elrha

Annexes

An evidence review of research on health interventions in humanitarian crises

2021 Update

ANNEXES

ANNEX 1: FINAL SEARCH STRATEGY BY DATABASE

Embase

('humanitarian'/exp OR 'humanitarian crisis'/exp OR humanitarian*:ab,ti,kw OR 'disaster'/exp OR 'disaster':ab,ti,kw OR 'crisis':ab,ti,kw OR 'mass disaster'/exp OR 'mass casualty incident':ab,ti,kw OR 'mass fatality':ab,ti,kw OR 'war'/exp OR war:ab,ti,kw OR 'armed conflict':ab,ti,kw OR 'conflict'/exp OR 'conflict':ab,ti,kw OR 'genocide'/exp OR 'genocide':ab,ti,kw OR 'ethnic cleansing'/exp OR 'ethnic cleansing':ab,ti,kw OR 'natural disaster'/exp OR 'epidemic'/exp OR 'epidemic':ab,ti,kw OR 'disease outbreak':ab,ti,kw OR mudslide:ab,ti,kw OR 'earthquake'/exp OR earthquake:ab,ti,kw OR 'flooding'/exp OR flood*:ab,ti,kw OR 'landslide'/exp OR landslide:ab,ti,kw OR 'volcano'/exp OR volcano:ab,ti,kw OR 'tidal wave':ab,ti,kw OR tidalwave:ab,ti,kw OR 'tsunami'/exp OR tsunami:ab,ti,kw OR 'cyclonic storm':ab,ti,kw OR typhoon:ab,ti,kw OR 'hurricane'/exp OR hurricane:ab,ti,kw OR 'cyclone':ab,ti,kw OR 'drought'/exp OR drought:ab,ti,kw OR 'starvation'/exp OR starvation:ab,ti,kw OR famine:ab,ti,kw OR 'humanitarian aid'/exp OR 'relief work'/exp OR 'relief work*':ab,ti,kw OR 'aid work*':ab,ti,kw OR 'disaster medicine'/exp OR 'disaster medicine':ab,ti,kw OR 'refugee'/exp OR refugee*:ab,ti,kw OR 'conflict affected*':ab,ti,kw OR 'conflict-affected*':ab,ti,kw OR 'forced migrant'/exp OR 'forced migrant*':ab,ti,kw OR 'forced migration'/exp OR 'forced migration':ab,ti,kw OR 'forcibly displaced':ab,ti,kw OR 'asylum'/exp OR 'asylum':ab,ti,kw OR 'asylum seeker'/exp OR 'asylum seeker*':ab,ti,kw OR 'internally displaced person'/exp OR 'idp':ab,ti,kw OR 'internal* displace*':ab,ti,kw OR 'displaced person*':ab,ti,kw OR 'displaced population*':ab,ti,kw)

AND

(afghanistan:ti,ab,kw OR albania:ti,ab,kw OR algeria:ti,ab,kw OR 'american samoa':ti,ab,kw OR angola:ti,ab,kw OR argentina:ti,ab,kw OR armenia:ti,ab,kw OR azerbaijan:ti,ab,kw OR bangladesh:ti,ab,kw OR benin:ti,ab,kw OR belarus:ti,ab,kw OR belize:ti,ab,kw OR bhutan:ti,ab,kw OR bolivia:ti,ab,kw OR 'bosnia and herzegovina':ti,ab,kw OR botswana:ti,ab,kw OR brazil:ti,ab,kw OR bulgaria:ti,ab,kw OR 'burkina faso':ti,ab,kw OR burundi:ti,ab,kw OR cambodia:ti,ab,kw OR cameroon:ti,ab,kw OR 'cabo verde':ti,ab,kw OR 'central african republic':ti,ab,kw OR chad:ti,ab,kw OR china:ti,ab,kw OR colombia:ti,ab,kw OR comoros:ti,ab,kw OR congo:ti,ab,kw OR 'costa rica':ti,ab,kw OR 'cote divoire':ti,ab,kw OR cuba:ti,ab,kw OR djibouti:ti,ab,kw OR 'democratic republic of the congo':ti,ab,kw OR 'north korea':ti,ab,kw OR dominica:ti,ab,kw OR 'dominican republic':ti,ab,kw OR ecuador:ti,ab,kw OR egypt:ti,ab,kw OR 'el salvador':ti,ab,kw OR eritrea:ti,ab,kw OR eswatini:ti,ab,kw OR ethiopia:ti,ab,kw OR 'equatorial guinea':ti,ab,kw OR fiji:ti,ab,kw OR gabon:ti,ab,kw OR gambia:ti,ab,kw OR georgia:ti,ab,kw OR ghana:ti,ab,kw OR grenada:ti,ab,kw OR guatemala:ti,ab,kw OR guinea:ti,ab,kw OR 'guinea bissau':ti,ab,kw OR guyana:ti,ab,kw OR haiti:ti,ab,kw OR honduras:ti,ab,kw OR india:ti,ab,kw OR indonesia:ti,ab,kw OR iran:ti,ab,kw OR iraq:ti,ab,kw OR jamaica:ti,ab,kw OR jordan:ti,ab,kw OR kazakhstan:ti,ab,kw OR kenya:ti,ab,kw OR kiribati:ti,ab,kw OR kosovo:ti,ab,kw OR 'kyrgyz republic':ti,ab,kw OR laos:ti,ab,kw OR lebanon:ti,ab,kw OR lesotho:ti,ab,kw OR liberia:ti,ab,kw OR libya:ti,ab,kw

OR madagascar:ti,ab,kw OR malawi:ti,ab,kw OR malaysia:ti,ab,kw OR mali:ti,ab,kw OR maldives:ti,ab,kw OR mauritania:ti,ab,kw OR 'marshall islands':ti,ab,kw OR mexico:ti,ab,kw OR micronesia:ti,ab,kw OR moldova:ti,ab,kw OR mongolia:ti,ab,kw OR montenegro:ti,ab,kw OR morocco:ti,ab,kw OR mozambique:ti,ab,kw OR myanmar:ti,ab,kw OR namibia:ti,ab,kw OR nepal:ti,ab,kw OR nicaragua:ti,ab,kw OR niger:ti,ab,kw OR nigeria:ti,ab,kw OR 'north macedonia':ti,ab,kw OR pakistan:ti,ab,kw OR 'papua new guinea':ti,ab,kw OR paraguay:ti,ab,kw OR peru:ti,ab,kw OR philippines:ti,ab,kw OR 'russian federation':ti,ab,kw OR rwanda:ti,ab,kw OR samoa:ti,ab,kw OR 'são tomé and principe':ti,ab,kw OR senegal:ti,ab,kw OR serbia:ti,ab,kw OR 'sierra leone':ti,ab,kw OR 'solomon islands':ti,ab,kw OR 'sri lanka':ti,ab,kw OR somalia:ti,ab,kw OR 'south africa':ti,ab,kw OR 'south sudan':ti,ab,kw OR 'st. lucia':ti,ab,kw OR 'st. vincent and the grenadines':ti,ab,kw OR sudan:ti,ab,kw OR suriname:ti,ab,kw OR 'syrian arab republic':ti,ab,kw OR tajikistan:ti,ab,kw OR tanzania:ti,ab,kw OR thailand:ti,ab,kw OR 'timor leste':ti,ab,kw OR togo:ti,ab,kw OR tonga:ti,ab,kw OR tunisia:ti,ab,kw OR turkey:ti,ab,kw OR turkmenistan:ti,ab,kw OR tuvalu:ti,ab,kw OR uganda:ti,ab,kw OR ukraine:ti,ab,kw OR uzbekistan:ti,ab,kw OR vanuatu:ti,ab,kw OR venezuela:ti,ab,kw OR vietnam:ti,ab,kw OR yemen:ti,ab,kw OR 'west bank and gaza':ti,ab,kw OR zambia:ti,ab,kw OR zimbabwe:ti,ab,kw OR 'afghanistan'/exp OR 'albania'/exp OR 'algeria'/exp OR 'american samoa'/exp OR 'angola'/exp OR 'argentina'/exp OR 'armenia'/exp OR 'azerbaijan'/exp OR 'bangladesh'/exp OR 'benin'/exp OR 'belarus'/exp OR 'belize'/exp OR 'bhutan'/exp OR 'bolivia'/exp OR 'bosnia and herzegovina'/exp OR 'botswana'/exp OR 'brazil'/exp OR 'bulgaria'/exp OR 'burkina faso'/exp OR 'burundi'/exp OR 'cambodia'/exp OR 'cameroon'/exp OR 'cape verde'/exp OR 'central african republic'/exp OR 'chad'/exp OR 'china'/exp OR 'colombia'/exp OR 'comoros'/exp OR 'congo'/exp OR 'costa rica'/exp OR 'cuba'/exp OR 'djibouti'/exp OR 'democratic republic congo'/exp OR 'north korea'/exp OR 'dominica'/exp OR 'dominican republic'/exp OR 'ecuador'/exp OR 'egypt'/exp OR 'el salvador'/exp OR 'eritrea'/exp OR 'eswatini'/exp OR 'ethiopia'/exp OR 'equatorial guinea'/exp OR 'fiji'/exp OR 'gabon'/exp OR 'gambia'/exp OR 'georgia (republic)'/exp OR 'ghana'/exp OR 'grenada'/exp OR 'guatemala'/exp OR 'guinea'/exp OR 'guinea-bissau'/exp OR 'guyana'/exp OR 'haiti'/exp OR 'honduras'/exp OR 'india'/exp OR 'indonesia'/exp OR 'iran'/exp OR 'iraq'/exp OR 'jamaica'/exp OR 'jordan'/exp OR 'kazakhstan'/exp OR 'kenya'/exp OR 'kiribati'/exp OR 'kosovo'/exp OR 'kyrgyzstan'/exp OR 'laos'/exp OR 'lebanon'/exp OR 'lesotho'/exp OR 'liberia'/exp OR 'libyan arab jamahiriya'/exp OR 'madagascar'/exp OR 'malawi'/exp OR 'malaysia'/exp OR 'mali'/exp OR 'maldives'/exp OR 'mauritania'/exp OR 'marshall islands'/exp OR 'mexico'/exp OR 'federated states of micronesia'/exp OR 'moldova'/exp OR 'mongolia'/exp OR 'montenegro (republic)'/exp OR 'morocco'/exp OR 'mozambique'/exp OR 'myanmar'/exp OR 'namibia'/exp OR 'nepal'/exp OR 'nicaragua'/exp OR 'niger'/exp OR 'nigeria'/exp OR 'republic of north macedonia'/exp OR 'pakistan'/exp OR 'papua new guinea'/exp OR 'paraguay'/exp OR 'peru'/exp OR 'philippines'/exp OR 'russian federation'/exp OR 'rwanda'/exp OR 'samoa'/exp OR 'sao tome and principe'/exp OR 'senegal'/exp OR 'serbia'/exp OR 'sierra leone'/exp OR 'solomon islands'/exp OR 'sri lanka'/exp OR 'somalia'/exp OR 'south africa'/exp OR 'south sudan'/exp OR 'saint lucia'/exp OR 'saint vincent and the grenadines'/exp OR 'sudan'/exp OR 'suriname'/exp OR 'syrian arab republic'/exp OR 'tajikistan'/exp OR 'tanzania'/exp OR 'thailand'/exp OR 'timor-leste'/exp OR 'togo'/exp OR 'tonga'/exp OR 'tunisia'/exp OR 'turkmenistan'/exp OR 'tuvalu'/exp OR 'uganda'/exp OR 'ukraine'/exp OR 'uzbekistan'/exp OR 'vanuatu'/exp OR 'venezuela'/exp OR 'viet nam'/exp OR 'yemen'/exp OR 'gaza strip palestine'/exp OR 'gaza strip'/exp OR 'zambia'/exp OR 'zimbabwe'/exp OR 'refugee*':ab,ti,kw OR 'refugee'/exp)

AND

('program'/exp OR 'evaluation study'/exp OR 'intervention'/exp OR 'experiment'/exp OR 'quasi experimental study'/exp OR 'cohort analysis'/exp OR 'cross-sectional study'/exp OR 'time series analysis'/exp OR 'pilot study'/exp OR 'trial'/exp OR 'impact'/exp OR 'efficacy'/exp OR 'outcome'/exp OR 'cost benefit analysis'/exp OR 'cost effectiveness analysis'/exp OR program*:ab,ti,kw OR project*:ab,ti,kw OR evaluation*:ab,ti,kw OR intervention*:ab,ti,kw OR experiment*:ab,ti,kw OR 'quasi experimental*':ab,ti,kw OR cohort*:ab,ti,kw OR 'cross sectional*':ab,ti,kw OR 'cross-sectional*':ti,ab,kw OR 'time series*':ab,ti,kw OR pilot*:ab,ti,kw OR trial*:ab,ti,kw OR impact:ab,ti,kw OR effectiveness:ab,ti,kw OR efficacy:ab,ti,kw OR outcome*:ab,ti,kw OR 'cost benefit':ab,ti,kw OR 'cost effectiveness':ab,ti,kw OR 'cost-effectiveness':ab,ti,kw OR 'cost efficiency':ab,ti,kw OR 'cost-efficiency':ab,ti,kw)

AND

('communicable disease'/exp OR 'communicable disease*':ab,ti,kw OR 'infectious disease*':ab,ti,kw OR 'infection*':ab,ti,kw OR 'virus infection'/exp OR 'viral infection*':ab,ti,kw OR 'viral disease*':ab,ti,kw OR 'bacterial infection'/exp OR 'bacterial infection*':ab,ti,kw OR 'bacterial disease*':ab,ti,kw OR 'parasitosis'/exp OR 'parasitic infection*':ab,ti,kw OR 'parasitic disease*':ab,ti,kw OR 'mycosis'/exp OR 'fungal infection*':ab,ti,kw OR 'fungal disease*':ab,ti,kw OR 'diarrhea'/exp OR 'diarrheal disease*':ab,ti,kw OR 'respiratory tract infection'/exp OR 'respiratory infection*':ab,ti,kw OR 'malaria'/exp OR 'malaria':ab,ti,kw OR 'tuberculosis'/exp OR 'tuberculosis':ab,ti,kw OR 'vaccine preventable disease'/exp OR 'vaccine preventable disease*':ab,ti,kw OR 'measles'/exp OR 'measles':ab,ti,kw OR 'meningitis'/exp OR 'meningitis':ab,ti,kw OR 'cholera'/exp OR 'cholera':ab,ti,kw OR 'ebola hemorrhagic fever'/exp OR 'ebola':ab,ti,kw OR 'typhoid fever'/exp OR 'typhoid':ab,ti,kw OR 'dengue'/exp OR 'dengue':ab,ti,kw OR 'poliomyelitis'/exp OR 'polio':ab,ti,kw OR 'vaccine'/exp OR 'vaccine*':ab,ti,kw OR 'vaccination'/exp OR 'vaccination*':ab,ti,kw OR 'wash':ab,ti,kw OR 'watsan':ab,ti,kw OR 'fecal-oral disease*':ab,ti,kw OR 'water'/exp OR 'water':ab,ti,kw OR 'aquifer'/exp OR 'aquifer*':ab,ti,kw OR 'bore well*':ab,ti,kw OR 'water table'/exp OR 'water table*':ab,ti,kw OR 'water pollutant'/exp OR 'water pollutant*':ab,ti,kw OR 'point of use water treatment'/exp OR 'point of use water treatment':ab,ti,kw OR 'sanitation'/exp OR 'sanitation':ab,ti,kw OR 'sanitary engineering':ab,ti,kw OR 'drainage':ab,ti,kw OR 'wastewater'/exp OR 'wastewater':ab,ti,kw OR 'waste water':ab,ti,kw OR 'sewage'/exp OR 'sewage':ab,ti,kw OR 'sludge':ab,ti,kw OR 'septic tank'/exp OR 'septic tank*':ab,ti,kw OR 'waste treatment':ab,ti,kw OR 'waste management'/exp OR 'solid waste management'/exp OR 'solid waste management':ab,ti,kw OR 'waste disposal'/exp OR 'waste disposal':ab,ti,kw OR 'excreta management':ab,ti,kw OR 'garbage':ab,ti,kw OR 'refuse':ab,ti,kw OR 'trash':ab,ti,kw OR 'latrine'/exp OR 'latrine*':ab,ti,kw OR 'pit latrine'/exp OR 'pit latrine*':ab,ti,kw OR 'toilet'/exp OR 'toilet*':ab,ti,kw OR 'open defecation'/exp OR 'open defecation':ab,ti,kw OR 'feces'/exp OR 'feces':ab,ti,kw OR 'defecation'/exp OR 'defecation':ab,ti,kw OR 'stool':ab,ti,kw OR 'hygiene'/exp OR 'hygiene':ab,ti,kw OR 'hygiene promotion':ab,ti,kw OR 'hand washing'/exp OR 'hand washing':ab,ti,kw OR 'hand hygiene':ab,ti,kw OR 'soap'/exp OR 'soap':ab,ti,kw OR 'detergent'/exp OR 'detergent':ab,ti,kw OR 'disinfectant agent'/exp OR 'disinfectant*':ab,ti,kw OR 'infection prevention and control'/exp OR 'infection prevention and control':ab,ti,kw OR 'nutrition'/exp OR 'nutrition':ab,ti,kw OR 'malnutrition'/exp OR 'malnutrition':ab,ti,kw OR 'malnourished':ab,ti,kw OR 'under-nutrition':ab,ti,kw OR 'under nutrition':ab,ti,kw OR 'wasting

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AND [humans]/lim AND [english]/lim AND [embase]/lim AND [article]/lim AND [2013-2021]/py

MEDLINE

("Humanitarian*"[tiab] OR "Disasters"[Mesh] OR "Disaster*"[tiab] OR "Crisis"[tiab] OR "Mass Casualty Incidents"[Mesh] OR "Mass Casualty Incident"[tiab] OR "Mass fatality"[tiab] OR "War"[tiab] OR "Armed Conflicts"[Mesh] OR "Armed conflict"[tiab] OR "Conflict"[tiab] OR "Genocide"[Mesh] OR "Genocide"[tiab] OR "Ethnic cleansing"[Mesh] OR "Ethnic cleansing"[tiab] OR "Natural Disasters"[Mesh] OR "Natural disaster"[tiab] OR "Epidemics"[Mesh] OR "Epidemic"[tiab] OR "Disease outbreaks"[Mesh] OR "Disease outbreak"[tiab] OR "Mudslide"[tiab] OR "Earthquakes"[Mesh] OR "Earthquake"[tiab] OR "Floods"[Mesh] OR "Flood*"[tiab] OR "Landslides"[Mesh] OR "Landslide"[tiab] OR "Volcano"[tiab] OR "Tidal Waves"[Mesh] OR "Tidal wave"[tiab] OR "Tidalwave"[tiab] OR "Tsunamis"[Mesh] OR "Tsunami"[tiab] OR "Cyclonic Storms"[Mesh] OR "Cyclonic Storm"[tiab] OR "Typhoon"[tiab] OR "Hurricane"[tiab] OR "Cyclone"[tiab] OR "Droughts"[Mesh] OR "Drought"[tiab] OR "Starvation"[Mesh] OR "Starvation"[tiab] OR "Famine"[Mesh] OR "Famine"[tiab] OR "Relief Work"[Mesh] OR "Relief Work*"[tiab] OR "Aid work*"[tiab] OR "Disaster Medicine"[Mesh] OR "Disaster medicine"[tiab] OR "Conflict Affected*"[tiab] OR "Conflict-Affected*"[tiab] OR "Forced Migrant*"[tiab] OR "Forced Migration"[tiab] OR "Forcibly displaced"[tiab] OR "Refugees"[Mesh] OR "Refugee*"[tiab] OR "Asylum"[tiab] OR "Asylum seeker*"[tiab] OR "Internal* displace*"[tiab] OR "IDP"[tiab] OR "Displaced person*"[tiab] OR "Displaced population*"[tiab])

AND

(Afghanistan[Mesh] OR Afghanistan[tiab] OR Albania[Mesh] OR Albania[tiab] OR Algeria[Mesh] OR Algeria[tiab] OR "American Samoa"[Mesh] OR "American Samoa"[tiab] OR Angola[Mesh] OR Angola[tiab] OR Argentina[Mesh] OR Argentina[tiab] OR Armenia[Mesh] OR Armenia[tiab] OR Azerbaijan[Mesh] OR Azerbaijan[tiab] OR Bangladesh[Mesh] OR Bangladesh[tiab] OR Benin[Mesh] OR Benin[tiab] OR "Republic of Belarus"[Mesh] OR Belarus[tiab] OR Belize[Mesh] OR Belize[tiab] OR Bhutan[Mesh] OR Bhutan[tiab] OR Bolivia[Mesh] OR Bolivia[tiab] OR "Bosnia and Herzegovina"[Mesh] OR "Bosnia and Herzegovina"[tiab] OR Botswana[Mesh] OR Botswana[tiab] OR Brazil[Mesh] OR Brazil[tiab] OR Bulgaria[Mesh] OR Bulgaria[tiab] OR "Burkina Faso"[Mesh] OR "Burkina Faso"[tiab] OR Burundi[Mesh] OR Burundi[tiab] OR Cambodia[Mesh] OR Cambodia[tiab]

OR Cameroon[Mesh] OR Cameroon[tiab] OR "Cabo Verde"[Mesh] OR "Cabo Verde"[tiab] OR "Central African Republic"[Mesh] OR "Central African Republic"[tiab] OR Chad[Mesh] OR Chad[tiab] OR China[Mesh] OR China[tiab] OR Colombia[Mesh] OR Colombia[tiab] OR Comoros[Mesh] OR Comoros[tiab] OR Congo[Mesh] OR Congo[tiab] OR "Costa Rica"[Mesh] OR "Costa Rica"[tiab] OR "Cote d'ivoire"[Mesh] OR "Cote d'ivoire"[tiab] OR Cuba[Mesh] OR Cuba[tiab] OR Djibouti[Mesh] OR Djibouti[tiab] OR "Democratic Republic of the Congo"[Mesh] OR "Democratic Republic of the Congo"[tiab] OR "Democratic People's Republic of Korea"[Mesh] OR "North Korea"[tiab] OR Dominica[Mesh] OR Dominica[tiab] OR "Dominican Republic"[Mesh] OR "Dominican Republic"[tiab] OR Ecuador[Mesh] OR Ecuador[tiab] OR Egypt[Mesh] OR Egypt[tiab] OR "El Salvador"[Mesh] OR "El Salvador"[tiab] OR Eritrea[Mesh] OR Eritrea[tiab] OR Eswatini[Mesh] OR Eswatini[tiab] OR Ethiopia[Mesh] OR Ethiopia[tiab] OR "Equatorial Guinea"[Mesh] OR "Equatorial Guinea"[tiab] OR Fiji[Mesh] OR Fiji[tiab] OR Gabon[Mesh] OR Gabon[tiab] OR Gambia[Mesh] OR Gambia[tiab] OR "Georgia (republic)"[Mesh] OR Georgia[tiab] OR Ghana[Mesh] OR Ghana[tiab] OR Grenada[Mesh] OR Grenada[tiab] OR Guatemala[Mesh] OR Guatemala[tiab] OR Guinea[Mesh] OR Guinea[tiab] OR Guinea-Bissau[Mesh] OR "Guinea Bissau"[tiab] OR Guyana[Mesh] OR Guyana[tiab] OR Haiti[Mesh] OR Haiti[tiab] OR Honduras[Mesh] OR Honduras[tiab] OR India[Mesh] OR India[tiab] OR Indonesia[Mesh] OR Indonesia[tiab] OR Iran[Mesh] OR Iran[tiab] OR Iraq[Mesh] OR Iraq[tiab] OR Jamaica[Mesh] OR Jamaica[tiab] OR Jordan[Mesh] OR Jordan[tiab] OR Kazakhstan[Mesh] OR Kazakhstan[tiab] OR Kenya[Mesh] OR Kenya[tiab] OR Kiribati[tiab] OR Kyrgyzstan[Mesh] OR "Kyrgyz Republic"[tiab] OR Laos[Mesh] OR Laos[tiab] OR Lebanon[Mesh] OR Lebanon[tiab] OR Lesotho[Mesh] OR Lesotho[tiab] OR Liberia[Mesh] OR Liberia[tiab] OR Libya[Mesh] OR Libya[tiab] OR Madagascar[Mesh] OR Madagascar[tiab] OR Malawi[Mesh] OR Malawi[tiab] OR Malaysia[Mesh] OR Malaysia[tiab] OR Mali[Mesh] OR Mali[tiab] OR Maldives[tiab] OR Mauritania[Mesh] OR Mauritania[tiab] OR "Marshall Islands"[Mesh] OR "Marshall Islands"[tiab] OR Mexico[Mesh] OR Mexico[tiab] OR Micronesia[Mesh] OR Micronesia[tiab] OR Moldova[Mesh] OR Moldova[tiab] OR Mongolia[Mesh] OR Mongolia[tiab] OR Montenegro[Mesh] OR Montenegro[tiab] OR Morocco[Mesh] OR Morocco[tiab] OR Mozambique[Mesh] OR Mozambique[tiab] OR Myanmar[Mesh] OR Myanmar[tiab] OR Namibia[Mesh] OR Namibia[tiab] OR Nepal[Mesh] OR Nepal[tiab] OR Nicaragua[Mesh] OR Nicaragua[tiab] OR Niger[Mesh] OR Niger[tiab] OR Nigeria[Mesh] OR Nigeria[tiab] OR "Republic of North Macedonia"[Mesh] OR "North Macedonia"[tiab] OR Pakistan[Mesh] OR Pakistan[tiab] OR "Papua New Guinea"[Mesh] OR "Papua New Guinea"[tiab] OR Paraguay[Mesh] OR Paraguay[tiab] OR Peru[Mesh] OR Peru[tiab] OR Philippines[Mesh] OR Philippines[tiab] OR Russia[Mesh] OR "Russian Federation"[tiab] OR Rwanda[Mesh] OR Rwanda[tiab] OR Samoa[Mesh] OR Samoa[tiab] OR "Sao Tome and Principe"[Mesh] OR "São Tomé and Principe"[tiab] OR Senegal[Mesh] OR Senegal[tiab] OR Serbia[Mesh] OR Serbia[tiab] OR "Sierra Leone"[Mesh] OR "Sierra Leone"[tiab] OR "Solomon Islands"[tiab] OR "Sri Lanka"[Mesh] OR "Sri Lanka"[tiab] OR Somalia[Mesh] OR Somalia[tiab] OR "South Africa"[Mesh] OR "South Africa"[tiab] OR "South Sudan"[Mesh] OR "South Sudan"[tiab] OR "Saint Lucia"[Mesh] OR "St. Lucia"[tiab] OR "Saint Vincent and the Grenadines"[Mesh] OR "St. Vincent and the Grenadines"[tiab] OR Sudan[Mesh] OR Sudan[tiab] OR Suriname[Mesh] OR Suriname[tiab] OR Syria[Mesh] OR "Syrian Arab Republic"[tiab] OR Tajikistan[Mesh] OR Tajikistan[tiab] OR Tanzania[Mesh] OR Tanzania[tiab] OR Thailand[Mesh] OR Thailand[tiab] OR Timor-Leste[Mesh] OR "Timor Leste"[tiab] OR Togo[Mesh] OR Togo[tiab] OR Tonga[Mesh] OR Tonga[tiab] OR Tunisia[Mesh] OR Tunisia[tiab] OR Turkey[Mesh] OR Turkey[tiab] OR Turkmenistan[Mesh] OR Turkmenistan[tiab] OR Tuvalu[Mesh] OR Tuvalu[tiab] OR Uganda[Mesh] OR Uganda[tiab] OR Ukraine[Mesh] OR Ukraine[tiab] OR Uzbekistan[Mesh] OR Uzbekistan[tiab] OR Vanuatu[Mesh] OR

Vanuatu[tiab] OR Venezuela[Mesh] OR Venezuela[tiab] OR Vietnam[Mesh] OR Vietnam[tiab] OR Yemen[Mesh] OR Yemen[tiab] OR "West Bank and Gaza"[tiab] OR Zambia[Mesh] OR Zambia[tiab] OR Zimbabwe[Mesh] OR Zimbabwe[tiab] OR Refugees[Mesh] OR Refugee*[tiab])

AND

(Program*[tiab] OR Project*[tiab] OR "Program Evaluation"[Mesh] OR "Evaluation Study"[Publication Type] OR Evaluation*[tiab] OR Intervention*[tiab] OR Experiment*[tiab] OR "Quasi-experimental*"[tiab] OR "Quasi experimental*"[tiab] OR "Cohort studies"[Mesh] OR Cohort*[tiab] OR "Cross-sectional studies"[Mesh] OR "Cross sectional*"[tiab] OR "Cross-sectional*"[tiab] OR "Interrupted time series analysis"[Mesh] OR "Time series*"[tiab] OR "Pilot projects"[Mesh] OR Pilot*[tiab] OR Trial*[Mesh] OR Trial*[tiab] OR Impact[tiab] OR Effectiveness[tiab] OR Efficacy[tiab] OR Outcome*[tiab] OR"Cost-benefit analysis"[Mesh] OR "Cost benefit"[tiab] OR "Cost effectiveness"[tiab] OR "Cost-effectiveness"[tiab] OR "Cost efficiency"[tiab] OR "Cost-efficiency"[tiab])

AND

("Communicable diseases"[Mesh] OR "Communicable disease*"[tiab] OR "Infectious disease*"[tiab] OR "Infections"[Mesh] OR "Infection*"[tiab] OR "Viral infection*"[tiab] OR "Virus diseases"[Mesh] OR "Viral disease*"[tiab] OR "Bacterial infections"[Mesh] OR "Bacterial infection*"[tiab] OR "Bacterial disease*"[tiab] OR "Parasitic diseases"[Mesh] OR "Parasitic infection*"[tiab] OR "Parasitic disease*"[tiab] OR "Mycoses"[Mesh] OR "Fungal infection*"[tiab] OR "Fungal disease*"[tiab] OR "Vaccines"[Mesh] OR "Vaccine*"[tiab] OR "Vaccination"[Mesh] OR "Vaccination*"[tiab] OR "Dysentery"[Mesh] OR "Diarrheal disease*"[tiab] OR "Respiratory tract infections"[Mesh] OR "Respiratory infection*"[tiab] OR "Malaria"[Mesh] OR Malaria[tiab] OR "Tuberculosis"[Mesh] OR Tuberculosis[tiab] OR "Vaccine-preventable diseases"[Mesh] OR "Vaccine preventable disease*"[tiab] OR "Measles"[Mesh] OR Measles[tiab] OR "Meningitis"[Mesh] OR Meningitis[tiab] OR "Cholera"[Mesh] OR "Cholera"[tiab] OR "Hemorrhagic Fever, Ebola"[Mesh] OR "Ebola"[tiab] OR "Typhoid fever"[Mesh] OR "Typhoid"[tiab] OR "Dengue"[Mesh] OR Dengue[tiab] OR "Poliomyelitis"[Mesh] OR "Polio"[tiab] OR "WASH"[tiab] OR "WATSAN"[tiab] OR "Fecal-oral disease*"[tiab] OR "Water"[Mesh] OR Water[tiab] OR "Water supply"[Mesh] OR "Water supply"[tiab] OR "Water source"[tiab] OR "Body of water"[tiab] OR "Water provision"[tiab] OR "Drinking water"[Mesh] OR "Drinking water"[tiab] OR "Fresh water"[Mesh] OR "Fresh water"[tiab] OR "Clean water"[tiab] OR "Potable water"[tiab] OR "Piped water"[tiab] OR "Public water"[tiab] OR "Private water"[tiab] OR "Domestic water"[tiab] OR Groundwater[Mesh] OR "Ground water"[tiab] OR "Aquifer*"[tiab] OR "Water wells"[Mesh] OR "Bore well*"[tiab] OR "Water table*"[tiab] OR "Well water"[tiab] OR "Rain water"[tiab] OR "Water pollutant*"[tiab] OR "Water quality"[Mesh] OR "Water quality"[tiab] OR "Water purification"[Mesh] OR "Point of use water treatment"[tiab] OR "Sanitation"[Mesh] OR Sanitation[tiab] OR "Sanitary engineering"[Mesh] OR "Sanitary engineering"[tiab] OR "Drainage, Sanitary"[Mesh] OR "Drainage"[tiab] OR "Wastewater"[tiab] OR "Waste water"[Mesh] OR "Waste water"[tiab] OR "Sewage"[Mesh] OR "Sewage"[tiab] OR "Sludge"[tiab] OR "Septic tank*"[tiab] OR "Waste treatment"[tiab] OR "Waste management"[Mesh] OR "Excreta management"[tiab] OR "Refuse disposal"[Mesh] OR "Waste disposal"[tiab] OR "Garbage"[Mesh] OR Garbage[tiab] OR "Refuse"[tiab] OR "Trash"[tiab] OR "Solid waste management"[tiab] OR "Toilet facilities"[Mesh] OR "Latrine*"[tiab] OR "Pit latrine*"[tiab] OR

"Toilet*"[tiab] OR "Open defecation"[tiab] OR "Feces"[Mesh] OR Feces[tiab] OR "Defecation"[Mesh] OR Defecation[tiab] OR "Stool"[tiab] OR "Hygiene"[Mesh] OR Hygiene[tiab] OR "Hygiene promotion"[tiab] OR "Hand hygiene"[Mesh] OR "Hand hygiene"[tiab] OR "Hand disinfection"[Mesh] OR "Hand washing"[tiab] OR "Soaps"[Mesh] OR "Soap"[tiab] OR "Detergents"[Mesh] OR "Detergent"[tiab] OR "Disinfectants"[Mesh] OR "Disinfectant*"[tiab] OR "Infection prevention and control"[tiab] OR "Nutritional status"[Mesh] OR Nutrition[tiab] OR "Malnutrition"[Mesh] OR Malnutrition[tiab] OR "Under-nutrition"[tiab] OR "Under nutrition"[tiab] OR "Malnourished"[tiab] OR "Wasted"[tiab] OR "Wasting syndrome"[Mesh] OR Wasting[tiab] OR "Stunted"[tiab] OR "Stunting"[tiab] OR "Marasmus"[tiab] OR "Protein-energy malnutrition"[Mesh] OR "Protein-energy malnutrition"[tiab] OR "Severe acute malnutrition"[Mesh] OR "Severe acute malnutrition"[tiab] OR "Starvation" [Mesh] OR Starvation[tiab] OR "Hunger"[Mesh] OR Hunger[tiab] OR "Famine"[Mesh] OR Famine[tiab] OR "Kwashiorkor"[Mesh] OR Kwashiorkor[tiab] OR "Nutritional deficienc*"[tiab] OR "Nutrition disorders"[Mesh] OR "Nutritional disorder*"[tiab] OR "Micronutrient deficienc*"[tiab] OR "Mineral deficienc*"[tiab] OR "Scurvy"[Mesh] OR Scurvy[tiab] OR "Ascorbic acid deficiency"[Mesh] OR "Vitamin C deficiency"[tiab] OR "Pellagra"[Mesh] OR Pellagra[tiab] OR "Niacin deficiency"[tiab] OR "Beriberi"[Mesh] OR Beriberi[tiab] OR "Thiamine deficiency"[Mesh] OR "Thiamine deficiency"[tiab] OR "Goiter"[Mesh] OR Goiter[tiab] OR "Iodine deficiency"[tiab] OR "Anemia"[Mesh] OR Anemia[tiab] OR "Supplementary feeding"[tiab] OR "Selective feeding"[tiab] OR "Therapeutic feeding"[tiab] OR "Community management of acute malnutrition"[tiab] OR "CMAM"[tiab] OR "Food fortification"[tiab] OR "Therapeutic food"[tiab] OR "Ready to use therapeutic food"[tiab] OR RUTF[tiab] OR "Ready to use supplementary food"[tiab] OR RUSF[tiab] OR "Lipid-based supplement"[tiab] OR "Fortified milk"[tiab] OR Vitamins[Mesh] OR "Vitamin*"[tiab] OR "Vitamin mix*"[tiab] OR "Micronutrient powder*"[tiab] OR "Enriched food*"[tiab] OR "Food, fortified"[Mesh] OR "Fortified food*"[tiab] OR "Diet modification*"[tiab] OR "Diet therapy"[Mesh] OR "Diet therapy"[tiab] OR "Diet treatment*"[tiab] OR "Dietary modification*"[tiab] OR "Nutrition therapy"[tiab] OR "Breast feeding"[Mesh] OR "Breastfeeding"[tiab] OR "Complementary food*"[tiab] OR "Infant formula"[Mesh] OR "Infant formula"[tiab] OR "Milk banks"[Mesh] OR "Milk bank*"[tiab] OR "Breast milk expression"[Mesh] OR "Breast milk"[tiab] OR "Sexual Health"[Mesh] OR "Sexual health"[tiab] OR "Reproductive Health"[Mesh] OR "Reproductive health"[tiab] OR "Adolescent Reproductive Health"[tiab] OR "Sexual education"[tiab] OR "Sex education"[Mesh] OR "Sex education"[tiab] OR "Minimum initial service package"[tiab] OR MISP[tiab] OR Maternal[tiab] OR "Maternal Health"[Mesh] OR "Maternal health"[tiab] OR "Infant, newborn"[Mesh] OR "Newborn"[tiab] OR "Neonat*"[tiab] OR "Newborn care"[tiab] OR "Perinatal care"[Mesh] OR "Perinatal care"[tiab] OR "Peripartum care"[tiab] OR "Intrapartum care"[tiab] OR "Prenatal care"[Mesh] OR "Prenatal care"[tiab] OR "Antenatal care"[tiab] OR "Postnatal care"[Mesh] OR "Postnatal care"[tiab] OR "Postpartum care"[tiab] OR "Pregnancy"[Mesh] OR Pregnancy[tiab] OR "Parturition"[Mesh] OR "Birth"[tiab] OR "Safe delivery"[tiab] OR "Safe motherhood"[tiab] OR "Birth attendant*"[tiab] OR "Midwife"[tiab] OR "Midwifery"[Mesh] OR Midwifery[tiab] OR "Obstetrics"[Mesh] OR Obstetrics[tiab] OR "Emergency obstetric care"[tiab] OR "Emergency obstetric and neonatal care"[tiab] OR "Emoc"[tiab] OR "Emonc"[tiab] OR "Miscarriage*"[tiab] OR "Abortion, spontaneous"[Mesh] OR "Spontaneous abortion*"[tiab] OR "Stillbirth"[Mesh] OR Stillbirth[tiab] OR "Eclampsia"[Mesh] OR Eclampsia[tiab] OR Preeclampsia[tiab] OR "Pre-eclampsia"[Mesh] OR Pre-eclampsia[tiab] OR "Obstructed labor"[tiab] OR "Postpartum hemorrhage"[Mesh] OR "Postpartum hemorrhage"[tiab] OR "Uterine hemorrhage"[Mesh] OR "Uterine hemorrhage"[tiab] OR "Contraception"[Mesh] OR Contraception[tiab] OR "Family planning services"[Mesh] OR "Family planning"[tiab] OR "Birth intervals"[Mesh] OR "Birth interval*"[tiab] OR

"Birth spacing"[tiab] OR "Abortion"[tiab] OR "Abortion, induced"[Mesh] OR "Induced abortion"[tiab] OR "Post abortion care"[tiab] OR "Human immunodeficiency virus"[tiab] OR "HIV"[Mesh] OR HIV[tiab] OR "Acquired immunodeficiency syndrome"[Mesh] OR "Acquired immune deficiency syndrome"[tiab] OR "AIDS"[tiab] OR "Sexually transmitted infection*"[tiab] OR "STI"[tiab] OR "Sexually transmitted diseases"[Mesh] OR "Sexually transmitted disease*"[tiab] OR "STD"[tiab] OR "Prevention of mother to child transmission"[tiab] OR "PMTCT"[tiab] OR "Infectious disease transmission, vertical"[Mesh] OR "Vertical transmission"[tiab] OR "Chlamydia Infections"[Mesh] OR Chlamydia[tiab] OR "Gonorrhea"[Mesh] OR Gonorrhea[tiab] OR "Syphilis"[Mesh] OR Syphilis[tiab] OR "Papillomavirus infections"[Mesh] OR "Human papillomavirus"[tiab] OR "HPV"[tiab] OR "Gender-based violence"[Mesh] OR "Gender-based violence"[tiab] OR "Gender based violence"[tiab] OR "Violence against women"[tiab] OR "Intimate partner violence"[Mesh] OR "Intimate partner violence"[tiab] OR "IPV"[tiab] OR "Partner violence"[tiab] OR "Family violence"[tiab] OR "Domestic violence"[Mesh] OR "Domestic violence"[tiab] OR "Spouse abuse"[Mesh] OR "Partner abuse"[tiab] OR "Sexual abuse"[tiab] OR "Sexual violence"[tiab] OR "Sex offenses"[Mesh] OR "Sexual crime"[tiab] OR "Sex crime"[tiab] OR "Rape"[Mesh] OR Rape[tiab] OR "Sexual assault"[tiab] OR "Forced sex"[tiab] OR "Sexual exploitation"[tiab] OR "Sexual slavery"[tiab] OR "Sexual harassment"[Mesh] OR "Sexual harassment"[tiab] OR "Sexual coercion"[tiab] OR "Physical abuse"[Mesh] OR "Physical violence"[tiab] OR "Assault"[tiab] OR "Abuse"[tiab] OR "Genital trauma"[tiab] OR "Genital injury"[tiab] OR "Vaginal trauma"[tiab] OR "Vaginal injury"[tiab] OR "Fistula"[Mesh] OR Fistula[tiab] OR "Menstrual hygiene"[tiab] OR "Menstrual hygiene products"[Mesh] OR "Menstrual hygiene management"[tiab] OR "Wellbeing"[tiab] OR "Well-being"[tiab] OR "Mental health"[Mesh] OR "Mental health"[tiab] OR "Self efficacy"[Mesh] OR "Self-efficacy"[tiab] OR "Resilience, psychological"[Mesh] OR "Resilienc*"[tiab] OR "Adaptation, psychological"[Mesh] OR "Coping"[tiab] OR "Self care"[Mesh] OR "Self-care"[tiab] OR "Self-help"[tiab] OR "Social connectedness"[tiab] OR "Cooperative behavior"[Mesh] OR "Social cohesion"[tiab] OR "Social networking"[Mesh] OR "Social network"[tiab] OR "Stress reduction"[tiab] OR "Mental disorders"[Mesh] OR "Mental disorder*"[tiab] OR "Mental illness*"[tiab] OR "Mental disturbance*"[tiab] OR "Psychiatric diagnosis"[tiab] OR "Psychiatric disease*"[tiab] OR "Psychiatric disorder*"[tiab] OR "Psychiatric illness*"[tiab] OR "Psychological disorder*"[tiab] OR "Depressive disorder"[Mesh] OR "Depression"[tiab] OR "Depressive episode"[tiab] OR "Depressive state"[tiab] OR "Suicide"[Mesh] OR Suicide[tiab] OR "Mania"[Mesh] OR "Mania"[tiab] OR "Delusions"[Mesh] OR "Delusion"[tiab] OR "Psychotic disorders"[Mesh] OR "Psychosis"[tiab] OR "Anxiety disorders"[Mesh] OR "Anxiety"[Mesh] OR "Anxiety"[tiab] OR "Hypervigilance"[tiab] OR "Mental trauma"[tiab] OR "Stress, psychological"[Mesh] OR "Stress"[tiab] OR "Psychological distress"[Mesh] OR Distress[tiab] OR "Stress disorders, post-traumatic"[Mesh] OR "Post-traumatic stress disorder"[tiab] OR "PTSD"[tiab] OR "Substance-related disorders"[Mesh] OR "Substance use"[tiab] OR "Substance abuse"[tiab] OR "Substance dependence"[tiab] OR "Drug abuse"[tiab] OR "Drug addiction"[tiab] OR "Somatization"[tiab] OR "Somatoform disorders"[Mesh] OR "Somatoform"[tiab] OR "Schizophrenia"[Mesh] OR Schizophrenia[tiab] OR "Obsessive-compulsive disorder"[Mesh] OR "Obsessive compulsive disorder"[tiab] OR "Phobic disorders"[Mesh] OR "Phobia"[tiab] OR "Neurotic disorders"[Mesh] OR "Neurosis"[tiab] OR "Psychosocial support systems"[Mesh] OR "Psychosocial support"[tiab] OR "Psychosocial intervention"[Mesh] OR "Psychosocial intervention"[tiab] OR "Pyschological support"[tiab] OR "Psychological intervention"[tiab] OR "Psychological first aid"[tiab] OR "Mental health support"[tiab] OR "Mental health intervention"[tiab] OR "MHPSS"[tiab] OR "Social support"[Mesh] OR "Social support"[tiab] OR "Community support"[tiab] OR "Family support"[tiab] OR "Psychotherapy"[Mesh] OR Psychotherapy[tiab] OR "Counseling"[Mesh] OR

Counseling[tiab] OR "Self-help groups"[Mesh] OR "Support group*"[tiab] OR "Peer support"[tiab] OR "Community healing"[tiab] OR "Communal healing"[tiab] OR "Safe space*"[tiab] OR "Child-friendly space*"[tiab] OR "Wounds and injuries"[Mesh] OR "Injury"[tiab] OR "Traumatic injury"[tiab] OR "Trauma"[tiab] OR "Trauma surgery"[tiab] OR "Brain injuries"[Mesh] OR "Brain injury"[tiab] OR "Brain injuries, traumatic"[Mesh] OR "Traumatic brain injury"[tiab] OR "Amputation"[Mesh] OR Amputation[tiab] OR "Amputees"[Mesh] OR Amputee[tiab] OR "Paralysis"[Mesh] OR Paralysis[tiab] OR "Paraplegia"[Mesh] OR Paraplegia[tiab] OR "Hemiplegia"[Mesh] OR Hemiplegia[tiab] OR "Disabled persons"[Mesh] OR "Disabled*"[tiab] OR "Disability"[tiab] OR "Physical disability"[tiab] OR "Physical handicap"[tiab] OR "Hearing loss"[Mesh] OR "Persons with hearing impairments"[Mesh] OR "Hearing impairment"[tiab] OR "Deafness"[Mesh] OR Deafness[tiab] OR "Vision disorders"[Mesh] OR "Visual impairment"[tiab] OR "Blindness"[Mesh] OR Blindness[tiab] OR "Visually impaired persons"[Mesh] OR "Impaired"[tiab] OR "Deficiency"[tiab] OR "Rehabilitation"[Mesh] OR Rehabilitation[tiab] OR "Rehabilitation exercise*"[tiab] OR "Therapeutic exercise*"[tiab] OR "Exercise therapy"[Mesh] OR "Exercise therapy"[tiab] OR "Exercise treatment*"[tiab] OR "Activities of daily living"[Mesh] OR "Activities of daily living"[tiab] OR "Physical therapy modalities"[Mesh] OR "Physiotherapy"[tiab] OR "Physical therapy"[tiab] OR "Motion therapy, continuous passive"[Mesh] OR "Movement therapy"[tiab] OR "Musculoskeletal manipulations"[Mesh] OR "Manual therapy"[tiab] OR "Orthopedics"[Mesh] OR Orthopedics[tiab] OR "Orthotic devices"[Mesh] OR Orthotics[tiab] OR "Prostheses and implants"[Mesh] OR "Artificial limbs"[Mesh] OR "Prostheses"[tiab] OR Wheelchairs[Mesh] OR "Wheelchair"[tiab] OR Crutches[Mesh] OR "Crutch"[tiab] OR "Anesthesia"[Mesh] OR Anesthesia[tiab] OR "Anesthesia, conduction"[Mesh] OR "Regional anesthesia"[tiab] OR "Pain control"[tiab] OR "Pain management"[Mesh] OR "Pain management"[tiab] OR "Functional status"[Mesh] OR "Functional outcome*"[tiab] OR "Rescue work"[Mesh] OR "Rescue work"[tiab] OR "Rescue personnel"[tiab] OR "Noncommunicable diseases"[Mesh] OR "Non-communicable disease*"[tiab] OR "NCD"[tiab] OR "Non-infectious disease*"[tiab] OR "Chronic disease"[Mesh] OR "Chronic disease*"[tiab] OR "Chronic condition*"[tiab] OR "Chronic illness*"[tiab] OR "Chronic health condition*"[tiab] OR "Chronic medical condition*"[tiab] OR "Cardiovascular diseases"[Mesh] OR "Cardiovascular disease"[tiab] OR "Heart diseases"[Mesh] OR "Heart disease"[tiab] OR "Heart attack"[tiab] OR "Myocardial infarction"[Mesh] OR "Myocardial infarction"[tiab] OR "Heart failure"[Mesh] OR "Heart failure"[tiab] OR "Hypertension"[Mesh] OR Hypertension[tiab] OR "High blood pressure"[tiab] OR "Diabetes mellitus"[Mesh] OR "Diabetes mellitus"[tiab] OR "Obesity"[Mesh] OR Obesity[tiab] OR "Metabolic syndrome"[Mesh] OR "Metabolic syndrome"[tiab] OR "Metabolic diseases"[Mesh] OR "Metabolic disease"[tiab] OR "Nervous system diseases"[Mesh] OR "Neurological disease"[tiab] OR "Neurological disorder*"[tiab] OR "Stroke"[Mesh] OR Stroke[tiab] OR "Cerebrovascular disorders"[Mesh] OR "Cerebrovascular disease"[tiab] OR "Cancer"[tiab] OR "Neoplasms"[Mesh] OR "Neoplasm"[tiab] OR "Tumor"[tiab] OR "Respiratory tract diseases"[Mesh] OR "Respiratory disease"[tiab] OR "Respiratory illness"[tiab] OR "Lung diseases"[Mesh] OR "Lung disease"[tiab] OR "Pulmonary disease, chronic obstructive"[Mesh] OR "Chronic obstructive pulmonary disease"[tiab] OR "COPD"[tiab] OR "Asthma"[Mesh] OR Asthma[tiab] OR "Kidney diseases"[Mesh] OR "Kidney disease"[tiab] OR "Renal insufficiency"[Mesh] OR "Renal insufficiency, chronic"[Mesh] OR "Chronic kidney disease"[tiab] OR "Kidney failure, chronic"[Mesh] OR "Renal failure"[tiab] OR "Liver diseases"[Mesh] OR "Liver disease"[tiab] OR "Liver illness"[tiab] OR "Hepatic disease"[tiab] OR "Liver Cirrhosis"[Mesh] OR Cirrhosis[tiab] OR "Endocrine system diseases"[Mesh] OR "Endocrine disease"[tiab] OR "Endocrine disorder*"[tiab] OR "Endocrine dysfunction"[tiab] OR "Thyroid diseases"[Mesh] OR "Thyroid disease"[tiab] OR

"Thyroid disorder*"[tiab] OR "Hypercholesterolemia"[Mesh] OR Hypercholesterolemia[tiab] OR "High cholesterol"[tiab] OR "Chronic pain"[Mesh] OR "Chronic pain"[tiab] OR "Dementia"[Mesh] OR Dementia[tiab] OR "Blood glucose"[Mesh] OR "Blood glucose"[tiab] OR "Blood sugar"[tiab] OR "Blood pressure"[Mesh] OR "Blood pressure"[tiab] OR "Cholesterol"[Mesh] OR Cholesterol[tiab] OR "Physicians"[Mesh] OR "Nurses"[Mesh] OR "Midwifery"[Mesh] OR "Allied health personnel"[Mesh] OR "Pharmacists"[Mesh] OR "Health personnel"[Mesh] OR "Community health workers"[Mesh] OR "Counselors"[Mesh] OR "Self care"[Mesh] OR "Pharmaceutical services"[Mesh] OR "Pharmacies"[Mesh] OR "Primary health care"[Mesh] OR "Ambulatory care"[Mesh] OR "Ambulatory care facilities"[Mesh] OR "Community health centers"[Mesh] OR "Health facilities"[Mesh] OR "Hospitals"[Mesh] OR "Secondary care"[Mesh] OR "Secondary care centers"[Mesh] OR "Tertiary healthcare"[Mesh] OR "Tertiary care centers"[Mesh] OR "Community health services"[Mesh] OR "Mobile health units"[Mesh] OR "Telemedicine"[Mesh] OR "Health services"[Mesh] OR "Delivery of health care"[Mesh] OR "Therapeutics"[Mesh] OR "Outcome and process assessment, health care"[Mesh] OR "Palliative care"[Mesh] OR "Quality improvement"[Mesh] OR "Quality assurance, health care"[Mesh] OR "Quality of health care"[Mesh] OR "Health care quality, access and evaluation"[Mesh] OR "Patient safety"[Mesh] OR "Risk management"[Mesh] OR "Patient satisfaction"[Mesh] OR "Continuity of patient care"[Mesh] OR "Case management"[Mesh] OR "Decision support systems, clinical"[Mesh] OR "Critical pathways"[Mesh] OR "Practice Guidelines as topic"[Mesh] OR "Health services accessibility"[Mesh] OR "physician*"[tiab] OR "doctor*"[tiab] OR "nurse*"[tiab] OR "midwife"[tiab] OR "paramedical*"[tiab] OR "pharmacist*"[tiab] OR "health worker*"[tiab] OR "health provider*"[tiab] OR "traditional health worker*"[tiab] OR "community health practitioner*"[tiab] OR "community volunteer*"[tiab] OR "community health worker*"[tiab] OR "vaccinator*"[tiab] OR "counselor*"[tiab] OR "self-care"[tiab] OR "pharmaceutical service"[tiab] OR "pharmacy"[tiab] OR "primary health care"[tiab] OR "primary health center*"[tiab] OR "primary care"[tiab] OR "pre-hospital care"[tiab] OR "health post*"[tiab] OR "health clinic*"[tiab] OR "health center*"[tiab] OR "health facilit*"[tiab] OR "hospital*"[tiab] OR "secondary care"[tiab] OR "secondary health care"[tiab] OR "tertiary care"[tiab] OR "tertiary health care"[tiab] OR "community-based service*"[tiab] OR "community-driven service*"[tiab] OR "community health"[tiab] OR "community health service*"[tiab] OR "mobile health"[tiab] OR "mobile health team"[tiab] OR "mobile health clinic"[tiab] OR "mobile health unit"[tiab] OR "outreach"[tiab] OR "telehealth"[tiab] OR "telemedicine"[tiab] OR "health service*"[tiab] OR "health service delivery"[tiab] OR "health delivery"[tiab] OR "health care provision"[tiab] OR "health care intervention*"[tiab] OR "treatment*"[tiab] OR "prevention"[tiab] OR "assessment"[tiab] OR "therapy"[tiab] OR "palliative care"[tiab] OR "continuous quality improvement"[tiab] OR "quality improvement"[tiab] OR "quality management"[tiab] OR "quality management system"[tiab] OR "quality assurance"[tiab] OR "quality of health care"[tiab] OR "quality collaborative"[tiab] OR "quality strateg*"[tiab] OR "patient safety"[tiab] OR "patient risk management"[tiab] OR "patient satisfaction"[tiab] OR "patient experience"[tiab] OR "continuity of care"[tiab] OR "coordination of care"[tiab] OR "case management"[tiab] OR "clinical decision support system"[tiab] OR "clinical guideline*"[tiab] OR "standard treatment guideline*"[tiab] OR "clinical pathway*"[tiab] OR "clinical peer review"[tiab] OR "clinical practice"[tiab] OR "access"[tiab] OR "health care coverage"[tiab] OR "diagnostics"[tiab] OR "Health policy"[Mesh] OR "Delivery of health care"[Mesh] OR "Health workforce"[Mesh] OR "Health information systems"[Mesh] OR "Equipment and supplies"[Mesh] OR "Healthcare financing"[Mesh] OR "Health information management"[Mesh] OR "Health information systems"[Mesh] OR "Sentinel surveillance"[Mesh] OR "Leadership"[Mesh] OR "Government"[Mesh] OR "health system"[tiab] OR "healthcare policy"[tiab] OR "healthcare strategy"[tiab] OR "national

guideline*"[tiab] OR "national standard*"[tiab] OR "health service delivery"[tiab] OR "human resources"[tiab] OR "health workforce"[tiab] OR "drug supply"[tiab] OR "pharmaceutical supply"[tiab] OR "medical supply"[tiab] OR "medical equipment"[tiab] OR "supply chain"[tiab] OR "health financing"[tiab] OR "health finance"[tiab] OR "user fees"[tiab] OR "health information management"[tiab] OR "health information system"[tiab] OR "health management information system"[tiab] OR hmis[tiab] OR "health surveillance system"[tiab] OR "leadership"[tiab] OR "leadership in healthcare"[tiab] OR "health management"[tiab] OR "governance"[tiab] OR "ministry of health"[tiab] OR moh[tiab] OR "government"[tiab] OR "health systems strengthening"[tiab])
Filters: 5/1/2013 - 4/30/2021, Humans, English, Medline, Journal Articles

Global Health

((Humanitarian* or Disaster or Crisis or "Mass casualty incident" or "Mass fatality" or War or "Armed conflict" or Conflict or Genocide or "Ethnic cleansing" or "Natural disaster" or Epidemic or "Disease outbreak" or Mudslide or Earthquake or Flood* or Landslide or Volcano or "Tidal wave" or Tidalwave or Tsunami or Cyclone or "Cyclonic storm" or Hurricane or Typhoon or Drought or Famine or Starvation or "Humanitarian aid" or "Humanitarian relief" or "Humanitarian response" or "Humanitarian assistance" or "Relief work*" or "Aid work*" or "Disaster medicine" or Conflict-affected* or "Conflict affected*" or "Forced migrant*" or "Forced migration" or "Forcibly displaced" or Refugee* or Asylum or "Asylum seeker*" or "Internal* displace*" or IDP or "Displaced person*" or "Displaced population*").ti,ab. or exp disasters/ or exp crises/ or exp war/ or exp conflict/ or exp natural disasters/ or exp drought/ or exp epidemics/ or exp starvation/ or exp famine/ or exp refugees/)

AND

((afghanistan or albania or algeria or "american samoa" or angola or argentina or armenia or azerbaijan or bangladesh or benin or belarus or belize or bhutan or bolivia or "bosnia and herzegovina" or botswana or brazil or bulgaria or "burkina faso" or burundi or cambodia or cameroon or "cabo verde" or "central african republic" or chad or china or colombia or comoros or congo or "costa rica" or "cote d'ivoire" or cuba or djibouti or "democratic republic of the congo" or "north korea" or dominica or "dominican republic" or ecuador or egypt or "el salvador" or eritrea or eswatini or ethiopia or "equatorial guinea" or fiji or gabon or gambia or georgia or ghana or grenada or guatemala or guinea or "guinea bissau" or guyana or haiti or honduras or india or indonesia or iran or iraq or jamaica or jordan or kazakhstan or kenya or kiribati or kosovo or "kyrgyz republic" or laos or lebanon or lesotho or liberia or libya or madagascar or malawi or malaysia or mali or maldives or mauritania or "marshall islands" or mexico or micronesia or moldova or mongolia or montenegro or morocco or mozambique or myanmar or namibia or nepal or nicaragua or niger or nigeria or "north macedonia" or pakistan or "papua new guinea" or paraguay or peru or philippines or "russian federation" or rwanda or samoa or "sao tome and principe" or senegal or serbia or "sierra leone" or "solomon islands" or "sri lanka" or somalia or "south africa" or "south sudan" or "saint lucia" or "saint vincent and the grenadines" or sudan or suriname or "syrian arab republic" or tajikistan or tanzania or thailand or "timor leste" or togo or tonga or tunisia or turkey or turkmenistan or tuvalu or uganda or ukraine or uzbekistan or vanuatu or venezuela or vietnam or yemen or "west bank and gaza" or zambia or zimbabwe or refugee*).ti,ab. or exp afghanistan/ or exp albania/ or exp algeria/ or exp american samoa/ or exp angola/ or exp argentina/ or exp

armenia/ or exp azerbaijan/ or exp bangladesh/ or exp benin/ or exp belarus/ or exp belize/ or exp bhutan/ or exp bolivia/ or exp "bosnia and herzegovina"/ or exp botswana/ or exp brazil/ or exp bulgaria/ or exp burkina faso/ or exp burundi/ or exp cambodia/ or exp cameroon/ or exp cabo verde/ or exp central african republic/ or exp chad/ or exp china/ or exp colombia/ or exp comoros/ or exp congo/ or exp costa rica/ or exp cote d'ivoire/ or exp cuba/ or exp djibouti/ or exp democratic republic of the congo/ or exp north korea/ or exp dominica/ or exp dominican republic/ or exp ecuador/ or exp egypt/ or exp el Salvador/ or exp eritrea/ or exp eswatini/ or exp ethiopia/ or exp equatorial guinea/ or exp fiji/ or exp gabon/ or exp gambia/ or exp georgia/ or exp ghana/ or exp grenada/ or exp guatemala/ or exp guinea/ or exp guinea bissau/ or exp guyana/ or exp haiti/ or exp honduras/ or exp india/ or exp indonesia/ or exp iran/ or exp iraq/ or exp jamaica/ or exp jordan/ or exp kazakhstan/ or exp kenya/ or exp kiribati/ or exp kosovo/ or exp kyrgyz republic/ or exp laos/ or exp lebanon/ or exp lesotho/ or exp liberia/ or exp libya/ or exp madagascar/ or exp malawi/ or exp malaysia/ or exp mali/ or exp maldives/ or exp mauritania/ or exp marshall islands/ or exp mexico/ or exp micronesia/ or exp moldova/ or exp mongolia/ or exp montenegro/ or exp morocco/ or exp mozambique/ or exp myanmar/ or exp namibia/ or exp nepal/ or exp nicaragua/ or exp niger/ or exp nigeria/ or exp north macedonia/ or exp pakistan/ or exp papua new guinea/ or exp paraguay/ or exp peru/ or exp philippines/ or exp russian federation/ or exp rwanda/ or exp samoa/ or exp "sao tome and principe"/ or exp senegal/ or exp serbia/ or exp sierra leone/ or exp solomon islands/ or exp sri lanka/ or exp somalia/ or exp south africa/ or exp south sudan/ or exp saint lucia/ or exp "saint vincent and the grenadines"/ or exp sudan/ or exp suriname/ or exp syrian arab republic/ or exp tajikistan/ or exp tanzania/ or exp thailand/ or exp timor leste/ or exp togo/ or exp tonga/ or exp tunisia/ or exp turkey/ or exp turkmenistan/ or exp tuvalu/ or exp uganda/ or exp ukraine/ or exp uzbekistan/ or exp vanuatu/ or exp venezuela/ or exp vietnam/ or exp yemen/ or exp "west bank and gaza"/ or exp zambia/ or exp zimbabwe/ or exp refugees/)

AND

((program* or project* or evaluation* or intervention* or experiment* or quasi-experimental* or "quasi experimental*" or cohort* or "cross sectional*" or cross-sectional* or "time series*" or pilot* or trial* or impact or effectiveness or efficacy or outcome* or "cost benefit" or "cost effectiveness" or cost-effectiveness or "cost efficiency" or cost-efficiency).ti,ab. or exp projects/ or exp evaluation/ or exp intervention/ or exp experiments/ or exp trials/ or exp cohort studies/ or exp time series/ or exp impact/ or exp program effectiveness/ or exp cost effectiveness analysis/ or exp efficacy/ or exp cost benefit analysis/) and (("Communicable disease*" or "Infectious disease*" or Infection* or "Viral infection*" or "Viral disease*" or "Bacterial infection*" or "Bacterial disease*" or "Parasitic infection*" or "Parasitic disease*" or "Fungal infection*" or "Fungal disease*" or Vaccine* or Vaccination* or "Diarrheal disease*" or "Respiratory infection*" or Malaria or Tuberculosis or "Vaccine preventable disease*" or Measles or Meningitis or Cholera or Ebola or Typhoid or Dengue or Polio or WASH or WATSAN or "Fecal-oral disease*" or Water or "Water supply" or "Water source" or "Body of water" or "Water provision" or "Drinking water" or "Fresh water" or "Clean water" or "Potable water" or "Piped water" or "Public water" or "Private water" or "Domestic water" or "Ground water" or Aquifer* or "Bore well*" or "Water table*" or "Well water" or "Rain water" or "Water pollutant*" or "Water quality" or "Point of use water treatment" or Sanitation or "Sanitary engineering" or Drainage or Wastewater or "Waste water" or Sewage or Sludge or "Septic tank*" or "Waste treatment" or "Excreta management" or "Waste disposal" or Garbage or Refuse or Trash or "Solid waste management" or Latrine* or "Pit latrine*" or Toilet* or "Open defecation" or Feces or

Defecation or Stool or Hygiene or "Hygiene promotion" or "Hand hygiene" or "Hand washing" or Soap or Detergent or Disinfectant* or "Infection prevention and control" or Nutrition or Malnutrition or Under-nutrition or "Under nutrition" or Malnourished or Wasted or Wasting or Stunted or Stunting or Marasmus or "Protein-energy malnutrition" or "Severe acute malnutrition" or Starvation or Hunger or Famine or Kwashiorkor or "Nutritional deficienc*" or "Nutritional disorder*" or "Micronutrient deficienc*" or "Mineral deficienc*" or Scurvy or "Vitamin C deficiency" or Pellagra or "Niacin deficiency" or Beriberi or "Thiamine deficiency" or Goiter or "Iodine deficiency" or Anemia or "Supplementary feeding" or "Selective feeding" or "Therapeutic feeding" or "Community management of acute malnutrition" or CMAM or "Food fortification" or "Therapeutic food" or "Ready to use therapeutic food" or RUTF or "Ready to use supplementary food" or RUSF or "Lipid-based supplement" or "Fortified milk" or Vitamin* or "Vitamin mix*" or "Micronutrient powder*" or "Enriched food*" or "Fortified food*" or "Diet modification*" or "Diet therapy" or "Diet treatment*" or "Dietary modification*" or "Nutrition therapy" or Breastfeeding or "Complementary food*" or "Infant formula" or "Milk bank*" or "Breast milk" or "Sexual Health" or "Reproductive Health" or "Adolescent Reproductive Health" or "Sexual education" or "Sex education" or "Minimum initial service package" or MISP or Maternal or "Maternal Health" or Newborn or Neonat* or "Newborn care" or "Perinatal care" or "Peripartum care" or "Intrapartum care" or "Prenatal care" or "Antenatal care" or "Postnatal care" or "Postpartum care" or Pregnancy or Birth or "Safe delivery" or "Safe motherhood" or "Birth attendant*" or Midwife or Midwifery or Obstetrics or "Emergency obstetric care" or "Emergency obstetric and neonatal care" or Emoc or Emonc or Miscarriage* or "Spontaneous abortion*" or Stillbirth or Eclampsia or Preeclampsia or Pre-eclampsia or "Obstructed labor" or "Postpartum hemorrhage" or "Uterine hemorrhage" or Contraception or "Family planning" or "Birth interval*" or "Birth spacing" or Abortion or "Induced abortion" or "Post abortion care" or "Human immunodeficiency virus" or HIV or "Acquired immune deficiency syndrome" or AIDS or "Sexually transmitted infection*" or STI or "Sexually transmitted disease*" or STD or "Prevention of mother to child transmission" or PMTCT or "Vertical transmission" or Chlamydia or Gonorrhea or Syphilis or "Human papillomavirus" or HPV or "Gender-based violence" or "Gender based violence" or "Violence against women" or "Intimate partner violence" or IPV or "Partner violence" or "Family violence" or "Domestic violence" or "Partner abuse" or "Sexual abuse" or "Sexual violence" or "Sexual crime" or "Sex crime" or Rape or "Sexual assault" or "Forced sex" or "Sexual exploitation" or "Sexual slavery" or "Sexual harassment" or "Sexual coercion" or "Physical violence" or Assault or Abuse or "Genital trauma" or "Genital injury" or "Vaginal trauma" or "Vaginal injury" or Fistula or "Menstrual hygiene" or "Menstrual hygiene management" or Wellbeing or Well-being or "Mental health" or Self-efficacy or Resilienc* or Coping or Self-care or Self-help or "Social connectedness" or "Social cohesion" or "Social network" or "Stress reduction" or "Mental disorder*" or "Mental illness*" or "Mental disturbance*" or "Psychiatric diagnosis" or "Psychiatric disease*" or "Psychiatric disorder*" or "Psychiatric illness*" or "Psychological disorder*" or Depression or "Depressive episode" or "Depressive state" or Suicide or Mania or Delusion or Psychosis or Anxiety or Hypervigilance or "Mental trauma" or Stress or Distress or "Post-traumatic stress disorder" or PTSD or "Substance use" or "Substance abuse" or "Substance dependence" or "Drug abuse" or "Drug addiction" or Somatization or Somatoform or Schizophrenia or "Obsessive compulsive disorder" or Phobia or Neurosis or "Psychosocial support" or "Psychosocial intervention" or "Pyschological support" or "Psychological intervention" or "Psychological first aid" or "Mental health support" or "Mental health intervention" or MHPSS or "Social support" or "Community support" or "Family support" or Psychotherapy or Counseling or "Support group*" or "Peer support" or "Community healing" or "Communal healing" or "Safe space*" or "Child-friendly space*" or Injury or "Traumatic

injury" or Trauma or "Trauma surgery" or "Brain injury" or "Traumatic brain injury" or Amputation or Amputee or Paralysis or Paraplegia or Hemiplegia or Disabled* or Disability or "Physical disability" or "Physical handicap" or "Hearing impairment" or Deafness or "Visual impairment" or Blindness or Impaired or Deficiency or Rehabilitation or "Rehabilitation exercise*" or "Therapeutic exercise*" or "Exercise therapy" or "Exercise treatment*" or "Activities of daily living" or Physiotherapy or "Physical therapy" or "Movement therapy" or "Manual therapy" or Orthopedics or Orthotics or Prostheses or Wheelchair or Crutch or Anesthesia or "Regional anesthesia" or "Pain control" or "Pain management" or "Functional outcome*" or "Rescue work" or "Rescue personnel" or "Non-communicable disease*" or NCD or "Non-infectious disease*" or "Chronic disease*" or "Chronic condition*" or "Chronic illness*" or "Chronic health condition*" or "Chronic medical condition*" or "Cardiovascular disease" or "Heart disease" or "Heart attack" or "Myocardial infarction" or "Heart failure" or Hypertension or "High blood pressure" or "Diabetes mellitus" or Obesity or "Metabolic syndrome" or "Metabolic disease" or "Neurological disease" or "Neurological disorder*" or Stroke or "Cerebrovascular disease" or Cancer or Neoplasm or Tumor or "Respiratory disease" or "Respiratory illness" or "Lung disease" or "Chronic obstructive pulmonary disease" or COPD or Asthma or "Kidney disease" or "Chronic kidney disease" or "Renal failure" or "Liver disease" or "Liver illness" or "Hepatic disease" or Cirrhosis or "Endocrine disease" or "Endocrine disorder*" or "Endocrine dysfunction" or "Thyroid disease" or "Thyroid disorder*" or Hypercholesterolemia or "High cholesterol" or "Chronic pain" or Dementia or "Blood glucose" or "Blood sugar" or "Blood pressure" or Cholesterol or physician* or doctor* or nurse* or midwife or paramedical* or pharmacist* or "health worker*" or "health provider*" or "traditional health worker*" or "community health practitioner*" or "community volunteer*" or "community health worker*" or vaccinator* or counselor* or self-care or "pharmaceutical service" or pharmacy or "primary health care" or "primary health center*" or "primary care" or "pre-hospital care" or "health post*" or "health clinic*" or "health center*" or "health facilit*" or hospital* or "secondary care" or "secondary health care" or "tertiary care" or "tertiary health care" or "community-based service*" or "community-driven service*" or "community health" or "community health service*" or "mobile health" or "mobile health team" or "mobile health clinic" or "mobile health unit" or outreach or telehealth or telemedicine or "health service*" or "health service delivery" or "health delivery" or "health care provision" or "health care intervention*" or treatment* or prevention or assessment or therapy or "palliative care" or "continuous quality improvement" or "quality improvement" or "quality management" or "quality management system" or "quality assurance" or "quality of health care" or "quality collaborative" or "quality strateg*" or "patient safety" or "patient risk management" or "patient satisfaction" or "patient experience" or "continuity of care" or "coordination of care" or "case management" or "clinical decision support system" or "clinical guideline*" or "standard treatment guideline*" or "clinical pathway*" or "clinical peer review" or "clinical practice" or access or "health care coverage" or diagnostics or "health system" or "healthcare policy" or "healthcare strategy" or "national guideline*" or "national standard*" or "health service delivery" or "human resources" or "health workforce" or "drug supply" or "pharmaceutical supply" or "medical supply" or "medical equipment" or "supply chain" or "health financing" or "health finance" or "user fees" or "health information management" or "health information system" or "health management information system" or hmis or "health surveillance system" or leadership or "leadership in healthcare" or "health management" or governance or "ministry of health" or moh or government or "health systems strengthening").ti,ab. or exp infectious diseases/ or exp infection/ or exp viral diseases/ or exp bacterial diseases/ or exp parasitoses/ or exp fungal diseases/ or exp mycoses/ or exp vaccines/ or exp vaccination/ or exp diarrhoea/ or exp respiratory diseases/ or exp malaria/ or

exp tuberculosis/ or exp measles/ or exp meningitis/ or exp cholera/ or exp ebola haemorrhagic fever/ or exp typhoid/ or exp dengue/ or exp poliomyelitis/ or exp water/ or exp water supply/ or exp water table/ or exp water treatment/ or exp water pollution/ or exp aquifers/ or exp wastes/ or exp sewage effluent/ or exp septic tank effluent/ or exp wells/ or exp sanitation/ or exp drainage/ or exp drainage water/ or exp wastewater/ or exp sewage/ or exp sewage sludge/ or exp sewage treatment/ or exp septic tanks/ or exp waste treatment/ or exp waste disposal/ or exp refuse/ or exp waste management/ or exp latrines/ or exp pit latrines/ or exp toilets/ or exp defaecation/ or exp hygiene/ or exp hand washing/ or exp disinfectants/ or exp infection control/ or exp soaps/ or exp detergents/ or exp nutrition/ or exp malnutrition/ or exp undernutrition/ or exp wasting disease/ or exp chronic wasting disease/ or exp marasmus/ or exp protein energy malnutrition/ or exp kwashiorkor/ or exp starvation/ or exp hunger/ or exp famine/ or exp nutrient deficiencies/ or exp nutritional disorders/ or exp trace element deficiencies/ or exp vitamin deficiencies/ or exp scurvy/ or exp pellagra/ or exp beriberi/ or exp goitre/ or exp iodine deficiency/ or exp anaemia/ or exp supplementary feeding/ or exp food enrichment/ or exp vitamins/ or exp therapeutic diets/ or exp diet treatment/ or exp breast feeding/ or exp infant formulae/ or exp human milk/ or exp complementary feeding/ or exp sexual health/ or exp reproductive health/ or exp sex education/ or exp maternity/ or exp maternity services/ or exp neonates/ or exp prenatal care/ or exp pregnancy/ or exp parturition/ or exp puerperium/ or exp eclampsia/ or exp midwives/ or exp traditional birth attendants/ or exp obstetrics/ or exp spontaneous abortion/ or exp fetal death/ or exp preeclampsia/ or exp contraception/ or exp family planning/ or exp abortion/ or exp induced abortion/ or exp human immunodeficiency virus/ or exp acquired immune deficiency syndrome/ or exp sexually transmitted diseases/ or exp vertical transmission/ or exp chlamydia/ or exp gonorrhoea/ or exp syphilis/ or exp human papillomaviruses/ or exp spouse abuse/ or exp domestic violence/ or exp sexual abuse/ or exp rape/ or exp abuse/ or exp fistula/ or exp mental health/ or exp coping strategies/ or exp self care/ or exp self help/ or exp support systems/ or exp mental disorders/ or exp mental stress/ or exp stress/ or exp suicide/ or exp substance abuse/ or exp psychotherapy/ or exp counselling/ or exp injuries/ or exp trauma/ or exp amputation/ or exp paralysis/ or exp paraplegia/ or exp disabilities/ or exp people with disabilities/ or exp hearing impairment/ or exp deafness/ or exp vision disorders/ or exp deficiency/ or exp rehabilitation/ or exp physical therapy/ or exp orthopaedics/ or exp prostheses/ or exp anaesthesia/ or exp chronic diseases/ or exp cardiovascular diseases/ or exp hypertension/ or exp diabetes mellitus/ or exp obesity/ or exp metabolic syndrome/ or exp metabolic disorders/ or exp nervous system diseases/ or exp stroke/ or exp cerebrovascular disorders/ or exp cancer/ or exp neoplasms/ or exp respiratory diseases/ or exp kidney diseases/ or exp liver diseases/ or exp endocrine diseases/ or exp hypercholesterolaemia/ or exp dementia/ or exp cholesterol/ or exp blood sugar/ or exp health care workers/ or exp pharmacy/ or exp primary health care/ or exp health clinics/ or exp health centres/ or exp hospitals/ or exp community health/ or exp community health services/ or exp telemedicine/ or exp health services/ or exp treatment/ or exp prevention/ or exp assessment/ or exp therapy/ or exp quality of care/ or exp access/ or exp health policy/ or exp human resources/ or exp pharmaceutical products/ or exp leadership/ or exp governance/ or exp government/)

limit to (english language and yr="2013 - 2021" and "Journal article" [Publication Type])

ANNEX 2: DATA EXTRACTION TOOL

Lead author:_____

Year of publication:_____

Population/setting

Country(ies) in which the study was conducted: _____

Location within country(ies)

- ◇ National sample
- ◇ Regional or other sample (if selected, describe in next question)

Specify included area(s)
Answer if "regional or other sample" selected in previous question

_____

Population type(s)

- ◇ Refugee
- ◇ Internally Displaced Persons (IDPs)
- ◇ Emergency-affected (non-displaced)
- ◇ Host community
- ◇ Multiple population types (specify in next question)

Specify multiple population types
Answer with a list of included population types from the options in the previous question (i.e., refugee, IDP, emergency-affected, host community) only if multiple population types were included

_____

Humanitarian crisis type(s)

- ◇ Armed conflict
- ◇ Natural disaster
- ◇ Outbreak
- ◇ Multiple humanitarian crisis types (specify in next question)

Specify multiple humanitarian crisis types
Answer with a list of included humanitarian crisis types from the options in the previous question (i.e., armed conflict, natural disaster, outbreak) only if multiple humanitarian crisis types were included

_____

Humanitarian context type(s)

- ◇ Camp: refugee and internally displaced camps and settlements
- ◇ Urban: urban settings where refugees and internally displaced persons are hosted, or non-displaced crisis-affected populations reside
- ◇ Rural: rural settings where refugees and internally displaced persons are hosted, or non-displaced crisis-affected populations reside
- ◇ Multiple humanitarian context types (specify in next question)

Specify multiple humanitarian context types

Answer with a list of included humanitarian context types from the options in the previous question (i.e., camp, urban, rural) only if multiple humanitarian context types were included

_____

Interventions

Type of intervention(s)

Briefly list the broad type of intervention(s) (e.g., health education, vaccination campaign, cash/ voucher assistance, etc.)

_____

Description of intervention(s)

Provide a more detailed description of the intervention(s)

_____

Implementing agency type

- ◇ Government
- ◇ UN agency
- ◇ NGO
- ◇ Private sector
- ◇ Multiple implementing agency types (specify in next question)
- ◇ Unclear or not specified

Specify multiple implementing agency types

_____

Service delivery / implementation site

- ◇ System-level
- ◇ Facility-based (excluding pharmacies)
- ◇ Pharmacies only
- ◇ Community-based
- ◇ Mobile/outreach
- ◇ Self-care
- ◇ Other (specify)

Description of "other" service delivery / implementation site

Answer only if "other" was selected in the previous question

Personnel type(s) involved

- ◇ Health professional cadre(s) (specify in next question)
- ◇ Community health workers (CHWs) / community health volunteers (CHVs)
- ◇ Lay personnel
- ◇ Not specified
- ◇ Not applicable

Description of "other" personnel type(s)/health professional cadre(s)

Part of a broader multi-sectoral program or intervention strategy

- ◇ Yes
- ◇ No

Description of broader multi-sectoral program or intervention strategy

Answer only if "yes" was selected in the previous question

Study details

Aim/objective of the study: _____

Study design

Study design

- ◇ Randomized controlled trial (RCT)
- ◇ Non-randomized / (quasi-)experimental study
- ◇ Cohort study
- ◇ Case-control study
- ◇ Mixed methods
- ◇ Economic evaluation (specify with description provided by author)
- ◇ Other (specify) _____

If RCT selected:

- ◇ Individual randomized
- ◇ Cluster (community/site) randomized

If economic evaluation selected: description provided by author

Add description only if economic evaluation is selected for study design

_____

Study Period

Study start date: _____

Study end date: _____

Duration of participation (from recruitment to last follow-up): _____

Number of data collection interactions/rounds dates (if relevant): _____

Participants

Sample description

Describe specific inclusion/exclusion criteria or important characteristics about the study sample

_____

Number of individuals/households enrolled by group: _____

Number of individuals/households completing the study by group: _____

Outcomes and results

Outcome(s) measured
List the primary and, where relevant, secondary outcomes measured. Be sure to indicate which are primary outcomes vs. secondary outcomes.

_____

Results

Primary/first outcome:

- ◇ Indicator/outcome description: _____

- ◇ Unadjusted point estimate and confidence interval/standard deviation (or summarize first key cost or qualitative finding): _____

- ◇ Adjusted point estimate and confidence interval/standard deviation: _____

Second outcome:

- ◇ Indicator/outcome description: _____

- ◇ Unadjusted point estimate and confidence interval/standard deviation (or summarize second key cost or qualitative finding): _____

- ◇ Adjusted point estimate and confidence interval/standard deviation: _____

Third outcome:

- ◇ Indicator/outcome description: _____

- ◇ Unadjusted point estimate and confidence interval/standard deviation (or summarize third key cost or qualitative finding): _____

- ◇ Adjusted point estimate and confidence interval/standard deviation: _____

If more than three, list additional outcomes:
Enter "N/A" if no more than 3 outcomes were measured

_____

Key take-away/conclusion: _____

Additional notes (optional): _____

ANNEX 3: CRITICAL APPRAISAL STRATEGY AND TOOLS

Overall Risk-Of-Bias Judgement Criterion

Judgement	Criteria
Low risk of bias	Judged to be low risk of bias for all domains
Moderate risk of bias	Judged to raise some concerns in at least one domain, but not to be high risk for any domain
High risk of bias	Judged to be high risk of bias for at least one domain OR to have some concerns for multiple domains in a way that substantively lowers confidence in the results
Unclear risk of bias	Too little information on which to base a judgement on risk of bias for outcome of interest

Critical Appraisal Tools for Experimental and Quasi-Experimental Studies

Domain	Judgement (yes, no, unclear)	Support for judgement
All Studies		
Are there clear research questions or objectives?		
Do the collected data address the research questions or objectives?		
Individual or Cluster Randomized Trials (see Cochrane RoB 2 tool for randomized trials and RoB 2 tool for cluster randomized trials for additional guidance)		
Is randomization appropriately performed, and are the groups comparable at baseline?		
Did the participants adhere to the assigned intervention?		
Are there complete outcome data?		
Was the method of measuring the outcome appropriate and was measurement consistent across intervention groups?		

	Judgement (yes, no, unclear)	Support for judgement
Is there selective reporting of outcome measurements, analyses of intervention-outcome relationships or intervention effects on different subgroups?		

Quasi-Experimental Studies / Non-Randomized Studies of Interventions (see Cochrane ROBINS-I tool for additional guidance)

	Judgement (yes, no, unclear)	Support for judgement
Is randomization appropriately performed, and are the groups comparable at baseline?		
Did the participants adhere to the assigned intervention?		
Are there complete outcome data?		
Was the method of measuring the outcome appropriate and was measurement consistent across intervention groups?		
Is there selective reporting of outcome measurements, analyses of intervention-outcome relationships or intervention effects on different subgroups?		
Is randomization appropriately performed, and are the groups comparable at baseline?		

Did the participants adhere to the assigned intervention?

Adapted from: Higgins JPT, Thomas J, Chandler J, Cumpston M, Li T, Page MJ, Welch VA (editors). Cochrane Handbook for Systematic Reviews of Interventions version 6.2 (updated February 2021). Cochrane, 2021. Available from www.training.cochrane.org/handbook.

Critical Appraisal Tools for Quantitative Studies Measuring Cost, Cost Efficiency, Cost-Effectiveness, Cost-Utility, Or Cost-Benefit of Interventions

Methodological quality criteria	Judgement (yes, no, unclear)	Support for judgement
All Studies		
Is the form of cost analysis justified in relation to the research question(s)?		
Are quantities of resources used reported separately from unit costs?		

Are currency and price data sources clearly stated?		
Are details of currency price adjustments for inflation or currency conversion clearly stated?		
Is the time horizon of costs clearly stated?		
Are discount rates clearly stated and justified, or reason for not discounting clearly explained?		
Is sensitivity analysis conducted and approach clearly described?		
Do conclusions flow from data reported?		
Are conclusions accompanied by appropriate caveats		

Adapted from: Schemilt, I., Mugford, M., Byford, S., Drummond, M., Eisenstein, E., Knapp, M., Mallender, J., Marsh, K., McDaid, D., Vale, L. and Walker, D. (2008), 'The Campbell Collaboration Economics Methods Policy Brief', The Campbell Collaboration. Retrieved from: https://www. campbellcollaboration.org/images/pdf/plain-language/Economic_Methods_Policy_Brief.pdf

Critical Appraisal Tool for Qualitative, Quantitative, and Mixed Methods Studies

Methodological quality criteria	Judgement (yes, no, unclear)	Support for judgement
Qualitative Studies		
Is the qualitative approach appropriate to answer the research question?		
Are the qualitative data collection methods adequate to address the research question?		
Are the findings adequately derived from the data?		
Is the interpretation of results sufficiently substantiated by data?		
Is there coherence between qualitative data sources, collection, analysis, and interpretation?		

Quantitative Studies		
Is the sampling strategy relevant to address the research question?		
Is the sample representative of the target population?		
Are the measurements appropriate?		
Is the risk of nonresponse bias low?		
Is the statistical analysis appropriate to answer the research question?		
Mixed Methods Studies		
Is there an adequate rationale for using a mixed methods design to address the research question?		
Are the different components of the study effectively integrated to answer the research question?		
Are the outputs of the integration of qualitative and quantitative components adequately interpreted?		
Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?		
Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?		

Adapted from Hong QN, Pluye P, Fàbregues S, Bartlett G, Boardman F, Cargo M, Dagenais P, Gagnon M-P, Griffiths F, Nicolau B, O'Cathain A, Rousseau M-C, Vedel I. Mixed Methods Appraisal Tool (MMAT), version 2018. Retrieved from http://mixedmethodsappraisaltoolpublic.pbworks.com
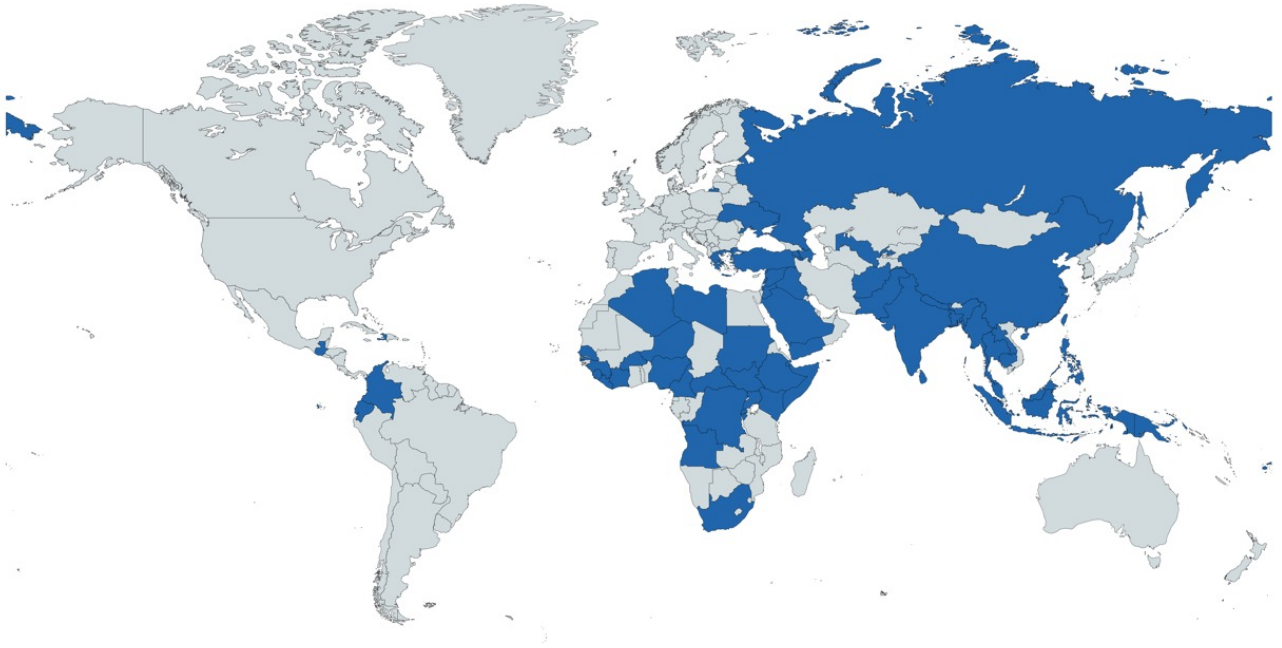
ANNEX 4: LOCATIONS OF RESEARCH INCLUDED IN HHER2 PUBLICATIONS

Locations of Research Included in HHER2 by Region (Number of Articles) *

| Africa	Asia	Europe	Latin America & the Caribbean	Middle East
• Algeria (1) • Angola (1) • Burkina Faso (4) • Burundi (9) • Cameroon (4) • Central African Republic (2) • Cote d'Ivoire (2) • Democratic Republic of the Congo (24) • Djibouti (1) • Ethiopia (6) • Guinea (8) • Kenya (7) • Liberia (6) • Libya (1) • Niger (2) • Nigeria (4) • Rwanda (3) • Sierra Leone (19) • Somalia (8) • South Africa (1) • South Sudan (7) • Sudan (2) • Uganda (13)	• Afghanistan (10) • Bangladesh (11) • Cambodia (2) • China (5) • Fiji (1) • India (1) • Indonesia (5) • Malaysia (3) • Myanmar (2) • Nepal (5) • Pakistan (12) • Philippines (2) • Sri Lanka (1) • Taiwan (1) • Thailand (13)	• Armenia (1) Azerbaijan (1) • Chechnya, Russian Federation (1) • Greece (3) • Ukraine (2)	• Colombia (3) • Ecuador (1) • Guatemala (2) • Haiti (17)	• Iraq (10) • Jordan (16) • Lebanon (16) • Palestine (2) • Syria (4) • Turkey (6) • Yemen (3)

*25 articles reported on evaluations of interventions in multiple countries, 9 of which included countries in multiple regions

Locations of Research Included in All HHER2 Publications
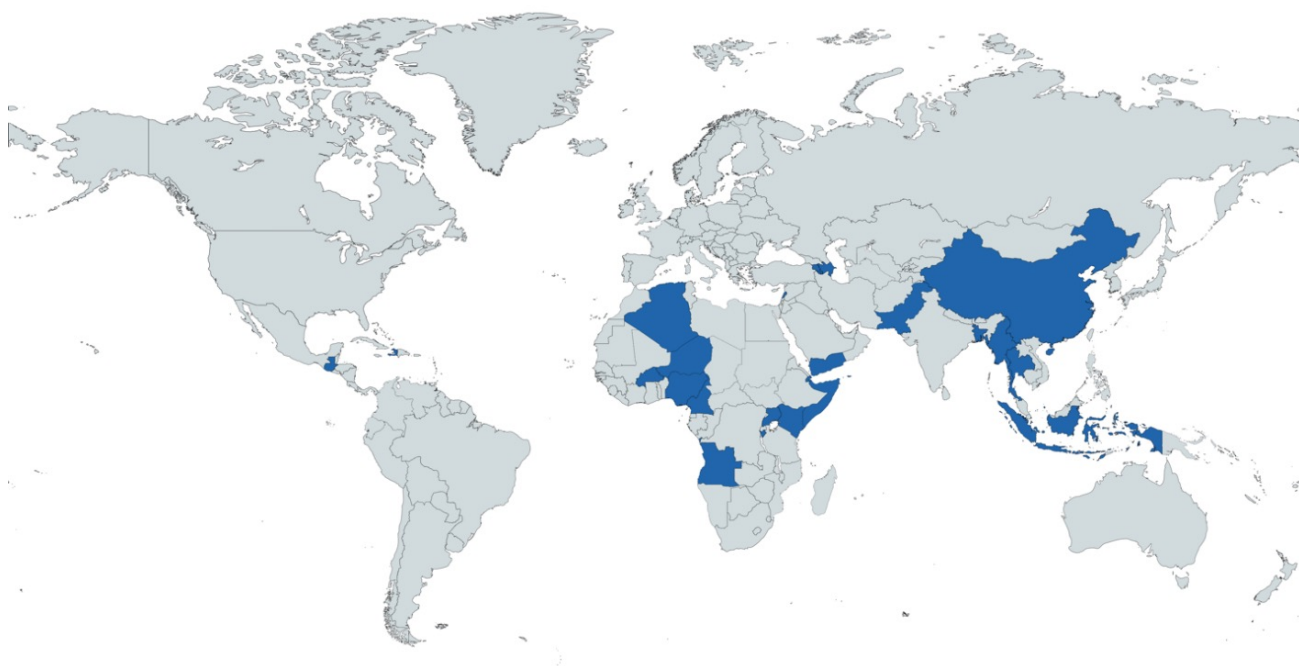

Locations of Research Included in Communicable Disease Control Publications
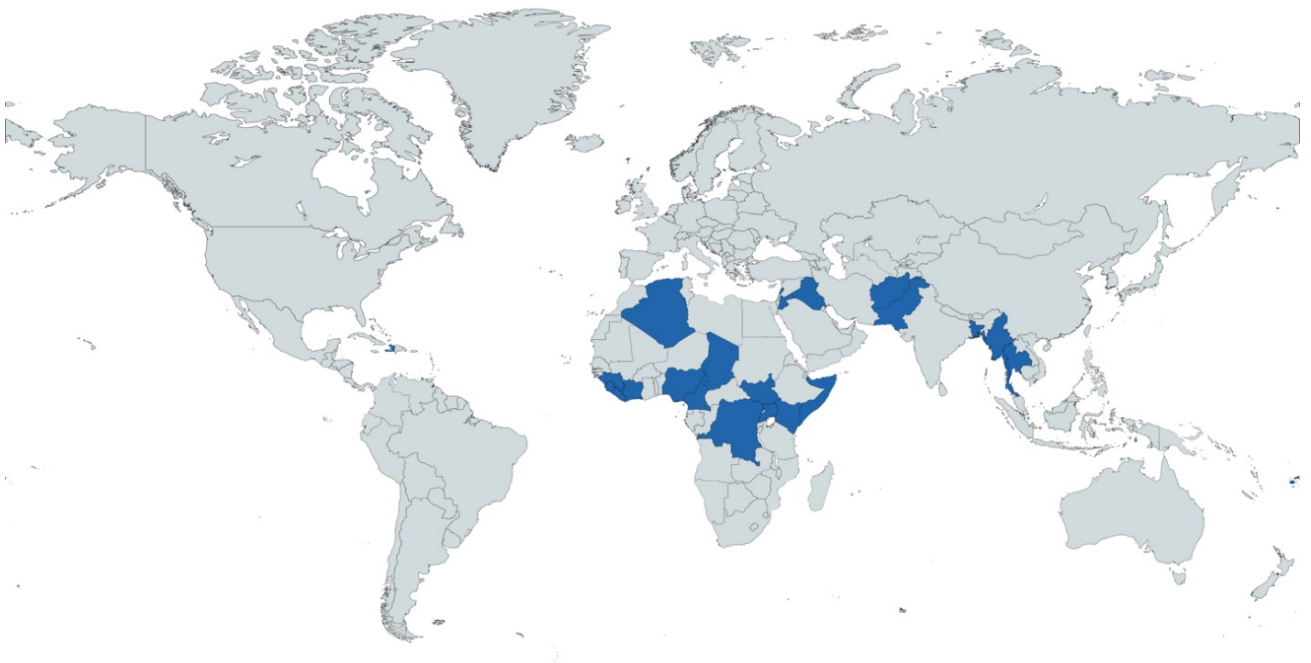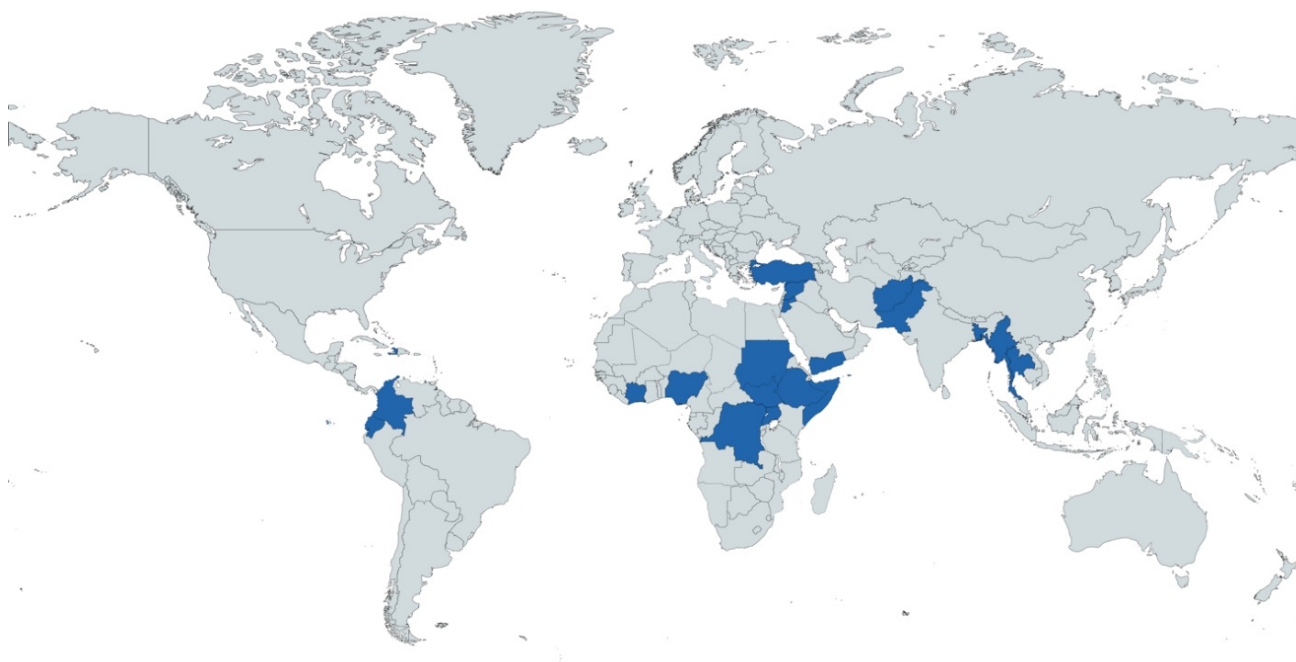
Locations of Research Included in Water, Sanitation, and Hygiene Publications
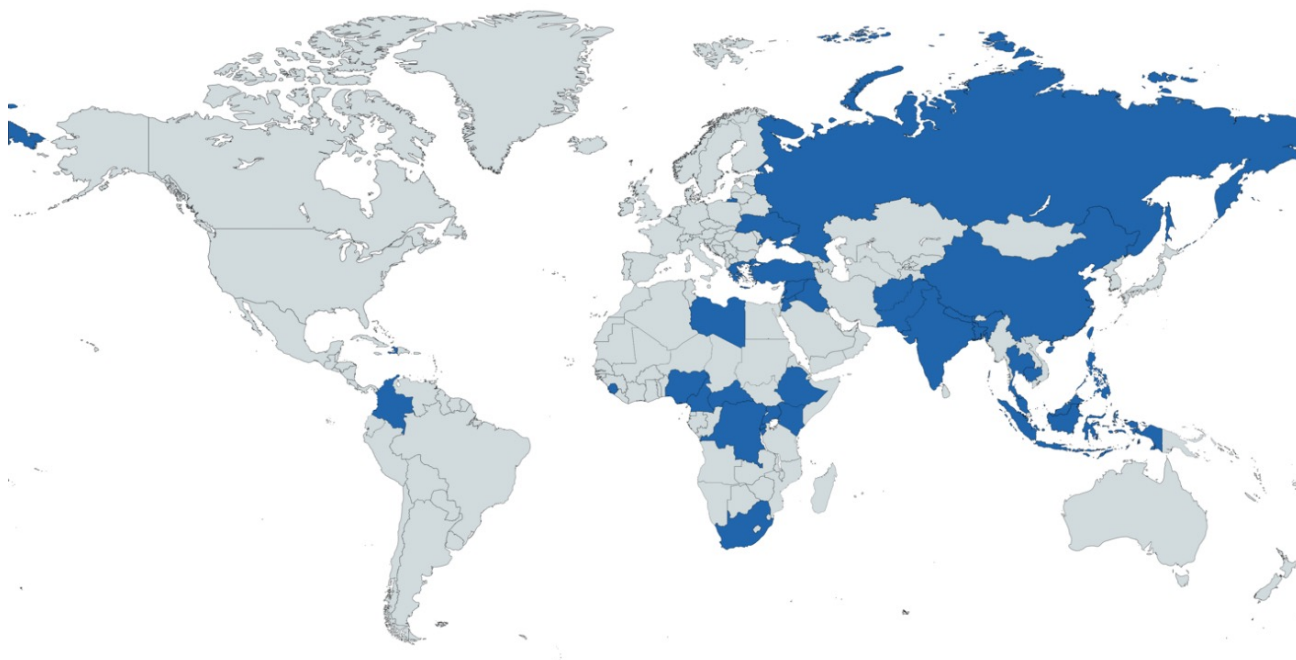

Locations of Research Included in Nutrition Publications

Locations of Research Included in Sexual and Reproductive Health Publications
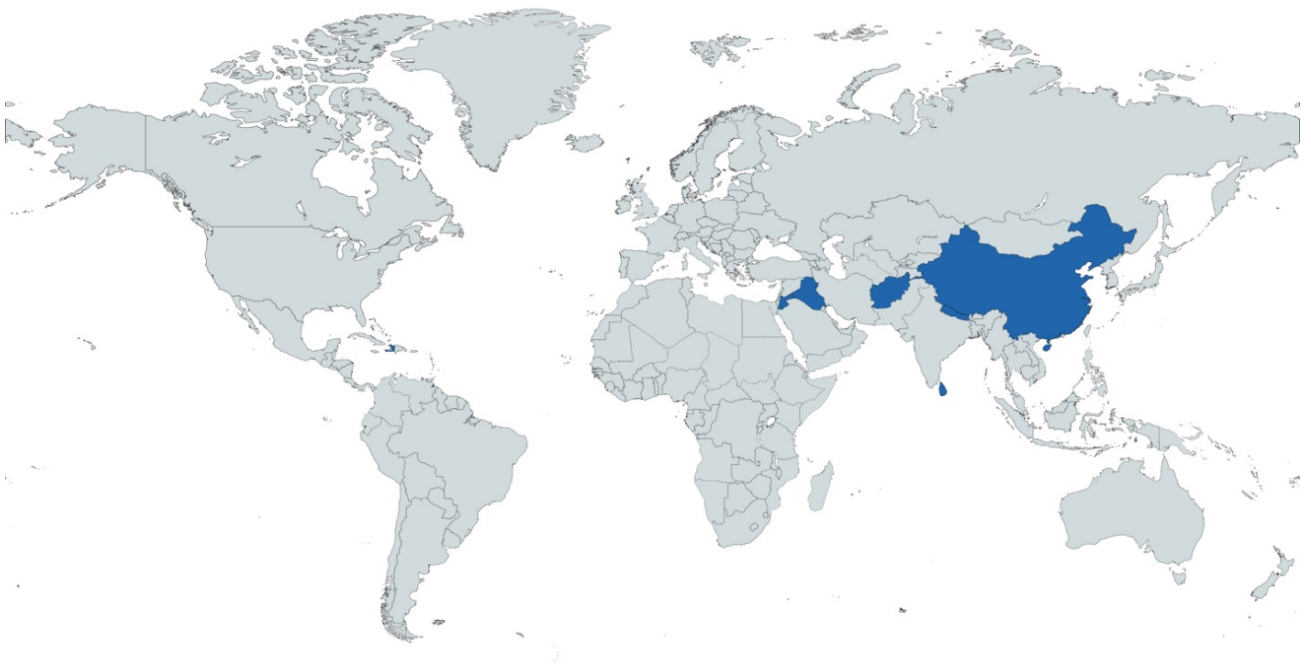

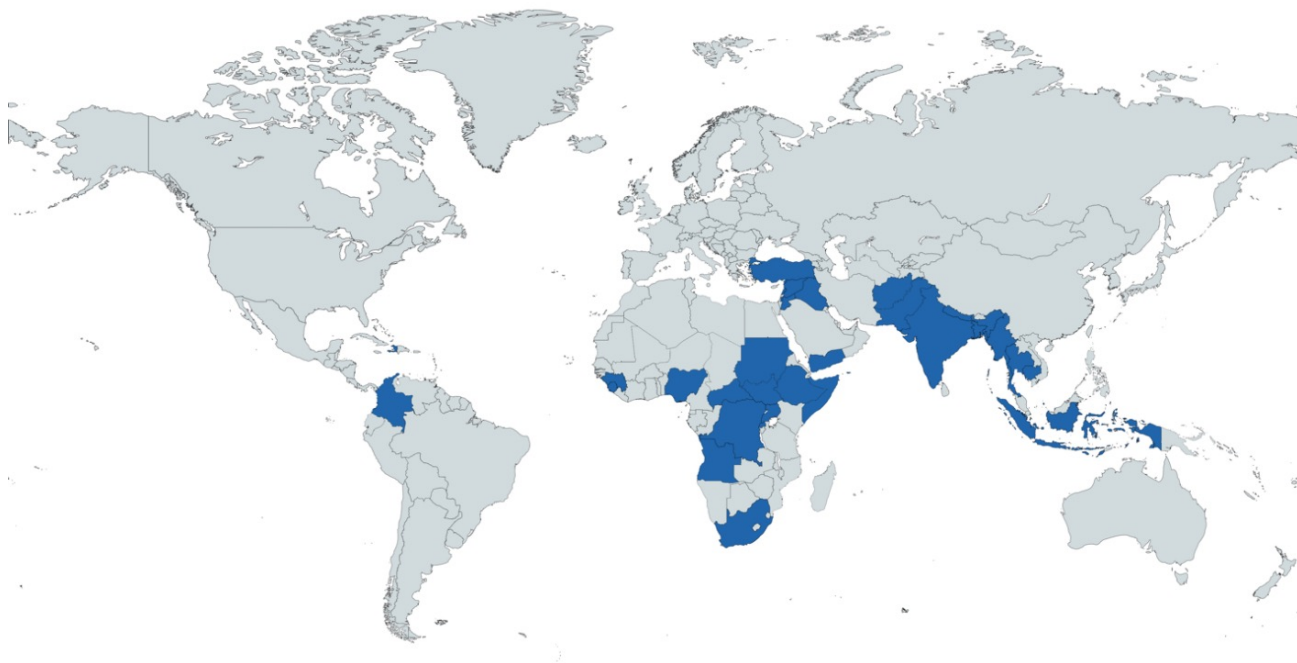## Locations of Research Included in Mental Health and Psychosocial Support Publications

Locations of Research Included in Non-Communicable Disease Publications
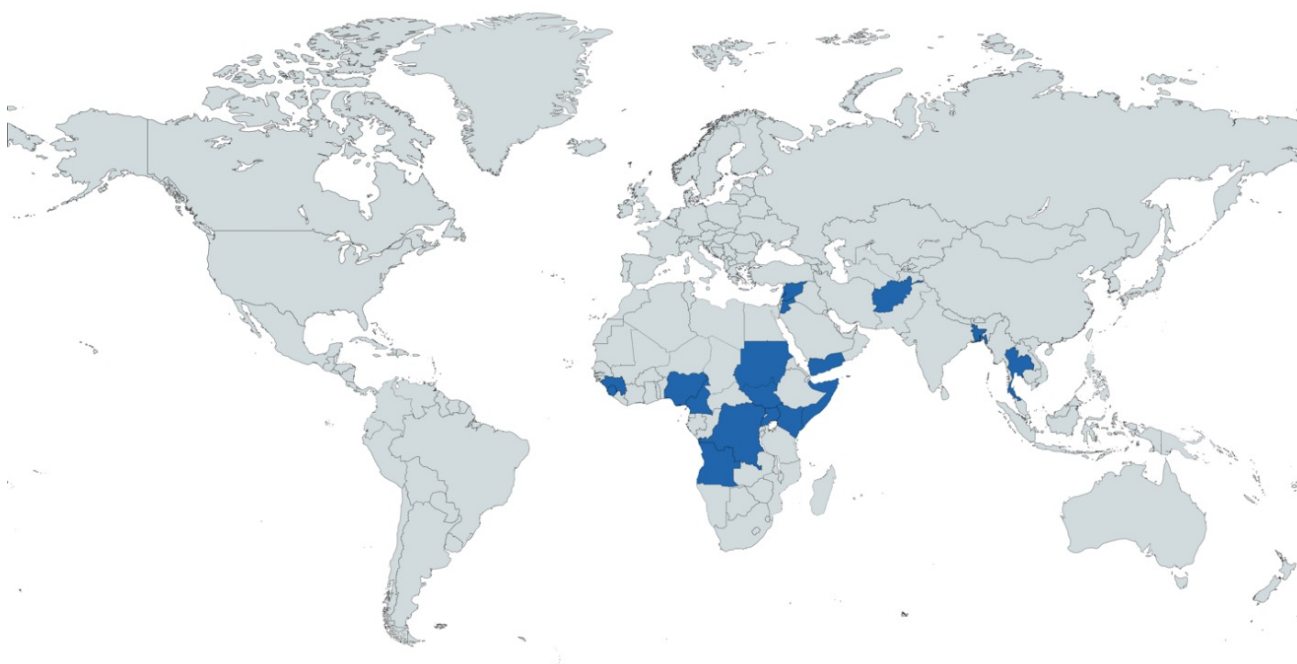

Locations of Research Included in Injury and Rehabilitation Publications

Locations of Research Included in Health Service Delivery Publications

Locations of Research Included in Health Systems Publications

ANNEX 5: STUDY DESIGN AND OUTCOMES OF COMMUNICABLE DISEASE CONTROL INTERVENTION STUDIES

Study Design of Communicable Disease Intervention Studies in Humanitarian Crisis Settings, 2013-2021 (n=70)

Author (Year)	Study Setting & Population	Intervention(s)	Methods
Abdullahi (2020)	**Country:** Nigeria, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp **Population:** Host community, internally displaced	**Description:** Active case finding (ACF) intervention for TB and testing for HIV with linkages to treatment **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - healthcare workers not specified, community mobilizers, camp representatives **Part of broader program:** Yes - multi-stakeholder health improvement collaboration	**Study design:** Observational **Study duration:** 1 year **Sample description:** Intervention - convenience sample among local government areas (LGAs) receiving ACF services Control - LGAs not receiving ACF services **Sample size:** 24 LGAs (12 intervention, 12 control)
Aibana (2013)	**Country:** Haiti, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** 2-phase oral cholera vaccine (OCV) campaign with dissemination of health education information **Implementation site:** Community-based **Personnel type(s):** Lay personnel - members of vaccination team and local media **Part of broader program:** Yes	**Study design:** Observational (pre-post cross-sectional surveys) **Study duration:** 7 months **Sample description:** Households in Bocozel, random selection **Sample size:** 1,329 HHs (811 pre-intervention, 518 post-intervention)

Aluisio (2020)	**Country:** Liberia and Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp **Population:** Emergency affected (non-displaced)	**Description:** Treatment with early third-generation cephalosporin antibiotic treatment (5-day course) in Ebola Treatment Units (ETUs) **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - health practitioners not specified **Part of broader program:** Yes - ETUs providing full-scope care for patients with suspected and confirmed Ebola virus disease (EVD)	**Study design:** Observational (cohort study) **Study duration:** 16 months **Sample description:** Patients admitted alive to 5 participating ETUs with confirmed EVD **Sample size:** 424 patients (360 intervention, 64 control)
Amabo (2019)	**Country:** Cameroon, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** Surveillance system for diarrheal disease **Implementation site:** System-level **Personnel type(s):** Health professional cadre - health personnel not specified, surveillance officer **Part of broader program:** No	**Study design:** Mixed methods (health registers, surveillance reports, key informant interviews) **Study duration:** 2 years **Sample description:** Health staff from the district health office and camp health facilities who conducted epidemiological surveillance activities **Sample size:** 138 surveillance reports, 10 key informant interviews (7 nurses, 2 clinicians, 1 logistician)
Amani (2021)	**Country:** Cameroon, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Reactive single dose oral cholera vaccine (OCV) 5-day mass vaccination campaign **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - vaccination team comprised of vaccinator, recorder, social mobilizer **Part of broader program:** No	**Study design:** Observational **Study duration:** 5-day campaign, 2-year data review period **Sample description:** Overall - people >1 year old, including pregnant women, in 9 high-risk health areas within 4 health districts; independent monitoring - rapid convenience assessment and Lot Quality Assessment Sampling from vaccine-eligible population **Sample size:** 537,274 overall vaccine-eligible population; 4,685 independent monitoring sample

Aregawi (2016)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** 2-round mass drug administration (MDA) for malaria in Ebola-impacted areas **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - health staff not specified and community health workers **Part of broader program:** No	**Study design:** Observational **Study duration:** 5 months **Sample description:** Random sampling of 1 health facility from each intervention (MDA) and control (non-MDA) chiefdom **Sample size:** 48 health facilities (34 intervention, 14 control)
Ashbaugh (2017)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Suspected viral haemorrhagic fever (VHF) reported to the Integrated Disease Surveillance and Response (IDSR) passive surveillance system **Implementation site:** System-level **Personnel type(s):** N/A **Part of broader program:** Yes - IDSR is a national passive surveillance system for reportable diseases	**Study design:** Observational (retrospective analysis) **Study duration:** 8 years **Sample description:** Active (MoH) and passive (IDSR) data for 4 EVD outbreaks that occurred after IDSR implementation **Sample size:** N/A
Azman (2016)	**Country:** South Sudan, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Mass vaccination campaign of a single dose of oral cholera vaccine during a cholera outbreak **Implementation site:** Facility-based **Personnel type(s):** Not specified **Part of broader program:** Yes - cholera outbreak response including WASH, case management, and surveillance activities	**Study design:** Observational (case-cohort) **Study duration:** 2 months **Sample description:** Cases: Age > 1 year at start of vaccination campaign who sought care at a cholera treatment centre; Cohort: Multistage random spatial sampling process divided among vaccinated and unvaccinated areas **Sample size:** Cases: 87 enrolled, 34 confirmed; Cohort: 898 enrolled (373 vaccinated, 525 unvaccinated), 858 completed follow up

Bekolo (2016)	**Country:** South Sudan, regional sample **Crisis type:** Outbreak **Context type:** Camp and non-camp **Population:** Host community, refugee	**Description:** Pre-emptive 2-dose oral cholera vaccine administration during a cholera outbreak **Implementation site:** Facility-based **Personnel type(s):** Not specified **Part of broader program:** No	**Study design:** Observational (retrospective analysis) **Study duration:** 3 months **Sample description:** Cholera patients seen at 41 cholera treatment facilities **Sample size:** 4,115 patients
Boum (2020)	**Country:** Guinea, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Host community	**Description:** 1 dose Ebola vaccine Phase III trial among frontline workers to assess vaccine immunogenicity **Implementation site:** Facility-based **Personnel type(s):** Not specified **Part of broader program:** Yes - sub-study within the Phase III trial	**Study design:** Quasi-experimental study **Study duration:** 17 months **Sample description:** Personnel working in Ebola or non-Ebola health facilities and services **Sample size:** 1,271 enrolled (1,172 vaccinated, 99 non-vaccinated); 1,153 analysed (1,079 vaccinated, 74 non-vaccinated)
Boyd (2019)	**Country:** Jordan and Lebanon, national sample **Crisis type:** Armed Conflict **Context type:** Camp and non-camp (rural and urban) **Population:** Refugee	**Description:** National TB Program (NTP) tuberculosis detection and treatment program, with International Organization for Migration (IOM) support for services provided to Syrian refugees **Implementation site:** System-level **Personnel type(s):** N/A **Part of broader program:** Yes	**Study design:** Observational (retrospective review) **Study duration:** 3 years (Jordan), 1 year (Lebanon) **Sample description:** All TB cases (Lebanon and Jordan) and household contacts for Syrian refugee TB cases (Lebanon only) **Sample size:** Jordan: 1,124 overall (591 native Jordanians, 324 foreign-born non-Syrians, 209 Syrian refugees); Lebanon: 650 overall (297 native Lebanese, 214 foreign-born non-Syrians, 139 Syrian refugees)

Bulabula (2019)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Diagnosis and treatment of rifampicin-resistant TB (RR-TB) **Implementation site:** Community-based, facility-based **Personnel type(s):** Health professional cadre and lay personnel - directly observed therapy (DOT) conducted by nurses and community health workers **Part of broader program:** No	**Study design:** Observational (retrospective cohort) **Study duration:** 5 years **Sample description:** Patients with confirmed TB at 10 TB diagnostic and treatment centres **Sample size:** 1,535 patients
Carias (2016)	**Country:** Guinea, Liberia, and Sierra Leone, national sample **Crisis type:** Outbreak **Context type:** Non-camp **Population:** Emergency affected (non-displaced)	**Description:** Economic feasibility of administering preventive malaria treatment to all contacts of patients with Ebola virus disease (EVD), to prevent the onset of febrile malaria and subsequent admission to Ebola treatment units (ETUs) **Implementation site:** System-level Personnel type: N/A **Part of broader program:** No	**Study design:** Economic evaluation (modelling analysis) **Study duration:** 1 year **Sample description:** N/A **Sample size:** N/A
Casey (2019)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Large scale fractional-dose yellow fever vaccination campaign **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Observational **Study duration:** 1 year **Sample description:** Convenience sample of persons > 2 years old who received fractional-dose vaccination at 6 sites (pregnant women excluded) **Sample size:** 764 enrolled, 716 completed 1 month follow-up, 684 completed 1 year follow-up

Chamla (2018)	**Country:** Nigeria, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Integration of child nutrition screening with polio vaccination campaign **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - vaccinators, nutrition screener, data collectors, supervisors, support staff **Part of broader program:** Yes - combined bivalent oral (bOPV) and inactivated polio vaccination (IPV) campaign	**Study design:** Observational (cross-sectional) **Study duration:** 1 month **Sample description:** Children attending the vaccination campaign (6 weeks-59 months for vaccination, 6-59 months for nutrition screening) in 4 local government areas (LGAs) **Sample size:** 1,698,950 targeted for bOPV, 1,618,354 targeted for IPV, 725,509 targeted for nutrition screening
Coldiron (2017)	**Country:** Uganda, regional sample **Crisis type:** Armed conflict **Context type:** Camp (rural) **Population:** Refugee	**Description:** Implementation of a large-scale intermittent preventive treatment of children (IPTc) program for malaria **Implementation site:** Community-based, facility-based **Personnel type(s):** Not specified **Part of broader program:** No	**Study design:** Observational **Study duration:** 17 months **Sample description:** Children aged 6 months-15 years (provision of dihydroartemisinin-piperaquine (DP) for malaria chemoprevention), systematic household sampling with random selection by age (malaria prevalence surveys), systematic household sampling (program coverage surveys) **Sample size:** 40,611 provided DP, 3,134 surveyed for malaria prevalence, 3,514 surveyed for program coverage

Devine (2017)	**Country:** Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (rural) **Population:** Refugee	**Description:** 3 strategies for prevention of Hepatitis B Virus (HBV) transmission, with universal HBV vaccination of infants in all options: 1. vaccine only, 2. HBIG after positive maternal rapid diagnostic test (RDT), 3. HBIG after positive maternal confirmatory test **Implementation site:** Facility-based **Personnel type(s):** Not specified **Part of broader program:** Yes - provision of antenatal, obstetric, paediatric, and general medical care	**Study design:** Economic evaluation (cost-effectiveness analysis) **Study duration:** 2 years **Sample description:** Pregnant women at clinic sites **Sample size:** 7,071
Doshi (2015)	**Country:** Democratic Republic of Congo, national sample **Crisis type:** Outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Field evaluation of measles vaccine effectiveness among children, using the case-based measles surveillance system **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Observational (case-control) **Study duration:** 3 years **Sample description:** Cases: children aged 12-59 months with confirmed measles and available vaccination history; Controls: children aged 12-50 months with a measles-like illness who tested negative for measles and available vaccination history **Sample size:** 1,044 cases, 1,335 controls
Franke (2018)	**Country:** Haiti, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** 2-dose vaccination campaign of a killed, bivalent, whole-cell oral cholera vaccine in setting with epidemic and endemic cholera **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - vaccinators, medical records registrar, local representative **Part of broader program:** No	**Study design:** Observational (case-control study) **Study duration:** 4 years **Sample description:** Cases: Patients with acute watery diarrhoea presenting to a cholera treatment facility; Controls: Matched to cases by age and location of residence **Sample size:** 884 (178 cases, 706 controls)

Gallandat (2020)	**Country:** Democratic Republic of Congo and Haiti, regional sample **Crisis type:** Outbreak **Context type:** Camp and non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Household spraying programs in cholera outbreaks **Implementation site:** Community-based **Personnel type(s):** Lay personnel - spraying agents **Part of broader program:** Yes - 3 independently occurring spraying programs were evaluated in this study	**Study design:** Mixed methods **Study duration:** 5 months **Sample description:** Household surveys: Participants were enrolled if an adult was present when the spraying team arrived and consented to participate; Key informant interviews: program coordinators and spraying agents **Sample size:** Households surveyed: 14 (5 program A, 5 program B, 4 program C); Surface samples: 418; Key informant interviews: 18
Garbern (2019)	**Country:** Liberia and Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	Description Mass drug administration (MDA) of artesunate-amodiaquine (ASAQ) during an Ebola virus disease (EVD) outbreak **Implementation site:** Community-based, facility-based **Personnel type(s):** Health professional cadre - health workers not specified **Part of broader program:** Yes - 2 MDAs of ASAQ were implemented in 8 of Sierra Leone's 14 districts	**Study design:** Observational (cohort study) **Study duration:** 1 year **Sample description:** 1:1 nearest-neighbour matching without replacement was used for matched cohort analysis; Intervention: Patients admitted to the ETUs during the time period of ASAQ therapeutic effect and whose reported home residence was in a chiefdom that received the MDA were considered exposed to ASAQ; Control: All other patients were presumed not exposed to ASAQ **Sample size:** 424 patients: 22 likely exposed to ASAQ, 402 not exposed to ASAQ
Gargano (2017)	**Country:** South Sudan, regional sample **Crisis type:** Armed conflict **Context type:** Camp (rural) **Population:** Refugee	**Description:** Cost-effectiveness estimation of Haemophilus influenzae type B (Hib)-containing and pneumococcal conjugate (PCV) vaccination among refugee children aged < 2 years **Implementation site:** Community-based **Personnel type(s):** Not specified **Part of broader program:** No	**Study design:** Economic evaluation (modelling analysis) **Study duration:** 1 year **Sample description:** Children aged < 2 years living in Yida camp **Sample size:** Target population 5,781

Gsell (2017)	**Country:** Guinea, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Ring vaccination with rVSV-ZEBOV in response to an outbreak of Ebola virus disease **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - epidemiological team, social mobilizers, others not specified **Part of broader program:** No	**Study design:** Observational (feasibility study) **Study duration:** 5 weeks **Sample description:** Contacts and contacts of contacts identified within each ring (excluded if pregnant, breastfeeding, severely ill, or < 6 years old) **Sample size:** 1,659 contacts of contacts
Habib (2017)	**Country:** Pakistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Community engagement and integrated maternal and child health and polio immunization campaigns: Arm A (control): Routine polio program activities; Arm B: additional interventions including community outreach and mobilization, provision of preventive maternal and child health services and routine immunization including oral polio vaccine (OPV); Arm C: all Arm B interventions with provision of inactivated polio vaccine (IPV) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - supervising medical officers, vaccinators, paramedics, facilitators, other healthcare providers not specified, community mobilizers **Part of broader program:** Yes - Pakistan national polio program	**Study design:** Randomized controlled trial (cluster randomized) **Study duration:** 1 year **Sample description:** Healthy children aged 1 month-5 years who lived within the 3 study areas **Sample size:** Baseline: 387 clusters randomized (131 arm A, 127 arm B, 129 arm C); overall 87,984 children, 28,760 children arm A, 30,098 arm B, 29,126 arm C; endline: 360 clusters (116 arm A, 122 arm B, 122 arm C); overall 75,189 children 23,334 children arm A, 26,110 children arm B, 25,745 children arm C

Howard (2017)	**Country:** Pakistan, regional sample **Crisis type:** Armed conflict **Context type:** Camp (rural) **Population:** Refugee	**Description:** Addition of malaria prevention by indoor residual spraying (IRS) in higher-incidence settlements to routine malaria diagnosis and treatment by case management **Implementation site:** Community-based, facility-based **Personnel type(s):** Health professional cadre and lay personnel - health workers not specified, microscopist, refugee workers **Part of broader program:** No	**Study design:** Economic evaluation **Study duration:** 5 years **Sample description:** Afghan refugees residing in settlements **Sample size:** Year 1 2,402,726 residents; year 5 1,236,325 residents
Ibraheem (2019)	**Country:** Iraq, regional sample **Crisis type:** Armed conflict **Context type:** Camp (urban) **Population:** Internally displaced	**Description:** Treatment of scabies with single and combined topical medications **Implementation site:** Facility-based **Personnel type(s):** Not specified **Part of broader program:** No	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 2 years **Sample description:** Patients aged >18 years with scabies who hadn't received anti-scabies treatment, cluster sample from 7 camps and classified into 7 groups (1 control, 6 treatment) **Sample size:** 195 enrolled (30 for each treatment group, 15 control), 195 analysed

Ivers (2015)	**Country:** Haiti, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Reactive cholera vaccination campaign with oral inactivated bivalent whole-cell vaccine **Implementation site:** Not specified **Personnel type(s):** Not specified **Part of broader program:** No	**Study design:** Observational (case-control study) **Study duration:** Median stay at the cholera treatment unit was 3 days **Sample description:** Cases (vaccination effectiveness (VE) study): Residents of the study area who were eligible for the vaccination campaign and sought treatment with watery diarrhoea confirmed to have cholera; Cases (bias-indicator study): Residents of the study area who were eligible for the vaccination campaign and sought treatment with watery diarrhoea confirmed to not have cholera Controls: individuals who did not seek treatment for diarrhoea **Sample size:** VE study: 48 cholera cases enrolled, 47 analysed; 188 controls analysed; Bias-indicator study: 42 non-cholera cases enrolled and analysed; 168 controls analysed
Jia (2015)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Community cell phone Ebola Haemorrhagic Fever (EHF) syndromic surveillance **Implementation site:** System-level **Personnel type(s):** N/A **Part of broader program:** Yes - Moyamba District Community syndromic surveillance system	**Study design:** Observational **Study duration:** 3 months **Sample description:** Sierra Leonean adults who own a cell phone **Sample size:** Moyamba district **population:** 278,119

Khan (2019)	**Country:** Bangladesh, regional sample **Crisis type:** Armed conflict **Context type:** Camp (urban) **Population:** Refugee	**Description:** Vaccination with measles-rubella (MR) vaccine (children aged 6 months-15 years), oral polio vaccine (OPV) (children aged < 5 years), and oral cholera vaccine (OCV) (all > 1 year, with 2 doses for children 1-5 years) **Implementation site:** Community-based **Personnel type(s):** Not specified **Part of broader program:** No	**Study design:** Observational **Study duration:** 1 week **Sample description:** Random cluster sample of Balukhali camp residents **Sample size:** 40,779 target population, 39,438 interviewed
Kuehne (2016)	**Country:** Liberia, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Mass drug administration (MDA) of artesunate/amodiaquine malaria chemoprevention (ASAQ-CP) distributed in 2 rounds during an Ebola outbreak **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - distribution team not specified, community volunteers **Part of broader program:** No	**Study design:** Observational **Study duration:** 3 months **Sample description:** Households that received the MDA (random selection of every 200th recipient) **Sample size:** 365 selected, 222 participated
Kunkel (2019)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Health facility (HF)-based active case finding (ACF) surveillance system for control of Ebola Virus Disease (EVD) transmission **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - doctors and nurses **Part of broader program:** Yes	**Study design:** Observational **Study duration:** 4 weeks **Sample description:** Health facilities (HFs) and records for all consultations **Sample size:** 113 HFs; 37,746 consultation records

Lee (2016)	**Country:** Guinea, national sample **Crisis type:** Outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** National Call centre and local alert system for detection of new cases of Ebola Virus Disease (EVD) **Implementation site:** System-level **Personnel type(s):** Lay personnel - call centre operators and dispatch team **Part of broader program:** No	**Study design:** Observational **Study duration:** 9 months **Sample description:** National viral haemorrhagic fever (VHF) database of all persons tested for EVD and all known, confirmed EVD cases **Sample size:** 17,309 alert calls analysed
Li (2016)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Community-based strategy to interrupt Ebola Virus Disease (EVD) transmission (widespread community-based education and field-operational intensified control measures) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - disease surveillance officers, contact tracers, support staff, social mobilizers **Part of broader program:** No	**Study design:** Observational **Study duration:** 6 months **Sample description:** No inclusion/exclusion criteria reported **Sample size:** Not specified
Logie (2014)	**Country:** Haiti, regional sample **Crisis type:** Environmental disaster **Context type:** Camp and non-camp (urban) **Population:** Internally displaced	**Description:** FASY (Women Taking Action for Their Health) psychoeducational HIV/STI prevention sessions based on content from the Population Council's All in One Curriculum: A Unified Approach to Sexuality, Gender, HIV and Human Rights Education **Implementation site:** Community-based **Personnel type(s):** Lay personnel - community health workers (CHWs) **Part of broader program:** No	**Study design:** Observational (cross-sectional survey) **Study duration:** 1 month **Sample description:** Residents aged > 12 months, cluster sampling with population proportional to size **Sample size:** 5,248 surveys completed (3,993 in Boffa, 1,255 in Forecariah)

Luquero (2013)	**Country:** Guinea, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Mass vaccination campaign of 2-dose oral cholera vaccine (OCV) during a cholera epidemic **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - vaccination team not specified **Part of broader program:** Yes - cholera epidemic response	**Study design:** Observational (retrospective matched case-control) **Study duration:** 8 months **Sample description:** Case: Acute flaccid paralysis (AFP) in a child aged <15 years or any paralytic illness in a person of any age with polio suspected; Control: NPAFP controls: non-polio AFP control matched by age, date of onset of paralysis and region; neighbourhood controls: 2 asymptomatic household or neighbourhood contacts, matched by age **Sample size:** 198 (99 cases and 99 NPAFP controls); 396 (132 cases and 264 neighbourhood controls)
Mahamud (2014)	**Country:** Somalia, national sample **Crisis type:** Outbreak **Context type:** Camp and non-camp (rural and urban) **Population:** Emergency affected (non-displaced), host community, internally displaced	**Description:** Oral polio vaccination (OPV) through the Expanded Programme on Immunization, provided routinely through a network of health facilities and supplementary immunization activities **Implementation site:** Not specified **Personnel type(s):** N/A **Part of broader program:** Yes - Expanded Programme on Immunization	**Study design:** Observational (descriptive diagnostic performance evaluation) **Study duration:** Not specified (samples collected during 2018-2019 outbreak) **Sample description:** Blood samples obtained by venous blood draw collected from suspected EVD patients **Sample size:** 928 samples tested with both QuickNavi-Ebola and GeneXpert
Martinez-Pino (2013)	**Country:** Guinea, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Cholera rapid diagnostic test (RDT) use during a mass vaccination campaign during an outbreak **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - vaccination team not specified **Part of broader program:** Yes - cholera epidemic response	**Study design:** Observational **Study duration:** Not specified (participants recruited on 2 days and followed for maximum of 7 days) **Sample description:** residents aged >= 1 year, systemic sampling method used at randomly selected vaccination sites **Sample size:** 108 enrolled, 106 analysed

Mbaeyi (2018)	**Country:** Somalia, national sample **Crisis type:** Outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Village Polio Volunteers (VPV) program for poliovirus surveillance **Implementation site:** Community-based **Personnel type(s):** Lay personnel - local trained volunteers **Part of broader program:** No	**Study design:** Observational **Study duration:** 5 years **Sample description:** N/A **Sample size:** N/A
Mesic (2020)	**Country:** Afghanistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Treatment and care of patients with rifampin-resistant tuberculosis (RR-TB) **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Observational (retrospective cohort study) **Study duration:** 3 years **Sample description:** Patients with treatment initiated for RR-TB **Sample size:** 146 enrolled in care, 112 started treatment, 77 with treatment outcome
Metuge (2021)	**Country:** Cameroon, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp **Population:** Emergency affected (non-displaced)	**Description:** Community based surveillance (CBS) to identify outbreak prone diseases (OPD) compared to the District Health Service (DHS) facility-based surveillance **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - medical doctors, nurses, community health workers (CHW) **Part of broader program:** Yes	**Study design:** Observational **Study duration:** 11 months **Sample description:** N/A **Sample size:** N/A
Michel (2019)	**Country:** Haiti, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Case-area targeted response interventions (CATI) for cholera **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - WaSH rapid response teams, nurses, auxiliary nurses **Part of broader program:** Yes	**Study design:** Observational **Study duration:** 3 years **Sample description:** 10,428 suspect cases (including 2,144 cases with reported severe dehydration, 360 positive stool cultures, 3,343 complete CATIs) **Sample size:** see above

O'Laughlin (2014)	**Country:** Uganda, regional sample **Crisis type:** Armed conflict **Context type:** Camp (rural) **Population:** Host community, refugee	**Description:** 12-week communication intervention to improve linkage to HIV care **Implementation site:** Facility-based **Personnel type(s):** Lay personnel - research assistants **Part of broader program:** Yes - primary health centre based in refugee settlement	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 20 months **Sample description:** Refugees and Ugandan nationals partaking in routine voluntary clinic-based HIV testing, found to be HIV+ and with mobile phone access **Sample size:** 208 enrolled (101 intervention, 107 control)
O'Laughlin (2020)	**Country:** South Sudan, regional sample **Crisis type:** Armed conflict **Context type:** Camp (urban) **Population:** Internally displaced	**Description:** Integration of immunization services into nutrition sites to improve children's immunization status **Implementation site:** Community-based, facility-based **Personnel type(s):** Health professional cadre and lay personnel - vaccinators, community nutrition volunteers **Part of broader program:** Yes - Expanded Program on Immunization	**Study design:** Observational **Study duration:** 1 year **Sample description:** All children under 5 years seen at the outpatient therapeutic program (OTP) centres and during nutrition community outreaches, purposive sampling of OTP centres **Sample size:** 4,358 enrolled (1,646 sector 2, 2,712 sector 5)
Oladeji (2019)	**Country:** South Sudan, regional sample **Crisis type:** Armed conflict **Context type:** Camp (urban) **Population:** Internally displaced	**Description:** Integration of immunization services into nutrition sites to improve children's immunization status **Implementation site:** Community-based, facility-based **Personnel type(s):** Health professional cadre and lay personnel - vaccinators, community nutrition volunteers **Part of broader program:** Yes - Expanded Program on Immunization	**Study design:** Observational **Study duration:** 1 year **Sample description:** All children under 5 years seen at the outpatient therapeutic program (OTP) centres and during nutrition community outreaches, purposive sampling of OTP centres **Sample size:** 4,358 enrolled (1,646 sector 2, 2,712 sector 5)

Ope (2017)	**Country:** Kenya, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (urban) **Population:** Refugee	**Description:** Field performance of ImmunoCard STAT! (ICS-RV) rapid diagnostic test for rotavirus **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - surveillance clerks **Part of broader program:** No	**Study design:** Observational **Study duration:** 7 months **Sample description:** Children aged < 5 years hospitalized with acute diarrhoea **Sample size:** 213 enrolled, 213 analysed
Ousman (2019)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Healthcare worker (HCW) training in infection prevention and control (IPC), provision of IPC kits and mentoring on IPC compliance in non-Ebola health care facilities (HCFs) **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - IPC specialists **Part of broader program:** No	**Study design:** Observational (pre-post) **Study duration:** 5 weeks **Sample description:** HCWs at 48 participating HCFs in 3 health zones **Sample size:** 878 HCWs trained; 48 HCFs (5 hospitals, 20 medical centres, 23 health centres)
Parker (2017)	**Country:** South Sudan, regional sample **Crisis type:** Outbreak **Context type:** Camp and non-camp (urban) **Population:** Emergency-affected (non-displaced), host community, internally displaced	**Description:** Neighbourhood-targeted and case-triggered use of a single dose of oral cholera vaccine (OCV) in 3 target areas **Implementation site:** Community-based, facility-based **Personnel type(s):** Health professional cadre and lay personnel - vaccinators, registrars, security guards, health promoters, team supervisors **Part of broader program:** Yes - broader cholera response	**Study design:** Observational **Study duration:** 1 month **Sample description:** Neighbourhood-targeted coverage survey: random sample of households using by stratified spatial sampling; Case-triggered coverage survey: spatially random points selected within 350 meters of suspected case households, 1 person from household selected at random **Sample size:** neighbourhood-based coverage survey 371 households and 2,662 individuals; case-triggered coverage survey 390 individuals

Ratnayake (2016)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Infection prevention and control **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre and lay personnel - HCWs, district health officials, community health officers, and community representatives **Part of broader program:** Yes	**Study design:** Mixed methods **Study duration:** 3 weeks **Sample description:** HCWs surveyed at peripheral health units (PHUs) **Sample size:** 35 HCWs at 8 PHUs
Rebaudet (2019)	**Country:** Haiti, national sample **Crisis type:** Outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Nationwide case-area targeted interventions (CATIs) cholera response strategy **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - local Haitian staff and MOH response teams **Part of broader program:** Yes	**Study design:** Observational **Study duration:** 4 years **Sample description:** Weekly cholera alerts **Sample size:** 7,856 weekly alerts (31,306 notified CATIs)
Routh (2017)	**Country:** Haiti, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Government-conducted oral cholera vaccine (OCV) campaign **Implementation site:** Community-based, facility-based **Personnel type(s):** Health professional cadre and lay personnel - vaccinators, record-keepers, announcers, supervisors **Part of broader program:** Yes - broader cholera response	**Study design:** Economic evaluation **Study duration:** 6 months **Sample description:** Non-pregnant residents aged >= 1 year **Sample size:** Target population 107,906 (20,917 in Cerca Carvajal, 86,989 in Petite Anse)

Sahr (2017)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Convalescent whole blood (CWB) to treat Ebola virus disease **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre **Part of broader program:** Yes - Ebola treatment centres	**Study design:** Quasi-experimental study (non-randomized trial) **Study duration:** 5 months **Sample description:** Patients being treated for EVD at study facilities **Sample size:** 69 patients enrolled (44 intervention, 25 control); 68 analysed (43 intervention, 25 control)
Scobie (2014)	**Country:** Fiji, national sample **Crisis type:** Environmental disaster **Context type:** Not specified **Population:** Emergency affected (non-displaced)	**Description:** Targeted typhoid vaccination campaign following a cyclone **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - nurse vaccinators, village health workers, drivers **Part of broader program:** Yes	**Study design:** Observational **Study duration:** 4 years **Sample description:** Persons aged >= 2 years **Sample size:** 16 targeted medical areas, target population of 65,294 persons
Scobie (2016)	**Country:** Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** Shanchol oral cholera vaccine (OCV) campaign **Implementation site:** Community-based **Personnel type(s):** Not specified **Part of broader program:** No	**Study design:** Observational (pre-post test) **Study duration:** 16 months **Sample description:** Households in Maela camp at least 1 month before study **Sample size:** Baseline 271 HHs, 1st follow-up 187 HHs, 2nd follow-up 199 HHs
Semper (2016)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Not specified **Population:** Emergency affected (non-displaced)	**Description:** GeneXpert Ebola assay for diagnosis of Ebola virus disease **Implementation site:** Laboratory-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Observational **Study duration:** 4 months **Sample description:** Clinical venipuncture whole blood (WB) and buccal swab (BS) specimens **Sample size:** 289 specimens received (218 WB, 71 BS); 275 specimens with valid GeneXpert and Trombley results for analysis (211 WB, 64 BS)

Senga (2017)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Contact tracing during an Ebola virus disease (EVD) outbreak **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - surveillance officers, contract tracers **Part of broader program:** Yes - Ebola containment efforts	**Study design:** Observational (retrospective analysis) **Study duration:** 4 months **Sample description:** Probable and confirmed EVD cases and their contacts **Sample size:** 449 cases, 2,525 contacts
Severe (2016)	**Country:** Haiti, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Oral cholera vaccine (OCV) campaign during a cholera outbreak **Implementation site:** Community-based, facility-based **Personnel type(s):** Health professional cadre and lay personnel - vaccinators, registrars, announcers **Part of broader program:** Yes - comprehensive cholera prevention and care	**Study design:** Observational **Study duration:** 37 months **Sample description:** Patients admitted to study hospital with acute watery diarrhoea **Sample size:** 3,255 patients with acute diarrhoea (673 from vaccinated area, 2,582 outside vaccinated area); 70,000 residents in catchment area (52,357 vaccinated, 17,643 unvaccinated)
Sheele (2015)	**Country:** Haiti, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Addition of saccharomyces boulardii and bismuth subsalicylate (BS) to standard cholera treatment, with the following treatment arms: 1. S. boulardii capsule + placebo capsule, 2. S. boulardii capsule + 2 BS tablets, 3. 2 BS tablets + placebo capsule, 4. 2 placebo capsules **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre and lay personnel - physician, nurse, recorder **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 1 month **Sample description:** Persons aged 12-89 years with onset of cholera symptoms for <3 days and no medications taken to treat cholera, randomized to treatment arm **Sample size:** 100 enrolled (26 arm 1, 25 arm 2, 25 arm 3, 24 arm 4), 100 analysed

Sozzi (2015)	**Country:** Haiti, regional sample **Crisis type:** Environmental disaster, outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Disinfection of CTC wastewater **Implementation site:** Facility-based **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Quasi-experimental study (non-randomized trial) **Study duration:** N/A **Sample description:** N/A **Sample size:** N/A
Spina (2018)	**Country:** Chad, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Chlorination of water supplies, hygiene promotion, and hygiene kit distribution **Implementation site:** Community-based **Personnel type(s):** Lay personnel - outreach workers **Part of broader program:** Yes	**Study design:** Observational (cross-sectional study) **Study duration:** 2 months **Sample description:** Households with females over the age of 18 years living in Am Timan **Sample size:** 395 survey respondents, 392 analysed
Stehling-Ariza (2016)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** 1-day active surveillance and health education for an Ebola virus disease cluster, with follow-up outreach **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - surveillance officers, community health workers, ambulance personnel, district leaders **Part of broader program:** Yes	**Study design:** Observational **Study duration:** 3 months **Sample description:** Laboratory-confirmed Ebola cases **Sample size:** 50 cases
Strecker (2015)	**Country:** Guinea, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Use of capillary blood samples as a collection specimen for the rapid diagnosis of Ebola virus disease **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - medical health personnel not specified, laboratory personnel **Part of broader program:** Yes - Ebola treatment centre	**Study design:** Observational **Study duration:** 2 months **Sample description:** Patient presenting with symptoms compatible with the WHO case definition for EVD **Sample size:** 60 blood samples analysed (60 capillary blood samples, 60 corresponding venous blood samples)

Swanson (2018)	**Country:** Liberia, national sample **Crisis type:** Outbreak **Context type:** Non-camp (urban and rural) **Population:** Emergency affected (non-displaced)	**Description:** Contact tracing during an Ebola outbreak **Implementation site:** Community-based **Personnel type(s):** Lay personnel - contact tracers **Part of broader program:** Yes - Liberian Ministry of Health national task force	**Study design:** Observational (retrospective descriptive analysis) **Study duration:** 14 months **Sample description:** Records for EVD case contacts in 6 counties **Sample size:** 25,830 records for contact
Theocha-ropoulos (2017)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Opening of an Ebola management centre (EMC) to improve geographic accessibility in Tonkolili district **Implementation site:** System-level **Personnel type(s):** Health professional cadre - doctors and nurses **Part of broader program:** Yes - EMC network in the region	**Study design:** Observational (retrospective cohort study) **Study duration:** 7 months **Sample description:** Residents who were confirmed EVD cases referred or admitted to 1 of 3 EMCs **Sample size:** 372 residents presented to an EMC (360 admitted, 12 dead on arrival), 249 admitted patients confirmed as EVD cases, 10 patients dead on arrival confirmed as EVD cases
Thomson (2015)	**Country:** Haiti, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Membrane filtration for detection of Vibrio cholerae for the measurement of biosand filter performance **Implementation site:** N/A **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Observational (descriptive field evaluation) **Study duration:** N/A (several months) **Sample description:** Biosand filters in the Artibonite Valley of Haiti **Sample size:** 50

Van Boetzelaer (2020)	**Country:** Bangladesh, regional sample **Crisis type:** Armed conflict **Context type:** Camp (urban) **Population:** Refugee	**Description:** Active indicator-based community-based surveillance system (CBS) to detect epidemic prone disease early for rapid response **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - surveillance workers, Epi Alert Team, Medical Response Team **Part of broader program:** Yes	**Study design:** Observational **Study duration:** 6 months **Sample description:** All HHs in catchment areas **Sample size:** average 97,340 HHs per CBS surveillance cycle (with average of 548,739 persons)
Vogt (2015)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Triage algorithm for admitted patients at an Ebola management centre, classifying patients as suspect or highly suspect and admitting to separate wards **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - not further specified **Part of broader program:** Yes	**Study design:** Observational (descriptive evaluation) **Study duration:** 3 months **Sample description:** Records from all patients who fulfilled Ebola virus disease case definition and were admitted to the study EMC **Sample size:** 433 admitted patients: 254 highly suspect and 179 suspect
Walker (2015)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Quantitative rapid diagnostic test (RDT) for identification of Ebola virus **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - phlebotomists, local healthcare workers **Part of broader program:** No	**Study design:** Observational (cohort study) **Study duration:** 1 month **Sample description:** Patients admitted to Ebola Holding Units suspected of EVD **Sample size:** 138 enrolled, 131 analysed (both RDT and PCR)

| Xu (2020) | **Country:** Myanmar, regional sample
Crisis type: Armed conflict
Context type: Camp (rural)
Population: Internally displaced | **Description:** Directly-observed chloroquine-primaquine (CQ/PQ) treatment for uncomplicated acute Plasmodium vivax malaria
Implementation site: Community-based, facility-based
Personnel type(s): Health professional cadre - health clinic staff not specified, microscopists
Part of broader program: No | **Study design:** Observational
Study duration: 33 months
Sample description: Patients aged 3-59 years who presented with fever or history of fever within the last 48 h and symptoms suggestive of malaria to the 2 clinics serving the IDP settlements, found to have P. vivax
Sample size: 281 enrolled (274 at day 7 follow-up, 263 at day 14 follow-up, 260 at day 28 follow-up) |
| No author listed (2014) | **Country:** Kenya, regional sample
Crisis type: Outbreak
Context type: Camp and non-camp (rural)
Population: Host community, refugee | **Description:** Combined use of inactivated (IPV) and oral poliovirus (OPV) vaccines in a large-scale campaign in refugee camps and host communities
Implementation site: Community-based, facility-based
Personnel type(s): Health professional cadre and lay personnel - healthcare workers, volunteers
Part of broader program: No | **Study design:** Observational
Study duration: Not specified (study activities referenced in 2 consecutive months)
Sample description: Children aged 0-59 months who lived in 5 refugee camps and surrounding communities, cluster sampling with convenience sample for nomadic families
Sample size: 1,286 households surveyed; information available for 2,161 children in 1,016 households |

Outcomes of Communicable Disease Intervention Studies in Humanitarian Crisis Settings, 2013-2021 (n=70)

Author (Year)	Health Outcome(s)	Main Results	Risk of Bias
Abdullahi (2020)	• TB lab testing results in intervention LGAs • Change in TB case notifications • Comparative interrupted time series analysis of notification rates	**TB lab testing results:** # people tested baseline 15,996, intervention 28,321; # people tested positive (B+) baseline 1,806, intervention 2,726; positive yield baseline 11.3%, intervention 9.6% (50.9% change in cases detected) **Change in TB case notifications:** all forms of TB intervention +552 (+16.5%), control -66 (-6.3%); B+ TB intervention +847 (+45.1%), control -73 (-9.2%) **Notification rates (95% CI):** all forms TB incidence rate ratio (IRR) 1.136 (1.072-1.204, p<0.001); bacteriologically positive TB IRR 1.141 (1.058-1.229, p=0.001)	High
Aibana (2013)	• Knowledge of cholera transmission • Knowledge of means of avoiding cholera • Knowledge of means of water treatment • % always treating water • % wash hands with soap and water >4 times a day	**Post- vs. pre-intervention OR (95% CI):** **Transmission knowledge:** 1.91 (1.52-2.40, p<0.0001) **Avoidance knowledge:** 1.83 (1.46-2.30, p<0.0001) **Water treatment knowledge:** 2.75 (2.16-2.50, p<0.0001) **Always treat water:** 1.62 (1.28-2.05, p<0.0001) **Wash hands >4/day:** 1.30 (1.03-1.64, p=0.03)	High
Aluisio (2020)	• Observed mortality during ETU care • Mortality likelihood by odds ratio (conditional logistic regression) and relative risk (bootstrap analysis)	**(95% CI):** **Observed mortality:** overall mortality 57.5%; mortality intervention 54.7% (49.6-59.8), control 73.4% (61.5-82.7) (p<0.005) **Mortality likelihood:** OR=0.48 (0.32-0.71, p=0.01), RR=0.82 (0.64-1.16, p=0.11)	Low

Amabo (2019)	• Simplicity (standardized case definition correctly stated by key informants [expected ≥80%], disease notification sheet is easy to fill in and available [≥80%], next level of data transmission is clearly defined [≥80%], cases are easy to recognize based on case definition [≥80%]; average time spent filling in disease notification report [≤10 min]) • Data quality (% unknown or blank responses on weekly notification sheets [≤10%]; case definitions used; clear hardcopy of surveillance forms available; % weekly surveillance forms signed twice [≥80%]) • Acceptability (completeness of surveillance forms ≥90%; timeliness of surveillance forms ≥80%; % personnel participating in surveillance ≥80%; % key informants that consider surveillance activities part of their routine work ≥90%) • Sensitivity (% suspected cases identified when reviewing logbooks and reported to next level [≥80%]) • Representativeness (% weekly reports sent by camp's surveillance sites [≥90%]) • Timeliness (% reports transmitted to district on time [≥80%]) • Stability (availability of a focal person for surveillance; % personnel trained for disease surveillance [≥80%]; % surveillance reports archived [≥80%]; availability of revised Integrated Disease Surveillance Guide & other data collection tool)	**Simplicity** score = 2 (simple if >=4): Standardized case definition correctly stated by key informants = 20%; Disease notification sheet easy to fill in & available = 100%; Next level of data transmission clearly defined = 100%; Cases are easy to recognize by case definition = 70%; Average time spent filling in disease notification report = 35 min **Flexibility** score = 1 (flexible if >=1): IDSR report sheet allows for notification a disease/event other than diarrheal disease = Yes **Data quality** score = 2 (data quality good if >=3): % 'unknown' or 'blank' responses on weekly notification sheets =3%; Case definitions used = No; Clear hardcopy of surveillance forms available = Yes; % weekly surveillance forms signed twice = 0% **Acceptability** score = 3 (acceptable if ≥1): Completeness of surveillance forms ≥90% = Yes; Timeliness of surveillance forms ≥80% = No; % personnel participating in surveillance ≥80% = Yes; % key informants that consider surveillance activities part of their routine work ≥90% = Yes) **Sensitivity** score = 1 (sensitive if = 1): % suspected cases identified when reviewing logbooks and reported to next level = 100% **Representativeness** score = 1 (representative if = 1): (% weekly reports sent by camp's surveillance sites from 2014 to 2015 = 100% **Timeliness** score = 0 (reactive if = 1): % weekly reports transmitted to district on time from 2014 to 2015 = 66% **Stability** score = 1 (stable if ≥3): Availability of a focal person for surveillance = Yes; % personnel trained for disease surveillance = 70%; % surveillance reports archived =70%] Availability of revised Integrated Disease Surveillance Guide and other data collection tool = No	Moderate
Amani (2021)	• Vaccination coverage: overall and independent monitoring • Vaccination management: wastage rate • Cholera incidence	**Vaccination coverage:** overall 99.9%, independent monitoring 97.2% **Wastage rate:** 0.0011% **Cholera incidence:** regional level baseline 10.5 cases per week, endline 9.3 cases per week; Garoua baseline 5.3, endline 2.1;	Unclear

		Garoua II baseline 2.3, endline 1.7; Tchollire baseline 0.6, endline 0; Pitoa baseline 1.7, endline 1.5; cases per 1000 baseline OCV zones 0.32, non-OCV zones 0.31; endline OCV zones 0.37, non-OCV zones 0.53 (p=1.4, a=0.05)	
Aregawi (2016)	• Intervention coverage (MDA chiefdoms) • Change from pre-MDA period to post-MDA period (MDA and non-MDA chiefdoms, cited by weeks 1-4): # of suspected malaria cases tested with rapid diagnostic testing (RDT), RDT test positivity rate (TPR), total malaria (clinical + confirmed) cases, proportion of malaria cases among all outpatients, proportion of malaria cases among all inpatients, Ebola alerts	**Intervention coverage:** round 1 87%, round 2 96% **% change in post-MDA weeks (95% CI, *=statistically significant):** **# of suspected malaria cases tested with RDT:** MDA chiefdoms round 1 week 1 -43* (-38 to -48), week 2 -41*, week 3 -36*, week 4 -6; round 2 week 1 -39*, week 2 -16*, week 3 -31*, week 4 +23; non-MDA chiefdoms round 1 week 1 -23* (-17 to -30%), week 2 -11*, week 3 -50*, week 4 -44*; round 2 week 1 -43*, week 2 -44*, week 3 -36*, week 4 -51* **RDT TPR:** MDA chiefdoms round 1 week 1 -6*, week 2 -35%* (-32 to -38), week 3 -25*, week 4 -29*; round 2 week 1 -22*, week 2 -35*, week 3 -34*, week 4 -34*; non-MDA chiefdoms round 1 week 1 -8*, week 2 +4, week 3 +8, week 4 +16*; round 2 week 1 -14*, week 2 +17, week 3 -7, week 4 +6 **Total malaria cases:** MDA chiefdoms round 1 week 1 -45* (-39 to -52), week 2 -43*, week 3 -42*, week 4 -10; round 2 week 1 -36*, week 2 -20, week 3 -3, week 4 +25; non-MDA chiefdoms round 1 week 1 -9*, week 2 -2, week 3 -33*, week 4 -26*; round 2 week 1 -14*, week 2 +17, week 3 -7, week 4 +6 **Outpatient malaria proportion:** MDA chiefdoms round 1 week 1 -33* (-29 to -38), week 2 -57*, week 3 -44*, week 4 -33*; round 2 week 1 -52*, week 2 -60*, week 3 -67*, week 4 -46*; non-MDA chiefdoms round 1 week 1 -33* (-25 to -40), week 2 -2, week 3 -22*, week 4 -3; round 2 week 1 -37*, week 2 -20*, week 3 -31*, week 4 -27* **Inpatient malaria proportion:** MDA chiefdoms round 1 week 1 -24* (-12 to -35), week 2 -16* (-0.4 to -31), week 3 +16, week 4 +24; round 2 week 1 -2, week 2 -70, week 3 -16, week 4 +28	Unclear

		Ebola alerts: MDA chiefdoms round 1 week 1 -30* (-13 to -46), week 2 -12, week 3 -23*, week 4 -18; round 2 week 1 -48*, week 2 -59*, week 3 -58*, week 4 -60*; non-MDA chiefdoms round 1 week 1 +0.1, week 2 +2, week 3 +7* (3-11), week 4 +10* (6-15); round 2 week 1 -16*, week 2 -19*, week 3 -22*, week 4 -32*	
Ashbaugh (2017)	• EVD cases: active (MoH) and passive (IDSR) reporting for each outbreak • Assessment of delay in reporting: reporting lags	**EVD cases (suspected, probable, and confirmed):** active overall 416; 2007 264; 2008 32; 2012 52; 2014 68; passive overall 438; 2007 265; 2008 32; 2012 63; 2014 78 **Reporting lags:** 3 week delay in passive reporting from occurrence of index case in 2014 outbreak	Low
Azman (2016)	• EVD cases: active (MoH) and passive (IDSR) reporting for each outbreak • Assessment of delay in reporting: reporting lags	**EVD cases (suspected, probable, and confirmed):** active overall 416; 2007 264; 2008 32; 2012 52; 2014 68; passive overall 438; 2007 265; 2008 32; 2012 63; 2014 78 **Reporting lags:** 3 week delay in passive reporting from occurrence of index case in 2014 outbreak	Low
Azman (2016)	• Vaccine effectiveness: adjusted hazard ratio, medically attended non-cholera diarrhoea risk, test-negative design, adjusted estimate in matched case-control design	**Vaccine effectiveness (95% CI):** **Adjusted hazard ratio:** 87.3% (70.2-100.0) **Medically attended non-cholera diarrhoea risk:** 17.6% (-48.7 to 67.1) **Adjusted vaccine effectiveness (test-negative design):** 75.9% (-89.2 to 97.7) **Direct vaccine effectiveness (matched case-control):** 36.5% (-401.7 to 89.4)	Unclear
Bekolo (2016)	• Proportion of patients with severe disease • Odds of developing severe disease between patients having received 2 vaccine doses and unvaccinated patients • Proportion of patients who died • Odds of death in patients with severe disease	**Proportion of patients with severe disease:** overall 47.3%, 1 dose 37.5%, 2 doses 16.2% **Odds of developing severe disease (95% CI):** adjusted OR 0.22 (0.11-0.44) **Proportion of patients who died:** overall 1.5%, 1 dose 0% **Odds of death in patients with severe disease (95% CI):** adjusted OR 4.76 (2.33-9.77)	Low

Boum (2020)	• Humoral response: ZEBOV-GP IgG seroresponse at 28 days post-vaccination, seroresponse persistence at 180 days • Antibody response against whole virion (ELISA IgG and neutralizing antibodies (NAb) against ZEBOV-whole virion): seroresponse at 14 (subset of 105 participants tested) and 28 days (subset of 87 participants tested) post-vaccination • Cellular response: Elispot analysis for Ebola response at 28 (subset of 87 participants tested) and 180 days (subset of 56 participants tested) post-vaccination	**Immune response (95% CI):** **ZEBOV-GP IgG seroresponse at 28 days:** vaccinated 86.4% (84.1-88.4), unvaccinated 0% (0.0-4.8) **ZEBOV-GP IgG seroresponse persistence at 180 days:** vaccinated 90.7% (82.0-95.4), unvaccinated 5.4% (2.1-13.1) **ELISA IgG against ZEBOV-whole virion seroresponse:** 14 days 31.8% (23.9-41.0), 28 days 26.9% (19.4-35.9) **NAb against ZEBOV-whole virion seroresponse:** 14 days 27.3% (19.8-36.3) **Ebola response by Elispot analysis:** 28 days 13.5%, 180 days 48.2%	Unclear
Boyd (2019)	• TB notification rate • Proportion of those completing treatment • Proportion of those completing contact tracing (Lebanon only)	**TB notification rate (95% CI):** Jordan 2013 overall 4.5/100,000, Syrian refugees 16.1/100,000 (12.9-20.0); 2014 overall 5.1/100,000, Syrian refugees 11.9/100,000 (9.4-15.0); 2015 overall 5.5/100,000, Syrian refugees 9.2/100,000 (7.1-11.9); Lebanon 2015 overall 11.1/100,000, Syrian refugees 11.8/100,000 (10.0-14.0) **Proportion of those completing treatment:** Jordan 2013 96.2%, 2014 94.4%, 2015 94.8%; Lebanon 2014 77.1%, 2015 87.8% **Proportion of those completing contact tracing:** 77.8%	Unclear
Bulabula (2019)	• Prevalence of RR-TB • Predictors for RR-TB: adjusted odds ratio (aOR) • Treatment success rates: rifampin-sensitive TB (RS-TB), RR-TB treated with 9, 20, and 24-month regimens • Predictors associated with treatment failure or death: adjusted hazard ratio (aHR)	**(95% CI)** **Prevalence of RR-TB:** 11.1% (9.5-12.8) **Predictors for RR-TB:** retreatment aOR 4.92 (2.31-10.45, P<0.001), positive sputum smear aOR 2.23 (1.49-3.32, p<0.001), prior TB episode aOR 1.74 per episode (.96-3.10, p<0.06) **Treatment success rates:** RS-TB 87%, RR-TB 9-month 83%, 20-month 79%, 24-month 74% **Predictors associated with treatment failure or death:** DOT aHR .29 (.11-.74, p=0.01), serious adverse drug event aHR 4.81 (2.04-11.30, p<0.001)	Low

Carias (2016)	• ETU admission costs • Average cost-effectiveness ratio (ACER): cost per ETU admission averted for each country in wet and dry seasons • Probability of ETU admission • Probability of EVD infection in ETU	**ETU admission costs:** patient without EVD $1685, EVD patients who survive $6627, EVD patients who die $2359 **ACER:** cost saving, probability of cost savings >=99% for all countries and both seasons; highest savings in children <5 years old **Probability of ETU admission:** Liberia: wet season <5 years old -29%, 5-14 years -24%, >=15 years -11%; dry season <5 years -13%, 5-14 years -10%, >=15 years -4%; Sierra Leone: wet season <5 years old -33%, 5-14 years -27%, >=15 years -10%; dry season <5 years -15%, 5-14 years -11%, >=15 years -4%; Guinea: wet season <5 years old -36%, 5-14 years -26%, >=15 years -10%; dry season <5 years -17%, 5-14 years -11%, >=15 years -4% **Probability of EVD infection in ETU:** -83% for all countries, seasons, and age groups	Low
Casey (2019)	• Vaccine response: seropositivity at 1 month and 1 year follow-up among all participants, participants who were seronegative at baseline, participants who were seropositive at baseline	**Seropositivity (95% CI):** **All participants:** 1 month 98% (97-99), 1 year 97% (96-98) **Participants who were seronegative at baseline:** 1 month 98% (96-99), 1 year 96% (94-98) **Participants who were seropositive at baseline:** 1 month immune response 66% (60-72), 1 year seropositivity 100% (98-100)	Moderate
Chamla (2018)	• bOPV and IPV vaccination coverage, with comparison of LGAs with and without integration of nutrition screening • Nutrition screening: overall and by LGA • Proportion of children screened found to have Severe Acute Malnutrition (SAM) • Proportion of SAM cases enrolled in treatment	**Vaccination coverage:** bOPV 98%, IPV 91% (LGAs with and without nutrition screening OR 0.85, 95% CI 0.55-1.29, p=0.42) **Nutrition screening:** overall 48.5%, Jere 56.6%, Konduga 22.8%, Mafa 80.0%, Maiduguri 47.1% **Proportion of children screened with SAM:** overall 3.7%, Jere 4.0%, Konduga 5.5%, Mafa 8.5%, Maiduguri 2.6% **Proportion of SAM cases enrolled in treatment:** overall 47.5%, Jere 34.9%, Konduga no data, Mafa 31.6%, Maiduguri 68.8%	Unclear

Coldiron (2017)	• # of children receiving DP • Proportion of children receiving DP: card- or verbally-confirmed receipt • 6-month malaria incidence: incidence rate ratio (IRR) from baseline to endline • Malaria prevalence: parasitemia by microscopy or PCR • Adverse events following DP provision	**# of children receiving DP:** 40,611 **Proportion of children receiving DP (95% CI):** distribution 1 93.7% (91.3-95.5), distribution 2 95.1% (92.4-96.9), distribution 3 95.3% (93.0-96.9) **6-month malaria incidence (95% CI):** children <5 years IRR 0.73 (0.69-0.77), children 5-14 years IRR 0.70 (0.67-0.72), persons >= 15 years IRR 1.49 (1.42-1.56) **Malaria prevalence (95% CI):** March 12.9% (10.6-15.8), May 12.5% (10.0-16.0), July 16.4% (13.8-19.3), September 25.3% (22.1-28.8) **Adverse events:** 57 reported during the study period, 28 judged as probably or definitely related to DP (8/18 after distribution 1, 18/31 after distribution 2, 2/7 after distribution 3)	Low
Devine (2017)	• Total cost • Incremental cost • Total infections • Infections averted • Incremental cost effectiveness ratio (ICER)	**Total cost, in USD:** vaccine only 21,673.15, HBIG after RDT 47,477.10, HBIG after confirmatory test 40,553.86 **Incremental cost, in USD:** HBIG after RDT 25,803.95, HBIG after confirmatory test -- **Total infections:** vaccine only 64, HBIG after RDT 28, HBIG after confirmatory test 41 **Infections averted:** HBIG after RDT 36, HBIG after confirmatory test -- Incremental cost effectiveness ratio (ICER): HBIG after RDT 716.78, HBIG after confirmatory test extended dominance	Low
Doshi (2015)	• Measles vaccine effectiveness (VE): by age category and year	**VE (95% CI):** children 12-59 months 80% (74-85), children 12-23 months 80% (66-88), children 24-59 months 81% (74-86); 2010 86% (70-93), 2011 76% (65-84), 2012 75% (61-84)	Unclear

Franke (2018)	• 2-dose vaccine effectiveness across 4 years of follow-up • 1-dose vaccine effectiveness over 24 months	**2-dose vaccine effectiveness:** 76% (95% CI 59-86, p<0.0001) **1-dose vaccine effectiveness:** decreased log-linearly with each month since vaccination (p=0.0004)	Low
Gallandat (2020)	• # of surfaces positive for V. cholerae • # of households with change in # of V. cholerae contaminated surfaces • # of surfaces with high contamination (>5,000 CFU/cm2) of V. cholerae • # of surfaces positive for E. coli	**# of surfaces positive for V. cholerae (before spraying, 30 min after, 24 hours after):** Program A - 25, 8, 16; Program B - 40, 25, 39; Program C - 22, 11, 33 **# of households with change in # of V. cholerae contaminated surfaces:** decrease in 93% at 30 mins, increase in 71% from 30 mins to 24 hours **# of surfaces with high contamination of V. cholerae (before spraying, 30 min after, 24 hours after):** Program A - 9, 4 (p<0.001), 5 (p=0.007 compared to before, p=0.064 compared to 30 mins after); Program B - 16, 10 (p=0.014), 13 (p=0.804 compared to before, p=0.008 compared to 30 mins after); Program C - 13, 5, 10 (p=0.062 comparing before, 30 mins after and 24 hours after) **# of surfaces positive for E. coli (before spraying, 30 min after, 24 hours after):** Program A - 20, 8 (p<0.001), 18 (p=0.879 compared to before, p<0.001 compared to 30 mins after); Program B - 35, 23 (p=0.005), 31 (p=0.018 compared to before, p=0.132 compared to 30 mins after); Program C - 16, 10 (p=0.010), 12 (p=0.515 compared to before, p=0.008 compared to 30 mins after) **HHs with decreased # surfaces positive for E. coli before vs. 30 min after spraying:** 10 (71%) **HHs with increased # surfaces positive for E. coli 30 min vs. 24 hrs after spraying:** 10 (71%)	Unclear

Garbern (2019)	• Mortality in EVD patients: by chiefdoms with and without MDA, by presumed ASAQ exposure, matched cohort analysis • Mortality in EVD patients (matched cohort analysis)	**Mortality in EVD patients (95% CI):** Patients from chiefdoms with MDA 57.1% (49.5-64.5), patients from chiefdoms without MDA 57.8% (51.6-63.8), patients with presumed ASAQ exposure 45.5% (25.1-67.5) **Matched cohort analysis of mortality:** Presumed ASAQ exposure 45.5%, presumed not exposed 72.7%, risk difference 27.2% (relative risk 0.63, 95% CI 0.37-1.07, p=.086)	Low
Gargano (2017)	• Estimated impact of Hib-containing and PCV vaccination on pneumonia cases, associated deaths, and medical visit costs under base-case scenarios: no vaccination, 1- and 2-dose Hib-containing vaccine or PCV, and 1-dose or 2-dose combined Hib-containing vaccine and PCV • Incremental cost-effectiveness ratio (ICER): cost per Disability-Adjusted-Life-Year (DALY) averted expressed in 2013 US dollars	**Estimated impact of vaccination:** no vaccination pneumonia cases 507, associated deaths 37, medical cost US $6,232; 1-dose Hib-containing vaccination pneumonia cases prevented 30, associated deaths prevented 2, medical costs reduced $400; 2-dose Hib-containing vaccination pneumonia cases prevented 33, associated deaths prevented 3, medical costs reduced $400; 1-dose PCV pneumonia cases prevented 98, associated deaths prevented 7, medical costs reduced $1,100; 2-dose PCV pneumonia cases prevented 105, associated deaths prevented 8, medical costs reduced $1,300; 1-dose combined pneumonia cases prevented 118, associated deaths prevented 8.5, medical costs reduced $1,500; 2-dose combined pneumonia cases prevented 125, associated deaths prevented 9.1, medical costs reduced $1,500 **Cost per DALY averted:** 1-dose HIB-containing vaccination $211; 2-dose Hib-containing vaccination $310; 1-dose PCV $148; 2-dose PCV $210; 1-dose combined $125; 2-dose combined $209	High
Gsell (2017)	• Proportion of eligible contacts of contacts vaccinated • Proportion of vaccinated contacts reporting adverse events • Ebola cases reported among vaccinated contacts (tracked for 21 days following vaccination)	**Proportion of eligible contacts of contacts vaccinated:** Ring C100 88%, ring C101 91%, ring C102 88%, ring C103 100% **Proportion of vaccinated contacts reporting adverse events:** 6-17 year olds 17%, >=18 year olds 36%; no severe adverse events causally related to the vaccine **Ebola cases reported among vaccinated contacts:** none	Unclear

Habib (2017)	• OPV coverage • IPV coverage (arm C only) • Difference in the proportion of Expanded Programme on Immunization (EPI) vaccinations received among children aged <60 months • Proportion of unvaccinated children • Proportion of fully vaccinated children	**Coverage (95% CI):** **OPV coverage:** arm A 75% (74-77), arm B 82% (81-83), arm C 84% (83-85) (p<0.0001) **IPV coverage:** round 1 92.2% (90.6-93.6), round 3 94.3% (93.0-95.3) Difference in proportion of EPI vaccinations received among children aged **<60 months:** Arm B 9% (7-11), arm C 11% (9-13) (p<0.0001) Proportion of unvaccinated children: baseline 42% in each arm; endline arm A 36% (32-40), arm B 28% (25-31), arm C 27% (24-30) Proportion of fully vaccinated children: baseline 22% in each arm; endline arm A 25% (22-27), arm B 32% (29-35), arm C 34% (31-37) (p<0.0001)	Unclear
Howard (2017)	• Cases and deaths prevented by IRS • DALYs averted • Incremental cost-effectiveness ratio (ICER) per DALY averted for IRS addition	**Cases and deaths prevented:** estimated total 67,988 vivax cases, 18,578 falciparum and mixed-infection cases, 132 deaths **DALYs averted:** 0.147 per case prevented, overall 12,725 DALYs averted **ICER per DALY averted:** US$266	Low
Ibraheem (2019)	• Proportion of patients cured at week 4 • Relative risk • Risk reduction (attributable risk)	**Proportion of patients cured at week 4:** group 1 (Permethrine 10%) 83.3%, group 2 (crotamiton 10%) 76.7%, group 3 (Sulfur 10%) 80%, group 4 (Permethrine 10% + Sulfur 10%) 93.3%, group 5 (crotamiton 10% + Sulfur 10%) 86.7%, group 6 (crotamiton 10% + Permethrine 10%) 90%, group 7 (control) 26.7% **Relative risk:** group 1 2.7, group 2 2.5, group 3 2.6, group 4 3.1, group 5 2.8, group 6 3 **Risk reduction:** group 1 0.56, group 2 0.5, group 3 0.53, group 4 0.66, group 5 0.6, group 6 0.63	High

Ivers (2015)	• Vaccine effectiveness: VE study and bias-indicator study	**Vaccine Effectiveness (95% CI):** **VE Study:** vaccinated, self-report 63% (8-85, p=0.031); self-reported 1 dose 67% (-62 to 93, p=0.17); self-reported 2 doses 62% (6-85, p=0.036); proof of vaccination (card or registry record) 58% (13-80, p=0.020) **Bias-Indicator Study:** vaccinated, self-report 18% (-208 to 78, p=0.77); self-reported 1 dose -153% (-1237 to 52, p=0.28); self-reported 2 doses 28% (-174 to 81, p=0.63); proof of vaccination (card or registry record) -21% (-238 to 57, p=0.72)	Unclear
Jia (2015)	• Total # of suspect and confirmed cases • Average # of suspected and confirmed cases • % of alerts reporting suspect cases and mortality • Average # EHF mortalities reported • % of alerts with successful follow-up within a day • % unmet calls • % false alerts	**Total # of suspect and confirmed cases:** 129 suspect and 49 confirmed **Average # of suspected and confirmed cases:** 4.16 (SD 3.76) suspect, 1.58 (SD 1.43) confirmed **% alerts reporting suspect cases:** 34% (n=76) **% alerts reporting mortality:** 65.92% (n=147) **Average # EHF mortalities reported:** 6.42 (SD 3.91, 95% CI 5.88-6.94) **% alerts w/ successful follow-up w/in a day:** 85.77% (n=223) **% unmet calls:** 13.85% (n=36) **% false alerts:** 0.38% (n=1)	Low
Khan (2019)	• Coverage rate: MR, OPV dose 1, OPV dose 2, OCV dose 1, OCV dose 2	**Coverage rate (95% CI):** MR 38% (38-39); OPV dose 1 75% (74-76); OPV dose 2 88% (88-89); OCV dose 1 94% (93-94); OCV dose 2 92% (91-92)	Unclear

Kuehne (2016)	• # of vouchers for pre-packaged medication pack distributed • Proportion of vouchers exchanged for medication packs • Reported compliance and adherence: household members who received sufficient ASAQ-CP, household members who initiated ASAQ-CP, household members who adhered to the full course of ASAQ-CP • Estimation of the effectiveness of MDA: risk difference (%) of self-reported fever episodes in the month prior to round 2 compared to the month prior to round 1	**(95% CI)** **# of vouchers distributed:** round 1 102,372, round 2 103,497 **Proportion of vouchers exchanged:** round 1 94%, round 2 93% **Household members who received sufficient ASAQ-CP:** round 1 90% (85-94), round 2 99% (98-100) **Household members who initiated ASAQ-CP:** round 1 52% (46-58), round 2 22% (17-28) **Household members who adhered to the full course of ASAQ-CP:** round 1 48% (42-54), round 2 21% (17-28) **Risk difference (%) of self-reported fever episodes:** household members who completed ASAQ-CP in round 1 4.9% (2.7-7.1, p<0.001); household members who did not start or complete ASAQ-CP in round 1 0.6% (-1.1 to 2.2, p<0.001)	Low
Kunkel (2019)	• # of consultations reviewed by ACF teams • Impact of HF-based ACF visits on HF-EVD awareness	**# of consultations reviewed by ACF teams:** 37,746 consultations reviewed, 690 suspected EVD case, 358 alert cases, 2 cases validated as suspected EVD cases **Adjusted odds of good awareness of EVD by previous ACF visit to HF (ref: no prior visit):** 2nd or 3rd visit 4.4 (95% CI 2.0-10.8, p=0.0005); 4th + visit 15.0 (95% CI 3.5-84.3, p=0.0007)	Low
Lee (2016)	• Sensitivity of the national call centre database • Sensitivity of calls to the local prefectures	**(95% CI):** **Sensitivity of the national call centre database:** 3.9% (3.0–4.9) Sensitivity of calls to the local prefectures: alert database (active prefectures) 54.3 (47.8–70.0), local source 51.1 (44.3–57.9), national source 3.2 (1.3–6.4)	Moderate

| Li (2016) | • Proportion of new confirmed cases from registered contacts % (new confirmed cases/ all registered contacts)
• Median of community infectivity time (range)-days
• % confirmed EVD died in the community
• Unsafe burials for probable or confirmed EVD case
• Districts with at least 1 security incident or other form of incompliance to EVD control measure (number per week) | **Proportion of new confirmed cases from registered contacts %:** nationwide 45.6 (302/662), pilot communities 64.3 (9/14)
Median of community infectivity time (days): nationwide 1.9, pilot communities 1.0
% confirmed EVD died in the community: nationwide 21.2 (156/736), pilot communities 12.5 (1/8)
Unsafe burials: nationwide 173, pilot communities 0
Districts/week with 1+ incompliance form: nationwide 2.7, pilot communities 0 | Unclear |
| Logie (2014) | • Change in HIV knowledge, assessed by the Brief HIV Knowledge Questionnaire
• Change in STI knowledge, assessed by the Sexually Transmitted Disease Knowledge Questionnaire
• Change in condom use, assessed by reported consistent use of condoms for sex in last 6 weeks
• Change in social support from family, friends and significant other, assessed by the Multidimensional Scale of Perceived Social Support
• Change in resilient coping, assessed by the Brief Resilient Coping Scale
• Change in depression, assessed by the Beck Depression Inventory Fast-Screen (BDI-FS)
• Change in relationship control, assessed by the Sexual Relationship Power Scale's 'relationship control' subscale | **Adjusted mean difference (95% CI):**
Change in HIV knowledge: 4.81 (4.36-5.26, $p<0.001$)
Change in STI knowledge: 0.84 (0.70-0.99, $p<0.001$)
Change in condom use: 4.05 (1.86-8.83, $p<0.001$)
Change in social support - overall: 1.02 (-0.30 to 2.34, $p=0.130$)
Change in social support - family: 0.45 (-0.15 to 1.04, $p=0.141$)
Change in social support - friends: 0.48 (-0.09 to 1.06, p-0.100)
Change in social support - significant other: 0.17 (-0.28 to 0.62, $p=0.456$)
Change in resilient coping: 0.04 (-0.36 to 0.45, $p=0.837$)
Change in depression: -0.63 (-0.88 to -0.39, $p<0.001$)
Change in relationship control: 0.43 (-0.41 to 1.27, $p=0.315$) | Moderate |

Luquero (2013)	• OCV coverage: round 1, round 2, fully vaccinated (2-dose), >= 1 dose, dropout rate between doses • Surveillance of adverse events	**OCV coverage % (95% CI):** **Round 1:** Boffa 89.4% (86.4-91.8), Forecariah 87.7% (84.2-90.6) **Round 2:** Boffa 79.8% (75.6-83.4), Forecariah 82.9% (76.6-87.7) **Fully vaccinated:** Boffa 75.8% (71.2-79.9, deff=10.1), Forecariah 85.9% (69.8-80.9, deff=5.0) >= 1 dose: Boffa 93.3% (91.1-95.0, deff=5.9), Forecariah 94.9% (91.8-96.9, deff=3.7) **Dropout rate:** Boffa 15.2% (12.2-18.7), Forecariah 13.6% (9.7-18.7) **Adverse events:** 48 patients (15 per 100,000 vaccinated) reported symptoms that were linked with the vaccine; no patient was transferred to a hospital and no deaths were reported	Low
Mahamud (2014)	• Vaccine effectiveness of OPV against type 1 wild poliovirus (WPV1): at least 1 dose, categorical analysis (1-3 and 4+ doses compared to 0)	**Vaccine effectiveness (95% CI):** **At least 1 dose:** NPAFP controls: 70% (37-86); neighbourhood controls: 95% (84-98) **Categorical analysis:** NPAFP controls: 1-3 dose recipients 59% (2-83), 4+ dose recipients 77% (46-91); neighbourhood controls: 1-3 dose recipients 92% (72-98), 4+ dose recipients 97% (89-99)	Unclear
Makiala (2019)	• Sensitivity of the QuickNavi-Ebola Assay compared to GeneXpert • Specificity of the QuickNavi-Ebola Assay compared to GeneXpert • Negative (NPV) & positive (PPV) predictive values • Agreement rate of QuickNavi-Ebola and GeneXpert	**Test statistics (95% CI):** **Sensitivity:** 85% (75.26-92.00) **Specificity:** 99.8% (99.15-99.97) **NPV:** 98.6% (846/858) **PPV:** 97.1% (68/70) **Agreement rate:** 98.5% (914/928)	Unclear

Martinez-Pino (2013)	• Proportion of positive tests after vaccination by post-vaccination day • Time to become negative	**Proportion of positive tests after vaccination (95% CI):** day 1 71.1% (61.5-79.9), day 2 82.5% (73.4-89.4), day 3 49.5% (39.1-59.9), day 4 21.5% (13.7-31.2), day 5 2.3% (0.3-8.1), day 6 1.1% (0.0-6.0), day 7 0.0% (0.0-0.4) **Time to become negative (n=95):** mean time 3.8 days (SD = 1.1)	Low
Mbaeyi (2018)	• Acute flaccid paralysis (AFP) case counts and nonpolio acute flaccid paralysis (NPAFP) rates (cases per 100,000 persons aged <15 years) • Stool specimen adequacy rates and timeliness of reporting • Mean duration from paralysis onset to notification	**AFP cases (#):** 172 in 2011, 148 in 2012, 546 in 2013, 420 in 2014 **NPAFP rates:** 6.5 in 2013, 7.4 in 2014, 4.8 cases in 2015, 5.3 in 2016; incidence rate ratio 2015 vs 2012 1.7 (95% CI 1.4-2.1, p<0.001) **Stool specimen adequacy rates:** Consistently >95% during 2011-2016 except in 2013, when the rate dropped to 86.8% **Overall mean duration from paralysis onset to notification:** 4.5 days for AFP cases during 2014-2016	Unclear
Mesic (2020)	• Regimen choice: short-term regimen (STR) or individualized long regimen • Treatment tolerability: adverse events (AE) • Treatment outcome by regimen	**Regimen choice:** STR 36.6%, individualized 63.4% **Treatment tolerability:** >=1 AE: STR 36.6%, individualized 44.3% (p=0.46); unfavourable treatment outcome: patients with AE 26.1%, patients without AE 73.9% (p=0.01) **Treatment outcome:** 4 month smear conversion STR 96.6%, individualized 97.9%; 6 month smear conversion STR 100%, individualized 97.9% (smear conversion p=0.34); 4 month culture conversion STR 84.6%, individualized 88.1%; 6 month culture conversion STR 96.2%, individualized 97.6% (culture conversion p=0.77); adjusted hazard ratio 1.14 (95% CI 0.42-3.06, p=0.79)	Low
Metuge (2021)	• Ability of CBS system vs DHS facility-based surveillance to pick up suspected cases of OPDs (# alerts by CBS system vs DHS) • Timeliness of reporting (average time first symptoms to alert generation by CBS system)	**Comparative ability of CBS system to pick up suspected cases of OPDs:** CBS system 9 alerts (8 investigated, 5 responses, and 3 confirmed); DHS 0 alerts **Timeliness of reporting:** CBS system 7.3 days	Low

| Michel (2019) | • CATI effectiveness according to response promptness
• CATI effectiveness according to response intensity | **Adjusted estimate of CATI effectiveness (95% CI):**
Of response promptness [days to 1st complete CATI vs >7 days] on outbreak size: 3-7 days 50% (9-72, p=0.0222); 2 days 68% (40-83, p=0.0004); <=1 day 76% (59-86, p<0.0001)
Of response promptness [days to 1st complete CATI vs >7 days] on outbreak duration: 3-7 days 53% (29-69, p=0.0004); 2 days 27% (-22 to 56, p=0.2322); <=1 day 61% (41-75, p<0.0001)
Of the response intensity [# complete CATIs/week vs <0.25 complete CATIs] on outbreak size: 0.25 to 0.5 complete 45% (-17 to 74, p=0.1206); 0.5 to 1 complete 70% (42-84, p=0.0003); >=1 complete 59% (11-81, p=0.0235)
Of the response intensity [# complete CATIs/week vs <0.25 complete CATIs] on outbreak duration: 0.25 to 0.5 complete 1% (-45 to 32, p=0.9759); 0.5 to 1 complete 57% (30-74, p=0.0007); >=1 complete 73% (49-86, p<0.0001) | Low |
| O'Laughlin (2014) | • Clients tested: total and refugees by SOC period, early intervention period (first 40 days), extended intervention period (128 days), total intervention period
• HIV prevalence among those tested | **(95% CI):**
% of total eligible clients tested: total SOC 6.7%, (5.8-7.7), early intervention 25.4% (24.2-26.7), extended intervention 19.8% (19.1-20.5), total intervention 21.3% (20.7-21.9); refugees SOC 87.4% (82.1-91.7), early intervention 75.7% (73.3-78.1), extended intervention 67.0% (65.2-68.8), total intervention 69.8% (68.3-71.2)
HIV prevalence among those tested: SOC 3.3% (1.3-6.8), early intervention 3.9% (2.9-5.2), extended intervention 4.7% (3.9-5.6), total intervention 4.5% (3.8-5.2) | Low |

O'Laughlin (2020)	• HIV clinic attendance within 90 days of HIV diagnosis: including and excluding day of diagnosis	**HIV clinic attendance within 90 days of HIV diagnosis including day of diagnosis:** intervention 72%, control 71% (p=0.879) **HIV clinic attendance within 90 days of HIV diagnosis excluding day of diagnosis:** intervention 68%, control 47% (p=0.002)	Unclear
Oladeji (2019)	• Immunization coverage • Dropout rate for vaccination comparing children who received first dose of pentavalent vaccine at OTP centre and primary health care (PHC) centre	**Immunization coverage:** sector 2 OTP centre BCG 31.6%, OPV-0 33.8%, OPV-1 31.8%, OPV-2 34.9%, OPV-3 34.5%, Penta-1 33.5%, Penta-2 36.2%, Penta-3 38.5%, IPV 50.7%, measles 44.2%; sector 2 PHC centre BCG 68.4%, OPV-0 66.2%, OPV-1 68.2%, OPV-2 65.1%, OPV-3 65.5%, Penta-1 66.5%, Penta-2 63.8%, Penta-3 61.5%, IPV 49.3%, measles 55.8%; sector 5 OTP centre BCG 20.5%, OPV-0 26.1%, OPV-1 34.9%, OPV-2 28.8%, OPV-3 23.5%, Penta-1 36.5%, Penta-2 36.8%, Penta-3 43.8%, IPV 30.3%, measles 43.9%; sector 5 PHC centre BCG 79.5%, OPV-0 73.9%, OPV-1 65.1%, OPV-2 71.2%, OPV-3 76.5%, Penta-1 64.5%, Penta-2 63.2%, Penta-3 56.2%, IPV 69.7%, measles 56.1% **Dropout rate:** sector 2 OTP centre 12%, PHC centre 35% (odds ratio 0.45, 95% CI 0.36-0.55, p<0.05); sector 5 OTP centre 8.9%, PHC centre 27% (odds ratio 0.27, 95% CI 0.20-0.35, p<0.05)	Unclear
Ope (2017)	• Test statistics of ICS-RV compared to Premier Rotaclone ELISA, overall and by dehydration category (severe, some, no dehydration): sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV)	**Test statistics of ICS-RV (95% CI):** **Overall:** sensitivity 83.1 (72.3-91.0), specificity 99.3 (96.1-100), PPV 98.3 (91.1-100), NPV 92.1 (86.6-95.5) **Severe dehydration:** sensitivity 85.0 (62.1-96.8), specificity 100.0 (87.7-100), PPV 100.0 (80.5-100), NPV 90.3 (74.2-98.0) **Some dehydration:** sensitivity 69.2 (38.6-90.9), specificity 97.6 (87.4-99.9), PPV 90.0 (55.5-99.7), NPV 91.1 (78.8-97.5) **No dehydration:** sensitivity 86.8 (71.9-95.6), specificity 100 (94.9-100), PPV 100 (89.4-100), NPV 93.4 (85.3-97.8)	Unclear

Ousman (2019)	• IPC score by HCF type	**Mean IPC score by HCF type (SD):** **Hospitals:** baseline 8 (2.82), endline 50 (11.92) (p<0.001) **Medical centres:** baseline 4 (1.29), endline 39 (15.57) (p<0.001) **Health centres:** baseline 4 (1.20), endline 36 (14.28) (p<0.001) **All HCFs:** baseline 4.41 (1.88), endline 39.51 (14.87) (p<0.001)	Unclear
Parker (2017)	• Estimated vaccine coverage	**Estimated vaccine coverage (95% CI):** **Neighbourhood-targeted campaign:** overall 69% (64-74), Kator 70% (63-77), Northern Juba 60% (52-68), Gumbo 69% (63-75) Case-triggered interventions: 51% (42-60)	Unclear
Ratnayake (2016)	• Proportion of correct IPC behaviours within the domains of pre-screening, donning, screening, doffing and consultation	**Baseline to follow-up risk ratio (95% CI):** **Pre-screening:** **Patient went directly, or HCW-directed patient, to screening area:** 0.53 (0.37-0.77) **Attendant washed hands:** 0 **Screener asked patient to wash hands:** 1.45 (1.16-1.80) **Patient washed hands on direction from HCW:** 1.49 (1.19-1.86) **Patient washed hands directly or washed on direction from HCW:** 1.27 (0.95-1.71) **Donning:** **Wore rubber boots or covers:** 1.51 (1.14-1.99) **Wore face shield or mask:** 1.27 (1.03-1.58) **Completed in correct order:** 8.94 (0.84-95.61) **Took off /did not wear jewellery:** 0.83 (0.72-0.97) **Wore new gloves:** 2.56 (1.37-4.79) **Continued to wear gloves:** 0.75 (0.6-0.94) **Screening:** **No other HCWs were in screening area:** 2.54 (0.69-1.07) **Stood 1.5 m from patient:** 4.09 (0.83-1.48) **Sat sideways to patient:** 2.3 (1.34-3.95) **Held digital thermometer 5-6 cm from patient:** 0.23 (0.12-0.43)	Unclear

		Doffing: **Removed any light PPE:** 2.54 (1.32-4.88) **Removed gloves:** 4.09 (1.34-12.49) **Washed gloved or ungloved hands:** 2.58 (1.0-6.66) **Removed face shield or goggles:** 0.21 (0.05-0.94) **Completed in correct order:** 6.64 (2.09-21.14) **Consultations:** **Washed hands before treating patient:** 0.63 (0.18-2.21) **Washed hands after treating patient:** 0.91 (0.5-1.65) **Put on new gloves before treating patient:** 0.97 (0.85-1.1) **Did not remove gloves after treating patient:** 1.51 (0.55-4.12) **Stood 1.5 m from patient:** 1.18 (0.92-1.51)	
Rebaudet (2019)	• Exhaustiveness of CATIs in response to cholera alerts: adjusted odds ratio • Intensity of CATIs in response to cholera alerts: adjusted incidence ratio • Quality of CATIs in response to cholera alerts: adjusted incidence ratio	**(95% CI):** **Exhaustiveness of CATI response**: higher for red alerts vs orange 2.52 (2.22-2.86, p<0.0001), increased during study period 1.43 (1.39-1.48, p<0.0001), tended to decrease when alert far from department capital 0.94 (0.88-1, p=0.06) **Intensity and quality of CATI response:** higher for red alerts vs orange 1.85 (1.72-1.98, p<0.0001), increased over study period 1.22 (1.20-1.25, p<0.0001), greater in more populated communes 1.02 (1.01-1.02, p<0.0001)	Low
Routh (2017)	• Total cost per dose administered • OCV campaign capacity: doses administered as % of theoretical capacity	**Total cost per dose administered:** Cerca Carvajal $3.18, Petite Anse $2.82, overall $2.90 **OCV campaign capacity:** Cerca Carvajal: round 1 20-25%, round 2 35-43%; Petite Anse: round 1 17-20%, round 2 26-31%	Moderate

Sahr (2017)	• Time to recovery • Ct values • Odds of survival	**Time to recovery (SD):** intervention 10.6 days (3.4), control 12.23 days (4.8) **Ct values (SD):** **Recovered patients:** intervention on admission 23.37 (5.0), 24 hours after transfusion 29.99 (5.9) (p<0.01); control on admission 31.97 (8.4), 24 hours after admission 31.25 (7.5) **Deceased patients:** intervention on admission 21.77 (4.9), 24 hours after transfusion 24.4 (5.4); control on admission 23.69 (3.5), 24 hours after admission 22.98 (4.1) **Odds of survival:** 2.3 (95% CI 0.8-6.5, p=0.09)	Unclear
Scobie (2014)	• Typhoid vaccination coverage of target population • Typhoid incidence risk ratio (IRR): post-campaign (2011) compared to pre-campaign (2008-9) by division and sub-division, with vaccination level details	**Vaccination coverage:** overall 98% (range 84-115%), Northern division 100%, Western division 103%, Central division 94%, Eastern division 98% IRR (95% CI): overall 1.01 (0.89-1.14), Northern 0.80 (0.67-0.96), Western 1.37 (1.09-1.72), Central 1.14 (0.88-1.49), Eastern --	Low
Scobie (2016)	• Cholera and WaSH knowledge • WaSH practices • Vaccine knowledge, attitudes, and practices	**Reported as baseline %, 1st follow-up %, 2nd follow-up %** **Have heard of cholera:** 81%, 81%, 91% **Knew watery diarrhoea was a symptom of cholera:** 52%, 45%, 52% **Knew 2+ means of cholera transmission:** 61%, 59%, 82% **Knew 2+ means of cholera prevention:** 62%, 78%, 80% **Would go to camp clinic for cholera treatment:** 97%, 99%, 100% **Would use oral rehydration for cholera treatment:** 0%, 7%, 6% **Had heard about cholera prevention and treatment from others or media:** 83%, 82%, 92% **Reported receipt of materials to prevent cholera:** 91%, --, -- **Knew about boiling or treating drinking water for cholera prevention:** 53%, 66%, 53% **Reported camp public tap as primary HH drinking water source:** 67%, 77%, 70% **Reported boils or treats drinking water:** 19%, 44%, 69% **Reported boiling or treating drinking water w/in last 24 hours:** 12%, 29%, 61%	Low

		Reported washing hands on >=3 types of occasions: 49%, 50%, 67% **Reported using soap to wash hands:** 66%, 77%, 85% **Observed soap at hand-washing station:** 84%, 90%, 95% **Observed covered drinking water container with spigot:** 73%, 63%, 65% **Observed residual chlorine in HH drinking water sample:** 8%, 4%, 2% **Observed E. coli in HH drinking water sample:** 39%, 49%, 34% **Could name >=2 diseases prevented by vaccines:** 50%, 52%, 68% **Heard of cholera vaccine:** 39%, 94%, 93% **Concerns about HH adults receiving vaccines:** 4%, 2%, 2% **Concerns about HH children receiving vaccines:** 7%, 5%, 1% **HH member received any vaccine:** 86%, 86%, 96% **Child aged <15 years received polio drops:** 97%, 98%, 100% **Child aged <15 years received measles injection:** 95%, 94%, 95% **Knew cholera prevented by vaccine:** 11%, 30%, 39%	
Semper (2016)	• Test statistics: sensitivity and specificity of the Xpert Ebola assay compared to the Trombley assay (gold standard)	**Test statistics (95% CI):** **Sensitivity:** WB 100% (84.6-100), BS 100% (83.2-100) **Specificity:** WB 99.5% (97.0-100), BS 100% (92.0-100)	Unclear
Senga (2017)	• Proportion of cases with registered contacts • Proportion of registered contacts with exposure information available • Proportion of registered contacts completing the 21-day monitoring period • Proportion of cases that arose from registered contacts	**Proportion of cases with registered contacts:** 44% **Proportion of registered contacts with exposure information available**: 85% **Proportion of contacts completing monitoring: 89%** **Proportion of cases that arose from the Contact Line List:** 6%	Low

Severe (2016)	• Frequency of positive cholera culture in patients admitted with diarrhoea • Proportion of patients with positive cholera culture from within vaccination area compared to outside the vaccination area • Prevalence of culture-confirmed cholera, comparing vaccinated and unvaccinated residents	**Frequency of positive cholera culture in patients admitted with diarrhoea:** 55% **Proportion of patients with positive cholera culture from within vaccination area compared to outside the vaccination area:** admissions from within vaccination area 21%, admissions from outside the vaccination area 79% (p<0.001) **Prevalence of culture-confirmed cholera:** vaccinated residents 0.034%, unvaccinated residents 2.09% (p<0.001)	Low
Sheele (2015)	• Average time in the study • Maximum reported hours of hospital stay • Stool frequency • Stool volume	**Average time in the study:** arm 1 34.2 hours, arm 2 33 hours, arm 3 19.8 hours, arm 4 26.4 hours **Maximum reported hours of hospital stay:** Kruskal-Wallis test statistic 10.87 (p=0.012) **Stool frequency:** Chi-square 0.41 (p=0.9382) **Stool volume:** Chi-square 4.66 (p=0.1981)	Unclear
Sozzi (2015)	• Degree of reduction in turbidity (NTU) • Degree of reduction in total suspended solid (TSS) • Degree of reduction in thermotolerant coliforms (CFU per 100 mL)	**Protocol A (low pH)** **Turbidity (NTU; mean):** raw wastewater 805, treated effluent 15, removal 98.2% **Thermotolerant coliforms (CFU per 100 ml; mean):** raw wastewater 1.75 x 10^4, treated effluent 5, removal 99.97% **COD (mg O2/l; mean):** raw wastewater 17,080, treated effluent 131, removal 99.2% **Total suspended solids (mg/l; mean):** raw wastewater 1,155, treated effluent 112, removal 90.5% Protocol B (high pH) **Turbidity (NTU, mean):** raw wastewater 430, treated effluent 23, removal 91.3%	Low

		Thermotolerant coliforms (CFU per 100 ml, mean): raw wastewater 4.98 x 10^4, treated effluent 106, removal 99.52% **COD (mg O2/l, mean):** raw wastewater 17,080, treated effluent 149, removal 99.1% **Total suspended solids (mg/l, mean):** raw wastewater 1,077, treated effluent 38, removal 92.9%	
Spina (2018)	• Water chlorination: mean FRC and % of HHs with safe FRC levels (≥0.2 mg/L) in water storage containers • Reach of hygiene promotion messages • Receipt of hygiene kit distribution and hygiene behaviour • Water sources, transport, and storage	**(95% CI):** **Households with safe FRC level in stored drinking water:** 43% (38-48) Median FRC values in HH storage containers: 0.1 (range: 0.1-3) **Reach of messages:** 388 HHs (99%, 97-100) **Receipt of kits:** 390 HHs (99%, 98-99) **Water sources for households:** private wells 269 HHs (69%, 64-73), in-home taps 141 HHs (36%, 31-41), river 13 HHs (3%, 2-6), multiple sources 29 HHs (7%, 5-10) **Water transport:** primarily using 20L containers 389 HHs (99.2%, 98-100) Households with safe FRC level in stored drinking water: among all 167 (43%, 38-48), among HHs with empty container at time of refill: 104 (65%, 57-73), among HHs with quarter-filled container at refill 20 (26%, 17-38), among HHs who refilled within last 6 hours 81 (60%, 51-68) **HHs who collected water from private wells:** 125 (46%, 40-53) **HHs who collected from in-home taps**: 40 (34%, 26-43)	Low
Stehling-Ariza (2016	• Mean number of days in the community after onset of Ebola symptoms • Case fatality ratio • Proportion of case investigations with identification of epidemiologic link to a prior Ebola case	**Mean number of days in the community after onset of Ebola symptoms (95% CI):** before intervention 4.0 days (3.2-4.7), after intervention 2.9 days (1.6-4.3) (p=0.15) **Case fatality ratio:** before intervention 58.8%, after intervention 73.3% (p=0.27) **Proportion of case investigations with identification of epidemiologic link to a prior Ebola case:** before intervention 47.6%, after intervention 100% (p<0.01)	Low

Strecker (2015)	• Test statistics: sensitivity, specificity, and negative likelihood ratio of tests using capillary blood samples compared with tests using venous blood samples	**Test statistics (95% CI):** **Sensitivity:** 86.8% (71.9-95.6) **Specificity:** 100% (84.6-100) **Negative likelihood ratio:** 0.13 (.06-.30)	Unclear
Swanson (2018)	• Positive predictive value (PPV): proportion of traced contacts who were identified as potential cases, by geography and epidemic phase • Sensitivity • Characteristics among contacts completing monitoring compared to potential cases: adjusted odds ratio (aOR)	**PPV:** overall 1.4%, urban 1.1%, rural 3.0%, phase 1 4.7%, phase 2 1.6%, phase 3 0.5%, phase 4 0.0% **Sensitivity:** overall 3.6%, phase 1 4.5%, phase 2 4.5%, phase 3 2.0%, phase 4 0% **Characteristics among contacts completing monitoring compared to potential cases:** aOR (95% CI) **Geographic residence:** urban (compared to rural) 0.52 (0.38-0.70, $p<0.05$) **Epidemic phase:** phase 2 (compared to phase 1) 0.19 (0.12-0.28, $p<0.05$), phase 3 (compared to phase 1) 0.07 (0.04-0.12, $p<0.05$) **Exposure types per contact:** slept or ate in same household 2.16 (1.59-2.94, $p<0.05$), direct physical contact with body 1.76 (1.21-2.54, $p<0.05$), touched bodily fluids 1.52 (1.13-2.05, $p<0.05$), manipulated clothes or objects: 1.33 (0.99-1.80)	Low
Theocha-ropoulos (2017)	• Median transport time from cases' residences to EMCs: comparison of district and distant EMCs • Median time from symptom onset to admission	**Median transport time:** district EMC 1 hour, distant EMCs 5 hours ($p<0.001$) **Median time to admission:** district EMC 3 days, distant EMCs 6 days ($p<0.001$)	Low
Thomson (2015)	• Removal efficiency of V. cholerae and total coliform in source water as an indicator of V. cholerae in field biosand filters • Time in operation (affects removal efficiency of total coliform and V. cholerae)	**Average removal of V. cholerae:** 80 ± 31% **Average removal of total coliform:** 63 ± 68% coliform underestimated V. cholerae concentration in 90% of samples; total coliform removal efficiency underpredicted V. cholerae removal efficiency (n = 16) **Time in operation/Average percent removal for V. cholerae filters:** 4-day old = 65 ± 24%, 1-month = 92 ± 8%, 3-month = 96 ± 3%, and 1-year 97 ± 3%	Unclear

| Van Boetzelaer (2020) | • Positive Predictive Value (PPV)
• Usefulness
• Timeliness
• Simplicity
• Flexibility
• Acceptability
• Representativeness
• Stability | **PPV:** overall range 41.7%-100%, AWD 88.8% (2,528/2,848), acute jaundice syndrome (53.2% (364/684), acute flaccid paralysis (AFP) 100% (28/28), dengue 70% (21/30), diphtheria (suspected) 41.7% (177/425), measles (suspected) 73.7% (101/137), meningitis (suspected) 50% (1/2)
Usefulness: 21 probable (RDT positive) cholera cases identified by HF-based surveillance; 2 alert responses activated for suspected AWD clusters identified by CBS
Timeliness: ID of suspected case - notification of epidemiologist: HF surveillance 1 hour, CBS within 8 hours (at end of working day)
ID of suspected case - notification of Epi Alert Team or Medical Response
Team: HF surveillance 2 hours, CBS within 8 hours (at end of working day)
Notification of Epi Alert Team - MSF response: HF surveillance 1-12 hours, CBS 1-12
Notification of epidemiologist - EWAR reporting: HF surveillance 1 hour, CBS 1 hour
EWAR reporting - WHO JAT investigation: HF surveillance 1-5 days; CBS 1-5 days
Simplicity: system was complex and required 354 staff in 10 different roles
Flexibility: dengue added to surveillance list after increase in cases; CBS designed with built-in flexibility for periodic rotation of WaSH indicators
Acceptability: all HHs in catchment areas consented to CBS inclusion & monthly HH visits
Representativeness: exhaustive, including all HHs in catchment area; coverage during holidays was 85.2-86.7% and >90% in other surveillance cycles
Stability: No interruptions reported | Low |

Vogt (2015)	• Test statistics: positive predictive value (PPV), negative predictive value (NPV), sensitivity, specificity, positive likelihood ratio, negative likelihood ratio	**Test statistics (95% CI):** **PPV:** 76.0% (70.2-81.1) **NPV:** 53.6% (46.0-61.1) **Sensitivity:** 69.9% (64.1-75.3) **Specificity:** 61.1% (53.1-68.8) **Positive likelihood ratio:** 1.8 (1.5-2.2) **Negative likelihood ratio:** 0.5 (0.4-0.6)	Low
Walker (2015)	• Sensitivity of the RDT compared to PCR: by CT score, quantitative result of the RDT • Specificity of the RDT compared to PCR: by CT score • Positive predictive value (PPV) of RDT by CT score • Negative predictive value (NPV) of RDT by CT score	**Results by CT score (95% CI):** **Sensitivity:** CT>=2 100.0% (78.2-100.0), CT>=4 100.0% (78.2-100.0), CT>=6 100.0% (78.2-100.0), CT>=8 73.3% (44.9-92.2), CT=10 40.0% (16.3-67.7) **Specificity:** CT>=2 92.2% (85.8-96.4), CT>=4 93.1% (86.9-97.0), CT>=6 96.6% (91.4-99.1), CT>=8 98.3% (93.9-99.8), CT=10 99.1% (95.3-100.0) **PPV:** CT>=2 62.5% (40.6-81.2), CT>=4 65.2% (42.7-85.6), CT>=6 79.0% (54.4-93.8), CT>=8 84.6% (54.5-97.6), CT=10 85.7% (42.2-97.6) **NPV:** CT>=2 100.0% (96.6-100.0), CT>=4 100.0% (96.6-100.0), CT>=6 100.0% (96.6-100.0), CT>=8 96.6% (91.5-99.1), CT=10 92.7% (86.7-96.6)	Unclear
Xu (2020)	• Cumulative incidence of recurrent parasitemia in P. vivax patients treated with CQ/PQ • Cumulative hazard of recurrence between 3-13 years old and >14 years old groups • Fever clearance with CQ/PQ treatment	**Cumulative incidence of recurrent parasitemia (95% CI):** day 3 0, day 7 1.46 (0.05-2.87), day 14 1.84 (0.23-3.45), day 28 2.60 (0.68-4.51) **Cumulative hazard of recurrence between 3-13 years old and >14 years old groups:** p=0.9494 **Fever clearance:** 90% febrile at treatment initiation, 7.2% 24 hours after treatment, 0.36% 48 hours after treatment	Low
No author listed (2014)	• Vaccine coverage rate: by campaign (November - OPV only, December - OPV+IPV) and community type	**Vaccine coverage rate (95% CI):** **Overall:** November 97.2% (95.4-98.3), December 93.3 (91.2-95.0) **Camps:** November 97.2% (95.4-98.3), December 92.8% (90.2-94.8) **Host community:** November 97.3 (95.0-98.5), December 95.8% (93.5-97.3)	Unclear

ANNEX 6: STUDY DESIGN AND OUTCOMES OF WATER, SANITATION, AND HYGIENE INTERVENTION STUDIES

Study Design of Water, Sanitation, and Hygiene Intervention Studies in Humanitarian Crisis Settings, 2013-2021 (n=21)

Author (Year)	Study Setting & Population	Intervention(s)	Methods
Aibana (2013)	**Country:** Haiti, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** 2-phase oral cholera vaccine (OCV) campaign with dissemination of health education information **Implementation site:** Community-based **Personnel type(s):** Lay personnel - members of vaccination team and local media **Part of broader program:** Yes	**Study design:** Observational (pre-post cross-sectional surveys) **Study duration:** 7 months **Sample description:** Households in Bocozel, random selection **Sample size:** 1,329 HHs (811 pre-intervention, 518 post-intervention)
Ali (2019)	**Country:** Pakistan, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Emergency-affected (non-displaced)	**Description:** Post-flood shallow well cleaning, well improvement, and water treatment and hygiene awareness **Implementation site:** Community-based **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Observational (pre-post assessment) **Study duration:** 5 years **Sample description:** Village wells **Sample size:** wells tested: 2,348 pre-cleaning, 2,380 post-clean emergency phase, 150 tested 4-5 years later
Anu Rajasingham (2020)	**Country:** Ethiopia, regional sample **Crisis type:** Environmental disaster, outbreak **Context type:** Non-camp (urban) **Population:** Not specified	**Description:** Technical assistance to improve chlorination of drinking water and monitor quality **Implementation site:** Community-based, system-level **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Observational (descriptive evaluation) **Study duration:** 1 month **Sample description:** N/A **Sample size:** 179 water points (various types)

Djimeu (2014)	**Country:** Angola, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural and urban) **Population:** Multiple (displaced and non-displaced)	**Description:** Social and economic development health and water, sanitation, and waste management projects **Implementation site:** Community-based **Personnel type(s):** Not specified **Part of broader program:** Yes	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 1 year **Sample description:** Children <5 years of age **Sample size:** 1,373 children (674 ASAF, 699 non-ASAF)
Gallandat (2020)	**Country:** Democratic Republic of Congo and Haiti, regional sample **Crisis type:** Outbreak **Context type:** Camp and non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Household spraying programs in cholera outbreaks **Implementation site:** Community-based **Personnel type(s):** Lay personnel - spraying agents **Part of broader program:** Yes - 3 independently occurring spraying programs were evaluated in this study	**Study design:** Mixed methods **Study duration:** 5 months **Sample description:** Household surveys: Participants were enrolled if an adult was present when the spraying team arrived and consented to participate Key informant interviews: program coordinators and spraying agents **Sample size:** households surveyed: 14 (5 program A, 5 program B, 4 program C), surface samples: 418, key informant interviews: 18
Hashmi (2019)	**Country:** Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Camp (rural) **Population:** Refugee	**Description:** Monthly household visits by a nurse with mother-infant pairs when infant was 3-9 months old, with assessment of appropriate infant feeding and WaSH practices as well as counselling on appropriate behaviours via 'The Healthy Baby Flipbook' **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - nurse **Part of broader program:** Yes	**Study design:** Observational (cohort study) **Study duration:** 6 months **Sample description:** Mother-infant pairs with term, healthy infants aged 2 months **Sample size:** 20 mother-infant pairs

Husain (2015)	**Country:** Ethiopia, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** Pilot study of a novel handwashing bag (HWB) **Implementation site:** Community-based **Personnel type(s):** Lay personnel - Environmental Health Agents (EHAs) **Part of broader program:** No	**Study design:** Observational **Study duration:** 6 months **Sample description:** Households in refugee camps **Sample size:** Baseline 211, endline 222
Kanagasa-bai (2021)	**Country:** Liberia, regional sample **Crisis type:** Armed conflict, outbreak **Context type:** Non-camp (rural) **Population:** Emergency-affected (non-displaced)	**Description:** WaSH renovations, mentoring, and supply chain improvements **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** Yes	**Study design:** Mixed methods (pre-post intervention and cost analysis) **Study duration:** 3 years **Sample description:** Liberia Government Hospital and St. Timothy (2 county hospitals) **Sample size:** N/A
Lantagne (2013)	**Country:** Haiti, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural and urban) **Population:** Emergency-affected (non-displaced)	**Description:** 5 household water treatment and safe storage (HWTS) programs: (1) Aquatabs + training, (2) Aquatabs only, (3) ceramic filters + training, (4) biosand filters + training, (5) Klorfasil chlorine powder **Implementation site:** Community-based **Personnel type(s):** Lay personnel - CHWs **Part of broader program:** No	**Study design:** Quasi-experimental **Study duration:** 9 months **Sample description:** Households affected by the Haiti earthquake **Sample size:** Acute phase: 363, Recovery phase: 218
Michel (2019)	**Country:** Haiti, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Case-area targeted response interventions (CATI) for cholera **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - WaSH rapid response teams, nurses, auxiliary nurses **Part of broader program:** Yes	**Study design:** Observational **Study duration:** 3 years **Sample description:** 10,428 suspect cases (including 2,144 cases with reported severe dehydration, 360 positive stool cultures, 3,343 complete CATIs) **Sample size:** see above

Ratnayake (2016)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Infection prevention and control **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre and lay personnel - HCWs, district health officials, community health officers, and community representatives **Part of broader program:** Yes	**Study design:** Mixed methods **Study duration:** 3 weeks **Sample description:** HCWs surveyed at peripheral health units (PHUs) **Sample size:** 35 HCWs at 8 PHUs
Rayner (2016)	**Country:** Haiti, regional sample **Crisis type:** Environmental disaster, outbreak **Context type:** Non-camp (rural) **Population:** Emergency-affected (non-displaced)	**Description:** Household drinking water filter distribution programs (biosand, ceramic, or Sawyer filters) **Implementation site:** Community-based **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Observational **Study duration:** 1 month **Sample description:** Households reached by organizations operating filter distribution programs in Haiti between 2010 and 2014 **Sample size:** 253 households (50 PWW Biosand; 50 CWH Biosand; 53 CWH Ceramic; 50 ASSLHA Ceramic; 50 Sawyer)
Rebaudet (2019)	**Country:** Haiti, national sample **Crisis type:** Outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency-affected (non-displaced)	**Country:** Haiti, national sample **Crisis type:** Outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency-affected (non-displaced)	**Study design:** Observational **Study duration:** 4 years **Sample description:** Weekly cholera alerts **Sample size:** 7,856 weekly alerts (31,306 notified CATIs)
Scobie (2016)	**Country:** Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** Shanchol oral cholera vaccine (OCV) campaign **Implementation site:** Community-based **Personnel type(s):** Not specified **Part of broader program:** No	**Study design:** Observational (pre-post test) **Study duration:** 16 months **Sample description:** Households in Maela camp at least 1 month before study **Sample size:** Baseline 271 HHs, 1st follow-up 187 HHs, 2nd follow-up 199 HHs

Sikder (2020a)	**Country:** Bangladesh, regional sample **Crisis type:** Armed conflict **Context type:** Camp (urban) **Population:** Refugee	**Description:** 3 source water chlorination interventions (bucket, in-line, and piped water chlorination) **Implementation site:** Community-based, system-level **Personnel type(s):** Lay personnel - trained chlorination agents **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 18 months **Sample description:** People who used water from water sources of interest **Sample size:** Water point observation: 29, Water testing: 516, HH surveys: 487
Sikder (2020b)	**Country:** Bangladesh and Democratic Republic of Congo (DRC), regional sample **Crisis type:** Armed conflict (both), outbreak (DRC) **Context type:** Camp (urban) in Bangladesh, non-camp (urban) in DRC **Population:** Refugee (Bangladesh); host community, refugee (DRC)	**Description:** Delivering drinking water by truck **Implementation site:** System-level **Personnel type(s):** Lay personnel - truckers, local and international NGO staff, government staff, geologist, and hydrologist **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 18 months **Sample description:** KIIs with staff, FGDs with users, collection and distribution point observations, household surveys, water quality tests **Sample size:** 17 Collection Point Observations, 16 Distribution Point Observations, 472 HH surveys, 505 Water Quality Tests, 4 FGDs with users, 9 KIIs with staff, 13 KIIs with truckers
Sozzi (2015)	**Country:** Haiti, regional sample **Crisis type:** Environmental disaster, outbreak **Context type:** Non-camp (urban) **Population:** Emergency-affected (non-displaced)	**Description:** Disinfection of CTC wastewater **Implementation site:** Facility-based **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Quasi-experimental study (non-randomized trial) **Study duration:** N/A **Sample description:** N/A **Sample size:** N/A

Spina (2018)	**Country:** Chad, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Chlorination of water supplies, hygiene promotion, and hygiene kit distribution **Implementation site:** Community-based **Personnel type(s):** Lay personnel - outreach workers **Part of broader program:** Yes	**Study design:** Observational (cross-sectional study) **Study duration:** 2 months **Sample description:** Households with females over the age of 18 years living in Am Timan **Sample size:** 395 survey respondents, 392 analysed
Thomson (2015)	**Country:** Haiti, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Membrane filtration for detection of Vibrio cholerae for the measurement of biosand filter performance **Implementation site:** N/A **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Observational (descriptive field evaluation) **Study duration:** N/A (several months) **Sample description:** Biosand filters in the Artibonite Valley of Haiti **Sample size:** 50
Watson (2019)	**Country:** Iraq, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Internally displaced	**Description:** Handwashing promotion intervention for older children **Implementation site:** Community-based **Personnel type(s):** Lay personnel - hygiene promoters **Part of broader program:** No	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 4 weeks **Sample description:** Households with at least 1 child aged 5-12 in Sharia camp **Sample size:** 80 households recruited, 71 completed
Yates (2015)	**Country:** Democratic Republic of Congo (DRC), Haiti, Senegal, and Sierra Leone, regional sample **Crisis type:** Multiple (outbreaks, endemic disease, food crisis) **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Chlorine dispenser system (including hardware, dispenser refills, community education, and supply chain of chlorine refills) **Implementation site:** Community-based **Personnel type(s):** Lay personnel - local promoters **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 2.5 years **Sample description:** Households at the 10 dispenser sites **Sample size:** 10 dispenser site visits per country, 9 water point observations in Senegal, and HH surveys (298 sustained Haiti, 300 initial/300 sustained Sierra Leone, 300 initial/300 sustained DRC, 277 initial/283 sustained Senegal)

Outcomes of Water, Sanitation, and Hygiene Intervention Studies in Humanitarian Crisis Settings, 2013-2021 (n=21)

Author (Year)	Health Outcome(s)	Main Results	Risk of Bias
Aibana (2013)	• Knowledge of cholera transmission • Knowledge of means of avoiding cholera • Knowledge of means of water treatment • % always treating water • % wash hands with soap and water >4 times a day	**Post- vs. pre-intervention OR (95% CI):** **Transmission knowledge:** 1.91 (1.52-2.40, p<0.0001) **Avoidance knowledge:** 1.83 (1.46-2.30, p<0.0001) **Water treatment knowledge:** 2.75 (2.16-2.50, p<0.0001) **Always treat water:** 1.62 (1.28-2.05, p<0.0001) **Wash hands >4/day:** 1.30 (1.03-1.64, p=0.03)	High
Ali (2019)	• Bacteriological risk and contamination before and after cleaning • Stages of bacteriological analysis before and after rehabilitation	**Bacteriological risk before, after cleaning (2010):** low risk 0%, 88%; intermediate risk 2%, 12%; high risk 17%, 0%; very high risk 81%, 0% **Bacteriological contamination before, after cleaning:** contaminated 85%, 20% **Stages of bacteriological analysis:** **Before rehabilitation:** 0 UFC/100ml = 202 wells, 1-10 UFC/100ml = 182 wells, 11-50 UFC/100ml = 570 wells, >50 UFC/100ml = 1394 wells **After rehabilitation:** 0 UFC/100ml = 2098 wells, 1-10 UFC/100ml = 87 wells, 11-50 UFC/100ml = 75 wells, >50 UFC/100ml = 120 wells	Low
Anu Rajasingham (2020)	• Samples with detectable free residual chlorine (FRC)	**Samples with detectable FRC, % (n):** centralized and decentralized chlorination water points: all 69% (67); tapstand - piped network 86% (31); donkey cart 60% (28); truck-filling station 100% (3); underground tank (Birkat) - piped network 45% (5); HH Jerry can 62% (38)	Unclear
Djimeu (2014)	• Height-for-age Z-scores (HAZ)	**Average treatment effect of ASAF on HAZ (SE):** FEM 0.3255 (0.037, p<0.01), PSM 0.335 (0.155, p<0.05), WLS 0.28445 (0.046, p<0.01)	Unclear

Gallandat (2020)	• # of surfaces positive for V. cholerae • # of surfaces with high contamination (>5,000 CFU/cm2) of V. cholerae • # of surfaces positive for E. coli	**# of surfaces positive for V. cholerae (before spraying, 30 min after, 24 hours after):** Program A - 25, 8, 16; Program B - 40, 25, 39; Program C - 22, 11, 33 **# of households with change in # of V. cholerae contaminated surfaces:** decrease in 93% at 30 mins, increase in 71% from 30 mins to 24 hours **# of surfaces with high contamination of V. cholerae (before spraying, 30 min after, 24 hours after):** Program A - 9, 4 (p<0.001), 5 (p=0.007 compared to before, p=0.064 compared to 30 mins after); Program B - 16, 10 (p=0.014), 13 (p=0.804 compared to before, p=0.008 compared to 30 mins after); Program C - 13, 5, 10 (p=0.062 comparing before, 30 mins after and 24 hours after) **# of surfaces positive for E. coli (before spraying, 30 min after, 24 hours after):** Program A - 20, 8 (p<0.001), 18 (p=0.879 compared to before, p<0.001 compared to 30 mins after); Program B - 35, 23 (p=0.005), 31 (p=0.018 compared to before, p=0.132 compared to 30 mins after); Program C - 16, 10 (p=0.010), 12 (p=0.515 compared to before, p=0.008 compared to 30 mins after) **HHs with decreased # surfaces positive for E. coli before vs. 30 min after spraying:** 10 (71**%)** **HHs with increased # surfaces positive for E. coli 30 min vs. 24 hrs after spraying:** 10 (71%)	Unclear
Hashmi (2019)	• Proportion of exclusively breastfed infants • Handwashing among mothers who had prepared the family meal the day prior to interview • Adequate dietary diversity • Appropriate meal amount • Minimum acceptable diet • Safe disposal of infant stool	**All months refer to age of infant** **Proportion of exclusively breastfed infants:** 3 months 42%, 5 months 65% **Handwashing among mothers who had prepared the family meal the day prior to interview:** 3 months 94%, 6 months 100%, 9 months 100% **Adequate dietary diversity:** 6 months 5%, 8 months 58%, 9 months 90% **Appropriate meal amount:** 6 months 10%, 9 months 100% **Minimum acceptable diet:** 6 months 0%, 8 months 47%, 9 months 90% **Safe disposal of infant stool:** 6 months 16%, 9 months 100%	High

Husain (2015)	• % of hanging bags at the time of visit • % of households having bags with water at the time of visit • % of respondents reported using the HWB as their primary hand washing device • % reported using the HWB last time they washed their hands • Durability: probable functional time • Durability: mean bag survival time	**Hanging bags:** MV1 95.1%, MV2 93.5%, MV3 98.1%, endline 71.8% **Households having bags with water:** MV1 83.9%, MV2 66.2%, MV3 66.7%, endline 38.4% **Respondents primarily using HWB, endline only (95% CI):** 45.9% (39.2-52.8) **Respondents using HWB at last handwash, endline only (95% CI):** 36.4% (30.1-43.2) **Durability (probability of 3-month functional time):** 68% **Durability (mean bag survival time):** 2.73 months	Unclear
Kanagasa-bai (2021)	• Overall HH compliance (proper technique and handwashing) before and after a single patient-care occurrence	**Baseline overall HH compliance (before intervention, 2016):** 36% (LGH Bomi), 86% (St. Timothy) **HH compliance during renovations (during intervention, 2017):** 61% (LGH Bomi), 64% (St. Timothy) **After WaSH improvements (after intervention, 2018):** 89% (LGH Bomi), 88% (St. Timothy)	Low
Lantagne (2013)	• Effective use: % of targeted households that used the intervention to improve their water quality • E. coli (CFU/100 mL) • Number (%) chlorine-treated water with 0.2 mg/L FCR • Turbidity in untreated water	**Effective use (<1 CFU/100 mL), % (n):** **DSI Aquatabs Safe Storage:** acute phase 63% (58), recovery phase 46% (77) **HRC Aquatabs:** acute phase 13% (13) **FilterPure Ceramic Filter:** acute phase 20% (29), recovery phase <1% (6) **CWH Biosand Filter:** acute phase 8% (19), recovery phase 28% (6) **Effective use (<10 CFU/100 mL):** **DSI Aquatabs Safe Storage:** acute phase 49% (58), recovery phase 41% (77) **HRC Aquatabs:** acute phase 10% (13) **FilterPure Ceramic Filter: acute phase 12% (29), recovery phase 11% (6)** **CWH Biosand Filter:** acute phase 20% (19), recovery phase 18% (6)	High

Michel (2019)	• CATI effectiveness according to response promptness • CATI effectiveness according to response intensity	**Adjusted estimate of CATI effectiveness (95% CI):** **Of response promptness [days to 1st complete CATI vs >7 days] on outbreak size:** 3-7 days 50% (9-72, p=0.0222); 2 days 68% (40-83, p=0.0004); <=1 day 76% (59-86, p<0.0001) Of response promptness [days to 1st complete CATI vs >7 days] on outbreak duration: 3-7 days 53% (29-69, p=0.0004); 2 days 27% (-22 to 56, p=0.2322); <=1 day 61% (41-75, p<0.0001) Of the response intensity [# complete CATIs/week vs <0.25 complete CATIs] on outbreak size: 0.25 to 0.5 complete 45% (-17 to 74, p=0.1206); 0.5 to 1 complete 70% (42-84, p=0.0003); >=1 complete 59% (11-81, p=0.0235) **Of the response intensity [# complete CATIs/week vs <0.25 complete CATIs] on outbreak duration:** 0.25 to 0.5 complete 1% (-45 to 32, p=0.9759); 0.5 to 1 complete 57% (30-74, p=0.0007); >=1 complete 73% (49-86, p<0.0001)	Low
Ratnayake (2016)	• Proportion of correct IPC behaviours within the domains of pre-screening, donning, screening, doffing and consultation	**Baseline to follow-up risk ratio (95% CI):** **Pre-screening:** Patient went directly, or HCW-directed patient, to screening area: 0.53 (0.37-0.77) Attendant washed hands: 0 Screener asked patient to wash hands: 1.45 (1.16-1.80) Patient washed hands on direction from HCW: 1.49 (1.19-1.86) Patient washed hands directly or washed on direction from HCW: 1.27 (0.95-1.71) **Donning:** Wore rubber boots or covers: 1.51 (1.14-1.99) Wore face shield or mask: 1.27 (1.03-1.58) Completed in correct order: 8.94 (0.84-95.61) Took off /did not wear jewellery: 0.83 (0.72-0.97) Wore new gloves: 2.56 (1.37-4.79) Continued to wear gloves: 0.75 (0.6-0.94) **Screening:** No other HCWs were in screening area: 2.54 (0.69-1.07) Stood 1.5 m from patient: 4.09 (0.83-1.48) Sat sideways to patient: 2.3 (1.34-3.95) Held digital thermometer 5-6 cm from patient: 0.23 (0.12-0.43)	Unclear

		Doffing: Removed any light PPE: 2.54 (1.32-4.88) Removed gloves: 4.09 (1.34-12.49) Washed gloved or ungloved hands: 2.58 (1.0-6.66) Removed face shield or goggles: 0.21 (0.05-0.94) Completed in correct order: 6.64 (2.09-21.14) **Consultations:** Washed hands before treating patient: 0.63 (0.18-2.21) Washed hands after treating patient: 0.91 (0.5-1.65) Put on new gloves before treating patient: 0.97 (0.85-1.1) Did not remove gloves after treating patient: 1.51 (0.55-4.12) Stood 1.5 m from patient: 1.18 (0.92-1.51)	
Rayner (2016)	• Turbidity (NTU) • Total coliform (CFU/100mL) • E. coli (CFU/100mL)	**Overall turbidity [median (lower, upper quartiles)]:** Untreated stored 0.64 (0.23, 2.33), direct-from-filter 0.39 (0.1, 1.37) **Overall total coliform (geometric mean):** untreated stored 1,451, direct-from-filter 42, treated 356 **Overall E. coli (geometric mean):** untreated stored 39.2, direct-from-filter 1.2, treated 3.0	Low
Rebaudet (2019)	• Exhaustiveness of CATIs in response to cholera alerts: adjusted odds ratio • Intensity of CATIs in response to cholera alerts: adjusted incidence ratio • Quality of CATIs in response to cholera alerts: adjusted incidence ratio	**(95% CI):** **Exhaustiveness of CATI response:** higher for red alerts vs orange 2.52 (2.22-2.86, p<0.0001), increased during study period 1.43 (1.39-1.48, p<0.0001), tended to decrease when alert far from department capital 0.94 (0.88-1, p=0.06) **Intensity and quality of CATI response:** higher for red alerts vs orange 1.85 (1.72-1.98, p<0.0001), increased over study period 1.22 (1.20-1.25, p<0.0001), greater in more populated communes 1.02 (1.01-1.02, p<0.0001)	Low

| Scobie (2016) | • Cholera and WaSH knowledge
• WaSH practices
• Vaccine knowledge, attitudes, and practices | Reported as baseline %, 1st follow-up %, 2nd follow-up %
Have heard of cholera: 81%, 81%, 91%
Knew watery diarrhoea was a symptom of cholera: 52%, 45%, 52%
Knew 2+ means of cholera transmission: 61%, 59%, 82%
Knew 2+ means of cholera prevention: 62%, 78%, 80%
Would go to camp clinic for cholera treatment: 97%, 99%, 100%
Would use oral rehydration for cholera treatment: 0%, 7%, 6%
Had heard about cholera prevention and treatment from others or media: 83%, 82%, 92%
Reported receipt of materials to prevent cholera: 91%, --, --
Knew about boiling or treating drinking water for cholera prevention: 53%, 66%, 53%
Reported camp public tap as primary HH drinking water source: 67%, 77%, 70%
Reported boils or treats drinking water: 19%, 44%, 69%
Reported boiling or treating drinking water w/in last 24 hours: 12%, 29%, 61%
Reported washing hands on >=3 types of occasions: 49%, 50%, 67%
Reported using soap to wash hands: 66%, 77%, 85%
Observed soap at hand-washing station: 84%, 90%, 95%
Observed covered drinking water container with spigot: 73%, 63%, 65%
Observed residual chlorine in HH drinking water sample: 8%, 4%, 2%
Observed E. coli in HH drinking water sample: 39%, 49%, 34%
Could name >=2 diseases prevented by vaccines: 50%, 52%, 68%
Heard of cholera vaccine: 39%, 94%, 93%
Concerns about HH adults receiving vaccines: 4%, 2%, 2%
Concerns about HH children receiving vaccines: 7%, 5%, 1%
HH member received any vaccine: 86%, 86%, 96%
Child aged <15 years received polio drops: 97%, 98%, 100%
Child aged <15 years received measles injection: 95%, 94%, 95%
Knew cholera prevented by vaccine: 11%, 30%, 39% | Low |

| Sikder (2020a) | • FCR 0.2 mg/L
• E. coli CFU/100 mL < 10
• Turbidity
• pH
• E. coli CFU/100 mL
• Queueing time | **FCR 0.2 mg/L, n (%):** bucket chlorination –, in-line chlorination 4 (44%), piped water chlorination 2 (20%)
E. coli CFU/100 mL < 10, n (%): bucket chlorination 0 (0%), in-line chlorination: 8 (89%), piped water chlorination 10 (100%)
Turbidity (NTU, mean (SD)): bucket chlorination 7.9 (14.5), in-line chlorination 2.7 (2.9), piped water chlorination 2.5 (1.0)
pH (mean (SD)): bucket chlorination 6.6 (0.6), in-line chlorination 8.0 (0.4), piped water chlorination 8.4 (0.6)
E. coli CFU/100 mL Geometric mean (geometric SD): bucket chlorination 451.0 (6.5), in-line chlorination 1.5 (2.4), piped water chlorination 1.0 (1.0)
Queueing time (minutes, mean (SD)): bucket chlorination 0 (0), in-line chlorination 1.5 (0.8), piped water chlorination 3.9 (2.9) | Unclear |
| Sikder (2020b) | • Free chlorine residual (FCR) at water collection points, distribution points, and in the household
• E. coli (CFU/100 mL)
• Effectiveness of program compared to Sphere indicators | **FCR (mg/L) at water collection points:** Program 1 --, Program 2 0.45, Program 3 1.80
FCR (mg/L) at water distribution points: Program 1 0.96, Program 2 0.38, Program 3 0.84
Number of households with ≥0.2 mg/L FCR: Program 1 158 (98%), Program 2 67 (39%), Program 3 86 (63%) (p<0.001)
E. coli (CFU/100 mL) at water collection points (SD): Program 1 548 (733) before chlorination, Program 2 <1 after chlorination, Program 3 <1 after chlorination
E. coli (CFU/100 mL) at water distribution points (SD): Program 1 3 (8), Program 2 1 (2), Program 3 11 (23)
Number of households with ≤1 E. coli CFU/100 mL: Program 1 120 (75%), Program 2 122 (70%), Program 3 88 (64%) (p=0.154)
Number of households with <10 E. coli CFU/100 mL: Program 1 138 (86%), Program 2 156 (90%), Program 3 107 (78%) (p=0.017)
Water access:
* Distance between HHs and distribution points: program 1 354 m, program 2 167 m, program 3 28.1 m
* Reported queueing time significantly below rec max of 30 min
Water Quantity/Quality
* Water quantity significantly lower than rec min of 15 L/(person day)
* Distribution point FCR significantly greater than rec min of 0.2 mg/L only in program 1
* Turbidity was significantly lower than the rec max of 5 NTU in programs 1 and 3 | Unclear |

| Sozzi (2015) | • Degree of reduction in turbidity (NTU)
• Degree of reduction in total suspended solid (TSS)
• Degree of reduction in thermotolerant coliforms (CFU per 100 mL) | **Protocol A (low pH)**
Turbidity (NTU; mean): raw wastewater 805, treated effluent 15, removal 98.2%
Thermotolerant coliforms (CFU per 100 ml; mean): raw wastewater 1.75 x 10^4, treated effluent 5, removal 99.97%
COD (mg O2/l; mean): raw wastewater 17,080, treated effluent 131, removal 99.2%
Total suspended solids (mg/l; mean): raw wastewater 1,155, treated effluent 112, removal 90.5%
Protocol B (high pH)
Turbidity (NTU, mean): raw wastewater 430, treated effluent 23, removal 91.3%
Thermotolerant coliforms (CFU per 100 ml, mean): raw wastewater 4.98 x 10^4, treated effluent 106, removal 99.52%
COD (mg O2/l, mean): raw wastewater 17,080, treated effluent 149, removal 99.1%
Total suspended solids (mg/l, mean): raw wastewater 1,077, treated effluent 38, removal 92.9% | Low |
| Spina (2018) | • Water chlorination: mean FRC and % of HHs with safe FRC levels (≥0.2 mg/L) in water storage containers
• Reach of hygiene promotion messages
• Receipt of hygiene kit distribution and hygiene behaviour
• Water sources, transport, and storage | **(95% CI):**
Households with safe FRC level in stored drinking water: 43% (38-48)
Median FRC values in HH storage containers: 0.1 (range: 0.1-3)
Reach of messages: 388 HHs (99%, 97-100)
Receipt of kits: 390 HHs (99%, 98-99)
Water sources for households: private wells 269 HHs (69%, 64-73), in-home taps 141 HHs (36%, 31-41), river 13 HHs (3%, 2-6), multiple sources 29 HHs (7%, 5-10)
Water transport: primarily using 20L containers 389 HHs (99.2%, 98-100)
Households with safe FRC level in stored drinking water:
among all 167 (43%, 38-48), among HHs with empty container at time of refill: 104 (65%, 57-73), among HHs with quarter-filled container at refill 20 (26%, 17-38), among HHs who refilled within last 6 hours 81 (60%, 51-68)
HHs who collected water from private wells: 125 (46%, 40-53)
HHs who collected from in-home taps: 40 (34%, 26-43) | Low |

Thomson (2015)	• Removal efficiency of V. cholerae and total coliform in source water as an indicator of V. cholerae in field biosand filters • Time in operation (affects removal efficiency of total coliform and V. cholerae)	**Average removal of V. cholerae:** 80 ± 31% **Average removal of total coliform:** 63 ± 68% Coliform underestimated V. cholerae concentration in 90% of samples; total coliform removal efficiency underpredicted V. cholerae removal efficiency (n = 16) **Time in operation/Average percent removal for V. cholerae filters:** 4-day old = 65 ± 24%, 1-month = 92 ± 8%, 3-month = 96 ± 3%, and 1-year 97 ± 3%	Unclear
Watson (2019)	• Proportion of key handwashing occasions that were accompanied by handwashing with soap (HWWS): (1) after using the toilet, (2) before eating, (3) before preparing food, (4) before serving food to another person and, (5) after cleaning another child's feces • Additional indicators of intervention compliance also measured: proportion of households reporting toy cheats, proportion of households which had used at least 1 soap, proportion of households with toy soap that was wet on inspection	**Effect of intervention on HWWS, risk ratio (95% CI):** 3.94 (1.59-9.79, p=0.003) **Household toy cheats:** 3% (n = 1) **Households finishing at least 1 soap:** 97% (n = 32) **Households with toy soap wet on inspection:** 85% (n = 17)	Moderate
Yates (2015)	• Reported use with dispensers • Confirmed use with dispensers • Confirmed correct use with dispensers • Effective use with dispensers	**Reported use:** Haiti - sustained: 12%; Sierra Leone - initial, sustained: 17%, 22%; DRC - initial, sustained: 52%, 9%; Senegal - initial, sustained: 92%, 97% **Confirmed use:** Haiti - sustained: 9%; Sierra Leone - initial, sustained: 11%, 18%; DRC - initial, sustained: 34%, 5%; Senegal - initial, sustained: 79%, 87% **Confirmed correct use:** Haiti - sustained: 7%; Sierra Leone - initial, sustained: 10%, 15%; DRC - initial, sustained: 32%, 4%; Senegal - initial, sustained: 60%, 70% **Effective use:** Haiti - sustained: 5%; Sierra Leone - initial, sustained: 10%, 10%; DRC - initial, sustained: 28%, 0%; Senegal - initial, sustained: 63%, 81%	Unclear

ANNEX 7: WASH ADDENDUM

Background

The methods presented in the body of the report yielded 21 articles that met inclusion criteria for the Water, Sanitation, and Hygiene (WaSH) topic area. Upon reviewing the draft findings for the WaSH topic area, expert reviewers noted articles that were potentially missing from those identified and included in the review. Based on their concerns and recommendations, the review team conducted an assessment of the suggested publications, as well as publications searchable on the WaSH cluster website.

Results

172 additional WaSH articles were screened by title and abstract, of which nine were identified as having met inclusion criteria. Detailed findings from this review are summarized in Figure 7.1.

Figure 7.1 Flow Diagram for WaSH Addendum Review
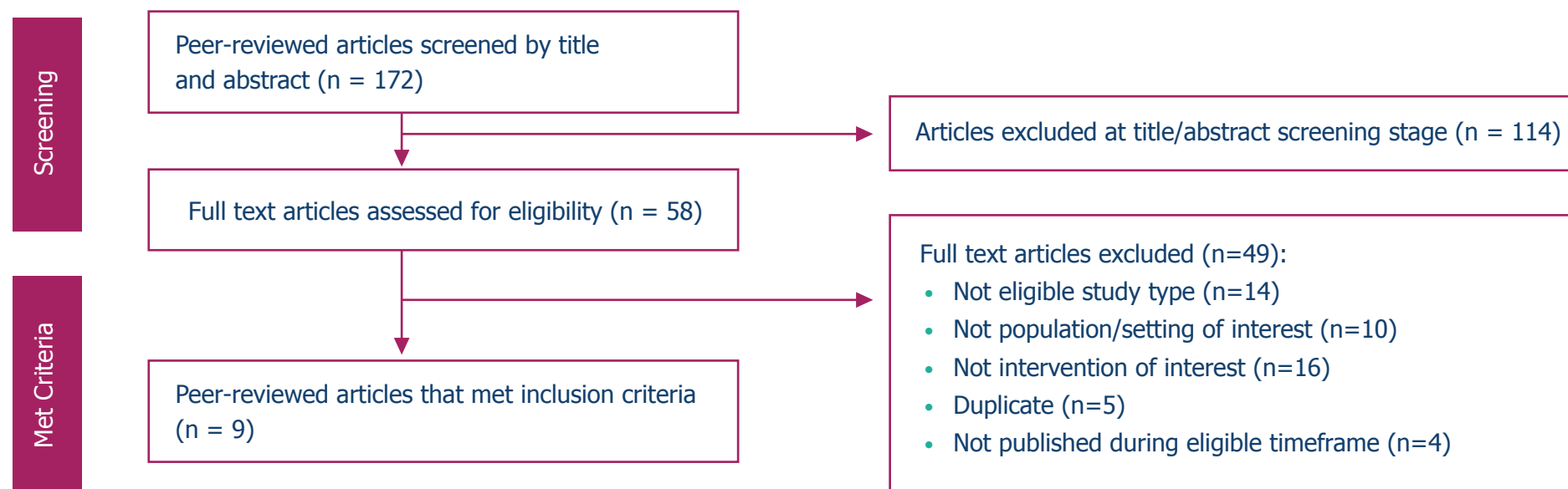
Upon review of the articles that met inclusion criteria, two had been identified by the initial search strategy and excluded at the screening stage. On this review, these two studies were determined to be in alignment with other articles that were included and thus determined to have met inclusion criteria.

The remaining seven articles meeting inclusion criteria were not identified by the initial search strategy; however, all were published in journals that were captured by the initial search strategy. These articles may have been identified with the addition of "chlorine" and related terms, as well as "membrane" to the WaSH search terms.

Citations

The following is a list of the citations that would have met inclusion criteria but that were not identified and included in the review:

1. Ali SI, Arnold M, Liesner F, et al. Characterization of disinfection by-products levels at an emergency surface water treatment plant in a refugee settlement in Northern Uganda. Water. 2019;11(4):647.

2. D'Mello-Guyett L, Greenland K, Bonneville S, et al. Distribution of hygiene kits during a cholera outbreak in Kasaï-Oriental, Democratic Republic of Congo: a process evaluation. Confl Health. 2020;14(51).

3. De Lange R, et al. Keeping it simple: A gender-specific sanitation tool for emergencies. Waterlines. 2014;33(1):45-54.

4. Ensink JHJ, Bastable A, Cairncross S. Assessment of a membrane drinking water filter in an emergency setting. J Water Health. 2015;13(2):362-370.

5. Holding S, Sadeghi I, White T, et al. Acceptability, effectiveness, and fouling of PointOne membrane filters distributed in South Sudan. Journal of Water, Sanitation and Hygiene for Development. 2019;9(2):247-257.

6. Rayner J, Yates T, Joseph M, et al. Sustained effectiveness of automatic chlorinators installed in community-scale water distribution systems during an emergency recovery project in Haiti. Journal of Water, Sanitation and Hygiene for Development. 2016;6(4):602-612.

7.   Sikder M, Daraz U, Lantagne D, et al. Effectiveness of multilevel risk management emergency response activities to ensure free chlorine residual in household drinking water in Southern Syria. Environ Sci Technol. 2018;52(24):14402-14410.

8.   Tian X, Zhao G, Cao D, et al. Health education and promotion at the site of an emergency: experience from the Chinese Wenchuan earthquake response. Global Health Promotion. 2016;23(1):15-26.

9.   Wilner L, Wells E, Ritter M, et al. Sustained use in a relief-to-recovery household water chlorination program in Haiti: comparing external evaluation findings with internal supervisor and community health worker monitoring data. Journal of Water, Sanitation and Hygiene for Development. 2017;7(1):56-66.

Summary

To align with best practice, the review team elected not to include these articles late in the review. While these papers would have met inclusion criteria if identified earlier, the impact on the review findings would have been minimal. These studies measured outcomes with relevance to the WaSH sector more broadly, with a primary focus on water quality, but they did not report on health outcomes. Thus, although these nine articles would have accounted for 30% of the included WaSH articles, there would not have been significant implications for the review's findings or recommendations for future health research in relation to the WaSH sector. However, as these articles do meet inclusion criteria for this review, they should be included in future reviews that focus on the effectiveness of WaSH interventions in humanitarian contexts.

ANNEX 8: STUDY DESIGN AND OUTCOMES OF NUTRITION INTERVENTION STUDIES

Study Design of Nutrition Intervention Studies in Humanitarian Crisis Settings, 2013-2021 (n=34)

Author (Year)	Study Setting & Population	Intervention(s)	Methods
Adelman (2019)	**Country:** Uganda, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (rural and urban) **Population:** Internally displaced	**Description:** 2 food for education (FFE) programs: a school feeding program (SFP) and take-home ration (THR) program. **Implementation site:** School-based **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 15 months **Sample description:** Children aged 6-59 months, adolescent girls aged 10-17, and adult women (>=18y) **Sample size:** Enrolled: 627 HHs, 233 adolescent girls, 577 adult women, 222 children; Follow-up **Cohort:** 556 HHs, 253 adolescent girls, 499 adult women, 242 children
Altmann (2016)	**Country:** Burkina Faso, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Emergency-affected (non-displaced)	**Description:** Nutrition surveillance using a community-based sentinel sites approach ("Listening Posts" (LP)) **Implementation site:** Community-based **Personnel type(s):** Not specified **Part of broader program:** No	**Study design:** Observational (surveillance/validity) **Study duration:** ~ 3 years **Sample description:** Children aged 6-24 months in LPs and in repeat SMART surveys **Sample size:** Observations in LP model: 14,534; observations in cross-sectional surveys: 1,623

Bliss (2018)	**Country:** Niger, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Emergency-affected (non-displaced)	**Description:** Conditional cash transfer program **Implementation site:** Community-based **Personnel type(s):** N/A **Part of broader program:** Yes	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 3 months **Sample description:** Intervention: CTP beneficiaries in the 2nd-lowest wealth category (per HEA) with an eligible child 6-23 months of age Control: non-beneficiary HHs meeting same criteria **Sample size:** 426 HHs (212 cash, 214 comparison)
Carrara (2017)	**Country:** Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Camp (rural) **Population:** Refugee	**Description:** New ration that included micronutrient-fortified flour (MFF) **Implementation site:** Community-based **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Observational (repeat cross-sectional) **Study duration:** 29 months **Sample description:** Women with viable pregnancies attending ANC **Sample size:** 533 in 2004 survey; 515 in 2006 survey
Chamla (2018)	**Country:** Nigeria, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Integration of child nutrition (MUAC) screening with polio vaccination campaign **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - vaccinators, nutrition screener, data collectors, supervisors, support staff **Part of broader program:** Yes - combined bivalent oral (bOPV) and inactivated polio vaccination (IPV) campaign	**Study design:** Observational (cross-sectional) **Study duration:** 1 month **Sample description:** Children attending polio campaign aged 6-59 months [for nutrition screening] **Sample size:** 725,509 children targeted for nutrition screening

Djimeu (2014)	**Country:** Angola, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural and urban) **Population:** Multiple (displaced and non-displaced)	**Description:** Social and economic development health and water, sanitation, and waste management projects **Implementation site:** Community-based **Personnel type(s):** Not specified **Part of broader program:** Yes	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 1 year **Sample description:** Children <5 years of age **Sample size:** 1,373 children (674 ASAF, 699 non-ASAF)
Dong (2013)	**Country:** China, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Complementary food supplementation **Implementation site:** Community-based, facility-based **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Observational (pre-post) **Study duration:** 18 months **Sample description:** All infants and children aged 6-24 months **Sample size:** 314 at baseline; 259 at 18-month endline
Doocy (2020a)	**Country:** Somalia, regional sample **Crisis type:** Armed conflict, environmental disaster **Context type:** Non-camp (urban) **Population:** Emergency-affected (non-displaced), internally displaced	**Description:** Assessment of 2 independent, targeted food assistance interventions implemented in parallel: provision of paper food vouchers or combination of in-kind food, food e-vouchers, and unrestricted cash **Implementation site:** Community-based **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 5 months **Sample description:** Pregnant and lactating women (PLW) from HHs meeting vulnerability criteria; study locations selected based on security and caseload **Sample size:** 514 PLW enrolled (166 paper vouchers, 288 mixed transfers, 60 non-assistance group); 490 analysed (162 paper vouchers, 269 mixed transfers, 59 non-assistance group)

Doocy (2020b)	**Country:** Somalia, regional sample **Crisis type:** Armed conflict, environmental disaster **Context type:** Non-camp (urban) **Population:** Emergency-affected (non-displaced), internally displaced	**Description:** Assessment of 2 independent, targeted food assistance interventions implemented in parallel: provision of paper food vouchers or combination of in-kind food, food e-vouchers, and unrestricted cash **Implementation site:** Community-based **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 5 months **Sample description:** PLW who were not malnourished (MUAC <21 cm) and children aged <5 years from HHs that met vulnerability criteria **Sample size:** 656 children enrolled (359 mixed transfers, 224 paper vouchers, 73 non-assistance); 703 analysed (375 mixed transfers, 248 paper vouchers, 80 non-assistance)
Dozio (2020)	**Country:** Cameroon, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** Baby Friendly Space (BFS) model with weekly activities focused on strengthening/ enhancing parental skills, psychomotor development for babies and emotional wellbeing for both women and babies - maximum of 6 months **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - psychologists, psychosocial workers, paraprofessionals **Part of broader program:** No	**Study design:** Mixed methods (descriptive quantitative and qualitative) **Study duration:** 18 months **Sample description:** Pregnant women, lactating mothers, and children aged <2 years **Sample size:** 3,345 enrolled; 1,022 analysed (203 pregnant women, 819 lactating women, and 819 infants)
El Harake (2018)	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Refugee	**Description:** School-based education and in-kind nutrition intervention composed of 2 main components: (1) delivering health and nutrition education modules on a bi-weekly basis, and (2) providing children with locally-prepared nutritious snacks **Implementation site:** School-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 2 years **Sample description:** Syrian refugee school children enrolled in grades 4 to 6 within 3 informal schools **Sample size:** 203 children enrolled (114 intervention, 89 control); 183 analysed (102 intervention, 81 control)

Fabiansen (2016)	**Country:** Burkina Faso, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Not specified	**Description:** Food supplementation (new formulations of corn-soy blend and lipid-based nutrient supplements) in children with low MUAC **Implementation site:** Facility-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Observational (cohort nested in randomized controlled trial) **Study duration:** 1 year **Sample description:** 6-23 month old children admitted for supplemental feeding based on an MUAC of 115 mm **Sample size:** 458 children
Fenn (2017)	**Country:** Pakistan, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** 3 cash-based interventions (CBIs): (1) a "standard cash" (SC) unconditional cash transfers of 1,500 Pakistani rupees, (2) a "double cash" (DC) unconditional cash transfers of 3,000 Pakistani rupees, (3) fresh food voucher (FFV) with cash value of 1,500 Pakistani rupees exchangeable for specified fresh foods in nominated shops **Implementation site:** Community-based **Personnel type(s):** N/A **Part of broader program:** Yes	**Study design:** Randomized controlled trial (cluster (community/site) randomized) **Study duration:** 14 months **Sample description:** Eligible HHs with at least 1 child aged 6-40 months **Sample size:** 2,496 HHs enrolled (632 controls, 632 SC, 600 DC, 632 FFV); 2,372 HHs analysed (607 controls, 595 SC, 568 DC, 602 FFV)

Grijal-va-Eternod (2018)	**Country:** Somalia, regional sample **Crisis type:** Armed conflict, environmental disaster **Context type:** Camp (urban) **Population:** Internally displaced	**Description:** CBI comprised of: (1) monthly unconditional cash transfer, (2) once-only distribution of a non-food-items kit, and (3) provision of piped water free of charge through tap stands **Implementation site:** Community-based **Personnel type(s):** N/A **Part of broader program:** Yes	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 8 months **Sample description:** HH **cohort:** Randomly selected HHs with children <5 years residing in sampled IDP camps; Child **cohort:** all children aged 6-59 months, IDP camp clusters selected based on vulnerability criteria measured in routine needs assessment **Sample size:** 240 HHs enrolled (394 children, 243 women): 120 intervention HHs (196 children, 122 women), 120 control HHs (198 children, 121 women). 228 HHs analysed (332 children, 223 women): 111 intervention HHs (155 children, 108 women), 117 control HHs (177 children, 115 women)
Hashmi (2019)	**Country:** Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Camp (rural) **Population:** Refugee	**Description:** Monthly household visits by a nurse with mother-infant pairs when infant was 3-9 months old, with assessment of appropriate infant feeding and WaSH practices as well as counselling on appropriate behaviours via 'The Healthy Baby Flipbook' **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - nurse **Part of broader program:** Yes	**Study design:** Observational (cohort study) **Study duration:** 6 months **Sample description:** Mother-infant pairs with term, healthy infants aged 2 months **Sample size:** 20 mother-infant pairs

Heckert (2020)	**Country:** Burundi and Guatemala, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Not specified	**Description:** 2 undernutrition prevention programs (PROCOMIDA and Tubaramure) with 3 components: (1) food assistance (family and individual food rations targeted to mothers from pregnancy until child is 6 mos, then child from 6-24 mos); (2) a health, hygiene, and nutrition behaviour change communication (BCC) strategy; and (3) activities to strengthen & promote local health care system use **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Economic evaluation **Study duration:** No study dates provided **Sample description:** Pregnant mothers and their children (<24 months of age) **Sample size:** Not specified
Hoddinott (2020)	**Country:** Bangladesh, regional sample **Crisis type:** Armed conflict **Context type:** Camp (urban) **Population:** Refugee	**Description:** Electronic food voucher (e-voucher) to be used at selected shops for 19 designated foods compared to food rations **Implementation site:** Community-based **Personnel type(s):** N/A **Part of broader program:** Yes	**Study design:** Observational (cross-sectional) **Study duration:** 1 month **Sample description:** Children in sampled HHs who were aged 6-23 months **Sample size:** 523 children (362 rations, 161 e-vouchers)
Jamalud-dine (2020)	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Camp (urban) **Population:** Refugee	**Description:** Community kitchens linked to a subsidized school snack intervention **Implementation site:** Community-based, school-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** No	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 8 months **Sample description:** Students enrolled in matched pairs of elementary schools; each school was paired to its closest match based on gender distribution, neighbourhood, and school size. **Sample size:** 1,433 students enrolled (746 intervention, 687 control); 1,362 students enrolled (714 intervention, 648 control)

Kurdi (2020)	**Country:** Yemen, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (not specified) **Population:** Emergency affected (non-displaced)	**Description:** Cash transfers conditional on attendance at monthly nutritional training sessions led by locally recruited community health volunteers (CHVs) **Implementation site:** Community-based **Personnel type(s):** Lay personnel - community health workers (CHWs) / CHVs **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 2.5 years **Sample description:** Females with children under 2 years or pregnant at time of enrolment **Sample size:** 2,000 HHs enrolled (1,001 intervention, 999 control); 1,945 analysed
Leroy (2016a)	**Country:** Burundi, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Not specified	**Description:** Food-assisted maternal and child health program with 3 core components: (1) the distribution of food rations from pregnancy to 24 mos (T24), from pregnancy to 18 mos (T18), or from birth to 24 mos (TNFP); (2) activities to improve the provision of health services and to promote their use; and (3) a behaviour change communication (BCC) strategy focused on improving nutrition, health, and hygiene practices **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 4 years **Sample description:** HHs in selected collines (communities) with a child aged 0-23.9 mos **Sample size:** 2,530 HHs at baseline (421 T24, 838 T18, 419 TNFP, 852 controls); 2,566 HHs at 2012 follow-up: (425 T24, 866 T18, 420 TNFP, 855 controls)

Leroy (2016b)	**Country:** Burundi, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Not specified	**Description:** Food-assisted maternal and child health program with 3 core components: (1) the distribution of food rations from pregnancy to 24 mos (T24), from pregnancy to 18 mos (T18), or from birth to 24 mos (TNFP); (2) activities to improve the provision of health services and to promote their use; and (3) a behaviour change communication (BCC) strategy focused on improving nutrition, health, and hygiene practices. **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** RCT **Study duration:** 4 years **Sample description:** Pregnant women (at or after the 4th month of gestation) and mothers of children <6 mos living in study provinces **Sample size:** Children: 2,533 children at baseline (423 T24, 834 T18, 417 TNFP, 859 controls); 2,497 children at follow-up (420 T24, 851 T18, 412 TNFP, 814 controls) Mothers: 2,505 mothers at baseline (413 T24, 839 T18, 410 TNFP, 843 controls); 2,511 mothers at follow-up (414 T24, 849 T18, 410 TNFP, 838 controls)
Leroy (2020)	**Country:** Burundi, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Not specified	**Description:** Child health program with 3 core components: (1) the distribution of food rations from pregnancy to 24 mos (T24), from pregnancy to 18 mos (T18), or from birth to 24 mos (TNFP); (2) activities to improve the provision of health services and to promote their use; and (3) a behaviour change communication (BCC) strategy focused on improving nutrition, health, and hygiene practices. **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 4 years **Sample description:** Pregnant women (at or after the 4th month of gestation) and mothers of children <6 mos living in study provinces **Sample size:** HHs: 2,598 HHs at baseline (431 T24, 859 T18, 430 TNFP, 878 controls); 2362 HHs at follow-up (389 T24, 804 T18, 391 TNFP, 778 controls); Mothers: 2,362 at follow-up (389 T24, 804 T18, 391 TNFP, 778 controls); Children: 2,029 at baseline (320 T24, 687 T18, 333 TNFP, 689 controls); 1,854 at follow-up (304 T24, 611 T18, 301 TNFP, 638 controls)

| Olney (2018) | **Country:** Guatemala, regional sample
Crisis type: Environmental disaster
Context type: Non-camp (rural)
Population: Not specified | **Description:** Child stunting prevention program (PROCOMIDA) with 3 components: (1) food rations; (2) a behaviour-change communication (BCC) strategy; and (3) interventions to improve quality and use of government-funded health services by mothers and children
Implementation site: Community-based
Personnel type(s): Health professional cadre and lay personnel
Part of broader program: No | **Study design:** Randomized controlled trial
Study duration: 45 months
Sample description: Pregnant women who resided in the communities served by the 100 PROCOMIDA health convergence centres or the 20 control centres and their children; Study Groups: Full family ration (FFR) + corn-soy blend (CSB), reduced family ration (RFR) + CSB, no family ration (NFR) + CSB, FFR + lipid-based nutrient supplement (LNS), FFR + micronutrient powder (MNP), control
Sample size: 4,545 women enrolled (784 FFR+CSB, 755 RFR+CSB, 756 NFR+CSB, 739 FFR+LNS, 794 FFR+MNP, 753 control); 3,404 women analysed (576 FFR+CSB, 575 RFR+CSB, 542 NFR+CSB, 550 FFR+LNS, 587 FFR+MNP, 574 control) |
| Olney (2019) | **Country:** Burundi, regional sample
Crisis type: Environmental disaster
Context type: Non-camp (rural)
Population: Not specified | **Description:** Food-assisted maternal and child health program with 3 core components: (1) the distribution of food rations from pregnancy to 24 mos (T24), from pregnancy to 18 mos (T18), or from birth to 24 mos (TNFP); (2) activities to improve the provision of health services and to promote their use; and (3) a behaviour change communication (BCC) strategy focused on improving nutrition, health, and hygiene practices.
Implementation site: Community-based
Personnel type(s): Lay personnel
Part of broader program: No | **Study design:** Randomized controlled trial
Study duration: 4 years
Sample description: Pregnant women (at or after the 4th month of gestation) and mothers of children <6 mos living in study provinces
Sample size: 2010 baseline = 5,856 children total (pooled treatment: 1,498 children 4-23.9 mos, 2,567 children 24-41.9 mos; control: 795 children 4-23.9 mos, 996 children 24-41.9 mos)
2012 follow-up = 2,276 children 4-23.9 mos (pooled treatment: 1,496, control: 780)
2014 follow-up = 3,560 children 4-23.9 mos (pooled treatment: 2,982, control: 578) |

Puett (2018)	**Country:** Burkina Faso, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Seasonal unconditional mobile cash transfers **Implementation site:** Community-based **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 16 months **Sample description:** 32 villages were randomly assigned to control and intervention groups; HHs with at least 1 child <12 months of age selected based on HH economy classification **Sample size:** Not specified
Shen (2020)	**Country:** Burkina Faso, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Blanket supplementary feeding program with 4 interventions: Corn Soy Blend Plus with fortified vegetable oil (CSB+ w/oil, reference arm), Corn Soy Whey Blend with fortified vegetable oil (CSWB w/oil), Super Cereal Plus (SC+), or Ready-to-Use Supplementary Food (RUSF). **Implementation site:** Community-based **Personnel type(s):** N/A **Part of broader program:** Yes	**Study design:** Economic evaluation **Study duration:** 2 years **Sample description:** Children aged 6-23 months **Sample size:** Full sample 6,112 enrolled (1,519 CSB+ w/ oil, 1,503 CSWB w/ oil, 1,564 SC+, 1,526 RUSF), 5,204 analysed (1,312 CSB+ w/ oil, 1,255 CSWB w/ oil, 1,324 SC+, 1,313 RUSF)
Sibson (2018)	**Country:** Niger, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Standard monthly unconditional cash transfers for 4 month duration vs. 6 month duration **Implementation site:** Community-based **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 8 months **Sample description:** All children 6-59 mos in villages selected to receive the UCT and random non-beneficiaries in these same villages **Sample size:** 2,292 children enrolled (standard intervention beneficiary: 1,013, standard intervention non-beneficiary: 255, modified intervention beneficiary: 818, modified intervention non-beneficiary: 206); 2,199 children analysed at endline (standard intervention beneficiary: 974, standard intervention non-beneficiary: 241, modified intervention beneficiary: 784, modified intervention non-beneficiary: 200)

Simonyan (2020)	**Country:** Armenia and Azerbaijan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural and urban) **Population:** Not specified	**Description:** Multi-disciplinary health & nutrition program including financial and social support for families, improvements to schools, and training for human resources. The health and nutrition subcomponent included food distribution, and health education classes. **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** Yes	**Study design:** Observational **Study duration:** 3 years **Sample description:** Children aged 6 months-6 years **Sample size:** 2013 survey=382;,2016 survey 983, 2016 sub-sample 348
Stark (2015)	**Country:** Indonesia, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Microfinance program providing loans to women as well as a savings program for borrowers **Implementation site:** N/A **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 8 weeks **Sample description:** Targeted women (husbands' feedback accepted) with children affected by tsunami **Sample size:** 377 enrolled (185 intervention, 192 control)
Style (2017)	**Country:** Djibouti and Kenya, regional sample **Crisis type:** Armed conflict **Context type:** Camp (urban) **Population:** Refugee	**Description:** Nutributter, a small quantity lipid-based nutrient supplement **Implementation site:** Community-based **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Observational **Study duration:** 3 years **Sample description:** All eligible children aged 6-59 months in camps **Sample size:** Range of 236-620 (analysed sample sizes varied by outcome)

Talley (2013)	**Country:** Haiti, regional sample **Crisis type:** Environmental disaster **Context type:** Camp (urban) **Population:** Internally displaced	**Description:** Infant feeding programs using ready-to-use infant formula (RUIF) and baby tents **Implementation site:** Community-based **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Observational **Study duration:** 3 months **Sample description:** Infants aged <12 months at enrolment living in impacted areas with no possibility of being breastfed **Sample size:** 493 infants analysed
Tondeur (2016)	**Country:** Algeria, regional sample **Crisis type:** Armed conflict **Context type:** Camp (urban/rural not specified) **Population:** Refugee	**Description:** Daily doses of lipid-based nutrient supplement (LNS) among children and micronutrient powder (MNP) among children and pregnant and lactating women (PLWs) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 3 months **Sample description:** Children aged 36-59 months enrolled in camp and growth monitoring program; PLW enrolled in camp antenatal care clinic **Sample size:** 354 (LNS [children 6-35 mos] = 123, MNP [children 36-59 mos] = 112, MNP [pregnant women] = 55, MNP [lactating women] = 64)
Trenouth (2018)	**Country:** Pakistan, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural and urban) **Population:** Not specified	**Description:** 3 CBIs: (1) double cash (DC) transfer, (2) standard cash (SC) transfer, and (3) fresh food voucher (FFV) transfer **Implementation site:** Community-based **Personnel type(s):** N/A **Part of broader program:** Yes	**Study design:** Economic evaluation **Study duration:** 8 months **Sample description:** HHs with at least 1 child aged 6-48 months enrolled based on income criteria **Sample size:** 2,610 children in program at baseline (DC=839, SC=905, FFV=866)
Yang (2015)	**Country:** China, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Large-scale health and nutritional education program **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** No	**Study design:** Observational **Study duration:** 1 year **Sample description:** Children aged <5 years **Sample size:** Baseline: survey 9,635, biochemical analysis 2,165; endline: survey 2,769, biochemical analysis 1,113

Outcomes of Nutrition Intervention Studies in Humanitarian Crisis Settings, 2013-2021 (n=34)

Author (Year)	Health Outcome(s)	Main Results	Risk of Bias
Adelman (2019)	• Prevalence of any anaemia • Prevalence of moderate-to-severe anaemia • Both analysed among females aged 10–13 y, aged ≥18 y, and children aged 6–59 mos	**Difference-in-differences (95% CI):** **Prevalence of any anaemia (females aged 10-13 years):** pooled FFE programs -0.24 (-0.43 to -0.08, p=0.006); SFP -0.27 (-0.48 to -0.07, p=0.009); THR -0.24 (-0.45 to -0.02, p=0.032); test: SFP = THR p=0.702 **Prevalence of moderate-to-severe anaemia (females aged 10-13 years):** pooled FFE Programs -0.19 (-0.35 to -0.04, p=0.018); SFP -0.21 (-0.39 to -0.03, p=0.021); THR: -0.18 (-0.36 to 0.00, p=0.056); test: SFP = THR p=0.694	High
Altmann (2016)	• External Validity of LP • Difference in global acute malnutrition (GAM) prevalence estimates between surveys and LP	**External validity:** Wald test results comparing MUAC between LP and cross-sectional survey models p=0.634 (well correlated) **Difference in surveys vs. LP GAM prevalence estimates:** all differences lay within estimated confidence limits (-8.47 to 5.38)	Unclear
Bliss (2018)	• Weight gain: adjusted difference in difference • Weight-for-height Z scores (WHZ) • Odds of acute malnutrition (AM)	**Adjusted difference-in-differences (95% CI):** **Weight gain:** baseline-midline = 1.03 (0.78-1.3, p<0.001), baseline-endline = 1.27 (1.01-1.53, p<0.001) **WHZ:** baseline-midline = 1.42 (1.2-1.64, p<0.001), baseline-endline = 1.82 (1.61-2.05, p<0.001) **Odds of AM:** baseline-midline = 0.24 (0.11-0.59, p<0.001), baseline-endline = 0.04 (0.02-0.12, p<0.001)	Unclear
Carrara (2017)	• Small for gestational age (SGA) • Preterm birth (PTB)	**Impact of no ration (2004) compared to comprehensive ration exposure (2006):** **SGA:** 28.9% vs 17.3% (adjusted p=0.050) **PTB**: 6.7% vs 5.3% (adjusted p=0.860)	Unclear

Chamla (2018)	• Nutrition screening: overall and by LGA • Proportion of children screened found to have Severe Acute Malnutrition (SAM) • Proportion of SAM cases enrolled in treatment	**Nutrition screening:** overall 48.5%, Jere 56.6%, Konduga 22.8%, Mafa 80.0%, Maiduguri 47.1% **Proportion of children screened with SAM:** overall 3.7%, Jere 4.0%, Konduga 5.5%, Mafa 8.5%, Maiduguri 2.6% **Proportion of SAM cases enrolled in treatment:** overall 47.5%, Jere 34.9%, Konduga no data, Mafa 31.6%, Maiduguri 68.8%	Unclear
Djimeu (2014)	• Height-for-age Z- scores (HAZ)	**Average treatment effect of ASAF on HAZ (SE):** FEM 0.3255 (0.037, p<0.01), PSM 0.335 (0.155, p<0.05), WLS 0.28445 (0.046, p<0.01)	Unclear
Dong (2013)	• Weight-for-length z-score (WLZ) [wasting] • Length-for-age z score (LAZ) [stunting] • Weight-for-age z score (WAZ) [underweight]	**Mean (SD):** **Change of WLZ:** Infants age 6-12 mos: baseline 0.23 (1.14), 6 mo FU 0.06 (0.93), 12 mo FU 0.36 (0.90); 18 mo endline 0.44 (0.87) **Children age 12-18 mos:** baseline -0.08 (0.96), 6 mo FU -0.36 (1.01), 12 mo FU -0.18 (0.97), endline 0.18 (0.90) **Children age 18-24 mos:** baseline -0.34 (0.99), 6 mo FU -0.33 (0.93), 12 mo FU -0.04 (0.88), endline -0.09 (1.04) **LAZ: Infants age 6-12 mos:** baseline -0.46 (0.09), 6 mo FU -0.08 (1.15), 12 mo FU -0.25 (1.31), endline -0.04 (1.06) **Children age 12-18 mos:** baseline -0.35 (1.08), 6 mo FU -0.25 (1.19), 12 mo FU -0.51 (1.01), endline -0.26 (1.40) **Children age 18-24 mos:** baseline -1.04 (1.20), 6 mo FU -0.57 (1.11), 12 mo FU -0.70 (0.85), endline -0.47 (1.27) **WAZ: Infants age 6-12 mos:** baseline -0.09 (1.11), 6 mo FU -0.05 (1.01), 12 mo FU 0.10 (1.19), endline 0.32 (0.95) **Children age 12-18 mos:** baseline -0.22 (0.98), 6 mo FU -0.38 (0.97), 12 mo FU -0.36 (0.96), endline 0.00 (1.00) **Children age 18-24 mos:** baseline -0.76 (0.86), 6 mo FU = -0.52 (0.86), 12 mo FU -0.37 (0.89), endline -0.28 (0.99)	Unclear

Doocy (2020a)	• Mean meals consumed on preceding day • Mean food groups consumed on preceding day • % achieving Minimum Dietary Diversity for Women (MDDW) • Mean MUAC • Acute malnutrition prevalence (MUAC <21.0 cm)	**Difference in change between intervention groups:** adjusted vouchers vs mixed transfers (95% CI): **Mean meals consumed on preceding day:** 0.3 (0.1-0.5, p=0.001) **Mean food groups consumed on preceding day:** 0.3 (-0.3 to 0.8, p=0.324) **% achieving MDDW:** 7.7% (-7.0 to 22.5%, p=0.303) **Mean MUAC:** 0.4 (-0.1 to 0.8, p=0.086) **Acute malnutrition prevalence:** -2.9% (-6.1 to 0.4, p=0.086)	Moderate
Doocy (2020b)	• Meals consumed on preceding day • % achieving Minimum Meal Frequency • Minimum Dietary Diversity (MDD) score • % achieving MDD • % achieving Minimum Acceptable Diet • Mean MUAC • Acute malnutrition prevalence (MUAC <12.5 cm)	**Difference in change between intervention groups: adjusted vouchers vs mixed transfers (95% CI):** **Meals consumed on preceding day:** -0.3 (-0.8 to 0.3, p=0.305) **% achieving Minimum Meal Frequency:** -0.5% (-15.2 to 12.3, p=0.462) **MDD score:** -0.2 (-0.7 to 0.4, p=0.300) **% achieving MDD:** -8.1% (-17.4 to 3.8, p=0.152) **% achieving Minimum Acceptable Diet:** -5.4% (-15.7 to 3.5, p=0.261) **Mean MUAC:** -0.4 (-0.9 to 0.2, p=0.125) **Acute malnutrition prevalence:** -5.5% (-25.3 to 12.3, p=0.578)	Low
Dozio (2020)	• Perceived social support: self-reporting scales (range 0-10) • Psychosocial suffering: self-reporting scales (range 0-10) • Mother-child relationship: observation grid (maximum score of 76) • Breastfeeding practices	**(SD):** **Perceived social support:** lactating women improving status 40%, improvement 0.86 (1.55, p<0.01); pregnant women improving status 36%, improvement 0.7 (1.35, p<0.01) **Psychosocial suffering:** lactating women improving status 62%, improvement 1.65 (2.05, p<0.01); pregnant women improving status 50%, improvement 1.04 (1.59, p<0.01) **Mother-child relationship:** lactating women improving status 89%;, improvement 13.36 (12.01, p<0.01) **Breastfeeding practices:** lactating women improving status 89%, improvement 3.28 (2.55, p<0.01)	Moderate

El Harake (2018)	• Mean change from baseline to 6-months follow up in dietary knowledge, attitude, and behaviour scores • Mean change in anthropometric measures: BMI for Age Z-score (BAZ), Waist to Height ratio (WHtR), Height for age Z-score (HAZ), Weight for age Z-score (WAZ)	**Adjusted mean change in scores, intervention versus control (95% CI):** **Dietary knowledge score:** 1.22 (0.54-1.89, p<0.001) **Dietary attitudes score:** 0.69 (0.08-1.30, p=0.026) **Behaviour scores:** -0.20 (-2.53 to 2.14) **BAZ:** 0.25 (0.10-0.41, p=0.001) **WHtR:** 0.02 (-0.01 to 0.05) **HAZ:** 0.19 (-0.07 to 0.45) **WAZ:** 0.25 (-0.04 to 0.54)	Unclear
Fabiansen (2016)	• Weight gain velocity • Increase in weight • MUAC-gain velocity • Increase in MUAC	**Weight gain velocity:** velocity from baseline showed a similar development between groups throughout supplementation; velocities from the last visit (2 weeks previously) remained similar between short and long children and were initially high but approaching velocities for well-nourished reference children toward the end of supplementation; there was no effect modification by type of product (CSB compared with LNS) on weight-gain velocity (p=0.65). **Increase in weight:** 12% after 12 weeks of supplementation **MUAC-gain velocities:** MUAC-gain velocity from baseline was similar between groups from week 4; MUAC-gain velocities from the last visit (2 weeks previously) remained similar between short and long children and were initially high but approaching velocities for well-nourished reference children toward the end of supplementation; there was no effect modification by type of product (CSB compared with LNS) on MUAC-gain velocity (p=0.45). **Increase in MUAC:** 6% after 10-12 weeks of supplementation	Unclear
Fenn (2017)	• Prevalence of being wasted (weight-for-height z-score [WHZ] <-2): adjusted odds ratio • Mean WHZ: adjusted β	**WHZ (95% CI):** at 6 months: DC 0.52 (0.29-0.92), FFV 1.16 (0.67-2.01), SC 1.09 (0.64-1.87); at 1 year: DC 0.80 (0.51-1.24), FFV 1.17 (0.75-1.82), SC 1.10 (0.71-1.71) Mean WHZ (95% CI): at 6 months: DC 0.11 (0.00-0.21), FFV 0.16 (0.05-0.26), SC 0.04 (-0.07 to 0.14); at 1 year: DC 0.00 (-0.12 to 0.12), FFV 0.02 (-0.10 to 0.14), SC -0.08 (-0.19 to 0.04)	Unclear

Grijalva-Eternod (2018)	• Primary outcomes (in children 6-59 mos): • Mean Child Dietary Diversity Score (DDS): adjusted difference-in-differences (DiD) • Incidence of acute malnutrition (defined by low MUAC and/or oedema): adjusted hazard ratio • Secondary outcomes: • Prevalence of acute malnutrition, defined by WHZ (children 6–59 mos): DiD • Mean weight-for-length/ height z-score (WHZ) (children 6–59 mos): DiD • Mean 30-day HH expenditure: DiD • Mean HH DDS: DiD • Mean Food Consumption Score (FCS): DiD • Mean Household Food Insecurity Access Scale (HFIAS) score: DiD • Mean Reduced Coping Strategies Index (rCSI) score: DiD • Mean Women DDS: DiD	**(95% CI):** **Child DDS:** linear regression 0.62 (0.08-1.15), ordered logistic regression 1.11 (0.15-2.07) **Incidence of first episode of acute malnutrition:** 0.94 (0.51-1.74) **Prevalence of acute malnutrition:** 1.09 (-5.64 to 7.83) **Mean WHZ value:** -0.22 (-0.46 to 0.03) **Mean 30-day HH expenditure:** US$29.60 (3.51-55.68) **HH DDS:** 0.99 (0.09-1.90) **HH FCS:** 14.8 (4.83-24.8) **Mean HFIAS score:** -48.6 (-67.2 to -29.9) **Mean rCSI score:** -11.6 (-17.5 to -5.96) **Mean Women DDS:** 1.37 (0.53-2.21)	Unclear

| Hashmi (2019) | • Proportion of exclusively breastfed infants
• Handwashing among mothers who had prepared the family meal the day prior to interview
• Adequate dietary diversity
• Appropriate meal amount
• Minimum acceptable diet
• Safe disposal of infant stool | **All months refer to age of infant**
Proportion of exclusively breastfed infants: 3 months 42%, 5 months 65%
Handwashing among mothers who had prepared the family meal the day prior to interview: 3 months 94%, 6 months 100%, 9 months 100%
Adequate dietary diversity: 6 months 5%, 8 months 58%, 9 months 90%
Appropriate meal amount: 6 months 10%, 9 months 100%
Minimum acceptable diet: 6 months 0%, 8 months 47%, 9 months 90%
Safe disposal of infant stool: 6 months 16%, 9 months 100% | High |
| Heckert (2020) | • Total cost of program activities per beneficiary for the duration of the program (in USD)
• Cost per beneficiary per percentage point reduction in stunting (in USD)
• Study group key: full-sized family ration (FFR), reduced family ration (RFR), no family ration (NFR), individual ration of corn–soy blend (CSB), lipid-based nutrient supplement (LNS), Micronutrient powder (MNP), standard food ration until child was 24 mos (T24), standard food ration until child was 18 mos (T18), standard program without food ration during pregnancy (TNFP) | **Total program cost per beneficiary:** PROCOMIDA (Guatemala): FFR+CSB $758.88, RFR+CSB $721.08, NFR+CSB $785.09, FFR+LNS $762.18, FFR+MNP $759.66
Tubaramure (Burundi): T24 $451.57, T18 $427.27, TNFP $449.07
Cost per beneficiary per percentage point reduction in stunting: PROCOMIDA (Guatemala): FFR+CSB $97.29, FFR+MNP $165.87
Tubaramure (Burundi): T24 $103.46, T18 $118.58, TNFP $154.52 | Moderate |

Hoddinott (2020)	• Mean length/height for age z-score (HAZ) • Stunting (HAZ< -2) • Weight-for-height z score (WHZ) • Wasting (WHZ< -2) • MUAC	**Associations with receipt of e-voucher compared to food ration (SE):** **HAZ:** 0.38 (0.19, p<0.05) **Stunting:** -0.08 (0.06) **WHZ:** -0.02 (0.12) **Wasting: -0.02 (0.05)** **MUAC:** -0.65 (1.07)	Low
Jamalud-dine (2020)	• Child and HH diet diversity • Haemoglobin levels • Anaemia (haemoglobin value <115 g/L) • BMI-for-age z-score (BAZ) • Height-for-age z-score (HAZ) • Overweight (BAZ > +2) • Obesity (BAZ > +3) • Stunting (HAZ < −2) • HH and child food insecurity	**Adjusted change from baseline to endline in intervention vs control groups (95% CI):** **Mean child diet diversity:** 0.33 (0.07-0.60, p=0.028) **Mean haemoglobin:** 3.26 (0.99-5.54, p=0.020) **Odds of anaemia:** 0.88 (0.76-1.01, p=0.073) **Mean BAZ:** 0.04 (-0.14 to 0.19, p=0.435) **Mean HAZ:** 0.01 (-0.10 to 0.08, p=0.714) **Odds of overweight:** 0.98 (0.65-1.49, p=0.923) **Odds of obesity:** 1.06 (0.48-2.30, p=0.891) **Odds of stunting:** 1.47 (0.73-2.97, p=0.278) **HH food insecurity:** -0.33 (-0.65 to 0.00, p=0.049) **Child food insecurity:** -0.20 (-0.67 to 0.27, p=0.273) Per protocol analyses were also presented disaggregated by high-participation and low-participation schools	Low

| Kurdi (2020) | • Breastfeeding initiation within first hour after delivery
• Probability of exclusively breastfeeding (EBF) during the first 6 months
• Treated drink water consumed by either adults or children under 2 years old
• Impact on infant and young child nutrition (IYCN) knowledge score (index specific to this program constructed based on 13 knowledge questions: literate vs illiterate) | **Instrumental variable (IV) estimates of program impact (95% CI):**
Breastfeeding initiation within first hour after delivery: 0.156 (0.036-0.275, p<0.05), time trend 0.07
Probability of EBF during the first 6 months: 0.144 (-0.009 to 0.298, p<0.10)
Treated drinking water consumed by adults: 0.167 (0.085-0.248, p<0.01), time trend 0.047 (p<0.10)
Treated drinking water consumed by children under 2 years: 0.103 (-0.012 to 0.218, p<0.10), time trend 0.164 (p<0.01)
Impact on IYCN knowledge score (adjusted program impacts): 0.913 (0.273-1.553, p<0.01), time trend 0.000 | Low |
| Leroy (2016a) | • Prevalence of child wasting (WLZ < 2SD)
• Mean weight-for-length z-score (WLZ) | **Adjusted impact of intervention on wasting (SE):** overall -3.31 (1.54, p<0.05), T24 arm -1.59 (1.84), T18 arm -4.52 (1.79, p<0.01), TNFP arm -2.60 (2.25)
Adjusted impact of intervention on WLZ (SE): overall 0.15 (0.08, p<0.05), T24 arm 0.20 (0.10, p<0.05), T18 arm 0.17 (0.08, p<0.05), TNFP arm 0.06 (0.10) | Unclear |

| Leroy (2016b) | • Haemoglobin (Hb) in children 0-24 mos and their mothers: adjusted difference-in-differences
• Prevalence of anaemia in children 0-24 mos and their mothers: adjusted difference-in-differences | **Respective treatment group vs controls, *p<0.10, **p<0.05 (SEM):**
Child outcomes:
Hb (all children): all treatment 0.4 (0.1)**, T24 0.3 (0.2)**, T18 0.4 (0.2)**, TNFP 0.3 (0.2)**
Hb (children 0-5.9 mo): all treatment 0.1 (0.2), T24 0.1 (0.3), T18 0.0 (0.3), TNFP 0.5 (0.3)**
Hb (children 6-23.9 mo): all treatment 0.4 (0.2)**, T24 0.4 (0.2)**, T18 0.6 (0.2)**, TNFP 0.2 (0.2)*
Anaemia prevalence (children 6- 23.9 mo): all treatment -6.1 (3.5)**, T24 -6.6 (5.6), T18 -8.2 (4.5)**, TNFP -1.0 (3.6)
Severe anaemia prevalence (children 6-23.9 mo): all treatment -2.2 (1.4*), T24 -1.5 (2.8), T18 -2.0 (1.6), TNFP -3.3 (1.5)**
Mother outcomes:
Hb (all mothers): all treatment 0.2 (0.1), T24 0.2 (0.2), T18 0.2 (0.2)*, TNFP 0.1 (0.2)
Hb (with children 0-2.9 mo): all treatment 0.7 (0.3)**, T24 0.7 (0.4)*, T18 0.9 (0.3)**, TNFP 0.3 (0.4)
Hb (with children 3-5.9 mo): all treatment 0.1 (0.2), T24 0.1 (0.3), T18 0.3 (0.2), TNFP -0.3 (0.4)
Hb (with children 6-23.9 mo): all treatment 0.2 (0.2), T24 0.2 (0.2), T18 0.2 (0.2), TNFP 0.1 (0.2)
Anaemia (all mothers): all treatment -6.0 (3.8)*, T24 -7.2 (4.3)**, T18 -6.6 (4.4)*, TNFP -3.7 (4.5)
Anaemia (with children 0-2.9 mo): all treatment -34.9 (12.2)**, T24 -29.0 (17.2)**, T18 -40.5 (13.1)**, TNFP -28.5 (14.7)**
Anaemia (with children 3-5.9 mo): all treatment -2.4 (7.1), T24 -1.9 (11.4), T18 -6.0 (8.5), TNFP 3.9 (11.3)
Anaemia (with children 6-23.9 mo): all treatment -5.2 (5.1), T24 -7.6 (5.2)*, T18 -5.2 (5.8), TNFP -2.9 (5.5)
Severe anaemia: all treatment -0.4 (0.7), T24 -1.0 (0.7)*, T18 0.1 (0.8), TNFP -0.8 (0.8) | Unclear |

| Leroy (2020) | • HFIAS (score & % food secure)
• HH hunger scale (HHS) (score & % with little-no hunger)
• HH dietary diversity scale (HDDS) score
• HH food consumption (Ln energy consumed, total energy consumed, energy from categorical & micronutrients)
• Maternal dietary diversity
• Children's dietary diversity and child feeding practices:
  ◇ dietary diversity (score & % with minimum dietary diversity)
  ◇ % with minimum meal frequency (MMF)
  ◇ % with minimum acceptable diet (MAD)
  ◇ % with Fe-rich foods consumption | **Double difference impact estimates for respective treatment group vs controls (SE):**
HFIAS score: T24 -2.9 (0.8, p<0.05), T18 -1.9 (0.7, p<0.05), TNFP -2.2 (0.9, p<0.05)
HFIAS (% food secure): T24 4.5 (2.2, p<0.05), T18 5.4 (2.0, p<0.05), TNFP 7.3 (2.9, p<0.05)
HHS Score: T24 -0.2 (0.2), T18 -0.2 (0.2), TNFP -0.3 (0.2)
HHS (% little-no hunger): T24 6.9 (7.0), T18 5.4 (4.3), TNFP 10.9 (5.3, p<0.05)
HDDS: T24 -0.1 (0.2), T18 0.3 (0.1, p<0.05), TNFP 0.2 (0.2)
Children's DDS: including CSB T24 0.1 (0.1), T18 0.2 (0.1, p<0.05), TNFP 0.3 (0.1, p<0.05); excluding CSB T24 -0.1 (0.1), T18 0.1 (0.1), TNFP 0.1 (0.1)
% children with min dietary diversity: including CSB T24 8 (4.6, p<0.05), T18 9.5 (4.9, p<0.05), TNFP 9.6 (4.7, p<0.05); excluding CSB T24 1.8 (4.8), T18 5.5 (5.2), TNFP 5.9 (5.3)
% children with MMF: T24 8 (6.1, p<0.10), T18 12.5 (4.2, p<0.05), TNFP 25.9 (5.2, p<0.05)
% children with MAD: including CSB T24 6.3 (5.2), T18 10.3 (3.1, p<0.05), TNFP 13.7 (3.5, p<0.05); excluding CSB T24 2.8 (5.0), T18 8 (3.2, p<0.05), TNFP 11.5 (3.5, p<0.05)
% children with Fe-rich food consumption: including CSB T24 40.4 (4.9, p<0.05), T18 26.2 (4.4, p<0.05), TNFP 36.5 (4.5, p<0.05); excluding CSB T24 -2.8 (2.8), T18 2 (2.8), TNFP -1.9 (5.6)
Single difference impact estimates for respective treatment group vs controls (SE):
Maternal DDS (includes CSB): T24 0.3 (0.1, p<0.05), T18 0.4 (0.1, p<0.05), TNFP 0.4 (0.1, p<0.05)
Maternal DDS (excludes CSB): T24 0.1 (0.1), T18 0.3 (0.1, p<0.05), TNFP 0.2 (0.1, p<0.05) | High |

| Olney (2018) | • Prevalence of stunting (length-for-age z score <−2)
 • Mean length-for-age z score
 • Length-for-age difference | Simple effects of each treatment (SEM), *p<0.05, **p<0.01:
 Prevalence of stunting:
 FFR+CSB: 1 mo -5.05*, 4 mo -2.03, 6 mo= -4.36, 9 mo -5.60*, 12 mo -6.56*, 18 mo -6.15, 24 mo -11.10**
 RFR+CSB: 1 mo -4.06*, 4 mo -2.18, 6 mo -2.68, 9 mo 0.87, 12 mo 0.83, 18 mo 1.69, 24 mo -1.42
 NFR+CSB: 1 mo -1.38, 4 mo -0.63, 6 mo 0.02, 9 mo 1.95, 12 mo -3.42, 18 mo -3.04, 24 mo -4.25
 FFR+LNS: 1 mo -1.39, 4 mo -2.52, 6 mo -1.28, 9 mo -0.63, 12 mo -2.28, 18 mo -3.74, 24 mo -3.00
 FFR+MNP: 1 mo -3.82*, 4 mo -3.21, 6 mo -4.20, 9 mo -5.83*, 12 mo -5.81*, 18 mo -3.20, 24 mo -6.54*
 Length-for-age z score:
 FFR+CSB: 1 mo 0.13 (0.07)*, 4 mo 0.08 (0.07), 6 mo 0.05 (0.07), 9 mo 0.03 (0.07), 12 mo 0.09 (0.07), 18 mo 0.11 (0.07), 24 mo 0.19 (0.08)*
 RFR+CSB: 1 mo 0.08 (0.06), 4 mo 0.02 (0.06), 6 mo 0.01 (0.07), 9 mo -0.06 (0.07), 12 mo -0.07 (0.08), 18 mo -0.05 (0.07), 24 mo -0.01 (0.08)
 NFR+CSB: 1 mo -0.03 (0.07), 4 mo 0.01 (0.07), 6 mo -0.03 (0.07), 9 mo -0.05 (0.07), 12 mo -0.00 (0.08), 18 mo 0.01 (0.08) 24 mo 0.06 (0.08)
 FFR+LNS: 1 mo -0.01 (0.08), 4 mo -0.01 (0.07), 6 mo -0.04 (0.07), 9 mo -0.07 (0.07), 12 mo -0.05 (0.07), 18 mo -0.03 (0.07), 24 mo -0.01 (0.07)
 FFR+MNP: 1 mo 0.03 (0.06), 4 mo 0.06 (0.06), 6 mo 0.05 (0.06), 9 mo 0.03 (0.07), 12 mo 0.06 (0.07), 18 mo 0.04 (0.07), 24 mo 0.11 (0.07)
 Length-for-age difference:
 FFR+CSB: 1 mo 0.24 (0.14)*, 4 mo 0.17 (0.15), 6 mo 0.11 (0.16), 9 mo 0.06 (0.17), 12 mo 0.23 (0.17), 18 mo 0.32 (0.21), 24 mo 0.59 (0.24)*
 RFR+CSB: 1 mo 0.12 (0.13), 4 mo 0.03 (0.14), 6 mo 0.00 (0.15), 9 mo -0.15 (0.16), 12 mo -0.16 (0.20), 18 mo -0.13 (0.21), 24 mo -0.02 (0.24)
 NFR+CSB: 1 mo -0.08 (0.15), 4 mo 0.01 (0.15), 6 mo -0.07 (0.15), 9 mo -0.13 (0.18), 12 mo -0.01 (0.19), 18 mo 0.03 (0.22), 24 mo 0.21 (0.26)
 FFR+LNS: 1 mo -0.03 (0.16), 4 mo -0.02 (0.15), 6 mo -0.09 (0.15), 9 mo -0.18 (0.16), 12 mo -0.14 (0.18), 18 mo -0.08 (0.19), 24 mo -0.04 (0.22)
 FFR+MNP: 1 mo 0.05 (0.11), 4 mo 0.12 (0.13), 6 mo 0.10 (0.14), 9 mo 0.06 (0.16), 12 mo 0.15 (0.18), 18 mo 0.13 (0.19), 24 mo 0.38 (0.22)* | Unclear |

Olney (2019)	• Motor and language development scores: adjusted difference-in-differences	**(SD): Language Milestones:** all (4-23.9 mo) 0.4 (0.2, p=0.03), 4-11.9 mo 0.2 (0.2, p=0.78), 12-17.9 mo 0.6 (0.3, p=0.03), 18-23.9 mo 0.9 (0.4, p=0.02), 12-23.9 mo 0.7 (0.3, p=0); all (24-41.9 mo) 0.3 (0.3, p=0.18), 24-29.9 mo 1.0 (0.3, p=0), 30-35.9 mo 0.0 (0.5, p=0.51), 36-41.9 mo 0.1 (0.6, p=0.45) **Motor milestones:** all (4-23.9 mo) 0.0 (0.3, p=0.5), 4-11.9 mo -0.6 (0.4, p=0.9), 12-17.9 mo 0.9 (0.4, p=0.02), 18-23.9 mo 0.3 (0.5, p=0.26) 12-23.9 mo 0.6 (0.4, p=0.08); All (24–41.9 mo) 0.4 (0.3, p=0.09), 24-29.9 mo 0.4 (0.3, p=0.09), 30-35.9 mo 0.3 (0.5, p=0.25), 36-41.9 mo 0.4 (0.4, p=0.17)	Unclear
Puett (2018)	• Cost transfer ratio (CTR) and total cost transfer ratio (TCTR) • Cost-efficiency including cost per household and cost per beneficiary (in USD; societal perspective, inclusive and exclusive of transfer value)	**Cost-transfer ratio:** societal perspective 0.82, institutional perspective 0.70 **Total cost-transfer ratio:** societal perspective 1.82, institutional perspective=1.70 **Cost-efficiency per household:** societal perspective: including transfer value $413, excluding transfer value $186 **Cost-efficiency per beneficiary:** societal perspective: including transfer value $393, excluding transfer value $177	Moderate
Shen (2020)	• Cost-effectiveness for primary stunting outcome (including LTFU): total cost per enrolled child • Cost-effectiveness for the primary wasting outcome (excluding LTFU): total cost per enrolled child	**Cost-effectiveness for the primary stunting outcome:** mean (uncertainty range), results in 2018 USD **Total cost per enrolled child, base case program perspective:** CSB+ w/ oil 126.6 (117.3-135.9), CSWB w/ oil 145.7 (143.1-148.2), SC+ 236.8 (216.2-257.5), RUSF 254.3 (237.4-271.3) **Total cost per enrolled child, caregiver perspective:** CSB+ w/ oil 206.5 (175.4-237.5), CSWB w/ oil 222.8 (201.0-244.5), SC+ 218.9 (167.0-270.7), RUSF 148.3 (NA) **Total cost per enrolled child, program and caregiver perspective:** CSB+ w/ oil 333.1 (292.7-373.5), CSWB w/ oil 368.5 (344.2-392.7), SC+ 455.7 (383.2-528.2), RUSF 402.7 (385.7-419.6) **Total cost per enrolled child, donor perspective:** CSB+ w/ oil 104.3 (94.9-113.6), CSWB w/ oil 125.6 (123.1-128.2), SC+ 217.4 (196.7-238.0), RUSF 232.4 (215.4-249.3) **Cost-effectiveness for the primary wasting outcome:** mean (uncertainty range) **Total cost per enrolled child, base case program perspective:** CSB+ w/ oil 121.6 (112.8-130.5), CSWB w/ oil 139.7 (137.2-142.1), SC+ 226.3 (206.7-245.9), RUSF 245.0 (228.7-261.2) **Total cost per enrolled child, caregiver perspective (USD 2018):** CSB+ w/ oil 195.4 (166.0-224.8), CSWB w/ oil 210.7 (190.1-231.3), SC+ 207.5 (158.4-256.7), RUSF 142.2 **Total cost per enrolled child, program and caregiver perspective:** CSB+ w/ oil 317.1 (278.8-**355.3), CSWB w/ oil 350.4 (327.4-373.3), SC+ 433.8 (365.0-502.5), RUSF 387.2 (370.9-403.4)** **Total cost per enrolled child, donor perspective:** CSB+ w/ oil 100.7 (91.8-109.5), CSWB w/ oil 120.5 (118.1-122.9), SC+ 207.7 (188.1-227.3), RUSF 224.0 (207.8-240.2)	Unclear

| Sibson (2018) | • Prevalence of global acute malnutrition (GAM) in children aged 6-59 months
• Secondary outcomes:
  ◇ Prevalence of MUAC <12.5 cm and/or edema in children 6-59 mos
  ◇ Prevalence of stunting
  ◇ Mean WHZ in children 6-59 mos
  ◇ Mean MUAC in children 6-59 months
  ◇ Mean HAZ
  ◇ Mean 30-day HH expenditure
  ◇ Household dietary diversity score (HDDS)
  ◇ Individual dietary diversity score in children 24-59 mos | **Adjusted odds ratio (95% CI):**
GAM prevalence: 0.96 (0.67-1.38, p=0.826)
% low MUAC: 0.89 (0.39-2.03, p=0.773)
% stunting: 1.36 (0.98-1.89, p=0.066)
Mean WHZ: 0.00 (-0.09 to 0.09, p=0.984)
Mean MUAC: -0.85 (-2.24 to 0.55, p=0.236)
Mean HAZ: -0.04 (-0.09 to 0.02, p=0.189)
Differences associated with modified intervention:
Mean 30-day HH expenditure: -1.56 (-5.48 to 2.35, p=0.414)
HDDS: 0.29 (-0.20 to 0.78, p=0.229)
Individual dietary diversity score: -0.03 (-0.59 to 0.52, p=0.904) | Moderate |
| Simonyan (2020) | • Stunting: adjusted odds ratio (program communities vs. no program)
• Anaemia: adjusted odds ratio (program communities vs. no program)
• Wasting prevalence
• Breastfeeding duration
• Minimum dietary diversity | **Stunting:** 1.92 (95% CI 1.13-3.26, p<0.05)
Anaemia: 0.24 (95% CI 0.16-0.36, p<0.001)
Wasting prevalence: baseline 2.0, endline 4.8 (p=0.07)
Breastfeeding duration: baseline 13.0, endline 11.5 months (p=0.002)
Minimum dietary diversity: baseline 68.06, endline 79.02 (p=0.001) | Unclear |

Stark (2015)	• School enrolment (children ≤ 18 years of age) • Clinic access (how often and under what financial circumstances accessed) • Diet (number of meals per day = 3 vs. 2) • Childcare	**Adjusted odds ratios (95% CI):** **School enrolment:** 0.880 (0.399-1.942, p=0.75) **Clinic access - no money to take child to clinic:** 1.614 (0.818-3.181, p=0.17) **Diet (3 vs. 2 meals per day):** 1.138 (0.484-2.678, p=0.77) **Childcare (no one vs. someone):** no adjusted OR reported since intervention = 100%	Unclear
Style (2017)	• Anaemia prevalence (% Hb<11g/dL): odds ratio, endline compared to baseline • Mean Hb (g/dL): difference between baseline and endline • Stunting (HAZ <-2): adjusted odds ratio, endline compared to baseline	**(95% CI):** **Anaemia prevalence**: children 6-23 months Dagahaley 0.65 (0.41-1.02, p=0.06), Hagadera 0.40 (0.25-0.62, p<0.01), Ifo 0.52 (0.32-0.84, p=0.01), Kakuma 0.33 (0.17-0.64, p<0.01); children 6-59 months Dagahaley 0.53 (0.36-0.76, p<0.01), Hagadera 0.35 (0.25-0.50, p<0.01), Ifo 0.55 (0.38-0.80, p<0.01), Kakuma 0.30 (0.20-0.46, p<0.01) **Mean Hb:** children 6-23 months Dagahaley 0.47 (0.19-0.75, p<0.01), Hagadera 0.94 (0.60-1.28, p<0.01), Ifo 0.63 (0.27-1.00, p<0.01), Kakuma 0.98 (0.55-1.41, p<0.01); children 6-59 months Dagahaley 0.60 (0.36-0.85, p<0.01), Hagadera 0.90 (0.63-1.117, p<0.01), Ifo 0.58 (0.30-0.87, p<0.01), Kakuma 1.05 (0.73-1.37, p<0.01) **Stunting:** children 6-23 months Dagahaley 0.88 (0.46-1.71, p=0.70), Hagadera 0.63 (0.41-0.97, p=0.04), Ifo 1.03 (0.60-1.78, p=0.90), Kakuma 1.61 (0.89-2.91, p=0.10); children 6-59 months Dagahaley 0.98 (0.63-1.54, p=0.9), Hagadera 0.58 (0.43-0.80, p<0.01), Ifo 0.92 (0.59-1.43, p=0.7), Kakuma 1.32 (0.87-1.99, p=0.2)	Unclear
Talley (2013)	• Mean weight-for-age z-score (WAZ) • Prevalence of underweight (WAZ > −3 to < −2)	**Mean WAZ:** all infants 21.41 (SD 1.82), infants 0-5 mos 21.80, infants 6-11 mos 21.23 (0-5 mos vs 6-11 mo p=0.001) **Prevalence of underweight:** all infants 14.8%, infants 0-5 mos 12.2%, infants 6-11 mos 20.5%	Unclear

Tondeur (2016)	• Acceptability: % of participants who liked product, reported it was easy to use, prefer to stop taking it, and who shared sachets during test • Product adherence at mid-point • Product consumption	**Acceptability:** n/N (%), *p<0.05 at endline **Participants who liked the nutrition product:** LNS (children) mid-point 115/122 (94.3%), endline 120/122* (98.4%); MNP (children) mid-point 80/98 (81.6%), endline 83/91 (91.2%); MNP (PLW) mid-point 93/102 (91.2%), endline 94/104* (90.4%) **Participants reporting that the product was easy to use:** LNS (children) mid-point 116/121 (95.9%), endline 115/121 (95.0%); MNP (children) mid-point 81/89 (91.0%), endline 83/91 (91.2%); MNP (PLW) mid-point 77/87 (88.5%), endline 104/109 (95.4%) **Participants who would prefer to stop taking the product:** LNS (children) mid-point 3/120 (2.5%), endline 7/122 (5.7%); MNP (children) mid-point 11/102 (10.8%), endline 9/107 (8.4%); MNP (PLW) mid-point 8/95 (8.4%), endline 11/111 (9.9%) **Participants who shared sachets during the test:** LNS (children) mid-point 10/122 (8.2%), endline 8/120 (6.7%); MNP (children) mid-point 9/98 (9.2%), endline 5/106 (4.7%); MNP (PLW) endline 2/104 (1.9%) **Product adherence at mid-point:** n (%), *p<0.001 LNS (children) poor 9 (8.2%), moderate 3* (2.7%), good 98* (89.1%); MNP (children) poor 3 (3.9%), moderate 23 (30.3%), good 50 (65.8%); MNP (PLW) poor 3 (3.8%), moderate 31 (39.2%), good 45 (57.0%) **Product consumption: median (IQR), *p<0.001:** LNS (children) mid-point 15* (14-15), endline 30* (28-30); MNP (children) mid-point 13 (9-15), endline 23 (18-28); MNP (PLW) mid-point 11 (9-15), endline 25 (15-28)	Unclear
Trenouth (2018)	• Cost-efficiency: cost per beneficiary HH, and total cost transfer ratios (TCTR) • Cost-effectiveness: Incremental cost per child receiving intervention (USD), incremental cost-effectiveness ratio (ICER) ($ per case of wasting/stunting averted)	**TCTR, gross transfer:** DC 1.62, SC 2.20, FFV 2.51 **TCTR, net transfer (gross transfer minus cost to beneficiaries):** DC 1.82, SC 2.82, FFV 2.73 **ICER, $/case of wasting averted:** DC $4865, SC & FFV not reported **ICER, $/case of stunting averted:** DC $1290, SC $882, FFV $883	Low

| Yang (2015) | • Feeding knowledge and practices related to anaemia: exclusive breastfeeding duration, adding cereal-based complementary foods between 4 and 6 months, adding meat at 6 months, parents/caregivers gave homemade cereal porridge and thought it better than the market sold one, parents/caregivers did not know anaemia, parents/caregivers knew iron deficiency was main reason causing anaemia, parents/caregivers knew eating animals, liver and meat more often could prevent their children from having anaemia
• Haemoglobin (in mg/L)
• Anaemia prevalence | **Exclusive breastfeeding duration (months):** >= 4 mos baseline 16.0%, endline 9.0%; 4-6 mos baseline 22.9%, endline 23.2%; 6-12 mos baseline 50.2%, endline 56.4%; >=12 mos baseline 10.8%, endline 11.4%
Adding cereal-based complementary foods between 4 and 6 months: baseline 47.6%, endline 60.6%
Adding meat at 6 months: baseline 56.9%, endline 94.4%
Parents/caregivers gave the homemade cereal porridge and thought it better than the market sold one: baseline 85.2%, endline 35.5%
Parents/caregivers did not know anaemia: baseline 67.0%, endline 60.5%
Parents/caregivers knew iron deficiency was main cause of anaemia: baseline 33.0%, endline 39.5%
Parents/caregivers knew foods that could prevent anaemia: baseline 38.3%, endline 44.2%
Haemoglobin in mg/L: mean (SD) baseline 118.77 (10.52), endline 122.03 (9.93) ($p<0.001$)
Anaemia prevalence: baseline 12.4%, endline 7.8% ($p<0.001$) | Low |

ANNEX 9: STUDY DESIGN AND OUTCOMES OF SEXUAL AND REPRODUCTIVE HEALTH INTERVENTION STUDIES

Study Design of Nutrition Intervention Studies in Humanitarian Crisis Settings, 2013-2021 (n=34)

Author (Year)	Study Setting & Population	Intervention(s)	Methods
Adam (2015)	**Country:** Sudan, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Internally displaced	**Description:** Interpersonal communication and mass education campaigns to promote reproductive healthcare service use **Implementation site:** Community-based **Personnel type(s):** Lay personnel - community health workers **Part of broader program:** No	**Study design:** Observational (baseline and endline surveys) **Study duration:** 4 years **Sample description:** Women with pregnancy in previous 2 years **Sample size:** 640 enrolled; 640 analysed
Alkoudsi (2019)	**Country:** Jordan and Syria, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced), general population	**Description:** Pharmaceutical care service for polycystic ovarian syndrome (PCOS) **Implementation site:** Facility-based - pharmacies only **Personnel type(s):** Health professional cadre - pharmacists **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 4 months **Sample description:** Women diagnosed with PCOS **Sample size:** 125 enrolled (63 intervention, 62 control); 118 analysed (60 intervention, 58 control)
Amsalu (2020)	**Country:** Somalia, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Host community, internally displaced	**Description:** 8-day essential newborn care course addressing recommendations in the Newborn Health in Humanitarian Settings: Field Guide, with 5-day refresher course at 6 months, supply provision and installation of newborn register **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - registered nurses and midwives **Part of broader program:** No	**Study design:** Observational (interrupted time series) **Study duration:** 29 months **Sample description:** Pregnant women who sought childbirth care at a study facility **Sample size:** Women who sought child-birth care: 525 enrolled, 419 analysed; healthcare workers: 12 enrolled, 10 analysed

Badiuzzam-an (2020)	**Country:** Bangladesh, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Host community	**Description:** Satellite/mobile clinics, referral services, ambulance services, and community health service workers **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - doctors and other clinic staff, community health workers **Part of broader program:** Yes - Chittagong Hill Tracts Development Facility (CHTDF) multi-sector program	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 5 years **Sample description:** Households with women of reproductive age **Sample size:** 3,664 enrolled (2,192 intervention, 694 control); 778 analysed (584 treatment, 194 control)
Boddam-Whetham (2016)	**Country:** Pakistan and Yemen, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban and rural) **Population:** Emergency affected (non-displaced)	**Description:** Voucher program to subsidize long-acting reversible contraceptives (LARCs) and permanent methods (PMs) of family planning **Implementation site:** Community-based **Personnel type(s):** Lay personnel - voucher distributors **Part of broader program:** No	**Study design:** Observational **Study duration:** 1 year **Sample description:** Married women of reproductive age, targeted with means testing of socioeconomic status **Sample size:** 595,078 analysed (Yemen 120,478, Pakistan 474,600)
Buller (2016)	**Country:** Ecuador, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Host community, refugee	**Description:** 6-month food assistance program (cash assistance, food vouchers, and food transfers) **Implementation site:** Community-based **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Mixed methods (sequential explanatory study building on prior randomized controlled trial) **Study duration:** 21 months **Sample description:** Men and women beneficiaries (primary target women in a relationship meeting poverty threshold) **Sample size:** Quantitative study - 1,413 enrolled, 1,226 analysed; qualitative study - 48 in-depth interviews, 8 focus group discussions (52 participants)

Corna (2019)	**Country:** Bangladesh, regional sample **Crisis type:** Armed conflict **Context type:** Camp (urban) **Population:** Refugee	**Description:** Psychosocial support intervention that consisted of support groups and home visits **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - psychosocial workers trained by clinical psychologist **Part of broader program:** Yes - psychosocial and mental health intervention	**Study design:** Observational (single arm pre-post study) **Study duration:** 5 months **Sample description:** Pregnant refugee women in 4th-6th month of pregnancy **Sample size:** 260 enrolled (130 Kutupalong, 130 Nayapara); size of analysed sample not specified
Coskun (2020)	**Country:** Turkey, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Host community, refugee	**Description:** TORCH infection screening during pregnancy **Implementation site:** Facility-based **Personnel type(s):** Not specified **Part of broader program:** No	**Study design:** Economic evaluation **Study duration:** 27 months **Sample description:** Pregnant women not serologically tested for TORCH infections before 10th week of pregnancy **Sample size:** 9,754 (1,333 Syrian refugee women, 8,421 Turkish women)
Deboutte (2013)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Provision of emergency obstetric care (EmOC), including Caesarean sections **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - health workers trained in anaesthesia, obstetric surgery, and pre- and post-operative care **Part of broader program:** No	**Study design:** Economic evaluation (within a case-control study) **Study duration:** 7 months **Sample description:** Women who delivered by C-section at a study facility, matched to women who delivered vaginally **Sample size:** 368 enrolled (178 intervention, 180 control); 368 analysed
Devine (2017)	**Country:** Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (rural) **Population:** Refugee	**Description:** 3 strategies for prevention of Hepatitis B Virus (HBV) transmission, with universal HBV vaccination of infants in all options: 1. vaccine only, 2. HBIG after positive maternal rapid diagnostic test (RDT), 3. HBIG after positive maternal confirmatory test **Implementation site:** Facility-based **Personnel type(s):** Not specified **Part of broader program:** Yes - provision of antenatal, obstetric, paediatric and general medical care	**Study design:** Economic evaluation (cost-effectiveness analysis) **Study duration:** 2 years **Sample description:** Pregnant women at clinic sites **Sample size:** 7,071

Doocy (2020)	**Country:** Somalia, regional sample **Crisis type:** Armed conflict, environmental disaster **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced), internally displaced	**Description:** Assessment of 2 independent, targeted food assistance interventions implemented in parallel: provision of paper food vouchers or combination of in-kind food, food e-vouchers, and unrestricted cash **Implementation site:** Community-based **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Quasi-experimental **Study duration:** 5 months **Sample description:** Pregnant and lactating women (PLW) meeting vulnerability criteria; study locations selected based on security and caseload **Sample size:** 514 PLW enrolled (166 paper vouchers, 288 mixed transfers, 60 non-assistance group); 490 analysed (162 paper vouchers, 269 mixed transfers, 59 non-assistance group)
Draiko (2021)	**Country:** South Sudan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Application of chlorhexidine gel to umbilical cord stumps **Implementation site:** Community-based **Personnel type(s):** Lay personnel - community health workers **Part of broader program:** No	**Study design:** Quasi-experimental **Study duration:** 10 months **Sample description:** Pregnant women in 2nd or 3rd trimester **Sample size:** 2,650 pregnant women enrolled (1,520 treatment, 1,075 control); 1,790 neonates enrolled and analysed (968 treatment, 822 control)
Edmond (2018)	**Country:** Afghanistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Standardized training and supportive supervision package aimed at improving existing community health worker (CHW) capacity to provide maternal and neonatal home visits and behaviour change communication messages **Implementation site:** System-level **Personnel type(s):** Lay personnel - community health workers **Part of broader program:** No	**Study design:** Quasi-experimental **Study duration:** 12 months **Sample description:** Random selection of villages and households **Sample size:** 1,408 women enrolled (709 intervention, 699 control); 1,378 analysed (689 intervention, 689 control)

Edmond (2019)	**Country:** Afghanistan, regional sample **Crisis type:** Armed conflict, environmental disaster **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Conditional cash transfer (CCT) program in which community health workers (CHWs) receive financial incentives to visit pregnant women at home and assist them to health facilities for delivery, and women receive financial incentives if they deliver at a facility **Implementation site:** Community-based **Personnel type(s):** Lay personnel - community health workers **Part of broader program:** No	**Study design:** Quasi-experimental **Study duration:** 14 months **Sample description:** Pregnant women 16 years and older **Sample size:** 2,441 at baseline (1,199 intervention, 1,242 control); 2,491 at endline (1,254 intervention, 1,237 control)
Edmond (2020)	**Country:** Afghanistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Maternal and child health mobile health teams (MHTs) providing primary care services to pregnant and postpartum women and children under 5 **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - midwives, vaccinators, and nurses **Part of broader program:** Yes	**Study design:** Observational (cross-sectional, population-based evaluation study) **Study duration:** 1 year **Sample description:** Intervention - districts receiving MHT services in prior 3 years; Control - districts not receiving MHT services **Sample size:** 110 districts (54 intervention, 56 control)
Foster (2017)	**Country:** Myanmar and Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (rural) **Population:** Migrant, refugee	**Description:** Establishment of 2 provider networks (including training, technical assistance, supply of medication and logistical support) to provide information about misoprostol and free medication for self-management of abortion **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - physicians, social workers, other health workers **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 3 years **Sample description:** Women who received a medical abortion through the network **Sample size:** 918 enrolled; 914 analysed

Gallagher (2019)	**Country:** Democratic Republic of Congo, Somalia, and Yemen, regional sample **Crisis type:** Armed conflict, environmental disaster, outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Service approach based on The Essential Elements of Postabortion Care as developed by the PAC Consortium: community mobilization, strengthening provider counselling, treatment of abortion complications, provision of voluntary contraceptive services, and referrals as needed **Implementation site:** Community-based, facility-based **Personnel type(s):** Health professional cadre and lay personnel - healthcare workers, community health workers (CHWs) **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 5 years **Sample description:** Women in need of postabortion care **Sample size:** Baseline 1,413 clients (812 DRC, 11 Somalia, 590 Yemen); endline 3,640 clients (1,412 DRC, 1,065 Somalia, 1,163 Yemen)
Gibbs (2020)	**Country:** Afghanistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Intervention - 12-month women's economic and social empowerment program with 90-180 minutes of programming weekly addressing numeracy, business skills, social empowerment topics, vocational training, money saving options, and referrals to services, as well as a monthly $10 cash stipend Control - $10 for each quantitative interview completed **Implementation site:** Community-based **Personnel type(s):** Not specified **Part of broader program:** No	**Study design:** Randomized controlled trial (individual randomized) **Study duration:** 27 months **Sample description:** Women aged 18-45, overemphasis on married women **Sample size:** 1,461 enrolled (747 intervention, 714 control); 1,210 analysed (673 intervention, 537 control)
Glass (2019)	**Country:** Somalia, regional sample **Crisis type:** Armed conflict, environmental disaster **Context type:** Camp and non-camp (urban) **Population:** Host community, internally displaced	**Description:** Communities Care program strengthens community-based services for survivors of gender-based violence (GBV) and seeks to affect social norms that maintain and tolerate GBV **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - healthcare workers not specified, trained community members **Part of broader program:** No	**Study design:** Randomized controlled trial (cluster randomized) **Study duration:** Approximately 24 months **Sample description:** Female and male community members 15 years and older **Sample size:** 387 baseline (192 intervention, 195 control); 330 endline (163 intervention, 167 control)

Gupta (2013)	**Country:** Cote d'Ivoire, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Intervention - Gender dialogue groups (GDG) for women and their partners aiming to change gender norms, added to a women's economic empowerment program (VSLA) Control - participation in VSLA program only **Implementation site:** Community-based **Personnel type(s):** Lay personnel - NGO field agents **Part of broader program:** Yes	**Study design:** Randomized controlled trial (cluster randomized) **Study duration:** 2 years **Sample description:** Women 18 years and older, only partnered women included in analysis **Sample size:** 1,198 enrolled (548 intervention, 650 control); 934 analysed (513 intervention, 421 control)
Hashmi (2019)	**Country:** Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Camp (rural) **Population:** Refugee	**Description:** Monthly household visits by a nurse with mother-infant pairs when infant was 3-9 months old, with assessment of appropriate infant feeding and WaSH practices as well as counselling on appropriate behaviours via 'The Healthy Baby Flipbook' **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - nurse **Part of broader program:** Yes	**Study design:** Observational (cohort study) **Study duration:** 6 months **Sample description:** Mother-infant pairs with term, healthy infants aged 2 months **Sample size:** 20 mother-infant pairs
Hossain (2014)	**Country:** Cote d'Ivoire, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Men & Women in Partnership Initiative, 16-session curriculum for Men's Discussion Groups designed to reduce overall levels of partner violence **Implementation site:** Community-based **Personnel type(s):** Not specified - group facilitators **Part of broader program:** Yes	**Study design:** Randomized controlled trial (cluster randomized) **Study duration:** 18 months **Sample description:** Male community members 15 years and older, females with a participating male partner **Sample size:** 361 men enrolled (174 intervention, 187 control); 255 women enrolled (106 intervention, 149 control); 316 men analysed (159 intervention, 157 control); 244 women analysed (115 intervention, 129 control)

Khan (2017)	**Country:** Pakistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced), internally displaced	**Description:** Intervention - 2 interactive psychoeducation sessions with pregnant women and their families, "Happy Mother, Healthy Child in Ten Steps," in addition to routine visits Control - routine visits only **Implementation site:** Community-based **Personnel type(s):** Lay personnel - Lady Health Workers (LHWs) **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 4 months **Sample description:** Pregnant women experiencing psychological distress **Sample size:** 81 enrolled (42 intervention, 39 control); 71 analysed (34 intervention, 37 control)
LeRoux (2020)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Capacity-building intervention seeking to mobilize, train and equip faith leaders to address root causes of violence against women and girls (VAWG) from a faith perspective **Implementation site:** Community-based **Personnel type(s):** Lay personnel - religious leaders and gender champions **Part of broader program:** No	**Study design:** Observational (pre-post descriptive evaluation with randomization within intervention area) **Study duration:** 29 months **Sample description:** Men and women from randomly selected households **Sample size:** 751 baseline respondents (387 women, 364 men); 1,198 endline respondents (601 women, 597 men)
Logie (2014)	**Country:** Haiti, regional sample **Crisis type:** Environmental disaster **Context type:** Camp and non-camp (urban) **Population:** Internally displaced	**Description:** FASY (Women Taking Action for Their Health) psychoeducational HIV/STI prevention sessions based on content from the Population Council's All in One Curriculum: A Unified Approach to Sexuality, Gender, HIV and Human Rights Education **Implementation site:** Community-based **Personnel type(s):** Lay personnel - community health workers (CHWs) **Part of broader program:** No	**Study design:** Quasi-experimental (cohort study) **Study duration:** 4 months **Sample description:** Women over 18 years old **Sample size:** 200 enrolled; 176 analysed

Murray (2018)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Intervention - 12 sessions of cognitive processing therapy (CPT) (1 individual and 11 group), including psychoeducation and cognitive restructuring for survivors of rape Control - individual supportive counselling **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - psychosocial assistants **Part of broader program:** No	**Study design:** Randomized controlled trial (cluster randomized) **Study duration:** 14 months **Sample description:** Women who witnessed or experienced sexual violence, experiencing poor mental health and some impairment in daily functioning **Sample size:** 405 enrolled (157 intervention, 248 control); 405 analysed
Parr (2014)	**Country:** Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (rural) **Population:** Migrant, refugee	**Description:** Efforts to change nuchal cord management during delivery by multi-stage interventions by doctor and registered midwife providing education and clinical support to skilled birth attendants (SBAs) **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - doctor, registered midwife, SBAs **Part of broader program:** Yes	**Study design:** Mixed methods (retrospective cohort study of birth data, knowledge survey and semi-structured interviews with SBAs) **Study duration:** 2 years **Sample description:** Birth records for normal singletons born >= 28 weeks gestation between July 1, 2011 and June 30, 2013; SBAs at study sites **Sample size:** 4,270 births; 5 interviews and 26 knowledge surveys
Stark (2018)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Intervention - Creating Opportunities through Mentorship, Parental Involvement, and Safe Spaces (COMPASS) programming with 32 life skills sessions for adolescent girls and 13 caregiver sessions Control - 32 life skills sessions **Implementation site:** Community-based **Personnel type(s):** Lay personnel - NGO staff **Part of broader program:** Yes	**Study design:** Randomized controlled trial (cluster randomized) **Study duration:** 15 months **Sample description:** Adolescent girls age 10-14 and caregiver of their choosing **Sample size:** baseline 869 girls and 764 caregivers (intervention 446 girls and 389 caregivers, control 423 girls and 375 caregivers); intention-to-treat (ITT) analysis 869 girls and 764 caregivers (intervention 446 girls and 389 caregivers, control 423 girls and 375 caregivers); treatment non-per protocol intervention 266 girls and 201 caregivers; treatment per protocol intervention 180 girls and 188 caregivers

Stevens (2018)	**Country:** Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (rural) **Population:** Migrant, refugee	**Description:** Community-based participatory action plan including an awareness and education campaign regarding preconception folate supplementation to for neural tube defect (NTD) prevention **Implementation site:** Community-based, facility-based **Personnel type(s):** Not specified **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 21 months **Sample description:** Women pregnant or within 2 months postpartum **Sample size:** 371 baseline; 307 endline
Tran (2021)	**Country:** Democratic Republic of Congo, Nigeria, and Uganda, regional sample **Crisis type:** Armed conflict **Context type:** Camp (rural) and non-camp (urban) **Population:** Refugee	**Description:** Clinical Outreach Refresher Training Strategy for sexual and reproductive health (S-CORT), designed to update health providers' competencies on uterine evacuation using both medications and manual vacuum aspiration **Implementation site:** Facility-based **Personnel type(s):** Unspecified - NGO trainer **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 4 months **Sample description:** Clinical and programmatic staff at partnering organizations' sites **Sample size:** 72 enrolled (21 Uganda, 21 Nigeria, 30 DRC); 65 analysed (18 Uganda, 20 Nigeria, 27 DRC)
White (2016)	**Country:** Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (rural) **Population:** Migrant, refugee	**Description:** Development and utilization of curriculum content and apprenticeship model for competency-based skilled birth attendant (SBA) training, including a train-the-trainer component **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - SBA **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 6 years **Sample description:** Students participating in training program, SBAs supervising students **Sample size:** 88 students enrolled, 88 analysed; qualitative sample of 5 SBAs, 3 teachers

| Wirtz (2016) | **Country:** Colombia and Ethiopia, regional sample
Crisis type: Armed conflict
Context type: Camp (urban) and non-camp (rural and urban)
Population: Internally displaced, refugee | **Description:** Development and validation of Assessment Screen to Identify Survivors Toolkit for Gender Based Violence (ASIST-GBV) screening tool that strengthens early identification of survivors to connect them to services
Implementation site: System-level
Personnel type(s): Health professional cadre - nurses
Part of broader program: Yes | **Study design:** Mixed methods (exploratory sequential design)
Study duration: 3 years
Sample description: Ethiopia - female refugees 15 years and older; Colombia - female IDPs 18 years and older
Sample size: 487 women in Ethiopia, 511 women in Colombia |

Outcomes of Sexual and Reproductive Health Intervention Studies in Humanitarian Crisis Settings, 2013-2021 (n=32)

Author (Year)	Health Outcome(s)	Main Results	Risk of Bias
Adam (2015)	• Women's awareness regarding the existence of antenatal care (ANC) and tetanus toxoid (TT) vaccination services • Women attending >=3 ANC visits • Women receiving >=3 TT vaccination doses • Institutional delivery • Women attending >=1 postnatal care (PNC) visit	**Adjusted odds ratio (95% CI):** **Awareness of ANC services:** 18.6 (13.1-26.5, p<0.001) **Awareness of TT vaccination services:** 3.2 (2.4-4.4, p<0.001) **Women attending >=3 ANC visits:** 8.8 (8.4-12.0, p<0.001) **Women receiving >=3 TT vaccination doses:** 2.5 (1.9-3.3, p<0.001) **Institutional delivery:** 5.4 (4.0-7.4, p<0.001) **Women attending >=1 PNC visit:** 5.5 (4.0-7.7, p<0.001)	Low
Alkoudsi (2019)	• Change in PCOSQ quality of life (QOL) aggregate and 7-section mean score by country • QOL score differences by country and group type: multivariable regression analysis	**Change in QOL aggregate mean score (SD):** Syria: intervention 17.5 (11.1), control -1.79 (8.85) (p = 0.00); Jordan: intervention 13.5 (12.7), control -2.92 (8.40) (p<0.001) **Change in QOL 7-section mean score (SD):** Syria: intervention 3.49 (2.66), control -0.44 (2.17) (p = 0.00); Jordan: intervention 3.15 (3.03), control -0.79 (2.16) (p<0.001) **QOL score differences:** beta 0.490 (p<0.001)	Low
Amsalu (2020)	• Composite outcome: proportion of newborns who received essential newborn care practices (skin-to-skin contact, early breastfeeding, dry cord care) • Proportion of newborns who received early initiation of breastfeeding, thermal care (immediate drying, skin-to-skin contact, delayed bathing),	**(95% CI):** **Odds of receiving 2 or more essential newborn care practices:** 64.5 (15.8-262.6, p<0.001) **Odds of receiving 3 essential newborn care practices:** 220.0 (33.7-1443.0, p<0.001) **Odds of receiving early initiation of breastfeeding:** 10.6 (1.6-69.8, p=0.014) **Odds of receiving thermal care:** 28.4 (8.0-100.9, p<0.001) **Odds of receiving clean childbirth practices:** 11.1 (2.6-46.6, p=0.001) **Knowledge test score:** posttraining to pretraining +11.9% (7.2-16.6, p<0.001), 18-month to posttraining +10.9% (4.7-17.0, p<0.001) **Accurate completion of partograph:** posttraining to pretraining +68.5% (52.7-84.3, p<0.001), 18-month to posttraining -30.3% (-13.5 to -47.1, p=0.002) **Skills in newborn resuscitation with bag and mask:** posttraining to pretraining +65.1% (53.4-76.7, p<0.001), 18-month to posttraining +0.4% (-6.6 to 7.4, p=0.903)	Low

	• clean childbirth practices (visibly clean delivery bed, handwashing and glove wearing by attendant, use of sterile delivery kit, dry cord care) • Health worker knowledge and skills (mean score difference from posttraining to pretraining and 18-month follow-up to posttraining): knowledge test score, accurate completion of partograph, skills in newborn resuscitation with bag and mask		
Badiuzzam-an (2020)	• Impact of CHTDF on maternal care utilization (fixed effect model): receipt of any antenatal care (ANC), delivery attended by trained birth attendant, delivery at a health facility • Differences in maternal care utilization by experience of conflict, fear of conflict, and ethnicity	**(SE):** **ANC check-up received:** overall 0.18 (0.09, p<0.1), without experience of conflict 0.19 (0.10, p<0.1), with experience of conflict 0.04 (0.20), without fear of conflict 0.16 (0.12), with fear of conflict 0.17 (0.10), Bengali 0.18 (0.12), Indigenous 0.24 (0.13, p<0.1) **Delivery attended by trained provider:** overall 0.16 (0.15), without experience of conflict 0.10 (0.18), with experience of conflict 0.44 (0.14, p<0.05), without fear of conflict 0.40 (0.19, p<0.1), with fear of conflict -0.01 (0.13), Bengali 0.17 (0.24), Indigenous 0.15 (0.16) **Delivery at a health facility:** overall 0.23 (0.08, p<0.01), without experience of conflict 0.26 (0.09, p<0.01), with experience of conflict 0.23 (0.10, p<0.05), without fear of conflict 0.37 (0.12, p<0.01), with fear of conflict 0.11 (0.06, p<0.1), Bengali 0.18 (0.14), Indigenous 0.24 (0.12, p<0.1)	Unclear
Boddam-Whetham (2016)	• % difference between expected and actual women choosing LARC (implants, IUD) or PM (female sterilization) through voucher redemption, by country • Voucher redemption rate	**% difference between expected and actual women choosing LARCs or PMs through vouchers:** Yemen +38.2%, Pakistan +1,041% **% difference between expected and actual women choosing implants through vouchers:** Yemen +133.3%, Pakistan +1,242% **% difference between expected and actual women choosing IUDs through vouchers:** Yemen +46.6%, Pakistan +2,874% **% difference between expected and actual women choosing female sterilization through vouchers:** Yemen -83.0%, Pakistan -47% **Voucher redemption rate:** Pakistan 87.7%	Unclear

Buller (2016)	• Impact of pooled treatment on disputes and disagreements • Impact of pooled treatment on locus of control and happiness, by food security quartiles • Impact of pooled treatment on health and nutritional knowledge • Impact of pooled treatment on group participation • Protective pathways by which food transfers may reduce intimate partner violence (IPV)	**(SE):** **Any dispute in last 6 months:** -0.05 (0.03, p<0.1) **Impact of pooled treatment on locus of control and happiness:** **Agreement with statement "My life is determined by my own actions":** overall 0.02 (0.02), bottom 2 quartiles 0.05 (0.02, p<0.05), top 2 quartiles -0.01 (0.03) **Agreement with statement "I have the power to make important decisions that change the course of my life":** overall 0.04 (0.03), bottom 2 quartiles 0.07 (0.04, p<0.1), top 2 quartiles -0.00 (0.03) **Agreement with statement "I am capable of protecting my own interests":** overall 0.04 (0.02, p<0.05), bottom 2 quartiles 0.05 (0.03, p<0.1), top 2 quartiles 0.03 (0.02) **Agreement with statement "I am satisfied with my life":** overall 0.01 (0.03), bottom 2 quartiles -0.00 (0.04), top 2 quartiles 0.02 (0.03) **Agreement with statement "I am very happy":** overall 0.03 (0.02), bottom 2 quartiles 0.06 (0.02, p<0.01), top 2 quartiles -0.00 (0.03) **Impact of pooled treatment on health and nutritional knowledge:** baby should start breastfeeding immediately 0.02 (0.03), complementary feeding starts at 6 months 0.04 (0.03), year-old baby should eat different foods -0.03 (0.03), can name at least 1 source of iron-rich food 0.13 (0.02, p<0.01), can name at least 1 source of vitamin A-rich food 0.15 (0.03, p<0.01), can name at least 1 way to safely treat water for drinking 0.00 (0.01) **Impact of pooled treatment on group participation in the last 6 months:** agriculture association, union or cooperative -0.03 (0.02, p<0.1), religious or spiritual group -0.00 (0.03), community or neighbourhood association -0.00 (0.04), political group or movement -0.01 (0.01), non-governmental organisation, education, cultural or other group 0.13 (0.04, p<0.01) **Protective pathways:** Reduced day-to-day conflict and stress in the couple; improved family well-being and happiness; women's decision-making ability, self-confidence, and freedom of movement	Low

Corna (2019)	• General mental health by mini-mental state examination (MMSE) • Self-esteem by Rosenberg's Self-Esteem scale • Depression by Center of Epidemiologic Studies Depression Scale (CES-D; subdomains include depressed mood, guilt/worthlessness, helplessness/hopelessness, lethargy/fatigue, loss of appetite and sleep disturbance) • Caregiver skills by Knowledge Attitude Practices Questionnaire: self-care during pregnancy, pregnancy and delivery care, feeding practices and newborn care, access to resources for care, child development and psychosocial stimulation	**Mean difference by camp (95% CI):** **MMSE:** Kutupalong 21.5 (20.3-22.4, p<0.001), Nayapara 23.1 (21.8-24.4, p<0.001) **Self-esteem:** Kutupalong 2.8 (1.5-4.2, p<0.001), Nayapara 1.5 (0.5-2.5, p<0.001) **Depression:** Kutupalong -9.9 (-15.4 to -4.4, p<0.001), Nayapara -0.7 (-6.0 to 4.5) **Self-care:** Kutupalong 6.1 (5.6-6.7, p<0.001), Nayapara 2.8 (2.3-3.4, p<0.001) **Pregnancy and delivery care:** Kutupalong 8.4 (7.5-9.2, p<0.001), Nayapara 5.4 (4.5-6.3, p<0.001) **Feeding practices and newborn care:** Kutupalong 2.0 (1.6-2.4, p<0.001), Nayapara 2.5 (2.1-2.9, p<0.001) **Resources for care:** Kutupalong 0.4 (-0.1 to 0.7), Nayapara 0.45 (0.2-0.8, p<0.01) **Child development and psychosocial stimulation:** Kutupalong 8.4 (5.4-11.3, p<0.001), Nayapara 10.7 (7.6-13.9, p<0.001)	Moderate
Coskun (2020)	• Detection rate, by diagnostic test • Cost per test (in New Turkish Lira), by diagnostic test • Total cost (in New Turkish Lira), by diagnostic test	**Detection rate:** CMV blood test 35-74%, Toxoplasma gondii blood test 35-74%, Rubella blood test 35-74%, IgG avidity test 80%, amniocentesis 100%, PCR-DNA and RT-PCR test 92-98% **Cost per test:** CMV blood test 7.13, Toxoplasma gondii blood test 7.13, Rubella blood test 7.13, IgG avidity test 16, amniocentesis 67.7, PCR-DNA and RT-PCR test 90 **Total cost:** overall 400,563.28, CMV blood test 121,423.9, Toxoplasma gondii blood test 132,931.72, Rubella blood test 139,092.04, IgG avidity test 4,816, amniocentesis 1,489.62, PCR-DNA and RT-PCR test 810	High

Deboutte (2013)	• Incremental cost of C-section (CS) delivery • Health-adjusted life expectancy (HALE) gained • Incremental cost effectiveness ratio (ICER): C-section cost per year of HALE gained	**Incremental CS cost, in USD:** mission hospital 14,359, government hospital 11,371 **HALE gained:** overall lower estimate 11,285 and higher estimate 36,604 years, NGO hospital higher estimate 27,453 years **ICER at NGO hospital, in USD:** lower estimate 9.2, higher estimate 3.8	Moderate
Devine (2017)	• Total cost • Incremental cost • Total infections • Infections averted • Incremental cost effectiveness ratio (ICER)	**Total cost, in USD:** vaccine only 21,673.15, HBIG after RDT 47,477.10, HBIG after confirmatory test 40,553.86 **Incremental cost, in USD:** HBIG after RDT 25,803.95, HBIG after confirmatory test -- **Total infections:** vaccine only 64, HBIG after RDT 28, HBIG after confirmatory test 41 **Infections averted:** HBIG after RDT 36, HBIG after confirmatory test -- **Incremental cost effectiveness ratio (ICER):** HBIG after RDT 716.78, HBIG after confirmatory test extended dominance	Low
Doocy (2020)	• Mean meals consumed on preceding day • Mean food groups consumed on preceding day • % achieving Minimum Dietary Diversity for Women (MDDW) • Mean MUAC • Acute malnutrition prevalence (MUAC <21.0 cm)	**Difference in change between intervention groups: adjusted vouchers vs mixed transfers (95% CI):** **Mean meals consumed on preceding day:** 0.3 (0.1-0.5, p=0.001) **Mean food groups consumed on preceding day:** 0.3 (-0.3 to 0.8, p=0.324) **% achieving MDDW:** 7.7% (-7.0 to 22.5%, p=0.303) **Mean MUAC:** 0.4 (-0.1 to 0.8, p=0.086) **Acute malnutrition prevalence:** -2.9% (-6.1 to 0.4, p=0.086)	Moderate

| Draiko (2021) | • Incidence of neonatal umbilical cord infection rate: crude odds ratio
• Incidence of cord infections by severity
• Neonatal mortality: crude odds ratio
• Proportion of women who deliver in a facility: crude odds ratio | **(95% CI):**
Cord infections: 3.03 (2.45-3.76, p=0.000)
Signs of cord infection: Mild redness - intervention 39.4%, control 32.8%; moderate redness - intervention 24.6%, control 24.2%; severe redness - intervention 9.1%, control 15.7%; presence of pus - intervention 3.4%, control 17.9%; pain at the cord - intervention 23.4%, control 9.4%
All neonatal deaths: 2.16 (1.10-4.22, p=0.022)
Place of delivery (facility birth): 1.29 (1.03-1.64, p=0.028) | Moderate |
| Edmond (2018) | Proportion of women who (difference-in-differences):
• Delivered in a health facility
• Attended at least 1 antenatal care (ANC) and 1 postnatal care (PNC) visit with a skilled healthcare provider
• Sought care for antenatal or delivery complications
• Delivery attended by a skilled birth attendant
• Sought care for complications during delivery or postpartum
• Sought care for maternal postnatal complications
• Saved money for transportation for emergency obstetric care
• Arranged blood donors
• Pre-planned for a skilled birth attendant | **Proportion of women who (95% CI):**
Delivered in a health facility: 10.97% (4.0-18.0, p=0.002)
Attended at least 1 ANC visit with a skilled healthcare provider: 10.54 (4.2-16.9, p=0.001)
Attended at least 1 PNC visit with a skilled healthcare provider: 7.20 (0.2-14.2, p=0.04)
Sought care for antenatal or delivery complications: 2.81 (-6.2 to 11.8, p=0.54)
Delivery attended by a skilled birth attendant: 14.22 (7.3-21.2, p<0.0001)
Sought care for complications during delivery or postpartum: 2.36 (-6.8 to 11.5, p=0.61)
Sought care for maternal postnatal complications: 14.0 (4.05-23.9, p=0.006)
Saved money for transportation for emergency obstetric care: 2.31 (-4.8 to 9.4, p=0.53)
Arranged blood donors: -9.59 (-15.4 to -3.8, p=0.0013)
Pre-planned for a skilled birth attendant: 5.32 (-2.0 to 12.7, p=0.16)
Initiated breastfeeding within the first hour after birth: -28.22 (-35.7 to -20.8, p<0.0001)
Currently breastfeeding: 1.13 (-2.4 to 4.7, p=0.39)
Knowledge of importance of saving money during pregnancy: 4.13 (-2.0 to 10.3, p=0.19)
Knowledge of importance of preplanning travel for birth: 8.46 (2.9-14.0, p=0.003)
Knowledge of importance of arranging a skilled birth attendant: 2.13 (-2.5 to 7.7, p=0.45) | Unclear |

	• Initiated breastfeeding within the first hour after birth • Currently breastfeeding • Knowledge of importance of saving money during pregnancy • Knowledge of importance of preplanning travel for birth • Knowledge of importance of arranging a skilled birth attendant		
Edmond (2019)	• Proportion of women who delivered in a health facility • Proportion of women who received at least 1 antenatal care (ANC) visit • Proportion of women who received at least 1 postnatal care (PNC) visit • Proportion of women who received at least 1 CHW home visit	**Difference-in-differences (95% CI):** **Proportion of women who delivered in a health facility:** 3.3% (-0.14 to 0.21, p=0.685) **Proportion of women who received at least 1 antenatal care (ANC) visit:** 45.0% (0.18-0.72, p=0.004) **Proportion of women who received at least 1 postnatal care (PNC) visit:** 31.8% (-0.05 to 0.68, p=0.80) **Proportion of women who received at least 1 CHW home visit:** 12.2% (-0.27 to 0.51, p=0.508)	Low
Edmond (2020)	District service provision: • Proportion of pregnant women who were recorded in HMIS as having received at least 1 antenatal care (ANC) visit • Proportion of children under 1 year who received their first measles vaccine	**Mean difference between intervention and control districts (95% CI):** **Proportion of pregnant women receiving >= 1 ANC visit:** 14.84 (1.66-28.01, p=0.03) **Proportion of children under 1 who received their first measles vaccine:** 12.78 (2.08-23.48, p=0.02) **Proportion of children under 5 who received at least 1 IMCI service for diarrhoea or pneumonia:** 10.34 (1.40-19.27, p=0.02) **Proportion of postpartum women receiving >= 1 PNC visit:** 2.79 (-5.11 to 10.70, p=0.48) **Proportion of pregnant women who delivered at a health facility:** 13.53 (-0.57 to 27.63, p=0.06) **Proportion of pregnant women who received a tetanus toxoid vaccine:** 14.48 (0.11-28.84, p=0.04) **Proportion of children under 1 who received their 3rd pentavalent vaccine:** 7.55 (-4.20 to 19.30, p=0.20)	Low

• Proportion of children under 5 years who received at least 1 integrated management of childhood illness (IMCI) service for diarrhoea or pneumonia • Proportion of postpartum women who received at least 1 postnatal care (PNC) visit • Proportion of pregnant women who delivered at a health facility • Proportion of pregnant women who received a tetanus toxoid vaccine • Proportion of children under 1 year who received their 3rd pentavalent vaccine Clinic service provision: • Mean # of ANC visits per clinic • Mean # of tetanus toxoid vaccines for pregnant women • Mean # of facility deliveries • Mean # of PNC visits per clinic • Mean # of 3rd pentavalent vaccines for children under 1 year • Mean # of measles vaccines for children under 1 year • Mean # of IMCI visits for diarrhoea or pneumonia for children under 5 years	**Mean # of ANC visits:** 41.32 (-52.46 to 135.11, p=0.37) **Mean # of tetanus toxoid vaccines for pregnant women:** 82.01 (-38.69 to 202.71, p=0.18) **Mean # of facility deliveries:** 119.35 (-9.48 to 248.19, p=0.07) **Mean # of PNC visits:** 10.68 (-33.12 to 54.49, p=0.63) **Mean # of 3rd pentavalent vaccines for children under 1 year:** -74.14 (-13.52 to 161.8, p=0.10) **Mean # of measles vaccines for children under 1 year:** -83.79 (-1.44 to 169.03, p=0.05) **Mean # of IMCI visits for diarrhoea or pneumonia for children under 5 years:** 280.95 (-40.11 to 602.00, p=0.09)

Foster (2017)	• Proportion of women not pregnant at follow-up • Occurrence of major complications among women who were not pregnant at follow-up • Pregnancy outcomes for women who remained pregnant at follow-up	**Proportion of women not pregnant at follow-up:** 96.4% **Occurrence of major complications among women who were not pregnant at follow-up:** 0% **Pregnancy outcomes for women who remained pregnant at follow-up:** 3.2% pregnant at follow-up: 2.6% had a live birth, 0.2% received medication abortion elsewhere, 0.3% had ectopic pregnancies	Low
Gallagher (2019)	• Overall # of PAC clients • Mode of treatment: sharp dilation and curettage (D&C), manual vacuum aspiration (MVA), medical treatment with misoprostol (miso) • Proportion of PAC clients who chose a method of contraception prior to leaving the facility • Contraceptive method mix among clients choosing a method: implant, injectable, intrauterine device (IUD), pills, long-acting reversible contraceptive (LARC)	**Overall # of PAC clients:** baseline 1,413 (812 DRC, 11 Somalia, 590 Yemen); endline 3,640 (1,412 DRC, 1,065 Somalia, 1,163 Yemen) **Mode of treatment:** DRC: D&C baseline 18%, endline 3% (p<0.001); MVA baseline 69%, endline 95%; miso baseline 12%, endline 2%. Yemen: D&C baseline 25%, endline 3% (p<0.001); MVA baseline 69%, endline 87%; miso baseline 6%, endline 11%. **Proportion of PAC clients who chose a method of contraception prior to leaving the facility:** DRC baseline 42%, endline 70% (p<0.001), Yemen baseline 17%, endline 38% (p=0.002), Somalia baseline 64%, endline 82% (p not provided, not statistically significant) **Contraceptive method mix among clients choosing a method:** DRC: implant baseline 52%, endline 38%; injectable baseline 26%, endline 22%; IUD baseline 7%, endline 32%; pills baseline 15%, endline 8%, LARCs baseline 59%, endline 70% (p=0.02). Somalia: implant baseline 0%, endline 18%; injectable baseline 14%, endline 29%; IUD baseline 14%, endline 6%; pills baseline 72%, endline 47%, LARCs baseline 14%, endline 24%. Yemen: implant baseline 1%, endline 9%; injectable baseline 16%, endline 6%; IUD baseline 0%, endline 6%; pills baseline 83%, endline 79%, LARCs baseline 1%, endline 15% (p=0.004)	Unclear
Gibbs (2020)	• Past year experience of physical intimate partner violence (IPV) among currently married women • Past year experience of severe physical IPV among currently married women	**Adjusted odds ratio (95% CI):** **Past year experience of physical intimate partner violence (IPV) among currently married women**: 0.88 (0.62-1.23, p=0.447) **Past year experience of severe physical IPV among currently married women:** 0.75 (0.50-1.11, p=0.15) **Women's past week depressive symptoms:** -0.35 (-1.19 to 0.48, p=0.406)	High

	• Women's past week depressive symptoms: assessed by the Center for Epidemiological Studies Depression scale • Past year emotional IPV among currently married women • Perceptions of husband cruelty among currently married women • Women's gender attitudes • Married women's participation in household decision-making • Women's mobility • Mother-in-law and sibling abuse • Perceptions of mother-in-law cruelty • Household food insecurity in past 4 weeks • Women's monthly income • Women's total savings • Financial shock resilience • Life satisfaction	**Past year emotional IPV among currently married women:** 0.87 (0.64-1.18, p=0.381) **Perceptions of husband cruelty among currently married women:** -0.16 (-0.49 to 0.16, p=0.325) **Women's gender attitudes:** -0.89 (-1.15 to -0.62, p<0.001) **Married women's participation in household decision-making:** 0.35 (0.04-0.74, p=0.078) **Women's mobility - travel outside of province in past year:** 1.78 (1.27-2.50, p=0.001) **Mother-in-law and sibling abuse:** 1.01 (0.69-1.47, p=0.975) **Perceptions of mother-in-law cruelty:** 0.06 (-0.48 to 0.60, p=0.827) **Household food insecurity in past 4 weeks:** -0.48 (-0.85 to -0.12, p=0.01) **Women's monthly income:** 3.79 (0.96-6.61, p=0.009) **Women's total savings:** 11.79 (9.95-13.64, p<0.001) **Financial shock resilience:** 1.05 (0.83-1.34, p=0.678 **Life satisfaction:** 0.09 (-0.12 to 0.29, p=0.395)	
Glass (2019)	• Change in harmful social norms based on 3 sub-scales: response to sexual violence, protecting family honour, husbands' right to use violence • Change in personal beliefs about GBV based on 3 sub-scales: response to sexual violence, protecting family honour, husbands' right to use violence • Change in confidence in services for GBV survivors	**Change in harmful social norms:** response to sexual violence b=-0.214, p=0.041; protecting family honour b=-0.558, p<0.001; husbands' right to use violence b=-0.309, p=0.003 **Change in personal beliefs about GBV:** response to sexual violence b=-0.092, p=0.379; protecting family honour b=0.196, p=0.102; husbands' right to use violence b=-0.167, p=0.209 **Change in confidence in services for GBV survivors:** b=0.318, p<0.001	Moderate

Gupta (2013)	• Past-year physical and/or sexual intimate partner violence (IPV) reported by women • Any past-year physical IPV • Any past-year sexual IPV • Any past-year economic abuse from partner • Gender norms: justification for wife beating, ability to refuse sex	**Adjusted odds ratio (95% CI):** **Past-year physical and/or sexual intimate partner violence (IPV) reported by women:** low adherence 1.19 (0.69-2.05, p=0.64); high adherence 0.64 (0.35-1.16, p=0.14) **Any past-year physical IPV:** low adherence 0.93 (0.49-1.77, p=0.82); high adherence 0.45 (0.21-0.94, p=0.04) **Any past-year sexual IPV:** low adherence 0.85 (0.44-1.64, p=0.63); high adherence 0.54 (0.27-1.10, p=0.11) **Any past-year economic abuse from partner:** low adherence 0.31 (0.18-0.52, p<0.0001); high adherence 0.47 (0.27-0.81, p=0.01) **Justification for wife beating:** low adherence -0.19 (-1.13 to 0.74, p=0.69); high adherence -1.14 (-2.01 to -0.28, p=0.01) **Ability to refuse sex:** low adherence 0.07 (-0.32 to 0.46, p=0.72); high adherence 0.12 (-0.24 to 0.48, p=0.50)	Unclear
Hashmi (2019)	• Proportion of exclusively breastfed infants • Handwashing among mothers who had prepared the family meal the day prior to interview • Adequate dietary diversity • Appropriate meal amount • Minimum acceptable diet • Safe disposal of infant stool	**All months refer to age of infant** **Proportion of exclusively breastfed infants:** 3 months 42%, 5 months 65% **Handwashing among mothers who had prepared the family meal the day prior to interview:** 3 months 94%, 6 months 100%, 9 months 100% **Adequate dietary diversity:** 6 months 5%, 8 months 58%, 9 months 90% **Appropriate meal amount:** 6 months 10%, 9 months 100% **Minimum acceptable diet:** 6 months 0%, 8 months 47%, 9 months 90% **Safe disposal of infant stool:** 6 months 16%, 9 months 100%	High
Hossain (2014)	• Women's experience of physical and/or sexual intimate partner violence (IPV) from a male partner in the past 12 months (women reporting) • Intention to use physical IPV (men reporting) • Belief that a woman can refuse sex in all circumstances (men reporting)	**Adjusted risk ratio (95% CI):** **Women's experience of physical and/or sexual IPV from a male partner in the past 12 months:** 0.52 (0.18-1.51) **Women's experience of physical IPV from a male partner in the past 12 months:** 0.64 (0.24-1.73) **Women's experience of sexual IPV from a male partner in the past 12 months:** 0.50 (0.14-1.80) **Men's intention to use physical IPV:** 0.83 (0.66-1.06) **Men's belief that a woman can refuse sex in all circumstances:** 1.21 (0.77-1.91) **Use of hostility and conflict management skills:** 1.30 (1.06-1.58) **Male involvement in household tasks typically done by females:** 2.47 (1.24-4.90)	Unclear

	• Use of hostility and conflict management skills (men reporting and women reporting no threats from male partner) • Male involvement in household tasks typically done by females (men reporting)		
Khan (2017)	• Help-seeking for psychological distress by pregnant women • Psychological distress measured by the Self-Reporting Questionnaire (SRQ) at endline • Social support measured by the Multidimensional Scale of Perceived Social Support (MSPSS) at endline	**Help-seeking for psychological distress by pregnant women:** intervention 71%, control 46% (p=0.036) **SRQ score (SD):** intervention 5.35 (3.29), control 6.43 (3.73) (p=0.20) **MSPSS score (SD):** intervention 57.15 (19.11), control 57.11 (14.28) (p=0.992)	Moderate
LeRoux (2020)	• Social norms and attitudes associated with gender and violence against women, measured by 4 composite scales by gender: gender attitudes scale, masculinities attitudes scale, rape myths scale, stigma scale • Emotional, physical and/or sexual intimate partner violence (IPV) in the last 12 months (male perpetration, female experience)	**Gender attitudes scale:** male baseline 15.7, endline 18.6 (p<0.001); female baseline 16.4, endline 18 (p<0.001) **Masculinities attitudes scale:** male baseline 14.7, endline 14.9 (p=0.159); female baseline 15.4, endline 15.2 (p=0.853) **Rape myths scale:** male baseline 16, endline 16.7 (p=0.001); female baseline 16.8, endline 19 (p=0.746) **Stigma scale:** male baseline 9.9, endline 10.6 (p<0.001); female baseline 10.2, endline 10.6 (p=0.002) **Emotional IPV:** male baseline 51%, endline 13.7% (p<0.001); female baseline 50%, endline 18.4% (p<0.001) **Physical IPV:** male baseline 35.1%, endline 12% (p<0.001); female baseline 30.3%, endline 16.6% (p<0.001) **Sexual IPV:** male baseline 31.4%, endline 8.5% (p<0.001); female baseline 36.8%, endline 15.1% (p<0.001) **Any IPV:** male baseline 68.2%, endline 23.3% (p<0.001); female baseline 68%, endline 29.3% (p<0.001)	Moderate

| Logie (2014) | • Change in HIV knowledge, assessed by the Brief HIV Knowledge Questionnaire
• Change in STI knowledge, assessed by the Sexually Transmitted Disease Knowledge Questionnaire
• Change in condom use, assessed by reported consistent use of condoms for sex in last 6 weeks
• Change in social support from family, friends and significant other, assessed by the Multidimensional Scale of Perceived Social Support
• Change in resilient coping, assessed by the Brief Resilient Coping Scale
• Change in depression, assessed by the Beck Depression Inventory Fast-Screen (BDI-FS)
• Change in relationship control, assessed by the Sexual Relationship Power Scale's 'relationship control' subscale | **Adjusted mean difference (95% CI):**
Change in HIV knowledge: 4.81 (4.36-5.26, p<0.001)
Change in STI knowledge: 0.84 (0.70-0.99, p<0.001)
Change in condom use: 4.05 (1.86-8.83, p<0.001)
Change in social support - overall: 1.02 (-0.30 to 2.34, p=0.130)
Change in social support - family: 0.45 (-0.15 to 1.04, p=0.141)
Change in social support - friends: 0.48 (-0.09 to 1.06, p-0.100)
Change in social support - significant other: 0.17 (-0.28 to 0.62, p=0.456)
Change in resilient coping: 0.04 (-0.36 to 0.45, p=0.837)
Change in depression: -0.63 (-0.88 to -0.39, p<0.001)
Change in relationship control: 0.43 (-0.41 to 1.27, p=0.315) | Moderate |

Murray (2018)	• Effect of CPT on felt stigma • Moderation of felt and enacted stigma on CPT effectiveness for depression and anxiety, post-traumatic stress, and functioning: assessed by the Harvard Trauma Questionnaire and Hopkins Symptoms Checklist	**Difference-in-differences (SE):** **Effect of CPT on felt stigma:** post-intervention b=-0.30 (0.13, p=0.024); 6 months post-intervention b=-0.31 (0.20, p=0.119) **Moderation of felt stigma for depression and anxiety:** post-intervention b=-0.07 (0.17, p=0.71); 6 months post-intervention b=0.01 (0.18, p=0.94) **Moderation of felt stigma for post-traumatic stress:** post-intervention b=-0.18 (0.16, p=0.27); 6 months post-intervention b=0.01 (0.20, p=0.95) **Moderation of felt stigma for functioning:** post-intervention b=-0.17 (0.21, p=0.42); 6 months post-intervention b=0.18 (0.25, p=0.48) **Moderation of enacted stigma for depression and anxiety:** post-intervention b=0.04 (0.02, p=0.08); 6 months post-intervention b=0.03 (0.03, p=0.36) **Moderation of enacted stigma for post-traumatic stress:** post-intervention b=0.02 (0.03, p=0.56); 6 months post-intervention b=-0.004 (0.03, p=0.88) **Moderation of enacted stigma for functioning:** post-intervention b=-0.02 (0.03, p=0.55); 6 months post-intervention b=-0.01 (0.04, p=0.73)	Unclear
Parr (2014)	• Rate of umbilical cord ligation • Proportion of cord ligation rates before and after arrival of midwife • Maternal and neonatal outcomes before and after arrival of midwife: birthweight in grams, mean estimated gestational age in weeks, 1 minute and 5 minute Apgar scores, proportion of 5-minute Apgars less than 7, newborn resuscitation percentage, postpartum haemorrhage, episiotomy • Proportion of correct answers given by SBAs on knowledge survey	**Rate of umbilical cord ligation:** quarter 1 15.9%, quarter 2 11.1%, quarter 3 2.4%, quarter 4 0.9% Proportion of cord ligation rates before and after arrival of midwife, by clinic site: Maela before 15.3%, after 1.0%; Wang Pha before 10.6%, after 1.9%; Maw Ker Thai before 13.7%, after 3.0% **Maternal and neonatal outcomes before and after arrival of midwife (SD):** birthweight before 2979 (437), after 2989 (429); mean estimated gestational age: before 39.1 (1.5), after 39.1 (1.4); shoulder dystocia before 0.1%, after 0.1%; Apgar (one minute), median: before 9, after 9; Apgar (5 minute), median: before 10, after 10; proportion of 5-minute Apgar less than 7: before 0.8%, after 0.8%; newborn resuscitation: before 2.8%, after 1.6%; postpartum haemorrhage: before 8.3%, after 6.5%; episiotomy %: before 5.1%, after 5.2% **Proportion of correct answers given by SBAs on knowledge survey:** proportion of infants born with nuchal cord: 61.5; presence of fetal nuchal cord is harmful to the infant: 16.7; can cause fetal distress in 2nd labour: 92.3; clamping and cutting of the fetal nuchal cord before birth is a dangerous practice: 84.6; clamping and cutting of the fetal nuchal cord before birth is associated with fetal anaemia: 83.3; clamping and cutting of the fetal nuchal cord before birth is associated with fetal shock and hypovolemia: 38.5; clamping and cutting of the fetal nuchal cord before birth is associated with HIE especially with shoulder dystocia: 88.5	Unclear

| Stark (2018) | • Girls' self-reported exposure in the last 12 months to any form of sexual violence, unwanted sexual touching, coerced sex, forced sex, physical violence, emotional violence, neglect, transactional sexual exploitation, child marriage
• Caregiver scores on gender inequitable roles scale, Parental Acceptance-Rejection Questionnaire (PARQ) total scale and warmth/affection subscale, acceptance of physical discipline on children | **Adjusted odds ratio (95% CI):**
Exposure to sexual violence: ITT 0.95 (0.65-1.37), non per protocol 0.94 (0.49-1.81), per protocol 0.83 (0.46-1.50)
Exposure to unwanted sexual touching: ITT 0.88 (0.57-1.36), non per protocol 0.85 (0.40-1.77), per protocol 0.79 (0.40-1.55)
Exposure to coerced sex: ITT 1 (0.58-1.72), non per protocol 0.94 (0.40-2.20), per protocol 0.81 (0.39-1.72)
Exposure to forced sex (13-14 year olds): ITT 1.05 (0.41-2.67), non per protocol 1 (0.49-1.81)
Exposure to physical violence: ITT 1.22 (0.79-1.58), non per protocol 1.06 (0.65-1.70), per protocol 1.15 (0.75-1.77)
Exposure to emotional violence: ITT 1.04 (0.76-1.42), non per protocol 1.03 (0.63-1.68), per protocol 0.848 (0.56-1.37)
Exposure to neglect: ITT 1.03 (0.74-1.44), non per protocol 0.92 (0.55-1.54), per protocol 1.01 (0.63-1.61)
Exposure to transactional sexual exploitation: ITT 1.08 (0.60-1.94), non per protocol 0.59 (0.21-1.65), per protocol 1.14 (0.52-2.49)
Exposure to child marriage (13-14 year olds): ITT 1.24 (0.38-4.00), non per protocol 1.09 (0.47-2.54), per protocol 0.78 (0.29-2.05)
No statistically significant odds ratios
Adjusted beta (95% CI):
Gender inequitable roles scale: ITT -0.10 (-0.61 to 0.40), non per protocol -0.01 (-0.72 to 0.70), per protocol -0.15 (-0.80 to 0.51)
PARQ total scale: ITT -2.08 (-3.20 to -0.96, p<0.001), non per protocol -1.39 (-3.02 to 0.25), per protocol -2.08 (-3.55 to -0.61, p<0.001)
PARQ warmth/affection subscale: ITT -1.08 (-1.79 to -0.36, p<0.01), non per protocol -0.9 (-1.91 to 0.10), per protocol -1.44 (-2.36 to -0.52, p<0.01)
Acceptance of physical discipline on children: ITT -0.10 (-0.70 to 0.49), non per protocol 0.03 (-0.77 to 0.84), per protocol -0.3 (-1.05 to 0.45) | Unclear |
| Stevens (2018) | • Uptake of preconception folic acid (PFA)
• Health worker knowledge of NTDs and PFA | **Proportion of women reporting PFA:** baseline 1.3%, endline 0.65% (p=0.465)
Proportion of health workers who have heard of NTDs: baseline 85%, endline 93% (p=0.162)
Proportion of health workers knowing PFA could be used to prevent NTDs: baseline 16%, endline 73% (p<0.001) | Unclear |

Tran (2021)	• Change in score from pre-test to post-test	**Change in score from pre-test to post-test:** Uganda pre-test 84%, post-test 89%; DRC pre-test 56%, post-test 76%; Nigeria pre-test 45%, post-test 52%	Low
White (2016)	• Proportion of students successfully completing the SBA training • Proportion of graduates who worked at the training facility (SMRU) for at least 12 months • Proportion of SBAs from first 3 training cohorts who completed the requirements for promotion or who were progressing towards promotion • Median score by cohort on theory exam • Proportion completing the clinical requirements of the program to achieve competence within 12 months • Perinatal indicators of birth room safety: proportion of women birthing at SMRU, proportion of women having partographs completed, proportion of stillbirth	**Proportion of students successfully completing the SBA training:** 79/88 (90%) **Proportion of graduates who worked at the training facility (SMRU) for at least 12 months:** 65/88 (74%) **Proportion of SBAs from first 3 training cohorts who completed the requirements for promotion or who were progressing towards promotion:** 28/60 (47%) **Median score by cohort on theory exam (IQR):** 81 (76-86), 77 (75-89), 81 (75-85), 79 (70-83) **Proportion completing the clinical requirements of the program to achieve competence within 12 months:** 100% **Proportion of women birthing at SMRU (2008-2015):** 57.2%, 59.7%, 66.9%, 76.8%, 81.6%, 81.2%, 83.2%, 81.9% ($p<0.001$) **Proportion of women having partograms completed (2008-2015):** 87.6%, 98.5%, 94.0%, 96.2%, 98.6%, 99.0%, 99.7%, 99.8% ($p<0.001$) **Proportion of stillbirth (2008-2015):** 1.0%, 0.7%, 1.0%, 0.8%, 0.9%, 0.7%, 0.7%, 0.4% ($p=0.0276$)	Unclear

| Wirtz (2016) | • Recent experiences of violence identified by screening tool among participants of pilot testing phase
• Acceptance of referral for positive GBV screen in pilot testing phase
• Recent experiences of violence identified by screening tool among participants of implementation phase
• Acceptance of referral for positive GBV screen in implementation phase
• Internal consistency, assessed by Cronbach's coefficient
• Exploratory factor analysis | **Recent experiences of violence identified by screening tool in pilot testing phase:**
Ethiopia: threatened/insulted 56.6%, physically hurt 43.2%,
forced sex 25.5%, sexual exploitation 11.3%, forced marriage 9.5%, any type of GBV 64.8%;
Colombia: threatened/insulted 26.1%, physically hurt 18.8%, forced sex 13%, sexual exploitation 10.1%, forced abortion 1.4%, forced marriage 2.9%, any type of GBV 44.9%
Acceptance of referral for positive GBV screen in pilot testing phase: Ethiopia 55.9%, Colombia 90%
Recent experiences of violence identified by screening tool in implementation phase:
Ethiopia: threatened/insulted 35.7%, physically hurt 46.6%,
forced sex 20.4%, sexual exploitation 27.7%, forced marriage 19.9%, any type of GBV 50.6%;
Colombia: threatened/insulted 41.5%, physically hurt 23.5%, forced sex 36%, sexual exploitation 20.2%, forced abortion 2%, forced marriage 4.2%, any type of GBV 63.4%
Acceptance of referral for positive GBV screen in implementation phase: Ethiopia 43.8%, Colombia 74.2%
Internal consistency: 0.77
Exploratory factor analysis: all items loaded onto a single factor (factor loadings: threat of violence 0.51, physical violence 0.65, forced sex 0.58, survival sex 0.69, forced pregnancy 0.63, and forced marriage 0.57) | Unclear |

ANNEX 10: STUDY DESIGN AND OUTCOMES OF MENTAL HEALTH AND PSYCHOSOCIAL SUPPORT INTERVENTION STUDIES

Study Design of Mental Health and Psychosocial Support Intervention Studies in Humanitarian Crisis Settings, 2013-2021 (n=104)

Author (Year)	Study Setting & Population	Intervention(s)	Methods
Abdulah (2019)	**Country:** Iraqi Kurdistan, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Internally displaced	**Description:** Group art-based therapy intervention treatment course **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Observational **Study duration:** 2 months **Sample description:** Kurdish Yezidi females living in the Sharya IDP camp **Sample size:** 16 enrolled, 14 analysed
Acarturk (2016)	**Country:** Turkey, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** Eye movement desensitization and reprocessing (EMDR) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - clinical psychologists **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 9 months **Sample description:** Treatment-seeking adult refugees with a PTSD diagnosis according to the DSM-IV **Sample size:** 37 intervention, 33 wait-list control
Akiyama (2018)	**Country:** Philippines, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp **Population:** Emergency affected (non-displaced)	**Description:** Coaching-education program **Implementation site:** School-based **Personnel type(s):** Lay personnel – teachers and student-leaders **Part of broader program:** No **Study design:** Quasi-experimental **Study duration:** 2 months **Sample description:** 10th grade students from 3 schools in Typhoon Haiyan-affected Leyte, Philippines **Sample size:** 364 enrolled, 293 analysed (51 intervention, 242 control)	**Study design:** Quasi-experimental **Study duration:** 2 months **Sample description:** 10th grade students from 3 schools in Typhoon Haiyan-affected Leyte, Philippines **Sample size:** 364 enrolled, 293 analysed (51 intervention, 242 control)

Akoury-Dirani (2015)	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural and urban) **Population:** Host community, refugee	**Description:** 2.5 day psychological first aid (PFA) training to enhance the readiness of mental health field workers **Implementation site:** System-level **Personnel type(s):** Health professional cadre - mental health providers **Part of broader program:** Yes	**Study design:** Observational **Study duration:** 1 month **Sample description:** Staff working directly with Syrian refugee and host community families **Sample size:** 77 attended, 60 followed up
Ali (2020)	**Country:** Jordan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Refugee	**Description:** 10 sessions of group counselling using psycho-education techniques that addressed 4 primary domains: alienation, loss and grief, hope and hopelessness, and psychological problems **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - clinical psychologist/ psychiatrist **Part of broader program:** No	**Study design:** Quasi-experimental **Study duration:** 1.5 months **Sample description:** Syrian refugee females in Jordan aged between 30 and 50 years, identified as psychologically challenged **Sample size:** 40 enrolled
Alsmadi (2018)	**Country:** Jordan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Refugee	**Description:** Intervention: daily dosage of Ginkgo biloba tablets for 6 weeks + psychoeducation; Control: psychoeducation only **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - clinical psychologists/nurses, pharmacists **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 3 months **Sample description:** Iraqi refugees in Jordan **Sample size:** 99 enrolled (50 intervention, 49 control); 84 analysed (40 intervention, 44 control)

Bass (2016)	**Country:** Iraq, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced), internally displaced, refugee	**Description:** 6-8 session trauma-informed support, skills, and psychoeducation intervention provided by community mental health workers (CMHWs) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - recruited CMHWs who were pharmacists, nurses, and physician assistants with no prior formal mental health training **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 12 months **Sample description:** Adults in Dohuk reporting experiences of torture and presenting with significant depressive symptoms **Sample size:** 209 enrolled (159 intervention, 50 wait-list control); 188 completed follow-up (149 intervention, 43 wait-list control)
Bell (2015)	**Country:** Rwanda, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** Analysed Self-Report Questionnaire (SRQ-SIB) responses to identify predictive and reliable items to produce a truncated version for screening women in need of mental health attention in low-resource primary care settings **Implementation site:** Mobile/outreach **Personnel type(s):** Lay personnel - community health workers (CHWs)/ community health volunteers (CHVs) **Part of broader program:** Yes - a cross-sectional study to identify and prioritize key women's health needs, translate to programmatic responses, evaluate programs, and disseminate results	**Study design:** Observational **Study duration:** 2 months **Sample description:** Women aged 15-49 with a history of displacement due to conflict **Sample size:** 810 enrolled, 810 analysed
Betancourt (2014)	**Country:** Sierra Leone, regional sample **Crisis type:** Armed conflict **Context type:** Unclear **Population:** Emergency affected (non-displaced)	**Description:** Youth Readiness Intervention (YRI), a 10 session group-based cognitive behavioural therapy (CBT) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 8 months **Sample description:** Youth aged 15-24 years with interest to continue education, psychological distress, and self-reported impairment in daily functioning **Sample size:** 431 enrolled (220 intervention, 211 control); 394 completed (203 intervention, 191 control)

Bolton (2014)	**Country:** Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Refugee	**Description:** Transdiagnostic psychotherapy, Common Elements Treatment Approach (CETA) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 8 months **Sample description:** Burmese individuals aged >=18 years who witnessed or experienced a traumatic event, with moderate to severe depression and/or PTSS **Sample size:** 347 enrolled (182 intervention, 165 control); 274 analysed (148 intervention, 126 control)
Bruno (2019)	**Country:** Gaza Strip, regional sample **Crisis type:** Armed conflict **Context type:** Unclear **Population:** Refugee	**Description:** Comprehensive (tiered) mental health and psychosocial support services meant to integrate mental health care into primary care services **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** No	**Study design:** Observational **Study duration:** 20 days **Sample description:** Randomly selected patients at the study clinic **Sample size:** 408 enrolled (205 intervention, 203 control)
Budosan (2016)	**Country:** Turkey, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Host community, refugee	**Description:** MHPSS intervention including 1) MHPSS training for team and non-specialized providers; 2) psychological/mental health intervention; and 3) social intervention **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - expatriate psychiatrist, psychologists, social worker, and community-level workers **Part of broader program:** No	**Study design:** Observational **Study duration:** 13 months **Sample description:** Primary: urban Syrian refugees; secondary: host population in Kilis if expressed need for MHPSS intervention that could not be provided by local health and/or social services; beneficiaries randomly selected for intervention assessment **Sample size:** 61 evaluated from field hospital and outpatient health centre, 42 evaluated from community skills centre

Chemali (2017)	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Other **Population:** Host community	**Description:** 4 session adapted version of SMART-ERP (Stress Management Relaxation Response Resilience Training) **Implementation site:** System-level **Personnel type(s):** Health professional cadre - social workers **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 23 months **Sample description:** Social and field workers working in Lebanon, with priority given to those directly involved with Syrian refugees **Sample size:** 120 social/fieldworkers attended SMART-3RP training; 100 participated in research portion; 52 completed the training
Chen (2014)	**Country:** China, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Short-term 6-week group CBT intervention as compared to a general supportive intervention and a nontreatment control group **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - mental health professionals and local volunteers **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 3 months **Sample description:** Adolescents who had lost at least 1 parent in the earthquake and were considered to have PTSD symptoms **Sample size:** 40 enrolled (16 intervention, 12 general support, 12 nontreatment control); 32 analysed (10 intervention, 10 general treatment, 12 nontreatment control)
Christensen (2020)	**Country:** Bangladesh, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** Digital mental health screening tool based on the WHO SRQ-20 **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - paramedic and coordinator **Part of broader program:** Yes	**Study design:** Mixed methods (descriptive/ observational + qualitative) **Study duration:** 3 months **Sample description:** Rohingya living in the Kutupalong camp who had been visited by the mHealth support team **Sample size:** 958 enrolled and analysed; 196 referred
Cole (2021)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** 6-week small group cognitive behavioural therapy **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** Yes	**Study design:** Quasi-experimental **Study duration:** 8 weeks **Sample description:** Sierra Leonean Ebola Treatment Center (ETC) staff with clinically significant symptoms of anxiety and depression **Sample size:** 253

Corboz (2019)	**Country:** Afghanistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** School/ community-based peace education program to change harmful social norms and practices related to gender and use of violence **Implementation site:** Community-based, school-based **Personnel type(s):** Lay personnel **Part of broader program:** Yes	**Study design:** Quasi-experimental (interrupted time series) **Study duration:** 1 year **Sample description:** Students in 11 secondary schools **Sample size:** 770 enrolled, 720 at midline, 734 at endline
Corna (2019)	**Country:** Bangladesh, regional sample **Crisis type:** Armed conflict **Context type:** Camp (urban) **Population:** Refugee	**Description:** Psychosocial support intervention that consisted of support groups and home visits **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - psychosocial workers trained by clinical psychologist **Part of broader program:** Yes - psychosocial and mental health intervention	**Study design:** Observational (single arm pre-post study) **Study duration:** 5 months **Sample description:** Pregnant refugee women in 4th-6th month of pregnancy **Sample size:** 260 enrolled (130 Kutupalong, 130 Nayapara); size of analysed sample not specified
Crombach (2018)	**Country:** Burundi, regional sample **Crisis type:** Armed conflict, environmental disaster **Context type:** Camp **Population:** Internally displaced	**Description:** 6-week Narrative Exposure Therapy (NET) as a trauma-focused intervention **Implementation site:** Community-based **Personnel type(s):** Lay personnel - local university psychology students **Part of broader program:** No	**Study design:** Quasi-experimental **Study duration:** 13 months **Sample description:** Individuals suffering significantly from trauma-related mental health symptoms (fulfilled minimum diagnostic criteria for PTSD) **Sample size:** 40 enrolled (15 intervention, 25 no treatment control); 29 completed 3-month follow-up (13 intervention, 16 control); 18 completed 9-month follow-up (8 intervention, 10 control)

Czaicki (2015)	**Country:** Philippines, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Community-based alcohol intervention program including assessment (1 day survey), training (3 sessions), and outreach **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - nursing staff and staff from main healthcare centre **Part of broader program:** No	**Study design:** Observational **Study duration:** Not specified **Sample description:** Assessment - residents of Tacloban City who were more likely to be poor with little to no access to alcohol intervention services; training - doctors, nurses, social workers and village staff; outreach - 1 of the most affected villages by Haiyan **Sample size:** 239 assessment, 52 training, 20 outreach
Dawson (2018)	**Country:** Indonesia, regional sample **Crisis type:** Armed conflict, environmental disaster **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** 5-week cognitive behaviour therapy (CBT) and problem-solving therapy (PS) **Implementation site:** Community-based, school-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 15 months **Sample description:** Conflict-exposed children aged 7-14 years involved in an after-school program and satisfying criteria for probable PTSD, randomized to treatment group **Sample size:** 64 enrolled and analysed (32 CBT, 32 PS)
de Fouchier (2018)	**Country:** Central African Republic, regional sample **Crisis type:** Armed conflict **Context type:** Not specified **Population:** Humanitarian workers	**Description:** Single session stress management group for international aid workers **Implementation site:** Unclear **Personnel type(s):** Health professional cadre - clinical psychologists trained in cognitive behavioural therapy **Part of broader program:** No	**Study design:** Observational **Study duration:** Not specified (during 1 month) **Sample description:** National staff working for SOS Children's Villages and Action Contre la Faim **Sample size:** 197 enrolled, 99 completed post-test assessment

Dhital (2019)	**Country:** Nepal, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Psychosocial support training for school teachers **Implementation site:** School-based **Personnel type(s):** Lay personnel - school teachers trained by clinical psychologist **Part of broader program:** Yes	**Study design:** Randomized controlled trial (cluster randomized) **Study duration:** 6 months **Sample description:** School-going adolescents from grades 6 to 8 with a minimum attendance of 80% and no known diagnosis of mental health problems **Sample size:** 15 schools enrolled, 7 pairs and 1 unpaired; 1,220 students enrolled (605 intervention, 615 control); 1,070 analysed (559 intervention, 511 control)
Doty (2018)	**Country:** Ukraine, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Internally displaced, military veterans	**Description:** Mental Health Assessment Inventory (MHAI) - locally adapted screening instrument for mental health and alcohol use problems **Implementation site:** N/A **Personnel type(s):** Health professional cadre - local mental health professionals **Part of broader program:** No	**Study design:** Observational **Study duration:** 1 week **Sample description:** Adults aged >=18 exposed to conflict (violence) or displacement due to the war, including IDPs and anti-terrorist operation veterans **Sample size:** 153 baseline (109 Zaporizhia, 44 Kyiv; 30 re-interview
Dozio (2020)	**Country:** Cameroon, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** Baby Friendly Space (BFS) model with weekly activities focused on strengthening/ enhancing parental skills, psychomotor development for babies and emotional wellbeing for both women and babies - maximum of 6 months **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - psychologists, psychosocial workers, paraprofessionals **Part of broader program:** No	**Study design:** Mixed methods (descriptive quantitative and qualitative) **Study duration:** 18 months **Sample description:** Pregnant women, lactating mothers, and children aged <2 years **Sample size:** 3,345 enrolled; 1,022 analysed (203 pregnant women, 819 lactating women, and 819 infants)

Dozio (2021)	**Country:** Central African Republic, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Internally displaced	**Description:** 5-session group Problem Management Plus (PM+) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** Yes	**Study design:** Mixed methods **Study duration:** 9 weeks **Sample description:** Beneficiaries of the larger income-generating activities program, priority given to participants with a low level of wellbeing **Sample size:** baseline 946, endline 838, post-intervention 140
Eichfeld (2019)	**Country:** Cambodia, Indonesia, and Thailand, regional samples **Crisis type:** Armed conflict, environmental disaster **Context type:** Not specified **Population:** Not specified	**Description:** Provider training of Trauma Stabilization as sole treatment for PTSD in adults **Implementation site:** Not specified **Personnel type(s):** Health professional cadre **Part of broader program:** Yes	**Study design:** Observational (retrospective analysis) **Study duration:** 3 years **Sample description:** Individuals who received at least 1 intervention of trauma stabilization **Sample size:** 4,799 full data set (1,483 Cambodia, 2,363 Indonesia, 953 Thailand); 1,358 analysed (654 Cambodia, 414 Indonesia, 290 Thailand)
El-Khodary (2020)	**Country:** Palestine, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp **Population:** Host community, refugee	**Description:** Psychosocial support counselling program **Implementation site:** School-based **Personnel type(s):** Lay personnel - school counsellors, social workers, and teachers **Part of broader program:** No	**Study design:** Observational **Study duration:** 2 months **Sample description:** Students aged 12-18 years in selected classes from selected schools **Sample size:** 572 enrolled, 572 analysed
Falb (2020)	**Country:** Syria, regional sample **Crisis type:** Armed conflict **Context type:** Unclear **Population:** Emergency affected (non-displaced)	**Description:** Cash Assistance Programming - monthly transfer for 3 months of $76 to cover 80% of non-food items a 6-person household may need **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** Yes	**Study design:** Mixed methods **Study duration:** 4 months **Sample description:** Households with women aged 18-59 years from a beneficiary household, with female heads of household or other female representative interviewed **Sample size:** 512 baseline, 456 endline; 40 qualitative interviews

Foka (2021)	**Country:** Greece, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** The Strengths for the Journey (SFJ) program, a structured 6-day intervention with group-based positive psychology sessions **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Quasi-experimental **Study duration:** 4 months **Sample description:** Children aged 7-14 who had not been identified as having a mental health disorder or intellectual disability and who spoke Arabic or Farsi **Sample size:** 72 enrolled (33 intervention, 39 waitlist control, 31 focus group)
Gammoh (2017)	**Country:** Jordan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Refugee	**Description:** Comparative drug trial between single dose of valerian-hops and single-dose of chlorpheniramine in modulating subjective sleep measures **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** Not specified **Sample description:** Adult refugees living in Amman and Mafraq attending the Caritas Medical Centre, without history of psychological or mental illness and no anxiolytic, antidepressant or drug use **Sample size:** 262 enrolled (79 valerian, 74 chlorpheniramine, 109 control); 191 analysed (65 valerian, 50 chlorpheniramine, 76 control)
Getanda (2020)	**Country:** Kenya, regional sample **Crisis type:** Armed conflict, environmental disaster **Context type:** Non-camp (urban) **Population:** Internally displaced	**Description:** 6-session psychosocial educational intervention **Implementation site:** School-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** Not specified (follow-up 1 week after completion of intervention) **Sample description:** Youth aged 14-17 years recruited from a school in Nakuru city who had experienced at least 1 traumatic event during the previous year and scored above the cut-off score on any emotional problem measures **Sample size:** 51 enrolled (25 intervention, 26 waitlist control); 44 completed (21 intervention, 23 waitlist control)

Gibbs (2020)	**Country:** Afghanistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Intervention - 12-month women's economic and social empowerment program with 90-180 minutes of programming weekly addressing numeracy, business skills, social empowerment topics, vocational training, money saving options, and referrals to services, as well as a monthly $10 cash stipend Control - $10 for each quantitative interview completed **Implementation site:** Community-based **Personnel type(s):** Not specified **Part of broader program:** No	**Study design:** Randomized controlled trial (individual randomized) **Study duration:** 27 months **Sample description:** Women aged 18-45, overemphasis on married women **Sample size:** 1,461 enrolled (747 intervention, 714 control); 1,210 analysed (673 intervention, 537 control)
Giraldo (2020)	**Country:** Colombia, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Validation of the Adapted Extreme Experiences Scale (EX2) that is composed of 2 dimensions: direct extreme experiences (dEX2) and indirect extreme experiences (iEX2) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - clinical psychologists **Part of broader program:** No	**Study design:** Observational (cross-sectional instrument validation) **Study duration:** Not specified **Sample description:** 1st pool included adults aged >18 years with "high exposure to conflict" (former illegal combatants then enrolled in an official reintegration program led by the Reincorporation and Normalization Agency of Colombia (ARN) and victims of conflict); 2nd pool included voluntary participants aged >18 years who were less conflict-affected **Sample size:** 187 enrolled (67 former combatants, 69 victims of conflict, 51 control)

Glass (2020)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** 12-month integrated parent (Pigs for Peace, PFP) and young adolescent (Rabbits for Resilience, RFR) animal microfinance/asset transfer program (RFR +PFP) **Implementation site:** Community-based **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Mixed methods (quasi-experimental and qualitative) **Study duration:** 24 months **Sample description:** Men and women aged >16 years who expressed an understanding and commitment to productive asset/microfinance programs, permanent household. Male and female adolescents aged 10-15 years participated if 1) parent/guardian was enrolled in PFP program but in delayed control group 2) youth and parent/guardian expressed interest 3) permanent residents of the participating village **Sample size:** 542 young adolescents participated (178 RFR + PFP, 187 RFR only, 177 PFP only); 501 baseline, 42 endline
Goninon (2021)	**Country:** Uganda, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** EMPOWER, a manualized culturally sensitive group-based CBT rehabilitation program with 9 sessions over 2 weeks **Implementation site:** Community-based **Personnel type(s):** Health professional cadre **Part of broader program:** Yes	**Study design:** Quasi-experimental (longitudinal, between-groups survey) **Study duration:** 6 weeks **Sample description:** Congolese participants aged >18 years and living in the settlement **Sample size:** 174 enrolled (76 immediate treatment group (ITG), 98 delayed treatment group (DTG); 98 completed (43 ITG, 55 DTG)

Gormez (2017)	**Country:** Turkey, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Refugee	**Description:** 8-week group cognitive behavioural therapy (CBT) delivered by teachers **Implementation site:** School-based **Personnel type(s):** Lay personnel - teachers **Part of broader program:** No	**Study design:** Observational **Study duration:** 8 weeks **Sample description:** Primary and secondary grade Syrian refugee students aged 10-15 years and attending a temporary education centre, selected based on their trauma-related psychopathology as reflected in the Child Post-Traumatic Stress- Reaction Index score **Sample size:** 32 enrolled
Greene (2020)	**Country:** Ethiopia, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** Assessments of trauma exposure and psychological symptoms including traumatic stress (Achenbach Child Behavior Checklist, Youth Self Report, Child Post Traumatic Stress Disorder Symptom Scale-Interview format, Orphans and Vulnerable Children Wellbeing Tool) **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Observational **Study duration:** 3 weeks **Sample description:** Youth aged 7-18 years living in 1 of 3 refugee camps in the Somali region of Ethiopia, reporting elevated levels of trauma-related, externalizing and/or internalizing symptoms, mentally competent to provide consent, not head of household, recruited from previous CETA study **Sample size:** 88 pairs of youth and caregivers enrolled; 42 pairs of youth and caregivers completed
Haar (2020)	**Country:** Afghanistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp **Population:** Emergency affected (non-displaced)	**Description:** 3 week Strong Families (SF) program for primary caregivers and children **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - teachers, caregivers, psychologists, social workers **Part of broader program:** No	**Study design:** Observational **Study duration:** 10 weeks **Sample description:** Female caregivers and children aged 8-12 years, recruited through schools and drug treatment centres **Sample size:** 72 families enrolled; 67 completed

Hamdani (2020)	**Country:** Pakistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp **Population:** Emergency affected (non-displaced)	**Description:** 5-week transdiagnostic Problem Management Plus (PM+) **Implementation site:** Facility-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 4 months **Sample description:** Primary care attendees with high levels of psychological distress (score>2 on the General Health Questionnaire (GHQ-12) and functional impairment (score >16 on the 12-item version of the WHO Disability Assessment Schedule 2.0 (WHODAS 2.0)) **Sample size:** 346 enrolled (172 intervention, 174 control)
Hamid (2021)	**Country:** Syria, regional sample **Crisis type:** Armed conflict **Context type:** Camp (urban) **Population:** Internally displaced	**Description:** 6-week, 12-session educational program **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - paediatric dentist and well-trained social workers **Part of broader program:** No	**Study design:** Quasi-experimental **Study duration:** 6 weeks **Sample description:** Children aged 9-14 years, all previously diagnosed with PTSD, able to practice oral hygiene without any help from parents **Sample size:** 121 enrolled (61 intervention, 60 control); 118 completed (60 intervention, 58 control)
Hermosilla (2019)	**Country:** Ethiopia, Iraq, Jordan, Nepal, Uganda, regional sample **Crisis type:** Armed conflict (Ethiopia, Iraq, Jordan, Uganda), environmental disaster (Ethiopia, Nepal) **Context type:** Camp **Population:** Emergency affected (non-displaced), internally displaced, refugee	**Description:** Data collected from various Child Friendly Spaces (CFS) studies, with differing areas of emphasis: Ethiopia (focus on functional literacy and numeracy skills); Uganda (traditional song, dance, storytelling, and organized sports); Iraq (music, sports, drawing, storytelling, drama, dance); Jordan (drawing, handicrafts, puzzles, games, storytelling, singing, drama); Nepal (games, outdoor sports, creative activities, traditional song and dance, life skills) **Implementation site:** Community-based **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Quasi-experimental **Study duration:** Ethiopia 4 months, Uganda 5 months, Iraq 6 months, Jordan 6 months, Nepal 6 months **Sample description:** Children aged 6-17 years and carers from households within the catchment area for the proposed CFS **Sample size:** Baseline 1,010 children, 1,312 carers

Hugelius 2021	**Country:** Kenya, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** Humanitarian Emergency Settings Perceived Needs (HESPER) Web Needs Assessment (self-administered web-based version of HESPER) **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Observational **Study duration:** 1 month **Sample description:** Individuals at least 18 years old, access to the internet by mobile phone, tablet, or computer, and able to participate in the interview in English **Sample size:** 339 enrolled (50 alternate forms reliability evaluation, 289 feasibility evaluation); 320 analysed (31 alternate forms reliability evaluation, 289 feasibility evaluation)
Im (2018)	**Country:** Kenya, regional sample **Crisis type:** Armed conflict **Context type:** Camp (urban) **Population:** Refugee	**Description:** 12-session peer-led trauma-informed psychoeducation groups (TIPE) **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** Yes - community initiative to build the capacity of local mental health service providers, paraprofessionals, and peer mentors with a focus on developing a community-based and culturally sensitive intervention	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** Not specified **Sample description:** Somali urban refugee youth aged mid-teens to early thirties **Sample size:** 250 recruited; 141 completed (96 no/low PTSD, 45 high PTSD)
Jordans (2013)	**Country:** Burundi. regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** 2-session parenting psychoeducation intervention **Implementation site:** School-based **Personnel type(s):** Lay personnel - community counsellors **Part of broader program:** Yes	**Study design:** Quasi-experimental **Study duration:** Not specified **Sample description:** School-going children aged 10-14 years living in especially difficult circumstances, included after screening for elevated psychosocial distress, whose parents were offered participation **Sample size:** 161 enrolled (97 intervention, 64 control); 120 analysed (58 intervention, 62 control)

Köbach (2015)	**Country:** Democratic Republic of Congo (DRC), regional sample **Crisis type:** Armed conflict **Context type:** Camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** 2 dissemination stages (DS) of Forensic Offender Rehabilitation Narrative Exposure Therapy (FORNET): stage 1 (DS1) training from clinical counsellors, stage 2 (DS2) training from the first batch of local counsellors **Implementation site:** Community-based **Personnel type(s):** Lay personnel - local counsellors **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 1 year **Sample description:** Adult male combatants from the eastern DRC suffering from trauma symptoms and heightened levels of aggression **Sample size:** DS1: 76 participants (35 FORNET, 41 control), 47 included in analysis 1 (21 FORNET, 26 control), 24 included in analysis 2 (11 FORNET, 13 control); DS2: 69 participants (33 FORNET, 36 control), 51 included in analysis 1 (28 FORNET, 23 control)
Khan (2017)	**Country:** Pakistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced), internally displaced	**Description:** Intervention - 2 interactive psychoeducation sessions with pregnant women and their families, "Happy Mother, Healthy Child in Ten Steps," in addition to routine visits; Control - routine visits only **Implementation site:** Community-based **Personnel type(s):** Lay personnel - Lady Health Workers (LHWs) **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 4 months **Sample description:** Pregnant women experiencing psychological distress **Sample size:** 81 enrolled (42 intervention, 39 control); 71 analysed (34 intervention, 37 control)
Khan (2019)	**Country:** Pakistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Internally displaced	**Description:** Locally adapted Group PM+ intervention in collaboration with the Lady Health Workers (LHWs) program in 10 catchment areas with 5 weekly sessions **Implementation site:** Facility-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 7 weeks **Sample description:** Females aged >= 18 years, referred for screening by LHW who scored above 2 on the General Health Questionnaire (GHQ) and above 16 on the WHO Disability Assessment Schedule (WHODAS) **Sample size:** 119 enrolled (59 intervention, 60 control); 112 completed [1 week post intervention] (54 intervention, 58 control)

Khoja (2016)	**Country:** Afghanistan regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** e-Health solutions addressing 4 mental health challenges: depression, psychosis, post-traumatic stress disorder, and substance abuse **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - community health workers (CHWs) and facility-based healthcare providers **Part of broader program:** No	**Study design:** Observational (cross-sectional evaluation) **Study duration:** Unclear **Sample description:** Existing registered population of the health facilities and young adults registered in the populations **Sample size:** 550 survey participants (345 intervention, 205 control); 1,400 young adults registered for SMS messages (329 surveyed)
Knaevelsrud (2015)	**Country:** Iraq, regional sample **Crisis type:** Armed conflict **Context type:** Unclear **Population:** Emergency affected (non-displaced)	**Description:** 5-week web-based psychotherapy (cognitive based therapy) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - psychotherapists or psychiatrists **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 7 months **Sample description:** Persons aged 18-65 years with knowledge of Arabic and a history of trauma accompanied by posttraumatic stress symptoms **Sample size:** 159 enrolled (79 intervention, 80 waitlist control); 159 analysed
Knappe (2019)	**Country:** Greece, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** 8-week exercise and sport intervention on post-traumatic stress disorder symptoms, mental health, and physical fitness **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 8 weeks **Sample description:** Males aged 16-49 years with no absolute contraindication for moderate-intensity physical activity and able to exercise 3 times a week **Sample size:** baseline 45 participants; endline 38 participants

Lakkis (2020)	**Country:** Jordan and Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** 21 weekly study sessions and discussions of parenting education (16 early childhood development sessions, 5 mental health and psychosocial support sessions) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - psychologists **Part of broader program:** Yes – long-term project entitled "SANAD" (SUPPORT in Arabic), train the trainer model for parents in couples	**Study design:** Observational (cohort study) **Study duration:** 10 months **Sample description:** Syrian refugee parents in couples who have children <=6 years and understand Arabic **Sample size:** 125 baseline, 67 endline
Leichner (2021)	**Country:** Nepal, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Capacity building of mental health workforce to provide quality mental health and psychosocial support (MHPSS) **Implementation site:** Community-based, facility-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 22 months **Sample description:** Health workers from 78 participating health facilities **Sample size:** 435 health workers trained
Lenglet (2018)	**Country:** Republic of Chechnya, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Individual counselling, number of sessions based on client need **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - trained counsellors **Part of broader program:** No	**Study design:** Randomized controlled trial (individual level stepped wedge) **Study duration:** Not specified (6 month follow-up after conclusion of intervention) **Sample description:** Clients aged >18 years seeking mental health care and scoring 1.75 or greater on the Hopkins Symptom Checklist-25 (HSCL-25) **Sample size:** baseline 168 randomized (84 intervention, 84 waitlist); 151 post-intervention (78 intervention, 73 control); 149 3 months post-intervention (78 intervention, 71 control); 77 6 months post-intervention (77 intervention, not completed for control)

Llosa (2017)	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** 2-phase (screen confirmation) strategy to detect mental disorders: phase 1 – screening, phase 2 – reappraisal with the Assessment Schedule (WHODAS-II) **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Observational **Study duration:** Not specified **Sample description:** Adult residents of the refugee camp **Sample size:** Phase 1: 748 participants in Screening Method A (246 positive, 502 negative), 315 participants in Screening Method B (86 positive, 229 negative); Phase 2: 139 participants in the reappraisal (75 positive, 64 negative), 32 participants from positive (10 positive, 22 negative), 23 participants from negative (3 positive, 20 negative)
Logie (2014)	**Country:** Haiti, regional sample **Crisis type:** Environmental disaster **Context type:** Camp and non-camp (urban) **Population:** Internally displaced	**Description:** FASY (Women Taking Action for Their Health) psychoeducational HIV/STI prevention sessions based on content from the Population Council's All in One Curriculum: A Unified Approach to Sexuality, Gender, HIV and Human Rights Education **Implementation site:** Community-based **Personnel type(s):** Lay personnel - community health workers (CHWs) **Part of broader program:** No	**Study design:** Quasi-experimental (cohort study) **Study duration:** 4 months **Sample description:** Women over 18 years old **Sample size:** 200 enrolled; 176 analysed
Malla (2019)	**Country:** India, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Training program for lay health workers in mental healthcare **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** No	**Study design:** Observational (descriptive evaluation) **Study duration:** 14 months **Sample description:** Identified cases with mental health disorders, who were then diagnosed by a psychiatrist **Sample size:** 262 patients

Mattheß (2019)	**Country:** Cambodia, Indonesia, and Thailand, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp **Population:** Emergency affected (non-displaced)	**Description:** Trauma Stabilization Therapy as a 'stand-alone' treatment for clients with PTSD **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - psychiatrists and psychologists **Part of broader program:** Yes	**Study design:** Observational (descriptive) **Study duration:** 4 years **Sample description:** Individuals who fulfilled the DSM-V criteria for PTSD pre-treatment or the ICD-11 criteria for PTSD **Sample size:** Data collected on 4,799 clients (197 fulfilled DSM-V criteria, 164 fulfilled ICD-11 criteria)
McBain (2015)	**Country:** Sierra Leone, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** 10 week Youth Readiness Intervention, a group-based cognitive behavioural intervention for war-affected young people who show psychological distress and functional impairments **Implementation site:** Community-based **Personnel type(s):** Lay personnel - local community workers **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 12 weeks **Sample description:** Youth aged 15-24 years who met criteria for internalizing and externalizing symptoms previously documented among war-affected young people in the study area, reported impairment in day-to-day functioning and were out of school; primary caretakers or those considered emotionally closest with an enrolled youth **Sample size:** 431 youth enrolled (220 intervention, 211 control); 394 youth completed (203 intervention, 191 control); 204 caregivers enrolled (101 intervention, 103 control); 155 caregivers completed (77 intervention, 78 control)
McBain (2016)	**Country:** Sierra Leone, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** 10-week multi-pronged group-based Youth Readiness Intervention (YRI) **Implementation site:** Facility-based, school-based **Personnel type(s):** Lay personnel - community health workers **Part of broader program:** No	**Study design:** Economic evaluation **Study duration:** 12 months **Sample description:** Youth aged 15-24 years who met criteria for internalizing and externalizing symptoms previously documented among war-affected young people in the study area, reported impairment in day-to-day functioning and were out of school **Sample size:** 436 enrolled (222 intervention, 214 control); 394 completed (203 intervention, 191 control)

McMullen (2013)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** 15 session group trauma-focused cognitive behavioural therapy **Implementation site:** School-based **Personnel type(s):** Health professional cadre - authors and counsellors **Part of broader program:** Yes - psychosocial program providing vocational training, food and shelter	**Study design:** Randomized controlled trial **Study duration:** 5 months **Sample description:** Males aged <18 years who were either a former child soldier or a witness to a violent event involving a real or perceived direct threat to life **Sample size:** 50 enrolled (24 intervention, 25 waitlist control); 48 post-intervention: (24 intervention, 24 control); 12 3 month follow-up (12 intervention, 0 control)
Metzler (2019)	**Country:** Uganda, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** Child friendly spaces (CFSs) containing activity areas, latrines, a store, and variety of playground equipment, with psychosocial activities **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** Yes - joint initiative to explore the protective and restorative outcomes and impacts of CFSs in various emergency contexts	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 18 months **Sample description:** Environmental clusters were mapped within the villages, households with children between the ages of 6 and 12 were identified, and primary caretakers were invited to participate **Sample size:** 689 baseline; 633 endline (463 CFS attenders, 170 CFS non-attenders); 447 follow-up (249 CFS attenders, 81 CFS non-attenders)
Miller (2020)	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Host community, refugee	**Description:** 9 week Parenting Group Intervention including 42 hours of in-class training, 3 on-site observations **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 20 months **Sample description:** Syrian refugee and host society families with at least 1 child aged 3-12, with preference given to Syrian refugee families **Sample size:** 151 enrolled (42 families and 78 caregivers in intervention, 37 families and 73 caregivers in control; 142 completed (78 intervention, 73 control)

Miller (2020)	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp **Population:** Host community, refugee	**Description:** I-Deal intervention for early adolescents versus a structured activity group (SRA) **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 5 months **Sample description:** Early adolescents aged 10-15 years living in the Akkar governate, Syrian refugees and Lebanese and Palestinian of the host community **Sample size:** 325 baseline, 257 endline, 226 follow-up
Momotaz (2019)	**Country:** Bangladesh, regional sample **Crisis type:** Armed conflict **Context type:** Camp (rural) **Population:** Host community, refugee	**Description:** Mental Health Gap Action Programme (mhGAP) training and supervision **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - physicians, psychosocial staff **Part of broader program:** No	**Study design:** Observational (descriptive evaluation) **Study duration:** 4 months **Sample description:** Physicians and counsellors (BA Psychology, social work or sociology) from government facilities and NGOs serving both the refugee and host population **Sample size:** 21 participants at initial training, 19 participants at follow-up (10 new)
Mughairbi (2020)	**Country:** Libya, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** 3-day intervention of psychoeducation and stress coping techniques **Implementation site:** Facility-based **Personnel type(s):** Not specified **Part of broader program:** No	**Study design:** Observational **Study duration:** 2 weeks **Sample description:** Libyan individuals aged 19 to 51 who volunteered to take part in the study **Sample size:** 41 baseline, 41 endline
Murray (2018)	**Country:** Ethiopia, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** Common elements treatment approach (CETA) **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 13 months **Sample description:** Children between 7-18 years, living in 1 of the 3 identified camps, and elevated symptoms in at least 1 of the following: trauma-related symptoms, externalizing symptoms, internalizing symptoms **Sample size:** 38 children enrolled; 37 children completed

Murray (2018)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Intervention - 12 sessions of cognitive processing therapy (CPT) (1 individual and 11 group), including psychoeducation and cognitive restructuring for survivors of rape; Control - individual supportive counselling **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - psychosocial assistants **Part of broader program:** No	**Study design:** Randomized controlled trial (cluster randomized) **Study duration:** 14 months **Sample description:** Women who witnessed or experienced sexual violence, experiencing poor mental health and some impairment in daily functioning **Sample size:** 405 enrolled (157 intervention, 248 control); 405 analysed
Nakimuli-Mpungu (2013)	**Country:** Uganda, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp **Population:** Emergency affected (non-displaced)	**Description:** 5 sessions of Group Counselling held monthly **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - social workers and trauma counsellors **Part of broader program:** No	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 6 months **Sample description:** Adult men and women with a history of war traumatic experiences **Sample size:** 613 enrolled (69 intervention, 544 control)
Nayak (2019)	**Country:** Rwanda, regional sample **Crisis type:** Armed conflict **Context type:** Unspecified **Population:** Internally displaced	**Description:** Trauma training of staff on children in unaccompanied children's centres (UCCs) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - individuals with backgrounds in education, social work, and nursing **Part of broader program:** No	**Study design:** Observational (descriptive) **Study duration:** 9 months **Sample description:** Children residing in the UCCs, aged 8-19 years **Sample size:** 888 analysed
Newnham (2015)	**Country:** Sierra Leone, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp **Population:** Emergency affected (non-displaced)	**Description:** 10 sessions of group (8 participants each) Youth Readiness Intervention (YRI) for war-affected youth **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Quasi-experimental (non-randomized) **Study duration:** 10 weeks **Sample description:** Individuals aged 15-24 years, who had war exposure and ongoing psychological and behavioural difficulties, referred by community elders and service providers **Sample size:** 32 analysed

O'Callaghan (2014)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Armed conflict **Context type:** Not specified (rural) **Population:** Emergency affected (non-displaced)	**Description:** 8 sessions of community-participative psychosocial intervention involving life skills and relaxation training and Mobile Cinema screenings **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 3 months **Sample description:** Children ages 7-18 and their caregivers living in a war-affected community facing current risks of attack/abduction by armed groups **Sample size:** 159 randomized (79 intervention, 80 wait-list control); 158 4-week post-intervention (78 intervention, 80 control); 138 3 month follow-up (71 intervention, 67 control); 159 analysed (79 intervention, 80 control)
Panter-Brick (2018)	**Country:** Jordan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Host community, refugee	**Description:** 8 week program of group structured activities informed by a profound stress attunement (PSA) framework Advancing Adolescents **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** Yes - funded as a part of the No Lost Generation initiative	**Study design:** Randomized Controlled Trial **Study duration:** 11 months **Sample description:** 12-18 year olds in communities heavily affected by the Syrian crisis, including both Syrian refugees and Jordanian host youth; eligibility based on vulnerability and need **Sample size:** 817 enrolled (463 intervention, 354 control); 463 post-intervention (269 intervention, 194 control); 212 follow-up (112 intervention, 100 control)
Pityaratstian (2015)	**Country:** Thailand, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** 3 day group cognitive behavioural therapy (CBT) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 2 months **Sample description:** Children 10-15 years old with a primary diagnosis of DSM-IV-TR PTSD **Sample size:** 36 enrolled

Ponguta (2020)	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp **Population:** Host community, refugee	**Description:** 25 session group-based mother-child education program (MOCEP) on parenting stress and practices **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 6-8 months **Sample description:** Mothers who were literate in Arabic, had a child between 2-7 years, and lived in the catchment area **Sample size:** 106 enrolled (53 intervention, 53 control); 69 analysed (35 intervention, 34 control)
Poole (2020)	**Country:** Greece, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** Comparing the performance of the PHQ-2 to the Sequential Screening of the PHQ-2/8 to identify symptoms consistent with major depressive disorder **Implementation site:** Other **Personnel type(s):** Not specified **Part of broader program:** No	**Study design:** Observational (cross-sectional) **Study duration:** Unclear **Sample description:** Residents of the Syrian refugee camp who volunteered **Sample size:** 135 participated; 129 analysed
Powell (2021)	**Country:** Jordan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Host community, refugee	**Description:** Integrated physical and mental health awareness education intervention to reduce non-communicable diseases – participants assigned to 1) the Health Community Clinic (HCC), 2) HCC with mental health awareness sessions, and 3) standard healthcare **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - Masters' level trained health awareness educators **Part of broader program:** No	**Study design:** Quasi-experimental **Study duration:** 20 months **Sample description:** Syrian refugees and Jordanian nationals between 18-75 years old that utilized services at the health centres and were at risk for or diagnosed with an NCD **Sample size:** 600 (248 HCC, 233 HCC-MH, 213 standard care)
Poznysh (2019)	**Country:** Ukraine, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp **Population:** Emergency affected (non-displaced), internally displaced	**Description:** 10 individual sessions of Art Therapy **Implementation site:** Community-based **Personnel type(s):** Not specified **Part of broader program:** No	**Study design:** Observational **Study duration:** Unspecified **Sample description:** Children aged 10-17 comprised of inhabitants of radioactive contaminated territories and forced migrants from armed conflict zone **Sample size:** 113 analysed (57 group 1, 56 group 2)

Rahman (2016)	**Country:** Pakistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** 5 weekly multi-component individual behavioural counselling sessions **Implementation site:** Facility-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 3 months **Sample description:** Routine patients from 3 primary care centres aged 18 to 60 with high levels of both psychological distress and functional impairment according to the World Health Organization Disability Assessment Schedule 2.0 (WHODAS 2.0) **Sample size:** 346 enrolled (172 intervention, 174 control); 306 3 month follow-up (146 intervention, 160 control)
Rahman (2019)	**Country:** Pakistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** 5 sessions of Group WHO PM+ intervention for women **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 3 months **Sample description:** Women in designated community clusters aged 18-60 years who intended to reside in the catchment area for the next 6 months who score 3 or more on the General Health Questionnaire-12 (GHQ-12) and 17 or more on the WHODAS **Sample size:** 612 enrolled (306 intervention, 306 control); 578 followed up at 3 months (288 intervention, 290 control)
Rees (2014)	**Country:** Uganda, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** Transcendental Meditation **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 90 days **Sample description:** Individuals in the camp exposed to combat, sexual assault, torture, and/or forced to witness the abuse or killing of loved ones with PCL-C scores greater than 46, not practicing any other Eastern or Western system of meditation, free of severe mental problems that would interfere with practicing TM **Sample size:** 11 analysed

Richards (2014)	**Country:** Uganda, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Sport-for-development intervention **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 5 months **Sample description:** Adolescents who were able bodied, 11-14 years old attending 6th grade at the study schools **Sample size:** 904 enrolled (618 intervention, 286 control); 877 followed up (601 intervention, 276 control)
Robjant (2019)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** 6 individual sessions of Narrative Exposure Therapy for Forensic Offender Rehabilitation (FORNET) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 16 months **Sample description:** Females 16 years or older that had been recruited into an armed group and fulfilled the diagnostic criteria of PTSD **Sample size:** 92 enrolled (46 intervention, 46 control), 84 analysed (43 intervention, 41 control)
Sahyoun (2019)	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** Healthy Kitchens, Health Children (HKHC) program involving working in the kitchen as a small business enterprise **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - nutritionists **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 8 months **Sample description:** Women ages 18-64 living in the camp that had either applied for the UNRWA social safety net program or had attended previous CBO activities and had previously expressed a need/willingness to work **Sample size:** 32 analysed

Salihu (2021)	**Country:** Nigeria, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Internally displaced	**Description:** 8 weekly sessions of African Circle Dance (ACD) Therapy and psychoeducation **Implementation site:** Community-based **Personnel type(s):** Health professionals and lay personnel - mental health nurse and dance specialist **Part of broader program:** No	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 4 months **Sample description:** Individuals aged >= 18 years living in 1 of the 2 IDP camps who exhibited depressive symptoms **Sample size:** 198 enrolled (100 intervention, 98 control); 198 analysed
Sangraula (2020)	**Country:** Nepal, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** 5 session Group Problem Management Plus (PM+) **Implementation site:** Community-based **Personnel type(s):** Lay personnel - community-based psychosocial workers **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 8-8.5 weeks **Sample description:** Residents of the study Village Development Committees (VDCs) aged >=18 years **Sample size:** 121 enrolled (61 intervention, 60 control); 118 completed (60 intervention, 58 control)
Schubert (2016)	**Country:** East Timor, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** 2 weeks of Eye Movement Desensitization and Reprocessing (EMDR) Therapy compared to a waitlist control **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - clinical psychologists **Part of broader program:** No	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 3 months **Sample description:** Timorese aged 18-65 years, with a traumatic event at least 3 months prior to study entry, reported PTSD symptoms, trauma symptom scale score >=2 using the Harvard Trauma Questionnaire (HTQ) and some social support **Sample size:** 23 enrolled; 21 analysed

Shaw (2019)	**Country:** Malaysia, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Refugee	**Description:** 8 week somatic-focused group cognitive behavioural therapy (CBT) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - author and therapist without mental health training **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 5 months **Sample description:** Female refugees or asylum seekers 19 years or older, living in Malaysia, Dari speaking, and symptomatic for emotional distress according to the Refugee Health Screening **Sample size:** 29 enrolled (20 intervention, 9 waitlist control)
Shultz (2019)	**Country:** Colombia, regional sample **Crisis type:** Non-camp (urban) **Context type:** Armed conflict **Population:** Internally displaced	**Description:** 3-stage stepped-care OSITA (Outreach, Screening, and Intervention for Trauma) involving interpersonal psychotherapy (IPC): Step 1: IPC1 session, Step 2: additional IPC1 sessions; Step 3: for women with thoughts of self-harm/suicide to be referred to psychiatric consultation or psychiatric emergency service **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre and lay personnel - government psychosocial professionals, graduate students, and community members **Part of broader program:** No	**Study design:** Observational (descriptive) **Study duration:** 1 year **Sample description:** Women residing in Bogota who self-reported to be displaced victims of armed conflict **Sample size:** 279 enrolled
Sijbrandij (2020)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp **Population:** Emergency affected (non-displaced)	**Description:** 11 one-day trainings of Psychological First aid (PFA) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - trained mental health nurses **Part of broader program:** Yes - part of a larger mixed methods study on the effectiveness of psychological first aid	**Study design:** Randomized controlled trial **Study duration:** 9 months **Sample description:** Primary health care workers >=18 years old with adequate oral and written command of the English or Krio language working at peripheral health units (PHUs) who had not previously received any PFA training or training with overlapping content **Sample size:** 129 PHUs enrolled (63 intervention, 66 control); 408 healthcare workers analysed (206 intervention, 202 control)

Steinhilber (2019)	**Country:** Jordan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp **Population:** Host community, refugee	**Description:** Psychosocial support for scholarship students including coverage for individual tutorials, sports activities, English language courses, mentoring program, summer school, etc. **Implementation site:** University-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Observational **Study duration:** over 1 year **Sample description:** Scholarship holders in a Masters program including Syrian refugees and socially disadvantaged Jordanians **Sample size:** 75 enrolled; 43 analysed
Sullivan (2019)	**Country:** Bangladesh, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** 90 minute session of peer to peer teaching for 13 CHWs of low-cost tools like acupuncture and breathing techniques for the alleviation of mental health complaints **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Observational **Study duration:** Not specified (7 day follow-up) **Sample description:** Households that CHWs usually work in that felt low mood, stress, difficulty in sleeping or pain may exist **Sample size:** 46 household members
Tang (2015)	**Country:** Taiwan, regional sample **Crisis type:** Environmental disaster **Context type:** Unclear **Population:** Internally displaced	**Description:** 4 sessions of Eye Movement Desensitization and reprocessing (EMDR) for PTSD **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - psychologists, psychiatrists, and "class mentors" **Part of broader program:** No	**Sample description:** Adolescents with posttraumatic stress disorder related to Typhoon Morakot (which occurred 3 months earlier), major depressive disorder, or current moderate or high suicide risk after experiencing Typhoon Morakot **Sample size:** 83 enrolled (41 intervention, 42 control)
Tay (2019)	**Country:** Malaysia, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp **Population:** Refugee	**Description:** Functional Impairment measure, WHO Disability Assessment Schedule (WHODAS) to assess whether it can serve as a proxy indicator of the range of MHPSS problems **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Observational (cross-sectional survey) **Study duration:** Unspecified **Sample description:** Self-identified Rohingya originating from Myanmar or the offspring of at least 1 Rohingya parent **Sample size:** 959 analysed (573 low impairment, 220 moderate impairment, 166 severe impairment)

Tay (2020)	**Country:** Malaysia, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Refugee	**Description:** 6 weeks of Integrative Adapt Therapy (IAT) for common mental health symptoms and adaptive stress compared to a cognitive behavioural therapy (CBT) **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** Not specified **Sample description:** Adults aged >=18 years with the presence of at least 1 mental disorder who witnessed or experienced at least 1 traumatic event related to mass conflict, and endorsed at least 1 ADAPT-related stressor on each scale of the relevant measure **Sample size:** 331 enrolled (170 IAT, 161 CBT); 312 analysed 6 weeks post-treatment (166 IAT, 156 CBT)
Tol (2014)	**Country:** Burundi, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp **Population:** Emergency affected (non-displaced), internally displaced, refugee	**Description:** 5 week, 15 session group classroom-based intervention consisting of cognitive behavioural techniques and creative expressive elements **Implementation site:** School-based **Personnel type(s):** Lay personnel **Part of broader program:** Yes - multi-layered care package implemented in schools that also included universal preventative activities	**Study design:** Randomized controlled trial **Study duration:** 3 months **Sample description:** Children attending schools in areas with continued political violence who were exposed to at least 1 potentially traumatic event and who scored above the standard cut-off on symptom checklists for either PTSD (>=11), depression (>=15), or anxiety (>=5) **Sample size:** 328 enrolled and analysed (153 intervention, 176 control)
Tol (2020)	**Country:** Uganda, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** 5 week facilitator-guided, group-based, self-help intervention (Self-Help Plus) **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 3 months **Sample description:** Female South Sudanese refugees with at least moderate levels of psychological distress (cutoff >=5 on the Kessler 6) **Sample size:** 22 clusters enrolled, 712 individuals enrolled (331 intervention, 363 control); 613 analysed (283 intervention, 330 control)

Tomita (2016)	**Country:** South Africa, regional sample **Crisis type:** Not specified **Context type:** Non-camp (urban) **Population:** Refugee	**Description:** mHealth, use of SMS to assess depressive symptoms among refugees **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Observational (cohort study) **Study duration:** 10 months **Sample description:** Individuals determined by nurse clinician to have a developmental disability or mental impairment **Sample size:** 153 enrolled at baseline, 135 follow-up
Ugurlu (2016)	**Country:** Turkey, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Refugee	**Description:** 5 day art therapy for trauma, depression, and anxiety **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - licensed art therapists **Part of broader program:** No	**Study design:** Observational **Study duration:** 1 week **Sample description:** Syrian children aged 7-12 who were living in Istanbul **Sample size:** 63 enrolled
Vallieres (2018)	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Unclear **Population:** Refugee	**Description:** Validation and clinical utility of International Classification of Diseases (ICD-11) and International trauma Questionnaire (ITQ) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - psychotherapists **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** Not specified **Sample description:** Individuals over the age of 18 and forcibly displaced to Lebanon from Syria within the last 5 years **Sample size:** 112 enrolled and analysed
Ventevogal (2014)	**Country:** Burundi, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Lay interviewer-administered versions of the Depression Self-Rating Scale (DSRS), the Child PTSD Symptom Scale (CPSS), and Screen for Child Anxiety Related Emotional Disorders (SCARED-41) with a gold standard of a semi-structured clinical psychiatric interview according to the Schedule for Affective Disorders and Schizophrenia for School-Age Children (K-SADS-PL) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** Yes - multisite study on how secondary school-based interventions affect the psycho-social wellbeing of violence affected children	**Study design:** Observational **Study duration:** Not specified **Sample description:** 4th or 5th grade children (ages 10-15) from the 3 schools where HealthNet TPO implemented its school-based mental health program **Sample size:** 65 enrolled and analysed

Vijayakumar (2017)	**Country:** India, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** Safety planning cards (CASP) used by community volunteers in home visits **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 15 months **Sample description:** Adults within 2 camps (1 for intervention, 1 for control) assessed for experience of trauma, depression, suicidal ideation, post-traumatic stress, and alcohol use; those with a score >16 on Center for Epidemiological Studies Depression (CES-D) or >30 on Posttraumatic Stress Disorder (PTSD) or with an active/passive suicidal ideation or history of previous suicidal attempts were considered high risk **Sample size:** 1,303 baseline (639 intervention (288 high-risk), 664 control (187 high-risk)); 265 endline (139 intervention (high-risk), 126 control)
Wieling (2015)	**Country:** Uganda, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp **Population:** Emergency affected (non-displaced)	**Description:** 4 week, 9 session parenting and family intervention model - Enhancing Family Connection (EFC) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - authors **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 5 months **Sample description:** Individuals who reported experiencing significant difficulty with parenting at least 1 child, willing to complete all 9 sessions, and had a child 6-12 years old **Sample size:** 14 enrolled and analysed
Ziveri (2019)	**Country:** Syria, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** 3 weekly sessions of an integrated psychosocial support (PSS) livelihood intervention **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 4 months **Sample description:** Households interested in agriculture and where farming is the main income source, farmers planning to plant strategic crop, household with rain-fed land and who do not possess agricultural machines and tools and who do not own cars, households who are permanent residents in selected villages, who have not received any agriculture assistance before **Sample size:** 140 households enrolled (70 intervention, 70 control)

Outcomes of Mental Health and Psychosocial Support Intervention Studies in Humanitarian Crisis Settings, 2013-2021 (n=104)

Author (Year)	Health Outcome(s)	Main Results	Risk of Bias
Abdulah (2019)	• Overall mental well-being as measured by the General Health Questionnaire (GHQ-12) • Socio-psychological well-being measured by the Flourishing Scale (FS; scored 8-56)	**Overall mental well-being (SD):** all participants pre 18.21(5.82), post 3.57 (1.65) (p<0.001, effect size 2.82); psychiatric care + art therapy pre 19.75 (7.63), post 2.00 (1.41) (p=0.015); only art therapy pre 17.60 (5.30), post 4.20 (1.32) (p<0.0001) **Socio-psychological wellbeing (SD):** all participants pre 41.36 (6.01), post 51.21 (2.75) (p<0.0001); psychiatric care + art therapy pre 37.25 (2.36), post 52.25 (0.96) (p=0.001); only art therapy pre 43.00 (6.31), post 50.80 (3.16) (p=0.005)	Unclear
Acarturk (2016)	• Exposure to traumatic events and PTSD symptoms as measured by the Harvard Trauma Questionnaire (HTQ) • Severity of PTSD symptoms as measured by the Impact of Event Scale-Revised (IES-R) • Depression symptoms measured by the Beck Depression Inventory (BDI) • Anxiety and Depression as measured by the Hopkins Symptoms Checklist-25 (HSCL-25) • DSM-IV Axis-I disorders as measured by the Mini-International Neuropsychiatric Interview (M.I.N.I.)	**Mean estimated difference EMDR vs. control (95% CI):** **HTQ:** post-intervention -0.96 (-1.18 to -0.74, p<0.001), 1-month follow-up -0.81 (-1.04 to -0.58, p<0.001) **IES-R:** post-intervention -37.65 (-45.66 to -29.63, p<0.001), 1-month follow-up -34.50 (-43.25 to -25.76, p<0.001) **BDI:** post-intervention -15.90 (-20.20 to -11.09, p<0.001), 1-month follow-up -13.28 (-18.73 to -7.82, p<0.001) HSCL: post-intervention -0.89 (-1.15 to -0.64, p<0.001), 1-month follow-up -0.70 (-0.96 to -0.43, p<0.001) **M.I.N.I. PTSD %:** intervention 51%, control 96% (p<0.001)	Moderate
Akiyama (2018)	• Students' self-esteem measured by Rosenberg's Scale	**Students' self-esteem (SD):** intervention pre 20.2 (2.36), post 21.1 (2.81) (p=0.02); control pre 19.7 (3.05), post 19.7 (3.28) (p=0.83)	High

Akoury-Dirani (2015)	• Health worker knowledge of PFA (definitions of mental health concepts, PFA principles and core actions, administration of screening tools) • Readiness to deliver PFA services (total score)	**Change in health worker knowledge:** Definition of PTSD +5% (p=0.382); What to avoid when administering PFA +15% (p=0.32); how to approach and interact with refugees when administering PFA +45% (p<0.001); how to behave with refugees +26% (p<0.001); things to avoid when listening to the story of a traumatized person +35% (p<0.001); comprehension of PTSD screening tool +20% (p=0.003) **Readiness levels (SD):** baseline 2.16 (0.47); after training 1.72 (0.40); 1 month follow-up 1.86 (0.43) (p<0.001)	Low
Ali (2020)	• Overall well-being • Well-being sub-domains (autonomy, environmental mastery, personal growth, positive relations, purpose in life, self-acceptance)	**Overall well-being (SD):** intervention pre 124.05 (9.35), post 176.00 (13.29); control pre 119.80 (10.80), post 122.85 (10.38) See article for sub-domain outcomes	High
Alsmadi (2018)	• Perceived Stress Scale (PSS) • Hamilton Anxiety Rating Scale (HAMA) • Multi-Dimensional Fatigue Inventory sub-domains: general fatigue, physical fatigue, mental fatigue, reduced motivation fatigue, reduced activity fatigue	**Mean at baseline and 6-week follow-up (SD):** **PSS:** intervention baseline 29.83 (5.76), follow-up 28.80 (5.65) (p=0.20); control baseline 31.68 (5.45), follow-up 32.45 (4.65) (p=0.26) **HAMA**: intervention baseline 31.53 (23.55), follow-up 17.20 (SD 9.84) (p=0.001); control baseline 19.77 (14.95), follow-up 16.61 (10.01) (p=0.22) **General Fatigue:** intervention baseline 9.50 (3.12), follow-up 9.46 (1.85) (p=0.91); control baseline 8.27 (2.53), follow-up 8.79 (1.82) (p=0.24) **Physical Fatigue:** intervention baseline 10.01 (3.28), follow-up 8.97 (1.95) (p=0.01); control baseline 9.06 (3.00), follow-up 8.95 (1.71) (p=0.82) **Mental Fatigue:** intervention baseline 11.34 (2.93), follow-up 9.94 (2.06) (p=0.001); control baseline 10.61 (3.13), follow-up 9.54 (2.20) (p=0.09) **Reduced Motivation:** intervention baseline 9.88 (3.44), follow-up 9.40 (2.37) (p=0.27); control baseline 8.77 (2.86), follow-up 8.77 (2.28) (p=0.99) **Reduced Activity:** intervention baseline 9.67 (3.54), follow-up 8.90 (2.23) (p=0.041); control baseline 8.75 (3.09), follow-up 8.45 (2.24) (p=0.57)	High

| Bass (2016) | • Depressive symptoms measured with the adapted Hopkins Symptom Checklist (HSCL-25)
• Dysfunction, based on a series of tasks and activities and rated on a Likert scale from 0-4
• Post-traumatic stress measured with the Harvard Trauma Questionnaire (HTQ)
• Traumatic grief measured with the Inventory of Traumatic Grief
• Adjusted net effect score (SD):
• Depressive symptoms: -0.22(-0.39 to -0.04, p=0.02, effect size 0.57)
• Dysfunction: -0.39 (-0.74 to -0.03, p=0.03, effect size 0.53)
• Anxiety: -0.19(-0.35 to -0.04, p=0.01, effect size 0.41)
• HTQ: -0.13(-0.27 to 0.01, p=0.07, effect size 0.35)
• Traumatic Grief: -0.11(-0.24 to 0.02, p=0.08, effect size 0.26) | **Adjusted net effect score (SD):**
Depressive symptoms: -0.22(-0.39 to -0.04, p=0.02, effect size 0.57)
Dysfunction: -0.39 (-0.74 to -0.03, p=0.03, effect size 0.53)
Anxiety: -0.19(-0.35 to -0.04, p=0.01, effect size 0.41)
HTQ: -0.13(-0.27 to 0.01, p=0.07, effect size 0.35)
Traumatic Grief: -0.11(-0.24 to 0.02, p=0.08, effect size 0.26) | Unclear |
| Bell (2015) | • Predictive ability: rate of cases detected, area under the curve
• Sensitivity and specificity
• Internal consistency | **Rate of cases detected:** testing sample 31%; total sample 30%
Area under the curve: testing sample 0.954; total sample 0.941
Sensitivity: testing sample 92%; total sample 88%
Specificity: testing sample 85%; total sample 86%
Internal consistency: testing sample 0.794; total sample 0.782 | Low |

| Betancourt (2014) | • Emotion regulation was assessed using 23 items from the Difficulties in Emotion Regulation Scale (DERS)
• Psychological distress was measured by combining items from the Oxford Measure of Psychosocial Adjustment (OMPA; scored 0-3)
• Prosocial attitudes/behaviours was measured with a subscale
• Social support
• Functional impairment was measured with the World Health Organization Disability Adjustment Scale (WHODAS 2.0; scored 0-4)
• Posttraumatic stress disorder symptoms (PTSD) was assessed with the 12-item University of California, Los Angeles (UCLA) Post-Traumatic Stress Disorder Reaction Index (PTSD-RI) | **Effect size post-intervention and at 6-month follow-up:**
Emotion regulation: post-intervention 0.31 ($p=0.01$), follow-up 0.03 ($p=0.84$)
Psychological distress: post-intervention -0.03 ($p=0.92$), follow-up -0.03 ($p=0.83$)
Prosocial behaviour: post-intervention 0.39 ($p=0.001$), follow-up 0.01 ($p=0.92$)
Social support: post-intervention 0.29 ($p=0.02$), follow-up 0.12 ($p=0.47$)
Functional impairment: post-intervention -0.32 ($p=0.007$), follow-up -0.10 ($p=0.54$)
Post-traumatic stress: post-intervention -0.02 ($p=0.88$), follow-up 0.14 ($p=0.33$) | Unclear |
| Bolton (2014) | • Depression measured with the Hopkins Symptom Checklist 25 (range 0-3)
• Post-traumatic severity symptoms measured with the Harvard Trauma Questionnaire (range 0-3)
• Functional impairment measured with a locally developed scale (range 0-4)
• Anxiety symptoms measured with the HSCL-25 anxiety subscale (range 0-4)
• Aggression measured with the 12-item Aggression Questionnaire (range 0-4) | **Adjusted net difference (95% CI):**
Depression: -0.49 (-0.59 to -0.40, $p<0.001$, effect size 1.16)
PTS: -0.43 (-0.51 to -0.35, $p<0.001$, effect size 1.19)
Functional impairment: -0.44 (-0.59 to -0.28, $p<0.001$, effect size 0.63)
Anxiety: -0.48 (-0.61 to -0.34, $p<0.001$, effect size 0.79)
Aggression: -0.24 (-0.34 to -0.15, $p<0.001$, effect size 0.58) | Unclear |

Bruno (2019)	• Stigmatizing behaviour towards people with mental illness measured by the Reported and Intended Behavior Scale (RIBS)	**RIBS:** intervention 14.53, control 13.44 (p<0.001)	Unclear
Budosan (2016)	• Well-being measured by Camberwell Assessment of Needs Short Appraisal Schedule (17-item, 5-point Likert scale) • Resilience measured by a modified 14-item scale 7 item, 7 point scale	**Change in well-being:** field hospital 16%; outpatient health centre 16%; community skills centre 14%; average total 15.3% **Change in resilience:** field hospital 17.1%; outpatient health centre 19.9%; community skills centre 14.3%; average total 17.1%	Unclear
Chemali (2017)	• Symptom Checklist-90 (SCL-90; >64 denotes clinical significance) • Physiological measures (blood pressure, pulse)	**Mean change from baseline to follow-up 9 months after intervention (SD):** **SCL-90:** -14.7 (29.8, p<0.0001) **SCL-90>=64:** -7 (-13.4, p=0.3141) **Systolic blood pressure:** -11.9 (18.4, p<0.0001) **Diastolic blood pressure:** -6.4 (10.1, p<0.0001) **Pulse:** -8.3 (15.9, p=0.0016)	Low
Chen (2014)	• PTSD symptoms measured with the Children's Revised Impact of Events Scale (CRIES-13; scale 0-65) • Depression symptoms measured with the Center for Epidemiologic Studies Depression Scale (CES-D; scale 0-60) • Resilience measured with the Connor-Davidson Resilience Scale (CD-RISC; scale 0-100)	**Mean score pre, post, and 3-month follow-up (SD):** **CRIES-13:** intervention pre 41.2 (11.8), post 27.2 (13.3), follow-up 18.4 (4.9); general support pre 33.6 (4.5), post 30.8 (11.2), follow-up 27.1 (13.8); control pre 31.2 (13.6), post 32.75 (9.74), follow-up 29 (11.37) **CES-D:** intervention pre 23.4 (14.2), post 19.7 (13), follow-up 5.3 (5.68); general support pre 13.5 (10), post 17.4 (10.1), follow-up 8.7 (6.15); control pre 15.6 (16.9), post 18.4 (10.2), follow-up 15.2 (10.8) **CD-RISC intervention pre:** 51.8 (13.2), post 60.5 (13.8), follow-up 70.8 (19.8); general support pre 49.3 (6.5), post 60.3 (11.1), follow-up 70.1 (12.6); control pre 52.7 (17.9), post 54 (14.1), follow-up 53.1 (12.7)	Unclear
Chris-tensen (2020)	• Indications of mental health issues as measured by the mHealth screening tool [referral rate]	**Referral rate:** total 20.46% (196/958), female 17.56% (130/740), male: 30.27% (66/218)	High

Cole (2021)	• Anxiety measured by the Generalized Anxiety Disorder (GAD7; scale 0-21) • Depression measured by the Patient Health Questionnaire-9 item (PHQ9; 5 – mild, 10 – moderate, 15- moderately severe, 20 – severe) • Functional Impairment measured by the Work and Social Adjustment Scale (WSAS; >20 indicates moderately severe, 10-20 indicates significant impairment)	**Mean score (95% CI):** **GAD:** pre-intervention 13.42 (12.45-14,38), post-intervention 8.96 (8.03-9.89) (p<0.0005) **PHQ-9:** pre-intervention 14.51 (14.10-16.72), post-intervention 10.90 (9.96-12.11) (p=0.30) **WSAS:** pre-intervention 24.58 (22.67-26.48), post-intervention 17.29 (15.64-18.95) (p<0.0005)	High
Corboz (2019)	• Peer violence perpetration at school measured by the Peer Perpetration Scale • Peer violence victimization measured through the Peer Victimization Scale • Corporal punishment experience at school • Physical punishment experience at home in last 4 weeks • Depression measured with the Children's Depression Inventory (CDI-2; range 40-90) • Hope measured with Snyder et al's Hope Scale (range 0-18)	**Mean score (95% CI):** **Peer violence perpetration or victimization:** boys baseline 57.7 (19.4-88.6), midline 43.5 (10.9-83), endline 29.1 (7.5-67.5) (p<0.001); girls baseline 46.9 (29-65.7), midline 41.5 (22.4-63.5), endline 23.6 (11.9-41.3) (p<0.001) **Corporal punishment:** boys baseline 43.7 (9.7-84.9), midline 33.4 (17.3-62.9), endline 27.2 (10.4-54.5) (p<0.001); girls baseline 35.0 (23.6-48.5), midline 20.3 (13.2-30.1), endline 14.2 (18.6-29.7) (p<0.001) **Physical punishment:** boys baseline 16.6 (5-42.7), midline 14.9 (4.1-41.7), endline 4.7 (1.3-15.3) (p<0.001); girls baseline 20.0 (7.0-45.4), midline 8.5 (4.7-15.1), endline 2.7 (1.6-4.4) (p<0.001) **Depression:** boys baseline 63.7 (47.8-79.6), midline 57.8 (50.3-65.2), endline 57.7 (47.3-68) (p<0.001); girls baseline 57.7 (54.5-61.1), midline 55.6 (50.8-60.4), endline 52.1 (48.8-55.5) (p<0.001) **Hope:** boys baseline 14.2 (11.8-16.7), midline 15.3 (11.5-19.0), endline 15.0 (13.8-16.2); girls baseline 13.5 (12.4-14.6), midline 13.7 (13.2-14.2), endline 16.0 (14.6-17.4)	High

Corna (2019)	• General mental health by mini-mental state examination (MMSE) • Self-esteem by Rosenberg's Self-Esteem scale • Depression by Center of Epidemiologic Studies Depression Scale (CES-D; subdomains include depressed mood, guilt/worthlessness, helplessness/hopelessness, lethargy/fatigue, loss of appetite and sleep disturbance) • Caregiver skills by Knowledge Attitude Practices Questionnaire: self-care during pregnancy, pregnancy and delivery care, feeding practices and newborn care, access to resources for care, child development and psychosocial stimulation	**Mean difference by camp (95% CI):** **MMSE:** Kutupalong 21.5 (20.3-22.4, p<0.001), Nayapara 23.1 (21.8-24.4, p<0.001) **Self-esteem:** Kutupalong 2.8 (1.5-4.2, p<0.001), Nayapara 1.5 (0.5-2.5, p<0.001) **Depression:** Kutupalong -9.9 (-15.4 to -4.4, p<0.001), Nayapara -0.7 (-6.0 to 4.5) **Self-care**: Kutupalong 6.1 (5.6-6.7, p<0.001), Nayapara 2.8 (2.3-3.4, p<0.001) **Pregnancy and delivery care**: Kutupalong 8.4 (7.5-9.2, p<0.001), Nayapara 5.4 (4.5-6.3, p<0.001) **Feeding practices and newborn care:** Kutupalong 2.0 (1.6-2.4, p<0.001), Nayapara 2.5 (2.1-2.9, p<0.001) **Resources for care:** Kutupalong 0.4 (-0.1 to 0.7), Nayapara 0.45 (0.2-0.8, p<0.01) **Child development and psychosocial stimulation:** Kutupalong 8.4 (5.4-11.3, p<0.001), Nayapara 10.7 (7.6-13.9, p<0.001)	Moderate
Crombach (2018)	• PTSD Symptom Severity measured with the PTSD Symptom Scale -Interview (PSS-I) • Depression measured with the Patient Health Questionnaire (PHQ-9)	**Hedges' g:** **PSS-I:** intervention 3-month 1.62, 9-month 3.44; control 3-month 0.64, 9-month 2.55 **PHQ-9:** intervention 3-month 0.84, 9-month 1.88; control 3-month -0.06, 9-month 0.72	High
Czaicki (2015)	• CAGE screening tool for alcohol use disorder • Alcohol dependence and harmful drinking patterns measured with the Alcohol Use Disorders Identification Test (AUDIT; score >7 considered indicative of harmful alcohol use requiring some intervention)	**Alcohol problem risk, n (%):** **CAGE assessment:** low 73 (30.5%), medium 134 (56.1%), high 32 (13.4%) **AUDIT assessment:** low 67 (57.3%), medium 24 (20.5%), high 26 (22.2%)	Unclear

Dawson (2018)	• Self-reported trauma exposure and PTSD (UCLA PTSD-RI [Part III]) • Depression (CDI) • Anger (Anger Expression Scale for Children) • Caregiver-reported trauma exposure and PTSD (UCLA PTSD-RI [Part III])	**Effect size (95% CI):** **Self-reported trauma exposure/PTSD:** between-group -0.17 (-0.79 to 0.45); within-group CBT -3.73 (-3.97 to -2.75), PS -2.68 (-3.29 to -2.07) **Depression:** between-group -0.18 (-0.86 to 0.48); within-group CBT -0.39 (-0.85 to 0.08), PS -0.25 (-0.70 to 0.22) **Anger:** between-group 0.19 (-0.57 to 0.96); within-group CBT -1.69 (-2.17 to -1.21), PS -2.03 (-2.64 to -1.44) **Caregiver-reported trauma exposure/PTSD:** between-group 0.03 (-0.77 to 0.83); within-group CBT -1.90 (-2.42 to -1.39), PS -1.98 (-2.43 to -1.52)	Unclear
de Fouchier (2018)	• Anxiety and depression measured with the Hopkins Symptoms Checklist (HSCL-25) • Post-traumatic stress disorder measured with the Harvard Trauma Questionnaire (HTQ)	**Pre- and post-intervention (SD):** **HSCL - anxiety**: pre 2.02 (0.64), post 1.67 (0.53); effect size 0.34 (p<0.001) **HSCL - depression:** pre 1.96 (0.64), post 1.69 (0.53); effect size 0.23 (p<0.001) **HTQ - PTSD:** pre 2.08 (0.70), post 1.83 (0.49); effect size 0.23 (p<0.001)	Unclear
Dhital (2019)	• PTSD symptoms measured with the Child PTSD Symptom Scale (range 0-52) • Depression symptoms measured with the Self-Rating Scale (range 0-36) • Hope measured with the Children's Hope Scale (range 1-36)	**Adjusted effect size (95% CI):** **PTSD symptoms:** 0.33 (-0.71 to 1.37, p=0.536) **Depression symptoms:** 0.30 (-0.21 to 0.80, p=0.249) **Hope:** -0.23 (-1.07 to 0.61, p=0.588)	High
Doty (2018)	• Instrument reliability for: depression symptom scale (IDSS), global post-traumatic stress scale (GPTSS), HSCL anxiety sub-scale, ASSIST 3.0 alcohol scale, local functioning scale, WHODAS 2.0 functioning scale	**Instrument reliability - consistency (α) and test-retest (ρ):** IDSS α baseline 0.94, re-interview 0.93, IRT-based analysis 0.89; ρ re-interview 0.84, IRT-based analysis 0.87 GPTSS α baseline 0.97, re-interview 0.97, IRT-based analysis 0.91; ρ re-interview 0.87, IRT-based analysis 0.87 HSCL Anxiety α baseline 0.90, re-interview 0.89, IRT-based analysis 0.82; ρ re-interview 0.80, IRT-based analysis 0.80 ASSIST 3.0 α baseline 0.86, re-interview 0.87; ρ re-interview 0.91 Local Functioning Scale α baseline 0.92, re-interview 0.78; ρ re-interview 0.85 WHODAS 2.0 functioning α baseline 0.95, re-interview 0.80; ρ re-interview 0.90	Unclear

Dozio (2020)	• Perceived social support: self-reporting scales (range 0-10) • Psychosocial suffering: self-reporting scales (range 0-10) • Mother-child relationship: observation grid (maximum score of 76) • Breastfeeding practices	**(SD):** **Perceived social support:** lactating women improving status 40%, improvement 0.86 (1.55, p<0.01); pregnant women improving status 36%, improvement 0.7 (1.35, p<0.01) **Psychosocial suffering:** lactating women improving status 62%, improvement 1.65 (2.05, p<0.01); pregnant women improving status 50%, improvement 1.04 (1.59, p<0.01) **Mother-child relationship:** lactating women improving status 89%;, improvement 13.36 (12.01, p<0.01) **Breastfeeding practices:** lactating women improving status 89%, improvement 3.28 (2.55, p<0.01)	Moderate
Dozio (2021)	• Overall wellbeing (WHO-5) • Posttraumatic symptoms measured with the Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5; range 0-80) • Functional impairment (WHODAS 2.0) • Problems measured with the Psychological Outcome Profiles (PSYCHLOPS; range <20)	**WHO-5:** baseline to endline change -10.73 (p<0.001), baseline to post-intervention change -10.13 (p<0.001) **PCL-5:** baseline to endline change +27.84 (p<0.001), baseline to post-intervention change +27.11 (p<0.001) **WHODAS:** baseline to endline change +17.43 (p<0.001), baseline to post-intervention change +16.63 (p<0.001) **PSYCHLOPS:** baseline to endline change +8.17 (p<0.001), baseline to post-intervention change +6.64 (p<0.001)	Moderate
Eichfeld (2019)	• PTSD remission rates for DSM-V and ICD-11 diagnoses	**DSM-V PTSD:** pre 100%, post 8.6% (p<0.00001); remission rate 91.4%, effect size 3.08 (95% CI 2.88-3.27, p<0.001) **ICD-11 PTSD:** pre 100%, post 6.7% (p<0.00001); remission rate 93.3%, effect size 3.78 (95% CI 3.56-3.99, p<0.001)	Unclear
El-Khodary (2020)	• Post-Traumatic Stress Disorders Symptoms Scale (PTSDSS) • Anxiety Symptoms Scale (GAD-7) • Child Depression Inventory (CDI)	**Pre- and post-intervention (SD):** **PTSD:** pre 51.7 (25.49), post 47.55 (24.66) **Anxiety:** pre 6.73 (4.70), post 6.23 (4.34) **Depression:** pre 5.67 (3.51), post 6.06 (3.99)	Unclear

Falb (2020)	• Food insecurity measured by Household Food Insecurity access Scale (HFIAS; range 0-9) • Perceived serious household needs and daily stressors (Humanitarian Emergency Settings Perceived Needs (HESPER; range 0-20) • Depressive symptom score (PHQ-9; range 0-27)	**(95% CI):** **HFIAS:** adjusted model -0.90 (-1.14 to 0.65, p<0.0001); household fixed effects model -0.95 (-1.19 to -0.71, p<0.0001) **HESPER:** adjusted model 0.04 (-0.31 to 0.40, p=0.83); household fixed effects model 0.12 (-0.24 to 0.48, p=0.52) **PHQ-9:** adjusted model 0.92 (0.35-1.49, p=0.001); household fixed effects model 0.89 (0.34-1.43, p=0.001)	Low
Foka (2021)	• Well-being measured with the World Health Organization Well-being Index (WHO-5) • Optimism measured with the Youth Life Orientation Test • Self-esteem measured with the Lifespan Self-Esteem Scale • Depressive Symptoms measured with the 10 item version of the Center for Epidemiological Studies Depression Scale for Children (CES-DC)	**Pre- and post-intervention (SD):** **Well-being:** treatment pre 41.67 (20.90), post 88.27 (13.24); waitlist pre 40.77 (18.20), post 47.89 (22.03); effect size 42.99 (p<0.001) **Optimism:** treatment pre 4.52 (3.15), post 9.19 (2.24); waitlist pre 4.97 (2.59), post 5.36 (2.74); effect size 27.16 (p<0.001) **Self-esteem:** treatment pre 2.48 (1.38), post 4.57 (0.82); waitlist pre 3.30 (0.92), post 3.28 (1.03); effect size 29.11 (p<0.001) **Depressive symptoms:** treatment pre 17.09 (7.06), post 4.40 (4.39); waitlist pre 17.13 (6.86), post 19.04 (5.96); effect size 62.14 (p<0.001)	Unclear
Gammoh (2017)	• Sleep quality (LSEQ) assessed ease of getting to sleep (GTS), quality of sleep (QOS), awakening from sleep (AFS), and behaviour following wakefulness (BFW) • Mean sedation (visual analogue scale; range 0-10) at 1 hour, at awakening and at 24 hours • Mean anxiety (visual analogue scale; range 0-10) at 1 hour, at awakening, and at 24 hours • Sleep latency at awakening	**LSEQ (GTS):** control 4.82, valerian 5.02, chlorepheniramine 6.28 (p=0.001) **LSEQ (QOS):** control 4.85, valerian 5.33, chlorpheniramine 6.82 (p=0.001) **LSEQ (AFS):** control 4.79, valerian 5.26, chlorpheniramine 6.32 (p=0.001) **LSEQ (BFW):** control 4.80, valerian 5.37, chlorpheniramine 6.64 (p=0.001) **Sedation:** 1 hour control 5.25, valerian 5.18, chlorpheniramine 5.88 (p=0.001); awakening control 5.29, valerian 4.92, chlorpheniramine 4.98 (p=0.001); 24 hours control 5.15, valerian 4.90, chlorpheniramine 5.03 (p=0.164) **Anxiety (1 hour):** control 5.10, valerian 4.63, chlorpheniramine 4.35 (p=0.001); awakening control 5.01, valerian 4.76, chlorpheniramine 4.17 (p=0.001); 24 hours control 5.15, valerian 4.90, chlorpheniramine 4.62 (p=0.004) **Sleep latency:** control 71.83, valerian 64.11, chlorpheniramine 36.08 (p=0.001)	Unclear

Getanda (2020)	• Post-traumatic stress disorder symptoms measured by Revised Child Impact of Event Scale 13 (CRIES-13; cut-off>=17) • Revised Children's Manifest Anxiety Scale (RCMAS; cut off>=18) • Depression Self-Rating Scale for Children (DSRS; cut off>=15) • KIDSCREEN-10	**Pre-intervention, post-intervention, and 1 week follow-up (SD):** **CRIES-13**: intervention pre 45.0 (6.3), post 17.3 (11.5), follow-up 12.0 (6.4); control pre 40.4 (8.4), post 38.0 (10.0), follow-up 35.2 (9.7); effect size time x group 0.309 (p<0.001) **RCMAS:** intervention pre 52.6 (10.1), post 44.8 (8.0), follow-up 49.1 (11.7); control pre 47.8 (9.9), post 53.3 (9.1), follow-up 51.9 (7.7); effect size time x group 0.646 (p<0.001) **DSRS:** intervention pre 18.1 (6.7), post 10.0 (6.9), follow-up 8.6 (8.8); control pre 15.8 (5.3), post 17.0 (5.5), follow-up 18.8 (4.0); effect size time x group 0.662 (p<0.001) **KIDSCREEN:** intervention pre 26.1 (6.82), post 28.9 (5.85); control pre 30.4 (8.5), post 30.9 (8.2); effect size time x group 0.444 (p<0.001)	Unclear
Gibbs (2020)	• Past year experience of physical intimate partner violence (IPV) among currently married women • Past year experience of severe physical IPV among currently married women • Women's past week depressive symptoms: assessed by the Center for Epidemiological Studies Depression scale • Past year emotional IPV among currently married women	**Adjusted odds ratio (95% CI):** **Past year experience of physical intimate partner violence (IPV) among currently married women:** 0.88 (0.62-1.23, p=0.447) **Past year experience of severe physical IPV among currently married women:** 0.75 (0.50-1.11, p=0.15) **Women's past week depressive symptoms:** -0.35 (-1.19 to 0.48, p=0.406) **Past year emotional IPV among currently married women:** 0.87 (0.64-1.18, p=0.381)	High
Giraldo (2020)	• Adjusted content validity ratio (CVR) sufficiency • Internal consistency • Construct validity • dEX2= Direct Extreme Experience • iEX2=Indirect Extreme Experience	**Adjusted CVR sufficiency:** dEX2 0.88, iEX2 0.88 **Internal consistency:** 18-item EX2 0.82, dEX2 0.78, iEX2 0.48; 14-item EX2 0.77, dEX2 0.75, iEX2 0.48 **Construct validity:** 18-item high exposure vs. low exposure EX2 p<0.001, dEX2 p<0.001, iEX2 p<0.001; 14-item high exposure vs. low exposure EX2 p<0.001, dEX2 p<0.001, iEX2=p<0.001	Unclear

Glass (2020)	• Adolescent internalizing behaviour and prosocial behaviour measured with the Acholi Psychosocial Assessment Instrument (APAI) • Experienced stigma	**(SD):** **Internalizing behaviour:** PFP only baseline 1.32 (0.24), 12 mo 1.21 (0.21), 24 mo 1.21 (0.21); RFR only baseline 1.33 (0.27), 12 mo 1.34 (0.24), 24 mo 1.34 (0.24); RFR+PFP baseline 1.36 (0.28), 12 mo 1.26 (0.25), 24 mo 1.25 (0.24); effect size group x time X2=0.96 (p=0.915) **Prosocial behaviour:** PFP only baseline 3.00 (0.59), 12 mo 3.02 (0.54), 24 mo 3.00 (0.54); RFR only baseline 2.94 (0.57), 12 mo 3.02 (0.53), 24 mo 3.01 (0.52); RFR+PFP baseline 2.85 (0.55), 12 mo 3.07 (0.55), 24 mo 3.09 (0.55); effect size group x time X2=10.56 (p=0.032) **Experienced stigma:** PFP only baseline 1.27 (0.32), 12 mo 1.16 (0.21), 24 mo 1.16 (0.22); RFR only baseline 1.25 (0.32), 12 mo 1.17 (0.28), 24 mo 1.16 (0.28); RFR+PFP baseline 1.29 (0.33), 12 mo 1.16 (0.25), 24 mo 1.16 (0.25); effect size group x time X2=2.22 (p=0.695)	Unclear
Goninon (2021)	• Post-Traumatic Stress Symptoms measured by Screen for Post-Traumatic Stress Symptoms (SPTSS; range 0-68)	**SPTSS (SD):** ITG baseline 49.92 (12.09), post-intervention 22.43 (15.73), t(42)=9.48 (p<0.001, d=1.93); DTG baseline 57.10, (10.81), post-intervention 43.01 (13.86), t(54)=6.30 (p<0.001, d=1.11)	Low
Gormez (2017)	• Post traumatic stress reactions measured by the Child Post-Traumatic Stress - Reaction Index (CPTS-RI; subdomains: intrusion, avoidance, arousal) • Anxiety-related psychopathologies measured by the Spence Children's Anxiety Scale (SCAS) • Strengths, emotional difficulties and behavioural problems measured by the Strengths and Difficulties questionnaire (SDQ)	**(SD):** **CPTS-RI Total:** pre-test 23.90 (12.76), post-test 17.63 (13.64) (p=0.011) **SCAS Total:** pre-test 53.29 (13.78), post-test 40.38 (20.59) (p=0.001) **SDQ Total:** pre-test 18.77 (4.28), post-test 16.81 (5.41) (p=0.021)	Unclear
Greene (2020)	• Participant Distress	**Change in Distress:** children: pre- vs post-interview -3.30 (p=0.001), pre vs follow-up -0.87 (p=0.385); caregivers pre- vs post-interview -3.55 (p<0.001), pre vs follow-up -2.23 (p=0.026)	Low

Haar (2020)	• Children's behavioural, emotional, and social issues were assessed with the Strengths and Difficulties Questionnaire (SDQ) • Parenting practices and family functioning were assessed with the Parenting and Family Adjustment Scales (PAFAS): parental consistency, coercive parenting, positive encouragement, parent-child relationships, parental adjustment, family relationships, parental teamwork	**SDQ (Total Difficulty Scale):** $X2(2)=34.16$ ($p<0.001$) **Parental consistency:** $F(2, 45)=7.72$ ($p=0.001$) **Coercive parenting:** $F(1.49, 86.76)=37.72$ ($p<0.001$) **Positive encouragement:** $X2(2)=14.83$ ($p=0.001$) **Parent-child relationship:** $X2(20)=22.54$ ($p<0.001$) **Parental adjustment:** $F(2, 50)=13.51$ ($p<0.001$) **Family relationships:** $X2(2)=40.73$ ($p<0.001$) **Parental teamwork:** $X2(2)=17.06$ ($p<0.001$)	Unclear
Hamdani (2020)	• Hospital Anxiety and Depression Scale (HADS range: 0-21; higher scores indicate elevated anxiety or depression) • World Health Organization Disability Assessment Schedule 2.0 (WHO DAS, 12-item version, range: 0-48; higher scores indicate more severe impairment) • Depression caseness, defined as a Patient Health Questionnaire score >=10	**(95% CI):** **HADS:** ICER for treatment with international specialist supervisor PKR 2,957.45 (2,261.64-4,029.00); with local supervisor PKR 588.82 (434.01-820.27) **WHO DAS:** ICER for treatment with international specialist supervisor PKR 4,096.51 (2978.13-6,045.66); with local supervisor PKR 815.89 (575.80-1,225.10) **Depression caseness:** ICER for treatment with international specialist supervisor PKR 53,759.91 (39,393.57-77,398.62); with local supervisor PKR 10,705.35 (7,730.95-15,627)	Unclear
Hamid (2021)	• Plaque Index (PI) • Gingival Index (GI) • Oral health related quality of life measured Child Perception Questionnaire (CPQ) • Child Posttraumatic Stress Reaction Index (CPTSD-RI; high scores indicate worse symptoms)	**Difference-in-differences between PTSD children in intervention and control group:** PI 0.114 ($p<0.001$) **GI:** 0.927 ($p<0.001$) **CPQ:** 0.852 ($p<0.001$) **CPTSD-RI:** 0.957 ($p<0.001$)	Unclear

Hermosilla (2019)	• Child protection concerns assessed with the Child Protection Rapid Assessment (CPRA) • Psychosocial wellbeing assessed with the Strengths and Difficulties Questionnaire (SDQ), Child Psychosocial Well-being (CWB), the Middle East Psychosocial Measure (MEPS), the Short Mood and Feelings Questionnaire (SMFQ), and the Child Hope Scale (HOPE) • Developmental assets assessed with the Caregiver Rating of Developmental Assets (CRDA), Developmental Assets Profile (Emergency or Brief; EmDAP/ B-DAP) • Knowledge of community resources assessed with the Child Protection Rapid Assessment (CPRA)	**(95% CI):** **Protection concerns:** ages 6-11 0.13 (-0.04 to 0.31, I2=46.35%); ages >12 0.00 (-0.30 to 0.30, I2=63.42%, p<0.036); Ethiopia 0.48 (0.08-0.88); Iraq: 0.58 (0.07-1.09) **Psychosocial wellbeing:** ages 6-11 0.18 (0.03-0.33), ages >12 0.12 (-0.13 to 0.38); Ethiopia 0.51 (0.10-0.91); Uganda 0.21 (0.03-0.40) **Developmental assets:** ages 6-11 0.19 (-0.11 to 0.48, I2=71.53%, p<0.010); ages >12 0.08 (-0.11 to 0.28); Uganda 0.37 (0.15-0.59); Iraq 0.86 (0.18-1.54) **Knowledge of community resources:** ages 6-11 -0.05 (-0.17 to 0.08); ages >12 0.03 (-0.23 to 0.16)	Moderate
Hugelius 2021	• Alternate forms reliability evaluation assessed with the intraclass correlation coefficient (ICC) between HESPER scale and HESPER web • First priority need rating agreement between HESPER scale and HESPER Web assessed with Cohen's K. (see paper for individual items) • Feasibility evaluation	**Alternate forms reliability evaluation:** ICC 0.88 (95% CI 0.60-0.91), Cohen's K 0.43-1.0; first priority need rating match between HESPER scale and HESPER Web 81% **Feasibility:** HESPER Web was quicker than the HESPER interview (p<0.001)	Unclear

Im (2018)	• Impact of trauma on mental health assessed with the PTSD Check List – Civilian Version • Psychosocial factors assessed with a questionnaire: violence, sense of community, emotional coping, problem solving, social support, awareness	**(SD):** **PTSD Symptoms:** no/low PTSD pre-test 27.41 (6.67), post-test 34.48 (12.83) (p<0.001); high PTSD pre-test 50.09 (7.52), post-test 31.93 (13.86) (p<0.001) **Violence:** no/low PTSD pre-test 5.72 (7.52), post-test 5.48 (3.77) (p=0.544); high PTSD pre-test 6.78 (6.18), post-test 6.18 (4.35) (p=0.486) **Sense of community:** no/low PTSD pre-test 6.98 (3.76), post-test 6.35 (3.21) (p=0.003); high PTSD pre-test 6.67 (3.49), post-test 7.84 (3.25) (p=0.101) **Emotional coping:** no/low PTSD pre-test 6.35 (3.01), post-test 7.23 (2.94) (p=0.053); high PTSD pre-test 7.15 (3.08), post-test 6.74 (3.53) (p=0.609) **Problem solving:** no/low PTSD pre-test 9.47 (4.27), post-test 10.16 (3.21) (p=0.215); high PTSD pre-test 10.26 (3.51), post-test 9.90 (4.26) (p=0.603) **Social support:** no/low PTSD pre-test 4.60 (2.55), post-test 4.94 (1.89) (p=0.315); high PTSD pre-test 3.67 (2.54), post-test 5.33 (2.50) (p=0.002) **Awareness:** no/low PTSD pre-test 6.21 (3.64), post-test 7.62 (3.37) (p=0.009); high PTSD pre-test 8.44 (3.67), post-test 8.15 (3.68) (p=0.731)	Unclear
Jordans (2013)	• Physical aggression and children's ability to deal with aggression measured with the Aggression Questionnaire (range 0-36) • Depression symptoms assessed using the Depression Self Rating Scale (DSRS; range 0-36) • Perceived family social support measured with the A-SCAT (range 0-33)	**Aggression:** intervention mean change -10.15% (p=0.033); control mean change 13.11% (p=0.017); between group comparison effect size 0.60 (p=0.001) **Depression:** intervention mean change 6.18% (p=0.099); control mean change 3.44% (p=0.373); between group comparison effect size 0.08 (p=0.654) **Family social support:** intervention mean change -4.42% (p=0.402); control mean change 8.82% (p=0.109); between group comparison effect size 0.32 (p=0.086)	Unclear
Köbach (2015)	• Posttraumatic stress evaluated with the PTSD symptom Scale Interview (PSSI; range 0-51) • Appetitive aggression was measured with the Appetitive and Facilitative Aggression Scale (AFAS) and the Appetitive Aggression Scale (AAS)	**(95% CI):** **PTSD severity:** DS1 baseline t(45)=-0.56, Cohen's d=-0.16 (-0.76 to 0.44), 6 months t(45)=2.74, Cohen's d=0.76 (0.13-1.38), 12 months t(22)=2.67, Cohen's d=1.09 (0.14-2.05); DS2 baseline t(49)=-0.49, Cohen's d=-0.14 (-0.71 to 0.44), 6 months t(49)=2.32, Cohen's d=0.65 (0.06-1.25) **Appetitive aggression:** DS1 baseline t(45)=-0.85, Cohen's d=-0.25 (-0.86 to 0.36), 6 months t(45)=-0.74, Cohen's d=-0.23 (-0.82 to 0.39), 12 months t(22)=-0.43, Cohen's d=-0.17 (-1.06 to 0.72); DS2 baseline t(49)=-1.31, Cohen's d=-0.37 (-0.95 to 0.21), 6months t(49)=-1.16, Cohen's d=-0.33 (-0.91 to 0.25)	High

Khan (2017)	• Help-seeking for psychological distress by pregnant women • Psychological distress measured by the Self-Reporting Questionnaire (SRQ) at endline • Social support measured by the Multidimensional Scale of Perceived Social Support (MSPSS) at endline	**Help-seeking for psychological distress by pregnant women:** intervention 71%, control 46% (p=0.036) **SRQ score (SD):** intervention 5.35 (3.29), control 6.43 (3.73) (p=0.20) **MSPSS score (SD):** intervention 57.15 (19.11), control 57.11 (14.28) (p=0.992)	Moderate
Khan (2019)	• Individual psychological distress, measured by levels of anxiety and depression on the Hospital Anxiety and Depression Scale (HADS-A, HADS-D) at 7th week after baseline. • PTSD assessed using the PTSD Checklist for DSM-5 (PCL-5) • Depressive Disorder was assessed with the Patient Health Questionnaire (PHQ-9) • General psychological profile determined with the PSYCHLOPS • Levels of functioning and generalized psychological distress measured with WHO Disability Assessment Schedule (WHODAS)	**(95% CI):** **Combined HADS-A and HADS-D:** -4.65 (-7.35 to -1.95, p=0.0009) **HADS-A:** -2.62 (-4.37 to -0.86, p=0.0039) HADS-D -2.48 (-4.00 to -0.96, p=0.0016) **PCL:** -2.79 (-9.51 to 3.94, p=0.4128) **PHQ:** -1.06 (-3.59 to 1.48, p=0.4112) **PSYCHLOPS:** -4.49 (-6.41 to -2.58, p<0.0001) **WHODAS:** -5.37 (-8.97 to -1.76, p=0.0040)	Unclear

| Khoja (2016) | • Improvement in awareness of mental health
• Reduction in stigma | **% correct response (odds ratio):**
Mental health conditions are treatable: intervention 94%, control 86% (2.52, p=0.0027)
Symptoms of depression: intervention 90%, control 73% (2.17, p<0.0001)
Use of drugs and alcohol can be signs of depression: intervention 88%, control 78% (2.03, p=0.0027)
Denied that myths of jins, jadu, or "wrath of God" is the cause of psychosis: intervention 68%, control 27% (5.66, p=0.0001)
Questions regarding signs of psychosis: intervention 64%, control 55% (1.56, p<0.0001)
Past traumatic events may be the cause of PTSD: intervention 77%, control 53% (2.99, p=0.0001)
Awareness regarding PTSD is extremely important: intervention 83%, control 58% (3.41, p=0.0001)
Disagreed that mental health patients are largely to blame for their own condition: intervention 93%, control 85% (2.33, p=0.003)
People should be very caring and kind to patients with mental health problems: intervention 92%, control 80% (2.76, p=0.0001) | Unclear |
| Knaevels-rud (2015) | • Posttraumatic Stress symptoms measured with the Posttraumatic Stress Diagnostic Scale (PDS)
• Depression and Anxiety measured with the Hopkins Symptom Checklist (HSCL-25)
• Somatization measured with the Symptom Checklist-90-Revised (SCL-90-R)
• Quality of life measured with the EUROHIS-QOL | **PDS:** intrusion $F(1,157)$ 30.74 ($p<0.001$, $d=0.72$); avoidance $F(1,157)$ 34.26 ($p<0.001$, $d=0.92$); hyperarousal $F(1,157)$ 28.58 ($p<0.001$, $d=0.68$), total score $F(1,157)$ 44.29 ($p<0.001$, $d=0.92$)
HSCL-25: anxiety $F(1,157)$ 28.30 ($p<0.001$, $d=0.79$); depression $F(1,157)$ 40.66 ($p<0.001$, $d=1.03$)
SCL: $F(1,157)$ 11.68 ($p<0.001$, $d=0.56$)
EUROHIS: $F(1,157)$ 44.20 ($p<0.001$, $d=0.84$)
Moderate | |

Knappe (2019)	• Symptoms of post-traumatic stress measured with the Impact of Event Scale -Revised (IES-R) • Mental Health including depression (Patient Health Questionnaire; PHQ-9), anxiety (Hospital Anxiety and Depression Scale; HAD-A) • Fitness including sleep complaints, pain, health-related quality of life, self-perceived fitness, handgrip strength test, 20 m shuttle run test	**(95% CI):** **PTSD symptoms:** t=3.53 (p<0.05), d=0.57 (0.23-0.91) **Depressive symptoms:** t=2.48 (p<0.10), d=0.40 (0.07-0.73) **Anxiety symptoms:** t=1.53, d=0.25 (-0.08 to 0.57) **Sleep complaints:** t=2.11 (p<0.10), d=0.34 (0.01-0.67) **Pain:** t=1.55, d=0.25 (-0.07 to 0.57) **Health-related quality of life:** t=-1.72, d=-0.28 (-0.60 to 0.15) **Self-perceived fitness:** t=-1.07, d=-0.17 (-0.49 to 0.15) **Handgrip strength test:** t=-5.61 (p<0.001), d=-0.91 (-0.53 to -1.28) **20 m shuttle run test:** t=-1.34, d=-0.21 (-0.54 to 0.11)	Unclear
Lakkis (2020)	• Psychological well-being including depression, measured by the WHO Well-being Index 1998 (WHO-5) • Parenting stress measured with the Parenting Stress Index-Short Form (PSI-SF) • Psychosocial problems and strengths in child's daily life measured with the Strengths and Difficulties Questionnaire (SDQ)	**F (df):** **WHO-5:** all children -4 (66) (p<0.001), Cohen's d=0.61; 3-6 years -4 (49) (p<0.001), Cohen's d=0.66; <3 years -2 (16) (p=0.153), Cohen's d=0.46 **PSI-SF:** all children 7.625 (65) (p<0.001), d=1.24; 3-6 years 7.114 (48) (p<0.001), d=1.31; <3 years 3.198 (16) (p=0.006), d=1.07 **SDQ:** 3-6 years 2.286 (48) (p=0.027), d=0.40	Unclear
Leichner (2021)	• Changes in healthcare provider knowledge and skills measured by a Perceived Competency Checklist (PCC), Assessment of Clinical Expertise (ACE), and Enhancing Assessment of Common Therapeutic Factors (ENACT-18), by participant type • Service user outcomes including improved functioning and satisfaction with services	**PCC (95% CI):** psychosocial counsellors +0.44 (-0.11 to 0.77), non-prescriber +0.37 (0.37-0.37), prescriber +1.41 (1.27-1.55) **ACE (95% CI):** psychosocial counsellors +0.65 (0.34-0.97), non-prescribers +0.46 (0.37-0.56), prescribers +0.12 (0.07-0.18) **ENACT-18 (95% CI):** Psychosocial counsellors +13.64 (8.47-18.8), non-prescribers +7.74 (6.97-10.37), prescribers +8.53 (6.35-10.72) **Improved functioning:** 57% **User satisfaction:** Completely satisfied 67%, somewhat satisfied 31%, unsatisfied 2%	Unclear

Lenglet (2018)	• Change in functioning assessed using the Short Form 6 (SF6; subdomains: body pain, social functioning, role emotional) • Changes in symptoms of anxiety and depression measured by the Hopkins Symptoms Checklist-25 (HSCL-25) • Changes in coping strategies as measured by the Coping Strategy Indicator (CSI) • Changes in perceived social support measured by the Social Provisions Scale (SPS)	**(95% CI):** **SF6 general health:** 11.81 (4.90-18.72), F=11.41 (p=0.0009) **HSCL-25 overall:** -0.53 (-0.67 to 0.38), F=53.71 (p<0.0001) **Coping and social support:** problem solving 0.12 (0.02-0.25), F=3.05 (p=0.0825); social support -0.02 (-0.19 to 0.16), F=0.03 (p=0.8622); avoidance 0.30 (0.17-0.43), F=20.16 (p<0.000); perceived social support 2.03 (0.68-3.37), F=8.83 (p=0.0034)	Low
Llosa (2017)	• Phase 1 – • Screening Method A: • Vignettes of Local Terms and Concepts (VOLTAC) • WHO Assessment Schedule of Serious Symptoms in Humanitarian Settings Household Interview (WASSS-H); • Screening Method B: • Individual interviews • Field-test version of WASSS-I • Self-reporting Questionnaire (SRQ); • Phase 2 – Reappraisal • Mini International Neuropsychiatric Interview (MINI) • Global Assessment Functioning (GAF) • WHO Disability	**VOLTAC:** sensitivity 56.1%, specificity 93.4%, positive predictive value (PPV) 8.3%, negative predictive value (NPV) 99.5%, correctly classified 93%, area under curve (AUC) 0.75 **WASSS-H:** sensitivity 100%, specificity 67.9%, PPV 3.2%, NPV 100.0%, correctly classified 68.3%, AUC 0.84 **Combined WASSS:** sensitivity 100.0%, specificity 56.1%, PPV 2.4%, NPV 100.0%, correctly classified 56.6%, AUC 0.78 **Combined Method A:** sensitivity 100.0%, specificity 74.4%, PPV 4.0%, NPV 100.0%, correctly classified 74.7%, AUC 0.87 **Combined Phase 1-Procedures:** sensitivity 100.0%, specificity 50.8%, PPV 2.1%, NPV 100.0%, correctly classified 51.3%, AUC 0.75 **WASSS-I:** sensitivity 50.0%, specificity 83.4%, PPV 8.1%, NPV 98.3%, AUC 0.67 SRQ-20 (at least 6 + responses): sensitivity 100.0%, specificity 82.5%, PPV 14.3%, NPV 100.0%, AUC 0.91 **Combined Method B:** sensitivity 100%, specificity 78.1%, AUC 0.89	Unclear

Logie (2014)	• Change in HIV knowledge, assessed by the Brief HIV Knowledge Questionnaire • Change in STI knowledge, assessed by the Sexually Transmitted Disease Knowledge Questionnaire • Change in condom use, assessed by reported consistent use of condoms for sex in last 6 weeks • Change in social support from family, friends and significant other, assessed by the Multidimensional Scale of Perceived Social Support • Change in resilient coping, assessed by the Brief Resilient Coping Scale • Change in depression, assessed by the Beck Depression Inventory Fast-Screen (BDI-FS) • Change in relationship control, assessed by the Sexual Relationship Power Scale's 'relationship control' subscale	**Adjusted mean difference (95% CI):** **Change in HIV knowledge:** 4.81 (4.36-5.26, p<0.001) **Change in STI knowledge:** 0.84 (0.70-0.99, p<0.001) **Change in condom use:** 4.05 (1.86-8.83, p<0.001) **Change in social support - overall:** 1.02 (-0.30 to 2.34, p=0.130) **Change in social support - family:** 0.45 (-0.15 to 1.04, p=0.141) **Change in social support - friends:** 0.48 (-0.09 to 1.06, p-0.100) **Change in social support - significant other:** 0.17 (-0.28 to 0.62, p=0.456) **Change in resilient coping:** 0.04 (-0.36 to 0.45, p=0.837) **Change in depression:** -0.63 (-0.88 to -0.39, p<0.001) **Change in relationship control:** 0.43 (-0.41 to 1.27, p=0.315)	Moderate
Malla (2019)	• Changes in patients' symptoms and functionality using the Global Assessment of Functioning (GAF) scale and Indian Disability Evaluation and Assessment Scale (IDEAS)	**F (df):** **GAF scale:** 104.729 (3.449, p=0.001) **IDEAS**: 4.364 (1.806, p=0.016)	Unclear
Mattheß (2019)	• Changes in PTSD symptoms measured with the Harvard Trauma Questionnaire (HTQ)	**PTSD (95% CI):** DSM-V 3.03 (2.83-3.22), t(196)=30.62 (p<0.001), r=0.91, Hedges's g(av)=3.08 (2.88-3.27); ICD-11 2.46 (2.32-2.60), t(163)=34.36 (p<0.001), r=0.937, Hedges's g(av)=3.78 (3.60-3.99)	Unclear

McBain (2015)	• Changes in Emotional Distress (range 1-4) and functional impairment (range 1-4) measured via Burden Assessment Scale (BAS) • Changes in prosocial behaviour (range 0-3), internalizing (range 0-3), and externalizing (range 0-3) measured with the Oxford Measure of Psychosocial Adjustment (OMPA)	**(95% CI):** **Emotional distress:** -0.252 (0.026, 0.4782, effect size 0.51) **Functional impairment:** 0.073 (-0.169 to 0.315, effect size 0.13) **Prosocial behaviour:** 0.249 (0.012-0.486, effect size 0.46) **Internalizing:** -0.001 (-0.199 to 0.197, effect size 0.00) **Externalizing:** 0.002 (-0.157 to 0.162, effect size0.00)	Unclear
McBain (2016)	• Incremental cost-effectiveness ratios determined from functional impairment, measured with the World Health Organization Disability Scale (WHODAS) then converted to quality-adjusted life years (QALYs) • Total costs of program (Y0 and Y1): financial cost and economic cost • Effectiveness estimates from mixed linear effects models measured at post-intervention and at 6 month follow-up: disability, adaptive behaviour, internalizing, externalizing, emotion regulation	**Full sample 0-5% discount rate:** linear reduction $7,260 to $10,044/QALY; within study 5% discount rate $8,052 to $10,140/QALY **Full sample 80-120% estimated cost:** linear reduction $5,808 to $9,432/QALY; within study $6,444 to $9,672/QALY **Upper quartile 0-5% discount rate:** linear reduction $3,564 to $6,276/QALY; within study $8,088 to $11,820/QALY **Upper quartile 80-120% estimated cost:** linear reduction $2,856 to $4,272/QALY; within study $6,480 to $9,708 **Total costs of program:** financial cost 18,227.6, economic cost 23,102.1 **Costs per person:** financial cost 82.1, economic cost 104.1 **Effectiveness estimates (95% CI):** **Disability:** post-intervention 3.46 (0.87-6.04, p=0.01, effect size 0.31), follow-up 1.07 (-1.92 to 4.07, p=0.48, effect size 0.10) **Adaptive behaviour:** post-intervention 0.15 (0.06-0.24, p<0.01, effect size 0.38), follow-up 0.01 (-0.12 to 0.13, p=0.92, effect size 0.02) **Internalizing:** post-intervention 0.01 (-0.09 to 0.10, p=0.91, effect size 0.01), follow-up 0.03 (-0.09 to 0.14, p=0.63, effect size 0.07) **Externalizing:** post-intervention -0.03 (-0.13 to 0.07, p=0.54, effect size -0.07), follow-up -0.01 (-0.13 to 0.11, p=0.88, effect size -0.02) **Emotion regulation:** post-intervention 0.11 (0.03-0.19, p=0.01, effect size 0.31), follow-up 0.02 (-0.09 to 0.12, p=0.79, effect size 0.04)	Low

McMullen (2013)	• Changes in symptoms of posttraumatic stress measured with the UCLA-PTSD Reaction Index • Changes in depressive and anxiety-like symptoms, conduct problems, and prosocial behaviour measured with the African Youth Psychosocial Assessment (AYPA)	**Mean change (SD):** **PTSD:** intervention -26.5 (10.7), control -2.6 (13.2) (F=89.27, p<0.001, effect size 0.665) **Psychosocial distress:** intervention -46.3 (15.2), control -12.5 (19.8) (F=72.47, p<.001, effect size 0.617) **Depression/anxiety:** intervention -31.1 (9.4), control -8.9 (14.3) (F=58.82, p<0.001, effect size 0.567) **Conduct problems:** intervention -4.8 (6.3), control -0.1 (7.8) (F=18.18, p<0.001, effect size 0.288) **Prosocial behaviour:** intervention -8.2 (6.6), control -4.0 (6.4) (F=34.18, p<0.001, effect size 0.432)	Low
Metzler (2019)	• Protection of children and systems of support, care, and protection assessed with the Child Protection Rapid Assessment (CPRA) • Mental Health and PSWB assessed with Caregiver Rating of Developmental Assets (CRDA) scale • Vulnerability assessment	**(95% CI):** **Child protection concerns:** endline -0.001 (-0.416 to 0.414, p=.996), follow-up -0.384 (-1.413 to 0.624, p=0.447) **Caregiver stresses:** endline -0.207 (-0.461 to 0.047, p=0.110), follow-up 0.004 (-0.402 to 0.410, p=0.985) **Psychosocial well-being:** endline 2.093 (1.303-2.883, p<0.001), follow-up 1.324 (-0.391 to 3.038, p=0.074) **Developmental assets:** endline 2.517 (1.384-3.650, p<0.001), follow-up 2.109 (-0.208 to 4.426, p=0.074) **Knowledge of CP resources:** endline 0.016 (-0.308 to 0.340, p=0.924), follow-up 0.123 (-0.491 to 0.737, p=0.694) **Perceived barriers to accessing resources:** endline 0.379 (0.039-0.718, p=0.29), follow-up 0.098 (-0.462 to 0.659, p=0.730) **Perceived barriers to known reporting mechanisms:** endline -0.268 (-0.885 to 0.350, p=0.394), follow-up 0.062 (-0.703 to 0.827, p=0.873)	Unclear
Miller (2020)	• Participant retention • Changes in caregiver stress assessed with an 8 item scale • Changes in Caregiver Psychosocial Wellbeing assessed with the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS; range 14-70)	**Mean change (95% CI):** **Retention:** 149/151 caregivers completed both baseline and endline **Stress:** intervention -2.56 (-3.46 to -1.65, Cohen's d=0.65); control -0.51 (-1.34 to 0.31, Cohen's d=0.15) **Psychosocial Wellbeing:** intervention 2.92 (1.35-4.49, Cohen's d=0.43); control 0.03 (-1.55 to 1.60, Cohen's d<0.01) **Psychological Distress:** intervention -5.93 (-7.75 to -4.12, Cohen's d=0.75); control 0.88 (-0.98 to 2.73, Cohen's d=0.11)	Unclear

	• Changes in caregiver Psychological Distress assessed with the Kessler Psychological Distress (K10; range 10-50) • Changes in Stress Management assessed with a 10-item scale • Changes in parenting assessed with a 24 item measure (range 24-72): warmth responsiveness, harsh parenting, parenting knowledge • Changes in Child Psychosocial Wellbeing-Parent report was assessed with the Kid-KINDL; range 24-120)	**Stress management:** intervention 2.95 (1.99-3.90, Cohen's d=0.71); control 0.18 (-0.56 to 0.94, Cohen's d=0.06) **Parenting total score:** intervention 4.27 (2.61-5.93, Cohen's d=0.59); control 0.29 (-0.79 to 1.38, Cohen's d=0.07) **Warmth-responsiveness:** intervention 2.00 (0.94-3.06, Cohen's d=0.43); control 0.27 (-0.50 to 1.03, Cohen's d=0.08) **Harsh parenting:** intervention -0.81 (-1.28 to -0.33, Cohen's d=0.39); control -0.06 (-0.48 to 0.34, Cohen's d=0.04) **Parenting knowledge:** intervention 1.26 (0.86-1.66, Cohen's d=0.72); control 0.11 (-0.31 to 0.53, Cohen's d=0.06) **Psychosocial wellbeing (parent report):** intervention 6.10 (2.24-9.96, Cohen's d=0.51); control 1.50 (-2.33 to 5.33, Cohen's d=0.14) **Psychosocial wellbeing (child report): intervention:** -2.30 (-1.91 to 6.51, Cohen's d=0.26); control -2.14 (-6.80 to 2.51, Cohen's d=0.28)	
Miller (2020)	• Psychological wellbeing measured with the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS; range 14-70) • Strengths and Difficulties assessed with the Strengths and Difficulties Questionnaire – Child/Adolescent Form (SDQ; range 0-40) • Hope assessed with the Children's Hope Scale (CHS; range 6-36)	T0 (baseline), T1 (endline), and T2 (follow-up) (SD): **Wellbeing:** intervention T0 53.00 (7.62), T1 52.33 (8.74), T2 53.47 (7.50); control T0 52.39 (7.96), T1 53.70 (7.77), T2 53.66 (6.69) **SDQ:** intervention T0 19.57 (6.41), T1 19.57 (5.31), T2 19.23 (5.06); control 18.63 (5.12), T1 18.46 (4.95), T2 17.23 (4.95) **Hope:** intervention T0 26.77 (5.41), T1 27.65 (5.38), T2 27.64 (5.49); control T0 26.94 (5.48), T1 27.76 (5.64), T2 27.97 (5.07)	Moderate
Momotaz (2019)	• Quality of training: scale 1-5 • Confidence in applying training to their work	**Quality of training:** average score for all aspects of training 3.5, average score of trainers 4.9 **Confidence in applying training to their work:** 76% felt very confident	Unclear

Mughairbi (2020)	• Change in PTSD diagnosis measured with the Posttraumatic Stress Disorder Checklist pre- and post-intervention • Re-experiencing; Avoidance' Hyperarousal symptoms pre- and post-intervention • Coping dimensions of task-focused emotion-focused, social diversion, and distraction pre- and post-intervention	**(SD):** **PTSD:** pre 47.29 (9.96), post 40.12 (8.99) (t=5.40, p<0.001) **Re-experiencing:** pre 14.47 (3.53), post 13.05 (3.13) (t=2.73, p<0.01) **Avoidance:** pre 18.59 (5.53), post 15.37 (4.84) (t=3.55, p<0.001) **Hyperarousal:** pre 14.34 (3.69), post 11.71 (3.76) (t=4.33, p<0.001)	Moderate
Murray (2018)	• Changes in internalizing symptoms measured with the Achenbach Child Behavior Checklist (CBCL/YSR) • Changes in externalizing symptoms measured with the CBCL/YSR • Changes in trauma symptoms measured with the Child Post Traumatic Stress Disorder Symptom Scale-Interview Format (CPSS-I) • Changes in child well-being measured with the Orphans and Vulnerable Children Wellbeing Tool	**(SD):** **Internalizing symptoms:** children pre: 25.73 (1.97), post 7.76 (1.66); caregivers pre 12, post 3 (z=4.965, p<0.001, effect size 0.85) **Externalizing symptoms:** children pre 7.5, post 1 (z=4.958, p<0.001, effect size 0.85); caregivers pre 7, post 2 (z=4.625, p<0.001, effect size 0.82) **CPSS-I:** children pre 20.83 (8.69), post 5.56 (5.89) (t(36)=10.38, p<0.001, effect size 1.71); caregivers pre 11, post 4 (z=5.168, p<0.001, effect size 0.76) **Wellbeing:** children pre 47.48 (15.98), post 62.72 (15.34) (t=-4.58, p<0.001, effect size 0.75)	Unclear

Murray (2018)	• Changes in feelings of perceived and internalized (felt) stigma • Moderation of intervention by stigma on the following outcomes: Depression and Anxiety, Posttraumatic stress, and functioning (measured by the Harvard Trauma Questionnaire and the Hopkins Symptoms Checklist)	**Difference-in-differences (SE):** **Effect of CPT on felt stigma:** post-intervention b=-0.30 (0.13, p=0.024); 6 months post-intervention b=-0.31 (0.20, p=0.119) **Moderation of felt stigma for depression and anxiety:** post-intervention b=-0.07 (0.17, p=0.71); 6 months post-intervention b=0.01 (0.18, p=0.94) **Moderation of felt stigma for post-traumatic stress:** post-intervention b=-0.18 (0.16, p=0.27); 6 months post-intervention b=0.01 (0.20, p=0.95) **Moderation of felt stigma for functioning:** post-intervention b=-0.17 (0.21, p=0.42); 6 months post-intervention b=0.18 (0.25, p=0.48) **Moderation of enacted stigma for depression and anxiety:** post-intervention b=0.04 (0.02, p=0.08); 6 months post-intervention b=0.03 (0.03, p=0.36) **Moderation of enacted stigma for post-traumatic stress:** post-intervention b=0.02 (0.03, p=0.56); 6 months post-intervention b=-0.004 (0.03, p=0.88) **Moderation of enacted stigma for functioning:** post-intervention b=-0.02 (0.03, p=0.55); 6 months post-intervention b=-0.01 (0.04, p=0.73)	Unclear
Nakimuli-Mpungu (2013)	• Depression symptoms assessed using the Self-reporting questionnaire (SRQ-20) • Posttraumatic Stress symptoms measured using the locally adapted Harvard Trauma Questionnaire (HTQ) • Functioning level assessed using a locally-developed function assessment	**(95% CI):** **Depression:** β -1.84 (-3.38 to -0.30, p=0.019) **PTSD:** β -2.14(-4.21 to -0.10, p=0.042) **Functioning level:** β 3.51 (0.61-6.40, p=0.018)	Unclear
Nayak (2019)	• PTSD Symptoms by a structured checklist of DSM-IV posttraumatic stress symptoms (PTSS Scale) including subdomains of re-experiencing, avoidance/numbing, and hypervigilance	**B(SE):** **PTSD:** model 1 0.06 (0.05), beta=0.04 (p=0.242); model 2 -0.01 (0.07), beta=-0.01 (p=0.860) **Re-experiencing:** 0.18 (0.12), beta=0.05 (p=0.144) **Avoidance/numbing:** 0.10 (0.14), beta=0.03 (p=0.477) **Hypervigilance:** 0.15 (0.11), beta=0.05 (p=0.175)	Unclear

Newnham (2015)	• Psychological symptoms by the Oxford Measure of Psychosocial Adjustment (OMPA; subdomains: internalizing, externalizing, adaptive attitudes) • Functional adaptation by the World Health Organization Quality of Life-BREF instrument (WHOQOL-BREF; subdomains: physical health, psychological health, environment) • Emotion Regulation by the Difficulties in Emotion Regulation Scale	**Internalizing:** p<0.0001, effect size 0.88; 48% reliable improvement **Externalizing:** p=0.0001, effect size 0.79; 20% reliable improvement **Adaptive attitudes:** p<0.01, effect size 0.49; 32% reliable improvement **Physical health:** p<0.05, effect size 0.41; 12% reliable improvement **Psychological health:** p<0.001; effect size=0.69; 24% reliable improvement **Environment:** p<0.05, effect size 0.48; 16% reliable improvement **Difficulties in emotion regulation:** p<0.001, effect size 0.74; 41% reliable improvement	Unclear
O'Cal-laghan (2014)	• Changes in posttraumatic stress reaction symptoms by the Impact of Events Scale (CRIES-8) • Changes in internalizing symptoms, conduct problems, prosocial behaviour by the African Youth Psychosocial Assessment Instrument (AYPA)	**(95% CI):** **CRIES:** post 10.03 (8.96-11.09), follow-up 10.11 (9.08-11.15); F=3.38, p=0.36, n2p=0.04 **AYPA depression/anxiety:** post 11.57 (10.37-12.77), follow-up 8.23 (7.04-9.42); F=37.02, p<0.001, n2p=0.32 **AYPA conduct:** post 5.18 (4.54-5.81), follow-up 4.82 (4.10-5.55); F=2.42, p=0.97, n2p=0.03 **AYPA conduct-rated:** post 5.47 (4.65-6.28), follow-up 4.18 (3.37-4.99); F=11.60, p<0.001, n2p=0.13 **AYPA pro-social:** post 13.73 (13.08-14.40), follow-up 12.42 (11.27-13.31); F=6.82, p=0.001, n2p=0.08	Low
Panter-Brick (2018)	• Insecurity and Stress by the Human Insecurity (HI) • Human Distress (HD) scales • Perceived Stress Scale (PSS) • Depression and anxiety assessed with the Arab Youth Mental Health (AYMH) • Emotional and behavioural mental health difficulties assessed with the Strengths and Difficulties Questionnaire (SDQ) • Symptoms of post-trauma intrusion and avoidance by the Child Revised Impact of Events Scale (CRIES-8)	**(95% CI):** **Human insecurity:** -7.04 (-10.90 to -3.17, p<0.0001), Cohen's d=-0.40 **Human distress:** -5.78 (-9.02 to -2.54, p<0.0001), Cohen's d=-0.28 **Perceived stress:** -1.92 (-3.05 to -0.79, p<0.001), Cohen's d=-0.34 **AYMH:** -3.35 (-4.68 to -2.02, p<0.0001), Cohen's d=-0.44 **SDQ total:** -1.46 (-2.42 to -0.50, p<0.01), Cohen's d=-0.23 **SDQ prosocial:** 0.16 (-0.15 to 0.47, p=0.32), Cohen's d=0.09 **CRIES:** -0.94 (-3.07 to 1.19, p=0.39), Cohen's d=-0.13	Moderate

Pityarats-tian (2015)	• Changes in PTSD symptoms assessed with the Children Revised Impact of Events Scale (CRIES) and the UCLA PTSD Reaction Index (PTSD-RI)	**CRIES:** post p>0.05, effect size 0.24; follow-up p<0.05, effect size 0.69 **PTSD-RI:** post p>0.05, effect size 0.21, follow-up p<0.05, effect size 0.41	Low
Ponguta (2020)	• Maternal Disciplinary style Questionnaire (DSQ; range 12-60; subdomains: inductive discipline, manipulating privileges, physical punishment, harsh verbal discipline, argument, shaming, and ignoring) • Maternal Better Parenting Program (BPP; range 11-47) questionnaire assessed maternal knowledge and practices • Strengths and Difficulties (SDQ) is a parent-report measure to assess child's social-emotional development • Maternal parenting stress Index-Short Form (PSI-SF) to assess mothers' levels of parenting stress • Duke Social Support Index-Short Form (DSSI-SF) was used to assess perceptions of social interaction and subjective support • Child Bear/Dragon task was used to measure inhibitory self-control • Shape Stroop was used to assess effortful control • Arabic Language Evaluation of Function (ALEF) assessed language development • Bracken School Readiness Assessment (BSRA) was used to assess emergent literacy and numeracy skills • Peace promotion skills scale (PPSS)	**(95% CI):** **Maternal DSQ:** p=0.0276, effect size -0.76 (-1.24 to -0.27) **Maternal BPP:** p=0.3200, effect size 0.39 (-0.09 to 0.86) **Maternal SDQ:** p=0.790, effect size -0.24 (-0.72 to 0.23) **SDQ prosocial:** p=0.450, effect size 0.11 (-0.37 to 0.58) **PSI-SF:** p=0.0009, effect size -0.90 (-1.39 to -0.40) **DSSI-SF:** p=0.4100, effect size 0.33 (-0.15 to 0.80) **Bear/Dragon:** p=0.970, effect size 0.07 (-0.42 to 0.55) **Shape stroop**: p=0.720, effect size 0.060 (-0.42 to 0.50) **ALEF pragmatic knowledge:** p=0.036, effect size 0.53 (0.03-1.03) **ALEF receptive vocabulary:** p=0.330, effect size 0.10 (-0.39 to 0.59) **ALEF sentence completion:** p=0.490, effect size 0.30 (-0.20 to 0.79) **BRSA letters:** p=0.570, effect size 0.13 (-0.35 to 0.62) **BRSA numbers:** p=0.770, effect size -0.01 (-0.50 to 0.48) **PPSS:** p=0.540, effect size -0.01 (-0.49 to 0.47)	Low

Poole (2020)	• Response rate • Validity of screening methods (PHQ-2 and PHQ-2/8 sequential screening) relative to the PHQ-8 MDD classification	**PHQ-2:** p=0.000; Cohen's kappa 0.42 (95% CI 0.26-0.57); overall agreement 68 (59-76); Area Under Curve (AUC) 0.69, positive predictive value (PPV) 61%, negative predictive value 83%; response rate 91% **PHQ-2/8:** p=0.008; Cohen's kappa 0.70 (0.55-0.80); overall agreement 95(89-98); AUC 0.94, PPV 100%, NPV 91%; response rate 87%	Low
Powell (2021)	• Cardiovascular disease risk factors: BMI, blood pressure • HbA1C levels	**Difference estimate at 18 months (95% CI):** **BMI at 18 months:** HCC -3.98 (-4.16 to -3.80, p<0.001), HCC-MH -4.08 (-4.28 to -3.88, p<0.001), standard of care: reference **Systolic blood pressure:** HCC -5.18 (-9.21 to -1.14, p<0.01), **HCC-MH-8.76 (-12.79 to -4.74 p<0.001), standard of care:** reference HbA1C: HCC -0.15 (-0.36 to 0.07) HCC-MH -0.55 (-0.77 to -0.33, p<0.001), standard of care: reference	Unclear
Poznysh (2019)	• Anxiety mean index (points) pre- and post-treatment • Aggressiveness mean index (points) pre- and post-treatment • Exhaustion mean index (points) pre- and post-treatment	**Mean index (S**D): **Anxiety:** pre 3.07 (0.36), post 0.93 (0.27) (p<0.001) **Aggressiveness:** pre 3.58 (0.39), post 0.75 (0.28) (p<0.001) **Exhaustion:** pre 2.01 (0.53), post 0.87 (0.31) (p<0.05)	Unclear
Rahman (2016)	• Anxiety and Depression symptom difference by the Hospital Anxiety and Depression Scale (HADS) • Posttraumatic stress symptoms difference by the Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5) • Functional impairment difference by the WHO Disability Assessment Schedule (WHODAS 2.0) • Progress on problems for which the person sought help by the Psychological Outcome Profiles (PSYCHLOPS) difference • Symptoms of depressive disorder difference with the Patient Health Questionnaire (PHQ-9)	**Score difference at post-treatment and 3 month follow-up (95% CI):** **HADS-Anxiety:** post -2.77 (-3.72 to -1.82, p<0.001, effect size 0.76), follow-up -2.77 (-3.56 to -1.98, p<0.001, effect size 0.74) **HADS-Depression:** post -3.02 (-3.93 to -2.10, p<0.001, effect size 0.91), follow-up -2.98 (-3.74 to -2.22, p<0.001, effect size 0.85) **HADS total:** post -5.83 (-7.60, -4.06, p<0.001, effect size 0.88), follow-up -5.75 (-7.21 to -4.29, p<0.001, effect size 0.83) **PCL-5**: post -5.86 (-9.09 to -2.63, p<0.001, effect size 0.54), follow-up -5.86 (-8.53 to -3.19, p<0.001, effect size 0.63) **WHODAS 2.0:** post -5.42 (-7.42 to -3.41, p<0.001, effect size 0.72), follow-up -4.17 (-5.84 to -2.51, p<0.001; effect size 0.67) **PSYCHLOPS:** post –, follow-up -1.58 (-2.40 to -0.77, p<0.001, effect size 0.34) **PHQ-9:** post -4.36 (-5.65 to -3.07, p<0.001, effect size 0.87), follow-up -3.41 (-4.49 to -2.34, p<0.001, effect size 0.73)	Low

Rahman (2019)	• Individual-level combined symptom score of anxiety and depression difference measured with the Hospital Anxiety and Depression Scale (HADS) • PTSD Symptoms difference measured with the Posttraumatic Stress Disorder Checklist (PCL-5) • Functional impairment difference by the WHO Disability Assessment Schedule (WHODAS 2.0) • Problems for which the person initially sought help difference by the Psychological Outcomes Profile Instrument (PSYCHLOPS) • Perceived social support difference by the Multidimensional Scale of Perceived Social Support (MSPSS) • Prevalence of depressive disorders difference by the Patient Health Questionnaire (PHQ-9)	**Post-treatment and 3 month follow-up (95% CI):** **HADS Total:** post -6.30 (-8.89 to -3.70, $p<0.0001$, effect size 0.77), follow-up -4.53 (-7.13 to -1.92, $p=0.0007$, effect size 0.58) **PCL-5:** post -3.44 (-6.15 to -0.73, $p=0.013$, effect size 0.39), follow-up -2.16 (-4.88 to 0.56, $p=0.12$, effect size 0.28) **WHODAS:** post -4.67 (-7.15 to -2.19, $p=0.0002$, effect size 0.65), follow-up -2.90 (-5.39 to -0.42, $p=0.022$, effect size 0.41) **PSYCHLOPS:** post -3.84 (-5.49 to -2.19, $p<0.0001$, effect size 0.86), follow-up -2.07 (-3.73 to -9.41, $p=0.015$, effect size 0.37) **MSPSS:** post 3.47 (-1.33 to 8.28, $p=0.16$, effect size 0.20), follow-up 1.96 (-2.87 to 6.78, $p=0.43$, effect size 0.11) **PHQ-9:** post -3.67 (-5.15 to -2.19, $p<0.0001$, effect size 0.75), follow-up -1.67 (-3.16 to -0.19, $p=0.027$, effect size 0.38)	Low
Rees (2014)	• Posttraumatic symptoms mean scores by the Posttraumatic Stress Disorder Checklist (PCL-C; range 17-85)	**PCL-C (SD):** baseline day 0 68.5 (9.5), day 30 69.2 (10.4), day 90 77.9 (5.9); post-intervention day 10 48.0 (8.9, $p<0.001$, effect size 4.05), day 30 35.3 (12.1) (day 90 baseline to day 30 $p<0.001$, day 10 to day 30 post-intervention $p=0.006$)	Unclear
Richards (2014)	• Multi-stage fitness test (km/hr) • Standing broad jump (cm) • BMI-for-age (z score) • Depression-like symptoms and anxiety-like symptoms measured by the (APAI)	**Between group difference in mean change - boys, adjusted (95% CI):** **Multi-stage fitness:** 0.00 (-0.33 to 0.34), effect size 0.00 (-0.32 to 0.33) **Standing broad jump:** -4.43 (-10.94 to 2.09), effect size -0.23 (-0.56 to 0.10) **BMI-for-age:** 0.01 (-0.21 to 0.22), effect size 0.01 (-0.31 to 0.34) **Depressive symptoms:** 8.18 (4.11 to 12.27), effect size 0.67 (0.33-1.00) **Anxiety symptoms:** 2.34 (1.12-3.56), effect size 0.63 (0.30-0.96)	Unclear

Robjant (2019)	• PTSD Symptoms by the PTSD Symptom Scale Interview for DSM-V (PSS-I-5) • Aggression measured by the Appetitive Aggression Scale (AAS) • Depression Severity by the Patient Health Questionnaire (PHQ-9)	**Cohen's d (95% CI):** **PSSI:** 3 month -1.75 (-2.47 to -1.14), 9 month -2.01 (-2.71 to -1.41) **AAS:** 3 month -0.54 (-1.09 to -0.03), 9 month -0.98 (-1.47 to -0.53) **PHQ:** 3 month -0.72 (-1.22 to -0.25), 9 month -0.57 (-1.03 to -0.15)	Unclear
Sahyoun (2019)	• Economic wellbeing from survey data • Food security by the Arab Family Food Security Scale (AFFSS) • Decision making assessed by the Women's Empowerment in Agriculture Index (WEAI): 8 sub-categories • Reported Health with the self-rated health question (SRH) • Mental health assessed with the Mental Health Inventory (MHI-5) • Social support with the Duke Social Support Index (DSSI)	**(95% CI):** **Economic wellbeing:** household assets baseline: 8 (6.5-9), endline 8 (7-10); household expenditure (USD/month) baseline 162.2 (152.5-165.7), endline 226.4 (168.7-229.1) (p=0.009) **Food security:** baseline 4 (2-5), endline 2 (0-3) (p=0.006) **SRH:** baseline 3 (2-4), endline 4 (3-4) **MHI-5:** baseline 40.9 (22.7-72.7), endline 57.14 (28.6-83.3) **DSSI:** baseline 24 (22-25), endline 24 (21-25.5)	Unclear
Salihu (2021)	• Adjusted Depressive Symptoms as measured by the Depression Anxiety Stress Scale – short form (DASS-21; range 0-42)) • Adjusted Anxiety by DASS-21 • Adjusted Stress by DASS-21	**Mean (SE) at 8-week post-intervention, 12-week follow-up:** **Depressive Symptoms:** post control 13.4 (2.7), intervention 8.1 (2.7), group x time -6.6 (95% CI -8.73 to -4.41), p<0.001; follow-up control 12.3 (2.7), intervention 10.2 (2.8), group x time -3.4 (95% CI -5.46 to -1.39), p=0.001 **Anxiety:** post control 12.1 (4.5), intervention 13.6 (4.3), group x time 1.4 (-1.53 to 4.26), p=0.355; follow-up 10.5 (4.5), intervention 12.7 (4.4), group x time 2.0 (-0.69 to 4.75), p=0.143 **Stress:** post control 5.2 (3.6), intervention 2.6 (3.5), group x time -1.9 (-3.94 to 0.11), p=0.064; follow-up control 9.3 (3.6), intervention 5.3 (3.6), group x time -3.3 (-5.45 to -1.14), p=0.003	Unclear

Sangraula (2020)	• Change in symptoms of depression by the Patient Health Questionnaire (PHQ-9) pretest and posttest • Daily Functioning assessed with the WHO Disability Assessment Schedule (WHODAS; range 12-60) • General psychological distress by the General Health Questionnaire (GHQ-12; range 0-36) • Posttraumatic Stress Disorder Checklist DSM-5 (PCL-5; range 8-40) • Psychosocial Mental Health Problems (PMHP; range 5-20) • Connectedness with family and friends by the Multidimensional Scale of Perceived Social Support (MSPSS; range 12-60) • Coping strategies by the Reducing Tension Checklist (RTC; range 0-40)	**Mean (SD) | Intracluster correlation coefficient (95% CI):** **PHQ-9:** intervention -3.5 (4.8), control -1.6 (3.4); ICC baseline 0.12 (0.03-0.41), endline – **WHODAS:** intervention -9.4 (8.4), control -5.2 (6.7); ICC baseline 0.10 (0.01-0.59), endline 0.09 (0.01-0.62) **GHQ-12:** intervention -12.3 (7.5), control -3.7 (7.0); ICC baseline 0.16 (0.02-0.62), endline 0.06 (0.00-0.75) **PCL-5:** intervention -2.7 (7.0), control -1.3 (5.6); ICC baseline 0.21 (0.08-0.45), endline – **PMHP:** intervention -1.0 (2.8), control -0.1 (2.7); ICC baseline 0.16 (0.05-0.41), endline 0.03 (0.00-0.97) **MSPSS:** intervention 0.9 (7.5), control -0.1 (7.9); ICC baseline –, endline 0.04 (0.00-0.87) **RTC:** intervention 5.0 (5.8), control -0.7 (4.6); ICC baseline 0.24 (0.09-0.50), endline 0.21 (0.05-0.59)	Low
Schubert (2016)	• Trauma exposure and symptoms consistent with PTSD were assessed with the Harvard Trauma Questionnaire (HTQ) • Depression and Anxiety symptoms were measured with the Hopkins Symptom Checklist (HSCL-25)	**PTSD:** post $p<0.001$, d=2.48; follow-up $p<0.001$; n2p=0.74 **Depression:** post $p<0.001$, d=2.09; follow-up $p<0.001$; n2p=0.72 **Anxiety:** Post: $p<0.001$; d=1.77; Follow-up; $p<0.001$; n2p=0.51	Unclear
Shaw (2019)	• Emotional Distress using the Refugee Health Screener-15 (RHS-15) from pretest to posttest for intervention group • Anxiety and Depression using the Hopkins Symptom Checklist-25 (HSCL-25) from pretest to posttest for intervention • PTSD symptoms measured using the Harvard Trauma Questionnaire (HTQ) from pretest to posttest for intervention	**RHS-15:** intervention b=-16.90 ($p<0.001$), control b=-20.88 ($p<0.001$), Cohen's d=2.14 **Anxiety:** intervention b=-.80 ($p<0.001$), control b=-1.10 ($p<0.001$), Cohen's d=2.31 **Depression:** intervention b=-.59 $p<0.001$, control b=-0.79 ($p<0.001$), Cohen's d=2.42 **PTSD:** intervention b=-0.24 ($p<0.05$), control b=-0.82 ($p<0.001$), Cohen's d=2.42	Unclear

Shultz (2019)	• Dropout rates • Major depressive disorder symptoms measured with pre-, post-, and follow-up scores of the Patient Health Questionnaire (PHQ-9; range 0-27) (n=56) • Anxiety measured with pre-, post-, follow-up measures of the Generalized Anxiety Disorder Screener (GAD-7; range 0-21) (n=47) • PTSD symptoms measured with pre-, post-, follow-up measures of the PTSD Checklist-Civilian Version (PCL-C; range 17-85) (n=40)	**(SE):** **Dropout rates:** loss to follow-up 30% **PHQ-9:** post 5.64 (0.68, p<0.001), follow-up 8.34 (0.61, p<0.001) **GAD-7:** post 5.36 (0.68, p<0.001), follow-up 6.34 (0.75, p<0.001) **PCL-C:** post 14.33 (1.88, p<0.001), follow-up 16.25 (2.43, p<0.001)	Unclear
Sijbrandij (2020)	• Knowledge retention measured with Knowledge Retention score • Scenario score measured understanding of how to apply appropriate skills and response strategies	**Mean difference (95% CI):** **Knowledge retention:** post 1.73 (0.98-2.47, p<0.0001), Cohen's d=0.50; follow-up 1.54 (0.76-2.33, p=0.0001), Cohen's d=0.43 **Scenario:** post 0.19 (-0.14 to 0.51, p=0.26), Cohen's d=0.04; follow-up 0.65 (0.31-0.98, p=0.0002), Cohen's d=0.38	Unclear
Steinhilber (2019)	• Self-reported level of anxiety by the Beck Anxiety Inventory (range 0-63) • Previous experience of traumatic event (yes/no) • Need to talk to someone (yes/no) • Perceived social support with the Perceived Support Scale (range 11-44)	**Mean (SD):** **Depression:** 12.53 (8.01); gender t(41)=-2.90, p<0.05; nationality t(41)=-1.48 **Anxiety:** 19.47 (11.95); gender t(41)=-2.45, p<0.05; nationality t(41)=-1.12 **Traumatic event:** 67.4% experienced a traumatic event **Social support team 1:** 27.63 (9.92) **Social Support team 2:** 24.86 (9.54)	Unclear
Sullivan (2019)	• Reported effect on complaints in a 7-day follow-up (complaints include: general mood, difficulty sleeping, pain, stress) in reported effect N (%)	**General mood:** helped a lot: 37%, helped 7%, no change 0%, made worse 0%, made much worse 0%, not stated 57% **Difficulty sleeping:** helped a lot 54%, helped 2%, no change 0%, made worse 0%, made much worse 0%, not stated 43% **Stress:** helped a lot 37%, helped 15%, no change 0%, made worse 0%, made much worse 0%, not stated 48% **Pain:** helped a lot 50%, helped 4%, no change 0%, made worse 0%, made much worse 0%, not stated 46%	High

Tang (2015)	• Chinese version of the Impact of Events Scale -Revised (C-IES-R) • Taiwanese version of the Multidimensional Anxiety Scale for Children (MASC-T) • Mandarin Chinese version of the Center for Epidemiologic Studies Depression Scale (CES-D)	**(SD):** **C-IES-R**: intervention baseline 34.02 (19.85), endline 18.37 (19.60); control baseline 23.10 (18.21), endline 21.36 (17.73) (F=3.79, p=0.05) **MASC-T:** intervention baseline 69.78 (19.54), endline 30.61 (25.70); control baseline 48.02 (19.39), endline 41.88 (20.51) (F=9.39, p=0.03) **CES-D:** intervention baseline 25.10 (11.50), endline 14.78 (11.36); control baseline 23.14 (10.45), endline 21.07 (9.85) (F=11.87, p=0.01)	Unclear
Tay (2019)	• Predictors of severity for high impairment compared to low impairment using Refugee Mental Health Assessment Package (R-MHAP) assessed trauma events (TEs), peri-migration stressors, post-migration living difficulties (PMLDs) and common mental disorders (CMDs) including PTSD, major depressive disorder, generalized anxiety disorder, and persistent complex bereavement disorder Short Form (WHODAS 2.0) for functional impairment. High impairment >=32; moderate impairment 19-31; lower impairment 0-18	**Odds ratio (95% CI):** **Age:** moderate 0.85 (0.73-0.98, p=0.029), severe 0.70 (0.58-0.86, p<0.001) **Male:** moderate 2.54 (1.62-4, p<0.001), severe 5.97 (2.96-12, p<0.001) **Employed:** moderate 0.97 (0.61-1.54, p=0.90), severe 5.15 (2.41-10.96, p<0.001) **Residency status (being stateless):** moderate 1.75 (1.18-2.63, p=0.006), severe 16.67 (5-50, p<0.001) **Exposure to pre-migration traumatic events:** moderate 3.27 (1.70-6.29, p<0.001), severe 3.4 (1.66-7.03, p<0.001) **Peri-migration stressors**: moderate 1.11 (1.05-1.16, p<0.001), severe 1.38 (1.27-1.49, p<0.001) **Exposure to post-migration living difficulties:** moderate 1.08 (1.05-1.12, p<0.001), severe 1.25 (1.20-1.3, p<0.001) **1 mental disorder:** moderate 2.1 (1.48-2.99, p<0.001), severe 4.02 (2.45-6.58, p<0.001) **2 or more mental disorders:** moderate 5.36 (3.54-8.11, p<0.001), severe 9.50 (5.52-16.34, p<0.001)	Low

Tay (2020)	• Adjusted treatment effects assessing differences in post-treatment scores between IAT and CBT for Posttraumatic Stress Disorder (PTSD), Complex PTSD (CPTSD) with the International Classification of Diseases (ICD-11), Major Depressive Disorder (MDD), Stressors with the 5 scales of Adaptive stress Index (ASI), and measures of resilience by the Connor-Davidson Resilience Scale (CDRS; range 0-100)	**Adjusted treatment effect (95% CI):** PTSD -0.08 (-0.14 to 0.02, p=0.012) **CPTSD:** -0.07 (-0.14 to -0.01) **MDD:** -0.007 (-0.13 to -0.01, p=0.025) **ASI:** ASI-1 (safety/security) -0.12 (-0.20 to -0.03, p<0.001); ASI-2 (traumatic losses) -0.10 (-0.18 to -0.02, p=0.02); ASI-3 (injustice) -0.03 (-0.11 to 0.06, p=0.513); ASI-4 (role/identity disruptions) -0.12 (-0.21 to -0.04, p< 0.001); ASI-5 (existential meaning) -0.18 (-0.19 to -0.05, p< 0.001) **CDRS:** 0.16 (0.06-0.026, p< 0.001)	Low
Tol (2014)	• PTSD assessed with the Child Posttraumatic Symptom Scale (range 0-51) • Depressive symptoms assessed with the Depression Self-Rating Scale (range 0-36) • Hope assessed with the Children's Hope Scale (range 6-36) • Functional impairment assessed with a 9 item measure asking about daily activities (range 9-36)	**Mean (SD):** **PTSD:** -0.073 (0.109) **Depressive symptoms:** -0.008 (0.062) **Hope**: 0.065 (0.073) **Functional impairment:** -0.035 (0.045)	High

| Tol (2020) | • Psychological distress measured using the Kessler 6 (K6)
• Personally identified problems with the Psychological Outcome profiles (PSYCHLOPS)
• PTSD symptoms assessed with the PTSD Checklist Civilian (PCL-6)
• Depression symptoms assessed with the Patient Health Questionnaire (PHQ-9)
• Anger with 2 dichotomous questions about explosive anger attacks
• Positive interactions between ethnic groups
• Psychological flexibility with the Acceptance and Action Questionnaire (AAQ-II)
• Functional impairment with the WHO Disability (WHODAS)
• Subjective wellbeing assessed with the WHO-5 | (95% CI):
K6: post -3.25 (-4.31 to -2.19, p<0.001, effect size -0.72), follow-up -1.20 (-2.33 to -0.08, p=0.04, effect size -0.26)
PSYCHLOPS: post -2.79 (-4.07 to -1.51, p<0.0001, effect size -0.58), follow-up -1.17 (-2.37 to 0.04, p=0.06, effect size -0.25)
PCL-6: post:-3.53 (-4.67 to -2.38, p<0.0001, effect size -0.68), follow-up -1.55 (-2.87 to -0.24, p=0.02, effect size -0.30)
PHQ-9: post -3.78 (-5.39 to -2.17, p=0.0003, effect size -0.75), follow-up -1.55 (-2.77 to -0.15, p=0.03, effect size -0.31)
Explosive anger: post 0.50 (0.32-0.50, p=0.002, effect size 0.50), follow-up 0.63 (0.40-1.0, p=0.04, effect size 0.63)
Interethnic relationship: post -0.14 (-0.47 to 0.19, p=0.37, effect size -0.06), follow-up -0.19 (-0.56 to 0.19, p=0.30, effect size -0.07)
AAQ-II score: post 4.49 (0.90-8.09, p=0.02, effect size 0.42), follow-up 1.11 (-4.26 to 6.48, p=0.66, effect size 0.09)
WHODAS 2.0 score: post -6.10 (-7.86 to -4.34, p<0.0001, effect size -0.77), follow-up -2.52 (-5.01 to -0.03, p=0.05, effect size -0.30)
WHO-5 score: post 2.89 (1.52-4.27, p=0.0006, effect size 0.51), follow-up 1.94 (0.81-3.06, p=0.0028, effect size 0.36) | Unclear |
| Tomita (2016) | • Depression symptoms using the Quick Inventory of Depressive Symptomatology (range 0-27: none (<5), mild (6-10), moderate (11-15), severe (16-20), very severe (>21))
• Reliability between face-to-face and SMS-based depression screening (test-retest agreement)
• Preference of screening method
• Participant feedback | Depression symptoms: overall baseline score 10.3, follow-up score 8.0 (p<0.01); none baseline 22.2%, follow-up 30.4%; mild baseline 26.1%, follow-up 39.3%; moderate baseline 37.3%, follow-up 27.4%; severe baseline 13.7%, follow-up 3%; very severe baseline 0.7%, follow-up 0%
Test and re-test reliability: weighted Kappa coefficient test 0.45, re-test 0.25
Preferred method: SMS 58.7%, face-to-face 41.3% (p=0.99)
Feedback: would recommend 95%, difficult to use 10%, comfortable to use 86.9% | Unclear |

Ugurlu (2016)	• PTSD assessed with the UCLA Post-Traumatic Stress Disorder (UCLA PTSD) Index for DSM-IV (range 0-84) • Depression symptoms with the Child Depression Inventory (CDI; range 0-54) • Symptoms of anxiety with the State-Trait Anxiety Scale (range 20-80)	Mean (SD): PTSD: pre 29.80 (10.50), post 15.32 (9.59) (t=5.451, df=24, p<0.001) Depression: pre 9.97 (1.01), post 6.00 (4.54) (t=3.955, df=29, p<0.001) Trait Anxiety: pre 36.92 (6.96), post 30.28 (7.39) (t=4.366, df=24, p<0.001) State Anxiety: pre 30.52 (8.31), post 28.84 (7.15), (t=1.010, df=24)	High
Vallieres (2018)	• PTSD and Complex PTSD (CPTSD) prevalence rates and associations of symptom levels and age • Analysis of the factor structure of PTSD/CPTSD symptoms	(95% CI): PTSD: 25.2% (17- 34); sex X2=0.60, df=1, p=0.437; OR 0.63 (0.19-2.05) CPTSD: 36.1% (27-46); sex: X2 =0.24, df=1, p=0.626; OR 1.27 (0.49-3.31) Confirmatory factor analysis: results supported a 2-factor higher-order model consistent with ICD-11 PTSD/CPTSD	Unclear
Ventevogal (2014)	• Depression Self-Rating Scale (DSRS); cut-off score of 19 • Child PTSD Symptom Scale (CPSS); cut off score of 26 • Screen for Child Anxiety Related Emotional Disorders (SCARED-41); cut off score of 44	DSRS: AUC 0.85 (95% CI (0.73-0.97), sensitivity 0.64, specificity 0.88 CPSS: AUC 0.78 (95% CI 0.62-0.95), sensitivity 0.71, specificity 0.83 SCARED-41: AUC 0.69 (95% CI 0.54-0.84), sensitivity 0.55, specificity 0.90	Unclear
Vijayaku-mar (2017)	• Change in rate per 100,000 of suicidal behaviour (suicide, attempted suicide, combined) assessed with Beck's Scale for Suicidal Ideation (SSI) from baseline to follow-up	Difference in change (95% CI): Suicide: 223 (-29 to 747, p=0.09) Attempted suicide: 296 (6.7-587, p=0.05) Combined: 519 (136-902, p=0.01)	High

| Wieling (2015) | • Parenting behaviours assessed with the Alabama Parenting Questionnaire (APQ) Subdomains: Parental involvement (range 6-30), positive parenting (range 4-20), poor monitoring (range 5-25)
 • Sum of parental aggression by the Conflict Tactics Scale-PC total aggression (CTS-PC; range 0-18)
 • Caring behaviour assessed with the Parental Bonding Instrument Caring Subscale (PBI; range 0-36)
 • #of child-reported experiences of family violence with the Family Violence Checklist (range 0-30) | Mean (SD):
 APQ parental involvement: pre 19.0 (4.5), post 22.5 (4.7); paired t test 2.61 (p=0.011)
 APQ positive parenting: pre 13.0 (3.1), post 15.9 (3.3); paired t test 2.36 (p=0.018)
 APQ poor monitoring: pre 10.8 (4.7), post 11.4 (4.8); paired t test 0.32 (p=0.751)
 CTS-PC: pre 5.3 (1.7), post 2.8 (2.6); paired t test 2.93 (p=0.007)
 PBI: pre 29.2 (7.4), post 32.6 (5.4); paired t test 1.89 (p=0.041)
 Family violence checklist: pre 3.2 (2.5), post 2.4 (2.0); paired t test 2.12)p=0.027) | Unclear |
| Ziveri (2019) | • Skills and Knowledge (scale 1-4)
 • Social Well-being (scale 1-4)
 • Emotional well-being (scale 1-4)
 • Economic well-being (scale 1-4)
 • Overall feeling (scale 1-4) | Skills and Knowledge: intervention pre 1.8, post 1.2; control pre 1.8, post 1.7
 Social Well-being: intervention pre 1.8, post 1.3; control pre 1.7, post 1.7
 Emotional Well-being: intervention pre 1.8, post 1.1; control pre 1.9, post 1.6
 Economic Well-being: intervention pre 1.7, post 1.2; control pre 1.9, post 1.6
 Overall Feeling: intervention pre 2.4, post 1.4; control pre 2.7, post 2.5 | Unclear |

ANNEX 11: STUDY DESIGN AND OUTCOMES OF NON-COMMUNICABLE DISEASE INTERVENTION STUDIES

Study Design of Non-Communicable Disease Intervention Studies in Humanitarian Crisis Settings, 2013-2021 (n=15)

Author (Year)	Study Setting & Population	Intervention(s)	Methods
Al alawneh (2019)	**Country:** Jordan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Refugee	**Description:** Home medication management review service **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - pharmacists and physicians **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 9 months **Sample description:** Adult Syrian refugees with at least 1 chronic condition or taking 5 or more medications **Sample size:** 106 (53 intervention, 53 control)
Al alawneh (2020)	**Country:** Jordan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Refugee	**Description:** Home medication management **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - pharmacists and physicians **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 9 months **Sample description:** Adult Syrian refugees with at least 1 chronic condition or taking 5 or more medications **Sample size:** 106 (53 intervention, 53 control)
Ansbro (2019)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Internally displaced	**Description:** Introduction of an integrated diabetic clinic within a hospital outpatient department **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Mixed methods (retrospective cohort & costing study) **Study duration:** 3 years **Sample description:** Diabetic adults attending an outpatient program in Mweso hospital, North Kivu **Sample size:** 243
Ansbro (2020)	**Country:** Jordan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Host community, refugee	**Description:** Primary-level NCD program **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Mixed methods (descriptive quantitative and costing study) **Study duration:** 3 years **Sample description:** Syrian refugees and vulnerable members of Jordanian population with NCDs **Sample size:** 5,045

Baktash (2019)	**Country:** Iraq, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Emergency-affected (non-displaced)	**Description:** Health education to enhance exercise behaviour **Implementation site:** Facility-based **Personnel type(s):** Not specified **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 5 months **Sample description:** Seniors living in geriatric homes in Baghdad city **Sample size:** 97 (49 experimental, 48 control)
Collins (2017)	**Country:** Jordan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Host community, refugee	**Description:** Outpatient CVD risk-based prevention strategies **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 1 year **Sample description:** Syrian refugee or Jordanian adults ≥ 40 years with 1 of 5 NCDs (CVD, diabetes, hypertension, COPD, or asthma) **Sample size:** 2,907
Erenoğlu (2020)	**Country:** Turkey, regional sample **Crisis type:** Armed conflict **Context type:** Unclear **Population:** Refugee	**Description:** Health education to increase awareness of breast and cervical cancer **Implementation site:** Facility-based **Personnel type(s):** Unclear - researchers **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 10 months **Sample description:** Female Syrian married and literate refugees aged ≥18 years **Sample size:** 60 (30 experimental; 30 control)
Istepanian (2014)	**Country:** Iraq, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Emergency-affected (non-displaced)	**Description:** Mobile health for diabetes management in primary care **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Randomized controlled trial (feasibility study) **Study duration:** 9 months **Sample description:** Type 2 diabetic patients from the study clinic with possession of a mobile phone device **Sample size:** 12 (6 intervention, 6 control)

Kayali (2019)	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Camp (urban) **Population:** Refugee	**Description:** Clinic-based healthcare provision for diabetes and hypertension **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Observational (retrospective cohort) **Study duration:** 18 months **Sample description:** Syrian patients with DM (types 1 and 2) or HTN who had at least 2 tests for HbA1c or blood pressure during 6-18 month follow-up **Sample size:** 2,644 patients (984 DM only, 780 HTN only, 880 DM and HTN)
Powell (2021)	**Country:** Jordan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Host community, refugee	**Description:** Integrated physical and mental health awareness education intervention to reduce non-communicable diseases – participants assigned to 1) the Health Community Clinic (HCC), 2) HCC with mental health awareness sessions, and 3) standard healthcare **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - Masters' level trained health awareness educators **Part of broader program:** No	**Study design:** Quasi-experimental **Study duration:** 20 months **Sample description:** Syrian refugees and Jordanian nationals between 18-75 years old that utilized services at the health centres and were at risk for or diagnosed with an NCD **Sample size:** 600 (248 HCC, 233 HCC-MH, 213 standard care)
Ratnayake (2021)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Armed conflict, outbreak **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced), internally displaced	**Description:** Integration of non-communicable disease management program within emergency primary care **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 2 years **Sample description:** Patients from Beni region with hypertension and/or diabetes **Sample size:** 788 patients

Saleh (2018)a	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (rural) **Population:** Host community, refugee	**Description:** Screening for diabetes and hypertension using an eHealth netbook application **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** Yes	**Study design:** Observational (descriptive quantitative) **Study duration:** 8 months **Sample description:** Rural Lebanese >40 years living in catchment areas of 8 primary health centres, Palestinian refugees in 3 camps **Sample size:** 3,481 (175 respondents to phone survey)
Saleh (2018)b	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (rural) **Population:** Host community, refugee	**Description:** Phone surveys evaluating use of an eHealth intervention **Implementation site:** Community-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 15 months **Sample description:** Rural Lebanese >40 years living in catchment areas of 8 primary health centres, Palestinian refugees in 3 camps **Sample size:** 1,000 survey respondents
Sibai (2020)	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural and urban) **Population:** Host community, refugee	**Description:** Multicomponent intervention to advance the level of care and management of hypertension and diabetes at PHC centres, including logistics and technical support of the health centres; human resource development, promotion of good practice in care, and use of basic documentation tools; and empowering patients attending PHCs and catchment area communities **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 6 months **Sample description:** Adults aged 40 years and above with hypertension and/or diabetes **Sample size:** 390 enrolled; 140 analysed

| Wolff (2020) | **Country:** Rwanda, regional sample
Crisis type: Armed conflict
Context type: Camp
Population: Refugee | **Description:** Energy-efficient wood-fuelled cookstove and a polypropylene heat retaining box
Implementation site: Community-based
Personnel type(s): Lay personnel
Part of broader program: No | **Study design:** Observational
Study duration: May 2015 – Mar 2016 (1 year follow-up)
Sample description: Female Congolese camp residents at least 16 years of age
Sample size: 436 |

Outcomes of Non-Communicable Disease Intervention Studies in Humanitarian Crisis Settings, 2013-2021 (n=15)

Author (Year)	Health Outcome(s)	Main Results	Risk of Bias
Al alawneh (2019)	• Frequency of treatment-related problems (TRPs)	**Total TRPs at baseline:** intervention 600 events, control 541 events **Total TRPs at follow-up:** intervention 182 events, control 514 events % change in # of TRPs at follow-up: intervention -69.7% (p<0.001), control -5% (p=0.116)	Low
Al alawneh (2020)	• EQ-5D QoL scores • Generalized anxiety score (Zigmond & Snaith)	**Difference in EQ-5D score between groups:** baseline p=0.45, follow-up p=0.266 **Difference in follow-up EQ-5D 'Health Status' domain, mean (SD):** intervention baseline 50.0 (6.2), follow-up 60.4 (5.1) (p<0.001); control baseline 68.7 (7.2), follow-up 58.6 (5.4) (p=0.03) **Difference in generalized anxiety scores between groups:** baseline p=0.202, follow-up: p<0.001	Moderate
Ansbro (2019)	• Incremental program costs • Intermediate clinical and programmatic diabetes outcomes	**Total costs:** 2014 €36,573, 2015 €30 861 (-16% from 2014) **Annual cost per patient:** 2014 €475, 2015 €214 **Visits with achieved control:** blood pressure ~80%, glycaemic 60%; odds of attaining BP control appeared to worsen post-implementation, odds of attaining glucose control improved	High
Ansbro (2020)	• Total program costs • Costs per patient per year • Cost drivers	**Total program costs (INT$):** 2015 4,206,481, 2016 6,400,611, 2017 6,739,438 **Cost drivers (% of total costs):** drugs 38.4-47%, human resources 35.1-27.9% **Costs per patient per year (INT$):** 2015 1,424, 2016 1,751, 2017 1,904	High
Baktash (2019)	• Changes in the health belief model concepts, assessed by a pre-test, post-test immediately following intervention, and follow-up 2 months following intervention	**Perceived seriousness, mean (SD):** intervention pre 3.51 (0.80), follow-up 3.88 (0.95); control pre 3.54 (0.69), follow-up 3.60 (0.82); multivariate F(2,94)=8.408, p<0.000 **Perceived susceptibility, mean (SD):** intervention pre 2.38 (0.65), follow-up 3.08 (1.35); control pre 2.42 (0.66), follow-up 2.79 (1.11); multivariate F(2,94)=12.578, p<0.000 **Perceived benefit, mean (SD):** intervention pre 2.97 (0.75), post 3.72 (1.17), follow-up 3.56 (1.12); control pre 3.02 (0.65), post 3.35 (0.76), follow-up 3.33 (1.05); multivariate F(2,94)=15.224, p<0.000	Unclear

Collins (2017)	• CVD risk scores • Concordance of lipid-lowering treatment prescriptions with guidance	**% (95% CI):** **WHO/ISH risk category:** <10% (n=1650) 56.8 (54.9-58.6), 10 to <20% (n=325) 11.2 (10.1-12.4), 20 to <30% (n=139) 4.8 (4.0-5.6), 30 to <40% (n=70) 2.4 (1.9-3.1), >=40% (n=115) 4.0 (3.3-4.7) **History of CVD (n=608):** 20.9 (19.5-22.4) **Eligible for lipid-lowering treatment:** 60.4% (58.6-62.2) **% of eligible receiving lipid-lowering treatment:** 48.3% (45.9-50.6)	Moderate
Erenoğlu (2020)	• Awareness of breast and cervical cancer	**Awareness of breast and cervical cancer, mean (SD), between groups:** baseline intervention 11.76 (8.44), control 8.80 (14.21) (t 0.98, p=0.330); post-test intervention 64.36 (4.74), control 15.43 (10.41) (t 23.43, p=0.000) **Awareness of breast and cervical cancer, mean (SD), within group:** intervention baseline 108.23 (8.44), post-test 55.57 (4.64) (t 69.56, p=0.000); control baseline 111.20 (14.21), post-test 104.6 (10.41) (t 42.47, p=0.000)	Unclear
Istepanian (2014)	• HbA1C levels	**HbA1C levels, mean (SD):** pre-test intervention 8.85 (0.73), control 8.95 (2.17); post-test intervention 8.05 (1.31, p=0.115), control 8.7 (1.7, p=0.448)	Unclear
Kayali (2019)	• HbA1C • Proportion with HbA1C<8% • Proportion with BP<140/90 mmHg	**Mean HbA1C (SD):** Type 1 DM baseline 9.3 (1.8), 6 months 8.4 (1.4, p=0.022); Type 2 DM baseline 9.4 (2.5), 6 months 8.1 (1.8, p=0.001); DM+HTN baseline 9.0 (2.0), 6 months 7.7 (1.6, p=0.003) **Proportion with HbA1C<8%:** Type 1 DM baseline 20%, 6 months 55% (p=0.016); Type 2 DM baseline 35%, 6 months 65% (p=0.016); DM+HTN baseline 32%, 6 months 64% (p=0.039) **Proportion with BP<140/90 mmHg:** HTN only baseline 27%, 6 months 49% (p<0.001); HTN+DM baseline 36%, 6 months 52% (p=0.006)	Low

Powell (2021)	• Cardiovascular disease risk factors: BMI, blood pressure • HbA1C levels	**Difference estimate at 18 months (95% CI):** **BMI at 18 months:** HCC -3.98 (-4.16 to -3.80, p<0.001), HCC-MH -4.08 (-4.28 to -3.88, p<0.001), standard of care: reference **Systolic blood pressure:** HCC -5.18 (-9.21 to -1.14, p<0.01), HCC-MH-8.76 (-12.79 to -4.74 p<0.001), standard of care: reference **HbA1C:** HCC -0.15 (-0.36 to 0.07) HCC-MH -0.55 (-0.77 to -0.33, p<0.001), standard of care: reference	Unclear
Ratnayake (2021)	• # of consultations for hypertension and diabetes: incidence rate ratio • Treatment adherence	**# of consultations (95% CI):** HTN 13.5 (5.8-31.5, p=0.00); diabetes 3.6 (1-12.9, p=0.046) **Treatment adherence:** HTN attended at least 2 visits 45.4%, remained in care 33.9%; diabetes attended at least 2 visits 55.3%, remained in care 50%; HTN+diabetes attended at least 2 visits 82.1%, remained in care 56%	High
Saleh (2018)a	• Diabetes and hypertension detection rates per 100,000	**Diabetes:** overall 183.56 total, 10.34 suspected, 173.23 pre-diagnosed; rural 191.27 total, 11.21 suspected, 180.06 pre-diagnosed; refugee camps 161.25 total, 7.84 suspected, 153.42 pre-diagnosed (rural compared to camp total p=0.046, suspected p=0.391, pre-diagnosed p=0.070) **Hypertension:** overall 355.93 total, 87.33 suspected, 268.6 pre-diagnosed; rural 350.46 total, 91.58 suspected, 258.89 pre-diagnosed; refugee camps 371.78 total, 75.03 suspected, 296.75 pre-diagnosed (rural compared to camp total p=0.233, **suspected p=0.131, pre-diagnosed p=0.028)** **Diabetes and hypertension comorbidity:** overall 112.61 total, 2.59 suspected, 110.03 pre-diagnosed; rural 117.85 total, 2.7 suspected, 115.15 pre-diagnosed; refugee camps 97.42 total, 2.24 suspected, 95.19 pre-diagnosed (rural compared to camp total p=0.096, suspected p=0.813, pre-diagnosed p=0.1)	Moderate
Saleh (2018)b	• Survey participants' views on eSahha SMSs	**Easiness:** SMSs are easy/very easy to understand 93.9% **Usefulness:** SMSs are useful/very useful 93.9% **Application:** SMSs are applied most of the times/always in daily life 76.9%	Moderate

Sibai (2020)	• 12-item 'Equipment Monitoring' tool for checking availability and functionality of equipment and medication • Health provider knowledge and skills • Data collection completeness • Patient satisfaction • Provider counselling • Patient awareness of program/where to seek help	**Equipment and medication availability/functionality:** effective process of replenishing most items in due time, except for glucose strips and waist circumference measuring tape **Physician knowledge/skills:** 100% correct related to treatment and monitoring; lower levels on diagnosis (25% disagreement on need to take 2 BP measurements, 81% unable to characterize indications of oral glucose tolerance test or related instructions given to patient when ordering test) **Nursing staff equipment usage knowledge post-training:** 33% correctly identified how many beeps they should hear when the test strip is firmly inserted into the instrument, 33% how long before instrument turns off automatically, 44% how to clean lancing site **Data completeness:** screening forms [random sample] 94% (range 88-100%), BMI and WC most commonly missing items (range 5-12%); patient records >80% **Patient satisfaction with encounters:** 60% **Counselling/provider inquiry:** 86% patients queried about compliance to medications; 68% patients queried about advice given on behavioural changes; 31-42% questioned on side effects of medications and potential complications. Patient awareness of program/where to seek help: 40%	Unclear
Wolff (2020)	• Forced expiratory volume (FEV1) per protocol population at follow-up • Peak expiratory flow (PEF) increase and reduced COPD Assessment Test (CAT)-score	**FEV1, % predicted:** baseline 2.2 L (87%), 9 months 2.21 L (88.4%) (p=not significant) **Pre-defined subgroup with airway obstruction (n=31), FEV1, % predicted:** baseline 1.58 L (65.6%), 9 months 1.7 L (70.9%) (p<0.01)	High

ANNEX 12: STUDY DESIGN AND OUTCOMES OF INJURY AND REHABILITATION INTERVENTION STUDIES

Study Design of Injury and Rehabilitation Intervention Studies in Humanitarian Crisis Settings, 2013-2021 (n=6)

Author (Year)	Study Setting & Population	Intervention(s)	Methods
Adhikari (2018)	**Country:** Nepal, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Community-based rehabilitation for physically impaired earthquake victims **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - physiotherapists **Part of broader program:** No	**Study design:** Observational (pre-post test) **Study duration:** 2 weeks **Sample description:** Medically and surgically stable patients who require rehabilitation **Sample size:** 13 enrolled; 13 analysed
Älgå (2020)	**Country:** Jordan and Iraq, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Negative pressure wound therapy for patients with acute conflict-related extremity wounds at 2 civilian trauma hospitals **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Randomized controlled trial (individual randomized) **Study duration:** 40 months **Sample description:** Patients aged >=18 years who presented to the emergency department within 72 hours of sustaining a conflict-related extremity wound **Sample size:** 174 enrolled (88 assigned to NPWT and 86 assigned to standard treatment); 165 analysed (83 received treatment in the NPWT group: 80 received NPWT and 3 received standard treatment, 82 received standard treatment in the standard treatment group)
Armstrong (2014)	**Country:** Sri Lanka, regional sample **Crisis type:** Armed conflict **Context type:** Camp (urban) **Population:** Internally displaced	**Description:** Spinal cord injury rehabilitation program at a rehabilitation facility **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre and lay personnel - mental health specialist, nurse, doctor, logistician, and physiotherapist **Part of broader program:** No	**Study design:** Observational (retrospective analysis of programmatic data) **Study duration:** 13 months **Sample description:** Patients admitted to rehabilitation with a spinal cord injury and stable vertebral spine **Sample size:** 89 enrolled, 89 analysed

Jachetti (2019)	**Country:** Haiti, regional sample **Crisis type:** Multiple **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Protocol for administering tranexamic acid in medical management of trauma **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - doctors, nurses, auxiliary service **Part of broader program:** No	**Study design:** Observational (descriptive retrospective pre-post study) **Study duration:** 15 months **Sample description:** Patients aged 18-65 years, with blunt or penetrating trauma and a South Africa Triage Score >=7, arriving to the emergency department within 3 hours of trauma **Sample size:** 116 patients, 52 in "before" group (prior to protocol implementation) and 64 in "after" group (use of protocol)
Schauer (2018)	**Country:** Iraq and Afghanistan, national sample **Crisis type:** Armed conflict **Context type:** Multiple **Population:** Emergency affected (non-displaced)	**Description:** Resuscitative thoracotomy for paediatric patients in traumatic cardiac arrest either pre-hospital or in the emergency department (ED) in a combat setting **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - not specified **Part of broader program:** Yes - active treatment for injuries sustained in conflict (Role III facilities and forward-surgical teams throughout Iraq and Afghanistan)	**Study design:** Observational (retrospective cohort study) **Study duration:** 9 years **Sample description:** All paediatric patients who underwent a documented resuscitative thoracotomy or CPR in the pre-hospital or ED setting during operations in Iraq and Afghanistan in 2007 to 2016 **Sample size:** 86 enrolled (13 for thoracotomy and 66 for CPR); 86 analysed
Yuxi (2017)	**Country:** China, regional sample **Crisis type:** Environmental disaster **Context type: Non-camp (urban)** **Population:** Emergency affected (non-displaced)	**Description:** Xuebijing injection to treat sepsis-induced acute kidney injury following the 2008 Wenchuan earthquake in a traditional Chinese medicine hospital **Implementation site:** Facility-based **Personnel type(s):** Not specified **Part of broader program:** No	**Study design:** Observational (retrospective study with intervention and control groups) **Study duration:** Not specified **Sample description:** Patients aged>18 years with a history of infection, trauma, and systemic inflammatory response syndrome **Sample size:** 55 enrolled (27 in CG group, 28 in CCXG group)

Outcomes of Injury and Rehabilitation Intervention Studies in Humanitarian Crisis Settings, 2013-2021 (n=6)

Author (Year)	Health Outcome(s)	Main Results	Risk of Bias
Adhikari (2018)	• WHO-DAS score (Wilcoxon's signed rank test 2 weeks post-earthquake rehabilitation) • NPRS - Pain Level Score (Wilcoxon's signed rank test) • Timed Up and Go (TUG)	**WHO-DAS score:** median pre 17, post 12 (Z=-3.196, p<0.001) **NPRS:** pain level pre 3.5, post 2 (Z=-2.72, p=0.007) **TUG test:** decrease from pre to post (Z=-1.41, p=0.16)	Unclear
Älgå (2020)	• Wound closure by suture, flap, or split-thickness skin graft, within 5 days from initial debridement surgery: proportion closed within 5 days, median time to wound closure • Net clinical benefit: composite of wound closure by day 5 and freedom from any bleeding, wound infection, sepsis, or amputation of the index limb • Prevalence of in-hospital death and complications	**Wound closure by day 5 (95% CI):** 49% NPWT, 60% standard treatment, absolute difference 10% (-5 to 25, p=0.212), risk ratio 0.83 (0.62-1.09) **Median time to wound closure (IQR):** 5 days (4-11) NPWT, 5 days (4-8) standard treatment **Net clinical benefit (95% CI):** 41% NPWT, 44% standard treatment, absolute difference 3% (-12 to 18, p=0.750), risk ratio 0.93 (0.65-1.35) **In-hospital death:** 0 in NPWT, 1 in standard treatment **Prevalence of wound infection:** 12% NPWT, 23% standard treatment, absolute difference 11% (-0.5 to 23, p=0.068), risk ratio 0.52 (0.26-1.05) **Other complications:** proportion of participants with sepsis, bleeding leading to transfusion, limb amputation did not differ between groups	Unclear
Armstrong (2014)	• Successful discharge to the community • SCIM score change from admission to discharge • SCIM score on follow-up at 6-12 weeks	**Successful discharge:** 83.2% **Mean SCIM score (SD):** admission 55 (18), discharge 71 (19) (p<0.01) **SCIM on follow-up (n=28):** 11% improved, 68% stable, 21% decline	High
Jachetti (2019)	• Intra-hospital mortality • Early mortality • Hospital length of stay	**Intra-hospital mortality (95% CI):** 0.32 (0.12-0.84) **Early mortality (95% CI):** 1.5 (0.2-20) **Median length of hospital stay (IQR):** before group 8 days (4-9), after group 6 days (6-12) (p=0.02)	Low

Schauer (2018)	• Survival to discharge • Survival by pre-hospital signs of life • Survival by ED signs of life	**Survival to discharge:** thoracotomy group 31%, CPR group 9% (p=0.108) **Pre-hospital signs of life:** thoracotomy group 75% among survivors, 11% among non-survivors (p=0.104); CPR group 67% among survivors, 28% among non-survivors (p=0.152) **ED signs of life:** thoracotomy group 100% among survivors, 56% among non-survivors (p=0.352); CPR group 100% among survivors, 60% among non-survivors (p=0.116)	Low
Yuxi (2017)	• Change in renal function and inflammatory markers: BUN, CPK, IL-1, IL-6	**Mean (SD) by CCXG and CG Groups, p-value compared to baseline:** BUN: CCXG baseline 16.40 (5.25), day 5 9.96 (2.74, p=0.47), day 7 7.61 (1.73, p=0.023), day 10 6.59 (1.20, p=0.012); CG baseline 15.51 (1.58) (p=0.820 compared to CCXG), day 5 12.09 (1.77, p=0.037, p=0.033 compared to CCXG), day 7 8.96 (1.49, p=0.031, p=0.040 compared to CCXG), day 10 6.19 (0.91, p=0.022, p=0.041 compared to CCXG) **CPK:** CCXG baseline 2887.0 (252.00), day 5 1991.3 (770.70, p=0.037), day 7 1042.7 (477.80, p=0.002), day 10 974.1 (247.22, p=0.001); CG baseline 2605.0 (226.20, p=0.067 compared to CCXG), day 5 2034.3 (514.90, p=0.029, p=0.025 compared to CCXG), day 7 1624.3 (345.50, p=0.013, p=0.017 compared to CCXG), day 10 1260.0 (332.21, p=0.002, p=0.001 compared to CCXG)	Low

ANNEX 13: STUDY DESIGN AND OUTCOMES OF HEALTH SERVICE DELIVERY INTERVENTION STUDIES

Study Design of Health Service Delivery Intervention Studies in Humanitarian Crisis Settings, 2013-2021 (n=56)

Author (Year)	Study Setting & Population	Intervention(s)	Methods
Al alawneh (2019)	**Country:** Jordan regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Refugee	**Description:** Home medication management review service **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - pharmacists and physicians **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 9 months **Sample description:** Adult Syrian refugees with at least 1 chronic condition or taking 5 or more medications **Sample size:** 106 (53 intervention, 53 control)
Alkoudsi (2019)	**Country:** Jordan and Syria, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced), general population	**Description:** Pharmaceutical care service for polycystic ovarian syndrome (PCOS) **Implementation site:** Facility-based - pharmacies only **Personnel type(s):** Health professional cadre - pharmacists **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 4 months **Sample description:** Women diagnosed with PCOS **Sample size:** 125 enrolled (63 intervention, 62 control); 118 analysed (60 intervention, 58 control)
Al Shdaifat (2019)	**Country:** Jordan, national sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (rural and urban) **Population:** Refugee	**Description:** 3-stage training program with needs assessments, didactics, and on-the-job training for general practitioners (GPs) **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - GPs **Part of broader program:** No	**Study design:** Observational (cohort; pre/post) **Study duration:** 2 years **Sample description:** GPs at health centres **Sample size:** 84 GPs

Amsalu (2020)	**Country:** Somalia, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Host community, internally displaced	**Description:** 8-day essential newborn care course addressing recommendations in the Newborn Health in Humanitarian Settings: Field Guide, with 5-day refresher course at 6 months, supply provision and installation of newborn register **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - registered nurses and midwives **Part of broader program:** No	**Study design:** Observational (interrupted time series) **Study duration:** 29 months **Sample description:** Pregnant women who sought childbirth care at a study facility **Sample size:** Women who sought child-birth care: 525 enrolled, 419 analysed; healthcare workers: 12 enrolled, 10 analysed
Badiuz-zaman (2020)	**Country:** Bangladesh, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Host community	**Description:** Satellite/mobile clinics, referral services, ambulance services, and community health service workers **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - doctors and other clinic staff, community health workers **Part of broader program:** Yes - Chittagong Hill Tracts Development Facility (CHTDF) multi-sector program	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 5 years **Sample description:** Households with women of reproductive age **Sample size:** 3,664 enrolled (2,192 intervention, 694 control); 778 analysed (584 treatment, 194 control)
Bass (2016)	**Country:** Iraq, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced), internally displaced, refugee	**Description:** 6-8 session trauma-informed support, skills, and psychoeducation intervention provided by community mental health workers (CMHWs) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - recruited CMHWs who were pharmacists, nurses, and physician assistants with no prior formal mental health training **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 12 months **Sample description:** Adults in Dohuk reporting experiences of torture and presenting with significant depressive symptoms **Sample size:** 209 enrolled (159 intervention, 50 wait-list control); 188 completed follow-up (149 intervention, 43 wait-list control)

Bekolo (2017)	**Country:** Guinea, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Implementation of a 6-monthly appointment spacing approach in HIV care to improve retention **Implementation site:** Facility-based, including pharmacies **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** No	**Study design:** Observational (retrospective cohort study) **Study duration:** 24 months **Sample description:** Stable HIV patients aged >15 years with current viral load <=1000 copies/ul **Sample size:** 1,957 participants (1,166 intervention, 791 control); final sample size 1,816 participants (1,109 intervention, 707 control)
Bernasconi (2019)	**Country:** Nigeria, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced), internally displaced	**Description:** Use of the Integrated Management of Childhood Illness (IMCI) clinical decision support system **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre **Part of broader program:** Yes	**Study design:** Observational (cross-sectional) **Study duration:** 1 year **Sample description:** Paediatric consultations of children from age 2-59 months **Sample size:** baseline 404 consultations, endline 424 consultations (consultation room survey 235: 184 with intervention, 51 without intervention; caregiver survey 189: 122 with intervention, 67 without intervention)
Bolton (2014)	**Country:** Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Refugee	**Description:** Transdiagnostic psychotherapy, Common Elements Treatment Approach (CETA) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 8 months **Sample description:** Burmese individuals aged >=18 years who witnessed or experienced a traumatic event, with moderate to severe depression and/or PTSS **Sample size:** 347 enrolled (182 intervention, 165 control); 274 analysed (148 intervention, 126 control)

Bruno (2019)	**Country:** Gaza Strip, regional sample **Crisis type:** Armed conflict **Context type:** Unclear **Population:** Refugee	**Description:** Comprehensive (tiered) mental health and psychosocial support services meant to integrate mental health care into primary care services **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** No	**Study design:** Observational **Study duration:** 20 days **Sample description:** Randomly selected patients at the study clinic **Sample size:** 408 enrolled (205 intervention, 203 control)
Chamla (2018)	**Country:** Nigeria, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Integration of child nutrition screening with polio vaccination campaign **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - vaccinators, nutrition screener, data collectors, supervisors, support staff **Part of broader program:** Yes - combined bivalent oral (bOPV) and inactivated polio vaccination (IPV) campaign	**Study design:** Observational (cross-sectional) **Study duration:** 1 month **Sample description:** Children attending the vaccination campaign (6 weeks-59 months for vaccination, 6-59 months for nutrition screening) in 4 local government areas (LGAs) **Sample size:** 1,698,950 targeted for bOPV, 1,618,354 targeted for IPV, 725,509 targeted for nutrition screening
Corna (2019)	**Country:** Bangladesh, regional sample **Crisis type:** Armed conflict **Context type:** Camp (urban) **Population:** Refugee	**Description:** Psychosocial support intervention that consisted of support groups and home visits **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - psychosocial workers trained by clinical psychologist **Part of broader program:** Yes - psychosocial and mental health intervention	**Study design:** Observational (single arm pre-post study) **Study duration:** 5 months **Sample description:** Pregnant refugee women in 4th-6th month of pregnancy **Sample size:** 260 enrolled (130 Kutupalong, 130 Nayapara); size of analysed sample not specified
Coskun (2020)	**Country:** Turkey, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Host community, refugee	**Description:** TORCH infection screening during pregnancy **Implementation site:** Facility-based **Personnel type(s):** Not specified **Part of broader program:** No	**Study design:** Economic evaluation **Study duration:** 27 months **Sample description:** Pregnant women not serologically tested for TORCH infections before 10th week of pregnancy **Sample size:** 9,754 (1,333 Syrian refugee women, 8,421 Turkish women)

Deboutte (2013)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Provision of emergency obstetric care (EmOC), including Caesarean sections **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - health workers trained in anaesthesia, obstetric surgery, and pre- and post-operative care **Part of broader program:** No	**Study design:** Economic evaluation (within a case-control study) **Study duration:** 7 months **Sample description:** Women who delivered by C-section at a study facility, matched to women who delivered vaginally **Sample size:** 368 enrolled (178 intervention, 180 control); 368 analysed
Devine (2017)	**Country:** Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (rural) **Population:** Refugee	**Description:** 3 strategies for prevention of Hepatitis B Virus (HBV) transmission, with universal HBV vaccination of infants in all options: 1. vaccine only, 2. HBIG after positive maternal rapid diagnostic test (RDT), 3. HBIG after positive maternal confirmatory test **Implementation site:** Facility-based **Personnel type(s):** Not specified **Part of broader program:** Yes - provision of antenatal, obstetric, paediatric and general medical care	**Study design:** Economic evaluation (cost-effectiveness analysis) **Study duration:** 2 years **Sample description:** Pregnant women at clinic sites **Sample size:** 7,071
Dhital (2019)	**Country:** Nepal, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Psychosocial support training for school teachers **Implementation site:** School-based **Personnel type(s):** Lay personnel - school teachers trained by clinical psychologist **Part of broader program:** Yes	**Study design:** Randomized controlled trial (cluster randomized) **Study duration:** 6 months **Sample description:** School-going adolescents from grades 6 to 8 with a minimum attendance of 80% and no known diagnosis of mental health problems **Sample size:** 15 schools enrolled, 7 pairs and 1 unpaired; 1,220 students enrolled (605 intervention, 615 control); 1,070 analysed (559 intervention, 511 control)

Djimeu (2014)	**Country:** Angola, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural and urban) **Population:** Multiple (displaced and non-displaced)	**Description:** Social and economic development health and water, sanitation, and waste management projects **Implementation site:** Community-based **Personnel type(s):** Not specified **Part of broader program:** Yes	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 1 year **Sample description:** Children <5 years of age **Sample size:** 1,373 children (674 ASAF, 699 non-ASAF)
Dozio (2021)	**Country:** Central African Republic, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Internally displaced	**Description:** 5-session group Problem Management Plus (PM+) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** Yes	**Study design:** Mixed methods **Study duration:** 9 weeks **Sample description:** Beneficiaries of the larger income-generating activities program, priority given to participants with a low level of wellbeing **Sample size:** baseline 946, endline 838, post-intervention 140
Draiko (2021)	**Country:** South Sudan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Application of chlorhexidine gel to umbilical cord stumps **Implementation site:** Community-based **Personnel type(s):** Lay personnel - community health workers **Part of broader program:** No	**Study design:** Quasi-experimental **Study duration:** 10 months **Sample description:** Pregnant women in 2nd or 3rd trimester **Sample size:** 2,650 pregnant women enrolled (1,520 treatment, 1,075 control); 1,790 neonates enrolled and analysed (968 treatment, 822 control)
Edmond (2018)	**Country:** Afghanistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Standardized training and supportive supervision package aimed at improving existing community health worker (CHW) capacity to provide maternal and neonatal home visits and behaviour change communication messages **Implementation site:** System-level **Personnel type(s):** Lay personnel - community health workers **Part of broader program:** No	**Study design:** Quasi-experimental **Study duration:** 12 months **Sample description:** Random selection of villages and households **Sample size:** 1,408 women enrolled (709 intervention, 699 control); 1,378 analysed (689 intervention, 689 control)

Edmond (2020)	**Country:** Afghanistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	Description Maternal and child health mobile health teams (MHTs) providing primary care services to pregnant and postpartum women and children under 5 **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - midwives, vaccinators, and nurses **Part of broader program:** Yes	**Study design:** Observational (cross-sectional, population-based evaluation study) **Study duration:** 1 year **Sample description:** Intervention - districts receiving MHT services in prior 3 years; Control - districts not receiving MHT services **Sample size:** 110 districts (54 intervention, 56 control)
Foster (2017)	**Country:** Myanmar and Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (rural) **Population:** Migrant, refugee	**Description:** Establishment of 2 provider networks (including training, technical assistance, supply of medication and logistical support) to provide information about misoprostol and free medication for a medication abortion **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - physicians, social workers, other health workers **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 3 years **Sample description:** Women who received a medical abortion through the network **Sample size:** 918 enrolled; 914 analysed
Gallagher (2019)	**Country:** Democratic Republic of Congo, Somalia, and Yemen, regional sample **Crisis type:** Armed conflict, environmental disaster, outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Service approach based on The Essential Elements of Postabortion Care as developed by the PAC Consortium: community mobilization, strengthening provider counselling, treatment of abortion complications, provision of voluntary contraceptive services, and referrals as needed **Implementation site:** Community-based, facility-based **Personnel type(s):** Health professional cadre and lay personnel - healthcare workers, community health workers (CHWs) **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 5 years **Sample description:** Women in need of postabortion care **Sample size:** Baseline 1,413 clients (812 DRC, 11 Somalia, 590 Yemen); endline 3,640 clients (1,412 DRC, 1,065 Somalia, 1,163 Yemen)

Gormez (2017)	**Country:** Turkey, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Refugee	**Description:** 8-week group cognitive behavioural therapy (CBT) delivered by teachers **Implementation site:** School-based **Personnel type(s):** Lay personnel - teachers **Part of broader program:** No	**Study design:** Observational **Study duration:** 8 weeks **Sample description:** Primary and secondary grade Syrian refugee students aged 10-15 years and attending a temporary education centre, selected based on their trauma-related psychopathology as reflected in the Child Post-Traumatic Stress- Reaction Index score **Sample size:** 32 enrolled
Hamdani (2020)	**Country:** Pakistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp **Population:** Emergency affected (non-displaced)	**Description:** 5-week transdiagnostic Problem Management Plus (PM+) **Implementation site:** Facility-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 4 months **Sample description:** Primary care attendees with high levels of psychological distress (score>2 on the General Health Questionnaire (GHQ-12) and functional impairment (score >16 on the 12-item version of the WHO Disability Assessment Schedule 2.0 (WHODAS 2.0)) **Sample size:** 346 enrolled (172 intervention, 174 control)
Hashmi (2019)	**Country:** Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Camp (rural) **Population:** Refugee	**Description:** Monthly household visits by a nurse with mother-infant pairs when infant was 3-9 months old, with assessment of appropriate infant feeding and WaSH practices as well as counselling on appropriate behaviours via 'The Healthy Baby Flipbook' **Implementation site:** Community-based **Personnel type(s):** Health professional (Nurses) **Part of broader program:** Yes	**Study design:** Observational (cohort study) **Study duration:** 6 months **Sample description:** Mother-infant pairs with term, healthy infants aged 2 months **Sample size:** 20 mother-infant pairs

Istepanian (2014)	**Country:** Iraq, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Emergency-affected (non-displaced)	**Description:** Mobile health for diabetes management in primary care **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Randomized controlled trial (feasibility study) **Study duration:** 9 months **Sample description:** Type 2 diabetic patients from the study clinic with possession of a mobile phone device **Sample size:** 12 (6 intervention, 6 control)
Jachetti (2019)	**Country:** Haiti, regional sample **Crisis type:** Multiple **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Protocol for administering tranexamic acid in medical management of trauma **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - doctors, nurses, auxiliary service **Part of broader program:** No	**Study design:** Observational (descriptive retrospective pre-post study) **Study duration:** 15 months **Sample description:** Patients aged 18-65 years, with blunt or penetrating trauma and a South Africa Triage Score >=7, arriving to the emergency department within 3 hours of trauma **Sample size:** 116 patients, 52 in "before" group (prior to protocol implementation) and 64 in "after" group (use of protocol)
Kayali (2019)	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Camp (urban) **Population:** Refugee	**Description:** Clinic-based healthcare provision for diabetes and hypertension **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Observational (retrospective cohort) **Study duration:** 18 months **Sample description:** Syrian patients with DM (types 1 and 2) or HTN who had at least 2 tests for HbA1c or blood pressure during 6-18 month follow-up **Sample size:** 2,644 patients (984 DM only, 780 HTN only, 880 DM and HTN)

Kersten (2013)	**Country:** Agok, Abyei area (disputed zone between the Republic of the Sudan and the Republic of South Sudan), regional sample **Crisis type:** Armed conflict **Context type:** Non-camp **Population:** Not specified	**Description:** Approach to systematically measure quality of care **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 3 weeks **Sample description:** Male and female patients 21 years or older; health care workers **Sample size:** 14 observations of care encounters; 67 patient files; 23 semi-structured interviews (4 project managers, 9 health care workers, 10 patients following discharge)
Khan (2017)	**Country:** Pakistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced), internally displaced	**Description:** Intervention - 2 interactive psychoeducation sessions with pregnant women and their families, "Happy Mother, Healthy Child in Ten Steps," in addition to routine visits; control - routine visits only **Implementation site:** Community-based **Personnel type(s):** Lay personnel - Lady Health Workers (LHWs) **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 4 months **Sample description:** Pregnant women experiencing psychological distress **Sample size:** 81 enrolled (42 intervention, 39 control); 71 analysed (34 intervention, 37 control)
Khan (2019)	**Country:** Pakistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Internally displaced	**Description:** Locally adapted Group PM+ intervention in collaboration with the Lady Health Workers (LHWs) program in 10 catchment areas with 5 weekly sessions **Implementation site:** Facility-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 7 weeks **Sample description:** Females aged >= 18 years, referred for screening by LHW who scored above 2 on the General Health Questionnaire (GHQ) and above 16 on the WHO Disability Assessment Schedule (WHODAS) **Sample size:** 119 enrolled (59 intervention, 60 control); 112 completed [1 week post intervention] (54 intervention, 58 control)

Khoja (2016)	**Country:** Afghanistan regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** e-Health solutions addressing the 4 mental health challenges: depression, psychosis, post-traumatic stress disorder, and substance abuse **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - community health workers (CHWs) and facility-based healthcare providers **Part of broader program:** No	**Study design:** Observational (cross-sectional evaluation) **Study duration:** Unclear **Sample description:** Existing registered population of the health facilities and young adults registered in the populations **Sample size:** 550 survey participants (345 intervention, 205 control); 1,400 young adults registered for SMS messages (329 surveyed)
Knaevels-rud (2015)	**Country:** Iraq, regional sample **Crisis type:** Armed conflict **Context type:** Unclear **Population:** Emergency affected (non-displaced)	**Description:** 5-week web-based psychotherapy (cognitive based therapy) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - psychotherapists or psychiatrists **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 7 months **Sample description:** Persons aged 18-65 years with knowledge of Arabic and a history of trauma accompanied by posttraumatic stress symptoms **Sample size:** 159 enrolled (79 intervention, 80 waitlist control); 159 analysed
Leichner (2021)	**Country:** Nepal, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Capacity building of mental health workforce to provide quality mental health and psychosocial support (MHPSS) **Implementation site:** Community-based, facility-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 22 months **Sample description:** Health workers from 78 participating health facilities **Sample size:** 435 health workers trained
Malla (2019)	**Country:** India, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Training program for lay health workers in mental healthcare **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** No	**Study design:** Observational (descriptive evaluation) **Study duration:** 14 months **Sample description:** Identified cases with mental health disorders, who were then diagnosed by a psychiatrist **Sample size:** 262 patients

Mattheß (2019)	**Country:** Cambodia, Indonesia, and Thailand, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp **Population:** Emergency affected (non-displaced)	**Description:** Trauma Stabilization Therapy as a 'stand-alone' treatment for clients with PTSD **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - psychiatrists and psychologists **Part of broader program:** Yes	**Study design:** Observational (descriptive) **Study duration:** 4 years **Sample description:** Individuals who fulfilled the DSM-V criteria for PTSD pre-treatment or the ICD-11 criteria for PTSD **Sample size:** Data collected on 4,799 clients (197 fulfilled DSM-V criteria, 164 fulfilled ICD-11 criteria)
Mesic (2020)	**Country:** Afghanistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Treatment and care of patients with rifampin-resistant tuberculosis (RR-TB) **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - not specified **Part of broader program:** No	**Study design:** Observational (retrospective cohort study) **Study duration:** 3 years **Sample description:** Patients with treatment initiated for RR-TB **Sample size:** 146 enrolled in care, 112 started treatment, 77 with treatment outcome
Momotaz (2019)	**Country:** Bangladesh, regional sample **Crisis type:** Armed conflict **Context type:** Camp (rural) **Population:** Host community, refugee	**Description:** Mental Health Gap Action Programme training and supervision **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - physicians, psychosocial staff **Part of broader program:** No	**Study design:** Observational (descriptive evaluation) **Study duration:** 4 months **Sample description:** Physicians and counsellors (BA Psychology, social work or sociology) from government facilities and NGOs serving both the refugee and host population **Sample size:** 21 participants at initial training, 19 participants at follow-up (10 new)
Murray (2018)	**Country:** Ethiopia, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** Common elements treatment approach (CETA) **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 13 months **Sample description:** Children between 7-18 years, living in 1 of the 3 identified camps, and elevated symptoms in at least 1 of the following: trauma-related symptoms, externalizing symptoms, internalizing symptoms **Sample size:** 38 children enrolled; 37 children completed

Nayak (2019)	**Country:** Rwanda, regional sample **Crisis type:** Armed conflict **Context type:** Unspecified **Population:** Internally displaced	**Description:** Trauma training of staff on children in unaccompanied children's centres (UCCs) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - individuals with backgrounds in education, social work, and nursing **Part of broader program:** No	**Study design:** Observational (descriptive) **Study duration:** 9 months **Sample description:** Children residing in the UCCs, aged 8-19 years **Sample size:** 888 analysed
Parr (2014)	**Country:** Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (rural) **Population:** Migrant, refugee	**Description:** Efforts to change nuchal cord management during delivery by multi-stage interventions by doctor and registered midwife providing education and clinical support to skilled birth attendants (SBAs) **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - doctor, registered midwife, SBAs **Part of broader program:** Yes	**Study design:** Mixed methods (retrospective cohort study of birth data, knowledge survey and semi-structured interviews with SBAs) **Study duration:** 2 years **Sample description:** Birth records for normal singletons born >= 28 weeks gestation between July 1, 2011 and June 30, 2013; SBAs at study sites **Sample size:** 4,270 births; 5 interviews and 26 knowledge surveys
Rahman (2019)	**Country:** Pakistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** 5 sessions of Group WHO PM+ intervention for women **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 3 months **Sample description:** Women in designated community clusters aged 18-60 years who intended to reside in the catchment area for the next 6 months who score 3 or more on the General Health Questionnaire-12 (GHQ-12) and 17 or more on the WHODAS **Sample size:** 612 enrolled (306 intervention, 306 control); 578 followed up at 3 months (288 intervention, 290 control)

Ratnayake (2016)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Infection prevention and control **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre and lay personnel - HCWs, district health officials, community health officers, and community representatives **Part of broader program:** Yes	**Study design:** Mixed methods **Study duration:** 3 weeks **Sample description:** HCWs surveyed at peripheral health units (PHUs) **Sample size:** 35 HCWs at 8 PHUs
Ratnayake (2021)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Armed conflict, outbreak **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced), internally displaced	**Description:** Integration of non-communicable disease management program within emergency primary care **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 2 years **Sample description:** Patients from Beni region with hypertension and/or diabetes **Sample size:** 788 patients
Saleh (2018a)	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (rural) **Population:** Host community, refugee	**Description:** Screening for diabetes and hypertension using an eHealth netbook application **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** Yes	**Study design:** Observational (descriptive quantitative) **Study duration:** 8 months **Sample description:** Rural Lebanese >40 years living in catchment areas of 8 primary health centres, Palestinian refugees in 3 camps **Sample size:** 3,481 (175 respondents to phone survey)
Saleh (2018b)	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (rural) **Population:** Host community, refugee	**Description:** Phone surveys evaluating use of an eHealth intervention **Implementation site:** Community-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 15 months **Sample description:** Rural Lebanese >40 years living in catchment areas of 8 primary health centres, Palestinian refugees in 3 camps **Sample size:** 1,000 survey respondents

Sangraula (2020)	**Country:** Nepal, regional sample **Crisis type:** Environmental disaster **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** 5 session Group Problem Management Plus (PM+) **Implementation site:** Community-based **Personnel type(s):** Lay personnel - community-based psychosocial workers **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 8-8.5 weeks **Sample description:** Residents of the study Village Development Committees (VDCs) aged >=18 years **Sample size:** 121 enrolled (61 intervention, 60 control); 118 completed (60 intervention, 58 control)
Shultz (2019)	**Country:** Colombia, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Internally displaced	**Description:** 3-stage stepped-care OSITA (Outreach, Screening, and Intervention for Trauma) involving interpersonal psychotherapy (IPC): Step 1: IPC1 session, Step 2: additional IPC1 sessions; Step 3: for women with thoughts of self-harm/suicide to be referred to psychiatric consultation or psychiatric emergency service **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre and lay personnel - government psychosocial professionals, graduate students, and community members **Part of broader program:** No	**Study design:** Observational (descriptive) **Study duration:** 1 year **Sample description:** Women residing in Bogota who self-reported to be displaced victims of armed conflict **Sample size:** 279 enrolled
Sibai (2020)	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural and urban) **Population:** Host community, refugee	**Description:** Multicomponent intervention to advance the level of care and management of hypertension and diabetes at PHC centres, including logistics and technical support of the health centres; human resource development, promotion of good practice in care, and use of basic documentation tools; and empowering patients attending PHCs and catchment area communities **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 6 months **Sample description:** Adults aged 40 years and above with hypertension and/or diabetes **Sample size:** 390 enrolled; 140 analysed

Sion (2015)	**Country:** Democratic Republic of Congo, national sample **Crisis type:** Armed conflict **Context type:** Non-camp **Population:** Emergency affected (non-displaced)	**Description:** District Hospital Surgical Services as part of a Complementary Package of Activities **Implementation site:** Facility-based **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Economic evaluation **Study duration:** 1 month **Sample description:** District hospitals **Sample size:** 12 hospitals
Theocha-ropoulos (2017)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Opening of an Ebola management centre (EMC) to improve geographic accessibility in Tonkolili district **Implementation site:** System-level **Personnel type(s):** Health professional cadre - doctors and nurses **Part of broader program:** Yes - EMC network in the region	**Study design:** Observational (retrospective cohort study) **Study duration:** 7 months **Sample description:** Residents who were confirmed EVD cases referred or admitted to 1 of 3 EMCs **Sample size:** 372 residents presented to an EMC (360 admitted, 12 dead on arrival), 249 admitted patients confirmed as EVD cases, 10 patients dead on arrival confirmed as EVD cases
Tol (2020)	**Country:** Uganda, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** 5 week facilitator-guided, group-based, self-help intervention (Self-Help Plus) **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** 3 months **Sample description:** Female South Sudanese refugees with at least moderate levels of psychological distress (cutoff >=5 on the Kessler 6) **Sample size:** 22 clusters enrolled, 712 individuals enrolled (331 intervention, 363 control); 613 analysed (283 intervention, 330 control)
Tomita (2016)	**Country:** South Africa, regional sample **Crisis type:** Not specified **Context type:** Non-camp (urban) **Population:** Refugee	**Description:** mHealth, use of SMS to assess depressive symptoms among refugees **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Observational (cohort study) **Study duration:** 10 months **Sample description:** Individuals determined by nurse clinician to have a developmental disability or mental impairment **Sample size:** 153 enrolled at baseline, 135 follow-up

Vogt (2015)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Triage algorithm for admitted patients at an Ebola management centre, classifying patients as suspect or highly suspect and admitting to separate wards **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - not specified **Part of broader program:** Yes	**Study design:** Observational (descriptive evaluation) **Study duration:** 3 months **Sample description:** Records from all patients who fulfilled Ebola virus disease case definition and were admitted to the study EMC **Sample size:** 433 admitted patients: 254 highly suspect and 179 suspect
Walker (2015)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Quantitative rapid diagnostic test (RDT) for identification of Ebola virus **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - phlebotomists, local healthcare workers **Part of broader program:** No	**Study design:** Observational (cohort study) **Study duration:** 1 month **Sample description:** Patients admitted to Ebola Holding Units suspected of EVD **Sample size:** 138 enrolled, 131 analysed (both RDT and PCR)

Outcomes of Health Service Delivery Intervention Studies in Humanitarian Crisis Settings, 2013-2021 (n=56)

Author (Year)	Health Outcome(s)	Main Results	Risk of Bias
Al alawneh (2019)	• Frequency of treatment-related problems (TRPs)	**Total TRPs at baseline:** intervention 600 events, control 541 events **Total TRPs at follow-up:** intervention 182 events, control 514 events **% change in # of TRPs at follow-up:** intervention -69.7% (p<0.001), control -5% (p=0.116)	Low
Alkoudsi (2019)	• Change in PCOSQ quality of life (QOL) aggregate and 7-section mean score by country • QOL score differences by country and group type: multivariable regression analysis	**Change in QOL aggregate mean score (SD):** Syria: intervention 17.5 (11.1), control -1.79 (8.85) (p = 0.00); Jordan: intervention 13.5 (12.7), control -2.92 (8.40) (p<0.001) **Change in QOL 7-section mean score (SD):** Syria: intervention 3.49 (2.66), control -0.44 (2.17) (p = 0.00); Jordan: intervention 3.15 (3.03), control -0.79 (2.16) (p<0.001) **QOL score differences:** beta 0.490 (p<0.001)	Low
Al Shdai-fat (2019)	• Pre-knowledge and post-knowledge assessment (mean knowledge test score) • Clinical checklist score • Satisfaction of provider with training	**Mean knowledge test score:** pretest 46%, post-test 81% (p<0.0001) **Clinical checklist score:** Significant increase across all 8 domains of clinical checklist (exact figures not provided) **Satisfaction with training:** 97%	Unclear
Amsalu (2020)	• Composite outcome: proportion of newborns who received essential newborn care practices (skin-to-skin contact, early breastfeeding, dry cord care) • Proportion of newborns who received early initiation of breastfeeding, thermal care (immediate drying, skin-to-skin contact, delayed bathing), clean childbirth practices (visibly clean delivery bed, handwashing and glove wearing by attendant, use of sterile delivery kit, dry cord care)	**(95% CI):** **Odds of receiving 2 or more essential newborn care practices:** 64.5 (15.8-262.6, p<0.001) **Odds of receiving 3 essential newborn care practices:** 220.0 (33.7-1443.0, p<0.001) **Odds of receiving early initiation of breastfeeding:** 10.6 (1.6-69.8, p=0.014) **Odds of receiving thermal care:** 28.4 (8.0-100.9, p<0.001) **Odds of receiving clean childbirth practices:** 11.1 (2.6-46.6, p=0.001) **Knowledge test score:** posttraining to pretraining +11.9% (7.2-16.6, p<0.001), 18-month to post-training +10.9% (4.7-17.0, p<0.001)	Low

	• Health worker knowledge and skills (mean score difference from posttraining to pretraining and 18-month follow-up to posttraining): knowledge test score, accurate completion of partograph, skills in newborn resuscitation with bag and mask	**Accurate completion of partograph:** posttraining to pretraining +68.5% (52.7-84.3, p<0.001), 18-month to posttraining -30.3% (-13.5 to -47.1, p=0.002) **Skills in newborn resuscitation with bag and mask:** posttraining to pretraining +65.1% (53.4-76.7, p<0.001), 18-month to posttraining +0.4% (-6.6 to 7.4, p=0.903)	
Badiuz-zaman (2020)	• Impact of CHTDF on maternal care utilization (fixed effect model): receipt of any antenatal care (ANC), delivery attended by trained birth attendant, delivery at a health facility • Differences in maternal care utilization by experience of conflict, fear of conflict, and ethnicity	**(SE):** **ANC check-up received:** overall 0.18 (0.09, p<0.1), without experience of conflict 0.19 (0.10, p<0.1), with experience of conflict 0.04 (0.20), without fear of conflict 0.16 (0.12), with fear of conflict 0.17 (0.10), Bengali 0.18 (0.12), Indigenous 0.24 (0.13, p<0.1) **Delivery attended by trained provider:** overall 0.16 (0.15), without experience of conflict 0.10 (0.18), with experience of conflict 0.44 (0.14, p<0.05), without fear of conflict 0.40 (0.19, p<0.1), with fear of conflict -0.01 (0.13), Bengali 0.17 (0.24), Indigenous 0.15 (0.16) **Delivery at a health facility:** overall 0.23 (0.08, p<0.01), without experience of conflict 0.26 (0.09, p<0.01), with experience of conflict 0.23 (0.10, p<0.05), without fear of conflict 0.37 (0.12, p<0.01), with fear of conflict 0.11 (0.06, p<0.1), Bengali 0.18 (0.14), Indigenous 0.24 (0.12, p<0.1)	Unclear
Bass (2016)	• Depressive symptoms measured with the adapted Hopkins Symptom Checklist (HSCL-25) • Dysfunction, based on a series of tasks and activities and rated on a Likert scale from 0-4 • Post-traumatic stress measured with the Harvard Trauma Questionnaire (HTQ) • Traumatic grief measured with the Inventory of Traumatic Grief	**Adjusted net effect score (SD):** **Depressive symptoms:** -0.22(-0.39 to -0.04, p=0.02, effect size 0.57) **Dysfunction:** -0.39 (-0.74 to -0.03, p=0.03, effect size 0.53) **Anxiety:** -0.19(-0.35 to -0.04, p=0.01, effect size 0.41) **HTQ:** -0.13(-0.27 to 0.01, p=0.07, effect size 0.35) **Traumatic Grief:** -0.11(-0.24 to 0.02, p=0.08, effect size 0.26)	Unclear
Bekolo (2017)	• Attrition from care	**Attrition from care:** control 10.6%, intervention 4.9% (adjusted hazard ratio 0.40, 95% CI 0.27-0.59, p<0.001)	Low

Bernasco-ni (2019)	• Danger signs of illness assessed for during consultation	**Danger signs assessed for during consultation:** baseline 37.1%, endline 60% (95% CI 53.6-66) (p<0.01)	Unclear
Bolton (2014)	• Depression measured with the Hopkins Symptom Checklist 25 (range 0-3) • Post-traumatic severity symptoms measured with the Harvard Trauma Questionnaire (range 0-3) • Functional impairment measured with a locally developed scale (range 0-4) • Anxiety symptoms measured with the HSCL-25 anxiety subscale (range 0-4) • Aggression measured with the 12-item Aggression Questionnaire (range 0-4)	**Adjusted net difference (95% CI):** **Depression:** -0.49 (-0.59 to -0.40, p<0.001, effect size 1.16) **PTS:** -0.43 (-0.51 to -0.35, p<0.001, effect size 1.19) **Functional impairment:** -0.44 (-0.59 to -0.28, p<0.001, effect size 0.63) **Anxiety:** -0.48 (-0.61 to -0.34, p<0.001, effect size 0.79) **Aggression:** -0.24 (-0.34 to -0.15, p<0.001, effect size 0.58)	Unclear
Bruno (2019)	• Stigmatizing behaviour towards people with mental illness measured by the Reported and Intended Behavior Scale (RIBS)	**RIBS:** intervention 14.53, control 13.44 (p<0.001)	Unclear
Chamla (2018)	• bOPV and IPV vaccination coverage, with comparison of LGAs with and without integration of nutrition screening • Nutrition screening: overall and by LGA • Proportion of children screened found to have Severe Acute Malnutrition (SAM) • Proportion of SAM cases enrolled in treatment	**Vaccination coverage:** bOPV 98%, IPV 91% (LGAs with and without nutrition screening OR 0.85, 95% CI 0.55-1.29, p=0.42) **Nutrition screening:** overall 48.5%, Jere 56.6%, Konduga 22.8%, Mafa 80.0%, Maiduguri 47.1% **Proportion of children screened with SAM:** overall 3.7%, Jere 4.0%, Konduga 5.5%, Mafa 8.5%, Maiduguri 2.6% **Proportion of SAM cases enrolled in treatment:** overall 47.5%, Jere 34.9%, Konduga no data, Mafa 31.6%, Maiduguri 68.8%	Unclear

Corna (2019)	• General mental health by mini-mental state examination (MMSE) • Self-esteem by Rosenberg's Self-Esteem scale • Depression by Center of Epidemiologic Studies Depression Scale (CES-D; subdomains include depressed mood, guilt/worthlessness, helplessness/hopelessness, lethargy/fatigue, loss of appetite and sleep disturbance) • Caregiver skills by Knowledge Attitude Practices Questionnaire: self-care during pregnancy, pregnancy and delivery care, feeding practices and newborn care, access to resources for care, child development and psychosocial stimulation	**Mean difference by camp (95% CI):** **MMSE:** Kutupalong 21.5 (20.3-22.4, p<0.001), Nayapara 23.1 (21.8-24.4, p<0.001) **Self-esteem:** Kutupalong 2.8 (1.5-4.2, p<0.001), Nayapara 1.5 (0.5-2.5, p<0.001) **Depression:** Kutupalong -9.9 (-15.4 to -4.4, p<0.001), Nayapara -0.7 (-6.0 to 4.5) **Self-care:** Kutupalong 6.1 (5.6-6.7, p<0.001), Nayapara 2.8 (2.3-3.4, p<0.001) **Pregnancy and delivery care:** Kutupalong 8.4 (7.5-9.2, p<0.001), Nayapara 5.4 (4.5-6.3, p<0.001) **Feeding practices and newborn care:** Kutupalong 2.0 (1.6-2.4, p<0.001), Nayapara 2.5 (2.1-2.9, p<0.001) **Resources for care:** Kutupalong 0.4 (-0.1 to 0.7), Nayapara 0.45 (0.2-0.8, p<0.01) **Child development and psychosocial stimulation:** Kutupalong 8.4 (5.4-11.3, p<0.001), Nayapara 10.7 (7.6-13.9, p<0.001)	Moderate
Coskun (2020)	• Detection rate, by diagnostic test • Cost per test (in New Turkish Lira), by diagnostic test • Total cost (in New Turkish Lira), by diagnostic test	**Detection rate:** CMV blood test 35-74%, Toxoplasma gondii blood test 35-74%, Rubella blood test 35-74%, IgG avidity test 80%, amniocentesis 100%, PCR-DNA and RT-PCR test 92-98% **Cost per test:** CMV blood test 7.13, Toxoplasma gondii blood test 7.13, Rubella blood test 7.13, IgG avidity test 16, amniocentesis 67.7, PCR-DNA and RT-PCR test 90 **Total cost:** overall 400,563.28, CMV blood test 121,423.9, Toxoplasma gondii blood test 132,931.72, Rubella blood test 139,092.04, IgG avidity test 4,816, amniocentesis 1,489.62, PCR-DNA and RT-PCR test 810	High
Deboutte (2013)	• Incremental cost of C-section (CS) delivery • Health-adjusted life expectancy (HALE) gained • Incremental cost effectiveness ratio (ICER): C-section cost per year of HALE gained	**Incremental CS cost, in USD:** mission hospital 14,359, government hospital 11,371 **HALE gained:** overall lower estimate 11,285 and higher estimate 36,604 years, NGO hospital higher estimate 27,453 years **ICER at NGO hospital, in USD:** lower estimate 9.2, higher estimate 3.8	Moderate

Devine (2017)	• Total cost • Incremental cost • Total infections • Infections averted • Incremental cost effectiveness ratio (ICER)	**Total cost, in USD:** vaccine only 21,673.15, HBIG after RDT 47,477.10, HBIG after confirmatory test 40,553.86 **Incremental cost, in USD**: HBIG after RDT 25,803.95, HBIG after confirmatory test -- **Total infections:** vaccine only 64, HBIG after RDT 28, HBIG after confirmatory test 41 **Infections averted:** HBIG after RDT 36, HBIG after confirmatory test -- **Incremental cost effectiveness ratio (ICER):** HBIG after RDT 716.78, HBIG after confirmatory test extended dominance	Low
Dhital (2019)	• PTSD symptoms measured with the Child PTSD Symptom Scale (range 0-52) • Depression symptoms measured with the Self-Rating Scale (range 0-36) • Hope measured with the Children's Hope Scale (range 1-36)	**Adjusted effect size (95% CI):** **PTSD symptoms:** 0.33 (-0.71 to 1.37, p=0.536) **Depression symptoms:** 0.30 (-0.21 to 0.80, p=0.249) **Hope:** -0.23 (-1.07 to 0.61, p=0.588)	High
Djimeu (2014)	• Height-for-age Z- scores (HAZ)	**Average treatment effect of ASAF on HAZ (SE):** FEM 0.3255 (0.037, p<0.01), PSM 0.335 (0.155, p<0.05), WLS 0.28445 (0.046, p<0.01)	Unclear
Dozio (2021)	• Overall wellbeing (WHO-5) • Posttraumatic symptoms measured with the Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5; range 0-80) • Functional impairment (WHODAS 2.0) • Problems measured with the Psychological Outcome Profiles (PSYCHLOPS; range <20)	**WHO-5**: baseline to endline change -10.73 (p<0.001), baseline to post-intervention change -10.13 (p<0.001) **PCL-5:** baseline to endline change +27.84 (p<0.001), baseline to post-intervention change +27.11 (p<0.001) **WHODAS:** baseline to endline change +17.43 (p<0.001), baseline to post-intervention change +16.63 (p<0.001) **PSYCHLOPS:** baseline to endline change +8.17 (p<0.001), baseline to post-intervention change +6.64 (p<0.001)	Moderate

Draiko (2021)	• Incidence of neonatal umbilical cord infection rate: crude odds ratio • Incidence of cord infections by severity • Neonatal mortality: crude odds ratio • Proportion of women who deliver in a facility: crude odds ratio	**(95% CI):** **Cord infections**: 3.03 (2.45-3.76, p=0.000) **Signs of cord infection:** Mild redness - intervention 39.4%, control 32.8%; moderate redness - intervention 24.6%, control 24.2%; severe redness - intervention 9.1%, control 15.7%; presence of pus - intervention 3.4%, control 17.9%; pain at the cord - intervention 23.4%, control 9.4% **All neonatal deaths:** 2.16 (1.10-4.22, p=0.022) **Place of delivery:** 1.29 (1.03-1.64, p=0.028)	Moderate
Edmond (2018)	• Proportion of women delivering in a health facility: difference-in-differences • Proportion of women who attended at least 1 antenatal care (ANC) and 1 postnatal care (PNC) visit with a skilled healthcare provider: difference-in-differences	**Proportion of women who (95% CI):** **Delivered in a health facility:** 10.97% (4.0-18.0, p=0.002) **A**ttended at least 1 ANC visit with a skilled healthcare provider: 10.54 (4.2-16.9, p=0.001) **A**ttended at least 1 PNC visit with a skilled healthcare provider: 7.20 (0.2-14.2, p=0.04)	Unclear
Edmond (2020)	District service provision: • Proportion of pregnant women who were recorded in HMIS as having received at least 1 antenatal care (ANC) visit • Proportion of children under 1 year who received their first measles vaccine • Proportion of children under 5 years who received at least 1 integrated management of childhood illness (IMCI) service for diarrhoea or pneumonia • Proportion of postpartum women who received at least 1 postnatal care (PNC) visit • Proportion of pregnant women who delivered at a health facility • Proportion of pregnant women who received a tetanus toxoid vaccine • Proportion of children under 1 year who received their 3rd pentavalent vaccine	**Mean difference between intervention and control districts (95% CI):** **Proportion of pregnant women receiving >= 1 ANC visit:** 14.84 (1.66-28.01, p=0.03) **Proportion of children under 1 who received their first measles vaccine:** 12.78 (2.08-23.48, p=0.02) **Proportion of children under 5 who received at least 1 IMCI service for diarrhoea or pneumonia:** 10.34 (1.40-19.27, p=0.02) **Proportion of postpartum women receiving >= 1 PNC visit:** 2.79 (-5.11 to 10.70, p=0.48) **Proportion of pregnant women who delivered at a health facility:** 13.53 (-0.57 to 27.63, p=0.06) **Proportion of pregnant women who received a tetanus toxoid vaccine:** 14.48 (0.11-28.84, p=0.04) **Proportion of children under 1 who received their 3rd pentavalent vaccine**: 7.55 (-4.20 to 19.30, p=0.20) **Mean # of ANC visits:** 41.32 (-52.46 to 135.11, p=0.37) **Mean # of tetanus toxoid vaccines for pregnant women:** 82.01 (-38.69 to 202.71, p=0.18)	Low

	Clinic service provision: • Mean # of ANC visits per clinic • Mean # of tetanus toxoid vaccines for pregnant women • Mean # of facility deliveries • Mean # of PNC visits per clinic • Mean # of 3rd pentavalent vaccines for children under 1 year • Mean # of measles vaccines for children under 1 year • Mean # of IMCI visits for diarrhoea or pneumonia for children under 5 years	**Mean # of facility deliveries:** 119.35 (-9.48 to 248.19, p=0.07) **Mean # of PNC visits:** 10.68 (-33.12 to 54.49, p=0.63) **Mean # of 3rd pentavalent vaccines for children under 1 year:** -74.14 (-13.52 to 161.8, p=0.10) **Mean # of measles vaccines for children under 1 year:** -83.79 (-1.44 to 169.03, p=0.05) **Mean # of IMCI visits for diarrhoea or pneumonia for children under 5 years:** 280.95 (-40.11 to 602.00, p=0.09)	
Foster (2017)	• Proportion of women not pregnant at follow-up • Occurrence of complications in women who were not pregnant at follow-up • Pregnancy outcomes for women who remained pregnant at follow-up	**Proportion of women not pregnant at follow-up:** 96.4% **Occurrence of complications in women who were not pregnant at follow-up:** 0% **Pregnancy outcomes for women who remained pregnant at follow-up:** 3.2% pregnant at follow-up: 2.6% had a live birth, 0.2% received medication abortion elsewhere, 0.3% had ectopic pregnancies	Low
Gallagher (2019)	• Overall # of PAC clients • Mode of treatment: sharp dilation and curettage (D&C), manual vacuum aspiration (MVA), medical treatment with misoprostol (miso) • Proportion of PAC clients who chose a method of contraception prior to leaving the facility • Contraceptive method mix among clients choosing a method: implant, injectable, intrauterine device (IUD), pills, long-acting reversible contraceptive (LARC)	**Overall # of PAC clients:** baseline 1,413 (812 DRC, 11 Somalia, 590 Yemen); endline 3,640 (1,412 DRC, 1,065 Somalia, 1,163 Yemen) **Mode of treatment:** DRC: D&C baseline 18%, endline 3% (p<0.001); MVA baseline 69%, endline 95%; miso baseline 12%, endline 2%. Yemen: D&C baseline 25%, endline 3% (p<0.001); MVA baseline 69%, endline 87%; miso baseline 6%, endline 11%. **Proportion of PAC clients who chose a method of contraception prior to leaving the facility:** DRC baseline 42%, endline 70% (p<0.001), Yemen baseline 17%, endline 38% (p=0.002), Somalia baseline 64%, endline 82% (p not provided, not statistically significant) **Contraceptive method mix among clients choosing a method:** DRC: implant baseline 52%, endline 38%; injectable baseline 26%, endline 22%; IUD baseline 7%, endline 32%; pills baseline 15%, endline 8%, LARCs baseline 59%, endline 70% (p=0.02).	Unclear

		Somalia: implant baseline 0%, endline 18%; injectable baseline 14%, endline 29%; IUD baseline 14%, endline 6%; pills baseline 72%, endline 47%, LARCs baseline 14%, endline 24%. Yemen: implant baseline 1%, endline 9%; injectable baseline 16%, endline 6%; IUD baseline 0%, endline 6%; pills baseline 83%, endline 79%, LARCs baseline 1%, endline 15% (p=0.004)	
Gormez (2017)	• Post traumatic stress reactions measured by the Child Post-Traumatic Stress - Reaction Index (CPTS-RI; subdomains: intrusion, avoidance, arousal) • Anxiety-related psychopathologies measured by the Spence Children's Anxiety Scale (SCAS) • Strengths, emotional difficulties and behavioural problems measured by the Strengths and Difficulties questionnaire (SDQ)	**(SD):** **CPTS-RI Total:** pre-test 23.90 (12.76), post-test 17.63 (13.64) (p=0.011) **SCAS Total:** pre-test 53.29 (13.78), post-test 40.38 (20.59) (p=0.001) **SDQ Total:** pre-test 18.77 (4.28), post-test 16.81 (5.41) (p=0.021)	Unclear
Hamdani (2020)	• Hospital Anxiety and Depression Scale (HADS range: 0-21; higher scores indicate elevated anxiety or depression) • World Health Organization Disability Assessment Schedule 2.0 (WHO DAS, 12-item version, range: 0-48; higher scores indicate more severe impairment) • Depression caseness, defined as a Patient Health Questionnaire score >=10	**(95% CI):** **HADS:** ICER for treatment with international specialist supervisor PKR 2,957.45 (2,261.64-4,029.00); with local supervisor PKR 588.82 (434.01-820.27) **WHO DAS:** ICER for treatment with international specialist supervisor PKR 4,096.51 (2978.13-6,045.66); with local supervisor PKR 815.89 (575.80-1,225.10) **Depression caseness:** ICER for treatment with international specialist supervisor PKR 53,759.91 (39,393.57-77,398.62); with local supervisor PKR 10,705.35 (7,730.95-15,627)	Unclear
Hashmi (2019)	• Proportion of exclusively breastfed infants • Handwashing among mothers who had prepared the family meal the day prior to interview • Adequate dietary diversity • Appropriate meal amount • Minimum acceptable diet • Safe disposal of infant stool	**All months refer to age of infant** **Proportion of exclusively breastfed infants:** 3 months 42%, 5 months 65% **Handwashing among mothers who had prepared the family meal the day prior to interview:** 3 months 94%, 6 months 100%, 9 months 100% **Adequate dietary diversity:** 6 months 5%, 8 months 58%, 9 months 90% **Appropriate meal amount:** 6 months 10%, 9 months 100% **Minimum acceptable diet:** 6 months 0%, 8 months 47%, 9 months 90% **Safe disposal of infant stool:** 6 months 16%, 9 months 100%	High

Istepanian (2014)	• HbA1C levels	**HbA1C levels, mean (SD):** pre-test intervention 8.85 (0.73), control 8.95 (2.17); post-test intervention 8.05 (1.31, p=0.115), control 8.7 (1.7, p=0.448)	Unclear
Jachetti (2019)	• Intra-hospital mortality: adjusted odds ratio • Early mortality: adjusted odds ratio • Hospital length of stay	**Intra-hospital mortality (95% CI):** 0.32 (0.12-0.84) **Early mortality (95% CI):** 1.5 (0.2-20) **Median length of hospital stay (IQR):** before group 8 days (4-9), after group 6 days (6-12) (p=0.02)	Low
Kayali (2019)	• HbA1C • Proportion with HbA1C<8% • Proportion with BP<140/90 mmHg	**Mean HbA1C (SD):** Type 1 DM baseline 9.3 (1.8), 6 months 8.4 (1.4, p=0.022); Type 2 DM baseline 9.4 (2.5), 6 months 8.1 (1.8, p=0.001); DM+HTN baseline 9.0 (2.0), 6 months 7.7 (1.6, p=0.003) **Proportion with HbA1C<8%:** Type 1 DM baseline 20%, 6 months 55% (p=0.016); Type 2 DM baseline 35%, 6 months 65% (p=0.016); DM+HTN baseline 32%, 6 months 64% (p=0.039) **Proportion with BP<140/90 mmHg:** HTN only baseline 27%, 6 months 49% (p<0.001); HTN+DM baseline 36%, 6 months 52% (p=0.006)	Low
Kersten (2013)	• Mean structural quality for all assessed areas (Donabedian's criteria of quality of care) • Process quality (observational structured checklist) • Overall mortality rate	**(SD):** **Mean structural quality for all assessed areas:** 73% (7) of expected performance level (EPL) **Mean process quality:** 59% EPL (9) **Process quality for:** supportive depts (lab & pharmacy) 86% (18) of EPL; general nursing care procedures 54% (7); hygiene procedures 41% (11) of EPL **Overall mortality rate:** 3.6% (2011)	Unclear
Khan (2017)	• Help-seeking for psychological distress by pregnant women • Psychological distress measured by the Self-Reporting Questionnaire (SRQ) at endline • Social support measured by the Multidimensional Scale of Perceived Social Support (MSPSS) at endline	**Help-seeking for psychological distress by pregnant women:** intervention 71%, control 46% (p=0.036) **SRQ score (SD):** intervention 5.35 (3.29), control 6.43 (3.73) (p=0.20) **MSPSS score (SD):** intervention 57.15 (19.11), control 57.11 (14.28) (p=0.992)	Moderate

Khan (2019)	• Individual psychological distress, measured by levels of anxiety and depression on the Hospital Anxiety and Depression Scale (HADS-A, HADS-D) at 7th week after baseline. • PTSD assessed using the PTSD Checklist for DSM-5 (PCL-5) • Depressive Disorder was assessed with the Patient Health Questionnaire (PHQ-9) • General psychological profile determined with the PSYCHLOPS • Levels of functioning and generalized psychological distress measured with WHO Disability Assessment Schedule (WHODAS)	**(95% CI):** **Combined HADS-A and HADS-D:** -4.65 (-7.35 to -1.95, p=0.0009) H**ADS-A:** -2.62 (-4.37 to -0.86, p=0.0039) HADS-D -2.48 (-4.00 to -0.96, p=0.0016) **PCL:** -2.79 (-9.51 to 3.94, p=0.4128) **PHQ:** -1.06 (-3.59 to 1.48, p=0.4112) **PSYCHLOPS:** -4.49 (-6.41 to -2.58, p<0.0001) **WHODAS:** -5.37 (-8.97 to -1.76, p=0.0040)	Unclear
Khoja (2016)	• Improvement in awareness of mental health • Reduction in stigma	**% correct response (odds ratio):** **Mental health conditions are treatable:** intervention 94%, control 86% (2.52, p=0.0027) **Symptoms of depression:** intervention 90%, control 73% (2.17, p<0.0001) **Use of drugs and alcohol can be signs of depression:** intervention 88%, control 78% (2.03, p=0.0027) **Denied that myths of jins, jadu, or "wrath of God" is the cause of psychosis:** intervention 68%, control 27% (5.66, p=0.0001) **Questions regarding signs of psychosis:** intervention 64%, control 55% (1.56, p<0.0001) **Past traumatic events may be the cause of PTSD:** intervention 77%, control 53% (2.99, p=0.0001) **Awareness regarding PTSD is extremely important:** intervention 83%, control 58% (3.41, p=0.0001) **Disagreed that mental health patients are largely to blame for their own condition:** intervention 93%, control 85% (2.33, p=0.003) **People should be very caring and kind to patients with mental health problems:** intervention 92%, control 80% (2.76, p=0.0001)	Unclear

Knaev-elsrud (2015)	• Posttraumatic Stress symptoms measured with the Posttraumatic Stress Diagnostic Scale (PDS) • Depression and Anxiety measured with the Hopkins Symptom Checklist (HSCL-25) • Somatization measured with the Symptom Checklist-90-Revised (SCL-90-R) • Quality of life measured with the EUROHIS-QOL	**PDS:** intrusion $F(1,157)$ 30.74 ($p<0.001$, $d=0.72$); avoidance $F(1,157)$ 34.26 ($p<0.001$, $d=0.92$); hyperarousal $F(1,157)$ 28.58 ($p<0.001$, $d=0.68$), total score $F(1,157)$ 44.29 ($p<0.001$, $d=0.92$) **HSCL-25:** anxiety $F(1,157)$ 28.30 ($p<0.001$, $d=0.79$); depression $F(1,157)$ 40.66 ($p<0.001$, $d=1.03$) **SCL:** $F(1,157)$ 11.68 ($p<0.001$, $d=0.56$) **EUROHIS:** $F(1,157)$ 44.20 ($p<0.001$, $d=0.84$)	Moderate
Leichner (2021)	• Changes in healthcare provider knowledge and skills measured by a Perceived Competency Checklist (PCC), Assessment of Clinical Expertise (ACE), and Enhancing Assessment of Common Therapeutic Factors (ENACT-18), by participant type • Service user outcomes including improved functioning and satisfaction with services	**PCC (95% CI):** psychosocial counsellors +0.44 (-0.11 to 0.77), non-prescriber +0.37 (0.37-0.37), prescriber +1.41 (1.27-1.55) **ACE (95% CI):** psychosocial counsellors +0.65 (0.34-0.97), non-prescribers +0.46 (0.37-0.56), prescribers +0.12 (0.07-0.18) **ENACT-18 (95% CI):** Psychosocial counsellors +13.64 (8.47-18.8), non-prescribers +7.74 (6.97-10.37), prescribers +8.53 (6.35-10.72) **Improved functioning:** 57% **User satisfaction:** Completely satisfied 67%, somewhat satisfied 31%, unsatisfied 2%	Unclear
Malla (2019)	• Changes in patients' symptoms and functionality using the Global Assessment of Functioning (GAF) scale and Indian Disability Evaluation and Assessment Scale (IDEAS)	**F (df):** **GAF scale:** 104.729 (3.449, $p=0.001$) **IDEAS:** 4.364 (1.806, $p=0.016$)	Unclear
Mattheß (2019)	• Changes in PTSD symptoms measured with the Harvard Trauma Questionnaire (HTQ)	**PTSD (95% CI):** DSM-V 3.03 (2.83-3.22), $t(196)=30.62$ ($p<0.001$), $r=0.91$, Hedges's $g(av)=3.08$ (2.88-3.27); ICD-11 2.46 (2.32-2.60), $t(163)=34.36$ ($p<0.001$), $r=0.937$, Hedges's $g(av)=3.78$ (3.60-3.99)	Unclear

Mesic (2020)	• Regimen choice: short-term regimen (STR) or individualized long regimen • Treatment tolerability: adverse events (AE) • Treatment outcome by regimen	**Regimen choice:** STR 36.6%, individualized 63.4% **Treatment tolerability:** >=1 AE: STR 36.6%, individualized 44.3% (p=0.46); unfavourable treatment outcome: patients with AE 26.1%, patients without AE 73.9% (p=0.01) **Treatment Outcome:** 4 month smear conversion STR 96.6%, individualized 97.9%; 6 month smear conversion STR 100%, individualized 97.9% (smear conversion p=0.34); 4 month culture conversion STR 84.6%, individualized 88.1%; 6 month culture conversion STR 96.2%, individualized 97.6% (culture conversion p=0.77); adjusted hazard ratio 1.14 (95% CI 0.42-3.06, p=0.79)	Low
Momotaz (2019)	• Quality of training: scale 1-5 • Confidence in applying training to their work	**Quality of training:** average score for all aspects of training 3.5, average score of trainers 4.9 **Confidence in applying training to their work:** 76% felt very confident	Unclear
Murray (2018)	• Changes in internalizing symptoms measured with the Achenbach Child Behavior Checklist (CBCL/YSR) • Changes in externalizing symptoms measured with the CBCL/YSR • Changes in trauma symptoms measured with the Child Post Traumatic Stress Disorder Symptom Scale-Interview Format (CPSS-I) • Changes in child well-being measured with the Orphans and Vulnerable Children Wellbeing Tool	**(SD):** **Internalizing symptoms:** children pre: 25.73 (1.97), post 7.76 (1.66); caregivers pre 12, post 3 (z=4.965, p<0.001, effect size 0.85) **Externalizing symptoms:** children pre 7.5, post 1 (z=4.958, p<0.001, effect size 0.85); caregivers pre 7, post 2 (z=4.625, p<0.001, effect size 0.82) CPSS-I: children pre 20.83 (8.69), post 5.56 (5.89) (t(36)=10.38, p<0.001, effect size 1.71); caregivers pre 11, post 4 (z=5.168, p<0.001, effect size 0.76) **Wellbeing:** children pre 47.48 (15.98), post 62.72 (15.34) (t=-4.58, p<0.001, effect size 0.75)	Unclear
Nayak (2019)	• PTSD Symptoms by a structured checklist of DSM-IV posttraumatic stress symptoms (PTSS Scale) including subdomains of re-experiencing, avoidance/numbing, and hypervigilance	**B(SE):** **PTSD:** model 1 0.06 (0.05), beta=0.04 (p=0.242); model 2 -0.01 (0.07), beta=-0.01 (p=0.860) **Re-experiencing:** 0.18 (0.12), beta=0.05 (p=0.144) **Avoidance/numbing:** 0.10 (0.14), beta=0.03 (p=0.477) **Hypervigilance:** 0.15 (0.11), beta=0.05 (p=0.175)	Unclear

| Parr (2014) | • Rate of umbilical cord ligation
• Proportion of cord ligation rates before and after arrival of midwife
• Maternal and neonatal outcomes before and after arrival of midwife: birthweight in grams, mean estimated gestational age in weeks, 1 minute and 5 minute Apgar scores, proportion of 5-minute Apgars less than 7, newborn resuscitation percentage, postpartum haemorrhage, episiotomy
• Proportion of correct answers given by SBAs on knowledge survey | **Rate of umbilical cord ligation:** quarter 1 15.9%, quarter 2 11.1%, quarter 3 2.4%, quarter 4 0.9%
Proportion of cord ligation rates before and after arrival of midwife, by clinic site: Maela before 15.3%, after 1.0%; Wang Pha before 10.6%, after 1.9%; Maw Ker Thai before 13.7%, after 3.0%
Maternal and neonatal outcomes before and after arrival of midwife (SD): birthweight before 2979 (437), after 2989 (429); mean estimated gestational age: before 39.1 (1.5), after 39.1 (1.4); shoulder dystocia before 0.1%, after 0.1%; Apgar (1 minute), median: before 9, after 9; Apgar (5 minute), median: before 10, after 10; proportion of 5-minute Apgar less than 7: before 0.8%, after 0.8%; newborn resuscitation: before 2.8%, after 1.6%; postpartum haemorrhage: before 8.3%, after 6.5%; episiotomy %: before 5.1%, after 5.2%
Proportion of correct answers given by SBAs on knowledge survey: proportion of infants born with nuchal cord: 61.5; presence of fetal nuchal cord is harmful to the infant: 16.7; can cause fetal distress in 2nd labour: 92.3; clamping and cutting of the fetal nuchal cord before birth is a dangerous practice: 84.6; clamping and cutting of the fetal nuchal cord before birth is associated with fetal anaemia: 83.3; clamping and cutting of the fetal nuchal cord before birth is associated with fetal shock and hypovolemia: 38.5; clamping and cutting of the fetal nuchal cord before birth is associated with HIE especially with shoulder dystocia: 88.5 | Unclear |
| Rahman (2019) | • Individual-level combined symptom score of anxiety and depression difference measured with the Hospital Anxiety and Depression Scale (HADS)
• PTSD Symptoms difference measured with the Posttraumatic Stress Disorder Checklist (PCL-5)
• Functional impairment difference by the WHO Disability Assessment Schedule (WHODAS 2.0)
• Problems for which the person initially sought help difference by the Psychological Outcomes Profile Instrument (PSYCHLOPS)
• Perceived social support difference by the Multidimensional Scale of Perceived Social Support (MSPSS) | **Post-treatment and 3 month follow-up (95% CI):**
HADS Total: post -6.30 (-8.89 to -3.70, $p<0.0001$, effect size 0.77), follow-up -4.53 (-7.13 to -1.92, p=0.0007, effect size 0.58)
PCL-5: post -3.44 (-6.15 to -0.73, p=0.013, effect size 0.39), follow-up -2.16 (-4.88 to 0.56, p=0.12, effect size 0.28)
WHODAS: post -4.67 (-7.15 to -2.19, p=0.0002, effect size 0.65), follow-up -2.90 (-5.39 to -0.42, p=0.022, effect size 0.41)
PSYCHLOPS: post -3.84 (-5.49 to -2.19, $p<0.0001$, effect size 0.86), follow-up -2.07 (-3.73 to -9.41, p=0.015, effect size 0.37)
MSPSS: post 3.47 (-1.33 to 8.28, p=0.16, effect size 0.20), follow-up 1.96 (-2.87 to 6.78, p=0.43, effect size 0.11)
PHQ-9: post -3.67 (-5.15 to -2.19, $p<0.0001$, effect size 0.75), follow-up -1.67 (-3.16 to -0.19, p=0.027, effect size 0.38) | Low |

	• Prevalence of depressive disorders difference by the Patient Health Questionnaire (PHQ-9)		
Ratnayake (2016)	• Proportion of correct IPC behaviours within the domains of pre-screening, donning, screening, doffing and consultation	**Baseline to follow-up risk ratio (95% CI):** **Pre-screening:** Patient went directly, or HCW-directed patient, to screening area: 0.53 (0.37-0.77) Attendant washed hands: 0 Screener asked patient to wash hands: 1.45 (1.16-1.80) Patient washed hands on direction from HCW: 1.49 (1.19-1.86) Patient washed hands directly or washed on direction from HCW: 1.27 (0.95-1.71) **Donning:** Wore rubber boots or covers: 1.51 (1.14-1.99) Wore face shield or mask: 1.27 (1.03-1.58) Completed in correct order: 8.94 (0.84-95.61) Took off /did not wear jewellery: 0.83 (0.72-0.97) Wore new gloves: 2.56 (1.37-4.79) Continued to wear gloves: 0.75 (0.6-0.94) **Screening:** No other HCWs were in screening area: 2.54 (0.69-1.07) Stood 1.5 m from patient: 4.09 (0.83-1.48) Sat sideways to patient: 2.3 (1.34-3.95) Held digital thermometer 5-6 cm from patient: 0.23 (0.12-0.43) **Doffing:** Removed any light PPE: 2.54 (1.32-4.88) Removed gloves: 4.09 (1.34-12.49) Washed gloved or ungloved hands: 2.58 (1.0-6.66) Removed face shield or goggles: 0.21 (0.05-0.94) Completed in correct order: 6.64 (2.09-21.14) **Consultations:** Washed hands before treating patient: 0.63 (0.18-2.21) Washed hands after treating patient: 0.91 (0.5-1.65) Put on new gloves before treating patient: 0.97 (0.85-1.1) Did not remove gloves after treating patient: 1.51 (0.55-4.12) Stood 1.5 m from patient: 1.18 (0.92-1.51)	Unclear

Ratnayake (2021)	• # of consultations for hypertension and diabetes: incidence rate ratio • Treatment adherence	**# of consultations (95% CI):** HTN 13.5 (5.8-31.5, p=0.00); diabetes 3.6 (1-12.9, p=0.046) **Treatment adherence:** HTN attended at least 2 visits 45.4%, remained in care 33.9%; diabetes attended at least 2 visits 55.3%, remained in care 50%; HTN+diabetes attended at least 2 visits 82.1%, remained in care 56%	High
Saleh (2018a)	• Diabetes and hypertension detection rates per 100,000	**Diabetes:** overall 183.56 total, 10.34 suspected, 173.23 pre-diagnosed; rural 191.27 total, 11.21 suspected, 180.06 pre-diagnosed; refugee camps 161.25 total, 7.84 suspected, 153.42 pre-diagnosed (rural compared to camp total p=0.046, suspected p=0.391, pre-diagnosed p=0.070) **Hypertension:** overall 355.93 total, 87.33 suspected, 268.6 pre-diagnosed; rural 350.46 total, 91.58 suspected, 258.89 pre-diagnosed; refugee camps 371.78 total, 75.03 suspected, 296.75 pre-diagnosed (rural compared to camp total p=0.233, suspected p=0.131, pre-diagnosed p=0.028) **Diabetes and hypertension comorbidity:** overall 112.61 total, 2.59 suspected, 110.03 pre-diagnosed; rural 117.85 total, 2.7 suspected, 115.15 pre-diagnosed; refugee camps 97.42 total, 2.24 suspected, 95.19 pre-diagnosed (rural compared to camp total p=0.096, suspected p=0.813, pre-diagnosed p=0.1)	Moderate
Saleh (2018b)	• Survey participants' views on eSahha SMSs	**Easiness:** SMSs are easy/very easy to understand 93.9% **Usefulness:** SMSs are useful/very useful 93.9% **Application:** SMSs are applied most of the times/always in daily life 76.9%	Moderate
Sangraula (2020)	• Change in symptoms of depression by the Patient Health Questionnaire (PHQ-9) pretest and posttest • Daily Functioning assessed with the WHO Disability Assessment Schedule (WHODAS; range 12-60) • General psychological distress by the General Health Questionnaire (GHQ-12; range 0-36)	**Mean (SD)	Intracluster correlation coefficient (95% CI):** **PHQ-9:** intervention -3.5 (4.8), control -1.6 (3.4); ICC baseline 0.12 (0.03-0.41), endline – **WHODAS:** intervention -9.4 (8.4), control -5.2 (6.7); ICC baseline 0.10 (0.01-0.59), endline 0.09 (0.01-0.62) **GHQ-12:** intervention -12.3 (7.5), control -3.7 (7.0); ICC baseline 0.16 (0.02-0.62), endline 0.06 (0.00-0.75)	Low

	• Posttraumatic Stress Disorder Checklist DSM-5 (PCL-5; range 8-40) • Psychosocial Mental Health Problems (PMHP; range 5-20) • Connectedness with family and friends by the Multidimensional Scale of Perceived Social Support (MSPSS; range 12-60) • Coping strategies by the Reducing Tension Checklist (RTC; range 0-40)	**PCL-5:** intervention -2.7 (7.0), control -1.3 (5.6); ICC baseline 0.21 (0.08-0.45), endline – **PMHP:** intervention -1.0 (2.8), control -0.1 (2.7); ICC baseline 0.16 (0.05-0.41), endline 0.03 (0.00-0.97) **MSPSS:** intervention 0.9 (7.5), control -0.1 (7.9); ICC baseline –, endline 0.04 (0.00-0.87) **RTC:** intervention 5.0 (5.8), control -0.7 (4.6); ICC baseline 0.24 (0.09-0.50), endline 0.21 (0.05-0.59)	
Shultz (2019)	• Dropout rates • Major depressive disorder symptoms measured with pre-, post-, and follow-up scores of the Patient Health Questionnaire (PHQ-9; range 0-27) (n=56) • Anxiety measured with pre-, post-, follow-up measures of the Generalized Anxiety Disorder Screener (GAD-7; range 0-21) (n=47) • PTSD symptoms measured with pre-, post-, follow-up measures of the PTSD Checklist-Civilian Version (PCL-C; range 17-85) (n=40)	**(SE):** **Dropout rates:** loss to follow-up 30% **PHQ-9:** post 5.64 (0.68, p<0.001), follow-up 8.34 (0.61, p<0.001) **GAD-7:** post 5.36 (0.68, p<0.001), follow-up 6.34 (0.75, p<0.001) **PCL-C:** post 14.33 (1.88, p<0.001), follow-up 16.25 (2.43, p<0.001)	Unclear
Sibai (2020)	• 12-item 'Equipment Monitoring' tool for checking availability and functionality of equipment and medication • Health provider knowledge and skills • Data collection completeness • Patient satisfaction • Provider counselling • Patient awareness of program/where to seek help	**Equipment and medication availability/functionality:** effective process of replenishing most items in due time, except for glucose strips and waist circumference measuring tape **Physician knowledge/skills:** 100% correct related to treatment and monitoring; lower levels on diagnosis (25% disagreement on need to take 2 BP measurements, 81% unable to characterize indications of oral glucose tolerance test or related instructions given to patient when ordering test) **Nursing staff equipment usage knowledge post-training:** 33% correctly identified how many beeps they should hear when the test strip is firmly inserted into the instrument, 33% how long before instrument turns off automatically, 44% how to clean lancing site **Data completeness:** screening forms [random sample] 94% (range 88-100%), BMI and WC most commonly missing items (range 5-12%); patient records >80% **Patient satisfaction with encounters:** 60%	Unclear

		Counselling/provider inquiry: 86% patients queried about compliance to medications; 68% patients queried about advice given on behavioural changes; 31-42% questioned on side effects of medications and potential complications. Patient awareness of program/where to seek help: 40%	
Sion (2015)	• Operating budget for surgical services: USD per inhabitant per year • Budget for surgical services as proportion of total operating budget • Proportion of hospital caseload requiring surgical services	**Operating budget for surgical services:** Model Normative Hospital 2.17, Demba Hospital 0.08, Kabare Hospital 0.69 **Budget for surgical services as % of total operating budget:** Model Normative 18%, Demba 24%, Kabare 20% **% of hospital caseload requiring surgical services:** Model Normative 33.3%, Demba 9%, Kabare 3.33%	High
Theocha-ropoulos (2017)	• Median transport time from cases' residences to EMCs: comparison of district and distant EMCs • Median time from symptom onset to admission	**Median transport time:** district EMC 1 hour, distant EMCs 5 hours (p<0.001) **Median time to admission:** district EMC 3 days, distant EMCs 6 days (p<0.001)	Low
Tol (2020)	• Psychological distress measured using the Kessler 6 (K6) • Personally identified problems with the Psychological Outcome profiles (PSYCHLOPS) • PTSD symptoms assessed with the PTSD Checklist Civilian (PCL-6) • Depression symptoms assessed with the Patient Health Questionnaire (PHQ-9) • Anger with 2 dichotomous questions about explosive anger attacks • Positive interactions between ethnic groups • Psychological flexibility with the Acceptance and Action Questionnaire (AAQ-II) • Functional impairment with the WHO Disability (WHODAS) • Subjective wellbeing assessed with the WHO-5	**(95% CI):** **K6:** post -3.25 (-4.31 to -2.19, p<0.001, effect size -0.72), follow-up -1.20 (-2.33 to -0.08, p=0.04, effect size -0.26) **PSYCHLOPS:** post -2.79 (-4.07 to -1.51, p<0.0001, effect size -0.58), follow-up -1.17 (-2.37 to 0.04, p=0.06, effect size -0.25) **PCL-6:** post:-3.53 (-4.67 to -2.38, p<0.0001, effect size -0.68), follow-up -1.55 (-2.87 to -0.24, p=0.02, effect size -0.30) **PHQ-9:** post -3.78 (-5.39 to -2.17, p=0.0003, effect size -0.75), follow-up -1.55 (-2.77 to -0.15, p=0.03, effect size -0.31) **Explosive anger**: post 0.50 (0.32-0.50, p=0.002, effect size 0.50), follow-up 0.63 (0.40-1.0, p=0.04, effect size 0.63) **Interethnic relationship:** post -0.14 (-0.47 to 0.19, p=0.37, effect size -0.06), follow-up -0.19 (-0.56 to 0.19, p=0.30, effect size -0.07) **AAQ-II score:** post 4.49 (0.90-8.09, p=0.02, effect size 0.42), follow-up 1.11 (-4.26 to 6.48, p=0.66, effect size 0.09)	Unclear

		WHODAS 2.0 score: post -6.10 (-7.86 to -4.34, p<0.0001, effect size -0.77), follow-up -2.52 (-5.01 to -0.03, p=0.05, effect size -0.30) **WHO-5 score**: post 2.89 (1.52-4.27, p=0.0006, effect size 0.51), follow-up 1.94 (0.81-3.06, p=0.0028, effect size 0.36)	
Tomita (2016)	• Depression symptoms using the Quick Inventory of Depressive Symptomatology (range 0-27: none (<5), mild (6-10), moderate (11-15), severe (16-20), very severe (>21)) • Reliability between face-to-face and SMS-based depression screening (test-retest agreement) • Preference of screening method • Participant feedback	**Depression symptoms:** overall baseline score 10.3, follow-up score 8.0 (p<0.01); none baseline 22.2%, follow-up 30.4%; mild baseline 26.1%, follow-up 39.3%; moderate baseline 37.3%, follow-up 27.4%; severe baseline 13.7%, follow-up 3%; very severe baseline 0.7%, follow-up 0% **Test and re-test reliability:** weighted Kappa coefficient test 0.45, re-test 0.25 **Preferred method:** SMS 58.7%, face-to-face 41.3% (p=0.99) **Feedback:** would recommend 95%, difficult to use 10%, comfortable to use 86.9%	Unclear
Vogt (2015)	• Test statistics: positive predictive value (PPV), negative predictive value (NPV), sensitivity, specificity, positive likelihood ratio, negative likelihood ratio	**Test statistics (95% CI):** **PPV:** 76.0% (70.2-81.1) **NPV:** 53.6% (46.0-61.1) **Sensitivity:** 69.9% (64.1-75.3) **Specificity:** 61.1% (53.1-68.8) **Positive likelihood ratio:** 1.8 (1.5-2.2) **Negative likelihood ratio:** 0.5 (0.4-0.6)	Low
Walker (2015)	• Sensitivity of the RDT compared to PCR: by CT score, quantitative result of the RDT • Specificity of the RDT compared to PCR: by CT score • Positive predictive value (PPV) of RDT by CT score • Negative predictive value (NPV) of RDT by CT score	**Results by CT score (95% CI):** **Sensitivit**y: CT>=2 100.0% (78.2-100.0), CT>=4 100.0% (78.2-100.0), CT>=6 100.0% (78.2-100.0), CT>=8 73.3% (44.9-92.2), CT=10 40.0% (16.3-67.7) **Specificity:** CT>=2 92.2% (85.8-96.4), CT>=4 93.1% (86.9-97.0), CT>=6 96.6% (91.4-99.1), CT>=8 98.3% (93.9-99.8), CT=10 99.1% (95.3-100.0) **PPV**: CT>=2 62.5% (40.6-81.2), CT>=4 65.2% (42.7-85.6), CT>=6 79.0% (54.4-93.8), CT>=8 84.6% (54.5-97.6), CT=10 85.7% (42.2-97.6) **NPV:**CT>=2 100.0% (96.6-100.0), CT>=4 100.0% (96.6-100.0), CT>=6 100.0% (96.6-100.0), CT>=8 96.6% (91.5-99.1), CT=10 92.7% (86.7-96.6)	Unclear

ANNEX 14: STUDY DESIGN AND OUTCOMES OF HEALTH SYSTEMS INTERVENTION STUDIES

Study Design of Health Systems Intervention Studies in Humanitarian Crisis Settings, 2013-2021 (n=32)

Author (Year)	Study Setting & Population	Intervention(s)	Methods
Abbas (2018)	**Country:** Syria, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Intervention: peer-led basic life support (BLS) training for medical students; Control: professional-led training **Implementation site:** University-based **Personnel type(s):** Health professional cadre - medical students **Part of broader program:** No	**Study design:** Randomized controlled trial **Study duration:** approximately 1 month (1 day training intervention) **Sample description:** Medical students from pre-clinical years at Syrian Private University **Sample size:** 72 enrolled (36 intervention, 36 control); 64 analysed (34 intervention, 30 control)
Akoury-Dirani (2015)	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural and urban) **Population:** Host community, refugee	**Description:** 2.5 day psychological first aid (PFA) training to enhance the readiness of mental health field workers **Implementation site:** System-level **Personnel type(s):** Health professional cadre - mental health providers **Part of broader program:** Yes	**Study design:** Observational **Study duration:** 1 month **Sample description:** Staff working directly with Syrian refugee and host community families **Sample size:** 77 attended, 60 followed up
Al Shdaifat (2019)	**Country:** Jordan, national sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (rural and urban) **Population:** Refugee	**Description:** 3-stage training program with needs assessments, didactics, and on-the-job training for general practitioners (GPs) **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - GPs **Part of broader program:** No	**Study design:** Observational (cohort; pre/post) **Study duration:** 2 years **Sample description:** GPs at health centres **Sample size:** 84 GPs

Amabo (2019)	**Country:** Cameroon, regional sample **Crisis type:** Armed conflict **Context type:** Camp **Population:** Refugee	**Description:** Diarrheal diseases surveillance system **Implementation site:** System-level **Personnel type(s):** Health professional cadre - health personnel not specified, surveillance officer **Part of broader program:** No	**Study design:** Mixed method (health registers, surveillance reports, key informant interviews) **Study duration:** 2 years **Sample description:** Health staff from the district health office and camp health facilities who conducted epidemiological surveillance activities **Sample size:** 10 KIIs (7 nurses, 2 clinicians, 1 logistician); 138 surveillance reports
Amsalu (2020)	**Country:** Somalia, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (urban) **Population:** Host community, internally displaced	**Description:** 8-day essential newborn care course addressing recommendations in the Newborn Health in Humanitarian Settings: Field Guide, with 5-day refresher course at 6 months, supply provision and installation of newborn register **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - midwives and registered nurses **Part of broader program:** No	**Study design:** Observational (interrupted time series) **Study duration:** 28 months **Sample description:** Pregnant women who sought childbirth care at a study facility **Sample size:** Women who sought child-birth care: 525 enrolled, 419 analysed; healthcare workers: 12 enrolled, 10 analysed
Badiuzzam-an (2020)	**Country:** Bangladesh, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Host community	**Description:** Satellite/mobile clinics, referral services, ambulance services, and community health service workers **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - doctors and other clinic staff, community health workers **Part of broader program:** Yes - Chittagong Hill Tracts Development Facility (CHTDF) multi-sector program	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 5 years **Sample description:** Households with women of reproductive age **Sample size:** 3,664 enrolled (2,192 intervention, 694 control); 778 analysed (584 treatment, 194 control)

Chemali (2017)	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Other **Population:** Host community	**Description:** 4 session adapted version of SMART-ERP (Stress Management Relaxation Response Resilience Training) **Implementation site:** System-level **Personnel type(s):** Health professional cadre – social workers **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 23 months **Sample description:** Social and field workers working in Lebanon, with priority given to those directly involved with Syrian refugees **Sample size:** 120 social/fieldworkers attended SMART-3RP training; 100 participated in research portion; 52 completed the training
Deboutte (2013)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Provision of emergency obstetric care (EmOC), including Caesarean sections **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - health workers trained in anaesthesia, obstetric surgery, and pre- and post-operative care **Part of broader program:** No	**Study design:** Economic evaluation (within a case-control study) **Study duration:** 7 months **Sample description:** Women who delivered by C-section at a study facility, matched to women who delivered vaginally **Sample size:** 368 enrolled (178 intervention, 180 control); 368 analysed
Djimeu (2014)	**Country:** Angola, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural and urban) **Population:** Multiple (displaced and non-displaced)	**Description:** Social and economic development health and water, sanitation, and waste management projects **Implementation site:** Community-based **Personnel type(s):** Not specified **Part of broader program:** Yes	**Study design:** Quasi-experimental (non-randomized trial) **Study duration:** 1 year **Sample description:** Children <5 years of age **Sample size:** 1,373 children (674 ASAF, 699 non-ASAF)
Edmond (2018)	**Country:** Afghanistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	**Description:** Standardized training and supportive supervision package aimed at improving existing community health worker (CHW) capacity to provide maternal and neonatal home visits and behaviour change communication messages **Implementation site:** System-level **Personnel type(s):** Lay personnel - community health workers **Part of broader program:** No	**Study design:** Quasi-experimental **Study duration:** 12 months **Sample description:** Random selection of villages and households **Sample size:** 1,408 women enrolled (709 intervention, 699 control); 1,378 analysed (689 intervention, 689 control)

Edmond (2020)	**Country:** Afghanistan, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced)	Description Maternal and child health mobile health teams (MHTs) providing primary care services to pregnant and postpartum women and children under 5 **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - midwives, vaccinators, and nurses **Part of broader program:** Yes	**Study design:** Observational (cross-sectional, population-based evaluation study) **Study duration:** 1 year **Sample description:** Intervention - districts receiving MHT services in prior 3 years; Control - districts not receiving MHT services **Sample size:** 110 districts (54 intervention, 56 control)
Gallagher (2019)	**Country:** Democratic Republic of Congo, Somalia, and Yemen, regional sample **Crisis type:** Armed conflict, environmental disaster, outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Service approach based on The Essential Elements of Postabortion Care as developed by the PAC Consortium: community mobilization, strengthening provider counselling, treatment of abortion complications, provision of voluntary contraceptive services, and referrals as needed **Implementation site:** Community-based, facility-based **Personnel type(s):** Health professional cadre and lay personnel - healthcare workers, community health workers (CHWs) **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 5 years **Sample description:** Women in need of postabortion care **Sample size:** Baseline 1,413 clients (812 DRC, 11 Somalia, 590 Yemen); endline 3,640 clients (1,412 DRC, 1,065 Somalia, 1,163 Yemen)
Jia (2015)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban and rural) **Population:** Emergency affected (non-displaced)	**Description:** Community cell phone Ebola Haemorrhagic Fever (EHF) syndromic surveillance **Implementation site:** System-level **Personnel type(s):** N/A **Part of broader program:** Yes - Moyamba District Community syndromic surveillance system	**Study design:** Observational **Study duration:** 3 months **Sample description:** Sierra Leonean adults who own a cell phone **Sample size:** Moyamba district **population:** 278,119

Kersten (2013)	**Country:** Agok, Abyei area (disputed zone between the Republic of the Sudan and the Republic of South Sudan), regional sample **Crisis type:** Armed conflict **Context type:** Non-camp **Population:** Not specified	**Description:** Approach to systematically measure quality of care **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 3 weeks **Sample description:** Male and female patients 21 years or older; health care workers **Sample size:** 14 observations of care encounters; 67 patient files; 23 semi-structured interviews (4 project managers, 9 health care workers, 10 patients following discharge)
Kunkel (2019)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Health facility (HF)-based active case finding (ACF) surveillance system for control of Ebola Virus Disease (EVD) transmission **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - doctors and nurses **Part of broader program:** Yes	**Study design:** Observational **Study duration:** 4 weeks **Sample description:** Health facilities (HFs) and records for all consultations **Sample size:** 113 HFs; 37,746 consultation records
Lee (2016)	**Country:** Guinea, national sample **Crisis type:** Outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** National Call centre and local alert system for detection of new cases of Ebola Virus Disease (EVD) **Implementation site:** System-level **Personnel type(s):** Lay personnel – call centre operators and dispatch team **Part of broader program:** No	**Study design:** Observational **Study duration:** 9 months **Sample description:** National viral haemorrhagic fever (VHF) database of all persons tested for EVD and all known, confirmed EVD cases **Sample size:** 17,309 alert calls analysed
Li (2016)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp (urban) **Population:** Emergency affected (non-displaced)	**Description:** Community-based strategy to interrupt Ebola Virus Disease (EVD) transmission (widespread community-based education and field-operational intensified control measures) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - disease surveillance officers, contact tracers, support staff, social mobilizers **Part of broader program:** No	**Study design:** Observational **Study duration:** 6 months **Sample description:** No inclusion/exclusion criteria reported **Sample size:** Not specified

Lovey (2021)	**Country:** Kenya, regional sample **Crisis type:** Outbreak **Context type:** Camp (rural) **Population:** Refugee	**Description:** Web-based basic higher education/ medical training course (InZone learning ecosystem) **Implementation site:** Community-based **Personnel type(s):** Lay personnel **Part of broader program:** No	**Study design:** Quasi-experimental **Study duration:** 6 months **Sample description:** Residents of Kakuma refugee camp or Kalobeyei integrated settlement with high school diploma satisfying English language proficiency requirements **Sample size:** 43 recruited (16 intervention, 27 control); 29 analysed (11 intervention, 18 control)
Mbaeyi (2018)	**Country:** Somalia, national sample **Crisis type:** Outbreak **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Village Polio Volunteers (VPV) program for poliovirus surveillance **Implementation site:** Community-based **Personnel type(s):** Lay personnel - local trained volunteers **Part of broader program:** No	**Study design:** Observational **Study duration:** 5 years **Sample description:** N/A **Sample size:** N/A
Metuge (2021)	**Country:** Cameroon, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp **Population:** Emergency affected (non-displaced)	**Description:** Community based surveillance (CBS) to identify outbreak prone diseases (OPD) compared to the District Health Service (DHS) facility-based surveillance **Implementation site:** Community-based **Personnel type(s):** Both health professional cadre and lay personnel – medical doctors, nurses, community health workers (CHW) **Part of broader program:** Yes	**Study design:** Observational **Study duration:** 11 months **Sample description:** N/A **Sample size:** N/A
Momotaz (2019)	**Country:** Bangladesh, regional sample **Crisis type:** Armed conflict **Context type:** Camp (rural) **Population:** Host community, refugee	**Description:** Mental Health Gap Action Programme (mhGAP) training and supervision **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - physicians, psychosocial staff **Part of broader program:** No	**Study design:** Observational (descriptive evaluation) **Study duration:** 4 months **Sample description:** Physicians and counsellors (BA Psychology, social work or sociology) from government facilities and NGOs serving both the refugee and host population **Sample size:** 21 participants at initial training, 19 participants at follow-up (10 new)

Parr (2014)	**Country:** Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (rural) **Population:** Migrant, refugee	**Description:** Efforts to change nuchal cord management during delivery by multi-stage interventions by doctor and registered midwife providing education and clinical support to skilled birth attendants (SBAs) **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - doctor, registered midwife, SBAs **Part of broader program:** Yes	**Study design:** Mixed methods (retrospective cohort study of birth data, knowledge survey and semi-structured interviews with SBAs) **Study duration:** 2 years **Sample description:** Birth records for normal singletons born >= 28 weeks gestation between July 1, 2011 and June 30, 2013; SBAs at study sites **Sample size:** 4,270 births; 5 interviews and 26 knowledge surveys
Ratnayake (2021)	**Country:** Democratic Republic of Congo, regional sample **Crisis type:** Armed conflict, outbreak **Context type:** Non-camp (rural) **Population:** Emergency affected (non-displaced), internally displaced	**Description:** Integration of non-communicable disease management program within emergency primary care **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 2 years **Sample description:** Patients from Beni region with hypertension and/or diabetes **Sample size:** 788 patients
Sibai (2020)	**Country:** Lebanon, regional sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural and urban) **Population:** Host community, refugee	**Description:** Multicomponent intervention to advance the level of care and management of hypertension and diabetes at PHC centres, including logistics and technical support of the health centres; human resource development, promotion of good practice in care, and use of basic documentation tools; and empowering patients attending PHCs and catchment area communities **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 6 months **Sample description:** Adults aged 40 years and above with hypertension and/or diabetes **Sample size:** 390 enrolled; 140 analysed

Sijbrandij (2020)	**Country:** Sierra Leone, regional sample **Crisis type:** Outbreak **Context type:** Non-camp **Population:** Emergency affected (non-displaced)	**Description:** 11 one-day trainings of Psychological First Aid (PFA) **Implementation site:** Community-based **Personnel type(s):** Health professional cadre - trained mental health nurses **Part of broader program:** Yes - part of a larger mixed methods study on the effectiveness of psychological first aid	**Study design:** Randomized controlled trial **Study duration:** 9 months **Sample description:** Primary health care workers >=18 years old with adequate oral and written command of the English or Krio language working at peripheral health units (PHUs) who had not previously received any PFA training or training with overlapping content **Sample size:** 129 PHUs enrolled (63 intervention, 66 control); 408 healthcare workers analysed (206 intervention, 202 control)
Sion (2015)	**Country:** Democratic Republic of Congo, national sample **Crisis type:** Armed conflict **Context type:** Non-camp **Population:** Emergency affected (non-displaced)	**Description:** District Hospital Surgical Services as part of a Complementary Package of Activities **Implementation site:** Facility-based **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Economic evaluation **Study duration:** 1 month **Sample description:** District hospitals **Sample size:** 12 hospitals
Stanley (2015)	**Country:** Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (rural) **Population:** Migrant, refugee	**Description:** Training in basic emergency assessment and management for local health workers **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - medics and nurses **Part of broader program:** Yes	**Study design:** Observational (cohort) **Study duration:** 8 weeks **Sample description:** Nurses and medics working at 3 clinic sites **Sample size:** 71 enrolled (45 nurses, 26 medics)

Steinhardt (2013)	**Country:** Afghanistan, national sample **Crisis type:** Armed conflict **Context type:** Non-camp (rural and urban) **Population:** Emergency affected (non-displaced)	**Description:** Health Financing Pilot (HFP) study with 3 arms: A) User fee arm, with a flat fee for services and percentage charge of wholesale drug price; B) Free services arm; C) Community Health Fund arm, where households pre-pay a set amount for access to health facility **Implementation site:** System-level **Personnel type(s):** N/A **Part of broader program:** No	**Study design:** Quasi-experimental **Study duration:** 3 years and 3 months **Sample description:** Basic Health Centres (BHC), Comprehensive Health Centres (CHC) and District Hospitals (DH) **Sample size:** 47 pilot facilities: 27 user fee facilities, 10 free services facilities, and 10 control facilities
Tran (2021)	**Country:** Democratic Republic of Congo, Nigeria, and Uganda, regional sample **Crisis type:** Armed conflict **Context type:** Camp (rural) and non-camp (urban) **Population:** Refugee	**Description:** Clinical Outreach Refresher Training Strategy for sexual and reproductive health (S-CORT), designed to update health providers' competencies on uterine evacuation using both medications and manual vacuum aspiration **Implementation site:** Facility-based **Personnel type(s):** Not specified - NGO trainer **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 4 months **Sample description:** Clinical and programmatic staff at partnering organizations' sites **Sample size:** 72 enrolled (21 Uganda, 21 Nigeria, 30 DRC); 65 analysed (18 Uganda, 20 Nigeria, 27 DRC)
Van Boetzelaer (2020)	**Country:** Bangladesh, regional sample **Crisis type:** Armed conflict **Context type:** Camp (urban) **Population:** Refugee	**Description:** Active indicator-based community-based surveillance system (CBS) to detect epidemic prone disease early for rapid response **Implementation site:** Community-based **Personnel type(s):** Health professional cadre and lay personnel - surveillance workers, Epi Alert Team, Medical Response Team **Part of broader program:** Yes	**Study design:** Observational **Study duration:** 6 months **Sample description:** All HHs in catchment areas **Sample size:** average 97,340 HHs per CBS surveillance cycle (with average of 548,739 persons)

White (2016)	**Country:** Thailand, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (rural) **Population:** Migrant, refugee	**Description:** Development and utilization of curriculum content and apprenticeship model for competency-based skilled birth attendant (SBA) training, including a train-the-trainer component **Implementation site:** Facility-based **Personnel type(s):** Health professional cadre - SBA **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 6 years **Sample description:** Students participating in training program, SBAs supervising students **Sample size:** 88 students enrolled; 88 analysed. Qualitative sample of 5 SBAs, 3 teachers
Wijekoon (2020)	**Country:** Bangladesh, regional sample **Crisis type:** Armed conflict **Context type:** Camp and non-camp (urban) **Population:** Host community, refugee	**Description:** Early warning, alert and response system to detect infectious disease outbreaks **Implementation site:** System-level **Personnel type(s):** Health professional cadre and lay personnel **Part of broader program:** No	**Study design:** Mixed methods **Study duration:** 1 month **Sample description:** Health facilities in the Teknaf and Ukhia subdistricts that serve refugee population **Sample size:** 26 health facilities

Outcomes of Health Systems Intervention Studies in Humanitarian Crisis Settings, 2013-2021 (n=32)

Author (Year)	Health Outcome(s)	Main Results	Risk of Bias
Abbas (2018)	• Course effectiveness in improving BLS knowledge and practical skills • Pass rate on practical assessment checklist • Improvement from pre to post course assessment	**Pre-post difference in questionnaire mean score:** 15.031 (p<0.001) **Pre-post difference in practical test pass:** 56 (p<0.001) **Overall pass rate:** professional trained 26/30, peer trained 30/34 (p=1.00) **Re-test overall pass rate:** professional trained 3/6, peer trained 7/8 (p=0.091) **Live pass rate:** professional trained 27/30, peer trained 33/34 (p=0.333) **Retest live pass rate:** professional trained 2/3, peer trained 7/8 (p=0.245)	Low
Akoury-Dirani (2015)	• Health worker knowledge of PFA (definitions of mental health concepts, PFA principles and core actions, administration of screening tools) • Readiness to deliver PFA services (total score)	**Change in health worker knowledge:** definition of PTSD +5% (p=0.382); what to avoid when administering PFA +15% (p=0.32); how to approach and interact with refugees when administering PFA +45% (p<0.001); how to behave with refugees +26% (p<0.001); things to avoid when listening to the story of a traumatized person +35% (p<0.001); comprehension of PTSD screening tool +20% (p=0.003) **Readiness levels (SD):** baseline 2.16 (0.47); after training 1.72 (0.40); 1 month follow-up 1.86 (0.43) (p<0.001)	Low
Al Shdai-fat (2019)	• Pre-knowledge and post-knowledge assessment (mean knowledge test score) • Clinical checklist score • Satisfaction of provider with training	**Mean knowledge test score:** pretest 46%, post-test 81% (p<0.0001) **Clinical checklist score:** Significant increase across all 8 domains of clinical checklist (exact figures not provided) **Satisfaction with training:** 97%	Unclear
Amabo (2019)	• Simplicity (standardized case definition correctly stated by key informants [expected ≥80%], disease notification sheet is easy to fill in and available [≥80%], next level of data transmission is clearly defined [≥80%], cases are easy to recognize based on case definition [≥80%]; average time spent filling in disease notification report [≤10 min])	**Simplicity score = 2 (simple if >=4):** Standardized case definition correctly stated by key informants = 20%; Disease notification sheet easy to fill in & available = 100%; Next level of data transmission clearly defined = 100%; Cases are easy to recognize by case definition = 70%; Average time spent filling in disease notification report = 35 min	Moderate

	- Data quality (% unknown or blank responses on weekly notification sheets [≤10%]; case definitions used; clear hardcopy of surveillance forms available; % weekly surveillance forms signed twice [≥80%]) - Acceptability (completeness of surveillance forms ≥90%; timeliness of surveillance forms ≥80%; % personnel participating in surveillance ≥80%; % key informants that consider surveillance activities part of their routine work ≥90%) - Sensitivity (% suspected cases identified when reviewing logbooks and reported to next level [≥80%]) - Representativeness (% weekly reports sent by camp's surveillance sites [≥90%]) - Timeliness (% reports transmitted to district on time [≥80%])) - Stability (availability of a focal person for surveillance; % personnel trained for disease surveillance [≥80%]; % surveillance reports archived [≥80%]; availability of revised Integrated Disease Surveillance Guide & other data collection tool)	**Flexibility score = 1 (flexible if >=1):** IDSR report sheet allows for notification a disease/event other than diarrheal disease = Yes **Data quality score = 2 (data quality good if >=3):** % 'unknown' or 'blank' responses on weekly notification sheets =3%; Case definitions used = No; Clear hardcopy of surveillance forms available = Yes; % weekly surveillance forms signed twice = 0% **Acceptability score = 3 (acceptable if ≥1):** Completeness of surveillance forms ≥90% = Yes; Timeliness of surveillance forms ≥80% = No; % personnel participating in surveillance ≥80% = Yes; % key informants that consider surveillance activities part of their routine work ≥90% = Yes) **Sensitivity score = 1 (sensitive if = 1):** % suspected cases identified when reviewing logbooks and reported to next level = 100% **Representativeness score = 1 (representative if = 1):** (% weekly reports sent by camp's surveillance sites from 2014 to 2015 = 100% **Timeliness score = 0 (reactive if = 1):** % weekly reports transmitted to district on time from 2014 to 2015 = 66% **Stability score = 1 (stable if ≥3):** Availability of a focal person for surveillance = Yes; % personnel trained for disease surveillance = 70%; % surveillance reports archived =70%] Availability of revised Integrated Disease Surveillance Guide and other data collection tool = No	
Amsalu (2020)	- Composite outcome: proportion of newborns who received essential newborn care practices (skin-to-skin contact, early breastfeeding, dry cord care) - Proportion of newborns who received early initiation of breastfeeding, thermal care (immediate drying, skin-to-skin contact, delayed bathing), clean childbirth practices (visibly clean delivery bed, handwashing and glove wearing by attendant, use of sterile delivery kit, dry cord care)	**(95% CI):** **Odds of receiving 2 or more essential newborn care practices:** 64.5 (15.8-262.6, p<0.001) **Odds of receiving 3 essential newborn care practices:** 220.0 (33.7-1443.0, p<0.001) **Odds of receiving early initiation of breastfeeding:** 10.6 (1.6-69.8, p=0.014) **Odds of receiving thermal care:** 28.4 (8.0-100.9, p<0.001) **Odds of receiving clean childbirth practices:** 11.1 (2.6-46.6, p=0.001) **Knowledge test score:** posttraining to pretraining +11.9% (7.2-16.6, p<0.001), 18-month to posttraining +10.9% (4.7-17.0, p<0.001)	Low

	• Health worker knowledge and skills (mean score difference from post-training to pretraining and 18-month follow-up to post-training): knowledge test score, accurate completion of partograph, skills in newborn resuscitation with bag and mask	**Accurate completion of partograph:** posttraining to pretraining +68.5% (52.7-84.3, p<0.001), 18-month to posttraining -30.3% (-13.5 to -47.1, p=0.002) **Skills in newborn resuscitation with bag and mask:** posttraining to pretraining +65.1% (53.4-76.7, p<0.001), 18-month to posttraining +0.4% (-6.6 to 7.4, p=0.903)	
Badiuz-zaman (2020)	• Impact of CHTDF on maternal care utilization (fixed effect model): receipt of any antenatal care (ANC), delivery attended by trained birth attendant, delivery at a health facility • Differences in maternal care utilization by experience of conflict, fear of conflict, and ethnicity	**(SE):** **ANC check-up received:** overall 0.18 (0.09, p<0.1), without experience of conflict 0.19 (0.10, p<0.1), with experience of conflict 0.04 (0.20), without fear of conflict 0.16 (0.12), with fear of conflict 0.17 (0.10), Bengali 0.18 (0.12), Indigenous 0.24 (0.13, p<0.1) **Delivery attended by trained provider:** overall 0.16 (0.15), without experience of conflict 0.10 (0.18), with experience of conflict 0.44 (0.14, p<0.05), without fear of conflict 0.40 (0.19, p<0.1), with fear of conflict -0.01 (0.13), Bengali 0.17 (0.24), Indigenous 0.15 (0.16) **Delivery at a health facility:** overall 0.23 (0.08, p<0.01), without experience of conflict 0.26 (0.09, p<0.01), with experience of conflict 0.23 (0.10, p<0.05), without fear of conflict 0.37 (0.12, p<0.01), with fear of conflict 0.11 (0.06, p<0.1), Bengali 0.18 (0.14), Indigenous 0.24 (0.12, p<0.1)	Unclear
Chemali (2017)	• Symptom Checklist-90 (SCL-90; >64 denotes clinical significance) • Physiological measures (blood pressure, pulse)	**Mean change from baseline to follow-up 9 months after intervention (SD):** **SCL-90:** -14.7 (29.8, p<0.0001) SCL-90>=64: -7 (-13.4, p=0.3141) **Systolic blood pressure:** -11.9 (18.4, p<0.0001) **Diastolic blood pressure:** -6.4 (10.1, p<0.0001) **Pulse:** -8.3 (15.9, p=0.0016)	Low
Deboutte (2013)	• Incremental cost of C-section (CS) delivery • Health-adjusted life expectancy (HALE) gained • Incremental cost effectiveness ratio (ICER): C-section cost per year of HALE gained	**Incremental CS cost, in USD:** mission hospital 14,359, government hospital 11,371 **HALE gained:** overall lower estimate 11,285 and higher estimate 36,604 years, NGO hospital higher estimate 27,453 years **ICER at NGO hospital, in USD:** lower estimate 9.2, higher estimate 3.8	Moderate

Djimeu (2014)	• Height-for-age Z- scores (HAZ)	**Average treatment effect of ASAF on HAZ (SE):** FEM 0.3255 (0.037, p<0.01), PSM 0.335 (0.155, p<0.05), WLS 0.28445 (0.046, p<0.01)	Unclear
Edmond (2018)	• Proportion of women delivering in a health facility: difference-in-differences • Proportion of women who attended at least 1 antenatal care (ANC) and 1 postnatal care (PNC) visit with a skilled healthcare provider: difference-in-differences	**Proportion of women who (95% CI):** **Delivered in a health facility:** 10.97% (4.0-18.0, p=0.002) **Attended at least 1 ANC visit with a skilled healthcare provider:** 10.54 (4.2-16.9, p=0.001) **Attended at least 1 PNC visit with a skilled healthcare provider:** 7.20 (0.2-14.2, p=0.04)	Unclear
Edmond (2020)	District service provision: • Proportion of pregnant women who were recorded in HMIS as having received at least 1 antenatal care (ANC) visit • Proportion of children under 1 year who received their first measles vaccine • Proportion of children under 5 years who received at least 1 integrated management of childhood illness (IMCI) service for diarrhoea or pneumonia • Proportion of postpartum women who received at least 1 postnatal care (PNC) visit • Proportion of pregnant women who delivered at a health facility • Proportion of pregnant women who received a tetanus toxoid vaccine • Proportion of children under 1 year who received their 3rd pentavalent vaccine	**Mean difference between intervention and control districts (95% CI):** **Proportion of pregnant women receiving >= 1 ANC visit:** 14.84 (1.66-28.01, p=0.03) **Proportion of children under 1 who received their first measles vaccine:** 12.78 (2.08-23.48, p=0.02) **Proportion of children under 5 who received at least 1 IMCI service for diarrhoea or pneumonia:** 10.34 (1.40-19.27, p=0.02) **Proportion of postpartum women receiving >= 1 PNC visit:** 2.79 (-5.11 to 10.70, p=0.48) **Proportion of pregnant women who delivered at a health facility:** 13.53 (-0.57 to 27.63, p=0.06) **Proportion of pregnant women who received a tetanus toxoid vaccine:** 14.48 (0.11-28.84, p=0.04) **Proportion of children under 1 who received their 3rd pentavalent vaccine:** 7.55 (-4.20 to 19.30, p=0.20) **Mean # of ANC visits:** 41.32 (-52.46 to 135.11, p=0.37) **Mean # of tetanus toxoid vaccines for pregnant women:** 82.01 (-38.69 to 202.71, p=0.18)	Low

	Clinic service provision: • Mean # of ANC visits per clinic • Mean # of tetanus toxoid vaccines for pregnant women • Mean # of facility deliveries • Mean # of PNC visits per clinic • Mean # of 3rd pentavalent vaccines for children under 1 year • Mean # of measles vaccines for children under 1 year • Mean # of IMCI visits for diarrhoea or pneumonia for children under 5 years	**Mean # of facility deliveries:** 119.35 (-9.48 to 248.19, p=0.07) **Mean # of PNC visits:** 10.68 (-33.12 to 54.49, p=0.63) **Mean # of 3rd pentavalent vaccines for children under 1 year:** -74.14 (-13.52 to 161.8, p=0.10) **Mean # of measles vaccines for children under 1 year:** -83.79 (-1.44 to 169.03, p=0.05) **Mean # of IMCI visits for diarrhoea or pneumonia for children under 5 years:** 280.95 (-40.11 to 602.00, p=0.09)	
Gallagher (2019)	• Overall # of PAC clients • Mode of treatment: sharp dilation and curettage (D&C), manual vacuum aspiration (MVA), medical treatment with misoprostol (miso) • Proportion of PAC clients who chose a method of contraception prior to leaving the facility • Contraceptive method mix among clients choosing a method: implant, injectable, intrauterine device (IUD), pills, long-acting reversible contraceptive (LARC)	**Overall # of PAC clients:** baseline 1,413 (812 DRC, 11 Somalia, 590 Yemen); endline 3,640 (1,412 DRC, 1,065 Somalia, 1,163 Yemen) **Mode of treatment:** DRC: D&C baseline 18%, endline 3% (p<0.001); MVA baseline 69%, endline 95%; miso baseline 12%, endline 2%. Yemen: D&C baseline 25%, endline 3% (p<0.001); MVA baseline 69%, endline 87%; miso baseline 6%, endline 11%. **Proportion of PAC clients who chose a method of contraception prior to leaving the facility:** DRC baseline 42%, endline 70% (p<0.001), Yemen baseline 17%, endline 38% (p=0.002), Somalia baseline 64%, endline 82% (p not provided, not statistically significant) **Contraceptive method mix among clients choosing a method:** DRC: implant baseline 52%, endline 38%; injectable baseline 26%, endline 22%; IUD baseline 7%, endline 32%; pills baseline 15%, endline 8%, LARCs baseline 59%, endline 70% (p=0.02). Somalia: implant baseline 0%, endline 18%; injectable baseline 14%, endline 29%; IUD baseline 14%, endline 6%; pills baseline 72%, endline 47%, LARCs baseline 14%, endline 24%. Yemen: implant baseline 1%, endline 9%; injectable baseline 16%, endline 6%; IUD baseline 0%, endline 6%; pills baseline 83%, endline 79%, LARCs baseline 1%, endline 15% (p=0.004)	Unclear

Jia (2015)	• Total # of suspect and confirmed cases • Average # of suspected and confirmed cases • % of alerts reporting suspect cases and mortality • Average # EHF mortalities reported • % of alerts with successful follow-up within a day • % unmet calls • % false alerts	**Total # of suspect and confirmed cases:** 129 suspect and 49 confirmed **Average # of suspected and confirmed cases:** 4.16 (SD 3.76) suspect, 1.58 (SD 1.43) confirmed **% alerts reporting suspect cases:** 34% (n=76) **% alerts reporting mortality:** 65.92% (n=147) **Average # EHF mortalities reported:** 6.42 (SD 3.91, 95% CI 5.88-6.94) **% alerts w/ successful follow-up w/in a day:** 85.77% (n=223) **% unmet calls:** 13.85% (n=36) **% false alerts:** 0.38% (n=1)	Low
Kersten (2013)	• Mean structural quality for all assessed areas (Donabedian's criteria of quality of care) • Process quality (observational structured checklist) • Overall mortality rate	**(SD):** **Mean structural quality for all assessed areas:** 73% (7) of expected performance level (EPL) **Mean process quality:** 59% EPL (9) **Process quality for:** supportive depts (lab & pharmacy) 86% (18) of EPL; general nursing care procedures 54% (7); hygiene procedures 41% (11) of EPL **Overall mortality rate:** 3.6% (2011)	Unclear
Kunkel (2019)	• # of consultations reviewed by ACF teams • Impact of HF-based ACF visits on HF-EVD awareness	**# of consultations reviewed by ACF teams:** 37,746 consultations reviewed, 690 suspected EVD case, 358 alert cases, 2 cases validated as suspected EVD cases **Adjusted odds of good awareness of EVD by previous ACF visit to HF (ref: no prior visit):** 2nd or 3rd visit 4.4 (95% CI 2.0-10.8, p=0.0005); 4th + visit 15.0 (95% CI 3.5-84.3, p=0.0007)	Low
Lee (2016)	• Sensitivity of the national call centre database • Sensitivity of calls to the local prefectures	**(95% CI):** **Sensitivity of the national call centre database:** 3.9% (3.0–4.9) Sensitivity of calls to the local prefectures: alert database (active prefectures) 54.3 (47.8–70.0),, local source 51.1 (44.3–57.9), national source 3.2 (1.3–6.4)	Moderate

Li (2016)	• Proportion of new confirmed cases from registered contacts % (new confirmed cases/ all registered contacts) • Median of community infectivity time (range)- days • % confirmed EVD died in the community • Unsafe burials for probable or confirmed EVD case • Districts with at least 1 security incident or other form of incompliance to EVD control measure (number per week)	**Proportion of new confirmed cases from registered contacts %:** Nationwide = 45.6 (302/662), Pilot communities = 64.3 (9/14) **Median of community infectivity time (days):** Nationwide = 1.9, Pilot communities = 1.0 **% confirmed EVD died in the community:** Nationwide = 21.2 (156/736), Pilot communities = 12.5 (1/8) **Unsafe burials:** Nationwide = 173, Pilot communities = 0 **Districts/week with 1+ incompliance form:** Nationwide = 2.7, Pilot communities = 0	Unclear
Lovey (2021)	• Post-test results • Knowledge acquisition	**Post-test results (95% CI, p-values for 2-tailed and 1-tailed tests between intervention groups):** **Written exam % score:** intervention 51% (38-63, p=0.006, p=0.003), control 30% (23-38) **Oral exam % score:** intervention 67% (45-56, p=0.05, p=0.03), control 51% (43-59) **Final results % score:** intervention 59% (44-74, p=0.008, p=0.004), control 41% (34-48) **Knowledge acquisition (intervention only):** **Critical thinking:** 4 points (SD 2.6), 53% (95% CI 32-75) **Quiz results:** 5 points (SD 1.3), 48% (95% CI 40-56)	Low
Mbaeyi (2018)	• Acute flaccid paralysis (AFP) case counts and nonpolio acute flaccid paralysis (NPAFP) rates (cases per 100,000 persons aged <15 years) • Stool specimen adequacy rates and timeliness of reporting • Mean duration from paralysis onset to notification	**AFP cases (#):** 172 in 2011, 148 in 2012, 546 in 2013, 420 in 2014 **NPAFP rates:** 6.5 in 2013, 7.4 in 2014, 4.8 cases in 2015, 5.3 in 2016; incidence rate ratio 2015 vs 2012 = 1.7 (95% CI 1.4-2.1, p<0.001) **Stool specimen adequacy rates:** Consistently >95% during 2011-2016 except in 2013, when the rate dropped to 86.8% **Overall mean duration from paralysis onset to notification:** 4.5 days for AFP cases during 2014-2016	Unclear

Metuge (2021)	• Ability of CBS system vs DHS facility-based surveillance to pick up suspected cases of OPDs (# alerts by CBS system vs DHS) • Timeliness of reporting (average time first symptoms to alert generation by CBS system)	**Comparative ability of CBS system to pick up suspected cases of OPDs:** CBS system - 9 alerts (8 investigated, 5 responses, and 3 confirmed); DHS - 0 alerts **Timeliness of reporting:** CBS system - 7.3 days	Low
Momotaz (2019)	• Quality of training: scale 1-5 • Confidence in applying training to their work	**Quality of training:** average score for all aspects of training 3.5, average score of trainers 4.9 **Confidence in applying training to their work:** 76% felt very confident	Unclear
Parr (2014)	• Rate of umbilical cord ligation • Proportion of cord ligation rates before and after arrival of midwife • Maternal and neonatal outcomes before and after arrival of midwife: birthweight in grams, mean estimated gestational age in weeks, 1 minute and 5 minute Apgar scores, proportion of 5-minute Apgars less than 7, newborn resuscitation percentage, postpartum haemorrhage, episiotomy • Proportion of correct answers given by SBAs on knowledge survey	**Rate of umbilical cord ligation:** quarter 1 15.9%, quarter 2 11.1%, quarter 3 2.4%, quarter 4 0.9% **Proportion of cord ligation rates before and after arrival of midwife, by clinic site:** Maela before 15.3%, after 1.0%; Wang Pha before 10.6%, after 1.9%; Maw Ker Thai before 13.7%, after 3.0% **Maternal and neonatal outcomes before and after arrival of midwife (SD):** birthweight before 2979 (437), after 2989 (429); mean estimated gestational age: before 39.1 (1.5), after 39.1 (1.4); shoulder dystocia before 0.1%, after 0.1%; Apgar (1 minute), median: before 9, after 9; Apgar (5 minute), median: before 10, after 10; proportion of 5-minute Apgar less than 7: before 0.8%, after 0.8%; newborn resuscitation: before 2.8%, after 1.6%; postpartum haemorrhage: before 8.3%, after 6.5%; episiotomy %: before 5.1%, after 5.2% **Proportion of correct answers given by SBAs on knowledge survey:** proportion of infants born with nuchal cord: 61.5; presence of fetal nuchal cord is harmful to the infant: 16.7; can cause fetal distress in 2nd labour: 92.3; clamping and cutting of the fetal nuchal cord before birth is a dangerous practice: 84.6; clamping and cutting of the fetal nuchal cord before birth is associated with fetal anaemia: 83.3; clamping and cutting of the fetal nuchal cord before birth is associated with fetal shock and hypovolemia: 38.5; clamping and cutting of the fetal nuchal cord before birth is associated with HIE especially with shoulder dystocia: 88.5	Unclear

Ratnayake (2021)	• # of consultations for hypertension and diabetes: incidence rate ratio • Treatment adherence	**# of consultations (95% CI):** HTN 13.5 (5.8-31.5, p=0.00); diabetes 3.6 (1-12.9, p=0.046) **Treatment adherence:** HTN attended at least 2 visits 45.4%, remained in care 33.9%; diabetes attended at least 2 visits 55.3%, remained in care 50%; HTN+diabetes attended at least 2 visits 82.1%, remained in care 56%	High
Sibai (2020)	• 12-item 'Equipment Monitoring' tool for checking availability and functionality of equipment and medication • Health provider knowledge and skills • Data collection completeness • Patient satisfaction • Provider counselling • Patient awareness of program/where to seek help	**Equipment and medication availability/functionality:** effective process of replenishing most items in due time, except for glucose strips and waist circumference measuring tape **Physician knowledge/skills:** 100% correct related to treatment and monitoring; lower levels on diagnosis (25% disagreement on need to take 2 BP measurements, 81% unable to characterize indications of oral glucose tolerance test or related instructions given to patient when ordering test) **Nursing staff equipment usage knowledge post-training:** 33% correctly identified how many beeps they should hear when the test strip is firmly inserted into the instrument, 33% how long before instrument turns off automatically, 44% how to clean lancing site **Data completeness:** screening forms [random sample] 94% (range 88-100%), BMI and WC most commonly missing items (range 5-12%); patient records >80% Patient satisfaction with encounters: 60% **Counselling/provider inquiry:** 86% patients queried about compliance to medications; 68% patients queried about advice given on behavioural changes; 31-42% questioned on side effects of medications and potential complications. Patient awareness of program/where to seek help: 40%	Unclear
Sijbrandij (2020)	• Knowledge retention measured with Knowledge Retention score • Scenario score measured understanding of how to apply appropriate skills and response strategies	**Mean difference (95% CI):** **Knowledge retention:** post 1.73 (0.98-2.47, p<0.0001), Cohen's d=0.50; follow-up 1.54 (0.76-2.33, p=0.0001), Cohen's d=0.43 **Scenario:** post 0.19 (-0.14 to 0.51, p=0.26), Cohen's d=0.04; follow-up 0.65 (0.31-0.98, p=0.0002), Cohen's d=0.38	Unclear

Sion (2015)	• Operating budget for surgical services: USD per inhabitant per year • Budget for surgical services as proportion of total operating budget • Proportion of hospital caseload requiring surgical services	**Operating budget for surgical services:** Model Normative Hospital 2.17, Demba Hospital 0.08, Kabare Hospital 0.69 **Budget for surgical services as % of total operating budget:** Model Normative 18%, Demba 24%, Kabare 20% **% of hospital caseload requiring surgical services:** Model Normative 33.3%, Demba 9%, Kabare 3.33%	High
Stanley (2015)	• Median assessment score • Proportion of participants who passed assessment	**Median assessment score:** 12 baseline, 20 post-test, 21 8-wk follow up % of participants who passed the assessment: 4.1% baseline, 71.2% post-test, 66% 8-week follow up	High
Steinhardt (2013)	• Observed facility structural quality • Patient and household perceived quality of care: adjusted change from baseline to follow-up compared to control catchment areas • Utilization of health services: change in average monthly visits	**Observed facility structural quality:** Difference in improvement between free service facilities and user fee facilities 2.2 (p-value not reported but indicated to be "not significant") **Patient and household perceived quality of care:** DH user fee facilities 1.74 (p<0.05), non-DH user fee facilities -1.08 (p<0.05), free service facilities 2.28 (p<0.05) **Utilization of health services:** Change in average monthly visits: DH user fee facilities 100.1, non-DH user fee facilities -297.7 (p<0.05), free service facilities 688.2 (p<0.05) **Change in average monthly OPD visits - baseline fee levels (reference = none):** user fee*service+meds fee 592.1 (p<0.05), user fee*service fee 254.1, free service*service+meds fee 1,300.6 (p<0.01), free service*service fee -443.2	High
Tran (2021)	• Change in score from pre-test to post-test	**Change in score from pre-test to post-test:** Uganda pre-test 84%, post-test 89%; DRC pre-test 56%, post-test 76%; Nigeria pre-test 45%, post-test 52%	Low

| Van Boetzelaer (2020) | • Positive Predictive Value (PPV)
• Usefulness
• Timeliness
• Simplicity
• Flexibility
• Acceptability
• Representativeness
• Stability | **PPV:** overall range 41.7%-100%, AWD 88.8% (2,528/2,848), acute jaundice syndrome (53.2% (364/684), acute flaccid paralysis (AFP) 100% (28/28), dengue 70% (21/30), diphtheria (suspected) 41.7% (177/425), measles (suspected) 73.7% (101/137), meningitis (suspected) 50% (1/2)
Usefulness: 21 probable (RDT positive) cholera cases identified by HF-based surveillance; 2 alert responses activated for suspected AWD clusters identified by CBS
Timeliness: ID of suspected case - notification of epidemiologist: HF surveillance 1 hour, CBS within 8 hours (at end of working day)
ID of suspected case - notification of Epi Alert Team or Medical Response Team: HF surveillance 2 hours, CBS within 8 hours (at end of working day)
Notification of Epi Alert Team - MSF response: HF surveillance 1-12 hours, CBS 1-12
Notification of epidemiologist - EWAR reporting: HF surveillance 1 hour, CBS 1 hour
EWAR reporting - WHO JAT investigation: HF surveillance 1-5 days; CBS 1-5 days
Simplicity: system was complex and required 354 staff in 10 different roles
Flexibility: dengue added to surveillance list after increase in cases; CBS designed with built-in flexibility for periodic rotation of WaSH indicators
Acceptability: all HHs in catchment areas consented to CBS inclusion & monthly HH visits
Representativeness: exhaustive, including all HHs in catchment area; coverage during holidays was 85.2-86.7% and >90% in other surveillance cycles
Stability: No interruptions reported | Low |

| White (2016) | • Proportion of students successfully completing the SBA training
• Proportion of graduates who worked at the training facility (SMRU) for at least 12 months
• Proportion of SBAs from first 3 training cohorts who completed the requirements for promotion or who were progressing towards promotion
• Median score by cohort on theory exam
• Proportion completing the clinical requirements of the program to achieve competence within 12 months
• Perinatal indicators of birth room safety: proportion of women birthing at SMRU, proportion of women having partographs completed, proportion of stillbirth | **Proportion of students successfully completing the SBA training:** 79/88 (90%)
Proportion of graduates who worked at the training facility (SMRU) for at least 12 months: 65/88 (74%)
Proportion of SBAs from first 3 training cohorts who completed the requirements for promotion or who were progressing towards promotion: 28/60 (47%)
Median score by cohort on theory exam (IQR): 81 (76-86), 77 (75-89), 81 (75-85), 79 (70-83)
Proportion completing the clinical requirements of the program to achieve competence within 12 months: 100%
Proportion of women birthing at SMRU (2008-2015): 57.2%, 59.7%, 66.9%, 76.8%, 81.6%, 81.2%, 83.2%, 81.9% (p<0.001)
Proportion of women having partograms completed (2008-2015): 87.6%, 98.5%, 94.0%, 96.2%, 98.6%, 99.0%, 99.7%, 99.8% (p<0.001)
Proportion of stillbirth (2008-2015): 1.0%, 0.7%, 1.0%, 0.8%, 0.9%, 0.7%, 0.7%, 0.4% (p=0.0276) | Unclear |
| Wijekoon (2020) | • Simplicity
• Flexibility
• Acceptability
• Representativeness
• Timeliness
• Sensitivity
• Positive predictive value (PPV)
• Usefulness
• Data quality
• Stability | **Simplicity** (Structure, design and ease of operation data flow, ease of completing reporting forms, how many should be completed, length of follow-up required for an outcome, time spent in managing, analysing, and disseminating data, degree of integration with other systems and laboratories): Moderate
Flexibility (Ability to adapt to changing information needs or operating conditions with few additional resources. Ability to scale up/down based on context, respond to new or multiple outbreaks, adding or removing new forms, modification of data management, bulletin production based on needs): Moderate
Acceptability (Willingness of all stakeholders to participate, as reflected in the completeness and relative ease of reporting, refusal to report, trust in the system and feedback): High
Representativeness (Ability to describe correctly the occurrence and distribution of a disease across the population by place and person): High | Low |

| | | **Timeliness** (Delay between steps in the system; Length of interval between reporting and public health action): Moderate; unable to determine for alerts
Sensitivity (Proportion of cases detected by the system out of all true cases in the population): Undetermined
PPV: Undetermined
Usefulness (Contribute to public health prevention and/ or control; Identify new adverse health events, estimate scale or magnitude of events, contribute to performance measures, contribute to accountability): High
Data quality (Completeness and validity of data recorded in the system; Completeness of data set, level of errors, missing fields, easy-to-read entries; Consistency of data at all reporting levels, over time, level of feedback, supervision, training provided to identify true cases in the population): Moderate
Stability (Reliability and availability of system; Unscheduled outages, downtimes, cost to maintain system, time spent on maintenance, lack of dedicated resources): High | |

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