

REPORT OF EVIDENCE GAPS
RESILIENT HEALTH SYSTEMS COLLECTION
15 December 2022

Authors: Cristián Mansilla and Ana Pizarro

This document presents an evidence gap based on 24 reviews prioritized for four different domains (chemical, biological, radiological, and nuclear hazards (CBRN), migrants, refugees and displaced populations, hospital preparedness, and non-communicable diseases (NCDs)). The document introduces a summary table of all the identified gaps, followed by a more detailed description of the gaps identified in each review. Hyperlinks have been created in the table to facilitate access to details of each gap.

The reviews have been classified based on their research question and the intervention, exposure, and phenomenon of interest they address. In each review, we searched for any study that might fill the gap (search strategies used for this update are available in the Appendix).

Finally, each gap was classified into four main types:

1. More research is needed: where the authors concluded that limited studies address a given research question.
2. More high-quality research is needed: where the authors concluded that the quality of the available literature is too low to make firm conclusions, and research with higher internal validity is required.
3. More research with higher external validity: where the authors concluded that there is a need for literature that could improve its applicability to a given research question.
4. More research to better understand a phenomenon: where the authors concluded that more research would be needed to grasp a phenomenon or a mechanism of action properly.
5. Other

Characteristics of the included reviews

24 reviews were considered for conducting this evidence map, which are described in the following table:

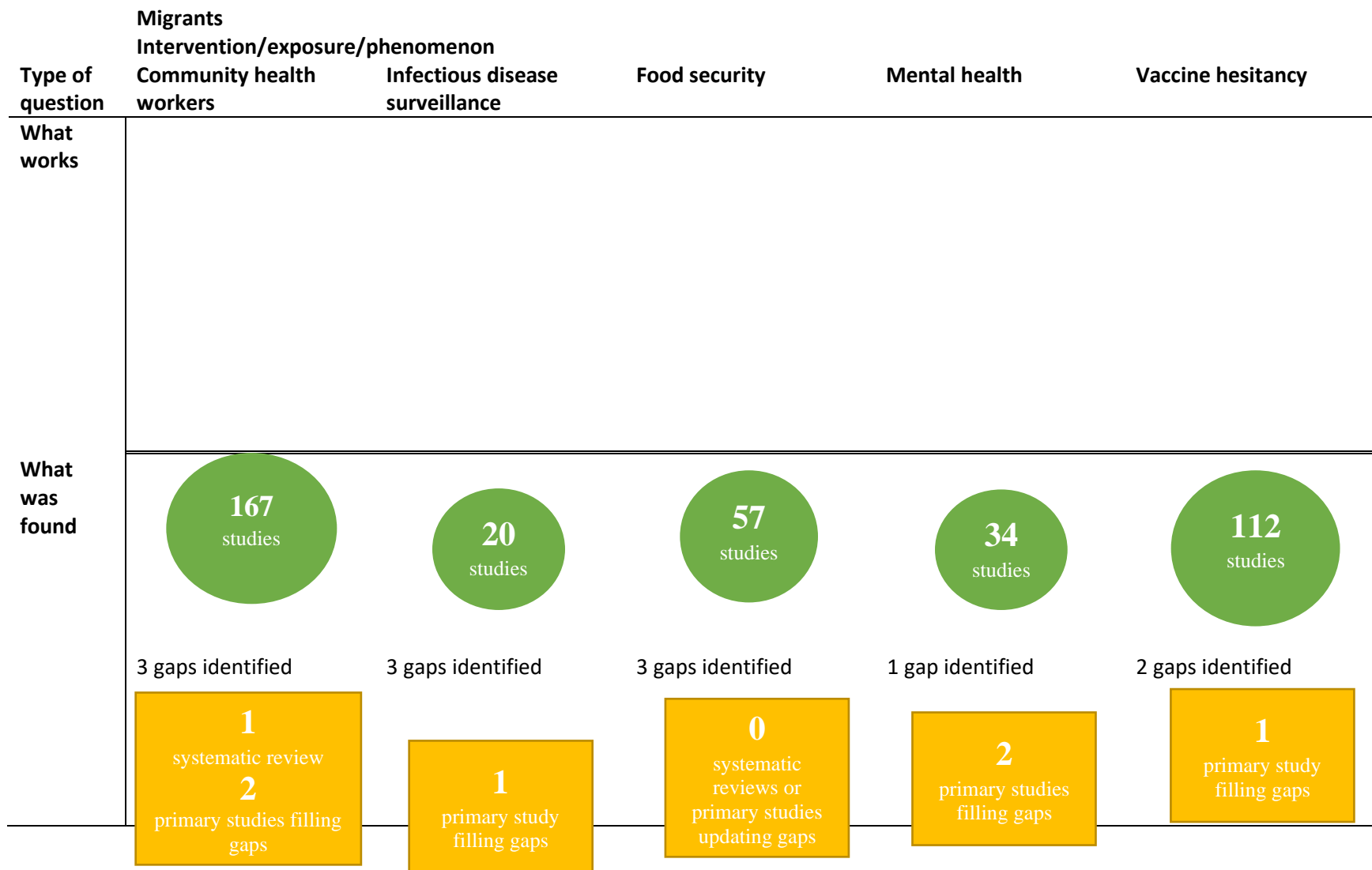
CHARACTERISTICS	N	%
Search date		
After 2020	3	13%
Between 2015 and 2020	16	67%
Between 2010 and 2014	4	17%
Before 2010	1	4%
Geographical restrictions		
No geographical restrictions	19	79%
Only studies conducted in one or more LMICs are included	5	21%
Only studies conducted in one or more HICs are included	0	0%
Only studies conducted in a specific set of countries are included	0	0%
Number of included studies		
50 or more	3	13%
Between 30 and 49	8	33%
Between 10 and 29	11	46%
Between 1 and 9	2	8%
No included studies	0	0%
Type of gaps identified*		
More research is needed	15	63%
More high-quality research is needed	5	21%
More research with higher external validity is needed	5	21%
More research to better understand a phenomenon or intervention is needed	8	33%
Other	1	4%
None	5	21%

*Reviews could have more than one type of gap, and therefore the percentages could sum more than 100%.

CBRN

Intervention/exposure/phenomenon

Type of question	Mass casualty triage systems	Pre-incident educational intervention	Communication with the public about CBRN	Hospital preparedness measures
What works		<p>44 studies</p> <p>2 gaps identified</p> <p>2 studies to potentially fill the gaps</p>		
What was found	<p>19 studies</p> <p>2 gaps identified</p> <p>2 systematic reviews confirming the existing gap</p>		<p>33 studies</p> <p>2 gaps identified</p> <p>1 systematic review confirming the existing gaps and adding 2 more</p>	<p>23 studies</p> <p>11 studies</p> <p>No gaps identified</p>



Hospital preparedness

Intervention/exposure/phenomenon

Type of question	Hospital resilience	Governance	Incident classification	Preparedness in biological events
What works				
What was found	<p>16 studies</p> <p>1 gap identified</p> <p>0 systematic reviews or primary studies filling gaps</p>	<p>34 studies</p> <p>1 gap identified</p> <p>1 primary study filling gaps</p>	<p>17 studies</p> <p>1 gap identified</p> <p>0 systematic reviews or primary studies filling gaps</p>	<p>23 studies</p> <p>1 gap identified</p> <p>1 systematic review confirming the existing gap</p>

Non-communicable diseases

Intervention/exposure/phenomenon

Type of question	Interventions to women and children in conflict settings	Impact of disasters	Chronic diseases during disasters	Interventions during disaster settings to general population
What works	<p>27 studies</p> <p>2 gaps identified</p> <p>0 systematic reviews or primary studies filling gaps</p>	<p>48 studies</p> <p>No gaps identified</p>	<p>85 studies</p> <p>4 gaps identified</p> <p>11 primary studies filling gaps</p>	<p>7 studies</p> <p>8 studies</p> <p>6 gaps identified</p> <p>0 systematic reviews or primary studies filling gaps</p>
What was found				

DETAILED EVIDENCE GAPS

Domain 1: Chemical, biological, radiological, or nuclear (CBRN) emergencies

1. Carter 2020 (1)

[Recommendations for improving public engagement with pre-incident information materials for initial response to a chemical, biological, radiological or nuclear \(CBRN\) incident: A systematic review](#)

This review has identified two main gaps:

#	Evidence gap	Classification	Population/setting identified
1	“Further research is required to examine how best to increase preparedness over the longer term, for example testing the efficacy of two or more interventions for improving preparedness over a medium-to-long-term time frame.”	Other (more research that complements the research question)	Not specified
2	“Further research should also examine public misperceptions in relation to different types of CBRN agents so that these can be specifically addressed when designing pre-incident education campaigns.”	More research to better understand the phenomenon is needed	Not specified

These gaps were identified up to June 2019 with no geographical restrictions.

An updated search was conducted on 11 August 2022 to check if new studies have filled these gaps, finding:

- No more recent systematic reviews addressing the same or a broader question.
- [1 study](#) evaluating the effectiveness of a healthcare provider course to improve chemical incident preparedness in Saudi Arabia might contribute to partially filling the gap 1.
- [1 study](#) evaluating the Irish population’s public perception of medical radiation risk might contribute to partially filling gap 2.

2. Culley 2014 (2)

[A review of the literature on the validity of mass casualty triage systems with a focus on chemical exposures](#)

This review has identified two main gaps:

#	Evidence gap	Classification	Population/setting identified
1	“Well-designed studies using actual patient data are needed to validate the reliability, sensitivity, and specificity	More high-quality	Chemical exposures

	of triage systems used for all mass casualty incidents, especially those involving chemical.s”	research is needed.	
2	“Need for evidence on the validity of triage systems for mass casualty incidents and, in particular, those involving chemical.s.”	More research to better understand the phenomenon is needed	Chemical exposures

These gaps were identified up to July 2012 with no geographical restrictions.

An updated search was conducted on 11 August 2022 to check if new studies have filled these gaps, finding:

- [A systematic review](#) published in April 2022 (search date not specified but conducted during 2021) assessed the accuracy of triage systems in disasters and mass casualty incidents, with no focus on chemical incidents.
 - This systematic review did not list implications for research.
- [A systematic review](#) published in August 2022 (a search conducted on 9 March 2022) assessed the accuracy of prehospital triage systems for mass casualty incidents, with no focus on CBRN incidents.
 - Although this systematic review did not include explicit implications for research, the authors stated that “the evidence presented here is not strong enough to conclude which triage system has the highest accuracy”.
 - This gap identified confirms that the gaps identified by the original review have yet to be addressed.

Considering that the original review search was conducted more than 10 years ago and that two more recent systematic reviews addressing broader questions were found, we did not search for primary studies to see if the gaps have been addressed.

3. Dowlati 2020(3)

[Hospital Preparedness Measures for Biological Hazards: A Systematic Review and Meta-Synthesis](#)

This review did not report evidence gaps and conducted its search on 1 June 2019 with no geographical restrictions.

4. Moradi 2019(4)

[Hospital Preparedness Plans for Chemical Incidents and Threats: A Systematic Review](#)

This review did not report evidence gaps and conducted its search on 15 May 2018 with no geographical restrictions.

5. [Rubin 2012 \(5\)](#)

[How to Communicate with the Public About Chemical, Biological, Radiological, or Nuclear Terrorism: A Systematic Review of the Literature](#)

This review has identified two main gaps:

#	Evidence gap	Classification	Population/setting identified
1	“Studies that empirically evaluate the impact of communications about CBRN, while understanding what people would like to know about CBRN and how they would prefer to receive this information should help communicators to ensure that their messages are attended to, evaluating whether these messages have the desired effect on behaviors or emotions requires more attention.”	More high-quality research is needed.	Chemical exposures
2	“Further research is required to extend these predominantly US-based findings to other countries and to confirm the findings of research using hypothetical scenarios.”	More research to better understand the phenomenon is needed	Chemical exposures

These gaps were identified up to [November 2011](#) with no geographical restrictions.

An updated search was conducted on [17 August 2022](#) to check if new studies have filled these gaps, finding:

- [A systematic review](#) published in October 2019 (search date not specified but conducted during 2017) assessed how to inform the public about protective actions in a nuclear or radiological incident without focusing on chemical or biological incidents.
 - The authors identified three evidence gaps:
 - “The use of social media in radiation emergency communications.”
 - “More data is needed on how different information sources can foster trust in the public.”
 - “The longer-term effect of any information campaign.”
 - These gaps identified to confirm that the gaps identified by the original review and three more gaps have yet to be addressed.

Considering that the original review search was conducted more than 10 years ago and at least one more recent systematic review was found, we did not search for primary studies to see if the gaps have been addressed.

6. [Bazyar 2022 \(6\)](#)

[Accuracy of Triage Systems in Disasters and Mass Casualty Incidents; a Systematic Review](#)

This review was identified in an updated search conducted to update evidence gaps identified by a previous review. Its gaps are described as part of the section describing [Culley 2014](#).

7. [Marcussen 2022](#) (7)

[Accuracy of prehospital triage systems for mass casualty incidents in trauma register studies - A systematic review and meta-analysis of diagnostic test accuracy studies](#)

This review was identified in an updated search conducted to update evidence gaps identified by a previous review. Its gaps are described as part of the section describing [Culley 2014](#).

Domain 2: Migrants

8. [Ahmed 2022](#) (8)

[Community health workers and health equity in low- and middle-income countries: systematic review and recommendations for policy and practice](#)

This review identified three main gaps:

#	Evidence gap	Classification	Population/setting identified
1	<p>“Dearth of studies reporting on community health workers (CHW) service quality for disadvantaged groups.”</p> <p>“There was a notable dearth of evidence on how CHWs serve those with disabilities.”</p> <p>“We found a concerning absence of research on how CHWs serve sexual and gender minorities.”</p> <p>“Research on how CHWs serve linguistic, religious, and ethnic minorities was also limited.”</p> <p>“A serious gap in the evidence base on how well CHWs address maternal newborn and child health (MNCH) and infectious diseases (e.g., TB, HIV) in disadvantaged groups.”</p>	More research with higher external validity	Community health workers in disadvantaged groups to address maternal newborn, and child health and infectious diseases
2	<p>“The impact of programs on the rights, needs, and wellbeing of CHWs.”</p>	More research to better understand the phenomenon is needed	Not specified.

3	"Need for more evidence on CHWs in humanitarian settings (most evidence comes from stable development settings.)"	More research to better understand the phenomenon is needed	Humanitarian settings
---	---	---	-----------------------

These gaps were identified up to Spring 2020, only including articles conducted in LMICs.

An updated search was conducted on 21 September 2022 to check if new studies have filled these gaps, finding:

- No more recent systematic review addressing the same or a broader question.
- A [systematic review](#) published in 2021 (search conducted on 23 April 2020) assessing community health worker interventions for older adults with complex health needs, with no broader focus on equity as the original review had.
 - The authors identified two evidence gaps:
 - "There is a need to further investigate the potential impact of CHW interventions on socially vulnerable older adults, particularly given the well-suited skills and training of CHWs to serve populations with high social needs."
 - "There is a need for additional high-quality studies to understand the impact, cost-effectiveness, and ideal implementation strategies for CHW-led interventions for older adults with complex needs."
- A [primary study](#) that explored community health workers' perspectives on task-shifting evidence-based mental health care for Latinxs in a rural community might contribute to partially filling the gap 1.
- A [primary study](#) assessing a community-based strategy to facilitate COVID-19 vaccine uptake among the Latinx population might contribute to partially filling gap 1.

9. [Saleh 2022 \(9\)](#)

[Infectious disease surveillance for refugees at borders and in destination countries: a scoping review](#)

This review identified three main gaps:

#	Evidence gap	Classification	Population/setting identified
1	" Further documentation is needed to address gaps in infectious disease surveillance for refugees at borders and destination countries"	More research is needed	Refugees at borders
2	"Literature outside the European region appears very limited, despite significant migrant populations in the Eastern Mediterranean and North Africa since the Syrian conflict began"	More research with higher external validity	Migrant populations outside European region

3	“It would be informative to have a specified review in the future addressing implementation of surveillance activities for refugees during pandemics, in particular COVID-19”	More research with higher external validity	Pandemics, in particular during COVID-19
----------	---	---	--

These gaps were identified up to July 2021 with no geographical restrictions.

An updated search was conducted on 10 October 2022 to check if new studies have filled these gaps, finding:

- No more recent systematic review addressing the same or a broader question.
- [A primary study](#) evaluating a diarrhea surveillance program during the Rohingya Crisis during 2017-2019 in Cox’s Bazar in Bangladesh, which might contribute to partially filling gap 2.

10. Nisbet 2022 (10)

[Food Security Interventions among Refugees around the Globe: A Scoping Review](#)

This review identified three main gaps:

#	Evidence gap	Classification	Population/setting identified
1	<p>“There is a lack of evidence as to whether international agencies are working together on interventions they support collectively and, if so, how effective those initiatives are compared to interventions implemented by one agency alone”.</p> <p>‘it is not clear the extent to which international agencies work with local governments or NGOs on the sustainability of interventions that is necessary to empower refugees, enable them to be self-sufficient, improve their food security status, and contribute to local economies”</p>	More research is needed	The role of international agencies for refugees
2	“Limited studies on cash, vouchers, and/or rations measured food security and considered gender in their implementation. Of those that did, none compared food security results across genders”	More research to better understand the phenomenon is needed	Refugees
3	“ There is a need to identify, evaluate, and document best practices aimed to improve the food security status of refugees.”	More research to better understand the	Refugees

		phenomenon is needed	
--	--	----------------------	--

These gaps were identified up to 29 June 2020, with no geographical restrictions.

An updated search was conducted on 3 October 2022 to check if new studies have filled these gaps, finding:

- No more recent systematic review addressing the same or a broader question.
- The [Shah 2020](#) review was found in the updated search, but it focuses on nutritional interventions for women and children in conflict settings.
- No more recent primary studies could update any of the gaps that were identified, confirming that the gaps identified in the original review have yet to be addressed.

11. [Mesa-Vieira C 2022 \(11\)](#)

[Mental health of migrants with pre-migration exposure to armed conflict: a systematic review and meta-analysis](#)

This review identified one main gap:

#	Evidence gap	Classification	Population/setting identified
1	"Further studies should present estimates disaggregated by sex, age, and ethnicity."	More research is needed	Migrants with pre-migration exposure to armed conflicts

These gaps were identified up to 28 June 2021, with no geographical restrictions.

An updated search was conducted on 29 September 2022 to check if new studies have filled these gaps, finding:

- No more recent systematic review addressing the same or a broader question.
- A [Cochrane systematic review](#) published in 2022 (search conducted on 21 February 2021) evaluated community-based interventions for improving mental health in refugee children and adolescents, but only in high-income countries
 - The authors identified two evidence gaps:
 - "Some of the largest gaps in the evidence include the absence of RCTs that are statistically powered to detect moderate effects, evaluations of interventions for the treatment of diagnosed mental health conditions, and evaluations including outcomes relating to the acceptability of interventions".
 - "RCTs in this field of research can be improved by more careful trial design and more transparent reporting".
- [A primary study](#) assessed PTSD, anxiety/depression, insecurity, distress, and trauma among refugee children from Syria living in Jordan might contribute to partially filling the gap.
- [A primary study](#) measuring the mental health (prevalence of PTSD anxiety and depression of adult refugees from Syria resettled in Norway might contribute to partially filling the gap.

12. Tankwanchi 2022 (12)

[Non-COVID-19 vaccine hesitancy among migrant populations worldwide: a scoping review of the literature](#)

This review identified two main gaps:

#	Evidence gap	Classification	Population/setting identified
1	"The treatment of migrant populations by many studies as a monolithic group defined by their foreign birthplaces is a research gap (e.g., foreign born without recognizing differences)"	More research is needed	Not specified
2	"The current body of evidence comes almost entirely from a subset of Western-based high-income countries"	More research with higher external validity	Migrants outside western-based high-income countries

These gaps were identified up to 10 October 2020, with no geographical restrictions.

An updated search was conducted on 7 October 2022 to check if new studies have filled these gaps, finding:

- No more recent systematic review addressing the same or a broader question.
- [A systematic review](#) published in 2022 (search conducted in February 2021) compared the vaccination coverage among migrants versus non-migrant populations, but it was not related to vaccine hesitancy. The authors did not use geographical restrictions when conducting their searches and did not provide any evidence gaps.
- [A primary study](#) evaluated the influenza vaccination uptake and its determinants among migrants in Shanghai, China might contribute to partially filling gap 2.

Domain 3: Hospital preparedness

13. Jolgehnejad 2021 (13)

[Factors Influencing Hospital Resilience](#)

This review identified one main gap:

#	Evidence gap	Classification	Population/setting identified
1	"Future research can address the social determinants influencing the resilience of the hospital (e.g., economics, politics, and culture), as well as the hospital supply chain."	More research is needed	Not reported

This gap was identified up to 2018, with no geographical restrictions.

An updated search was conducted on 17 October 2022 to check if new studies have filled this gap, finding:

- No more recent systematic review addressing the same or a broader question.
- No primary study that could contribute to fill the gap.

14. Lokot 2022 (14)

[Health system governance in settings with conflict-affected populations: a systematic review](#)

This review identified one main gap:

#	Evidence gap	Classification	Population/setting identified
1	“Very limited evidence on health system governance in settings with conflict-affected populations”	More research is needed	Conflict-affected

This gap was identified up to October 2020, with no geographical restrictions.

An updated search was conducted on 15 November 2022 to check if new studies have filled this gap, finding:

- No more recent systematic review addressing the same or a broader question.
- [A primary study](#) conducted a survey about the healthcare governance during humanitarian responses about the current practice among international humanitarian actors might contribute to partially fill the gap.

15. Murray 2018 (15)

[Review article: A systematic review of emergency department incident classification frameworks](#)

This review identified one main gap:

#	Evidence gap	Classification	Population/setting identified
1	“Efforts to develop an ideal incident classification framework for use in ED risk management would benefit from synthesizing a wider range of theories of failure, both human and organisational. This may allow improved recognition of safety threats and development of mitigation strategies. Drawing on wider and multiple theories may also provide language and concepts to help investigators identify and describe what is observed”	More research to better understand a phenomenon	Not reported

	<p>“It is suggested that future work to develop ED incident classification frameworks should include the broader perspectives from theories on safety, human behaviour, organisations and system behaviour in addition to the widely accepted human factors approach”</p>		
--	---	--	--

This gap was identified up to February 2016, with no geographical restrictions.

An updated search was conducted on 16 November 2022 to check if new studies have filled this gap, finding:

- No more recent systematic review addressing the same or a broader question.
- A [protocol of a systematic review](#) published in 2022 is planning to create a conceptual framework of determinants of emergency department utilization among older adults.
- No primary study that could contribute to fill the gap.

16. Aminizadeh 2019 (16)

[Hospital management preparedness tools in biological events: A scoping review](#)

This review identified one main gap:

#	Evidence gap	Classification	Population/setting identified
1	<p>“The findings of the research showed that currently, there is no comprehensive tool to assess the preparedness of hospitals in biological events, and so far, no methodology was able to determine a method, tool, or comprehensive indicator that has a standard methodological approach regarding a systematic review and toolmaking as well as a comprehensive and qualitative research methodology for various aspects of hospital preparedness in biological events”</p>	<p>More research is needed</p>	<p>Biological events</p>

This gap was identified up to December 2017, with no geographical restrictions.

An updated search was conducted on 21 November 2022 to check if new studies have filled this gap, finding:

- [A systematic review](#) published in 2021 (search conducted on 31 December 2018) searching hospital preparedness checklists in biological events to assess them using the COSMIN checklists. The authors did not use geographical restrictions when conducting their searches:
 - The authors identified two evidence gaps:
 - “Further validation studies are required to fill the evidence gaps in the measurement properties of these instruments”

- “None of the evaluated checklists and instruments included all dimensions required for an appropriate hospital preparedness evaluation. The information on their measurement properties was lacking.”
 - These gaps identified confirm that the gaps identified by the original review have yet to be addressed.

17. [Aminizadeh 2021 \(17\)](#)

[COSMIN Checklist for Systematic Reviews of the Hospital Preparedness Instruments in Biological Events](#)

This review was identified in an updated search conducted to update evidence gaps identified by a previous review. Its gaps are described as part of the section describing [Aminizadeh 2019](#)

Domain 4: Non-communicable diseases

18. [Shah 2020 \(18\)](#)

[Delivering non-communicable disease interventions to women and children in conflict settings: a systematic review](#)

This review identified two main gaps:

#	Evidence gap	Classification	Population/setting identified
1	“No information on population-level intervention coverage or on the effectiveness of interventions in improving the health status of conflict-affected women or children”	More research is needed	Conflict-affected women or children
2	“Low quality and quantity of evidence about NCD intervention effectiveness in LMIC”	More research with higher external validity	LMICs

This gap was identified up to 31 March 2018, only including articles conducted in LMICs.

An updated search was conducted on 3 November 2022 to check if new studies have filled this gap. finding:

- Five systematic reviews that are part of a BMJ Global Health supplement (which the original review also belongs to) on [Reaching conflict-affected women and children with health and nutrition interventions](#).
 - These reviews were all published in 2021 (search conducted on 31 March 2018).
 - The review topics were:
 - [Maternal and neonatal interventions in conflict settings](#)
 - [Sexual and reproductive interventions in conflict settings](#)
 - [Water, sanitation and hygiene interventions to women and children in conflict settings](#)

- [Infectious disease interventions to women and children in conflict settings](#)
- [Trauma and rehabilitation interventions to women and children in conflict settings](#)
- As seen, all the reviews used the same population, but did not have the same focus on non-communicable diseases as the original review.
- The original search produced too many results for primary studies, which was not feasible to review given the project time frame.

19. [Ghazanchari 2022 \(19\)](#)

[Identifying and Describing Impact of Disasters on Non-Communicable Diseases: A Systematic Review](#)

This review did not report evidence gaps and conducted its search on 15 May 2018 with no geographical restrictions.

20. [Ngaruiya 2022 \(20\)](#)

[Systematic review on chronic non-communicable disease in disaster settings](#)

This review identified four main gaps:

#	Evidence gap	Classification	Population/setting identified
1	“However, with a rise of diabetes in all regions including Sub-Saharan Africa, where the largest percentage increase in the incidence of diabetes is projected in the coming decade, this represents a significant gap in the available literature [127]. Increased research on diabetes in these understudied regions is particularly needed on interventions targeting screening and early disease recognition in order to forego complications, highlighted in several articles. Increased research on diabetes in these understudied regions (is particularly needed on interventions targeting screening and early disease recognition in order to forego complications, highlighted in several articles”	More research is needed	Sub-Saharan Africa
2	“Further studies are also needed on the additional leading NCDs, particularly cancer and chronic respiratory disease; this includes on epidemiology to guide policy and further research”	More research is needed	Leading NCDs (e.g., cancer and chronic respiratory illnesses)
3	“This highlights the importance of developing interventions with palliative care implications as well as policies that ensure access to palliative care management such as medications to treat pain, mental health symptoms and gastrointestinal symptoms”	More research is needed	Not specified

4	“Finally, several articles that were included in our results included NCDs as a peripheral focus, rather than as primary outcomes [77, 135]. Consideration should be given to include comparison or control groups in study design, for example individuals in neighboring regions, non-refugee counterparts, or matched sample populations not afflicted by the disease”	More high quality research is needed	Humanitarian emergencies
---	---	--------------------------------------	--------------------------

These gaps were identified up to 11 December 2017, only including articles conducted in LMICs.

An updated search was conducted on 23 November 2022 to check if new studies have filled this gap. finding:

- No more recent systematic review addressing the same or a broader question
- [A primary study](#) analyzing the clinical presentations and challenges of diabetic patients among Somalis in Ethiopia might contribute to partially fill gap 1.
- [A primary study](#) evaluating the healthcare facilities’ readiness to manage hypertension and diabetes in Bidibidi refugee settlement in Uganda might contribute to partially fill gap 1
- 9 primary studies were found to contribute to fill gap 2:
 - 5 primary studies ([Macyntyre, 2020](#); [Alves, 2020](#); [De, 2020](#); [Mavrouli, 2021](#), [Alves, 2020](#)) were addressing chronic respiratory diseases in disaster settings.
 - 4 primary studies ([Ozaki, 2020](#); [Calo, 2022](#), [Mendez-Lazaro, 2021](#); [Akihiko, 2021](#)) were addressing cancer care during disaster settings.

21. [Leff 2021 \(21\)](#)

[A Review of Interventions for Non-Communicable Diseases in Humanitarian Emergencies in Low-and Middle-Income Countries](#)

This review identified two main gaps:

#	Evidence gap	Classification	Population/setting identified
1	“A limited number of interventions designed to address NCDs in humanitarian emergencies, with a particular dearth of studies addressing the mitigation phase of disaster”	More research is needed	Not specified
2	“The lack of priority given to patients with NCDs in interventions for humanitarian emergencies requires further study, with significant attention paid to NCD risk factor reduction and the advancement of interventions to address NCDs in the mitigation and preparedness phases of emergency management”	More research is needed	Not specified

These gaps were identified up to 11 December 2017, only including articles conducted in LMICs.

Due to not having access to the published version of this article (only the pre-print version was available), we did not conduct an updated search of this review.

22. [Ghazanchari 2021](#) (22)

[Establishing the Status of Patients With Non-Communicable Diseases in Disaster: A Systematic Review](#)

This review did not report evidence gaps and conducted its search in 2019 with no geographical restrictions.

23. [Ruby 2015](#) (23)

[The Effectiveness of Interventions for Non-Communicable Diseases in Humanitarian Crises: A Systematic Review](#)

This review identified four main gaps:

#	Evidence gap	Classification	Population/setting identified
1	“In the case of cancer, the challenges of financing and sustaining cancer care for Syrian refugees have been highlighted and further research is required on these issues.”	More research is needed	Syrian refugees
2	“Extremely limited quantity and quality of evidence on NCD in humanitarian crises, substantially more research is needed, including data on costs” “Key research needs include: [...] analysing the costs and sustainability of interventions”	More high-quality research is needed	Not specified
3	“Key research needs include: a better understanding of NCD delivery models in more acute and early recovery settings	More research is needed	Not specified
4	“Key research needs include: [...] developing methods to minimize bias in setting where standard randomised control studies are not feasible”	More high-quality research is needed	Not specified

These gaps were identified up to June 2014, only including articles conducted in LMICs.

An updated search was conducted on 2 November 2022 to check if new studies have filled this gap. finding:

- No more recent systematic review addressing the same or a broader question.
- The [Leff 2021](#) and the [Shah 2020](#) reviews were found in the updated search.

Considering that the original review search was conducted more than 8 years ago, and that at least one more recent systematic review was found, we did not search for primary studies to see if the gaps have been addressed.

24. [Nikoloski 2021](#) (24)

[Covid-19 and non-communicable diseases: evidence from a systematic literature review](#)

This review did not report evidence gaps and conducted its search in [15 November 2020](#) with no geographical restrictions.

REFERENCES

1. Carter H, Drury J, Amlôt R. Recommendations for improving public engagement with pre-incident information materials for initial response to a chemical, biological, radiological or nuclear (CBRN) incident: A systematic review. *International Journal of Disaster Risk Reduction* [Internet]. 2020;51:101796. Available from: <https://www.sciencedirect.com/science/article/pii/S221242092031298X>
2. Culley JM, Svendsen E. A review of the literature on the validity of mass casualty triage systems with a focus on chemical exposures. *Am J Disaster Med*. 2014;9(2):137.
3. Dowlati M, Seyedin H, Moslehi S. Hospital Preparedness Measures for Biological Hazards: A Systematic Review and Meta-Synthesis. *Disaster Med Public Health Prep* [Internet]. 2020/07/27. 2021;15(6):790–803. Available from: <https://www.cambridge.org/core/article/hospital-preparedness-measures-for-biological-hazards-a-systematic-review-and-metasyntesis/2CFA9EEDCAF54DC7DB4BC47FC9071F3B>
4. Moradi Majd P, Seyedin H, Bagheri H, Tavakoli N. Hospital Preparedness Plans for Chemical Incidents and Threats: A Systematic Review. *Disaster Med Public Health Prep* [Internet]. 2019/10/15. 2020;14(4):477–85. Available from: <https://www.cambridge.org/core/article/hospital-preparedness-plans-for-chemical-incidents-and-threats-a-systematic-review/22E20BFD5618BB10EDD3B5884C5C4E2C>
5. Rubin GJ, Chowdhury AK, Amlôt R. How to communicate with the public about chemical, biological, radiological, or nuclear terrorism: a systematic review of the literature. *Biosecur Bioterror*. 2012;10(4):383–95.
6. Bazyar J, Farrokhi M, Salari A, Safarpour H, Khankeh HR. Accuracy of triage systems in disasters and mass casualty incidents; a systematic review. *Arch Acad Emerg Med*. 2022;10(1).
7. Marcussen CE, Bräuner KB, Alstrøm H, Møller AM. Accuracy of prehospital triage systems for mass casualty incidents in trauma register studies-A systematic review and meta-analysis of diagnostic test accuracy studies. *Injury*. 2022;
8. Ahmed S, Chase LE, Wagnild J, Akhter N, Sturridge S, Clarke A, et al. Community health workers and health equity in low-and middle-income countries: systematic review and recommendations for policy and practice. *Int J Equity Health*. 2022;21(1):1–30.

9. Saleh M, Farah Z, Howard N. Infectious disease surveillance for refugees at borders and in destination countries: a scoping review. *BMC Public Health*. 2022;22(1):1–14.
10. Nisbet C, Lestrat KE, Vatanparast H. Food Security Interventions among Refugees around the Globe: A Scoping Review. *Nutrients*. 2022;14(3):522.
11. Mesa-Vieira C, Haas AD, Buitrago-Garcia D, Roa-Diaz ZM, Minder B, Gamba M, et al. Mental health of migrants with pre-migration exposure to armed conflict: a systematic review and meta-analysis. *Lancet Public Health*. 2022;7(5):e469–81.
12. Tankwanchi AS, Jaca A, Ndlambe AM, Zantsi ZP, Bowman B, Garrison MM, et al. Non-COVID-19 vaccine hesitancy among migrant populations worldwide: a scoping review of the literature, 2000-2020. *Expert Rev Vaccines* [Internet]. 2022 Sep 2;21(9):1269–87. Available from: <https://doi.org/10.1080/14760584.2022.2084075>
13. Jolgehnejad AK, Kahnali RA, Heyrani AI. Factors influencing hospital resilience. *Disaster Med Public Health Prep*. 2021;15(5):661–8.
14. Lokot M, Bou-Orm I, Zreik T, Kik N, Fuhr DC, el Masri R, et al. Health system governance in settings with conflict-affected populations: a systematic review. *Health Policy Plan*. 2022;37(5):655–74.
15. Murray M, McCarthy S. A systematic review of emergency department incident classification frameworks. *Emergency Medicine Australasia*. 2018;30(3):293–308.
16. Aminizadeh M, Farrokhi M, Ebadi A, Masoumi GR, Kolivand P, Khankeh HR. Hospital management preparedness tools in biological events: A scoping review. *J Educ Health Promot*. 2019;8.
17. Aminizadeh M, Farrokhi M, Ebadi A, Masoumi GR, Beyrami-Jam M, Khankeh HR. COSMIN Checklist for Systematic Reviews of the Hospital Preparedness Instruments in Biological Events. *J Nurs Meas*. 2021;
18. Shah S, Munyuzangabo M, Gaffey MF, Kamali M, Jain RP, Als D, et al. Delivering non-communicable disease interventions to women and children in conflict settings: a systematic review. *BMJ Glob Health*. 2020;5(Suppl 1):e002047.
19. Ghazanchaei E, Khorasani-Zavareh D, Aghazadeh-Attari J, Mohebbi I. Identifying and describing impact of disasters on non-communicable diseases: a systematic review. *Iran J Public Health*. 2021;50(6):1143.
20. Ngaruiya C, Bernstein R, Leff R, Wallace L, Agrawal P, Selvam A, et al. Systematic review on chronic non-communicable disease in disaster settings. *BMC Public Health*. 2022;22(1):1–88.
21. Leff R, Selvam A, Bernstein R, Wallace L, Hayward A, Agrawal P, et al. A Review of Interventions for Non-Communicable Diseases in Humanitarian Emergencies in Low-and Middle-Income Countries. *medRxiv*. 2021;
22. Ghazanchaei E, Khorasani-Zavareh D, Aghazadeh-Attari J, Mohebbi I. Establishing the status of patients with non-communicable diseases in disaster: A systematic review. *Disaster Med Public Health Prep*. 2021;1–8.

23. Ruby A, Knight A, Perel P, Blanchet K, Roberts B. The effectiveness of interventions for non-communicable diseases in humanitarian crises: a systematic review. *PLoS One*. 2015;10(9):e0138303.
24. Nikoloski Z, Alqunaibet AM, Alfawaz RA, Almударра SS, Herbst CH, El-Saharty S, et al. Covid-19 and non-communicable diseases: evidence from a systematic literature review. *BMC Public Health*. 2021;21(1):1–9.

APPENDIX 1.

Search strategies used to update evidence gaps

Carter 2020

1. Pre-incident.ab,ti.
2. "prepare*".ab,ti.
3. Pre-disaster.ab,ti.
4. Pre-emergency.ab,ti.
5. Prior.ab,ti.
6. Before.ab,ti.
7. "Educat*".ab,ti.
8. "inform*".ab,ti.
9. "Communicat*".ab,ti.
10. anthrax.ab,ti.
11. avalanche.ab,ti.
12. "bio* warfare".ab,ti.
13. "bio* weapon*".ab,ti.
14. "bioterror*".ab,ti.
15. blizzard.tw.
16. bomb.ab,ti.
17. "cbrn*".ab,ti.
18. Chemical.ab,ti.
19. cyclone.ab,ti.
20. "decontaminat*".ab,ti.
21. "disaster*".ab,ti.
22. earthquake.ab,ti.
23. "evacuat*".ab,ti.
24. "explosion*".ab,ti.
25. fire.ab,ti.
26. "flood*".ab,ti.
27. hurricane.ab,ti.
28. industrial accident.ab,ti.
29. landslide.ab,ti.
30. "mass casualt*".ab,ti.
31. "mass shooting*".ab,ti.
32. "multi* casualt*".ab,ti.
33. radiation.ab,ti.
34. Nuclear.ab,ti.
35. "terroris*".ab,ti.
36. tidal wave.ab,ti.
37. tornado.ab,ti.
38. tsunami.ab,ti.
39. typhoon.ab,ti.
40. volcanic eruption.ab,ti.
41. white powder.ab,ti.
42. 1 or 2 or 3 or 4 or 5 or 6
43. 7 or 8 or 9

44. 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41
45. 42 and 43 and 44

Culley 2014

((("mass casualty"[Text Word] AND ("triage system"[Text Word] OR "Triage Validation"[Text Word] OR "algorithm"[Text Word] OR "hazard"[Text Word])) OR ("mass casualty disaster"[Text Word] AND ("triage system"[Text Word] OR "triage tool"[Text Word] OR "Triage Validation"[Text Word] OR "algorithm"[Text Word] OR "hazard"[Text Word] OR "Evidence Based Medicine"[Text Word] OR "EBM"[Text Word]))) AND "systematic review"[Filter]) OR (((("mass casualty"[Text Word] AND ("triage system"[Text Word] OR "Triage Validation"[Text Word] OR "algorithm"[Text Word] OR "hazard"[Text Word])) OR ("mass casualty disaster"[Text Word] AND ("triage system"[Text Word] OR "triage tool"[Text Word] OR "Triage Validation"[Text Word] OR "algorithm"[Text Word] OR "hazard"[Text Word] OR "Evidence Based Medicine"[Text Word] OR "EBM"[Text Word])))

Dowlati 2020: No evidence gap search update was conducted

Moradi 2019: No evidence gap search update was conducted

Rubin 2012

((("Radioactive Hazard Release"[MeSH Terms] OR "Biohazard Release"[MeSH Terms] OR "Chemical Hazard Release"[MeSH Terms] OR "Chemical Terrorism"[MeSH Terms] OR "Chemical Warfare"[MeSH Terms] OR "Bioterrorism"[MeSH Terms] OR "Biological Warfare"[MeSH Terms] OR "Radiation Exposure"[MeSH Terms] OR "Radiation Injuries"[MeSH Terms] OR "Radiation Effects"[MeSH Terms] OR "Radiation Protection"[MeSH Terms] OR "Radiation-Protective Agents"[MeSH Terms] OR "biological hazard"[Title/Abstract] OR "biohazard"[Title/Abstract] OR "radioactive hazard"[Title/Abstract] OR "chemical hazard"[Title/Abstract] OR "nuclear hazard"[Title/Abstract] OR "radiological hazard"[Title/Abstract] OR "biological accident"[Title/Abstract] OR "chemical accident"[Title/Abstract] OR "nuclear accident"[Title/Abstract] OR "radiological accident"[Title/Abstract] OR "biological emergenc"[Title/Abstract] OR "chemical emergenc"[Title/Abstract] OR "nuclear emergenc"[Title/Abstract] OR "radiological emergenc"[Title/Abstract]) AND ("Communication"[MeSH Terms] OR "Education"[MeSH Terms] OR "Civil Defense"[MeSH Terms] OR "Emergency Medical Service Communication Systems"[MeSH Terms] OR "Call Centers"[MeSH Terms] OR "Hotlines"[MeSH Terms] OR ("Communication"[Text Word] OR "educati"[Text Word] OR "preparedness"[Text Word])) OR (("terror"[Text Word] OR "explosion"[Text Word] OR "cbrn"[Text Word]) AND ("Communication"[Text Word] OR "educati"[Text Word] OR "preparedness"[Text Word]))

Bazyar 2022: No evidence gap search update was conducted

Marcussen 2022: No evidence gap search update was conducted

Ahmed 2022

#1 "community health worker" OR "community health workers" OR "community health aides" OR "community health aide" OR "family planning personnel" OR "village health worker" OR "village health workers" OR "home health aide" OR "home health aides" OR "allied health personnel" OR "population program specialists" OR "nurses aides" OR "nurses aide" OR "nursing auxiliaries" OR "nursing auxiliary" OR "volunteerism" OR "non professional home care" OR "nonprofessional home care" OR "peer group" OR "social support" OR "psychosocial networks" OR "social networks" OR "lay worker" OR "lay workers" OR "lay visitors" OR "lay attendants" OR "lay support" OR "lay person" OR "lay personnel" OR "lay helpers" OR "lay carer" OR "lay carers" OR "lay caregiver" OR "lay caregivers" OR "lay staff" OR "lay midwife" OR "lay midwives" OR "lay providers" OR "lay health worker" OR "lay health workers" OR "lay counsellor" OR "lay counsellors" OR "lay volunteer" OR "lay volunteers" OR "lay mentor" OR "lay mentors" OR "voluntary workers" OR "voluntary worker" OR "voluntary visitor" OR "voluntary visitors" OR "voluntary support" OR "voluntary supporter" OR "voluntary supporters" OR "volunteer worker" OR "volunteer workers" OR "volunteer support" OR "volunteer supporters" OR "volunteer supporter" OR "volunteer caregivers" OR "volunteer caregiver" OR "volunteer staff" OR "volunteer providers" OR "volunteer provider" OR "volunteer care givers" OR "volunteer practitioners" OR "volunteer care" OR "volunteer nursing" OR "informal workers" OR "informal visitor" OR "informal visitors" OR "informal support" OR "informal supporter" OR "informal supporters" OR "informal helpers" OR "informal carer" OR "informal carers" OR "informal caregiver" OR "informal caregivers" OR "informal providers" OR "informal care givers" OR "informal practitioners" OR "untrained workers" OR "untrained attendants" OR "untrained person" OR "untrained personnel" OR "untrained staff" OR "untrained midwives" OR "untrained providers" OR "untrained practitioners" OR "Unlicensed visitor" OR "unlicensed visitors" OR "unlicensed support" OR "unlicensed supporters" OR "unlicensed supporter" OR "unlicensed personnel" OR "unlicensed caregivers" OR "unlicensed staff" OR "unlicensed providers" OR "unlicensed practitioners" OR "nonprofessional workers" OR "non professional workers" OR "non professional support" OR "nonprofessional supporter" OR "nonprofessional supporters" OR "nonprofessional personnel" OR "non professional personnel" OR "non professional carers" OR "nonprofessional caregivers" OR "non professional caregivers" OR "nonprofessional staff" OR "non professional staff" OR "non professional visitor" OR "non professional visitors" OR "non professional providers" OR Paraprofessional* OR paramedic OR paramedics OR "paramedical worker" OR "paramedical workers" OR "paramedical personnel" OR "allied health worker" OR "allied health workers" OR "support worker" OR "support workers" OR "Trained volunteer" OR "trained volunteers" OR "trained health worker" OR "trained health workers" OR "trained mothers" OR "trained health care workers" OR "trained healthcare workers" OR "community health care workers" OR "community healthcare workers" OR "community distributors" OR "community based health workers" OR "community based distributors" OR "village healthcare workers" OR "village health workers" OR "village health care workers" OR "community based providers" OR "community workers" OR "community based workers" OR "frontline health workers" OR "frontline health worker" OR "frontline workers" OR "frontline worker" OR "community volunteer" OR "community volunteers" OR "community based volunteers" OR "community support" OR "community based support" OR "birth attendant" OR "birth attendants" OR "birth assistants" OR Doula* OR douladural* OR Monitrice* OR "peer volunteer" OR "peer volunteers" OR "peer mentor" OR "peer mentors" OR "peer support" OR "peer intervention" OR "peer interventions" OR "peer counsellor" OR "peer counsellors" OR "church based intervention" OR "church based interventions" OR "church based program" OR Linkworker OR linkworkers OR "link worker" OR "link workers" OR "barefoot doctor" OR "barefoot doctors" OR Outreach OR "home care" OR "home aide" OR "home aides" OR "home nursing" OR "home support" OR "home intervention" OR "home interventions" OR "home treatment" OR "home treatments" OR "home visitor" OR "home visitors" OR "expert patient" OR "expert patients" OR "health

promoter" OR "health promoters" OR "health extension worker" OR "health extension workers" OR "mentor mother" OR "mentor mothers"

#2 "rural population" OR "rural populations" OR "rural community" OR "rural communities" OR "rural spatial distribution" OR "healthcare disparities" OR "healthcare disparity" OR "health care disparity" OR "health care disparities" OR Disadvantage* OR "vulnerable population" OR "vulnerable populations" OR "underserved patients" OR "underserved population" OR "underserved populations" OR "sensitive population groups" OR "sensitive population group" OR "sensitive populations" OR "sensitive population" OR "medically underserved area" OR "physician shortage area" OR Inequalit* OR "socioeconomic factors" OR "socioeconomic factor" OR "low income population" OR "low income populations" OR "standard of living" OR "gender identity" or Gender OR "sex role" OR "woman role" OR "women role" OR "man role" OR "men role" OR "gender role" OR equit* OR inequit* or disparit* OR equalit* OR disabilit* OR caste OR ethnicity

#3 "health services accessibility" OR "access to health care" OR "accessibility of health services" OR "health services geographic accessibility" OR "contraceptive availability" OR "program accessibility" OR "program availability" OR "availability of health services" OR "health services availability" OR "acceptability of health care" OR "acceptability of healthcare" OR "patient acceptance of health care" OR "patient acceptance of healthcare" OR "program acceptability" OR "health care seeking behaviour" OR "health seeking behaviour" OR "patient acceptance of healthcare" OR "acceptors" OR "acceptor characteristics" OR "community empowerment" OR "utilization" OR "coverage" OR "community governance" OR "quality of healthcare" OR "quality of health care" OR "healthcare quality" OR "health care quality"

#4 #1 and #2 and #3

Saleh 2022

(((((migrant*[Title/Abstract] OR refugee*[Title/Abstract] OR "asylum seeker"*[Title/Abstract] OR "displaced people"[Title/Abstract] OR "displaced person"*[Title/Abstract])) OR ("Transients and Migrants"[Mesh]) OR "Refugees"[Mesh])) AND ((syndromic[Title/Abstract] OR infectious[Title/Abstract] OR infection*[Title/Abstract] OR "communicable disease"*[Title/Abstract]) OR ("Communicable Diseases"[Mesh])) AND (polic* or protocol)) AND (surveillance OR screening)

Nisbet 2022 (Ovid search)

1.Refugees/

2.refuge*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub- heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

3.asylum*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub- heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

4.(Displaced adj2 (person? or people)).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary

concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

5.1 or 2 or 3 or 4

6.food supply/ or famine/

7.Food/ or "diet, food, and nutrition"/

8.diet/ or diet, diabetic/ or diet, healthy/ or eating/ or drinking/ or feeding behavior/ or breast feeding/

9.Malnutrition/

10.famine*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub- heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

11.(hunger or hungry).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

12.starv*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub- heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

13.malnutrition.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

14.malnourish*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

15.food*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub- heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

16.(diet* or nutritio* or eat* or drink* or feed*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

17.or/6-16

18.5 and 17

Mesa-Vieira 2022

(("Human Migration"[Mesh] OR "Transients and Migrants"[Mesh] OR "Refugees"[Mesh] OR "Emigration and Immigration"[Mesh] OR "Emigrants and Immigrants"[Mesh] OR "Undocumented Immigrants"[Mesh] OR migrant*[Title/Abstract] OR immigrant*[Title/Abstract] OR immigration*[Title/Abstract] OR emigrant*[Title/Abstract] OR emigration*[Title/Abstract] OR internal

displace*[Title/Abstract] OR displaced people[Title/Abstract] OR displaced population*[Title/Abstract] OR displaced person*[Title/Abstract] OR refugee*[Title/Abstract] OR asylum seeker*[Title/Abstract] AND (("Mood Disorders"[Mesh] OR "Depressive Disorder"[Mesh] OR "Anxiety"[Mesh] OR "Anxiety Disorders"[Mesh] OR "Stress Disorders, Post-Traumatic"[Mesh] OR "Combat Disorders"[Mesh]) OR (mood[Title/Abstract] AND disorder*[Title/Abstract] OR affective[Title/Abstract] AND disorder*[Title/Abstract] OR combat*[Title/Abstract] AND disorder*[Title/Abstract] OR anxiety[Title/Abstract] OR depression[Title/Abstract] OR depressive[Title/Abstract] OR post-traumatic stress disorder*[Title/Abstract] OR posttraumatic stress disorder*[Title/Abstract] OR PTSD[Title/Abstract])) NOT ("animals"[mesh] NOT "humans"[mesh]) NOT (letter[pt] OR news[pt] OR comment[pt] OR editorial[pt] OR congress[pt] OR abstracts[pt])

Tankwanchi 2022

(((((vaccine) OR (vaccination)) OR (immunization)) OR (immunisation)) AND (((((((((((diaspora) OR (emigre)) OR (emigrant)) OR (immigrant)) OR (migrant)) OR (foreign-born)) OR (foreigner)) OR (newcomer)) OR (refugee))) AND (((((((((((((((((((((((((((((((((((((((acceptance) OR (uptake)) OR (confidence)) OR (trust)) OR (anxiety)) OR (doubt)) OR (mistrust)) OR (anti-vaccination)) OR (anti-vax*)) OR (concern)) OR (distrust)) OR (misinformation)) OR (resistance)) OR (compulsory)) OR (dropout)) OR (critic)) OR (skeptical)) OR (exemption)) OR (sceptic)) OR (objector)) OR (attitude)) OR (choice)) OR (fear)) OR (opposition)) OR (controversy)) OR (hesitancy)) OR (perception)) OR (rumor)) OR (rumour)) OR (avoidance)) OR (decision)) OR (hesitation)) OR (phobia)) OR (awareness)) OR (delay)) OR (intention)) OR (refusal)) OR (belief)) OR (barrier)) OR (denial)) OR (knowledge)) OR (rejection)) OR (dilemma)) OR (behavior)) OR (behaviour)) OR (misconception)) OR (mandatory)) OR (reluctance)) OR (autism)) OR (covid-19)) OR (coronavirus)) OR (measles)) OR (MMR)) OR (HPV)) OR (human papillomavirus))

Khademi 2021

"Hospital"[Title/Abstract] AND ("resilience"[Title] OR "preparedness"[Title] OR "risk mitigation"[Title] OR "continuity"[Title]) AND 2019/01/01:2022/12/31[Date - Publication] AND (("Social Determinants of Health"[MeSH Terms] OR "Health Inequities"[MeSH Terms] OR "Socioeconomic Factors"[MeSH Terms]) AND ("Social Determinants of Health"[MeSH Terms] OR "Health Inequities"[MeSH Terms] OR "Socioeconomic Factors"[MeSH Terms] OR ("social determinant*" [Title/Abstract] OR "socioeconomic" [Title/Abstract] OR "inequalit*" [Title/Abstract] OR "economic*" [Title/Abstract] OR "financ*" [Title/Abstract] OR "cost*" [Title/Abstract] OR "wages" [Title/Abstract] OR "salary" [Title/Abstract] OR "pay" [Title/Abstract] OR "poverty" [Title/Abstract] OR "politic*" [Title/Abstract] OR "polic*" [Title/Abstract] OR "culture" [Title/Abstract] OR "environment*" [Title/Abstract] OR "transport" [Title/Abstract] OR "quality" [Title/Abstract] OR "racism" [Title/Abstract] OR "discriminat*" [Title/Abstract] OR "equity" [Title/Abstract] OR "access*" [Title/Abstract] OR "education" [Title/Abstract] OR "community" [Title/Abstract] OR "suppl*" [Title/Abstract]))

Lokot 2022

- 1.(war[Title/Abstract]) OR (wars[Title/Abstract]) OR (asylum[Title/Abstract]) OR (forc* displac* [Title/Abstract]) OR (forc* migra* [Title/Abstract]) OR (refugee*[Title/Abstract]) OR (humanitarian* [Title/Abstract]) OR (armed conflict [Title/Abstract])
- 2.(health system* [Title/Abstract]) OR (health reform* [Title/Abstract]) OR (healthcare [Title/Abstract]) OR (health care [Title/Abstract])
- 3.(governance[Title/Abstract]) OR (decision-mak* [Title/Abstract]) OR (priority setting [Title/Abstract]) OR (priority-setting [Title/Abstract]) OR (policy-mak* [Title/Abstract]) OR health*adj5 transparen* OR health*adj5 accountab* OR health*adj5 ethic* OR health*adj5 integrity OR health*adj5 coordinat* OR health*adj5 collaborat* OR health*adj5 partner* OR health*adj5 participat* OR health*adj5 responsive* OR health*adj5 leader* OR health*adj5 steward* OR health*adj5 strateg* OR health*adj5 cooperat* OR health*adj5 regulat* OR health*adj5 corrupt* OR health*adj5 inclus* OR health*adj5 equit* OR health*adj5 capacity OR health*adj5 capabilit* OR health*adj5 effective* OR health*adj5 efficien* OR health*adj5 intelligence* OR health*adj5 information OR health*adj5 "rule of law"
- 4.1 and 2 and 3

Murray 2018

("Medical Errors"[MeSH Major Topic] OR ("adverse incident*" [Title/Abstract] OR "medical error*" [Title/Abstract] OR "adverse event*" [Title/Abstract] OR "safety event*" [Title/Abstract] OR "adverse outcome*" [Title/Abstract] OR "avoidable harm*" [Title/Abstract] OR "avoidable death*" [Title/Abstract] OR "near miss*" [Title/Abstract] OR "sentinel event*" [Title/Abstract] OR "care delivery problem*" [Title/Abstract] OR "care management problem*" [Title/Abstract])) AND ("Classification"[MeSH Major Topic] OR ("taxonom*" [Title/Abstract] OR "classif*" [Title/Abstract] OR "categor*" [Title/Abstract] OR "typolog*" [Title/Abstract] OR "framework*" [Title/Abstract])) AND ("emergency service, hospital"[MeSH Major Topic] OR "Emergency Medicine"[MeSH Major Topic] OR ("Emergency Medicine" [Title/Abstract] OR "emergency department" [Title/Abstract])) AND 2016/02/02:2022/11/15[Date - Publication]

Aminizadeh 2019

((("Biological" [Title/Abstract] OR "CBRN" [Title/Abstract] OR "Biohazard" [Title/Abstract] OR "Biosafety" [Title/Abstract] OR "biological terrorism" [Title/Abstract] OR "Bioterrorism" [Title/Abstract] OR ("Biological Warfare"[MeSH Terms] OR "Bioterrorism"[MeSH Terms] OR "Biohazard Release"[MeSH Terms] OR "Containment of Biohazards"[MeSH Terms] OR "Biological Warfare Agents"[MeSH Terms])) AND ("disaster*" [Title/Abstract] OR "emergenc*" [Title/Abstract] OR "accident*" [Title/Abstract] OR "event*" [Title/Abstract] OR "threat*" [Title/Abstract] OR "agent*" [Title/Abstract] OR "mass casualty" [Title/Abstract] OR ("Disasters"[MeSH Terms] OR "Emergencies"[MeSH Terms] OR "Accidents"[MeSH Major Topic] OR "Mass Casualty Incidents"[MeSH Terms])) AND ((("Hospitals"[MeSH Terms] OR ("Hospital" [Title/Abstract] AND ("Preparedness" [Title/Abstract] OR "Readiness" [Title/Abstract]))) AND (((("tool*" [Title/Abstract] OR "Criteria" [Title/Abstract]) AND "standard*" [Title/Abstract]) OR "questionnaire*" [Title/Abstract] OR "assessment*" [Title/Abstract] OR "appraisal*" [Title/Abstract] OR "measurement*" [Title/Abstract] OR "evaluation*" [Title/Abstract] OR "checklist*" [Title/Abstract] OR "indicator*" [Title/Abstract] OR ("Surveys and Questionnaires"[MeSH Terms] OR "Needs Assessment"[MeSH Terms] OR "Risk Assessment"[MeSH Terms] OR "quality

assurance, health care"[MeSH Terms] OR "Checklist"[MeSH Terms] OR "Data Collection"[MeSH Terms] OR "Program Evaluation"[MeSH Terms]))) AND (2018/1/1:2022/11/21[pdat])

Aminizadeh 2021: No evidence gap search update was conducted

Shah 2020

("Disasters"[MeSH Terms] OR "Disaster Victims"[MeSH Terms] OR "Emergencies"[MeSH Terms] OR "Mass Casualty Incidents"[MeSH Terms] OR "Warfare and Armed Conflicts"[MeSH Terms] OR "Armed Conflicts"[MeSH Terms] OR "Warfare"[MeSH Terms] OR "Biological Warfare"[MeSH Terms] OR "Bioterrorism"[MeSH Terms] OR "Chemical Warfare"[MeSH Terms] OR "Chemical Terrorism"[MeSH Terms] OR "Nuclear Warfare"[MeSH Terms] OR "Psychological Warfare"[MeSH Terms] OR "War Crimes"[MeSH Terms] OR "Ethnic Cleansing"[MeSH Terms] OR "Genocide"[MeSH Terms] OR "Holocaust"[MeSH Terms] OR "War Exposure"[MeSH Terms] OR "War-Related Injuries"[MeSH Terms] OR "Disaster Medicine"[MeSH Terms] OR "Emergency Medical Services"[MeSH Terms] OR "Starvation"[MeSH Terms] OR "Cyclonic Storms"[MeSH Terms] OR "Droughts"[MeSH Terms] OR "Floods"[MeSH Terms] OR "Tidal Waves"[MeSH Terms] OR "Avalanches"[MeSH Terms] OR "Earthquakes"[MeSH Terms] OR "Landslides"[MeSH Terms] OR "Tornadoes"[MeSH Terms] OR "Wildfires"[MeSH Terms] OR "Tsunamis"[MeSH Terms] OR "Volcanic Eruptions"[MeSH Terms] OR "Refugees"[MeSH Terms] OR "Relief Work"[MeSH Terms] OR "Rescue Work"[MeSH Terms] OR (((("mass casualt*" [Title/Abstract] AND "OR"[Title/Abstract]) OR "mass fatalit*" [Title/Abstract] OR "armed conflict*" [Title/Abstract] OR "war"[Title/Abstract] OR "military"[Title/Abstract] OR "biological terrorism"[Title/Abstract] OR "Bioterrorism"[Title/Abstract] OR "biowarfare"[Title/Abstract] OR "Chemical Terrorism"[Title/Abstract] OR "Ethnic Cleansing"[Title/Abstract] OR "Genocide"[Title/Abstract] OR "gas poisoning"[Title/Abstract] OR "Holocaust"[Title/Abstract]) AND "R"[All Fields]) AND "nuclear terrorism"[Title/Abstract]) OR "War Exposure"[Title/Abstract] OR "famine"[Title/Abstract] OR "Starvation"[Title/Abstract] OR "avalanche*" [Title/Abstract] OR "cyclone*" [Title/Abstract] OR "drought*" [Title/Abstract] OR "earthquake*" [Title/Abstract] OR "flood*" [Title/Abstract] OR "hurricane"[Title/Abstract] OR "landslide*" [Title/Abstract] OR "land slide*" [Title/Abstract] OR "mudslide*" [Title/Abstract] OR "mud slide*" [Title/Abstract] OR "storm*" [Title/Abstract] OR "tornado*" [Title/Abstract] OR "tsunami*" [Title/Abstract] OR "typhoon*" [Title/Abstract] OR "volcan*" [Title/Abstract] OR "evacuee*" [Title/Abstract] OR "Refugees"[Title/Abstract] OR "transients"[Title/Abstract] OR "humanitarian"[Title/Abstract] OR "Relief Work"[Title/Abstract]) AND "displaced"[Title/Abstract]) OR "displacement"[Title/Abstract] OR "disaster victim*" [Title/Abstract] OR "war victim*" [Title/Abstract] OR "rubble"[Title/Abstract] OR "civil war"[Title/Abstract] OR "conflict zone*" [Title/Abstract] OR "no fly"[Title/Abstract] OR "relief aid"[Title/Abstract] OR "protected village"[Title/Abstract] OR "refugee camp*" [Title/Abstract])) AND (((("Women"[MeSH Terms] OR "Adolescent"[MeSH Terms] OR "Young Adult"[MeSH Terms] OR "Child"[MeSH Terms] OR "child, preschool"[MeSH Terms] OR "Infant"[MeSH Terms] OR "infant, newborn"[MeSH Terms] OR "infant, low birth weight"[MeSH Terms] OR "infant, small for gestational age"[MeSH Terms] OR "infant, very low birth weight"[MeSH Terms] OR "infant, extremely low birth weight"[MeSH Terms] OR "infant, postmature"[MeSH Terms] OR "infant, extremely premature"[MeSH Terms] OR "abortion, induced"[MeSH Terms] OR "delivery, obstetric"[MeSH Terms] OR "Pregnancy"[MeSH Terms] OR "Pregnant Women"[MeSH Terms] OR "adolescen*" [Title/Abstract] OR "teen*" [Title/Abstract] OR "youth*" [Title/Abstract] OR "young adult*" [Title/Abstract] OR "pregnant"[Title/Abstract] OR "pregnanc*" [Title/Abstract] OR "mother*" [Title/Abstract] OR

"birth"[Title/Abstract] OR "childbirth"[Title/Abstract]) AND "abdominal deliveri*"[Title/Abstract]) OR "c section*"[Title/Abstract] OR "caesarean*"[Title/Abstract] OR "cesarean*"[Title/Abstract] OR "abortion*"[Title/Abstract] OR "abortions"[Title/Abstract] OR "postconception fertility control"[Title/Abstract] OR "infan*"[Title/Abstract] OR "newborn*"[Title/Abstract] OR "neonat*"[Title/Abstract] OR "baby*"[Title/Abstract] OR "babies"[Title/Abstract] OR "toddler*"[Title/Abstract] OR "boy"[Title/Abstract] OR "boys"[Title/Abstract] OR "girl*"[Title/Abstract] OR "kid"[Title/Abstract] OR "kids"[Title/Abstract] OR "child*"[Title/Abstract] OR "pediatric*"[Title/Abstract] OR "paediatric*"[Title/Abstract] OR "prematu*"[Title/Abstract] OR "preterm"[Title/Abstract] OR "school*"[Title/Abstract] OR "obstetric*"[Title/Abstract] OR "Women"[Title/Abstract] OR "woman"[Title/Abstract]) AND ("Noncommunicable Diseases"[MeSH Terms] OR "Chronic Disease"[MeSH Terms] OR "Autoimmune Diseases"[MeSH Terms] OR "lupus erythematosus, systemic"[MeSH Terms] OR "Central Nervous System Diseases"[MeSH Terms] OR "Cardiovascular Diseases"[MeSH Terms] OR "Heart Diseases"[MeSH Terms] OR "Myocarditis"[MeSH Terms] OR "Cardiomyopathies"[MeSH Terms] OR "arrhythmias, cardiac"[MeSH Terms] OR "Angina Pectoris"[MeSH Terms] OR "Myocardial Infarction"[MeSH Terms] OR "Coronary Disease"[MeSH Terms] OR "Heart Failure"[MeSH Terms] OR "Hypertension"[MeSH Terms] OR "hypertension, renal"[MeSH Terms] OR "Ischemia"[MeSH Terms] OR "Cerebrovascular Disorders"[MeSH Terms] OR "Stroke"[MeSH Terms] OR "Hypercholesterolemia"[MeSH Terms] OR "Blood Pressure"[MeSH Terms] OR "Blood Glucose"[MeSH Terms] OR "Obesity"[MeSH Terms] OR "Anemia"[MeSH Terms] OR "Neoplasms"[MeSH Terms] OR "Glucose Metabolism Disorders"[MeSH Terms] OR "Bronchitis"[MeSH Terms] OR "pulmonary disease, chronic obstructive"[MeSH Terms] OR "Asthma"[MeSH Terms] OR "Liver Diseases"[MeSH Terms] OR "Liver Cirrhosis"[MeSH Terms] OR "Renal Insufficiency"[MeSH Terms] OR "Lung Diseases"[MeSH Terms] OR "Fibromyalgia"[MeSH Terms] OR "Osteoporosis"[MeSH Terms] OR "Endocrine System Diseases"[MeSH Terms] OR "Cystic Fibrosis"[MeSH Terms] OR "Arthritis"[MeSH Terms] OR "Chronic Pain"[MeSH Terms] OR "Musculoskeletal Diseases"[MeSH Terms] OR "Parkinson Disease"[MeSH Terms] OR "Thyroid Diseases"[MeSH Terms] OR "Nervous System Diseases"[MeSH Terms] OR "Alzheimer Disease"[MeSH Terms] OR "Multiple Sclerosis"[MeSH Terms] OR "Colitis"[MeSH Terms] OR ("NCD"[Title/Abstract] OR "NCDS"[Title/Abstract] OR "noncommunicable disease*"[Title/Abstract] OR "non communicable disease*"[Title/Abstract] OR "chronic"[Title/Abstract] OR "long term condition*"[Title/Abstract] OR "multimorbidit*"[Title/Abstract] OR "autoimmun*"[Title/Abstract] OR "brain"[Title/Abstract] OR "lupus"[Title/Abstract] OR "cerebral"[Title/Abstract] OR "cardiovascular"[Title/Abstract] OR "card*"[Title/Abstract] OR "heart"[Title/Abstract] OR "myocard*"[Title/Abstract] OR "cardiomyopath*"[Title/Abstract] OR "arrhythmia*"[Title/Abstract] OR "angin*"[Title/Abstract] OR "coronary"[Title/Abstract] OR "infarc*"[Title/Abstract] OR "hypertens*"[Title/Abstract] OR "kidney"[Title/Abstract] OR "Blood Pressure"[Title/Abstract] OR "circulation"[Title/Abstract] OR "circulatory"[Title/Abstract] OR "ischaem*"[Title/Abstract] OR "cerebrovascular"[Title/Abstract] OR "vascular"[Title/Abstract] OR "apoplexia"[Title/Abstract] OR "apoplexy"[Title/Abstract] OR "hemorrhage*"[Title/Abstract] OR "carotid artery disease*"[Title/Abstract] OR "intracranial"[Title/Abstract] OR "encephalopathy"[Title/Abstract] OR "stroke*"[Title/Abstract] OR "vertebrobasilar"[Title/Abstract] OR "cholester*"[Title/Abstract] OR "hypercholest*"[Title/Abstract] OR "Blood Glucose"[Title/Abstract] OR "blood sugar"[Title/Abstract] OR "glycaemia"[Title/Abstract] OR "glycemia"[Title/Abstract] OR "diabet*"[Title/Abstract] OR "obes*"[Title/Abstract] OR "Anemia"[Title/Abstract] OR "anaemia"[Title/Abstract] OR "cancer*"[Title/Abstract] OR "malignan*"[Title/Abstract] OR "neoplas*"[Title/Abstract] OR "tumor*"[Title/Abstract] OR "tumour*"[Title/Abstract] OR "asthma*"[Title/Abstract] OR "lung"[Title/Abstract] OR "copd"[Title/Abstract] OR "pulmonary"[Title/Abstract] OR "obstructive respiratory"[Title/Abstract] OR "bronch*"[Title/Abstract] OR "pulmonary"[Title/Abstract] OR "pneumonosis"[Title/Abstract] OR "pneumopathy"[Title/Abstract] OR "renal"[Title/Abstract] OR

"hepatic"[Title/Abstract] OR "liver"[Title/Abstract] OR "osteoporos*"[Title/Abstract] OR "Fibromyalgia"[Title/Abstract] OR "fibrosit*"[Title/Abstract] OR "rheumatism"[Title/Abstract] OR "musculoskeletal"[Title/Abstract] OR "orthopaedic"[Title/Abstract] OR "arthrit*"[Title/Abstract] OR "polyarthritis"[Title/Abstract] OR "Cystic Fibrosis"[Title/Abstract] OR "pancreas"[Title/Abstract] OR "endocrin*"[Title/Abstract] OR "hormonal disorder*"[Title/Abstract] OR "hormone dysfunction*"[Title/Abstract] OR "hormone imbalance*"[Title/Abstract] OR "thyroid"[Title/Abstract] OR "nervous"[Title/Abstract] OR "neural disease*"[Title/Abstract] OR "neurolog*"[Title/Abstract] OR "paralysis"[Title/Abstract] OR "parkinson*"[Title/Abstract] OR "Colitis"[Title/Abstract] OR "colon inflammat*"[Title/Abstract] OR "sclerosis"[Title/Abstract] OR "alzheimer*"[Title/Abstract] OR "dementia"[Title/Abstract])) AND ((systematicreview[Filter]) AND (2018/4/1:2022/11/3[pdat]))

Ghazanchaei 2022: No evidence gap search update was conducted

Ngaruiya 2022

("Disasters"[MeSH Major Topic] OR "Natural Disasters"[MeSH Terms] OR "Mass Casualty Incidents"[MeSH Terms] OR "Relief Work"[MeSH Major Topic] OR "Refugees"[MeSH Major Topic] OR "Disaster Victims"[MeSH Terms] OR "Warfare and Armed Conflicts"[MeSH Terms] OR "Terrorism"[MeSH Terms] OR "volcano*"[Title/Abstract] OR "hurricane*"[Title] OR "flood*"[Title] OR "drought*"[Title] OR "tornado*"[Title] OR "cyclone"[Title] OR "wildfire*"[Title] OR "tsunami"[Title] OR "landslide*"[Title] OR "mudslide*"[Title] OR "avalanche*"[Title] OR "disaster*"[Title] OR "humanitarian*"[Title] OR "mass casualty"[Title] OR "refugee*"[Title] OR "displaced person*"[Title] OR "displaced people"[Title] OR "displaced population*"[Title] OR "armed conflict*"[Title] OR "conflict setting*"[Title] OR "warfare"[Title] OR "Terrorism"[Title] OR "failed state"[Title]) AND ("Cardiovascular Diseases"[MeSH Terms] OR "Diabetes Mellitus"[MeSH Terms] OR "Neoplasms"[MeSH Terms] OR "Respiratory Tract Diseases"[MeSH Major Topic] OR "cardiovascular disease*"[Title] OR "cardiovascular condition*"[Title] OR "heart disease*"[Title] OR "Heart condition"[Title] OR "coronary artery disease"[Title] OR "CAD"[Title] OR "infraction"[Title] OR "high blood pressure"[Title] OR "hypertension"[Title] OR "angina"[Title] OR "Diabetes"[Title] OR "neoplasm*"[Title] OR "cancer"[Title] OR "respiratory tract disease*"[Title] OR "respiratory tract condition*"[Title] OR "respiratory disease*"[Title] OR "Chronic Pulmonary Disease"[Title] OR "asthma"[Title] OR "palliative"[Title] OR "lung disease*"[Title] OR "COPD"[Title] OR "Chronic Obstructive Pulmonary Disease"[Title]) AND ("Developing Countries"[MeSH Terms] OR "Commonwealth of Independent States"[MeSH Terms] OR "Latin America"[MeSH Terms] OR "South America"[MeSH Terms] OR "Central America"[MeSH Terms] OR "Africa"[MeSH Terms] OR "Asia"[MeSH Terms] OR "Islands"[MeSH Terms] OR ("developing countr*"[Title/Abstract] OR "LMIC"[Title/Abstract] OR "LMICs"[Title/Abstract] OR "low income"[Title/Abstract] OR "middle income countr*"[Title/Abstract] OR "Latin America"[Title/Abstract] OR "Caribbean"[Title/Abstract] OR "africa*"[Title/Abstract] OR "asia*"[Title/Abstract] OR "India"[Title/Abstract]) OR ("developing countr*"[Title/Abstract] OR "LMIC"[Title/Abstract] OR "LMICs"[Title/Abstract] OR "low income"[Title/Abstract] OR "middle income countr*"[Title/Abstract] OR "Latin America"[Title/Abstract] OR "Caribbean"[Title/Abstract] OR "africa*"[Title/Abstract] OR "asia*"[Title/Abstract] OR "India"[Title/Abstract] OR "Anguilla"[Title/Abstract] OR "Antigua"[Title/Abstract] OR "Barbuda"[Title/Abstract] OR "Argentina"[Title/Abstract] OR "Aruba"[Title/Abstract] OR "Bahamas"[Title/Abstract] OR "Barbados"[Title/Abstract] OR "eastern caribbean"[Title/Abstract] OR "Belize"[Title/Abstract] OR "Bermuda"[Title/Abstract] OR "Bolivia"[Title/Abstract] OR "Brazil"[Title/Abstract] OR "british virgin islands"[Title/Abstract] OR "cayman islands"[Title/Abstract] OR

"Chile"[Title/Abstract] OR "Columbia"[Title/Abstract] OR "costa rica"[Title/Abstract] OR "Cuba"[Title/Abstract] OR "Curacao"[Title/Abstract] OR "Dominica"[Title/Abstract] OR "dominican republic"[Title/Abstract] OR "Ecuador"[Title/Abstract] OR "el salvador"[Title/Abstract] OR "french guiana"[Title/Abstract] OR "Grenada"[Title/Abstract] OR "Guadeloupe"[Title/Abstract] OR "Guatemala"[Title/Abstract] OR "Guyana"[Title/Abstract] OR "Haiti"[Title/Abstract] OR "Honduras"[Title/Abstract] OR "Jamaica"[Title/Abstract] OR "Martinique"[Title/Abstract] OR "Mexico"[Title/Abstract] OR "Montserrat"[Title/Abstract] OR "netherlands antilles"[Title/Abstract] OR "Nicaragua"[Title/Abstract] OR "Panama"[Title/Abstract] OR "Paraguay"[Title/Abstract] OR "Peru"[Title/Abstract] OR "puerto rico"[Title/Abstract] OR "saint kitts"[Title/Abstract] OR "Nevis"[Title/Abstract] OR "saint lucia"[Title/Abstract] OR "saint vincent"[Title/Abstract] OR "Grenadines"[Title/Abstract] OR "saint maarten"[Title/Abstract] OR "Suriname"[Title/Abstract] OR "Trinidad"[Title/Abstract] OR "trinidad and tobago"[MeSH Terms] OR "Trinidad"[Title/Abstract] OR "tobago"[Title/Abstract] OR "Turks"[Title/Abstract] OR "Caicos"[Title/Abstract] OR "Uruguay"[Title/Abstract] OR "Venezuela"[Title/Abstract] OR "Ethiopia"[Title/Abstract])) AND 2017/12/18:2022/11/21[Date - Publication]) NOT "COVID-19"[Title]

Leff 2021: No evidence gap search update was conducted

Ghazanchai 2021: No evidence gap search update was conducted

Ruby 2015

1. exp Disasters/
2. exp Relief Work/
3. Rescue Work/
4. Emergencies/
5. Emergency Medicine/
6. Emergency Medical Services/
7. Disaster Medicine/
8. Mass Casualty Incidents/
9. Emergency Responders/
10. Medical Missions, Official/
11. (humanitarian adj2 (crisis or crises or relief or response or agenc\$)).tw.
12. humanitarian.tw.
13. (disaster adj3 (relief or plan\$)).tw.
14. ((relief or aid) adj2 work\$).tw.
15. Refugees/
16. (refugee or evacuee or evacuated).tw.
17. (displace\$ adj2 (force\$ or population or human or internal\$)).tw.
18. Altruism/
19. exp War/
20. war.tw.
21. ((armed or zone) adj2 conflict\$).tw.
22. (conflict affected adj3 (population\$ or person\$ or communit\$)).tw.
23. Avalanches/

24. Earthquakes/
25. Floods/
26. Landslides/
27. Tidal Waves/
28. Tsunamis/
29. Cyclonic Storms/
30. (typhoon\$ or hurricane\$ or cyclone\$).tw.
31. (avalanche\$ or earthquake\$ or flood or floods or flooding or flooded or landslide\$ or tsunami\$).tw.
32. (disaster adj2 (natural or victim)).tw.
33. Droughts/
34. drought\$.tw.
35. Starvation/
36. (starvation or famine\$).tw.
37. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36
38. Randomized Controlled Trial/
39. Controlled Clinical Trial/
40. Cross-Sectional Studies/
41. Case-Control Studies/
42. Cohort Studies/
43. Pilot Projects/
44. (random\$ or controlled).tw.
45. (control adj3 (area or cohort? or compare? or condition or design or group? or intervention? or participant? or study)).ab. not (controlled clinical trial or randomized controlled trial).pt.
46. ((evaluat\$ or prospective or retrospective) adj1 study).tw. MEDLINE/Embase/Global Health/PsychInfo Search Terms (cont.):
47. (quasi-experiment\$ or quasiexperiment\$ or quasi random\$ or quasirandom\$ or quasi control\$ or quasicontrol\$ or ((quasi\$ or experimental) adj3 (method\$ or study or trial or design\$))).tw.
48. (time series adj2 interrupt\$).tw.
49. (intervention\$ or impact or effectiveness or efficacy or service\$ or outcome\$ or output or treatment\$ or management or program\$ or project\$).tw.
50. Economics/
51. Cost-Benefit Analysis/
52. cost control.mp. or "Cost Control"/
53. Cost savings.mp. or "Cost Savings"/
54. cost of illness.mp. or "Cost of Illness"/
55. cost \$utility.tw.
56. (Cost\$ adj2 effective\$).tw.
57. cost-effective\$.tw.
58. (cost adj3 utility).tw.
59. cost-utilit\$.tw.
60. 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 53 or 54 or 55 or 56 or 57 or 58 or 59
61. Developing Countries/
62. exp asia/
63. exp africa/
64. exp pacific islands/

65. exp eastern europe/
66. exp china/
67. balkan peninsula/ or europe, eastern/ or transcaucasia.mp.
68. caribbean region/ or central america/ or gulf of mexico/ or latin america/ or south america.mp.
69. atlantic islands/ or indian ocean islands/ or macau/ or pacific islands/ or philippines/ or prince edward island/ or svalbard/ or west indies.mp.
70. 61 or 62 or 63 or 64 or 65 or 66 or 67 or 68 or 69
71. Japan/
72. 70 not 71
73. 37 and 60 and 72
74. 73
75. limit 74 to yr="1980 -Current"
76. (Non\$communicable disease* or NCD* or chronic disease* or chronic condition* or long term condition* or autoimmune disease* or Lupus or heart disease or cardiovascular or cerebrovascular or stroke or hypertens* or \$cholesterolaemia or heart failure or arrhythmia* or aneurysm* or cardiac or angina or myocardial infarct* or coronary heart disease or CHD or ischaem\$ or cholesterol or blood pressure or blood sugar or blood glucose or diabetes or obesity or circulatory disorder* or \$carditis or cardiomyopathy or anaemi* or cancer* or neoplasm* or asthma* or respiratory or COPD or chronic obstructive pulmonary disease* or pulmonary or bronchitis or lung function or lung disease* or liver function or diabetes or chronic kidney disease* or CKD or liver disease* or renal failure or cirrho* or osteoporosis or fibromyalgia or musculoskeletal or chronic pain or \$arthritis or cystic fibrosis or thyroid disorder or neurological condition or Parkinson* or colitis or multiple sclerosis or MS or Alzheimer* or thrombo* or embolus or embolism or atherosclero* or vascular disease*).mp.
77. 75 and 76

Nikoloski 2021: No evidence gap search update was conducted