IFRC

The Last Mile

Norwegian **Red Cross**

CONTENTS

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The study team would like to acknowledge the valuable contribution of individuals from various organizations in the development of this study:

IWORDS GLOBAL: www.iwordsglobal.com

Author	Marcela Rueda Gomez
Development of the Health in the Last Mile Index	Fernando Ruiz
Case studies development and technical editor	Luz Adriana Muñoz
Support team	Mónica Ropaín, Catalina Arenas, Paola Serrano, Lorena Hillón, Gabriela Forero, Kavitha Devadas
Design	Mauricio Ramírez

NORWEGIAN RED CROSS: STUDY COMMISSIONER

Study coordination	Anette Bringedal Houge Øivind Hetland
Advisory team	Tonje Tingberg Morten Tønnesen-Krokan Frederik F. Siem Arne Westgaard

THE INTERNATIONAL FEDERATION OF RED CROSS AND RED CRESCENT SOCIETIES

Reviewers	Mark James Johnson Lasha Goguadze

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PROLOGUE

It is a sad irony that help is most difficult to provide precisely where it is most sorely needed. While it is a top priority of the Sustainable Development Goals (SDG) to leave no one behind, millions still live, struggle to survive, and die without access to primary, specialized and crucial health care services. The 2018 *World Disaster Report: Leaving Millions No One Behind* shows that too often, it is the most vulnerable people and the people most in need that may be beyond the reach of public services, and, alas, humanitarian assistance.

At the intersection of the SDGs, humanitarian assistance and health, the term "Health in the last mile" (HILM) has gained a particular stronghold – referring to humanitarian action that provides pivotal health services where services would otherwise be limited or non-existent. HILM remains, however, an umbrella term that means different things in different contexts and to different actors.

In conflicts, violence-affected urban areas, poor rural settings, or in context subject to sudden or slow-onset disaster risks and epidemics, who are the people with least access to health care services? What are their health needs and what are the barriers they face? Not least, when many live without access to health care services, how do we decide where the last mile begins? Does it refer to a certain percentage of the population, is it defined by a specific structural challenge, is it constituted by the most acute health issues, or does it refer to the need for primary health services in the most remote of places? The answer to these questions can produce very different humanitarian priorities and approaches.

The Red Cross Red Crescent movement provides volunteers and professionals with access and trust where government actors, as well as other development and humanitarian organizations, sometimes cannot reach. As we make the last mile our first priority, we must triage both between crises and needs. Within each humanitarian setting, we need to ask the questions above anew, and contextualize them, our analyses and – subsequently – our responses, to the reality of the needs and access challenges on the ground. We know that generic response models may not only have blind spots that hinder access to health care services for the most vulnerable, potentially they also reproduce or reinforce the structures that marginalize particular groups and put them in a less visible category of 'those most vulnerable.'

This report seeks to better conceptualize and map what health in the last mile refers to in terms of access, needs and structural and geographic vulnerabilities and how these vulnerabilities overlap in different humanitarian settings and regions. The report identifies particularly vulnerable groups and develops a new measure for identifying countries that are and will be in the last mile in terms of health care services. With additional in-depth case studies, the report provides both transferable conceptual tools for the sector, and context-dependent analyses of last mile challenges within countries, illustrating what health in the last mile means in practice.

While a larger share of the population is likely to struggle with access to health care services in some countries, the last mile is not limited to traditional humanitarian settings. In Norway, for instance, undocumented migrants are not provided with access to the same level of health care as the rest of the population. Seeing the urgent need for health care services for this group, the Norwegian Red Cross and the Church City Mission partnered up in 2010 and opened a dedicated health centre for undocumented migrants.

The recommendations in the report are forward-looking. They point towards important converging factors that support greater investment by the humanitarian sector in reaching the last mile. These range from increased recognition of the importance of universal health coverage, investment in health systems and the role of community health workers in task shifting as well as efforts to improve

programmatic approaches and supply systems. The report also highlights the importance of protection, gender awareness and inclusion and the key role played by local humanitarian actors in reducing barriers to access to health care. For humanitarian actors and governments, the report highlights the need to adapt national laws to facilitate international assistance, continued funding for communities and countries with significant humanitarian needs, as well as strengthened coordination between humanitarian and development actors.

While we are mindful of the fact that the report does not capture the challenges and needs of all last mile communities, we hope that it will encourage a dialogue within and between governments, humanitarians, development actors, donors, researchers and other stakeholders, on how to better adapt our responses to last mile challenges.

Bernt G. Apeland
SECRETARY GENERAL OF THE NORWEGIAN RED CROSS

Jagan Chapagain
SECRETARY GENERAL OF THE INTERNATIONAL FEDERATION OF RED CROSS AND RED CRESCENT SOCIETIES (IFRC)

ACRONYMS AND ABBREVIATIONS

AIDS: Acquired immune deficiency syndrome
CAAFAG: Children Associated with Armed Forces or Armed Groups
COVID-19: Coronavirus disease 2019
DALY: Disability adjusted life years
GBV: Gender-based violence
HDI: Human Development Index
HIV: Human immunodeficiency virus
HLMCI: Health in the Last Mile Country Index
ICRC: International Committee of the Red Cross
ICU: Intensive care units
IDP: Internally displaced person
IFRC: International Federation of Red Cross and Red Crescent Societies
INFORM: Index for Risk Management Report
IOM: International Organization for Migration
LGBTQI: Lesbian, gay, bisexual, transgender, queer, intersex
MERS: Middle East respiratory syndrome
NCD: Non-communicable disease
NorCross: Norwegian Red Cross
PLHIV: People living with HIV/AIDS
PPE: Personal protective equipment
SARS: Severe acute respiratory syndrome
SGBV: Sexual and gender-based violence
STIs: Sexually transmitted infections
TB: Tuberculosis
UNHCR: United Nations High Commissioner for Refugees
UNDP: United Nations Development Programme
UNFPA: United Nations Population Fund
UNICEF: United Nations Children's Fund
UNOCHA: United Nations Office for the Coordination of Humanitarian Affairs
WASH: Water, sanitation, and hygiene
WB: World Bank
WHO: Word Health Organization

GLOSSARY

- **Communicable diseases:** "Communicable, or infectious diseases, are caused by microorganisms such as bacteria, viruses, parasites and fungi that can be spread, directly or indirectly, from one person to another. Some are transmitted through bites from insects while others are caused by ingesting contaminated food or water."[1]

- **Conflict:** Conflict refers to "a confrontation between one or more parties aspiring towards incompatible or competitive means or ends." Conflicts may be interstate, internal, or state-formation conflicts. Some conflicts are country-wide, while others are localized in specific parts of a country.[2] Conflicts are becoming more fragmented (involvement of several armed groups)[3] and more internationalized (spreading beyond national borders).[4] The latter is facilitated by technology and the formation of alliances. Conflict and terrorism are interlinked. The large majority of deaths resulting from terrorism are reported in conflict-affected countries or settings known for having high levels of political terror.[5]

- **Coronavirus:** Coronaviruses (CoV) are a broad family of viruses that can cause a variety of conditions and diseases, from the common cold to more serious illnesses, and even death. For example, the coronavirus that causes Middle East respiratory syndrome (MERS-CoV) and the one that causes the severe acute respiratory syndrome (SARS-CoV).

- **COVID-19:** The coronavirus disease 2019 is an infectious disease caused by a new strain of coronavirus that has not been found before in humans.[6]

- **Disasters:** Disasters include "sudden, calamitous events that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope using its own resources. A disaster occurs when a hazard impacts on vulnerable people. The combination of hazards, vulnerability and inability to reduce the potential negative consequences of risk results in disaster."[7] Disaster events may be biological (epidemic), climatological, geophysical, hydrological, meteorological, non-technological and man-made, technological and man-made, or other (e.g. chemical).[8]

- **Environmental health needs:** Health needs derived from air pollution, challenges in accessing clean water and sanitation, and poisoning.

- **Epidemic:** The occurrence in a community or region of cases of illness or health-related events clearly in excess of normal expectancy.[9]

- **Health:** A state of physical, mental and social well-being and not merely the absence of disease or infirmity.[i]

- **Health outcomes:** Health outcomes may reflect a state of health at a point in time, a change in a health state over a period of time, or change in health status as a result of an intervention.[10]

- **Health system:** A health system consists of all the organizations, institutions, resources, and people whose primary purpose is to improve health.[11] Health systems are often described in terms of six core components: (i) service delivery, (ii) health workforce, (iii) health information systems, (iv) access to essential medicines, (v) financing, and (vi) leadership/governance.[12]

- **Healthcare access:** Access combines physical accessibility and economic accessibility. That is, "Physical accessibility is understood as the availability of good health services within reasonable and safe reach of those who need them and of opening hours, appointment systems and other aspects of service organization and delivery that allow people to obtain the services when they need them. Economic accessibility, or affordability, is a measure of people's ability to pay for services without financial hardship. It takes into account not only the price of the health services but also indirect and opportunity costs (e.g. the costs of transportation to and from facilities and of taking time away from work)."[13]

- **Healthcare in danger:** This term refers to the challenges that prevent safe access to healthcare in crisis situations, including violence, obstructions to service provision, discrimination against specific groups (i.e. influential actors that try to stop healthcare workers from offering care to wounded enemies or to some ethnic groups), and a lack of security.[14]

- **Injuries and violence:** These may include road traffic injuries and interpersonal violence, violence against women, and harmful practices.

- **Intersectionality:** "Intersectionality promotes an understanding of human beings as shaped by the interaction of different social locations (e.g. 'race'/ethnicity, indigeneity, gender, class, sexuality, geography, age, disability/ability, migration status, religion). These interactions occur within a context of connected systems and structures of power (e.g. laws, policies, state governments, religious institutions, media). Through such processes, interdependent forms of privilege and oppression shaped by colonialism, imperialism, racism, homophobia, ableism and patriarchy are created."[15]

- **Mental disorders:** "[Mental disorders] comprise a broad range of problems, with different symptoms. However, they are generally characterized by some combination of abnormal thoughts, emotions, behaviour and relationships with others. Examples are schizophrenia, depression, intellectual disabilities and disorders due to drug abuse. Most of these disorders can be successfully treated."[16]

- **Non-communicable diseases:** A non-communicable disease (NCD) can be defined as a disease that is not transmissible directly from one person to another. NCDs may often be the result of a combination of genetic, physiological, environmental, and behavioural factors. NCDs are (most often) chronic, i.e. diseases of long duration and generally slow progression. According to WHO, the four main types of NCDs are: (1) cardiovascular diseases (e.g. heart attacks and stroke), (2) cancer, (3) chronic respiratory diseases (e.g. chronic obstructed pulmonary disease and asthma), and (4) diabetes.[17]

[i] Preamble to the Constitution of WHO as adopted by the International Health Conference, New York, 19 June - 22 July 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of WHO, no. 2, p. 100) and entered into force on 7 April 1948. The definition has not been amended since 1948.

- **Pandemic:** An epidemic occurring worldwide, or over a very wide area, crossing international boundaries, and usually affecting a large number of people.[18]

- **Sexual, reproductive, and maternal health:** "Sexual health is a state of physical, emotional, mental, and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination, and violence. Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Maternal health refers to the health of women during pregnancy, childbirth, and the postpartum period."[19]

EXECUTIVE SUMMARY

Over the past decades, significant progress has been made in terms of improved health outcomes.[20] However, health inequities – understood as avoidable and unjust differences in exposure to health risk factors, health outcomes, social and economic consequences of health outcomes, healthcare access, and capacity to finance care – persist.[21] Health inequities pose challenges in achieving the Sustainable Development Goals, particularly Goal 3: "Ensure healthy lives and promote well-being for all at all ages." Also, Goal 16: "Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable, and inclusive institutions at all levels."

Additionally, humanitarian and development actors can inadvertently further entrench these health inequities. For example, The World Disasters Report 2018 suggests that too often humanitarian actors pay more attention "to areas, population groups and sectors where the most information already exists, or where there are easy wins or particular gains to be made," rather than focusing on areas with the greatest inequities.[22]

Populations exposed to health inequities vary from country to country and within country-level subregions and represent a wide range of characteristics. Who they are and where they live is not always entirely clear, as these individuals and communities tend to be underserved by national health authorities and exist at or beyond the margins of the response of the humanitarian and development sectors. Lack of reliable data at different levels increases the invisibility of these populations. As a result, their voices are not heard, and their needs are ignored. When they do have access to services, one-size fits all strategies may in fact increase their exposure to danger or reproduce or reinforce the structures that contribute to their vulnerability, marginalization, or oppression in the first place. Moreover, pandemic episodes, such as the current COVID-19, have exposed health disparities and have shown that the concept of vulnerability is ever-changing.

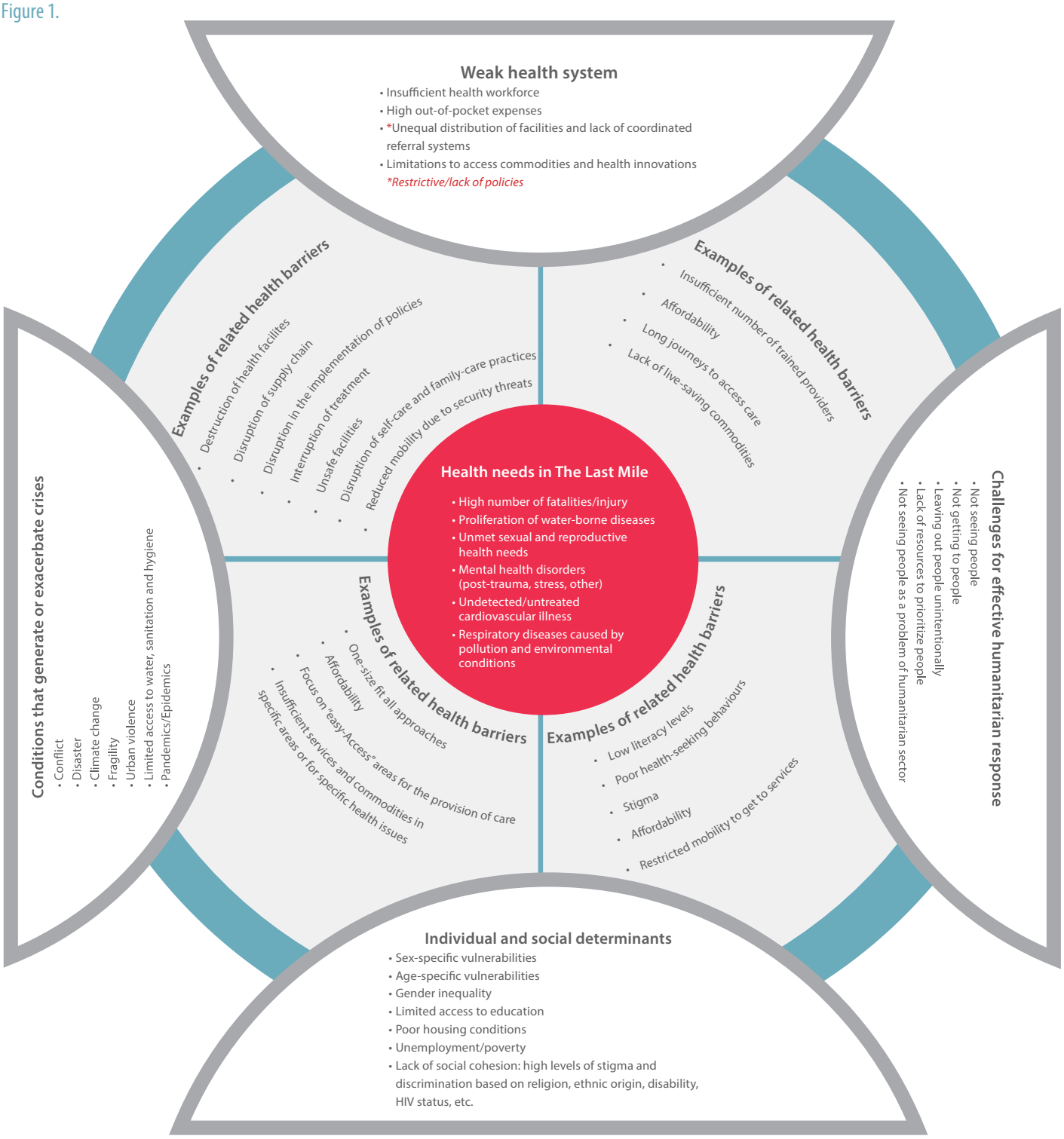
The concept of 'health in the last mile' has gained momentum among humanitarian actors over the past few years as these actors attempt to understand and address the factors that exacerbate barriers to health for certain populations. However, the last mile has remained an umbrella term that means different things – a geographical space, a status, and others – in different contexts and to different actors. Different conceptualizations, in turn, may produce different priorities and approaches.

In the last quarter of 2019, NorCross commissioned a desk research study to help conceptualize the last mile and understand which populations and settings are in the last mile or at risk of being pushed into it. The purpose of this study is to provide a concise language for different last mile considerations and challenges while addressing the vulnerabilities and needs of populations that are neither the most visible nor the most numerous. The study was conducted based on literature review, input from key informants, and an online survey. The information gathered was used to: (1) develop a definition of the last mile; (2) identify 18 populations on the verge of the last mile in humanitarian crises settings; (3) develop the Health in the Last Mile Country Index (HLMCI), which is a data-informed projection of countries that are likely to be closer to/in the last mile in 2030 (including a comparison of where each country was in 2016); and (4) provide recommendations for humanitarian and development actors.

THE LAST MILE DEFINITION

- This study proposes a definition of the last mile that takes into account converging factors that exacerbate barriers to healthcare. **That is, an individual, community, or geographical setting (i.e. country) is further along the last mile in terms of health when there is a confluence of: (1) conditions that lead to or exacerbate crises (for instance, conflict, disaster, climate change, fragility, urban violence, pandemics, limited access to water, sanitation, and hygiene); (2) significant challenges for humanitarian action response; (3) weak health systems; and (4) individual and social determinants that reinforce and compound vulnerability, exclusion, oppression, stigmatization, and marginalization**. Based on the findings of this study, Figure 1 illustrates the health needs and barriers to healthcare often present in the last mile:

Figure 1.



POPULATIONS ON THE VERGE OF THE LAST MILE

The study identifies 18 populations on the verge of the last mile in humanitarian crises settings. This list is not exhaustive and builds on qualitative and quantitative reports, as well as on the input of key informants. Considering that one of the key characteristics of some last mile populations is that they are out of sight, it is possible that some groups may not have been captured in this study. It is also possible that some groups in high income countries and non-conflict/stable settings find themselves on the verge of the last mile due to other converging factors within their context. However, evidence illustrates that the 18 populations selected here are impacted by health inequities as a result of the confluence of conditions that lead to or exacerbate crises. This includes

challenges to the response of humanitarian actors, weak health systems, and individual and social determinants that reinforce vulnerability, exclusion, oppression, stigmatization, and marginalization.

The categorizations used to identify these 18 populations are not mutually exclusive: an individual may be a survivor of gender-based violence who also lives in a slum. It is important to note that the intersectional interaction of these factors increases vulnerability. It is also important to recognize that some of these categories refer to identities (for example, being a member of a minority group) while others refer to circumstances/conditions (for example, detainees) that may be permanent or temporary:

- **Children Associated with Armed Forces or Armed Groups (CAAFAG)** and **gang-affiliated youth** are at the core of the interaction of conflict/urban violence, age-specific vulnerabilities, traditional gender norms that focus on men (boys, in this case) as recruitment targets for criminal organizations and armed actors, potential disability, lack of health providers in areas with high levels of conflict activity, and significant challenges to the humanitarian response.

- Stigma and discrimination against some minorities, as well as competition for scarce resources or territorial control, put some **minorities (religious, ethnic, LGBTQI, other) and indigenous groups** at increased risk of violence and conflict. In some cases, the marginalization of these populations may also mean that they live in areas with high exposure to poor housing conditions, urban violence, and a lack of water, sanitation, and hygiene. Many of these populations also tend to work in traditional occupations, such as agriculture, which increases the likelihood of fatality and morbidity in disaster situations.

- **Individuals may become stateless and/or be displaced from their place of origin (refugees, internally displaced populations [IDPs])** as a result of conflict, their faith, age, or even their gender. Humanitarian actors often face dilemmas associated with neutrality and impartiality when attempting to reach some of these populations – stateless individuals, in particular – which then translates into limited healthcare access for these populations or delays in providing assistance.

- **Undocumented migrants** may have left their countries of origin as a result of humanitarian crises or individual and social factors that contributed to their exclusion and marginalization. In countries of destination, migrants may be relegated to slums and dangerous/unsafe occupations, and they may face significant challenges accessing the most basic health and social services.

- **Detainees** – including prisoners of war, security detainees, irregular migrants, common law criminals, and other individuals whose freedom is restricted – face significant risks to their life and health, such as forced disappearances, extrajudicial executions, ill-treatment, epidemic emergencies, and/or a lack of respect for judicial guarantees. These risks converge with drivers of poor health, such as overcrowding, failing infrastructure, inadequate food, inadequate space, and poor sanitation and ventilation.

- **Rural communities, slum dwellers, and traveller communities** suffer negative health consequences because of their location and mobility. This mobility may be a choice, because of cultural traditions, or it may be forced in order to access resources. Climate change, disaster, poor infrastructure (for example, road networks), and a lack of health sector investment are common challenges among these populations. In the case of slum dwellers, their needs are also linked to the fact that humanitarian actors do not always consider these individuals to fall within their scope of work.

- **Forced sex work** is often a result of conflict, disaster, gender inequality, and poverty in general. A lack of opportunities and food security, power dynamics, and other factors, means that many individuals are forced into sex work because they do not have any other options.

- **Sexual and gender-based violence** often occurs when there is a confluence of gender inequality, disaster, and/or conflict; shelters and camps are often unsafe, and rates of domestic violence, trafficking, and child marriage increase during crises, including epidemic/pandemic emergencies. Limited installed capacity to manage the immediate and long-term health consequences of this type of violence and the deprioritization of the needs of survivors of sexual and gender-based violence in favour of attending to basic needs (considered more urgent) further push these survivors to the last mile.

- **Individuals with disabilities and those with chronic diseases** have a high probability of aggravating their physical and/or mental health in the context of crises, such as epidemics/pandemics, due, for instance, to the disruption of treatments and regular support.

THE HEALTH IN THE LAST MILE COUNTRY INDEX (HLMCI)

Through the combination of data from multiple authoritative databases, the HLMCI scores countries to identify their likelihood of being in the last mile. The

index is a summarized measure that considers four key aspects in identifying countries with the greatest vulnerability: (1) the health gap in terms of avoidable mortality; (2) access to formal education; (3) the level of vulnerability broadly speaking; and (4) the evident fragility of countries. In that sense, the index was an analytical tool that enabled gathering, processing, and organizing information from 178 countries,[ii] with the goal of identifying the countries that are most distant from social progress (last mile countries), both in the current context (2016) and in the future (2030). The countries in the first 25 positions correspond to those with high HLMCI score, which are more likely to have larger number of individuals and communities on the verge of the last mile.

DATABASES AND OTHER AUTHORITATIVE SOURCES USED TO CALCULATE HLMCI SCORES:[iii]

- Disease burden and mortality estimates of the World Health Organization (WHO): the study team focused on four causes of death, that is, deaths of children under five years old, tuberculosis, AIDS, and maternal death. It also introduced the 'health gap' concept included in Global Health 2035 Report,[23] to conduct comparisons of disease and mortality among countries. This report focuses on the experience of four countries (Chile, China, Costa Rica, and Cuba, called the 4C) that previously had similar income and mortality rates to countries currently classified as low-income, but they had achieved a great reduction of preventable deaths by 2011.
- Projection of population according to their educational attainment (provided by the Wittgenstein Centre for Demography and Global Human Capital).
- Index for Risk Management Report (INFORM).
- Classification of the Fragile States Index of the Fund for Peace.

KEY FINDINGS IN THE HLMCI:

The results of the index indicate that 21 of the 25 countries that are furthest from social progress are in Africa. The five first positions are occupied by Central African Republic, Chad, Somalia, South Sudan, and Mali. On the other hand, Finland, Norway, Iceland, Luxembourg, and Switzerland were identified as the five countries that are farthest from the last mile (annex 1A includes the full results of the index). According to the proposed methodology for the HLMCI (see methodology section), if a country is furthest from social progress in 2030, and therefore in the first places in the index, it means the following:

- It will have a larger health gap compared to the 4 countries (4C: Chile, China, Costa Rica, and Cuba) that have made great progress in reducing preventable deaths. According to the expected mortality level, it will have higher rates of maternal, child, tuberculosis, and AIDS-related deaths (the indicators where the HLMCI originate are in Annex 1B).
- It will be further from its 50–54 year-old population having 20 years of formal schooling.
- It will have higher levels of vulnerability and fragility, with similar levels to the ones reported between 2015 and 2019.

Using three countries as examples, these rankings indicate the following:

Central African Republic: In 2030, this will be the most vulnerable country of the 178 countries included in the ranking. This means that by 2030:

- The health gap in relation to the reference group (4C) will be significant. This is evident as the projected mortality rates will be higher in children under the age of 5 (2,029 per thousand), maternal mortality (19), AIDS (91), and tuberculosis (74). The weighted average rate (with a weight of 80% for the first two causes and 20% for HIV/AIDS/tuberculosis) indicates that it will have 835 more deaths (weighted) than 4C (See Annex 1A).

[ii] A total of 178 countries are included in the Index. Excluded countries lack sufficient data to conduct the scoring process.

[iii] As further explained in the Study Methodology section of the report, the score is built by assigning different weight to the different sources. For instance, disease and mortality rate data has been given a higher weight in the final score than fragility and vulnerability calculations. The latter was decided to ensure the final HLMCI scores maintain a focus on the health outcomes expected in these countries.

- The education gap will be larger with regards to achieving 20 years of schooling for the population between the ages of 50 and 54 (14 years).

- The level of vulnerability (INFORM Index) is assumed to remain constant between 2019 and 2030. At the beginning of the period, it had reported an average level of 8.26/10.00 in the last 5 versions of the INFORM Index (2015–2019).

- Its level of fragility is also assumed to remain constant between 2019 and 2030. In 2019, it reported an average fragility level of 111.3/120 when the last 5 measures were taken (2015–2019).

Norway: In 2030, it will be the second least vulnerable country of the 178 included in the ranking. This means that by 2030:

- It will have a lower level of mortality in the four causes compared to the reference group (4C). In other words, 'a positive gap' based on its higher level of health (-44 rate of weighted deaths).

- The education gap to achieve 20 years of schooling will be considerably small (6.6 years).

- The level of vulnerability (INFORM Index) and the level of fragility have both been very low between 2015–2019 (0.7/10 in the first case and 19.8/120 in the second). The prediction is that these levels will remain the same in 2030.

Syria: In 2030, it will be the sixtieth (60) most vulnerable country of the 178 included in the HLMCI. Even though its needs are high because of the current humanitarian crises, it is ranked in this position for the following reasons:

- Although it has a health gap compared to 4C, it is not as large as the one that the Central African Republic (or other countries in the top positions of the HLMCI ranking) has (the weighted average rate indicates that it will have a rate of 49 additional deaths compared to 4C). These country projections show high levels of child and maternal mortality, but lower rates of tuberculosis and AIDS-related deaths.

- The education gap is similar to the one for the Central African Republic (12.6 years to achieve 20 years of schooling). But it is important to note that education has a lower weight on the HLMCI (15%), as the study team prioritized a focus on health.

- Its level of vulnerability (INFORM Index) is somewhat lower than the one for the Central African Republic (7.1/10.0), but its fragility level is similar (110.4/120) given the current crises. As with the education component, these two components also have a weight of 15% on the HLMCI.

Additional information about the top 25 countries in the HLMCI ranking for 2030:

- 24 are classified as low or lower-middle income countries by the World Bank Open Data; Equatorial Guinea is classified as upper middle income.

- 11 are included among the 20 countries that have made the least progress in combating hunger, as measured by the 2019 Global Hunger Index.

- 100% have experienced crises (conflict, disaster) within the last decade.

- 21 were African countries. The other four countries were Yemen (No. 10 in the ranking), Afghanistan (No. 12), Pakistan (No. 15), and Haiti (No. 19).

RECOMMENDATIONS

The multiple interconnections between crises, weak health systems, humanitarian response, and individual and social determinants that reinforce and compound vulnerability, exclusion, oppression, stigmatization, and marginalization for each of the populations and countries listed above are further analysed in the full report. It is clear that individuals that fall within or are at risk of falling within the last mile face increased barriers to healthcare compared to the

general population, as outlined in Figure 1. Humanitarian actors have a critical role in changing this reality. The following 13 recommendations serve as inputs for future discussions regarding the impact and confluence of vulnerability, exclusion, oppression, stigmatization, and marginalization:

1. **Universal health coverage should remain a priority in times of crises**
   Universal health coverage is at the centre of efforts to reduce health inequities, which means it should remain a priority in times of crisis. For example, plans should be established to provide and fund quality health services for populations that are either in or at risk of being in the last mile.

2. **More investment for resilient health systems is needed**
   International frameworks recommend increasing the resilience of health systems, and establishing shock resistant infrastructure and social protection systems for at-risk communities. This requires investment in health financing, health information, and technologies, among others.

3. **Investing in task sharing/task shifting can help increase the number of health providers prepared to meet the needs of populations in the last mile**
   Providing community health workers, peer educators, and other volunteers with training and support means they can share or provide certain services that normally pertain to other health providers. This, in turn, reduces the barriers that populations in the last mile face regarding healthcare.

4. **Health systems should be closer to populations in the last mile**
   Health systems should be closer to populations in the last mile. For this to occur, interventions may include bringing service provision to the community level, simplifying communication, and introducing technology.

5. **Implementing intersectional approaches to research, evaluation, and needs assessments, and using data for decision-making at all levels are necessary measures to reduce vulnerability and increase the visibility of individuals in the last mile**
   Intersectionality should guide research and knowledge generation, evaluation, and needs assessment processes in humanitarian settings. For this, it is important to invest in stronger data gathering and analysis capacities across the humanitarian sector and at the national level, among other strategies.

6. **Supply systems should consider the needs of diverse groups**
   Having access to good quality, sufficient, and sustainable commodities is necessary for individuals to achieve the highest possible standard of health. Therefore, in order to accommodate the needs of diverse groups, certain strategies need to be implemented. For example, reducing the cost of commodities and addressing infrastructure barriers that limit the delivery of supplies.

7. **Implementing protection, gender, and inclusion standards is essential to successful health programming by humanitarian actors**
   There are certain conditions that humanitarian actors must provide. This includes providing people affected by emergencies with access, participation, and safety. To do so, standards must be put in place to address protection, gender, and inclusion concerns.

8. **Investing in and empowering local humanitarian actors helps reduce barriers to healthcare access**
   Local stakeholders have first-hand knowledge of the needs of populations in the last mile and on how they navigate the barriers to healthcare access. For this reason, investing in and empowering them through horizontal partnerships with international humanitarian actors and sustained funding is a way to reduce these barriers.

9. **Reducing barriers to healthcare for individuals in the last mile requires active collaboration at the subnational and community levels**
   Governments and grassroots groups at subnational levels are well positioned to identify and reach highly vulnerable populations. Therefore, by implementing strategies such as the use of technology and establishing relationships that promote shared decision-making, these groups are better prepared to serve populations in the last mile.

10. **National laws should prepare to allow effective and timely international assistance**
    For effective and timely international assistance to take place, national laws need to address gaps or opportunities. For example, legislation and policies can reduce bureaucratic barriers and restrictions that affect access to international funds.

11. **Additional efforts are required to strengthen coordination efforts between humanitarian and development actors**
    Humanitarian and development actors need to coordinate efforts; this has an impact on health programming. At the same time, these joint efforts enable humanitarian actors to implement comprehensive strategies that consider empowerment and income generation, for example.

12. **Securing and sustaining funding for last-mile countries and populations is critical**
    Countries in the last mile have significant funding gaps; in other words, the difference between resources requested and the actual funding received. Therefore, securing and sustaining funding for these countries becomes increasingly necessary to reduce barriers to healthcare.

13. **Local and global preparedness and response (in financial, health equipment, logistic, and policy terms) for growing epidemics and pandemics events, that exacerbate existing crises and inequalities, is essential**
    Epidemics (local and/or regional level) and pandemics (global scale) are highly challenging and not only have a high impact on health, but they can also cause economic and social crises that expose and deepen existing inequalities and vulnerabilities. Global pandemics require global, local, and societal attention, both in terms of preparedness and responses.

INTRODUCTION

BACKGROUND

Over the past decades, significant progress has been made in terms of improving global health outcomes. These improvements are the result of scientific and technological progress, increased recognition of the right to health and the links between positive health outcomes and development, the implementation of more strategic health policies and increased coordination among stakeholders at the global, national and local levels, among other factors. The eradication of smallpox, improvements in HIV detection, and management and reductions in malaria deaths and maternal mortality are just some examples that illustrate this change.[24]

However, these positive changes have not reached all individuals equally. Health access remains elusive for a large part of the global population. Individuals and communities who face health inequities – avoidable and unjust differences in exposure to health risk factors, health outcomes, social and economic consequences of health outcomes, access to healthcare, and capacity to finance care[25] – vary from country to country and within country-level subregions. They also vary across a wide range of characteristics, including, but not limited to, age, gender, race, residence, ability to pay, employment, gender identity or expression, sexual orientation, immigration status, culture, language, religion, education, and disability. Accessible, timely, acceptable, and quality healthcare for these populations is further compromised by crises, weak health systems, insufficient funding, and individual and social vulnerabilities that impact certain populations.

Global epidemics, such as the latest COVID-19, has also shown that the concept of vulnerability is ever-changing. Some groups or even entire communities and countries, which are not considered vulnerable outside of an epidemic/pandemic context, can quickly become vulnerable depending on the social, economic, and political response and the coping capacity of health systems and socio-economic structures. These situations can bring new vulnerable populations to the edge of the last mile, making the existing inequalities more evident, and bringing harder challenges to the humanitarian and development sectors and actors involved. Thus, based on current knowledge, with the uncertainties that follow from the developing COVID-19 pandemic, this crisis could bring some potential consequences affecting people living in the last mile and the future of the humanitarian landscape.

The world has recognized the need to act to reduce health inequities and improve health outcomes. Goal 3 of the United Nations Sustainable Development Goals framework requires States to "ensure healthy lives and promote well-being for all at all ages." In order to do so, Goal 3 focuses on left behind populations, which are those who lack the choices and opportunities to participate in and benefit from development progress.[26] Efforts to achieve this goal by 2030 are supported by other frameworks directly related to health or that include health access as a key consideration, such as international humanitarian law, the Convention on the Rights of Persons with Disabilities (2007), the Optional Protocol to the Convention on the Elimination of Discrimination against Women (1999), and the International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families (1990), to name a few.

Humanitarian and development actors implement a wide range of efforts to support the achievement of these commitments and complement the actions of national health systems, including public health, health in emergencies and/or right-based[iv] initiatives, in a diverse range of settings, including countries affected by crises (active conflict, disaster, and protracted crises). However, current interventions often do not reach enough individuals and communities, which, in turn, translates into lost opportunities to decrease mortality and morbidity. The concept of 'health in the last mile' has gained traction among humanitarian actors over the past few years in an attempt to better understand the factors that exacerbate barriers to access for some populations. The last

[iv] "A human rights-based approach to health specifically aims at realizing the right to health and other health-related human rights. Health policy making, and programming are to be guided by human rights standards and principle." For more information see: World Health Organization. (n.d.). *A Human Rights-Based Approach To Health*. WHO. https://www.who.int/hhr/news/hrba_to_health2.pdf

mile, however, has remained an undefined umbrella term that means different things – a geographical space, a status, other – in different contexts and to different actors. Different conceptualizations, in turn, may produce different priorities and approaches.

HEALTH IN THE LAST MILE: PROPOSED DEFINITION

Based on a literature review, input from key informants, and an online survey (see 'Study methodology'), this study proposes that, in relation to health, 'last mile' should be used to refer to those individuals and communities who are at the intersection of multiple factors that contribute to health inequities and poor health outcomes, particularly in humanitarian crises. **An individual/community is further along the last mile of health when there is a confluence of conditions that lead to or exacerbate crises; significant challenges for humanitarian response; weak health systems; and individual and social determinants that reinforce and compound vulnerability, exclusion, oppression, stigmatization, and marginalization.**

Figure 2.

REPORT STRUCTURE

- **Study methodology** includes a brief description of the study questions and data collection and data management methods used. It offers a detailed explanation of the steps taken to identify 18 populations in the last mile, and to develop the HLMCI, which is a tool created by the authors to rank countries according to their probability to be in the last mile in 2030, considering current trends.

- **Section One** focuses on unpacking the definition of last mile. This section dives deep into explaining the various converging factors and conditions and their impact on health outcomes and barriers to healthcare, including evidence and examples from a wide range of settings.

- **Section Two** profiles 18 populations and 30 countries that fall within the last mile. These populations and countries were identified using multiple sources of information, including expert input, WHO data, and data from multiple indexes and publications that explore countries and country-level subregions that present significant and persistent high needs. The section concludes with four in-depth case studies on El Salvador, Pakistan, Iraq, and Somalia, which provide detailed information to illustrate the roots of the last mile in these countries and what it looks like in practice.

- **Section Three** provides recommendations and inputs for future discussions.

- **Annexes** provides additional information on the HLMCI methodology and indicators, including a full list of the HLMCI (including scores and rankings for 178 countries).

AUDIENCE AND NEXT STEPS

This report is meant to help stimulate and facilitate dialogue among humanitarian actors on issues such as the improved identification of high-need populations and countries, efforts to minimize barriers to healthcare, the coordination required with development actors at different levels and different moments of a crisis, and funding priorities. We hope that the wider humanitarian and development community will use the findings of this study to improve their programming and reach out to specific population groups in order to better understand their needs and the barriers to healthcare they experience.

STUDY METHODOLOGY

The study focused on answering five critical questions:

1. How do different stakeholders understand key concepts used in the analysis of health inequities? (Including: health in the last mile, 'out of' groups, left behind populations, and vulnerability)

2. How do we define where the last mile begins? Is it a percentage of the population, a specific structural challenge, the most acute health issues, or does it refer to the need for primary health services in the most remote places?

3. What is the role of climate change, conflict, disaster, and other emergencies in driving populations to the last mile?

4. Who are the people who have the least access to healthcare, what are their health needs, and what barriers do they face?

5. What does the future look like for last mile countries and populations? (projections to 2030)

The study was guided by the Fundamental Principles of the International Red Cross and Red Crescent Movement: humanity, impartiality, neutrality, independence, voluntarism, unity, and universality. The study also incorporated the pillars of inclusion and participation, rigour, protection of all parties involved, bias reduction, and accountability.

To answer the study questions, different data collection methods were used. A detailed explanation is offered below:

DATA MANAGEMENT

A. Data collection methods to define the last mile and identify populations in the last mile

The process to develop a health in the last mile definition involved:

Desk review (stage one): scanning academic databases, journal articles, reports, and documentation from global, regional and local-level stakeholders, and global health frameworks/agreements to **clarify the concept of the last mile**. Keywords used for online searches included:

- Left behind populations
- Health + last mile
- Health + vulnerability
- Health + low income
- Health + poverty
- Barriers to healthcare
- Social determinants of health
- Universal health coverage

Over 50 documents were reviewed. Priority was given to documents published since 2014. It is important to highlight that a significant number of documents attempting to provide a definition of the 'last mile' term came from the business world, particularly in the fields of communication and retail. Under those disciplines the term refers to the distribution of telecommunication networks to end-users, or the movement of goods from a central hub to a final destination. The term is used metaphorically to refer to a point in the distribution system from where challenges or bottlenecks may present. The nature of the obstacles may vary, but what is clear is that they may have negative implications in what the final users receive (i.e. speed, quantity, and quality).

Another portion of documents attempting to define this term came from individuals and organizations concerned with health supply chain management systems, particularly in humanitarian crises.[v] From this conceptualization, the focus lies on stock or service availability at patient dispensing sites (considered the last mile, as it is the point where the product or service is consumed or utilized). A stock-out of health products or the availability of products of inferior quality can lead to poor health outcomes and, more importantly, to the detriment of a person's right to health and life. This means that, in supply chain management systems, the last mile refers to a 'point of product (or service) consumption' and not to a specific geographical area, a group of individuals who present specific characteristics, or a specific neglected community.

A smaller number of documents on healthcare refer to the last mile as that space where each individual makes decisions (healthful as well as less healthful decisions) that impact their attainment of the highest standard of health. Under this notion, the last mile is not a geographical area or a neglected group, it is a set of behaviours and decisions that must be influenced by health actors, in order to pursue the desired health outcomes at individual and population levels.[vi]

Desk review (stage two): scanning academic databases, journal articles, reports, and documentation from global, regional, and local-level stakeholders **to identify the connection between the last mile and climate change, conflict, disaster, and other emergencies such as pandemics.** Keywords used for online searches included:

- Health + climate change
- Health + natural hazards
- Health + disaster
- Health + emergency
- Health + conflict
- Health + resilience
- Health + pandemics/epidemics
- Humanitarian response + health
- Development + humanitarian + health

[v] Improving Global Health Outcomes Through Last Mile Logistics Special Focus Forum – Global Health and Humanitarian Supply Chains. PWC. November 2017. https://www.pwc.com/us/en/health-industries/health-services/assets/global-health-outcomes-through-last-mile-logistics.pdf

[vi] Creating a New Healthcare. Episode #60 - Behavioral Economics In The 'Last Mile Of Healthcare' With Karen Horgan. SouthEngine Beta. March, 2019. https://shoutengine.com/CreatingaNewHealthcare/episode-60-behavioral-economics-in-the-last-mi-74948

Over 100 documents were reviewed. Priority was given to documents published since 2014. These documents provided significant input to identify healthcare access barriers in humanitarian settings.

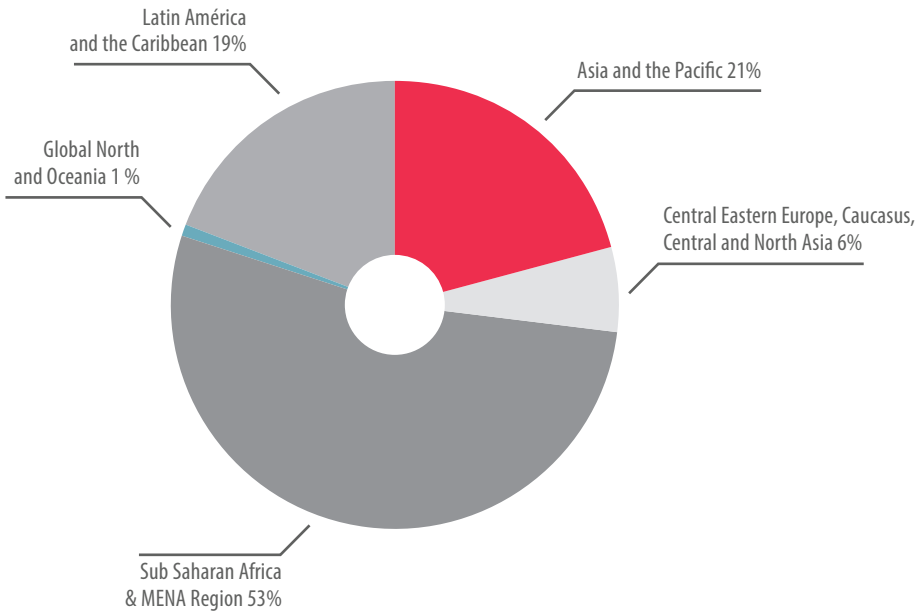
Interviews and online survey: A global mapping process was conducted in order to ensure that the interviews and online survey maximized inclusive coverage across all fields of health. Once the well-known humanitarian and development organizations had been listed, we conducted online searches to identify different civil society organizations, regional fora, and community-based organizations. Based on these searches, an initial list of 400 organizations/ groups was created.

- The key informant interviews sought to unpack the definition of last mile and its challenges with different organizations and experts working in health to understand what vulnerability and the 'last mile' look like in different contexts, what health challenges are neglected and why, how these challenges are being addressed (or not), and the future of those living in the last mile. The semi-structured in-depth interviews provided insight on the diversity of individuals and population groups living in the last mile in humanitarian settings. A total number of 29 respondents participated in the interview process.

- The online survey was carried out with the intent of understanding what health in the last mile meant to individuals working on health in humanitarian and development organizations. The survey was made available via the online platform Survey Monkey in English, Spanish, and French. It was shared with over 400 stakeholders working in health, and we received a total of 60 responses. The survey results do not have significant value from a quantitative point of view, but the results obtained served to guide the second desk review. The survey tool had a total of ten questions focused mainly on:

Figure 3.

Work regions of online survey respondents



- The profile of the participating individual/organizations
- Unpacking the definition of 'health in the last mile'
- The identification of populations in the last mile of health
- The health needs of key populations that are being left behind

- The structural and geographic barriers and challenges experienced by actors providing services
- The structural and geographic barriers experienced by populations living in the last mile

Desk review (stage three): scanning academic databases, journal articles, reports, and documentation from global, regional, and local-level stakeholders to identify potential populations living in the last mile of health, their characteristics, and barriers to healthcare. This desk review process led to the identification of 18 populations commonly affected in humanitarian settings. The process was guided by three sources of information:

- Recommendations from key informants and the respondents of the online survey.
- Populations highlighted in publications by humanitarian actors.
- Results of analysing the populations most affected by a wide range of health needs in 30 countries with the lowest Human Development Index (2018), and subregions within those countries.

Once there was agreement on the global list of populations in the last mile/on the verge of the last mile, the study team conducted further online searches for each population. Keywords used for online searches included:

- Health + 'x population' (e.g. disable) + humanitarian

Using the global list of 18 populations, the study team conducted additional searches for the top 25 countries in the HLMCI (see detailed methodology below) and for 5 additional countries of interest (e.g. settings that did not rank as farthest along the last mile, but that have a current humanitarian crises). The searches were regarding the health needs and characteristics of these populations. Keywords used for online searches included:

- Health + 'x population' (e.g. disable) + 'x country'

This search was complemented by a population-centred (instead of country-centred) online search. Example:

- Top 30 countries with child combatants

This effort allowed the study team to suggest "Examples of populations in the last mile" for each country profiled in section "2.2. Countries in the last mile of health".

B. Limitations

This study was mostly desk based. Despite making an effort to include diverse stakeholders as key informants and opening the survey to the wider humanitarian and development community, there is a high likelihood that community-based actors that do not have an online presence may have been unintentionally excluded from the process. While the consultancy team acknowledges that the study would have been enriched by the community's perspective, in the interest of obtaining access to information in a short time frame, and due to the complexities of ensuring anonymity or confidentiality of these constituents when working with intermediary organizations at any level, this process was not undertaken.

DEVELOPMENT OF THE HLMCI

Through the combination of data from multiple authoritative databases, the HLMCI scores countries to identify their likelihood of being in the last mile. Based on the score obtained for each country, the HLMCI offers a ranking of the country for 2016 and 2030. Those in the first 25 positions are more likely to be on the verge of the last mile.

Databases and other authoritative sources used to calculate HLMCI scores:

- **Disease burden and mortality estimates of the World Health Organization (WHO)**:[27] The study team focused on four causes of death, that is, deaths of children under five years old, tuberculosis, AIDS, and maternal death. It also introduced the 'health gap' concept included in the Global Health 2035 Report, to conduct comparisons of disease and mortality among

countries. This report focuses on the experience of four countries (Chile, China, Costa Rica, and Cuba, called the 4C) that previously had similar income and mortality rates to countries currently classified as low-income, but they had achieved a great reduction of preventable deaths by 2011.

- **Total population projection of the Department of Economic and Social Affairs of the United Nations** (projections for 2020, 2025, and 2030).[28]

- **Projection of population according to their educational attainment (provided by the Wittgenstein Centre for Demography and Global Human Capital):**[29] This tool presents a set of different scenarios regarding the future population and human capital trends in 201 countries and territories of the world through 2100. In addition to considering age and sex in its projections, the tool incorporates the educational attainment of the population. The study team used what is known as the 'medium scenario'. This scenario foresees that fertility and mortality follow a medium path, which can be seen as most likely from today's perspective.

- **Index for Risk Management Report (INFORM)**: Since 2015, the Inter-Agency Standing Committee Reference Group on Risk, Early Warning, and Preparedness and the European Commission have created the Index for Risk Management Report (INFORM). INFORM is a way to simplify a large quantity of information about crisis risk so that it can be easily used for decision-making. It is a composite indicator that identifies "countries at risk from humanitarian emergencies and disasters that could overwhelm current national response capacity, and therefore lead to a need for international assistance."[30] INFORM generates a picture of risk by grouping 54 different indicators that measure three dimensions of risk:

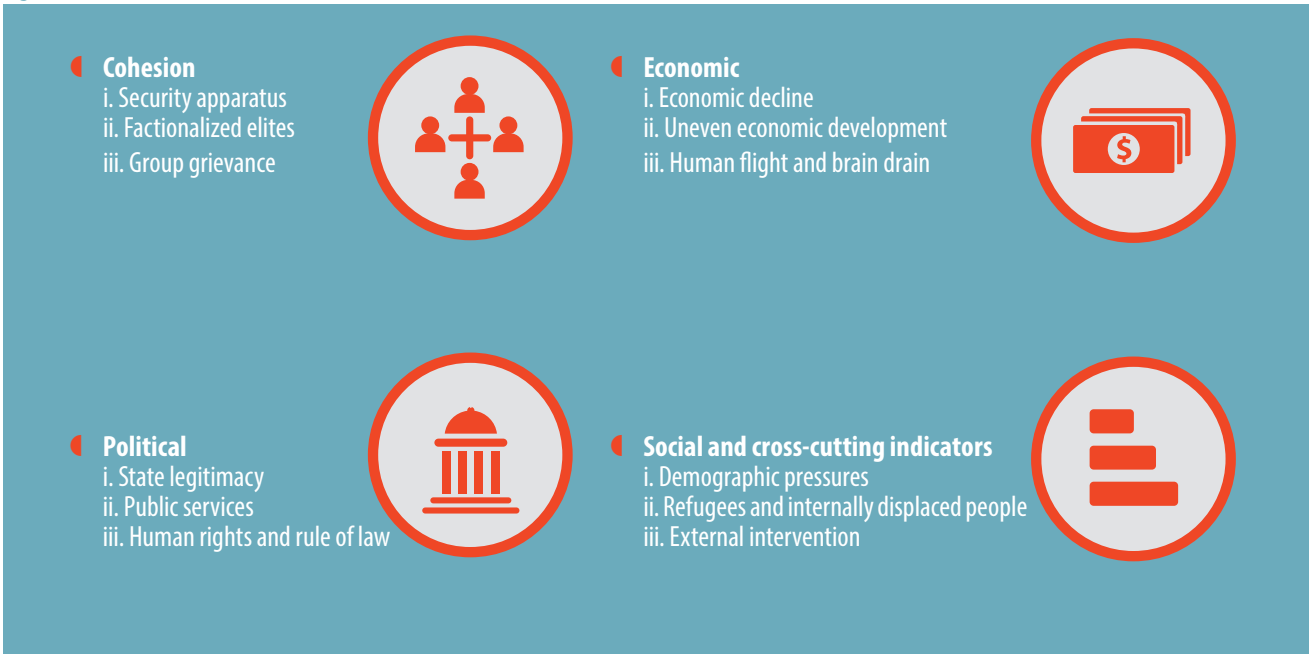
  - **Hazard and exposure:** Events that may occur and the population or resources potentially affected by these hazards.

  - **Vulnerability:** Susceptibility of communities to these dangers.

  - **Lack of coping capacity:** Lack of resources that can help cushion the impact.

- **Classification of the Fragile States Index of the Fund for Peace:** The study team used an average annual index for the period from 2015 to 2019 for the 178 countries included in the HLMCI.[31] The Fragile States Index is based on quantitative, qualitative, and expert validation data on the following 12 key political, social, and economic indicators, with over 100 sub-indicators.

Figure 4.



A) COMPONENTS OF THE HLMCI

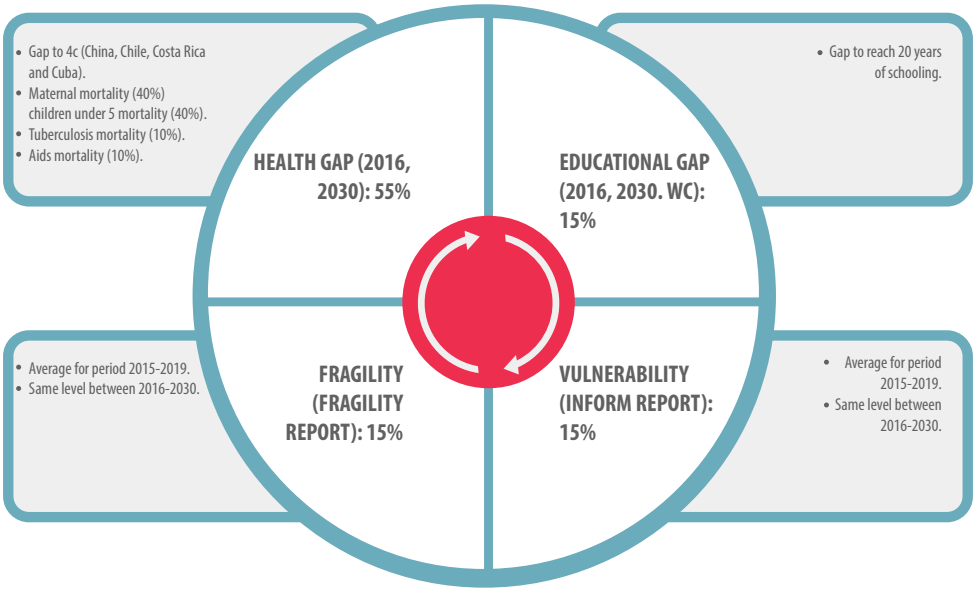
The HLMCI has 4 components, which were defined based on the information available for the majority of countries in the world, as stated in the previous section. One of the advantages of this index, compared to other similar ones, is that it includes human development aspects, such as the vulnerability and fragility of the States. Together with education, these elements are considered from a focus on social health determinants, which has been a priority in the development of this tool. Below, a description of each of the four components (see Figure 5):

- ***Health gap:*** inspired in the 'health gap' concept from the Global Health 2035 Report,[32] the reference group comes from the average level of preventable deaths of Chile, China, Costa Rica, and Cuba. These are known as the 4C group. These countries reflect successful cases in reducing preventable deaths until 2011. Therefore, the HLMCI estimates the difference between the mortality rates of each country and 4C for four causes of death: child (younger than 5 years), maternal, AIDs, and tuberculosis mortality. In exploring the WHO estimates for these causes between 2000 and 2016 (see Annex 2), the rates of AIDs and tuberculosis were less regular compared to child and maternal mortality. Therefore, that assigned weights to determine the 'health gap' were 40% for the last two and 10% for AIDS and tuberculosis. This gap can be understood as a weighted mortality rate for the four causes. Once the gap was obtained, and with the goal of assigning a higher weight to the health component, its contribution to the total index was determined to be 55%. It is important to note that the index was estimated for two different moments in time: 2016 and 2030. For 2016, the information for the health gap comes from the raw mortality rates, developed from the WHO data for 2000, 2010, 2015, and 2016 and the UN population estimates for the same years. 2030 required the development of a simple mortality projection by applying the rate of annual increase between 2015 and 2016 of death from the four analysed causes, for 3 consecutive years (2020, 2025, and 2030). Then, the raw rate was obtained by dividing said deaths by the UN projected population for those years. All health indicators are included in Annex 1B.

- ***Education gap:*** the 'education gap' is understood as the difference between the number of schooling years of the 50–54 year-old group and the fixed value of 20 years of schooling. This is based on the assumption that 20 years is the maximum possible value that this age group can achieve both in 2016 and 2030. Once the gap was calculated, a 15% weight was assigned in its contribution to the total index. That data for this estimate comes from the Wittgenstein Centre for Demography and Global Human Capital.

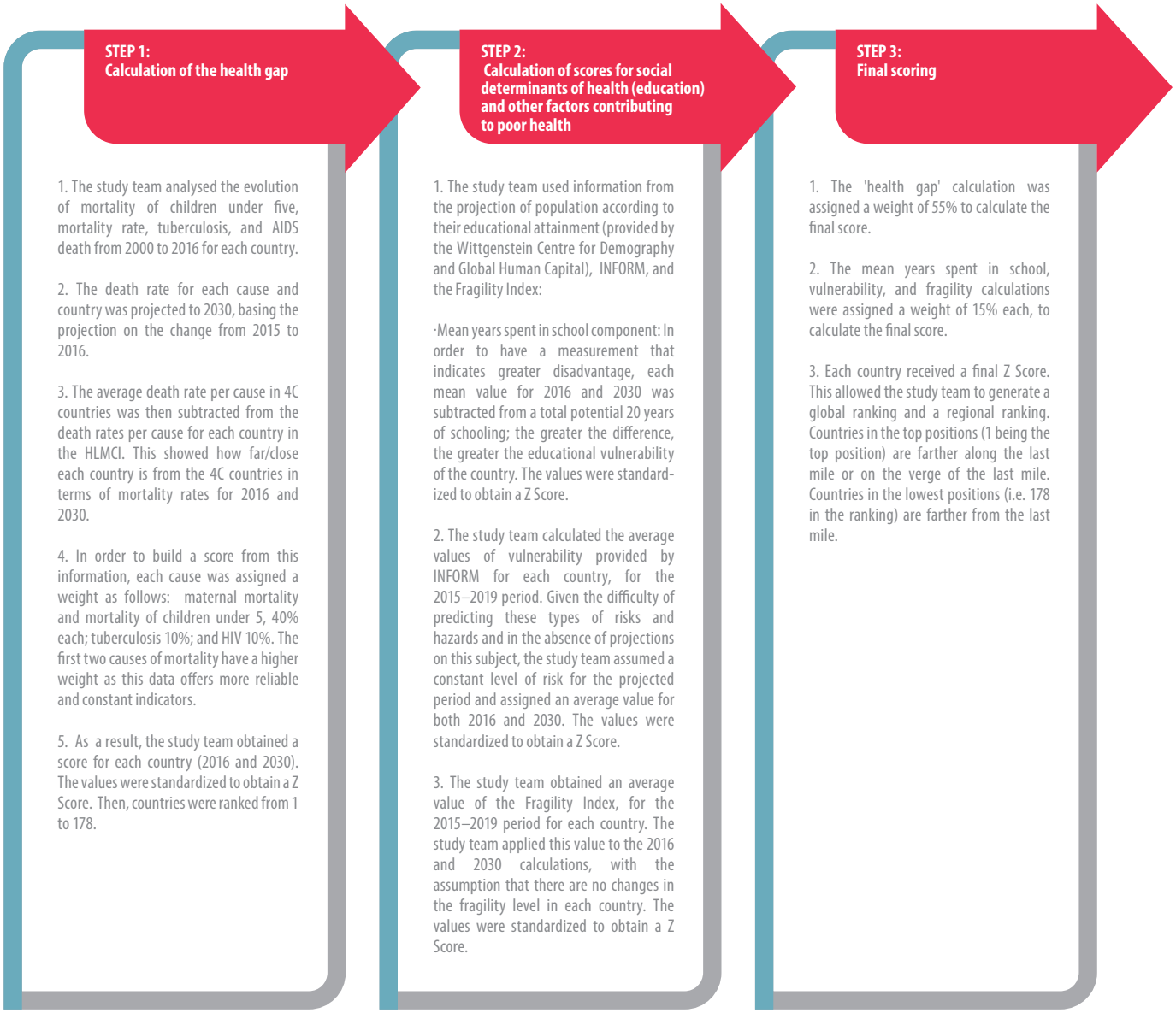
- ***The level of vulnerability and fragility:*** given the availability of two indices (INFORM and FSI) that approximate these social progress dimensions, the average value of the last 5 annual measures for the 2015–2019 is considered. Given the high levels of uncertainty of these aspects, the HLMCI assumes constant levels between 2016 and 2030. Each one of these dimensions contributes 15% to the total estimate of the index.

Figure 5. Components of the HLMCI



B) STEPS TO DEVELOP THE HLMCI

The following figure describes the steps taken to obtain the HLMCI, considering the components described in the previous section. Once the index was obtained, countries were organized from highest to lowest (the final scores correspond to the rank of the Z values of the index, that can be between 2.78 and -1.30). The highest values (positive) are those that are furthest from social progress (last mile).



C) LIMITATION OF THE HLMCI

The HLMCI has limitations worth considering; these are related to the availability of information, the methodological decisions, and the robustness of its proposal. For example, the lack of projections of mortality rates and levels of vulnerability and fragility for a wide range of countries. Although the HLMCI was not the focus of this report, the team made a technical effort to remedy these information deficiencies in the short-term. However, the team is aware that a task like this is complex, and it could be developed with demographic and epidemiological techniques that are more robust and sophisticated. These could be the object of a future study. However, a comparision between the results of the HLMCI and other development indicators such as HDI and life expectancy, shows very approximate tendencies in the majority of countries (see Annex 1C).

COUNTRIES' PROFILES DEVELOPMENT

Once the study team had the final ranking of the HLMCI, a profile of the 25 countries farthest in the last mile by 2030 was developed. Additional 5 countries – representing a variety of regions and selected in consultation with NorCross – were also profiled. The following table provides an overview of the information used for each country profile. The references show the source that was used to identify the data for each last mile country. It is important to highlight that these reliable sources (i.e. monitoring systems for the Sustainable Development Goals; World Bank; WHO; UN) offer the most recent information available for each country; this means that the reporting years for the data presented varies from country to country. While some countries have information available from as recent as 2019, other countries only have less recent data available or are yet in the process of updating the data in these platforms.

Table 1.

Country general characteristics and health needs	✚ HLMCI ranking (global and regional) ✚ General information for the country: Level of income Population[33] Fertility rate[34] Life expectancy at birth[35] ✚ Health needs data Mortality rate[36] Births attended by skilled health staff[37] New HIV infections[38] Mortality rate for non-communicable diseases[39] Suicide mortality rate[40] ✚ Net official development assistance received (current US$) (millions)[41]
Examples of populations living in the last mile	✚ Populations likely to be in the last mile in the country: considering that one of the factors contributing to being in the last mile is lack of visibility, reliable data is not always available at the country level for populations in the last mile. It is important to highlight that the examples provided do not take into account the total number of the vulnerable population groups in a country in relation to the share of the listed population. Groups added to the list are not necessarily large in number. They are groups that face multiple conditions that place them along the last mile.
Conditions that exacerbate crises	✚ The country's ranking according to the Fragile States Index developed by Fund for Peace; countries with a higher ranking are more fragile. ✚ The country's ranking according to the Global Climate Risk Index (1999 to 2018);[42] it analyses to what extent countries and regions have been affected by impacts of weather-related loss events (storms, floods, heat waves etc.). ✚ The country's ranking according to the Global Hunger Index (2019),[43] a tool that measures and tracks hunger globally, by region, and by country; countries with the lowest ranking are most at risk. ✚ Active conflict or post-conflict information.
Humanitarian need and response	✚ Existence of a health cluster (yes/no), according to the World Health Organization. ✚ Humanitarian aid requested versus humanitarian aid obtained based on available data. ✚ Other information available from the context.

Health system

- Based on the most recent data available from the United Nations system to monitor progress made towards Goal 3 of the Sustainable Development Goals:
  - Coverage of essential health services.[44]
  - Health worker density and distribution.[45 46]
  - Proportion of the target population covered by all vaccines included in their national programme.[47]

Other determinants

- Human Development Index (HDI) rankings and the following data from the World Bank:
  - Mortality rate attributed to household and ambient air pollution.[48]
  - Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population).[49]
  - Income share held by lowest 20%.[50]
  - Urban population growth (annual %).[51]
  - Primary completion rate, total (% of relevant age group).[52]
  - Individuals using the Internet (% of population).[53]

SECTION 1

DEFINING THE ‘LAST MILE’

SECTION 1: DEFINING THE 'LAST MILE'

This section analyses the four converging factors that push populations into the last mile: (1) conditions that lead to or exacerbate crises; (2) significant challenges for a humanitarian response; (3) weak health systems; and (4) individual and social determinants that reinforce and compound vulnerability, exclusion, oppression, stigmatization, and marginalization. Each converging factor is analysed by providing some brief explanation on how the condition interlinks with health needs, outcomes, and barriers. Some of the findings are illustrated using examples of the populations most affected.

1.1. CONDITIONS THAT LEAD TO OR EXACERBATE CRISES

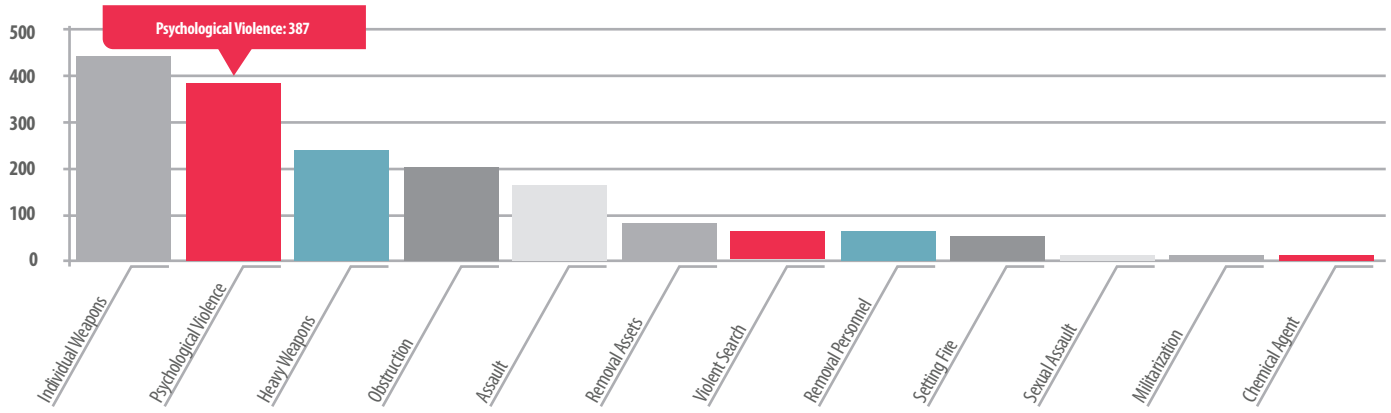
1.1.1. CONFLICT AND ITS IMPACT ON HEALTH AND HEALTHCARE ACCESS

Despite the existence of international humanitarian law, which includes rules that protect access to healthcare, including in relation to the protection and care of the wounded and sick, the protection and respect of medical personnel, medical units, and transport and medical ethics,[54] conflict puts healthcare in danger, as summarized below:

- Violence against healthcare facilities,[vii] medical vehicles and healthcare personnel, leading to the disruption of entire health systems.[55] [56] In 2019, the WHO Surveillance System for Attacks on Health care reported the following attacks:

Figure 6.

Number of attacks - Year 2019



- Violence against the wounded and the sick, including "killing, injuring, harassing and intimidating patients or those trying to access healthcare; blocking and interfering with timely access to care; the deliberate failure to provide or denial of assistance; discrimination in access to, and quality of, care; and interruption of medical care."[57]
- Disruption of supply chain management systems for the delivery of life-saving and essential commodities and equipment. In Syria, for example, the conflict has turned otherwise manageable chronic diseases into unnecessary terminal conditions because of the unavailability of curative treatments and medicines.[58]
- Disruption to the implementation of government health policies and strategies, including those aimed at universal health coverage.
- Disruption of patients' adherence to health treatments due to poor access to and cost of commodities, e.g. vaccinations, antiretrovirals, other.z

[vii] The destruction of facilities also includes the destruction of any pre-existing systems that enable access to services for particularly vulnerable populations, such as individuals with disabilities (e.g. ramps).

- Lack of safe facilities and poor infection control practices in healthcare facilities lead to the amplification of outbreaks and, in turn, the closing of health centres and hospitals. For example, data from 1996 to 2006 shows a connection between the emergence or outbreak of infectious diseases and the occurrence of conflict.[59] In Nigeria, out of the 749 health facilities located in conflict-affected areas – Borno, Yobe, and Adamawa – 32% have no access to water at all and 60% have no access to safe water.

- Disruption of self-care and family-care practices due to family disintegration or changes in family dynamics, e.g. single-headed households. Studies from Uganda report particular barriers in the access to information and health among adolescents affected by displacement and separation from family.[60]

- Security threats to humanitarian actors (health providers, relief/logistic/disaster management staff, others)[61] [62], and other local stakeholders that impede the delivery of community-based or mobile services. From 2016 to 2017, humanitarian actors reported an increase of over 30% in aid worker fatalities.[63]

- Restrictions to mobility, including timely access to available health services, due to the setup of checkpoints, closures, and curfews. For example, women have died at checkpoints on their way to hospital, as it is not possible to predict how long it will take to reach a facility.[64]

- Diversion of government health funding to cover conflict-related expenses and the inability of global actors to provide the funding requested to ensure the sustained provision of health services in conflict settings.

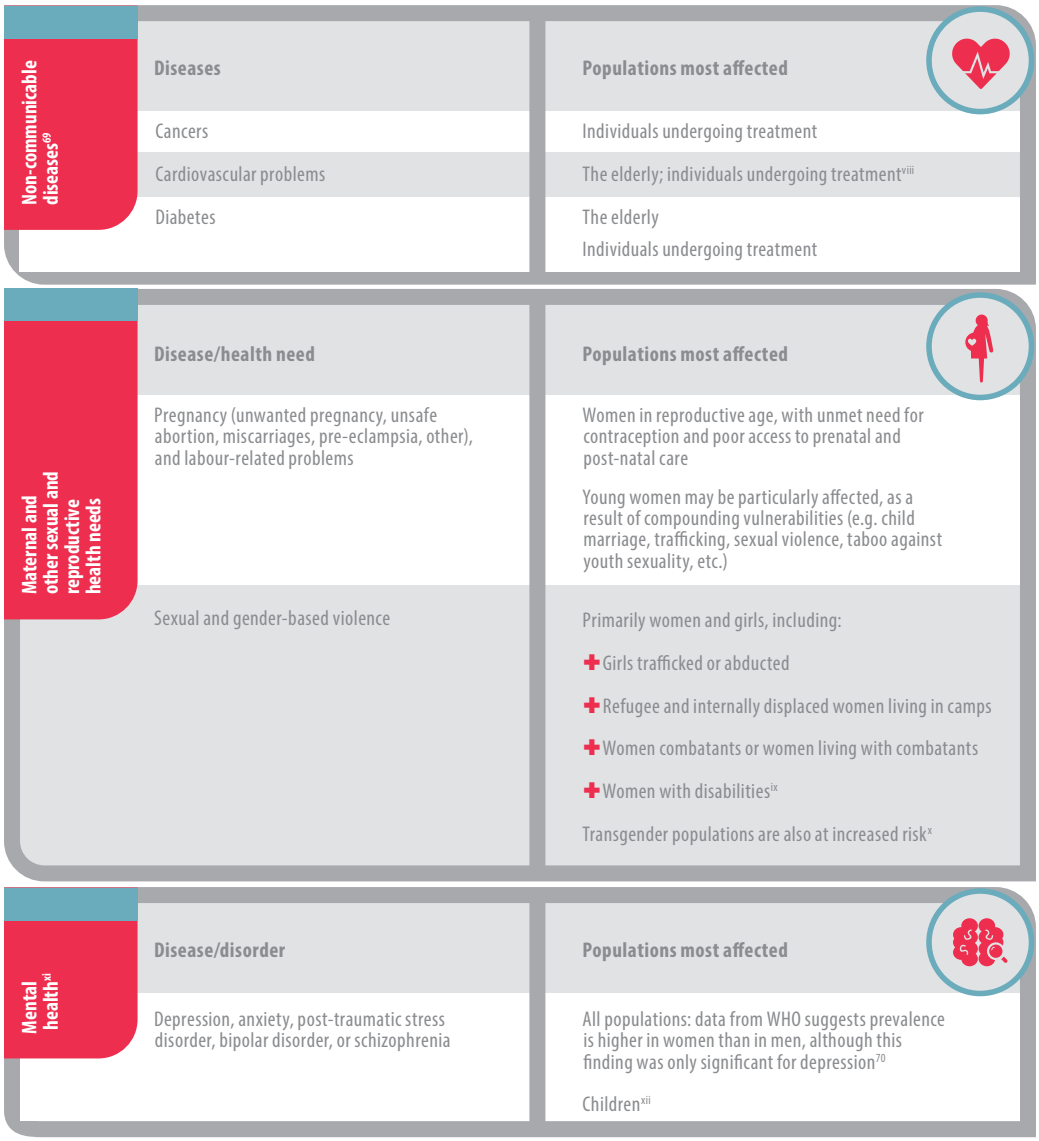
- Measures by armed actors to prevent access to healthcare services as a strategy to draw the attention of the international community or local government.

Barriers to access, combined with other consequences of conflict, affect health outcomes across multiple dimensions, as evident in the examples below. Individual characteristics and social vulnerabilities directly impact health outcomes. For example, while men´s health tends to be more affected by the direct effects of conflict (e.g. injury as a result of their participation as combatants), women´s health tends to be more affected by the indirect effects of conflict (e.g. psychological and physical consequences associated with sexual and gender-based violence exacerbated by conflict).[65]

Examples of health needs exacerbated during conflict:

Table 2.

	Diseases	Populations most affected
Communicable diseases	Cholera	Children under five
	Diahorrea	Children under five
	HIV and other STIs	Individuals living with HIV[66] [67] Sex workers Survivors of sexual violence
	Ebola; malaria; other infectious diseases[68]	Populations living in temporary settlements or camps with overcrowding and rudimentary shelters (e.g. refugees, displaced populations)



[viii] A study conducted in the West Bank showed a connection between increased risk of non-communicable diseases and conflict (protracted crisis). For more information: Collier, J., & Kienzler, H. (2018, July). Barriers to cardiovascular disease secondary prevention care in the West Bank, Palestine – a health professional perspective. *Conflict and Health, 12(27).* https://conflictandhealth.biomedcentral.com/articles/10.1186/s13031-018-0165-x

[ix] Data from conflict settings indicate that women with intellectual and mental disabilities are more affected by sexual and gender-based violence as a result of factors such as stigma and discrimination, being seen as 'easy' targets, extreme poverty, social exclusion and isolation, loss of protective mechanisms, and limited mobility. For more information: Rohwerder, B. (2017). *Women and girls with disabilities in conflict and crises.* UK Government's Department for International Development (DFID). https://assets.publishing.service.gov.uk/media/5b9a458540f0b67866ffbd56/032-Women_and_girls_with_disabilities_in_crisis_and_conflict.pdf

[x] A study implemented in conflict-affected areas in Colombia shows how transgender populations and other LGBTQI individuals are targeted by armed groups. For more information: Centro Nacional de Memoria Histórica. (2019). *Ser marica en medio del conflicto armado*. http://www.centrodememoriahistorica.gov.co/informes-2019/ser-marica-en-medio-del-conflicto-armado

[xi] WHO estimates a prevalence of mental disorders (depression, anxiety, post-traumatic stress disorder, bipolar disorder, and schizophrenia) of one in five people in conflict-affected settings. For more information: Charlson, F., Ommeren, M. v., Flaxman, A., Cornett, J., Whiteford, H., & Saxena, S. (2019, June). *New WHO prevalence estimates of mental disorders in conflict settings: a systematic review and meta-analysis*. The Lancet. https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)30934-1/fulltext

[xii] In Syria, a World Bank report indicates that some 70% of children surveyed reported bed wetting, a sign of post-traumatic stress disorder, which is perhaps unsurprising given that two-thirds of children were said to have lost a loved one, had their house bombed or shelled, or suffered conflict related injuries. For more information: World Bank. (2017). *The Toll Of War- The Economic And Social Consequences Of The Conflict In Syria*. http://documents.worldbank.org/curated/en/811541499699386849/pdf/117331-WP-v2-PUBLIC-The-Toll-of-War.pdf

	Disease/health issue	Populations most affected
Injuries and other environmental illnesses	Respiratory problems due to war pollution	General population Children under five may be particularly affected due to their individual characteristics[xiii]
	Gunshot (and other weapon-related) wounds (including those leading to impairment or disability)	Combatants and civilians in targeted areas
	Poisoning	There have been no confirmed reports of the use of **poison** or **poisoned** weapons in either international or non-international armed **conflicts**[71]

	Health problems	Populations most affected
Other health issues	Malnutrition	Children under five

1.1.2. DISASTERS AND THEIR IMPACT ON HEALTH AND HEALTHCARE ACCESS

In 2018 alone, 315 disasters were reported around the world, including 127 floods. The consequences of these disasters included over 11,000 deaths, nearly 70 million people affected and more than US $130 billion dollars in economic damage.[72] Efforts to prevent and manage the consequences of disaster are guided by landmark agreements such as the Sendai Framework for Disaster Risk Reduction 2015-2030, the Sustainable Development Goals, the Paris Climate Conference, the International Health Regulations (2005), and the Agenda for Humanity (World Humanitarian Summit).[73]

Disasters are directly linked to increased barriers to **healthcare** access, as outlined below:

- Destruction of healthcare facilities, leading to the disruption of entire health systems. For example, the Nepal earthquake in 2015 destroyed 446 public health facilities and 16 private establishments. In addition, 701 public health facilities were partially damaged, along with 64 private health establishments.[74]

- Disruption of already weak supply chain management systems for the delivery of life-saving and essential health commodities and equipment. Disasters may disrupt surveillance and communications systems, impact local markets, and lead to a lack of coordination among actors involved in the supply chain.[75] This can result in shortages of necessary medicines, medical commodities and essential medical equipment, and may push actors to purchase them internationally. In Papua New Guinea, for example, routine measles coverage in the Southern Highlands and Hela provinces was 18.2% and 27.6% in 2016, respectively. After the 2018 earthquake, immunization became even more challenging, despite the efforts of humanitarian actors to reach children in a very challenging areas. Some 13% of health facilities in the affected areas remain closed, resulting in 55,000 children under five years old with urgent health needs.[76]

- Higher cost of commodities. Due to regulatory constraints associated with importing medicines into countries hosting refugees, some organizations buy drugs locally in small batches and at a higher price.[77]

- Disruption in the implementation of governmental health policies and strategies or delays in restabilising their implementation. A longitudinal study in Philippines found that three years after Super Typhoon Haiyan, the majority of study participants assessed significant challenges covering health-related financial expenditures. Yet reliable services by the government or non-governmental organizations had not been re-established. People who reported injuries were not all receiving the appropriate medical care, medications or support for disabilities, causing chronic pain and preventing the continuation of gainful work or employment.[78]

[xiii] According to WHO, one reason why children are particularly vulnerable to the effects of air pollution is that they breathe more rapidly than adults and so absorb more pollutants. They are also closer to the ground, where some pollutants reach peak concentrations, at a time when their brains and bodies are still developing. For more information: World Health Organization. (2018, October). *More than 90% of the world's children breathe toxic air every day.* https://www.who.int/news-room/detail/29-10-2018-more-than-90-of-the-world%E2%80%99s-children-breathe-toxic-air-every-day

- Disruption to patients' adherence to health treatments due to post-disaster access to and cost of commodities and services. A study on healthcare access and utilization after the 2010 Pakistan floods determined, for instance, that access to care was associated with post-flood income level, suggesting health resources were not readily available to households that had suffered significant financial losses, including loss of income.[79]

- Lack of safe facilities and poor infection control practices in healthcare facilities lead to the amplification of outbreaks and, in turn, the closing of health centres and hospitals. In 1991, a measles outbreak in the Philippines following the eruption of Mt. Pinatubo involved more than 18,000 cases, according to WHO research.[80]

- Disruption of self-care and family-care practices due to family disintegration or changes in family dynamics.

- The ability of humanitarian actors to access affected areas due to the indirect effects of disaster (e.g. tsunamis after an earthquake).

- Restrictions to mobility (local populations and humanitarian actors) due to damage to transport infrastructure (roads, channels). This is particularly important in countries with weak transport systems, which generally lack the capability to resume operations at a level similar to before the disruption, in countries that simply did not have existing infrastructure in place to reach remote areas and countries with challenging terrains.

In the aftermath of a disaster, challenges to access, combined with recovery, affect individuals' health across multiple dimensions, as evident in the examples below. Existing individual and social vulnerabilities mean some populations may suffer more immediate consequences, while others may face long-term consequences:

Table 3.

Communicable diseases	Health issue	Populations most affected
	Cholera	Children under five Communities close to flood areas[xiv]
	HIV and other STIs	Individuals living with HIV[81 82] Sex worker Survivors of sexual violence
	Ebola; malaria; other infectious diseases (e.g. Zika, Middle East Respiratory Syndrome)[83]	Populations living in temporary settlements or camps with overcrowding and rudimentary shelter (e.g. evacuate population)
	Skin or soft tissue infections	People injured during disasters because of lack of mobility (e.g. people with disabilities)

Non-communicable diseases[xv]	Health issue	Populations most affected
	Cancers	Individuals undergoing treatment
	Cardiovascular problems	The elderly (e.g. caused by heatwaves)
	Diabetes	The elderly Individuals undergoing treatment

[xiv] Floods create standing water pools that give rise to vector-borne infectious disease, such as malaria through mosquitos. For more information: Smith, K. R., Woodward, A., Campbell-Lendrum, D., Chadee, D. D., Honda, Y., Liu, Q., & Sauerborn, R. (2014). *Human health: impacts, adaptation, and co-benefits*. IPCC. https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap11_FINAL.pdf

[xv] A study in the West Bank showed a connection between increased risk of non-communicable diseases and conflict (protracted crises). For more information: Collier, J., & Kienzler, H. (2018, July). Barriers to cardiovascular disease secondary prevention care in the West Bank, Palestine – a health professional perspective. *Conflict and Health, 12(27)*. https://conflictandhealth.biomedcentral.com/articles/10.1186/s13031-018-0165-x

	Health issue	Populations most affected
Mental health[xvi]	Psychological distress	Depression tends to be more common among women than men Depression and anxiety become more common as people get older People with severe existing mental disorders are especially vulnerable
Maternal and other sexual and reproductive health needs	Pregnancy (unwanted pregnancy, unsafe abortion, miscarriages, pre-eclampsia, other), and labour-related problems	Women of reproductive age with unmet need for contraception and poor access to prenatal and post-natal care Young women may be particularly affected, due to compounding vulnerabilities (e.g. child marriage, trafficking, sexual violence, taboos against youth sexuality, etc.)
	Sexual and gender-based violence	Primarily women and girls[xvii]
Injuries and other environmental illnesses	Wounds and spinal injuries[xviii]	General population
	Lung/respiratory (drowning)	In some settings, women are more affected due to their less developed swimming skills[84] and other reasons such as their decision to stay behind to look for their children and other relatives and their limited climbing skills, which means they face challenges to escape[85]
Other health issues	Malnutrition[xix]	Children under five

[xvi] WHO estimates a prevalence of mental disorders (depression, anxiety, post-traumatic stress disorder, bipolar disorder, and schizophrenia) of one in five people in conflict-affected settings. For more information: Charlson, F., Ommeren, M. v., Flaxman, A., Cornett, J., Whiteford, H., & Saxena, S. (2019, June). *New WHO prevalence estimates of mental disorders in conflict settings: a systematic review and meta-analysis* The Lancet. https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)30934-1/fulltext

[xvii] A study on SGBV in disaster settings implemented by IFRC in 2015 indicates that respondents in Bangladesh and Samoa mentioned relocation after displacement, inequitable relief distribution, and economic hardship after disasters as triggers for GBV increasing. For more information: International Federation of Red Cross and Red Crescent Societies. (n.d.). *Preventing and responding to gender-based violence (GBV) in disasters*. https://www.ifrc.org/en/what-we-do/principles-and-values/gender1/preventing-and-responding-to-gender-based-violence-gbv-in-disasters/

[xviii] A systematic review of studies on the health impacts of droughts included spinal injury, resulting from diving into water bodies believed to be deeper than they were. For more information: Stanke, C.,Kerac, M., Prudhomme, C., Medlock, J., & Murray, V. (2013, June). *Health effects of drought: a systematic review of the evidence. NCBI*. https://www.ncbi.nlm.nih.gov/pubmed/23787891

[xix] Disaster triggers problems in terms of access to food and water, sanitation, and hygiene systems. This, in turn, has dire consequences on health. In 2017, for instance, disasters such as drought were a major trigger of food crises in 23 countries, with more than 39 million food-insecure people requiring assistance.

1.1.3. CLIMATE CHANGE AND ITS IMPACT ON HEALTH AND HEALTHCARE ACCESS

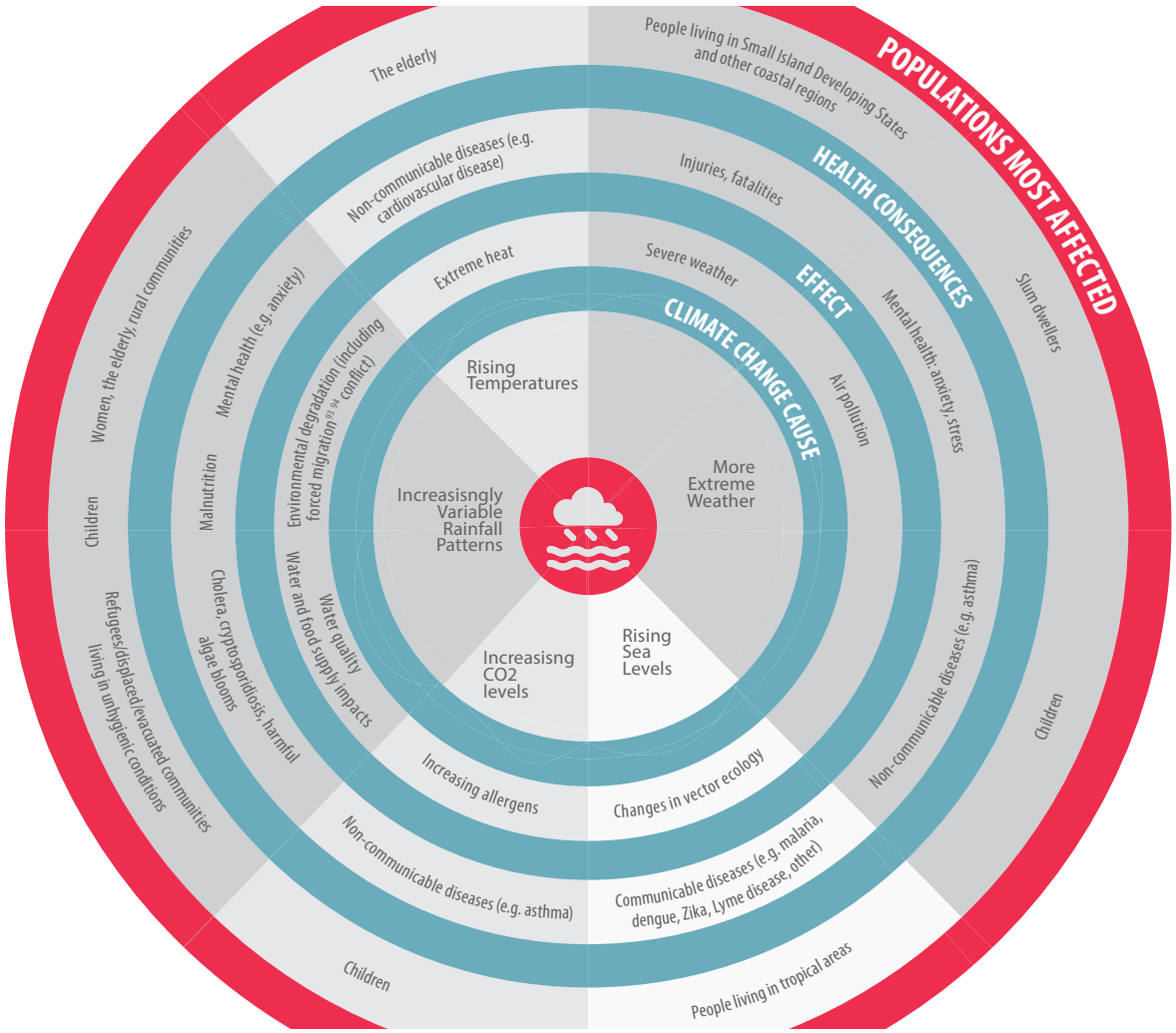
Climate change is the result of industrialization, deforestation, and large-scale agriculture, which increase the quantity of greenhouse gases in the atmosphere and, in turn, the average global temperature. As populations and economies grow and standards of living increase, the cumulative level of greenhouse gas emissions also increase.[87] Climate change is profoundly linked to disasters: changes in the global climate exacerbate climate hazards and amplify the risk of extreme weather disasters.[88]

Climate change is also deeply intertwined with inequality: the poorest communities and other disadvantaged groups that are marginalized – due to gender, age, race, ethnic background, and other factors – are disproportionately affected as a result of greater exposure to climate hazards (e.g. living in areas prone to flood, erosion, mudslides; working on highly hazardous occupations), greater susceptibility to damages caused by climate change (e.g. vulnerable rural communities affected by effects on agricultural sector or loss of livestock assets), and a diminished ability to cope with and recover from these impacts due to the limited availability of resources to support recovery.[89] [90]

Although there is increased recognition of the negative impacts of climate change – as reflected in the multiple frameworks to address climate change and its consequences[91]—e.g. United Nations Framework Convention on Climate Change, the Kyoto Protocol, and the Paris Agreement) – 250,000 additional deaths per year are expected between 2030 and 2050 as a result of this phenomenon.[92]

As climate change has the potential to cause or amplify the effects of disaster, it poses significant challenges to healthcare access. Examples of the health consequences of climate change are included in the table below:

Figure 7.



Note. Adapted from Center for Disease Control and Prevention. (2019, September). Climate Effects on Health. CDC: https://www.cdc.gov/climateandhealth/effects/default.htm and World Health Organization. (n.d.). Fact File- 10 Facts On Climate Change And Health. WHO: https://www.who.int/features/factfiles/climate_change/facts/en/index9.html

1.1.4. STATE FRAGILITY AND ITS IMPACT ON HEALTH AND HEALTHCARE ACCESS

State fragility is based on the combination of exposure to risk and the insufficient coping capacity of the state, system, and/or communities to manage, absorb, or mitigate those risks. It can lead to negative outcomes including violence, the breakdown of institutions, displacement, humanitarian crises, or other emergencies.[95] Fragility can be the result of a protracted crisis that creates environments in which a significant proportion of the population is acutely vulnerable to death, disease, and disruption of livelihoods over a prolonged period of time. Governance within these environments is usually very weak, with the state having a limited capacity to respond to and mitigate threats to the population or provide adequate levels of protection.[96]

Key facts on fragility:

- In 2016, 1.8 billion people, or 24% of the world's population, were living in fragile contexts. The majority of fragile contexts are situated in Sub-Saharan Africa, followed by the Middle East and North Africa.[97]
- In 2015, fragile contexts were home to 513.6 million people living in extreme poverty.[98]
- Currently, 25 countries designated as fragile by the Organisation for Economic Co-operation and Development have humanitarian appeals active with the UN Office for the Coordination of Humanitarian Affairs (UNOCHA), and 12 of the top 15 refugee-hosting countries are themselves considered fragile. Moreover, all but two of these 15 top refugee-hosting countries are classified low- and middle-income, meaning they have to deal with poverty and marginalization among both host and refugee communities.[99]
- When it comes to achieving development goals, fragile states show significant challenges. As many as 82% of fragile and conflict-affected states are off-track to achieve their 2030 targets.[100]

Considering the links between fragility and conflict and fragility and capacity to respond to disaster, it is fair to say that the majority of the challenges to healthcare access posed by fragility have already been outlined in the previous sections. Additional considerations on the relationship between fragility and health include:

- Fragile countries in a post-conflict or protracted crisis scenario face challenges in terms of recruiting, retaining, distributing, and developing the capacities of health personnel. This is linked to factors such as migration or death of health professionals during the crisis period, destruction of training institutions, the need to use health professionals in administrative roles in the face of scarce resources, the lack of desire of health professionals to return to conflict-affected areas, and low salaries in the public sector as a result of corruption or insufficient funding.[101] [102]
- As mentioned before, 12 of the top 15 refugee-hosting countries are themselves considered fragile. In these fragile settings, refugee populations may face additional barriers to healthcare access, such as requirements to register in the health system, language/interpretation, poor health literacy and inability to pay, stigma, and discrimination from host communities, among others.[103]

The significant impact of fragility on health outcomes can be seen in the following comparisons:[104]

Table 4.

Indicator	Low and middle-income countries	Fragile states
% of undernourished people	N/A	44%
% of children who die before their fifth birthday	4.4%	6.7%
% countries that have met the target of ending preventable child death or are projected to do so by 2030	60%	30%

1.1.5. URBAN VIOLENCE AND ITS IMPACT ON HEALTH AND HEALTHCARE ACCESS

Urban violence is the result of multiple factors, including:

- Rapid and/or unplanned urbanization: According to WHO estimates, 55% of the world population already lives in urban centres, and this number is expected to increase to 68% by 2050. Urbanization may lead to overall economic growth and increased opportunities for millions of people, however, in some contexts, it may also lead to increased poverty, inequality, environmental degradation, and violence. Those confined to the margins of a city or to slums are particularly affected.[105]

- Fragile states that struggle to maintain rule of law and offer access to justice are more at risk for urban violence. Criminal groups use this weakness as an opportunity to grow and develop.[106]

Urban violence is a global problem that has a devastating impact on people's lives and livelihoods, and the suffering it causes is a major concern in many contexts around the world.[107] Latin America is the region with highest rates of urban violence, with 42 of the 50 most dangerous cities located in the region.[108] Youth are considered to be the largest at-risk group.[109] Cities affected by violence are often off the radar of the humanitarian sector, as they lack a singular emergency event or easily identifiable disaster-affected population. In many cases, such settings also lack a clear declaration of disaster from the national authorities and limited interest from the media or donor constituencies.[110]

The consequences of urban violence include the erosion of social cohesion, decreased investment incentives, limited opportunities for education and employment, reduced mobility of local communities, and the diversion of social investment to security expenses.[111] Urban violence also endangers healthcare in a similar way to the impact of conflict. Barriers to healthcare exacerbated by urban violence include, but are not limited to:[xx]

- Safety-related fears reduce the number of health resources in a neighbourhood or community (e.g. pharmacies, staffed health centres, other), which means individuals have to travel longer distances to manage their health needs.

- Physical barriers to access health services, e.g. because of the presence of gangs in the surrounding areas.

- Restriction on ambulances, other health resources, and humanitarian actors imposed by local gangs.

- Mobility restrictions for the local population, including limiting timely access to available health services due to closures and curfews.

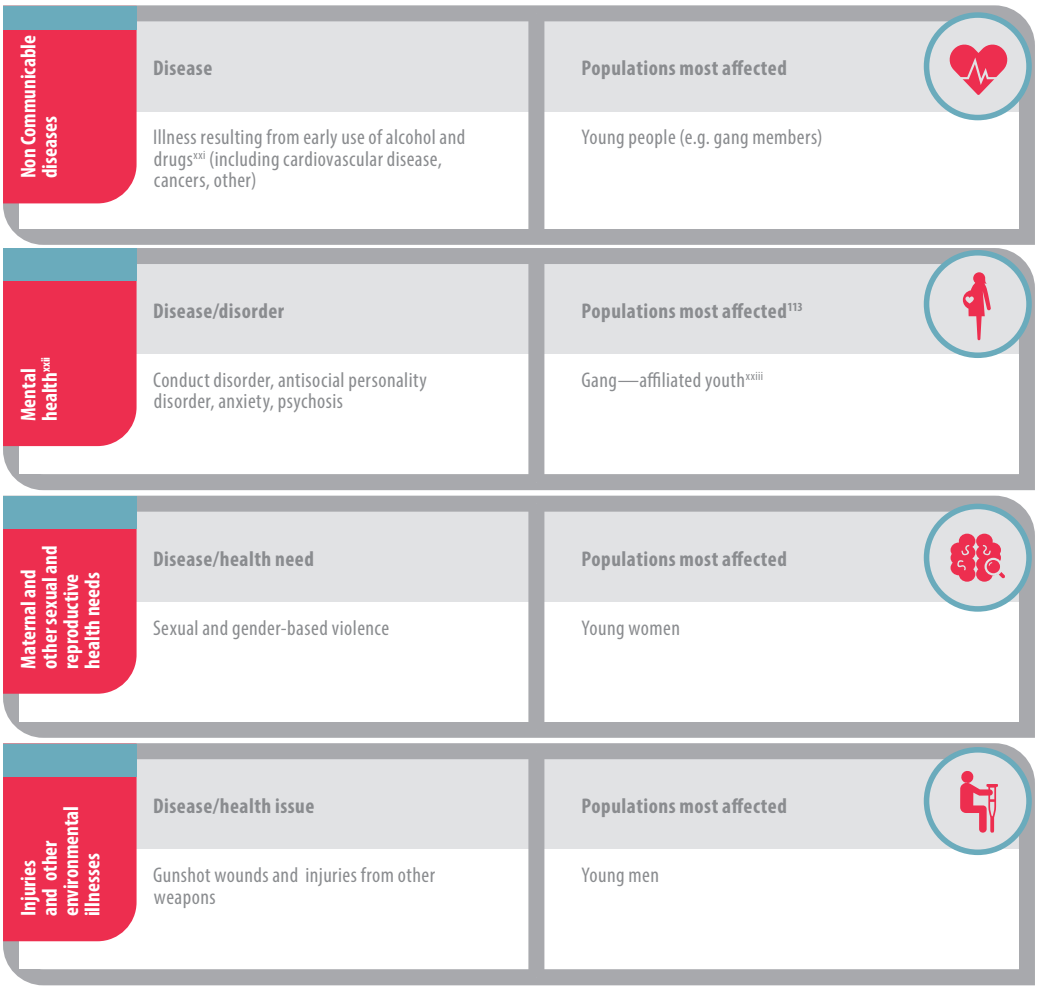
- Diversion of government health funding to cover increased police spending.

Access challenges, combined with a lack of investment in urban violence prevention, affect individual health across multiple dimensions, as evident in the examples below. Existing individual and social vulnerabilities mean some populations may suffer more immediate consequences while others experience more long-term consequences:

Table 5.

	Disease	Populations most affected
Communicable diseases	HIV/STIs[112]	Detainees (as a result of participation in gang violence)

[xx] There are a limited number of studies focused on assessing the connection between urban violence and healthcare access. The majority of available studies were implemented in cities from the Global North. The findings presented here combine information from these studies and narratives from humanitarian actors with expertise in urban violence.



1.1.6. EPIDEMICS AND PANDEMICS: IMPACTING HEALTH SYSTEMS AND ARISING VULNERABILITIES

The world is more and more at serious risk of epidemics and ravaging regional or global pandemics, causing not only hard health impacts and loss of lives, but also overturning economies creating social chaos and exposing existing profound inequalities and vulnerabilities. According to WHO, between 2011 and 2018, 1,483 epidemic events in 172 countries were tracked.[114] The COVID-19 pandemic has revealed the scope of this challenge. This high risk vulnerability is worsened when occurring in complex humanitarian contexts, as well as affected/increased by the convergence of current global issues such as population growth, amplified urbanization, conflict, migration, and climate change.[115]

Even if normally the poor are the most exposed during a context of an epidemic/pandemic, the concept of vulnerability can change during and before an outbreak episode. Some groups that were not completely considered vulnerable before the outset of an outbreak, could become part of the vulnerable populations even in peaceful/welfare and developed contexts.

Negative impacts are particularly acute in fragile and vulnerable settings, where poverty, poor governance, weak health systems, lack of trust in health services, specific cultural and religious aspects, protracted crises, and armed conflict make any outbreak preparedness and response difficult. For example, attacks to the Ebola response in the Democratic Republic of Congo during 2018–2020,[116] and the recent attacks to health workers responding to COVID-19 in India.[117]

[xxi] A study implemented in El Salvador shows, for instance, that gang members have a higher use of illegal drugs compared to non-gang members. They also tend to be heavy alcohol users. For more information: Johnson, K. W., Shamblen, S. R., Courser, M. W., Young, L., Abadi, M. H., & Browne, T. (2013, June). *Drug use and treatment success among gang and non-gang members in El Salvador: a prospective cohort study.* National Center for Biotechnology Information. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3682862/

[xxii] WHO estimates a prevalence of mental disorders (depression, anxiety, post-traumatic stress disorder, bipolar disorder, and schizophrenia) of one in five people in conflict-affected settings. For more information: Charlson, F., Ommeren, M. v., Flaxman, A., Cornett, J., Whiteford, H., & Saxena, S. (2019, June). *New WHO prevalence estimates of mental disorders in conflict settings: a systematic review and meta-analysis.* The Lancet. https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)30934-1/fulltext

[xxiii] Based on research conducted in Global North countries facing urban violence, there are links in both directions: mental health issues seem to influence gang membership, and gang affiliation affects individuals' mental health. For more information see: at: Public Health England. (2015, January). *The mental health needs of gang-affiliated young people.* Government of UK. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/771130/The_mental_health_needs_of_gang-affiliated_young_people_v3_23_01_1.pdf

Disease outbreaks disturb entire health systems, reducing access to health services for other diseases and conditions. This leads to an increased mortality along with economic depression scenarios. Therefore, countries deprived of basic primary healthcare and services, weak health infrastructure, and effective infection control mechanisms face the greatest losses, including death, displacement, and economic devastation.[118]

The severe acute respiratory syndrome brought by COVID-19, might represent a greater threat for some among those populations living in complex humanitarian crises. These groups have very limited access to advanced healthcare and are particularly vulnerable and at risk due to displacement and refugee problematics, crowded housing, malnutrition, inadequate water, sanitation, and hygiene options, along with the lack of infrastructure and support of health systems to develop a comprehensive response. Poor governance, public scepticism, and political and social violence may undermine the interventions in these settings even more.[119] Public health strategies to prevent, contain, and face epidemic/pandemic emergencies within complex humanitarian crises are not always successful in those contexts.

1.1.7. LIMITED ACCESS TO WATER, SANITATION AND HYGIENE AND ITS IMPACT ON HEALTH

Access to sufficient, continuous, safe, acceptable, and physically accessible water for personal care and domestic use, as well as access to adequate and safely managed sanitation services, is not only a right but a minimum standard to guarantee good health conditions.[120] Its importance for development is recognized under Goal 6 of the Sustainable Development Goals, which aims to "ensure availability and sustainable management of water and sanitation for all."

However, currently, one in three people (2.2 billion) globally do not have access to safely managed drinking water services and more than a half of the global population (4.2 billion people) does not have access to safely managed sanitation services. Similarly, global trends indicate that by 2050, 40% of the global population will live in areas facing severe water stress, and global water demand will increase by 55% by 2050.[121] Poor access to water, sanitation, and hygiene (WASH) is a major concern in humanitarian settings; people who live in extremely fragile contexts are three times as likely to practise open defecation, four times as likely to lack basic sanitation services, and eight times as likely to lack basic drinking water services.[122]

Limited access to WASH is strongly linked to poor health outcomes:

- **WASH and death**: Contaminated drinking water causes 485,000 deaths every year, while poor sanitation causes 432,000 diarrhoeal deaths (297,000 of these deaths correspond to children under the age of five).[123] In 2016, inadequate WASH conditions caused deaths due to diarrhoeal diseases (828,651), acute respiratory infections (370,370), malnutrition (28,194), schistosomiasis (10,405), soil-transmitted helminthiasis (6,248), and trachoma and lymphatic filariasis (less than 20). Poor water resource management caused deaths due to malaria (354,924), dengue (38,315), and onchocerciasis (less than 10). And there were almost 234,000 drownings because of inadequate safety of water environments.[124] Of all the inadequate WASH-attributable deaths, 62% were due to inadequate drinking water, sanitation, and hygiene; 26% were caused by inadequate resource management; and 12% were due to unsafe water environments. Similarly, 88% of the disease burden attributable to WASH is due to parasitic and nutritional causes, and only 12% to injuries.[125]

- **WASH, death, and disability-adjusted life years (DALYs)**: In 2016, 3.3% of global deaths (1.9 million) and 4.6% (123 million) of global DALYs due to the effects of poor WASH were preventable. Among children under five, 13% of all deaths and 12% of all DALYs are a consequence of inadequate WASH conditions. In Sub-Saharan Africa, 53% of deaths and 60% of DALYs are attributable to WASH. In this region, children under five are especially affected, with about one fifth of all deaths of children under five attributable to inadequate WASH conditions.[126]

1.2. CHALLENGES FOR EFFECTIVE HUMANITARIAN RESPONSE

While it is true that living in a crisis context exacerbates barriers to healthcare access, not all populations are affected in the same way. Many individuals benefit from timely humanitarian assistance, manage to minimize negative health outcomes linked to crises, and build resilience to disasters and conflicts. Others, however, are intentionally or unintentionally left out of the humanitarian response which pushes them further into the last mile.

As highlighted in the World Disasters Report 2018, many people fall through the cracks during humanitarian response due to five flaws: "Too many affected people are 1) *out of sight*, 2) *out of reach*, 3) *left out of the loop*, or find themselves in crises that are 4) *out of money*, or deemed to be 5) *out of scope* because they are suffering in ways that are not seen as the responsibility of the humanitarian sector."[127]

1.2.1. OUT OF SIGHT

Multiple factors contribute to the failure of the humanitarian sector to see some populations and their needs, including:

- Lack of registration/proof of identity.
- Lack of recognition of the population in the geographical setting of operation (e.g. stateless individuals).
- Security and geographical challenges mean they are not involved in the identification of needs.
- Lack of experience of local volunteers and staff to implement needs/vulnerability assessments.
- Cultural barriers that impede individuals' ability to voice their needs (e.g. women, LGBTQI populations, stigmatized faith groups).
- The needs of certain populations are considered taboo in the local context, so no one wants to talk about these issues, e.g. sexual and gender-based violence, the health needs of sex workers, etc.
- The health needs of certain populations are the result of a commonly accepted cultural practice (e.g. FGM), and the health consequences are therefore invisible.
- There is lack of reliable data or monitoring systems in the context of operation.
- Available data hides inequality between countries and within countries and regions.

Common healthcare barriers that emerge as a result of failing to see people include the following:

- Services implemented by humanitarian actors do not offer alternatives for individuals who do not speak the predominant language(s).
- The package of services offered does not address the critical needs of some community members.
- Some populations may be saturated by health interventions, while others lack a clear path to access care.

Examples of out-of-sight populations

- Women living with FGM in high prevalence countries.
- LGBTQI individuals in countries with high stigmatization or criminalization.
- Individuals living in the last mile in middle-income countries.

VISIBILITY AS A BARRIER: THE ROLE OF THE MEDIA IN DEFINING WHO IS IN THE LAST MILE

The media plays an important role in making humanitarian crises and populations visible. Information is key to raising awareness and understanding the dynamics of a crisis, the challenges facing the most affected populations, including their main vulnerabilities and needs, and the barriers that restrict their access to resources and services. The media is also key to leveraging resources from the international community to assist difficult-to-reach populations. Indeed, there is a proven close correlation between media coverage, appeal coverage, and aid per person in the context of humanitarian crises.[128]

However, in many cases, media coverage does not necessarily respond to the health needs of the most marginalized populations or the most severe crises. Media coverage choices, particularly in media from wealthy Western countries, are influenced by different factors, including economics. Studies have shown a correlation between the perceived economic impact of a disaster on Western markets and the amount of Western media coverage.[129]

As an example, "the South Asia earthquake attracted 86 minutes of TV coverage on US networks in 2005 and raised over US$ 300 per targeted beneficiary. Meanwhile, Somalia and Côte d'Ivoire attracted no TV coverage at all and raised respectively just US$ 53 and US$ 27 per beneficiary."[130] The media's focus on certain populations and crises takes away visibility from the needs and challenges experienced by persons in the last mile, including their access to quality health services. This limits the allocation of resources from the international community to the most acute humanitarian crises and deepens the marginalization of traditionally excluded persons.

1.2.2. OUT OF REACH

Some populations, while seen as vulnerable, present challenges for humanitarian response, as actors are unable to get to them for various reasons, including:

- Geographical (terrain, transport, rugged mountains, high plateaus, coastal terraces, offshore coral reefs) or political reasons.
- Community preference for isolation (i.e. indigenous communities in the Amazon).
- Conflict and insecurity.
- Bureaucratic and legal bottlenecks created by affected states and donors.
- Conditions on the ground that hinder the delivery and distribution of aid; for example, commercial blockades, restrictions on relief supplies, long inspection delays, or aid rejection.[131]
- Poor access to technology/internet to support the delivery of services, commodities and information.

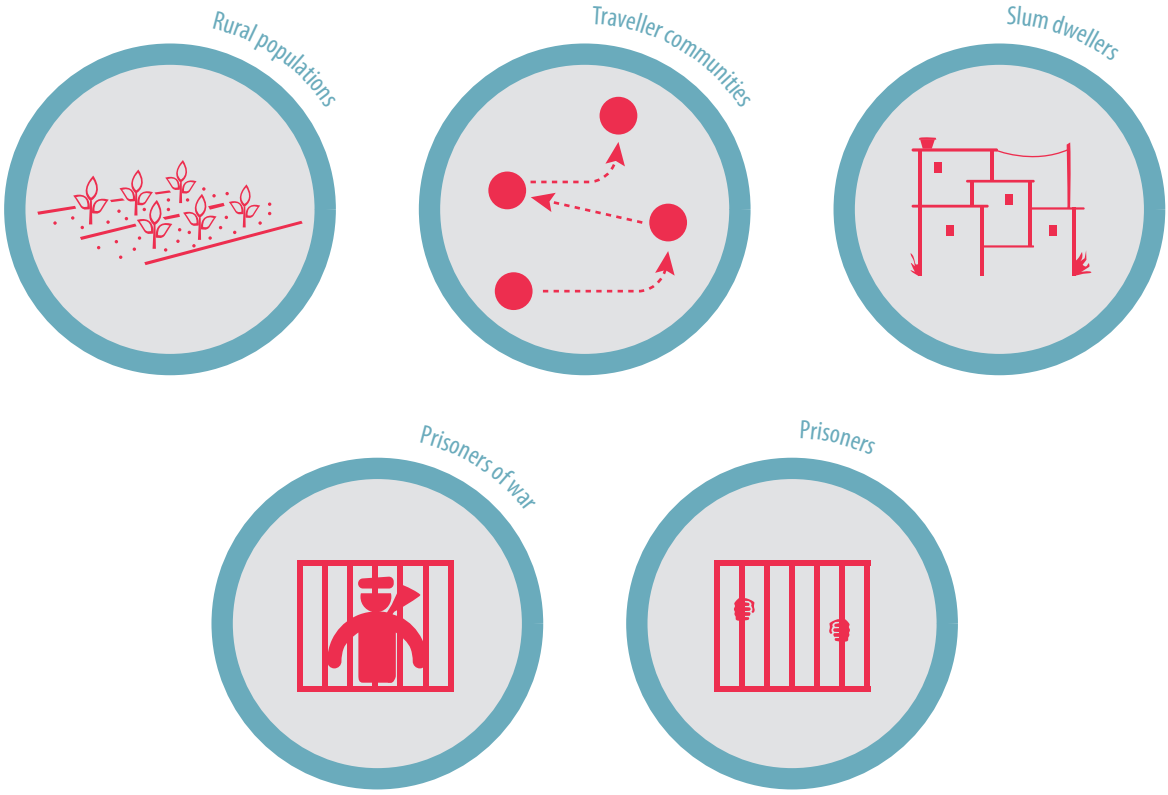
Common barriers to healthcare that emerge as a result of difficulties reaching certain populations include:

- The cost of accessing care must be funded by the individual.
- The same barriers faced by humanitarian actors will be faced by individuals trying to access care.

Examples of out-of-reach populations

- rural populations
- traveller communities

- slum dwellers
- prisoners of war
- prisoners



1.2.3. LEFT OUT OF THE LOOP

Some individuals may be unintentionally excluded from humanitarian response as a result of the following:

- Humanitarian actors offering things that are not relevant to their needs.
- Humanitarian actors offering things using means that are not easy to understand for local populations.
- Humanitarian actors implementing a one-size-fits-all initiative.

The people that are most at risk do not always receive the assistance and information they need in a manner that effectively meets their needs. Too many relief programmes are not adequately tailored to the specific needs of local populations. These failings are most systematic and alarming when it comes to older people and persons with disabilities. These populations are often left out of disaster planning, and the humanitarian sector generally fails to take their particular needs and capacities into account.

Common barriers to healthcare that emerge as a result of unintentional exclusion include:

- Language and communication barriers.
- Physical barriers, e.g. lack of ramps, braille options, other.
- Lack of relevant commodities to address/treat health issues.

Examples of out-of-the-loop populations

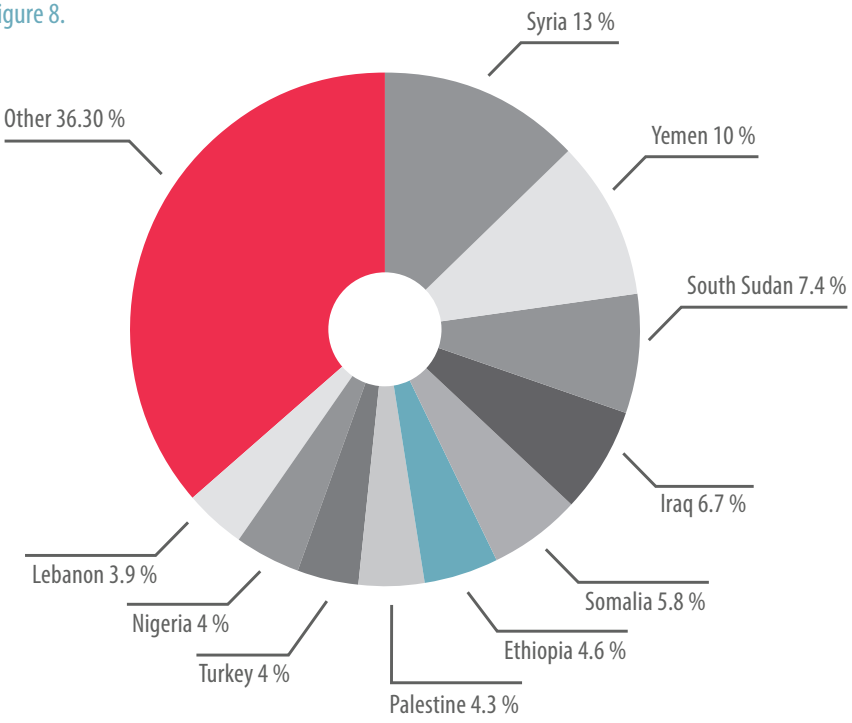
- individuals with disabilities
- migrants and refugees in host country
- displaced individuals in host communities

1.2.4. OUT OF MONEY

There is a growing gap between the funds available and the funds required for humanitarian response; in 2017, for example, only 60% of UN-coordinated appeal requirements were met. The data suggests that while aid levels may be reaching their peak, the level of need continues to grow.

This lack of funding, combined with the high costs associated with getting to hard-to-reach populations, means that humanitarian actors end up making donor-driven decisions (in terms of areas of intervention and priority issues). It is important to highlight that aid goes primarily to countries in the African and Middle East and North Africa regions, mainly Syria, Yemen, South Sudan, and Iraq, among others (see Figure 8) .

Figure 8.



Note : Figure from Urquhart, A. (2019, August). 4 trends in global humanitarian aid: https://www.bond.org.uk/news/2019/08/4-trends-in-global-humanitarian-aid#fig3

Common barriers to healthcare that emerge as a result of a lack of resources include:

- Insufficient service delivery points.
- Insufficient commodities to meet health needs.
- Poor quality health initiatives.
- Implementation of health services in 'easy-to-access' areas.
- Neglect of certain health needs that are not prioritized by relevant donors.

Examples of populations most affected by a lack of money:

- Hard-to-reach populations (e.g. rural areas, small islands, other).
- Out-of-sight populations.
- Individuals living in the last mile in middle-income countries.

1.2.5. OUT OF SCOPE

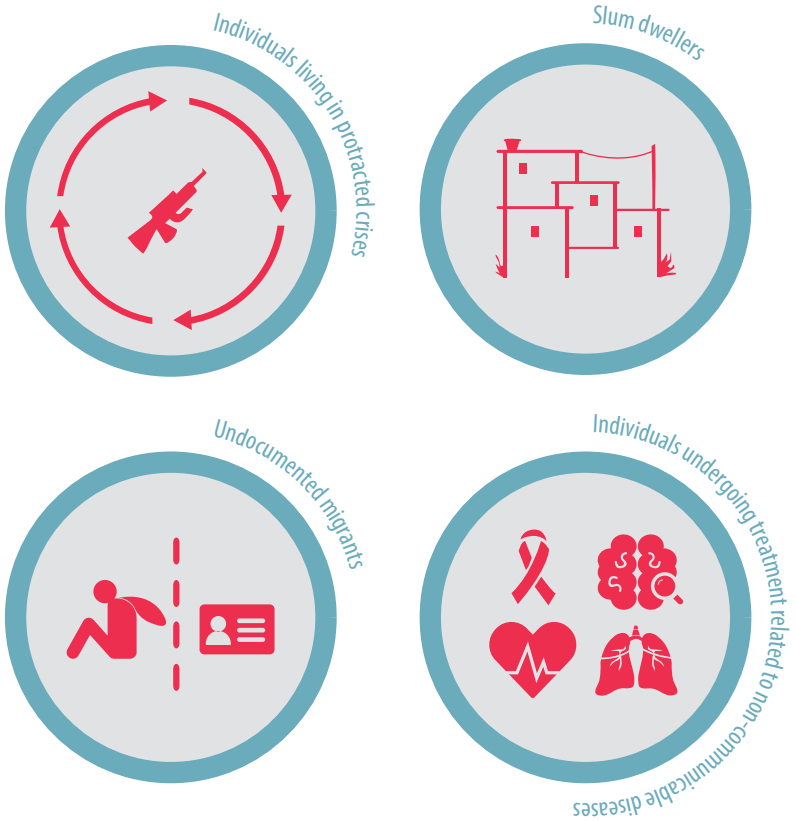
Some populations and crises are considered to be the responsibility of the development sector, which means that they attract less attention and investment. In some cases, although the crisis is acknowledged, the longevity of the situation reduces interest and prioritization from humanitarian actors. Urban violence in areas with no active conflict is an example of a forgotten crisis.

When a crisis and affected populations are considered out of scope, they face increased barriers to healthcare access, including:

- Insufficient commodities to meet health needs.
- Poor quality health initiatives.
- Implementation of health services in 'easy-to-access' areas.
- Neglect of certain health needs that are not prioritized by relevant donors.
- Insufficient emergency medical teams: "The lack of initial responders to the West African Ebola outbreak reveals that the number of emergency medical teams willing to respond to protracted conflict and complex emergencies is in stark contrast to the proliferation of teams in 'simple' sudden onset disasters."[132]

Example of out-of-scope populations

- Individuals living in protracted crises.
- Slum dwellers.
- Undocumented migrants.
- Individuals undergoing treatment related to non-communicable diseases (often perceived to be the responsibility of development actors).



1.2.6. OTHER FACTORS THAT IMPACT HUMANITARIAN RESPONSE IN THE LAST MILE

In addition to the flaws highlighted by the World Disasters Report 2018, humanitarian actors face other challenges when trying to meet the health needs of crisis-affected populations.

- **Coordination challenges**: Today, there is a diversity of active emergency medical teams, in terms of affiliation, profiles, and capacities. Although the increased number of actors offering healthcare in crises is generally positive – e.g. 180 agencies registered with the UN coordinating body in the aftermath of the Indian Ocean Tsunami, compared to the single field hospital and limited number of health teams following the 1976 earthquake in Guatemala[133] – it is important to acknowledge the challenges this increase poses in terms of effective coordination and monitoring. In practice, this may lead to a duplication of efforts targeting 'overserved' populations and a lack of assistance for populations that are out of sight or out of reach.

- **Preparation of emergency medical teams**: Experts have noted an increase in the number of improvised, poorly prepared, and underequipped emergency medical teams.[134] This can lead to poor quality of services or service provision for limited health needs, leaving many populations that face more complex health issues behind.

1.3. WEAK HEALTH SYSTEMS

In addition to the barriers to healthcare generated or exacerbated by crises and by humanitarian response challenges, individuals living in the last mile experience obstacles to healthcare access due to weak or unresponsive health systems, which are characterized by the lack of a diverse and trained workforce, high out-of-pocket expenditure, poor referral systems, limited access to commodities and equipment, and inefficient policies.

1.3.1. POOR AVAILABILITY OF A DIVERSE AND TRAINED WORKFORCE

- Health provider shortages pose a barrier to access. A recent analysis estimates that regions such as Africa will experience shortages of up to 6 million providers by 2030.[135] This is the result of a lack of training and education opportunities for new health providers (including for specialized care), lack of funding to hire the required providers, brain drain of health workers from low and low/middle-income countries to resource-rich countries and from rural to urban areas, among other problems. As explained previously (Section 1.1.2), this situation is exacerbated by humanitarian crises.

- The willingness of health providers to offer particular services also creates a barrier to access. In the context of health service provision, stigma fosters the perception that a certain service, or the person accessing it (or providing it), are morally wrong or socially unacceptable, while myths fuel ignorance and fear that result in discrimination. Stigma and discrimination translate into barriers to access services such as safe abortion, family planning, sexual and gender-based violence services, Ebola management, and others.[136]

> **EBOLA VIRUS IN WEST AFRICA**
>
> In 2016, Sierra Leona registered the highest number of cases of infected people during an unprecedented Ebola virus disease outbreak in West Africa: 14,122. Many healthcare providers, including doctors and nurses, died. Healthcare providers were highly vulnerable to infection and were at high risk of being stigmatized, ostracized, and attacked. Indeed, healthcare providers did face stigma and discrimination as soon as they started assisting the emergency, particularly those working in primary healthcare facilities (rather than Ebola-specific treatment units). They reported changes in their personal, social, and professional lives and expressed that they felt lonely, ostracized, unloved, afraid, saddened, and no longer respected.[137]

- The composition of the health workforce does not meet the needs and preferences of the population in terms of gender preference, language, competence (e.g. youth friendly providers), or level of specialization, thus limiting the population's access to healthcare services.

1.3.2. HIGH OUT-OF-POCKET EXPENSES

Out-of-pocket expenses refers to the direct payments people make to healthcare providers and facilities when they use services and to access commodities. This excludes pre-payments of health services, such as taxes or specific insurance premiums or contributions and, where possible, reimbursements to the payer.[138] Some trends and impacts of out-of-pocket costs in healthcare are outlined below.[139]

- Out-of-pocket costs are a core indicator of universal health coverage and are negatively associated with financial protection. Households that face elevated out-of-pocket payments are exposed to financial hardship and, as a result, people cannot seek and access the healthcare they need.[140] This is why they are the most regressive way to fund the health sector.[141]

- In 2015, out-of-pocket costs represented, on average, 32% of global health expenditure,[142] and they continue to increase.[143] It is estimated that about **100 million people are pushed into poverty due to elevated out-of-pocket expenses**.[144]

- In some fragile and conflict-affected countries, data show low levels of out-of-pocket expenses. This is not because of universal health coverage, but rather because people lack the financial ability to access healthcare and so have no other option than to avoid using health services altogether.

THE CASE OF SOUTH-EAST ASIA

The South-East Asia region concentrates 25% of the global population and has the highest levels of out-of-pocket expenses in the world (38% on average). Global experience suggests that when 30% to 40% of health spending is financed by out-of-pocket payments, people are not sufficiently protected and their right to health is threatened.[145]

The highest out-of-pocket costs in the region are related to acquiring medications; purchasing medication is the primary out-of-pocket expense in India, Nepal, Bhutan, and Timor-Leste.[146] The high cost of healthcare spending is leading to poverty.[147] India and Nepal are the countries with the highest impoverishment effect due to out-of-pocket health spending in the region, 4.2% and 1.7%, respectively; global median rates of impoverishment are 1.86% when using the extreme poverty line and 2.44% when using the poverty line. In South-East Asia, a combination of low public revenue (23% of gross domestic product) and low government spending on health (9% of total government spending) limits the most vulnerable people from accessing quality care and pushes a section of the population into poverty.[148]

1.3.3. UNEQUAL DISTRIBUTION OF HEALTH FACILITIES AND LACK OF COORDINATED REFERRAL SYSTEMS

The unequal distribution of health facilities (e.g. between rural and urban areas, wealthy areas and slums within a city, by region, by levels of specialization, etc.) plays an important role in increasing barriers to access, particularly in contexts with poor transit infrastructure (e.g. roads), or social and cultural factors that increase vulnerability (e.g. contexts where women's mobility is restricted due to gender norms and practices).[149]

Poorly coordinated referral systems that do not take into account users´ needs, location, capacity to pay, literacy level, and other user and health system constraints also constitute a barrier to healthcare access in most settings. In times of crisis, these barriers may increase, as referral systems face additional challenges to ensuring patients' timely access to surgery (e.g. orthopaedic), post-operative care, advance therapy (e.g. in secondary or tertiary level hospitals, which are often available only in the main cities), etc. These challenges may include disrupted access to telecommunication systems used to facilitate the referral and counterreferal process.

1.3.4. LIMITED ACCESS TO COMMODITIES, EQUIPMENT, AND OTHER INNOVATIONS

The capacity of low and middle-income countries to acquire commodities, equipment, and other health innovations is undermined by lack of funding, elevated costs from laboratories for life-saving medicines, and corruption, among other factors. Examples of barriers to access essential supplies are included below:

- **Vaccines:** Immunization saves the lives of 2.5 million people each year,[150] but "19.4 million children continue to be unvaccinated. Of the 19.4 million infants who are not fully vaccinated with DTPcv-3,[xxiv] 8.6 million (44%) live in 16 countries that are polio endemic, fragile, or affected by conflict."[151] Furthermore, high costs associated with the production of newer vaccines results in these vaccines being out of reach for most individuals, as well as many humanitarian and medical organizations.[152] [153] A lack of awareness and misinformation also impacts their uptake.

[xxiv] Vaccine protecting against diphtheria, tetanus, and pertussis.

VACCINATION UPTAKE IN SAMOA: MEASLES OUTBREAK

In November 2019, the government of Samoa declared a state of emergency due to a measles epidemic. Samoa had a very low uptake of measles vaccines and one of the lowest vaccine coverages in the world. In 2018, an incident at a health facility increased resistance to vaccination. The measles outbreak has plunged the country into a serious health emergency: as of December 18, 2019 the Ministry of Health confirmed 5,371 measles cases (children under five are the most affected population) and 76 measles-related deaths.[154] [155]

- **Drugs for chronic illnesses**: During humanitarian disasters and crises, people with chronic illnesses are not usually considered a high priority, despite suffering from life-threatening diseases such as cancer, epilepsy, diabetes, and HIV/AIDS. The case of HIV/AIDS is particularly notable because of the various setbacks that people living with HIV/AIDS (PLHIV) face, including social stigma, poor healthcare policies and social security, and frequent stock outs. Marginalized groups such as sex workers, LGBTQI people, and women are further alienated from the medicines that enable them to lead a healthier life. Although antiretroviral drugs are technically supposed to be free, PLIHIV make significant investments in other drugs and hospital visits to keep opportunistic infections at bay. Persons who are in the advanced stage of the disease often cannot afford specialized treatment or even palliative care.[156] The West and Central Africa region has around 5 million PLHIV, with 53% of adults and 28% of children currently on antiretroviral therapy. According to UNAIDS, less than a third of children living with HIV in the region are on treatment; this is the lowest coverage rate for this age group in the world.[157] In a study conducted by Médecins Sans Frontières, one of the main challenges mentioned by PLHIV in terms of accessing healthcare was financial barriers.[158] In West and Central African countries, patients are seen as a source of income for health providers, who receive very low wages. The need for additional sources of income has meant healthcare providers can be reluctant to provide free treatment to PLHIV, and instead implement irrational practices that increase the number of consultations, follow-ups, and antiretroviral therapy renewals.

- **Health technology**: Health technology plays a crucial role in the prevention, diagnosis and treatment of disease and injury, as well as supporting patients' rehabilitation.[159] However, there are significant barriers to access innovative commodities, devices, and equipment due to prohibitive cost, resistance from the health system/health providers, low capacity to manage the innovation (e.g. lack of water/safe conditions for use of the device, instability of power supply, complicated custom procedures to access spare parts, etc.), and cultural factors that translate into low demand for innovative health technologies.

COST OF ANTIVENOMS: SNAKEBITES IN RURAL POPULATIONS IN INDIA[160]

Snakebites are a key public health emergency that has not received adequate attention. A total of 5.4 million snakebites occur each year, resulting in at least 1.8 million cases of envenoming (poisoning from snakebites) and 81,400 deaths. For snakebite survivors, the snakebite can leave its victim with paralysis or permanent disability. Agricultural workers are particularly susceptible to bites, and children are at higher risk of death due to snakebites, due to their smaller body mass. In India, 2.8 million snakebites are reported every year, causing over 50,000 deaths. Rural health facilities lack the infrastructure and trained medical staff to administer antivenom, and lack of effective cold chain and unreliable refrigeration facilities in rural areas often render it ineffective.

The prohibitive cost of antivenoms make them particularly inaccessible to rural populations, which are the most impacted populations globally, especially in tropical and subtropical countries. Without easy access to health facilities, and unable to afford the cost even when there are health facilities, rural populations are left with no other option but to forego treatment or turn to traditional healers. Given the low demand for antivenom, production has either ceased or the costs have risen even more.

Time is of the essence for effective treatment of snakebites. Although free ambulance services exist in rural areas of India, an analysis by the British Medical Journal suggests that a "shortage of services in rural areas, suboptimal response times or non-attendance of calls, inadequately trained paramedics, and the absence of in-transit antidote therapy and standardized resuscitation protocols" all present barriers to access. A study conducted in rural Tamil Nadu in India found that a third of snakebite victims did not arrive at the hospital until several days after being bitten, likely due to inability to pay, dependence on faith healers, and unavailability of transport.

LACK OF ICU MECHANICAL VENTILATORS AND INTUBATION EQUIPMENT DURING THE COVID-19 PANDEMIC

The COVID-19 pandemic has underlined the lack of health equipment preparation to cope with such a crisis, both in developing/poor/protracted crisis countries (the most affected by structural health equipment shortage), and in more developed/rich scenarios. Many hospitals and other health facilities worldwide have reported shortages of key equipment needed to care for critically ill patients, including ventilators and personal protective equipment (PPE) for medical personnel. For example, the lack of adequate PPE for frontline healthcare workers is worrisome; they lack respirators, gloves, face shields, gowns, and hand sanitizer. This has led to high rates of infection and even to the death of many health workers in places where the pandemic has exploded.

For example, in Italy, healthcare workers have experienced high rates of infection and death partially due to an inadequate access to PPE.[161] Estimates in the U.S. suggested that the country would need further respirators and surgical masks than the available amount.[162] In complex humanitarian scenarios the situation is predicted to be worse. The provisions of adequate health equipment shortage is a main concern for the government of those countries as well as for several humanitarian actors. In Yemen, for example, years of violent conflict has resulted in a collapsed health system, making an effective response to the pandemic virtually impossible with the current health resources available in the country.[163]

1.3.5. RESTRICTIVE POLICIES/LACK OF POLICIES

Governments can be a health booster or a barrier. In countries with widespread inequality, health access can suffer from 'elite capture', where resources meant for the benefit of the population are taken by the few for individual gain. Some examples of how policies create barriers to healthcare access are outlined below:

- Insufficient financial allocation for the implementation of health strategies and programmes: In low-income countries, health systems are affected by insufficient financial resources and inappropriate resource allocation. Conflicts and natural disasters are more likely to occur in low-income countries where health systems are highly dependent on international funding.[164] However, the funding from UN-coordinated appeals (which include funding for the health sector) generally only covers approximately 40% to 60%.[165] Moreover, international funding is often attached to donor requirements, which may result in funding health issues that do not correspond to the needs on the ground.[166] [167]

- Strict registration requirements as a precondition to accessing healthcare: Civil registration allows people to become citizens and claim protection and services, including healthcare. Nevertheless, UNICEF estimates that 35% of children under five are not registered.[168] In terms of refugees, despite being formally entitled to health services in their first country of registration for asylum, in practice, this right is usually denied if they are denied asylum status, as asylum seekers and refugees have different access to health services. Similarly, refugees that have not already declared themselves to the relevant authority may fear detention and be discouraged from seeking/accessing health services. Additionally, some undocumented or labour migrants may be subjected to forced migration, which makes it impossible for them to claim asylum and, therefore, access healthcare.[169]

- Policies that 'securitize' health: Unjustified travel bans and other mechanisms to isolate populations due to the fear of epidemics/pandemics.

- Weak implementation of available health policies due to corruption, political will, bias (i.e. for the provision of sexual and reproductive health services or the provision of services to highly vulnerable populations), and other considerations.

1.4. INDIVIDUAL AND SOCIAL DETERMINANTS THAT PUSH INDIVIDUALS TO THE LAST MILE

Individuals are further pushed into the last mile when they experience **social and individual determinants** that reinforce and compound the following factors:

- Vulnerability: Vulnerability is a complex term with multiple interpretations in the social and health sciences. Generally speaking, it denotes the extent of harm that can be expected under certain conditions. In other words, it refers to an individual/community´s risk of being exposed to crisis situations (exposure), the risk of not having the necessary resources to cope with these situations (capacity), and the risk of being subjected to serious consequences as a result of the crises (potentiality). Vulnerability is extremely hard to measure; it is multidimensional, relative, and dynamic. A group that is vulnerable in a certain humanitarian context/country may not be vulnerable in another vastly different context/country.[170]

- Exclusion: Exclusion consists of dynamic, multi-dimensional processes driven by unequal power relationships that interact across four main dimensions – economic, political, social, and cultural – and at different levels including individual, household, group, community, country, and global levels. This results in a continuum of inclusion/exclusion characterized by unequal access to resources, capabilities, and rights, which leads to health inequalities.[171]

- Oppression: Prolonged cruel or unjust treatment or exercise of authority.

- Stigmatization: Stigma is defined as the co-occurrence of labelling, stereotyping, separation, status loss, and discrimination in a context in which power is exercised. Stigma operates at multiple levels, including the individual, interpersonal (e.g. discrimination, hate crimes), and structural (e.g. community norms, institutional policies). A stigmatized status affects health by undermining or exacerbating several processes – stress responses, the availability of resources, social relationships, psychological and behavioural responses – that can lead to adverse health outcomes. Members of stigmatized groups often

lack the necessary resources to act on health knowledge. Stigma can also trigger bias, which results in unequal access to health-enhancing resources or medical care. Structural stigma is also associated with suicide, greater violence and homicide, and cardiovascular disease.[172]

- Marginalization: Different groups of people within a given culture, context, and history at risk of being subjected to multiple discriminations due to the interplay of different personal characteristics or grounds, such as sex, gender, age, ethnicity, religion or belief, health status, disability, sexual orientation, gender identity, education, or income or geographic location.[173]

1.4.1. AGE-SPECIFIC HEALTH NEEDS[xxv]

Children under five

Needs and facts	Frequent barriers to healthcare
✚ In 2018, an estimated 5.3 million children under the age of five died, mostly from preventable causes; almost half of them died in their first month of life,[174] mainly from preterm birth complications, pneumonia, birth asphyxia, congenital anomalies, diarrhoea, and malaria.[175] ✚ Nutrition related factors account for about 45% of deaths in children under five years of age. ✚ Death rates are higher in low-income countries, and children living in these countries are 100 times more likely to die from infectious diseases than those living in high-income countries.[176] ✚ Two regions concentrate 80% of these deaths: Sub-Saharan Africa and Central and Southern Asia. However, these regions only account for 52% of the global population of children under five.[177] In Sub-Saharan Africa alone, one child in 13 dies before the age of five.[178] ✚ Worldwide, children from rural and poorer households remain disproportionately affected. Children from the poorest 20% of households are nearly twice as likely to die before their fifth birthday as children in the richest 20%.[179]	✚ Availability of live-saving commodities (such of vaccinations) ✚ Lack of new-born facilities ✚ Other barriers exacerbated by crises ✚ Barriers experienced by parents: Studies show a correlation between mortality of children under the age of five and a mother's educational level,[180] socio-economic inequality,[181] and maternal health-non-seeking behaviour.[182]

Adolescents and youth[183]

Needs and facts	Frequent barriers to healthcare
✚ Important contributors to adolescent death (over 1 million in 2016 alone) include road traffic injuries, participation as soldiers in conflict, suicide, interpersonal violence, HIV/AIDS, and diarrhoeal diseases. ✚ 50% of mental health disorders in adulthood are related to undetected or untreated problems that manifest by age 14. ✚ Adolescent girls are exposed to early pregnancy and unsafe abortion (about 3.3 million abortions are reported in young girls under 20). Young women opting for an abortion are more likely to obtain care from unsafe or unlicensed providers and to delay seeking services, including for the management of complications.	✚ Lack of financial resources. ✚ Stigmatization by heath providers. ✚ Literacy. ✚ Mobility restrictions (e.g. for children associated with armed forces or armed groups, married young women).

[xxv] Individuals have age-specific health needs as a result of biology, barriers to healthcare that impede adequate management of such needs and social conditions that associate specific behaviours/occupations/practices to a particular age.

Women of reproductive age

Needs and facts

- In 2017, over 800 women died each day from complications in pregnancy and childbirth. Sub-Saharan Africa and South Asia account for 86% of maternal deaths worldwide.[184] Young women (ages 10-14) face a higher risk of complications and death as a result of pregnancy than other women.[185]
- 94% of all maternal deaths are in low resource settings in low and lower-middle-income countries.[186]
- Women account for more than half the number of people living with HIV worldwide.[187]

Frequent barriers to healthcare

- Lack of contraceptives and other commodities.
- Lack of trained providers for labour and management of complications.
- Stigma linked to sexual and reproductive healthcare.

The elderly[188 189 190]

Needs and facts

- Chronic health conditions such as diabetes, high blood pressure, arthritis, respiratory diseases, and joint pain have specific health and nutrition needs that are not always covered by health benefit packages.
- Older people in developing countries are at high risk for cardiovascular disease, stroke, hypertension, diabetes, and dementia. In contexts where they are not treated on time, the exacerbation of these diseases results in high mortality and morbidity rates.
- Poor nutrition and increased risk of chronic disease means the elderly are exposed to micronutrient deficiencies, such as vitamins B6, B12, C and E, folic acid, and calcium.
- In situations of humanitarian crisis, the pain and trauma resulting from the loss of one's family and livelihood is often confused for the disabling effects of aging, and the need for psychological support is neglected.
- Older women are disproportionately vulnerable. They usually live longer than men and, in developing countries, being widowed increases their vulnerability and exposes them to isolation and emotional and physical violence.

Frequent barriers to healthcare

- In medical facilities, the limited availability of medicines to treat common conditions contributes to the unmet health needs of the elderly population.
- Normally, there are no programmes specifically designed to control infections and communicable diseases – diarrhoea, pneumonia, and tuberculosis – among the elderly population, despite the fact that they have a higher risk of contracting these diseases.
- Older people face mobility difficulties that limit their access to health facilities and distribution centres for food and drinking water during humanitarian emergencies.

1.4.2. GENDER INEQUALITY

The impact of gender on health outcomes

- Gendered ideas about bodies and workplaces continue to dictate the kind of roles men and women tend to occupy. As a result, men's and women's exposure to health risks is different. For example, workers in the mining industry (typically male) are highly impacted by environmental pollution and lack of safety, while and household pollution caused by use of fossil fuels disproportionately affects poor women who are responsible for cooking. However, this latter issue hardly receives any attention.[191]
- Ideas around masculinity motivate risky practices, including unprotected sex, alcohol abuse, and dangerous driving; "about three-quarters of all road traffic related deaths are in men younger than 25."[192]
- Pre-conceived notions of gender identity and sexual orientation mean non-heteronormative behaviours are punished in many societies. These punishments include stoning, corrective rape, bullying, and harassment and can have long-lasting impacts on physical and mental health.[193] [194]
- Traditional gender norms encourage control over a woman's body, sexuality, and life. This may lead to practices such as female genital mutilation, or sexual and gender-based violence. Global estimates from WHO indicate that about one in three women worldwide experienced either physical and/or sexual intimate partner violence or non-partner sexual violence in their lifetime. Violence has a negative impact on women's physical, mental, sexual, and reproductive health. Conflict, displacement, and post-conflict/disaster further exacerbate violence against women.[195]
- Gender influences an individual's capacity to respond to disaster. Research shows that women and girls are disproportionately affected by disasters, particularly when it comes to injury, and death. It is estimated that women and children are 14 times more likely to die in disasters.[196]
- Although women and men are both affected by infectious disease outbreaks, they are impacted in different ways. Epidemics and pandemics that have occurred worldwide have revealed that these situations make existing inequalities for women and girls worse. Partner violence tends to intensify in those times, and women's vulnerability to such violence increases during these emergencies. On the other hand, as in many countries social norms place a heavy caregiving burden on women and girls, they are likely to be more affected (physically and mentally) by disease outbreaks. Equally, since globally women represent 70% of the health and social sector workforce (UN)[197], they are at the frontline to fight the disease infections. This makes them more vulnerable to become infected and also more exposed to discrimination. Despite this context, policies and public health efforts have not yet addressed the gendered impacts of disease outbreaks.[198]

Frequent barriers to healthcare

- Stigmatization by health providers.
- Gender-relevant services and commodities are not available.
- Other barriers exacerbated by crises.
- Restricted mobility of women and girls to visit service delivery points.

1.4.3. LIMITED ACCESS TO EDUCATION

The impact of education on health outcomes	Lack of education as a barrier to healthcare access
✚ The attainment of higher levels of education among mothers improves children's nutrition and vaccination rates while reducing preventable child deaths, maternal mortality, and HIV infection.[199] ✚ Education can create opportunities for better health, but poor health can put educational attainment at risk (reverse causality). Furthermore, higher educational attainment can lead to improved health as more educated individuals will most likely make better-informed health-related decisions for themselves and their families. ✚ Income and education are two factors that correlate most strongly with life expectancy and most health status measures.[200] ✚ Higher educational attainment can shape employment opportunities, which are the main determinants of economic resources. More educated individuals will experience lower rates of unemployment, which is strongly associated with worse health and higher mortality.[201] Educational attainment can also affect health by influencing social and psychological factors like greater perceived personal control, which has frequently been linked to better health and health-related behaviours, higher relative social standing and increased social support.	✚ Low literacy levels impact access to information and capacity to make informed decisions. ✚ Lack of education may lead to unemployment and, therefore, increased financial hardship when paying for services.

1.4.4. POOR HOUSING CONDITIONS

The impact of housing on health outcomes	Housing as a barrier to healthcare access
✚ Moving frequently, falling behind on rent, and couch surfing are associated with health problems in youth, such as more risk of teen pregnancy, drug use, and depression.[202] Chronically homeless populations experience higher morbidity and mortality, and many of them face trauma in the streets or in shelters.[203] ✚ Air pollution in the household due to use of inadequate materials for cooking, heating, and lighting; exposure to extreme temperatures; air quality risk associated with dust or gases from toxic building materials or radon exposure; exposure to disease-bearing vectors (e.g. pets and insects); exposure to dampness and mould; inadequate water and sanitation conditions; outdoor air pollution; exposure to flooding, lack of access to green spaces, and transport routes; exposure to noise and exposure to unsafe construction materials/practices constitute environmental conditions that negatively affect health outcomes.[204 205 206] ✚ Airborne infectious diseases (e.g. tuberculosis), vector-borne diseases (e.g. malaria, Chagas, leishmaniosis), water-borne/diarrhoeal diseases, non-communicable diseases (e.g. stroke, heart failure and other cardiovascular disease), allergies, cancers, domestic injuries, mental health, and occupational health risks (e.g. injuries, falls) are some of the main health consequences of inadequate housing conditions.[207 208]	✚ Lack of access to a stable home may affect access to healthcare.

1.4.5. UNEMPLOYMENT AND POVERTY

The impact of income and employment on health outcomes	Poverty as a barrier to healthcare access
✚ In 2015, 736 million people lived on less than US$1.90 a day. More than half of the extreme poor live in Sub-Saharan Africa and the majority of the global poor live in rural areas, are poorly educated, are employed in the agricultural sector, and are under 18 years of age. Economic exclusion translates into limited access to healthcare, particularly in the absence of universal health coverage policies and strategies for health system strengthening in marginalized areas.[209] ✚ The long-term unemployed have a lower life expectancy and worse health than those who work.[210] ✚ Unskilled workers in many economies have lost jobs, particularly in the manufacturing sector, while in the formal and informal sector, many workers remain vulnerable to job loss, exploitation, low pay, and dangerous conditions that directly affect their health.	✚ Poor health seeking behaviours as individuals prioritize covering traditional basic needs, such as food, housing, and clothing. ✚ Financial hardship when covering out-of-pocket expenses.[211]

1.4.6. LOW LEVELS OF RESILIENCE

The impact of resilience and health on health outcomes	Low resilience as a barrier to healthcare access
✚ The IFRC defines resilience as "the ability of individuals, communities, organizations or countries exposed to disasters, crises and underlying vulnerabilities to anticipate, prepare for, reduce the impact of, cope with and recover from the effects of shocks and stresses without compromising their long-term prospects."[212] Communities with low levels of resilience may have poorly-maintained and inaccessible infrastructure and services, including poor healthcare services, social cohesion, and difficulty managing natural resources , among other challenges.	✚ Poor coordination mechanisms among health system actors. ✚ Health facilities that do not meet minimum standards.

1.4.7. LACK OF SOCIAL COHESION

The impact of social cohesion on health outcomes	Lack of social cohesion as a barrier to healthcare access
✚ Social cohesion plays an important role in community resilience, inclusion of vulnerable groups, and health inequities. A community that exhibits social divisions based on income, ethnicity, caste, language, gender, and other factors is likely to present significant differences in health attainment among those facing discrimination, stigma, or isolation.	✚ Lack of trust in health institutions among vulnerable individuals. ✚ Stigma from health providers.

SECTION 2

WHO AND WHERE? PROFILES FROM THE LAST MILE

SECTION 2: WHO AND WHERE? PROFILES FROM THE LAST MILE

Using the definition of the last mile provided in Section One and the HLMCI (See 'Methodology'), this section profiles populations and countries that fall within the last mile. The authors acknowledge that any labelling of a particular group or country as 'living in the last mile' may contribute to further stigma and that these populations may not self-identify as populations in the last mile. Humanitarian actors must handle this with care, highlighting the value of the term to inform efforts to address health inequities and improve health outcomes.

2.1. POPULATIONS IN THE LAST MILE OF HEALTH

This section includes information about 18 population groups classified as in/on the verge of being in the last mile of health. For each population, information on health needs and outcomes and frequent barriers to healthcare access is provided. For some populations, a mini case study helps illustrate the needs and challenges that push these groups to the last mile.

This list is not exhaustive. Considering that one of the key characteristics of some last mile populations is that they are out of sight, it is possible that some groups may have not been captured in this study. It is also possible that some groups in high income countries and non-conflict/stable settings find themselves on the verge of the last mile due to other converging factors within their context (for example, pandemics/epidemics and their impacts in very stable/developed/non-conflict settings, as revealed by the COVID-19 outbreak). However, qualitative and quantitative evidence illustrates how the 18 populations selected here are impacted by health inequities as a result of the confluence of conditions that lead to or exacerbate crises, including challenges to the response of humanitarian actors, weak health systems, and individual and social determinants that reinforce vulnerability, exclusion, oppression, stigmatization, and marginalization.

It is important to highlight that the categorization of these populations is not mutually exclusive, for instance, an individual may be a survivor of gender-based violence who also lives in a slum. It is important to note that the intersectional interaction of these factors increases vulnerability. It is also important to recognize that some of these categories refer to identities (e.g. being a member of a minority group) while others refer to circumstances/conditions (e.g. detainees) that may be permanent or temporary.

2.1.1. ORPHANS IN CONFLICT AND DISASTER SETTINGS

SOME FACTS

- Children can be orphaned due to conflicts, disasters, onset or combination of poverty, disease, and disability.
- There is a lack of up-to-date information, but according to estimates from 2015, there were nearly 140 million orphans globally, including 61 million in Asia, 52 million in Africa, 10 million in Latin America and the Caribbean, and 7.3 million in Eastern Europe and Central Asia.[213]
- While orphans can be found in any setting, those in conflict and disaster settings are particularly vulnerable due to the breakdown of law and order, social systems and protections for children. Natural disasters lead to displacement and death and make orphaned children more vulnerable to child trafficking, exploitation, and abuse.[214]
- Research that analysed over 15,000 conflict events from 1990 to 2016 across 33 African countries concluded that children in the age range of 0–15 were 6% more likely to be orphaned when living near any conflict. This number rose to 42% when they lived near conflicts of high intensity.[215]
- During disasters, there is an influx of aid and international media coverage. This has inadvertently led to establishments of orphanages or expedited inter-country adoptions. In cases where one of the child's parents may still be alive, there is often a misalignment of priorities where these children may be placed in orphanages or hurriedly adopted by a family instead of attempting to reunite them with the single parent or extended family.[216]
- Pandemics/epidemics significantly increase the vulnerability of orphan children, especially those living in conflict and disaster settings. Due to their living conditions, those children usually do not have access to hygiene products, information, and basic medical services. Additionally, orphanages tend to reduce the number of children they can hold in their facilities to adhere to public health rules, exposing some orphans even more. The visit restrictions implemented in many orphan institutions could interfere with potential adoptions.[217] Finally, these institutions may also experience a decrease in essential donations because they are unable to meet with their usual network of supporters.

FREQUENT BARRIERS TO HEALTHCARE ACCESS

- Mobility restrictions
- Exposure to violence and exploitation by older children and adults
- Lack of registration

ORPHAN CHILDREN IN YEMEN

The war in Yemen has pushed the country to the brink of a severe humanitarian crisis. The war caused a famine and a fuel crisis, as well as the breakdown of healthcare systems and public provisions. The airstrikes have not just resulted in severe loss of life, leaving many children orphaned, but has also left them with physical and emotional trauma.[218] Without medical equipment and access to pharmaceutical drugs, doctors have struggled to treat children suffering from malnutrition or injured in the strikes. According to the UNICEF Situation Report from November 2019, there were 12.3 million children in need of humanitarian assistance, of which 1.7 million were internally displaced. The staggering numbers of orphaned children are further vulnerable because of a lack of adult supervision and support. Due to a lack of funding from the government, Yemen's orphanages face closure, which would mean hundreds of orphan children would be forced on to the streets.[219] The continued funding gap faced even by UN agencies has made the crisis even worse.

2.1.2. STREET CHILDREN

SOME FACTS

- Children may find themselves living on the streets as a result of domestic abuse, but also as a result of losing parents/support networks during conflict or disaster. Urban violence may also push some children to the streets.
- Street children are one of the most vulnerable groups of people in the world. No accurate data exists on the number of street children globally.[220]
- Children are often exposed to drugs and substance abuse (such as sniffing glue) to deal with the harsh conditions on the street, including forced labour, sexual exploitation, and depression.[221]
- Street children lack access to a healthy, sufficient, and nutritious diet. Because availability of food can be scarce, they often eat whatever they are able to find. In some parts of the world, street children may go through rubbish to find food or clothing, which can pose serious hazards in terms of contamination and hygiene.[222]
- Respiratory and skin diseases are a significant morbidity problem among street children.[223]
- Because of power dynamics, children also report facing physical abuse from "older street children, peer group and gangs of street children."[224]
- For street children, there is a high risk of physical injury during their work, especially in hazardous places. Physical disabilities can affect their income and productivity and make survival on the streets harder.[225] Little data exists on hidden populations among street children, e.g. those who already have a physical disability.
- Street children become more exposed during pandemics/epidemics, as they experience an increase limited access to food and other basic hygienic products and services. They are much more likely to be immunocompromised due to underlying health conditions (for example, malaria, pneumonia, HIV/AIDS, TB, etc.). They are then faced with trying to fight infectious disease outbreaks with compromised immune systems and complicating factors. Moreover, with movement restrictions brought by the containment measures, these children, who depend on busy streets for their survival, can lose their source of income which may lead them to starvation conditions and/or more violence and abuse. Without access to accurate, up-to-date, and child-friendly information about the virus, and the safety measures required, this group is more susceptible to rumours and 'fake news' which could be detrimental to their health.

FREQUENT BARRIERS TO HEALTHCARE ACCESS

- Lack of registration
- Lack of resources
- Poor health seeking behaviours
- Mobility restrictions (due to control from others)

HOMELESS CHILDREN IN PAKISTAN[226]

Over 52% of the population of Pakistan is under the age of 25, a large part of which are children and adolescents. According to a national-level 2018 report, around 90% of street children in Pakistan are subject to sexual molestation, assault, and gang rape. Young girls are forced into sex work as well. According to data reported by non-governmental organizations, "the majority of children living on the street in Pakistan are subjected to forced begging. Begging ringmasters sometimes maim children to earn more money. Boys are subjected to sex trafficking around hotels, truck stops, bus stations and shrines. Illegal labour agents charge high recruitment fees to parents in return for employing their children, some of whom are subjected to forced labour and sex trafficking." (2018 Trafficking in Persons Report - Pakistan).

Half of the street children in Pakistan are thought to be Afghan refugees, but data from civil society organizations indicate it may be up to 70%.

Even though the government has opened child protection offices in many districts, street children who are refugees do not have access to many of these services due to lack of documentation, including birth certificates.

2.1.3. CHILDREN ASSOCIATED WITH ARMED FORCES OR ARMED GROUPS (CAAFAG)

SOME FACTS

- According to the United Nations, a CAAFAG is "A child associated with an armed force or armed group refers to any person below 18 years of age who is, or who has been, recruited or used by an armed force or armed group in any capacity, including but not limited to children, boys and girls, used as fighters, cooks, porters, spies or for sexual purposes."[227]
- Despite the difficulty obtaining accurate data, thousands of children are deprived of their liberty every year, the majority at or around the age of eight. This exposes these children to greater risks and negative long-term effects on their future development.[228]
- Children's participation in armed groups has devastating consequences on their emotional and physical well-being.[229] CAAFAG are at risk of trauma, physical violence and torture, conflict related injuries, and sexual abuse from older children or group leaders. The impact on CAAFAG is lifelong, making it difficult for these children to recover and reintegrate.[230]
- Due to their living conditions, vulnerability, and limited access to healthcare and information, CAAFAG might be more exposed to epidemics/pandemics. The impact of the current COVID-19 outbreak on CAAFAG populations is yet to be measured, due to the ongoing and worldwide growth of this pandemic on countries experiencing this problematic.

FREQUENT BARRIERS TO HEALTHCARE ACCESS

- Lack of mobility to visit health facilities, as they are in hiding or on the move.
- Invisibility: disarmament, demobilization and reintegration programmes do not address their health needs.
- Medical professionals lacking specialist training.
- Ideas about masculinity leading to fears of being seen as weak, effeminate, homosexual, afflicted with HIV/AIDS.

CAAFAG IN THE DEMOCRATIC REPUBLIC OF CONGO

CAAFAG have been recruited since the beginning of the civil conflict in the Democratic Republic of Congo. While UNICEF estimates published in 2018 stated that 3,200 CAAFAG were part of armed groups, reports from the UN Special Mission stated that 4,000 CAAFAG were active in the Kasaï and the eastern part of the country alone.[231] Children formed 60% of the armed group members of Kamuina Nsapu. Children who are recruited into armed groups are forced to participate in and witness brutal violence, including rape, murder, maiming, and torture. Some children are even forced to commit violence against their own community members. In an article published in 2018, UNICEF and partner organizations reported 800 cases of sexual abuse among CAAFAG, however, experts believe the scale of abuse to be much larger and more severe.[232] When former CAAFAG undergo rehabilitation and attempt to return to society, many report behavioural problems, including aggression, insomnia, increased anxiety and isolation, and a lack of trust in authority figures.

2.1.4. GANG-AFFILIATED YOUTH

SOME FACTS

- Gang-affiliated youth emerge in the vacuum left by insecurity, weak governance, and poverty.[233]
- Research shows juvenile delinquency increases with gang affiliation.[234] Youth are considered to be the largest at-risk group for urban violence and criminality, especially in regions like Latin America, where gang-related violence is a long-standing problem.[235]
- Gang-affiliated youth suffer numerous other health consequences, including teenage pregnancy, drug and alcohol abuse, trauma, and other mental health concerns.[236]
- According to one study, exposure to community and gang violence is linked to unintended pregnancies among adolescent girls affiliated with gangs.[237]
- Early exposure to violence and death can cause long term adverse impact, which requires appropriate mental health support and social rehabilitation that may not be available.[238]
- The measures and strategies adopted by national and local governments to respond to epidemics and pandemics, along with the negative economic consequences brought by these measures, may represent an upsurge of youth gangs as a means of survival. Many children and youth from low-income families rely on school for regular meals. With the closure of schools and the loss of informal jobs, these families, that are economically strained, may find it especially hard to feed their children and, in general, provide for their families. Therefore, youth gang enrolment could signify an option of subsistence. In addition, for older youth the financial impact of these containment measures could mean job losses or a drastic reduction of working hours, putting them at greater risk for poverty, debt, risky sexual behaviour, depression, and episodes of criminality. Pandemics/Epidemics also increases pressure on already limited national support services.[239]

FREQUENT BARRIERS TO HEALTHCARE ACCESS

- Poor health seeking behaviour.
- Lack of knowledge or access to rehabilitation/mental health services.
- Lack of competent preventive services/infrastructure.
- Social isolation (leading to delays in receiving appropriate care for injuries/ailments).
- Lack of access to healthcare services if detained frequently.

2.1.5. DETAINEES

SOME FACTS

- Communicable diseases such as tuberculosis, malaria, HIV, and other STIs, lead to significant death rates in detention places.[240] The high rates of HIV and STIs among prisoners and detainee populations is often the result of consensual and non-consensual sexual practices, including sexual violence. It can result in serious health risks and is vastly underreported.[241]
- Mental health needs worsen in detention, a consequence of violence, stress suffered during arrest or interrogation, situations of ill-treatment or torture, drug use, separation from support structures, and other factors.[242] Mental health disorders among prisoners have consistently exceeded rates of such disorders in the general population.
- "In many contexts, a sub-culture of drug use exists within prisons and often it is intertwined with the internal prisoner hierarchies. Intravenous drug use greatly increases health risks in prison settings. Two factors contribute to this increased risk: first, the prevalence of blood-borne diseases tends to be higher among people in prison than among the general population; second, the scarcity of clean needles, and the fact that drug paraphernalia must be concealed from authorities, leads to more sharing of needles and other equipment."[243]
- Due to the high-risk environment where most of detainees live (poor sanitation, massive overcrowding, scarce health access), they are among the most vulnerable populations of a viral contagion during an epidemic/pandemic. Detention facilities are usually not adapted to face large-scale outbreaks, and basic protective measures such as social distancing and hygiene rules cannot be observed as easily as outside. Additionally, the underlying health conditions among detainee populations (HIV, cardiopulmonary diseases, and other immunocompromising conditions), make them highly susceptible to catching any infectious disease and having fatal health outcomes. The COVID-19 pandemic has revealed the highly vulnerable situation of many detainees not only in underdeveloped/conflict settings, but also in more stable and developed countries; for example, in countries such as Colombia and Italy, prisoners fearing the spread of COVID-19 have sparked riots, triggering prison crises, and resulting in numerous deaths posing a higher threat in prison populations.[244]

FREQUENT BARRIERS TO HEALTHCARE ACCESS

- Prison conditions are harsh and often life-threatening due to overcrowding, failing infrastructure, and inadequate medical care. Often prisons have inadequate food and inadequate space, sanitation, and ventilation.[245]
- Women's menstrual and physical hygiene needs are often neglected.[246]
- There is a lack of prenatal and postnatal care, inadequate education regarding childbirth and parenting, and no psychological preparation for the mother's separation from the infant after delivery.[247] [248]

YOUNG PEOPLE INCARCERATED IN SUB-SAHARAN AFRICAN PRISONS AND DETENTION CENTRES

Children and adolescents between the ages of 12 and 18 years old are held in Sub-Saharan African prisons. The key vulnerable populations detained are young people, including girls, LGBTQI youth, sexually exploited youth, and 'cross over' youth that are involved in both the juvenile justice and child welfare systems. The majority of Sub-Saharan African prisons are in a deplorable situation for the young people held. The violation of international human rights norms is reflected in the systemic abuse of young people and their detention with adults. Basic needs of sanitation, ventilation, safe spaces, protection from physical and sexual violence, clothing, food, and access to medical care are not met. Because of their age, young people are particularly affected by learning disabilities, mental health issues, risky health behaviours, self-harm, victimization, and suicide. Detention also exposes them to infectious diseases, trauma, violence and injury, impairs positive child and adolescent development and the transition to adulthood, and hinders successful re-integration into the community on discharge.

2.1.6. INDIVIDUALS DISPLACED FROM THEIR PLACE OF ORIGIN[249]

SOME FACTS

- There are 25.9 million refugees around the world, and the vast majority of them have found refuge in poor and unstable countries, often ones that neighbour their country of origin.[250] 41.3 million people are internally displaced because of conflict and violence; this is the highest figure recorded in history.[251]
- Displaced individuals include pregnant women, children, sick people, and people with disabilities. These people must endure constant fear of detention and deportation and may be subject to trafficking or slavery while trying to save their own lives. Unaccompanied children are particularly vulnerable.
- The displacement process can lead to food insecurity and nutritional problems, including malnutrition (both undernutrition and micronutrient deficiencies). The condition of being a refugee leads to the disruption of infant and young child feeding practices and care. When food is in short supply, refugee women and girls in vulnerable situations are more likely than the host population to experience poor nutrition. Pregnant and lactating women are at particular risk of undernutrition owing to their increased physiological requirements.[252]
- Sexual minority refugees may face additional vulnerabilities in some settings with regard to nutrition and health. In refugee camps with Somalian communities, there have been reports of cutting off food provisions to these populations when there is a need to ration food usage in the refugee camp.[253]
- Refugees who have fled their countries of origin seeking protection often face greater risks on the road and in host countries. These risks are particularly acute when it comes to gender-based violence.[254]
- As refugees face significant health risks due to crowded and poor living conditions, limited or no access to healthcare, and the absence of health and sanitation infrastructure, infectious outbreaks could be particularly devastating for them. According to the UNHCR, infectious **diseases are the major causes of morbidity and mortality among refugees**.[255]
- The UNHCR has also revealed that three-quarters of the world's refugees and many migrants are hosted in developing regions where health systems are already overwhelmed, lacking the necessary capacity to cope with even the most basic services or emergencies, which make very difficult to handle pandemics or large scale epidemics crises.[256]

FREQUENT BARRIERS TO HEALTHCARE ACCESS[257]

- Displaced individuals with existing chronic conditions and hereditary diseases experience interruption in their care or episodic care, and probably will not have medicines or health records with them.
- Many displaced women do not take up antenatal care or face delays in receiving it because of payment barriers at hospitals, lack of referrals to gynaecologists, or fear, including that of being brought to the attention of the authorities and a sense of shame.
- Other barriers include mobility restrictions (due to security in camps and surrounding areas), language challenges, trust in the capacity of providers in the host country to meet their healthcare needs, and stigma from providers and communities in host countries.

REFUGEE SEX WORKERS IN KAMPALA, UGANDA

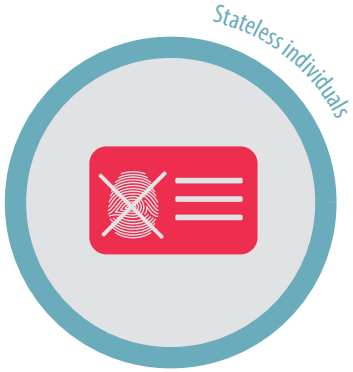
The Women's Refugee Commission has conducted research on refugees that engage in sex work in humanitarian settings to offer insights about this reality, particularly in Kampala, Uganda. Unfortunately, this topic continues to be overlooked by the humanitarian community.

In Kampala, the Women's Refugee Commission found that refugees who engage in sex work were not comfortable disclosing their situation to healthcare providers due to fear of being stigmatized and discriminated against. Refugees in Kampala were also reported to face higher risks of gender-based violence and have less knowledge of sexual and reproductive health when compared with Ugandan sex workers. The research also mentioned that perpetrators of sexual and gender-based violence might target refugees who engage in sex work, as they are less likely to file a police report, even in cases of rape, sexual torture, and robbery. Indeed, refugees who engage in sex work fear being criminalized as a result of their legal status and due to the fact, that selling sex is forbidden in Uganda. The motivations of refugees that engage in sex work varied, ranging from earning enough money to meet their basic needs to having more flexible work hours or earning a better income.[258]

2.1.7. STATELESS INDIVIDUALS

SOME FACTS

- There are approximately 10 million stateless people worldwide, 3 million of whom are children. The majority of the world's stateless people have never had any nationality, most often because their parents had no nationality to pass on.[259] [260]
- Individuals may be born statelessness or become stateless after fleeing a crisis.
- Statelessness is often accompanied by stigma and challenges to finding employment and accessing education and other social services. This, in turn, leads to poverty.[261]
- Most stateless individuals live in overcrowded makeshift settlements that lack clean water and sanitation. This is coupled with poor health and hygiene practices.[262]
- Many stateless children have never received any vaccinations.
- For some stateless ethnic groups, family planning use is perceived as a strategy to keep their numbers down. This leads to unwanted pregnancy, unsafe abortion, unattended labour, and poor maternal and new-born health.[263]
- As well as refugees and displaced people, stateless individuals are at greater risk of health impacts during an epidemic/pandemic due to their status. With no nationality, stateless people are usually denied basic human rights and are often unable to have access to healthcare. They are very vulnerable to abuse and exploitation, including slavery and prostitution.[264] [265]



FREQUENT BARRIERS TO HEALTHCARE ACCESS[266]

- Lack of registration in the health system/requirement of identification to access care.
- Lack of understanding among health providers of individuals' rights and entitlements.
- Fear, as accessing care may lead to deportation or persecution.
- Pregnant women may forego antenatal care and give birth at home due to barriers to access. Aside from the risks associated with unattended births, a child born outside the formal structures of state healthcare is unlikely to be registered, perpetuating a cycle of statelessness.

2.1.8. UNDOCUMENTED MIGRANTS

SOME FACTS[267] [268]

- In 2017, the total number of people residing in a country other than that of their birth was estimated at 258 million, of which approximately 31% resides in Asia, 9.5% in Africa, and 3.7% in Latin America and the Caribbean.[269]
- Evidence indicates health disorders (schizophrenia, depression, and anxiety) remain a recurring problem among migrant populations. Children and young migrants have high challenges in mental health as they may experience challenges with integration and unaccompanied transition. Beyond this, they may have been traumatized by the conditions they faced in their country of origin, including conflict, war, etc.
- During the migration journey, people may face different physical and environmental threats and exposure to violence and may be exposed to living in overcrowded camps, with poor access to water, sanitation, and hygiene. This leads to the spread of vector-borne diseases and other infectious diseases.
- Undocumented migrants and even regularized migrants are exposed to jobs with high occupational hazards. Mining, a common occupation among migrants in Africa, translates into increased risks of accidents and lung diseases induced by mineral dust exposure, particularly silicosis, noise induced hearing loss, and pulmonary tuberculosis; extended working hours result in fatigue and increased risks of accidents, injuries or severe health problems.[270]
- Undocumented migrants often face great difficulties in access to healthcare, which means that common health needs are not met or are even likely to become worse and lead to further complications.[271] Barriers to access to healthcare are most severe for undocumented persons. These individuals may circumvent any contact with public officials, fearing detention and deportation, which leads to a higher risk of adverse consequences from the spread of a pandemic.[272] Additionally, this population may also face restrictions to food, lodging, or other governmental subsidies during lockdown measures and quarantine periods.

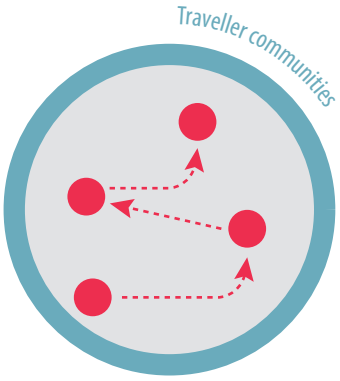
FREQUENT BARRIERS TO HEALTHCARE ACCESS

- Interruption of care.
- Lack of registration.
- Avoidance of services due to fear of deportation.
- Stigma enacted by health providers.
- Language barrier.

2.1.9. TRAVELLER COMMUNITIES[xxvi]

SOME FACTS

- Climate change and disaster affect the capacity of these groups to maintain adequate nutrition during movements. Although there is no solid evidence of the health status of traveller communities, there are indications that suggest that they face significant health risks and poor health outcomes.[273]
- The constant displacement of these communities becomes facilitates the transmission of diseases, since people are permanently exposed to new infectious agents and it is common for these communities to have low immunity and poor nutrition. The transmission of diseases occurs in both directions, that is, diseases can be acquired by coming into contact with new populations or infectious areas, or they can be spread by the traveller community in the new destination, infecting the local population.
- These communities are more likely to acquire conditions such as chronic cough, asthma, bronchitis and arthritis and neglect the issue as they are used to normalizing symptoms.
- Infectious agents are not only transported by people but also by the products or animals they move and commercialize.
- Traveller communities are marginalized worldwide and usually experience severe health inequalities, even in comparison to other ethnic minority groups,[274] likely having less access to health services including immunization. This situation makes of these populations an easy target for epidemics. For example, lower vaccination coverage has been identified in some traveller population groups, in particular the Gypsy–Traveller communities, where outbreaks of measles are common.[275]



FREQUENT BARRIERS TO HEALTHCARE ACCESS

- The fact that these communities are constantly moving explains the absence of demographic data and, in turn, contributes to them not being taken into account during health programming.
- Most traveller communities have a preference for traditional medicine, therefore, even in cases where they can access health services, some people do not attend because they distrust conventional medicine (vaccines are seen as pollutants).
- There are strong sociolinguistic and cultural barriers that make it difficult for communities to connect with health services.
- Traveller communities usually navigate rural areas where there is generally less accessibility to health and basic sanitation services.
- The constant displacement of communities interferes with the administration of prolonged treatments, such as immunization services, especially in the case of children.

2.1.10. RELIGIOUS MINORITIES

SOME FACTS

- Religion may substantially shape the perceptions, attitudes, beliefs, and behaviours of individuals toward their health. Some religious practices are associated with risks, e.g. overheating as a result of exposure to crowds, aggravation of chronic illnesses as a result of fasting, or refusal to accept science-based treatments, infection, death, and long-term gynaecological and mental health problems as a result of female genital mutilation, etc.[276]
- In addition to 'expected' risks of practices promoted by a specific faith, religious minorities face health challenges resulting from stigma and discrimination. For instance, evidence has showed consistent relationships between experiences of discrimination and poor mental health among Muslim and Muslim-like populations. Experiencing discrimination was linked to higher levels of psychological distress among men.[277] [278] Some studies have also shown a connection between high blood pressure, high cholesterol, and other cardiovascular diseases and anti-Muslim discrimination.[279]
- Due to their belief-shaped mindset, some religious minorities can be considered as hard-to-reach communities in terms of health access and coverage. They could be very difficult to persuade to abandon non-healthy deep-rooted practices sanctioned by tradition and religious beliefs and/or they can be exempted from immunization by local/national laws (for example, the case of measles immunization in some states in the U.S.[280]). This situation can be potentially risky during epidemics/pandemics, providing major difficulties in disease control. However, these emergencies can also upsurge discrimination against these groups. An infectious outbreak might bring a spiral into panic, which might be used to justify unnecessarily severe limits on movement and on civil liberties, especially for racial and religious minorities around the world.

[xxvi] According to Carr et al (2014), the term traveller communities is used to describe multiple cultural and ethnic groups with diverse histories and customs, including Romani Gypsies, Irish Travelers, Welsh Travelers, Scottish Travelers, Rome, New Travelers, Traveling Show people, Circus People, and Boat Dwellers. For more information: Carr, S. M., Lhussier, M., Forster, N., Goodall, D., Geddes, L., Pennington, M., & Michie, S. (2014). *Outreach programmes for health improvement of Traveller Communities: a synthesis of evidence.* NCBI. https://www.ncbi.nlm.nih.gov/books/NBK262870/

FREQUENT BARRIERS TO HEALTHCARE ACCESS

- Health providers often are not familiar with the specific faith-based practices of religious minorities. This may lead to stigma, misinformed expectations, and a lack of adequate information to promote adherence to medical treatment.
- The fear of discrimination may influence health seeking behaviours.

2.1.11. ETHNIC MINORITIES AND INDIGENOUS POPULATIONS

SOME FACTS

- Ethnic minorities and Indigenous people tend to be poorer than other groups. A study conducted in 10 countries across Asia, Africa, and Latin America, for instance, concluded that indigenous groups face severe poverty.[281]
- Diabetes and other NCDs are an issue of concern among some of these groups. Worldwide, over 50% of indigenous adults over age 35 have type 2 diabetes with numbers predicted to rise, and diabetes, high blood pressure, and sickle cells diseases are the most common diseases affecting the Afro-descendant population[xxvii] in Latin America.[282]
- In terms of communicable diseases, tuberculosis and a lack of treatment disproportionately affect indigenous peoples around the globe.
- Child and maternal mortality are also an issue of concern for these populations. For example, the probability that an Afro-descendant child dies before the age of one is systematically higher than for a non-Afro-descendant child in both urban and rural settings. The largest relative gaps are in Colombia, where the probability of death is 1.6 times higher for Afro-descendant children. In Ecuador, maternal mortality rates in Afro-descendant women are four times higher than in non-afro descendant women. In 10 Latin American countries, 11.4% to 24.1% of Afro-descendant adolescents between 15 and 19 years old have had at least one child. This percentage is higher than in non-Afro-descendant women, and is particularly marked in Brazil and Uruguay.[283]
- Even if epidemics and pandemics do not discriminate, ethnic minorities and indigenous populations tend to experience worse health outcomes than other groups during and after these emergencies.[284] This differential impact resides in the common higher rates of underlying health conditions in those minority populations (for example, the case of African Americans in the U.S. and the high rates of diabetes in this community)[xxviii], and the larger socio-economic, health, cultural, educational, and linguistic barriers to adopt pandemic/epidemic contention and mitigation interventions. Experiences such as ethnic or eco-tourism could increase the vulnerabilities of indigenous groups to infectious diseases outbreaks.[285] Additionally, indigenous peoples, who already face marginalization and inadequate health services and information in their languages, could struggle to receive the proper care and information they need in these situations.
- Beyond the health impacts, previous outbreaks have shown that the spread of infectious diseases may cause prejudice, discrimination, and stigmatization against some ethnic or racial groups who are blamed for bringing diseases (e.g. the attacks against Chinesse people at the beginning of the COVID-19 pandemic, as they were signalled as the originators of the pandemic).[286]

FREQUENT BARRIERS TO HEALTHCARE ACCESS

- Cultural and social exclusion from 'modern' healthcare, as ethnic minorities and indigenous may continue to practice some rituals, healing practices and alternatives that are stigmatized by health providers.[287] Providers are not trained to integrate (or at least acknowledge) these practices and traditions into treatment plans. For instance, the contribution of indigenous midwives to the health and well-being of their community as well as their cultural and clinical knowledge is unacknowledged and even undermined by Western health systems.[288]
- Language barriers.
- Geographical access.

AFRO-COLOMBIAN: WHEN DISCRIMINATION ENCOUNTERS ARMED CONFLICT

In Colombia, one out of five citizens is afro-descendant. The Afro-Colombian population is concentrated in the major cities and in traditionally Afro-descendant territories located mainly in the Pacific region and in the northern region.[289] Many of these territories are located in the heart of the internal armed conflict, and Afro-Colombian civilians face human rights violations, threats, massacres, homicides, selective murders, forced displacement, confinement, and the destruction of their culture and their social fabric.[290]

Afro-Colombian adults are less likely than non-Afro-Colombian adults to report excellent or good health. They are also less likely to seek medical services, and when they do seek them, they are less likely than non-Afro-Colombians to receive the appropriate healthcare.[291] In the Pacific region, Afro-descendants are particularly vulnerable, and the infant mortality rate is 10% to 50% higher than the national average.[292] Health disparities between the Afro-Colombian and the non-Afro-Colombian population are rooted not only in socio-economic variables, but also in discrimination.[293] Armed conflict exacerbates health needs and hinders quality healthcare.

[xxvii] In 2010, there were 111 million afro descendant people in Latin America, this is 21.1% of the total population. For more information: Comisión Económica para América Latina y el Caribe (CEPAL). (2017). *Situación de las personas afrodescendientes en América Latina y desafíos de políticas para la garantía de sus derechos*. https://repositorio.cepal.org/bitstream/handle/11362/42654/1/S1701063_es.pdf

[xxviii] There are 34.2 million people in the United States living with diabetes (American Diabetes Association, ADA), which is more than 10% of the country's total population, and African-Americans are 60% more likely than whites to be diagnosed with diabetes, according to the Office of Minority Health at the U.S. Department of Health and Human Services. For more information: Monet., E. (2020, April). *COVID-19: The Dangers of Underlying Health Conditions For African Americans*. Richmond Pulse. https://richmondpulse.org/2020/04/07/covid-19-the-dangers-of-underlying-health-conditions-for-african-americans/

2.1.12. RURAL POPULATIONS

SOME FACTS

- Research from 2015 showed that 56% of people living in rural areas worldwide did not have access to essential healthcare services; this was twice the figure in urban areas where the coverage was 22%. The largest differences between rural and urban areas are found in Asia. For example, in Indonesia the percentage of people that are not covered is twice as high in rural areas than in urban areas.[294]
- Rural maternal mortality rates are 2.5 times higher than urban rates. Globally, the highest levels in rural maternal mortality are found in Africa.[295]
- It is commonly thought that epidemics hit large cities more often, where many people live in close proximity and come into contact through public transportation and other situations. However, evidence shows that in some cases, members of rural communities are interconnected in ways not always found in larger cities, and they tend to watch out for one another and likely would do so regardless of a disease outbreak.[296] Thus, the closer relationships and the possibility that rural community members spend more time together could increase the chance of infection and transmission to others during an epidemic/pandemic. The precariousness regarding health access, health infrastructure availability, limited resources, and the underlying health conditions (not or barely treated) only sharpens this risk.

FREQUENT BARRIERS TO HEALTHCARE ACCESS

- Availability of transport services to access the health facilities.
- Navigating waiting time and loss of income due to travel and waiting time in public health facilities.
- Absence of adequate number of health workers, nurses, and doctors who can tend to them.[297] [298] For example, rural hospitals and healthcare facilities are plagued by staff shortages, especially specialized doctors. There are sometimes not enough beds in a facility, and patients have to sleep on the floor. Caregivers may not have the amenities necessary to stay in hospitals or a place to cook.
- Navigating cultural and language barriers within health facilities.
- Shortages of essential drugs and medicine, and testing facilities: A patient may have to travel to another village or the nearest city for an X-ray or a blood test, or to buy medicine.
- An absence of specialized services, such as a wider range of sexual and reproductive health services (including contraceptive options) and mental health services.[299]
- Few services for people with disabilities and children with intellectual disabilities; superstitions lead to beliefs about possession and angering the gods, among others.
- Affordability barriers increase reliance on unlicensed practitioners for diagnosis and drugs, resulting in maltreatment and delayed access to treatment.

THE NIGERIAN MIDDLE BELT REGION

The Nigerian Middle Belt Region is a geographical zone that crosses the country from east to west. Since January 2018, a conflict between farmers and semi-nomadic pastoralists has escalated dramatically, causing massive displacements and a higher death toll than the Boko Haram attacks in north-eastern Nigeria.[300]

Several factors have increased competition for scarce resources, including increased demand for agricultural land located along seasonal grazing routes due to rapid population growth. Other factors are more closely related to climate change; for example, floods from the Niger and Benue rivers, increasing desertification, and recurrent droughts in the north. Desertification and droughts have pushed Muslim nomadic pastoralist from the north towards predominantly Christian farming areas further south.[301]

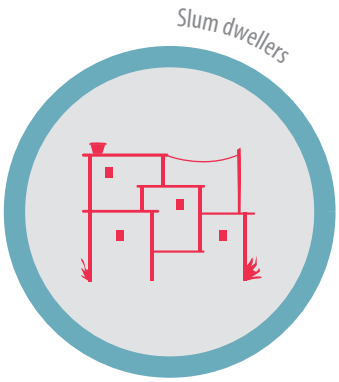
Health needs:

- The displacement of several thousand farmers due to conflicts with pastoralist have resulted in the loss of food stocks and harvest crops, which has affected their food security and nutritional status. According to the Nigerian Health Cluster, acute respiratory infections, watery diarrhoea, and severe acute malnutrition are the top three causes of illness among IDPs in Nigeria.[302]
- Massive floods from the Niger and Benue rivers have destroyed farmers' crops and livestock, increased the threat of endemic epidemics, such as cholera, and increased the risk of vector-borne and water-borne diseases.[303]
- Vector-borne diseases, in particular malaria morbidity and mortality, are a serious public health threat for populations living in the Nigerian Middle Belt Region. While Nigeria has the highest burden worldwide, with a malaria prevalence rate of 25%,[304] the Middle Belt Region has one of the highest prevalence rates in the country, with a rate close to 40% in children between the ages of 6 and 59 months.[305]

2.1.13. SLUM DWELLERS

SOME FACTS

- Slums are usually characterized by a lack of appropriate sewage or sanitation facilities, regular supply of clean water, and electricity. The houses tend to be densely packed and unsafe. These factors increase the risk of problems such as chronic diarrhoea, tuberculosis, and vector borne diseases.[306]
- The number of people living in slums is generally predicted to increase by 106 million in fragile and conflict affected countries. Only three ffragile states – Egypt, Lao PDR, and Rwanda – were on track to reduce their number of slum dwellers.
- As explained in the 'Urban Violence' section, slum dwellers are often affected by gang violence and other types of organized crime.
- The risky health and social environment of slums (overcrowding, lack of clean water, poor sanitation, and deficient medical facilities), combined with low vaccination rates, poor education, and self-medication, result in high vulnerability to infection and disease outbreaks. Thus, diseases such as cholera, malaria, dengue, Ebola, and HIV are common in slums across the world.[307] For example, evidence shows that urban slums were a breeding ground and a fuelling spread factor for the Ebola Virus Disease in the West Africa outbreak.[308] [309] These same slum conditions make it difficult to follow contain/mitigation measures to control epidemics. Additionally, the economic impacts of pandemics/epidemics can hit these communities harder, deepening the existing vulnerabilities and inequalities.



FREQUENT BARRIERS TO HEALTHCARE ACCESS

- Insufficient availability of health facilities.
- Insufficient number of providers (as they lack motivation to work in local settings due to security concerns).
- Affordability of services (given poverty levels/unemployment rates).

2.1.14. LGBTQI INDIVIDUALS

SOME FACTS

- The vulnerability of LGBTQI populations are exacerbated in times of conflict, disaster, or crisis. While international humanitarian law prohibits targeting people based on their sexual orientation or gender identity, these populations are often subject to increased violence and homophobia in times of crisis. The additional pressures experienced by society in times of conflict and natural disasters act to amplify homophobia, which can lead to the denial of assistance.[310]
- LGBTQI populations have significant mental health risks. Weak support networks, stigma and discrimination expose these populations – young people in particular – to an increased risk of depression, suicide, substance abuse, engagement in unsafe sexual practices, STISs, and HIV.[311] [312]
- Evidence indicates that LGBTQI individuals are exposed to substantially more health-related risks – including HIV/AIDS, other communicable diseases, and suicide—than the general population.[313]
- LGBTQI communities are all-too familiar with the phenomena of stigma and epidemics. This community is very vulnerable to infectious disease outbreaks due to underlying health conditions and also because they continue to experience stigmatization, unprofessional attitudes, and lack of support and understanding from healthcare providers.[314] Immunodeficient systems linked to compromised health conditions, such as HIV and cancer, put LGBTQI people at higher risk of contracting a virus and diseases during an epidemic/pandemic; they may also tend to seek medical care less than their heterosexual and gender-conforming peers for fear of discrimination.[315]

FREQUENT BARRIERS TO HEALTHCARE ACCESS[316] [317]

- The criminalization of homosexuality may deter individuals from seeking health services due to fears related to the confidentiality of services.
- In countries where no criminal sanctions exist, homophobic, sexist, and transphobic practices and attitudes on the part of health providers and personnel may nonetheless deter LGBTQI persons from seeking services.
- In many countries, transgender people face particular difficulties in accessing healthcare, as relevant services, when available, are prohibitively expensive, and state funding or insurance coverage is rarely available. Healthcare professionals are often insensitive to the needs of transgender people and lack the necessary professional training.
- Intersex children, who are born with atypical sex characteristics, are often subjected to discrimination and medically unnecessary surgery to 'fix' their sex, frequently performed without their informed consent or that of their parents.
- The package of services offered to LGBTQI populations may not be evidence-based, e.g. the practice of so-called 'reparative' therapy intended to 'cure' homosexuality.
- Lack of commodities, e.g. condoms, treatment for STIs.

2.1.15. SURVIVORS OF SEXUAL AND GENDER-BASED VIOLENCE

SOME FACTS

- Multiple studies have shown a relation between disaster and an increase in sexual and gender-based violence. The evidence also confirms that there is limited awareness of this relation among communities, health providers, and humanitarian actors.[318]
- According to a study conducted by IFRC in the South Asia region, child marriage, girl trafficking, and domestic violence are just some examples of gender-based violence that increases in situations of disaster.[319]
- The United Nations has identified sexual violence as a frequently used as tactic of war; these crimes include mass rapes often accompanied by other types of violence, such as killing, looting, pillage, forced displacement, and arbitrary detention.[320]
- As stated by UNFPA and other authoritative sources, pandemics/epidemics may increase the risk of abuse and exploitation of women and girls, forcing them to be locked down with their aggressors. Different forms of GBV, including intimate partner violence and SGBV, have shown to escalate due to heightened tensions in the household. China, Spain, and the USA have reported data showing that the strategies adopted to tackle the spread of the COVID-19 have, in some cases, exacerbated violence against women and girls. Aditionally, lockdowns and quarantines from containment measures could mean that medical services and support to SGBV survivors may be cut off or deprioritized in healthcare structures as a result of overburdened health systems focused on managing pandemic cases instead.[321]
- This situation could also signify that many women could face unintended pregnancies. Restricted access to abortion care facilities or pharmacies providing misoprostol, may lead to unsafe abortions and increased mortality among SGBV survivors. SGBV survivors may also face difficulties to access prophylaxis for HIV and STI prevention. Lack of timely treatment can put their health and life at risk.

FREQUENT BARRIERS TO HEALTHCARE ACCESS

- Lack of commodities, e.g. emergency contraception, profilaxis.
- Poorly coordinated referral networks.
- Lack of trained providers.
- Stigma.
- Pressure to report the incident as a condition to access care.

2.1.16. SEX WORKERS

SOME FACTS

- A study conducted by the IFRC shows that experiencing poverty following a disaster can force women and girls to engage in transactional sex.[322] However, the needs of sex workers are not incorporated into disaster response and planning.[323]
- Sex workers are vulnerable due to both structural oppression, as well as their unmet social and health needs.[324]
- Female sex workers are 13.5% more likely to be living with HIV than other women of reproductive age.[325] Often, they are not in a position to negotiate safe sex (e.g. condom use) with their clients because of risk of further violence.
- Sex workers are also at an increased risk of domestic and intimate partner violence, stigmatization, and reproductive and mental health problems.
- Sex workers may be at risk of physical and sexual violence from authority figures, e.g. police, peace keeping forces, soldiers.[326]
- Sex workers face a high risk of infectious diseases contagion and epidemic outbreaks. The risk of acquiring HIV and other STIs is significantly greater due to unsafe sexual activity, multiple sexual partners, and/or drug substance use. The rates of STIs are from 5 to 60 times higher among sex workers than in the general populations, since they are often unaware of their infection status, which endangers their own health and increases the risk of infecting others with HIV and other STIs.[327] There is also a deep-rooted social stigmatization of this group regarding HIV and STI spread. According to the World Bank, sex workers have often been catalogued as vectors of disease and core transmitters rather than workers and human beings with rights in terms of HIV prevention and treatment.[328]

FREQUENT BARRIERS TO HEALTHCARE ACCESS

- Discrimination from healthcare providers.
- Sex work is criminalized in many countries, which leaves sex workers without protection in case of denial of services including healthcare.[329] Even in countries where sex work is legal, the law may not be implemented properly.[330]
- Unemployment resulting in financial hardship .
- Lack of knowledge around sexual health or HIV status.
- No legal protection in cases of violence/rape.
- Lack of mobility (due to power dynamics with pimps/brothels).

2.1.17. INDIVIDUALS WITH DISABILITIES

SOME FACTS

- Over a billion people are estimated to be living with some form of disability; long-term physical, mental, intellectual, or sensory impairments which, in interaction with various barriers, may hinder their full and effective participation in society on an equal basis with others.[331]
- Between 110 million (2.2%) and 190 million (3.8%) people 15 years of age and older have significant difficulties in functioning.[332] Additionally, 1 out of 10 children experience a disability and it is likely that one 1 in 5 women will face disability during her lifetime.[333]
- Evidence indicates that individuals with disabilities have a high probability of experiencing new impairments in the context of a crisis and of suffering psychological stress and/or disorientation.[334]
- Women with disabilities are at higher risk of having an unwanted pregnancy or contracting STIs when health services are not available.[335]
- Sex workers may be at risk of physical and sexual violence from authority figures, e.g. police, peace keeping forces, soldiers.
- People with disabilities might be at a higher risk when epidemics and pandemics occur. This is due to the barriers that this population may encounter in implementing basic hygiene measures, such as handwashing to contain the spread (for example hand-basins or sinks may be physically inaccessible, or a person may have physical difficulty rubbing their hands together thoroughly) or the pre-existing health conditions they could present. People with disabilities may also be disproportionately impacted by outbreaks because of serious disruptions to health and other related services they rely upon. WHO is certain that barriers experienced by people with disabilities can be reduced if key stakeholders take appropriate action.[336]

FREQUENT BARRIERS TO HEALTHCARE ACCESS

- Insufficient availability of relevant services and commodities, such as rehabilitation and assistive devices.
- Poor adaptation of service delivery points to meet the requirements of individuals with physical disabilities.
- Lack of adaptation of informational materials to meet the needs of individuals with physical or cognitive impairment.
- Lack of trained providers.

2.1.18. PEOPLE WITH CHRONIC DISEASES

SOME FACTS

- Chronic diseases are a major cause of death worldwide, representing 71% of all deaths globally and over 85% of premature deaths in low- and middle-income countries. These deaths are mainly due to cardiovascular diseases, followed by cancers, respiratory diseases, and diabetes.[337]
- Refugees and migrants – particularly elderly groups – are disproportionally affected by interruptions in treatment of chronic diseases, while being exposed to additional risk factors during the journey. Among the risks are physical injuries, secondary infections, and poor control of glycaemia; loss of access to medication or devices; loss of prescriptions; degradation of living conditions; and absence of healthcare providers.[338]
- People living with chronic diseases could have poor general health conditions which make them particularly vulnerable to epidemics. For instance, according to WHO, people with pre-existing medical conditions such as heart disease, lung disease, cancer, or diabetes appear to develop serious illness more often than others without these underlying medical conditions. Likewise, the regular use of medicines such as steroid tablets or chemotherapy also put them at risk to severe effects of contagious diseases such as this novel pandemic. [339]

FREQUENT BARRIERS TO HEALTHCARE ACCESS

- According to recent studies, people living with chronic diseases face barriers to healthcare access, in particular, but not exclusively, due to a lack of affordability of essential medications, gaps in health systems (including screening and referrals), and low adherence to medications.[340]
- Natural disasters and conflicts increase the burden on health systems and structures, disrupting, exacerbating, or decreasing its capacity to deliver ongoing case management for chronic diseases and timely treatment.[341]
- In humanitarian emergencies, the health component of programmes and projects focuses often on life saving interventions and infectious illnesses.[342] However, chronic diseases are starting to grab the attention of humanitarian actors as leading causes of disability and death in disaster-prone areas.[343]

2.2. COUNTRIES IN THE LAST MILE OF HEALTH[xxix]

As explained in the section 'Study Methodology', through the combination of data from multiple authoritative databases, the HLMCI scores countries to identify their likelihood of being in the last mile. Based on the score obtained for each country, the HLMCI offers a ranking of the country for 2016 and 2030. Those in the first 25 positions are more likely to be on the verge of the last mile.

This section offers information on those first 25 countries. An additional five countries are profiled (Syria, Guatemala, Lebanon, Myanmar, and Venezuela) as examples of countries that rank better in the Index, yet key informants and literature review indicate that they report significant barriers to healthcare access. Each country is assessed based on factors that push individuals to the last mile in relation to health (as per the definition proposed in this study): the existence or probability of crisis, challenges for humanitarian response, pre-existing health system barriers, and other prevalent and social determinants in the country. In-depth cases studies of the last mile in El Salvador, Pakistan, Iraq, and Somalia[xxx] are also included.

It is important to remember that countries that are further from the last mile – e.g. stable and developed countries – may also be home to populations living in the last mile of health that suffer the convergence of contextual compounding factors that affect healthcare access. Homeless individuals and people who inject drugs are just two populations that are affected by the confluence of factors that lead to health inequities and poor health outcomes.

[xxix] A single table with the most relevant indicators for each of these country profiles, for comporative purposes, can be found in Annex 2.
[xxx] Countries selected in consultation with NorCross staff members.

2.2.1. CENTRAL AFRICAN REPUBLIC

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 1

Regional HLMCI ranking: 1

Low-income country

Population: 4.67 million

Fertility rate, total (births per woman): 4.8

Life expectancy at birth, total (years): 53

Mortality rate, under-5 (per 1,000 live births): 117

Births attended by skilled health staff (% of total): 40%

HIV incidence per 1,000 population: 1.20 [0.77–1.77]

Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 23.1%

Suicide mortality rate (per 100,000 per age-standardized population): 11.6

Net official development assistance received (current US$) (millions): 655.7

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Internally displaced populations: 697,337 people (as of March 2020)[344]
- Individuals in the migration route to Cameroon, Democratic Republic of Congo, Chad, Congo, Sudan, and South Sudan
- Cattle migrants (transhumance) in the north-west (Bouar-BocarangaBaboua region), the west (Berberati region, Gamboula, AmadaGaza), the centre-west (Bossembéle-Yaloké region), the centre-east (Kouango-Bambari-Alindao-Kembé region), the north of the Ouham Prefecture, and in Nana-Gribizi
- Children associated with armed forces or armed groups: 14,000 Child soldiers were reported between 2017 and 2018 serving as combatants, guards, human shields, porters, messengers, spies, cooks, and/or for sexual purposes[345]
- LGBTQI population: The Penal Code in article 85 criminalizes "acts against nature commited in public" and imposes harsh penalties of 6 months to 2 years imprisonment. Local CSOs indicate that this has been used to blackmail and arrest LGBTQI people[346]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 6
- Global Climate Risk Index (1999 to 2018): 159
- Global Hunger Index (2019): 117 out of 117 qualifying countries
- Conflict: Yes

HUMANITARIAN NEED AND RESPONSE

- Health cluster: Yes
- In 2019:[347]

  2.9 million people affected (more than half are children)

  1.6 million people have acute and immediate humanitarian needs

  1.7 million people targeted by humanitarian response

  US $2.8 million funds were requested; 48% funded

  US $430.7 million needed to cover the humanitarian crisis: $168 million for food security, $39 million for protection, US $35 million for water, hygiene, and sanitation, $29 million for health, $26 million for nutrition, and $22 million for shelter

  139 humanitarian partners operating in the country

  Insecurity and conflict have affected the humanitarian community with around 40 humanitarians injured by criminals or armed groups in 2019[348] and high levels of kidnapping of humanitarian workers and theft of the vehicles and premises of the United Nations and non-governmental organizations[349]

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 33
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 0.629
  Nursing and midwifery personnel (per 10,000 population): 2.04
- Full immunization coverage among one-year-olds (%):
  Male: 17.7%
  Female: 16.8%

OTHER DETERMINANTS

- Human Development Index 2019: 188 out of 189
- Subregions with lowest HDI (2018):
  RS V (Basse Kotto, Mbornou, Houte Mbormou)
  RS III (Ouham Pende, Ouham)
  RS II (Mambera Kadei, Nana Mambere, Sangha Mbaere)
- Ambient and household air pollution attributable death rate (per 100,000 population): 141 [128–153]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 66.3%
- Income share held by lowest 20%: 3.3%
- Urban population growth (annual %): 2.5%
- Primary completion rate, total (% of relevant age group): 41%

2.2.2. CHAD

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 2
Regional HLMCI ranking: 2
Low-income country
Population: 15.48 million
Fertility rate, total (births per woman): 5.7
Life expectancy at birth, total (years): 54
Mortality rate, under-5 (per 1,000 live births): 119
Births attended by skilled health staff (% of total): 20%
HIV incidence per 1,000 population: 0.65 [0.5–0.83]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 23.9%
Suicide mortality rate (per 100,000 per age-standardized population): 15.5
Net official development assistance received (current US$) (millions): 875.4

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Internally displaced populations: 208,382 people (as of March 2020)[350]
- Refugees: 469,606 people including 3,838 asylum seekers (as of April 2020)[351]
- LGBTQI population: Sexual relations with a person of the same sex are prohibited and punished with 2 years imprisonment[352]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 7
- Global Climate Risk Index (1999 to 2018): 110
- Global Hunger Index (2019): 115 out of 117 qualifying countries
- Conflict: Post-conflict, high volatility

HUMANITARIAN NEED AND RESPONSE

- Health cluster: Yes
- In 2019:[353]
  - 4.3 million people in need
  - 2 million people targeted by humanitarian response
  - US $28.7 million funds were requested; 11% funded
  - US $476.6 million needed to cover the humanitarian crisis: $140.3 million for food security, $16.8 million for protection, US $20.9 million for water, hygiene, and sanitation, $28.7 million for health, $69.6 million for nutrition, and $3.3 million for shelter
  - 39 humanitarian partners operating in the country
  - In 2018, two aid workers were killed in armed/unarmed robberies in Chad[354]

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 28
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 0.475
  Nursing and midwifery personnel (per 10,000 population): 4.64
- Full immunization coverage among one-year-olds (%):
  Male: 25.4%
  Female: 25.9%

OTHER DETERMINANTS

- Human Development Index 2019: 187 out of 189
- Subregions with lowest HDI (2018):
  Zone 2 (BET [Borkou, Ennedi, Tibesti], Kanem [including Barh El Gazal], Lac)
  Zone 4 (Ouaddai [incl Assongha, Sili], Biltine [new name Wad Fira]
  Zone 5 (Chari-Baguirmi [Dababa, Baguirmi, Hadjer Lamis]
- Ambient and household air pollution attributable death rate (per 100,000 population): 181 [160–198]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 38.4%
- Income share held by lowest 20%: 4.9%
- Urban population growth (annual %): 3.9%
- Primary completion rate, total (% of relevant age group): 41%
- Individuals using the Internet (% of population): 6.5%

2.2.3. SOMALIA

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 3
Regional HLMCI ranking: 3
Low-income country
Population: 15.01 million
Fertility rate, total (births per woman): 6.1
Life expectancy at birth, total (years): 57
Mortality rate, under-5 (per 1,000 live births): 122
Births attended by skilled health staff (% of total): 9%
HIV incidence per 1,000 population: 0.03 [0.01–0.05]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 21.8%
Suicide mortality rate rate (per 100,000 per age-standardized population): 8.3
Net official development assistance received (current US$) (millions): 1,573

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Internally displaced populations: 2,218,000 people (as of April 2020)[355]
- Survivors of female genital mutilation: 98% of girls and women between the ages of 15–49 in Somalia have undergone FGM[356]
- LGBTQI population: Article 409 of the Penal Code prohibits and criminalizes same-sex intimacy as an offence against modesty[357]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 2
- Global Climate Risk Index (1999 to 2018): Not available
- Global Hunger Index (2019): Not available
- Conflict: Yes

HUMANITARIAN NEED AND RESPONSE

- Health cluster: Yes
- In 2019:[358]
  - 4.2 million people in need
  - 3.4 million people targeted
  - US $93 million funds were requested, 21.9% funded
  - US $1.08 billion needed to cover the humanitarian crisis: $353 million for food security, $84 million for protection, US $104 million for water, hygiene and sanitation, $93 million for health, $178 million for nutrition, and $64 million for shelter
  - 328 humanitarian partners operating in the country[359]

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 25
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 0.229
  Nursing and midwifery personnel (per 10,000 population): 0.61
- Full immunization coverage among one-year-olds (%):
  Male: 14.4%
  Female: 9.9%

OTHER DETERMINANTS

- Human Development Index 2019: not available
- Subregions with lowest HDI (2018):
  Middle Juba
  Galguduud
  Hiran
- Ambient and household air pollution attributable death rate (per 100,000 population): 152 [136–166]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): Not available
- Income share held by lowest 20%: Not available
- Urban population growth (annual %): 4.1%
- Primary completion rate, total (% of relevant age group): Not available
- Individuals using the Internet (% of population): 2%

2.2.4. SOUTH SUDAN

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 4
Regional HLMCI ranking: 4
Low-income country
Population: 10.98 million
Fertility rate, total (births per woman): 4.7
Life expectancy at birth, total (years): 58
Mortality rate, under-5 (per 1,000 live births): 99
Births attended by skilled health staff (% of total): 19%
HIV incidence per 1,000 population: 1.56 [1.03–2.18]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 19.8%
Suicide mortality rate (per 100,000 per age-standardized population): 6.1
Net official development assistance received (current US$) (millions): 1,577.3

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Internally displaced populations: 1,665,815 people (as of February 2020)[360]
- Children associated with armed forces or armed groups: 453 children have been reported as recruited for war[361]
- LGBTQI population: The Penal code in article 248 criminalizes "intercourse against the order of nature" with 10 years imprisonment [362]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 3
- Global Climate Risk Index (1999 to 2018): 125
- Global Hunger Index (2019): Insufficient data
- Conflict: Yes

HUMANITARIAN NEED AND RESPONSE

- Health cluster: Yes
- In 2019:[363]

  3.4 million people in need

  2 million people targeted

  US $120 million funds were requested; 40% funded

  Frequent attacks against humanitarian workers and facilities result in regular suspension of activities. Weather conditions affect deployment during rainy season[364]

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 31
- Health worker density and distribution:
  Medical doctors (per 10,000 population): Not available
  Nursing and midwifery personnel (per 10,000 population): Not available
- Full immunization coverage among one-year-olds (%):
  Male: 6.4%
  Female: 8.3%

OTHER DETERMINANTS

- Human Development Index 2019: 186 out of 189
- Subregions with lowest HDI (2018):
  Northern Bahr El Ghazal
  Warrap
  Jonglei
- Ambient and household air pollution attributable death rate (per 100,000 population): 109 [98–119]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 82.3%
- Income share held by lowest 20%: 3.9%
- Urban population growth (annual %): 2.0%
- Primary completion rate, total (% of relevant age group): 27%
- Individuals using the Internet (% of population): 8.0%

2.2.5. MALI

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 5
Regional HLMCI ranking: 5
Low middle-income country
Population: 19.08 million
Fertility rate, total (births per woman): 5.9
Life expectancy at birth, total (years): 59
Mortality rate, under-5 (per 1,000 live births): 98
Births attended by skilled health staff (% of total): 67%
HIV incidence per 1,000 population: 0.78 [0.6–1.12]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 24.6%
Suicide mortality rate (per 100,000 per age-standardized population): 8.9
Net official development assistance received (current US$) (millions): 1,492.2

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Internally displaced populations: 239,484 people (as of March 2020)[365]
- Refugee returnees: 82,507 people (as of March 2020)[366]
- People affected by landmines: In 2017 Mali confirmed antivehicle mine contamination and an increase of improvised explosive devices in the centre of the country[367]
- Cattle migrants (transhumance): Conflicts concerning natural resources in the Saeh region makes the mobility of the pastoral area difficult[368]
- Gang–affiliated youth[369]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 21
- Global Climate Risk Index (1999 to 2018): 135
- Global Hunger Index (2019): 83 out of 117
- Conflict: Yes

HUMANITARIAN NEED AND RESPONSE

- Health cluster: Yes
- In 2019:[370]
  - 3.2 million people in need
  - 2.3 million people targeted
  - US $16 million funds were requested; 56% funded
  - The total need to cover the humanitarian needs is US $296 million
  - At least 196 humanitarian partners
- Mines and explosives pose a threat to humanitarian workers. The aid sector is also target of attacks against staff, volunteers, and facilities[371]

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 38
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 1.393
  Nursing and midwifery personnel (per 10,000 population): 3.82
- Full immunization coverage among one-year-olds (%):
  Male: 30.4%
  Female: 30.2%

OTHER DETERMINANTS

- Human Development Index 2019: 189 out of 189
- Subregions with lowest HDI (2018):
  Dosso
  Tahoua
  Zinder
- Ambient and household air pollution attributable death rate (per 100,000 population): 107 [97–115]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 49.7%
- Income share held by lowest 20%: 8.0%
- Urban population growth (annual %): 4.9%
- Primary completion rate, total (% of relevant age group): 50%
- Individuals using the Internet (% of population): 47.0%

2.2.6. LESOTHO

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 6
Regional HLMCI ranking: 6
Lower middle-income country
Population: 2.11 million
Fertility rate, total (births per woman): 3.1
Life expectancy at birth, total (years): 54
Mortality rate, under-5 (per 1,000 live births): 81
Births attended by skilled health staff (% of total): 78%
HIV incidence per 1,000 population: 7.8 [6.69–9.15]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 26.6%
Suicide mortality rate (per 100,000 per age-standardized population): 28.9
Net official development assistance received (current US$) (millions): 151.8

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Rural populations (as a result of drought/El Niño)
- Disabled people: 4.2% of Lesotho population has some form of disability; school infrastructure is not accessible for children with physical and visual impairments[372]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 61
- Global Climate Risk Index (1999 to 2018): 118
- Global Hunger Index (2019): 79 out of 117
- Conflict: No

HUMANITARIAN NEED AND RESPONSE

- Health cluster: No
- IIt is expected that from October 2019 to March 2020 about 30% of the rural population – over 433,000 people – will require humanitarian assistance, compared to 18% in 2018. 13.3% of the urban population – about 75,000 people – will also require humanitarian assistance, compared to 9.2% in 2018
- In 2018, US $150,000 were requested. Information not available about amount funded[373]

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 48
- Health worker density and distribution:
  Medical doctors (per 10,000 population): Not available
  Nursing and midwifery personnel (per 10,000 population): 6.51
- Full immunization coverage among one-year-olds (%):
  Male: 69.9%
  Female: 69.9%

OTHER DETERMINANTS

- Human Development Index 2019: 164 out of 189
- Ambient and household air pollution attributable death rate (per 100,000 population): 113 [99–129]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 57.9%
- Income share held by lowest 20%: 2.8%
- Urban population growth (annual %): 2.3%
- Primary completion rate, total (% of relevant age group): 86%
- Individuals using the Internet (% of population): 29.0%

2.2.7. NIGERIA

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 7
Regional HLMCI ranking: 7
Middle-income country
Population: 195.87 million
Fertility rate, total (births per woman): 5.4
Life expectancy at birth, total (years): 54
Mortality rate, under-5 (per 1,000 live births): 120
Births attended by skilled health staff (% of total): 43%
HIV incidence per 1,000 population: 0.65 [0.4–1.03]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 22.5%
Suicide mortality rate (per 100,000 per age-standardized population): 17.3
Net official development assistance received (current US$) (millions): 3,301.5

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Internally displaced populations: 2,586,653 people (as of February 2020)[374]
- Populations in areas of intervention of Boko Haram
- Farmers/herders
- Children associated with armed forces or armed groups: The United Nations has documented and verified 1,947 cases of recruitment and use of children by armed groups[375]
- Ethnic minorities: Yuruba, Igbo, Ijaw, and Ogoni communities are targets for Boko Haram and have felt a deadly impact in the conflict[376]
- Religious minorities: Hausa and Christians in the north are targets for Boko Haram and have felt a deadly impact in the conflict[377]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 14
- Global Climate Risk Index (1999 to 2018): 117
- Global Hunger Index (2019): 93 out of 117
- Conflict: Inter-community/ethno-religion conflicts

HUMANITARIAN NEED AND RESPONSE

- Health cluster: No
- In 2019:[378]

  7.1 million people in need

  6.2 million people targeted

  US $848 million funds were requested: US $263.6 million for food security, US $106.3 million for nutrition, US $73.7 million for health, US $68.8 million for wash, US $60.5 million for shelter

  Currently, Nigeria has the support of 183 humanitarian projects
- Humanitarian actors have challenges to access northeast Nigeria. Access is also restricted in the Middle Belt region due to violence between farmers and herders. Flooding during rainy seasons further limit access[379]

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 42
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 3.827
  Nursing and midwifery personnel (per 10,000 population): 14.52
- Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis: Not available
- Full immunization coverage among one-year-olds (%):
  Male: 22.5%
  Female: 22.7%

OTHER DETERMINANTS

- Human Development Index 2019: 158 out of 189
- Human Development Index 2019: 158 out of 189 Subregions with lowest HDI (2018):
  Bauchi
  Jigawa
  Katsina
  Kebbi
  Sokoto
  Yobe
- Ambient and household air pollution attributable death rate (per 100,000 population): 159 [141–174]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 53.5%
- Income share held by lowest 20%: 5.4%
- Urban population growth (annual %): 4.2%
- Primary completion rate, total (% of relevant age group): 74%

2.2.8. SIERRA LEONE

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 8
Regional HLMCI ranking: 8
Low-income country
Population: 7.65 million
Fertility rate, total (births per woman): 4.3
Life expectancy at birth, total (years): 54
Mortality rate, under-5 (per 1,000 live births): 105
Births attended by skilled health staff (% of total): 82%
HIV incidence per 1,000 population: 0.55 [0.36–0.77]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 30.5%
Suicide mortality rate (per 100,000 per age-standardized population): 16.1
Net official development assistance received (current US$) (millions): 505.9

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- People with disabilities: People with disabilities face stigma and neglect in Sierra Leone.[380]
- By 2015, 93,129 people had a disability in the country, representing 1,3% of the total population[381]
- People living with HIV: The HIV prevalence in the country is 1.25%. Sex workers, their clients, and partners account for the 39.7% of new infections[382]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 39
- Global Climate Risk Index (1999 to 2018): 91
- Global Hunger Index (2019): 103 out of 117
- Conflict: No

HUMANITARIAN NEED AND RESPONSE

- Health cluster: No
- Low intervention from humanitarian sector: Following the end of the Ebola outbreak, the pattern of development assistance to the health sector has shifted back from emergency response and humanitarian assistance to recovery and longer-term capacity building investments[383]

HEALTH SYSTEM

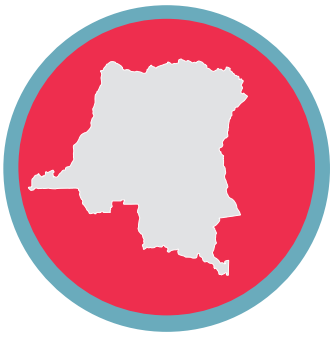
- Coverage of essential health services (UHC index of service coverage): 39
- Health worker density and distribution:
  Medical doctors (per 10,000 population): Not available
  Nursing and midwifery personnel (per 10,000 population): 9.96
- Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis: Not available
- Full immunization coverage among one-year-olds (%):
  Male: 68.4%
  Female: 68.4%

OTHER DETERMINANTS

- Human Development Index 2019: 181 out of 189
- Subregions with lowest HDI (2018):
  Bonthe
  Kailahun
  Koinadugu
  Moyamba
  Pujehun
  Tonkolili
- Ambient and household air pollution attributable death rate (per 100,000 population): 148 [135–160]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 52.2%
- Income share held by lowest 20%: 7.9%
- Urban population growth (annual %): 3.1%
- Primary completion rate, total (% of relevant age group): 82%
- Individuals using the Internet (% of population): 9%

2.2.9. DEMOCRATIC REPUBLIC OF CONGO

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS



Global HLMCI ranking: 9
Regional HLMCI ranking: 9
Low-income country
Population: 84.1 million
Fertility rate, total (births per woman): 5.9
Life expectancy at birth, total (years): 60
Mortality rate, under-5 (per 1,000 live births): 88
Births attended by skilled health staff (% of total): 80%
HIV incidence per 1,000 population: 0.21 [0.14–0.29]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 19.4%
Suicide mortality rate (per 100,000 per age-standardized population): 9.7
Net official development assistance received (current US$) (millions): 2,509.8

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Internally displaced populations: 4,516,865 people (2018)[384]
- Children associated with armed forces or armed groups: The United Nations documented 631 cases of recruitment and use of children, including 91 girls[385]
- Survivors of sexual and gender-based violence: humanitarian actors assist almost 30,000 survivors of GBV per year[386]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 5
- Global Climate Risk Index (1999 to 2018): 141
- Global Hunger Index (2019): Insufficient information
- Conflict: Post-conflict; rebel groups continue operating in the Eastern Areas

HUMANITARIAN NEED AND RESPONSE

- Health cluster: Yes
- In 2019:[387]
  - 8.1 million people in need
  - 3.5 million people targeted
  - US $212.3 million funds were requested; 29.4% funded

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 41
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 0.900
  Nursing and midwifery personnel (per 10,000 population): 4.7
- Full immunization coverage among one-year-olds (%):
  Male: 45.1%
  Female: 45.5%

OTHER DETERMINANTS

- Human Development Index 2019: 179 out of 189
- Subregions with lowest HDI (2018):
  - Equateur
  - Kasai Occidental
  - Orientale
  - Sud-Kivu
- Ambient and household air pollution attributable death rate (per 100,000 population): 101 [90–110]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 76.6%
- Income share held by lowest 20%: 5.5%
- Urban population growth (annual %): 4.5%
- Primary completion rate, total (% of relevant age group): 70%
- Individuals using the Internet (% of population): 8.6%

2.2.10. YEMEN

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 10
Regional HLMCI ranking: 1
Low-income country
Population: 28.5 million
Fertility rate, total (births per woman): 3.8
Life expectancy at birth, total (years): 66
Mortality rate, under-5 (per 1,000 live births): 55
Births attended by skilled health staff (% of total): 45%
HIV incidence per 1,000 population: 0.04 [0.01–0.08]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 30.6%
Suicide mortality rate (per 100,000 per age-standardized population): 9.8
Net official development assistance received (current US$) (millions): 7,985.2

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Internally displaced populations: 3,647,250 people (as of August 2019)[388]
- Children associated with armed forces and armed groups: The United Nations has reported 370 cases of recruitment and use of children[389]
- People with disabilities/Victims of landmines

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 1
- Global Climate Risk Index (1999 to 2018): 74
- Global Hunger Index (2019): 116 out of 117
- Conflict: Yes

HUMANITARIAN NEED AND RESPONSE

- Health cluster: Yes
- In 2019:[390]
  19.7 million people in need
  3.5 million people targeted
  US $627 million funds were requested; 39% funded
- Humanitarian assistance was blocked until 2018. Increased access for the delivery of assistance since then, but challenges continue in major ports such as Al Hudaydah[391]

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 43
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 3.103
  Nursing and midwifery personnel (per 10,000 population): 7.3
- Full immunization coverage among one-year-olds (%):
  Male: 41.4%
  Female: 43.9%

OTHER DETERMINANTS

- Human Development Index 2019: 179 out of 189
- Subregions with lowest HDI (2018):
  Beida, Dhamar, Raimah
  Hajja, Sada, Amran
  Hodeida
- Ambient and household air pollution attributable death rate (per 100,000 population): 90 [78–102]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 7.4%
- Income share held by lowest 20%: 7.1%
- Urban population growth (annual %): 4.1%
- Primary completion rate, total (% of relevant age group): 72%
- Individuals using the Internet (% of population): 26.7%

2.2.11. CÔTE D'IVOIRE

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 11
Regional HLMCI ranking: 10
Lower middle-income country
Population: 25.07 million
Fertility rate, total (births per woman): 4.6
Life expectancy at birth, total (years): 57
Mortality rate, under-5 (per 1,000 live births): 81
Births attended by skilled health staff (% of total): 74%
HIV incidence per 1,000 population: 0.7 [0.37–1.32]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 29.1%
Suicide mortality rate (per 100,000 per age-standardized population): 23
Net official development assistance received (current US$) (millions): 953.7

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Stateless individuals: It is estimated that 1,656,330 people live in Côte d'Ivoire at risk of statelessness (as of January 2020).[392] This is due to the absence of a national law that grants nationality to abandoned children or to descendants of neighbouring countries that gained independence such as Mali, Burkina Faso, and Guinea[393]
- Migrants: Cotê d'Ivoire holds the second-largest corridor of labour migrants, large groups of migrant workers are hired in low-skilled sectors including domestic work, informal trade, and agriculture[394]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 29
- Global Climate Risk Index (1999 to 2018): 153
- Global Hunger Index (2019): 84 out of 117
- Conflict: Post-conflict; cases of inter-community conflict

HUMANITARIAN NEED AND RESPONSE

- Health cluster: No
- Low intervention of humanitarian actors over the past three years

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 47
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 2.326
  Nursing and midwifery personnel (per 10,000 population): 8.52
- Full immunization coverage among one-year-olds (%):
  Male: 43.6%
  Female: 41.2%

OTHER DETERMINANTS

- Human Development Index 2019: 179 out of 189
- Subregions with lowest HDI (2018):
  Nord
  Nord Est
  Nord Ouest
- Ambient and household air pollution attributable death rate (per 100,000 population): 144 [127–160]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 28.2%
- Income share held by lowest 20%: 5.7%
- Urban population growth (annual %): 3.4%
- Primary completion rate, total (% of relevant age group): 72%
- Individuals using the Internet (% of population): 46.8%

2.2.12. AFGHANISTAN

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 12
Regional HLMCI ranking: 1
Low-income country
Population: 37.18 million
Fertility rate, total (births per woman): 4.5
Life expectancy at birth, total (years): 64
Mortality rate, under-5 (per 1,000 live births): 62
Births attended by skilled health staff (% of total): 51%
Afghanistan. HIV incidence per 1,000 population: 0.02 [0.01–0.04]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 29.8%
Suicide mortality rate (per 100,000 per age-standardized population): 6.4
Net official development assistance received (current US$) (millions): 3,788.9

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Internally displaced populations: 2,106,893 people (2018)[395]
- People with disabilities/Victims of landmines: 1,415 civilians were killed or injured by landmines in 2018.[396] In 2018 more than 12,000 people sought assistance at physical rehabilitation centres managed by the Red Cross. Disabled people suffer from unemployment, lack of rehab, and lack of educational opportunities[397]
- Children associated with armed forces or armed groups: The United Nations reported 46 cases of recruitment and use of children in the conflict and 3,062 children casualties[398]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 9
- Global Climate Risk Index (1999 to 2018): 24
- Global Hunger Index (2019): 108 out of 117
- Conflict: Yes

HUMANITARIAN NEED AND RESPONSE

- Health cluster: Yes
- In 2019:[399]

  6.3 million people in need

  US $51 million funds were requested; 42% funded

  US $612 million required to respond
- Constraints for humanitarian actors include difficult registration process in the country and limitations to the scope of action. Approximately 40% of the country is either controlled or contested by armed groups, resulting in significant constraints on movement. Aid workers and health infrastructure are frequently targeted. Landmines are a significant issue that restricts mobility[400]

Health system

- Coverage of essential health services (UHC index of service coverage): 37
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 2.840
  Nursing and midwifery personnel (per 10,000 population): 3.2
- Full immunization coverage among one-year-olds (%):
  Male: 45.3%
  Female: 46.6%

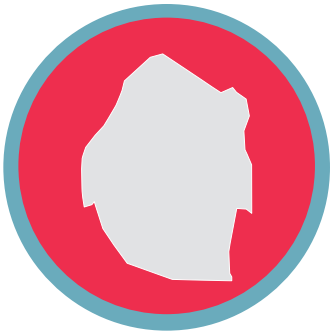
Other determinants

- Human Development Index 2019: 170 out of 189
- Subregions with lowest HDI (2018):
  Central Highlands
  North East
  South
  West
- Ambient and household air pollution attributable death rate (per 100,000 population): 95 [85–104]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 54.5%
- Income share held by lowest 20%: Not available
- Urban population growth (annual %): 3.4%
- Primary completion rate, total (% of relevant age group): 28%
- Individuals using the Internet (% of population): 13.5%

2.2.13. ESWATINI

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 13
Regional HLMCI ranking: 11
Lower middle-income country
Population: 1.14 million
Fertility rate, total (births per woman): 3.0
Life expectancy at birth, total (years): 59
Mortality rate, under-5 (per 1,000 live births): 54
Births attended by skilled health staff (% of total): 84%
HIV incidence per 1,000 population: 8.62 [7.64–9.97]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 26.7%
Suicide mortality rate (per 100,000 per age-standardized population): 16.7
Net official development assistance received (current US$) (millions): 119.6



EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Children under five: Child deprivation ranks high in the dimensions of child protection; 73% of children are deprived of adequate health, and 62% of children are deprived of adequate nutrition[401]
- Rural populations: 20% of the rural population is facing severe acute food insecurity and in need of urgent action[402]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 42
- Global Climate Risk Index (1999 to 2018): 115
- Global Hunger Index (2019): 74 out of 117
- Conflict: No

HUMANITARIAN NEED AND RESPONSE

- Health cluster: No
- In 2018, 354,121 people were in need. In 2017, US$200,000 of humanitarian funding were requested, only US$10,000 were received[403]

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 63
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 0.796
  Nursing and midwifery personnel (per 10,000 population): 20
- Full immunization coverage among one-year-olds (%):
  Male: 80.9%
  Female: 76.6%

OTHER DETERMINANTS

- Human Development Index 2019: 138 out of 189
- Ambient and household air pollution attributable death rate (per 100,000 population): 69 [58–79]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 58.9%
- Income share held by lowest 20%: 4.0%
- Urban population growth (annual %): 39.5%
- Primary completion rate, total (% of relevant age group): 96%
- Individuals using the Internet (% of population): 47.0%

2.2.14. NIGER

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 14
Regional HLMCI ranking: 12
Low-income country
Population: 22.44 million
Fertility rate, total (births per woman): 7.0
Life expectancy at birth, total (years): 62
Mortality rate, under-5 (per 1,000 live births): 84
Births attended by skilled health staff (% of total): 40%
HIV incidence per 1,000 population: 0.08 [0.06–0.12]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 20.0%
Suicide mortality rate: (per 100,000 per age-standardized population): 9
Net official development assistance received (current US$) (millions): 1,196.3

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Refugees and internally displaced populations: 223,094 refugees and 223,868 displaced persons (as of April 2020);[404] primarily in Diffa and Tillabéri, and recently in Maradi[405]
- Children under five

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 18
- Global Climate Risk Index (1999 to 2018): 73
- Global Hunger Index (2019): 101 out of 117
- Conflict: No

HUMANITARIAN NEED AND RESPONSE

- Health cluster: Yes
- In 2019:[406]
  - 2.3 million people in need
  - 1.6 people targeted
  - US $12.1 million funds were requested; 18% funded

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 37
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 0.500
  Nursing and midwifery personnel (per 10,000 population): 3.11
- Full immunization coverage among one-year-olds (%):
  Male: 51.9%
  Female: 53.0%

OTHER DETERMINANTS

- Human Development Index 2019: 189 out of 189
- Subregions with lowest HDI (2018):
  Diffa
  Dosso
  Maradi
  Tahoua
  Zinder
- Ambient and household air pollution attributable death rate (per 100,000 population): 140 [125–152]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 78.2%
- Income share held by lowest 20%: 8.9%
- Urban population growth (annual %): 4.3%
- Primary completion rate, total (% of relevant age group): 72%
- Individuals using the Internet (% of population): 5.3%

2.2.15. PAKISTAN

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 15
Regional HLMCI ranking: 2
Lower middle-income country
Population: 212 million
Fertility rate, total (births per woman): 3.6
Life expectancy at birth, total (years): 67
Mortality rate, under-5 (per 1,000 live births): 69
Births attended by skilled health staff (% of total): 69%
HIV incidence per 1,000 population: 0.11 [0.10–0.12]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 24.7%
Suicide mortality rate (per 100,000 per age-standardized population): 3.1
Net official development assistance received (current US$) (millions): 1,362

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Refugees: 1,420,673 registered Afghan refugees (as of March 2020)[407]
- Returnees (in merged areas/tribal districts, previously named FATA)[408]
- Religious Minorities: Hindus and other minorities are targeted by islamist militants[409]
- Slum Dwellers: 45.5% of the urban population of Pakistan is living in slums[410 411]
- Street children

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 23
- Global Climate Risk Index (1999 to 2018): 5
- Global Hunger Index (2019): 94 out of 117
- Conflict: Yes

HUMANITARIAN NEED AND RESPONSE

- Health cluster: Yes
- In 2019:[412]
  - 2.9 million people in need
  - 1.1 million people targeted for humanitarian response
  - US $106.7 million funds were requested; 2.5% funded

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 45
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 9.8
  Nursing and midwifery personnel (per 10,000 population): 5
- Full immunization coverage among one-year-olds (%):
  Male: 56.2%
  Female: 51.6%

OTHER DETERMINANTS

- Human Development Index 2019: 152 out of 189
- Subregions with lowest HDI (2018):
  Balochistan
  Khyber Pakhtunkhwa (NWFrontier)
  Sindh
- Ambient and household air pollution attributable death rate (per 100,000 population): 113 [99–127]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 3.9%
- Income share held by lowest 20%: 8.9%
- Urban population growth (annual %): 2.7%
- Primary completion rate, total (% of relevant age group): 71%
- Individuals using the Internet (% of population): 72.6%

2.2.16. MAURITANIA

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 16
Regional HLMCI ranking: 13
Lower middle-income country
Population: 4.4 million
Fertility rate, total (births per woman): 4.6
Life expectancy at birth, total (years): 64
Mortality rate, under-5 (per 1,000 live births): 76
Births attended by skilled health staff (% of total): 69%
HIV incidence per 1,000 population: 0.03 [0.02–0.07]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 18.1%
Suicide mortality rate (per 100,000 per age-standardized population): 7.5
Net official development assistance received (current US$) (millions): 447.18

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Refugees: 63,222 refugees (as of April 2020)[413], of which almost 56,000 Malian refugees hosted in the Mbera Camp[414]
- Slum dwellers

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 31
- Global Climate Risk Index (1999 to 2018): 81
- Global Hunger Index (2019): 90 out of 117
- Conflict: History of inter-ethnic conflicts

HUMANITARIAN NEED AND RESPONSE

- Health cluster: Yes
- In 2019:[415]

  2.3 million people were at risk of food shortages (approximately half of the population)

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 41
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 1.5
  Nursing and midwifery personnel (per 10,000 population): 10.32
- Full immunization coverage among one-year-olds (%):
  Male: 28.2%
  Female: 28.0%

OTHER DETERMINANTS

- Human Development Index 2019: 161 out of 189
- Subregions with lowest HDI (2018):
  Assaba
  Gorgol
  Guidimagha
  Hodh Charghi
  Hodh Gharbi
- Ambient and household air pollution attributable death rate (per 100,000 population): 88 [76–102]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 42.0%
- Income share held by lowest 20%: 6.7%
- Urban population growth (annual %): 4.4%
- Primary completion rate, total (% of relevant age group): 76%
- Individuals using the Internet (% of population): 20.8%

2.2.17. BENIN

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 17
Regional HLMCI ranking: 14
Low-income country
Population: 11.49 million
Fertility rate, total (births per woman): 4.9
Life expectancy at birth, total (years): 61
Mortality rate, under-5 (per 1,000 live births): 93
Births attended by skilled health staff (% of total): 78%
HIV incidence per 1,000 population: 0.34 [0.17–0.71]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 19.6%
Suicide mortality rate (per 100,000 per age-standardized population): 15.7
Net official development assistance received (current US$) (millions): 570.3

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Children under five: 9.6% of the population is food insecure, and 32% of young children are affected[416]
- Survivors of female genital mutilation: 72 % of the girls from the Peuhl ethnic group have undergone Female Genital Mutilation[417]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 75
- Global Climate Risk Index (1999 to 2018): 149
- Global Hunger Index (2019): 82 out of 117
- Conflict: No

HUMANITARIAN NEED AND RESPONSE

- Health cluster: No
- Low intervention of humanitarian actors

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 40
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 1.57
  Nursing and midwifery personnel (per 10,000 population): 6.15
- Full immunization coverage among one-year-olds (%):
  Male: 56.6%
  Female: 54.4%

OTHER DETERMINANTS

- Human Development Index 2019: 179 out of 189
- Subregions with lowest HDI (2018):
  Atacora (incl Donga)
  Borgou (incl Alibori)
  Mono (incl Couffo)
- Ambient and household air pollution attributable death rate (per 100,000 population): 119 [107–129]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 49.5%
- Income share held by lowest 20%: 3.2%
- Urban population growth (annual %): 3.9%
- Primary completion rate, total (% of relevant age group): 81%
- Individuals using the Internet (% of population): 82.4%

2.2.18. GUINEA-BISSAU

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 18
Regional HLMCI ranking: 15
Low-income country
Population: 1.87 million
Fertility rate, total (births per woman): 4.6
Life expectancy at birth, total (years): 58
Mortality rate, under-5 (per 1,000 live births): 82
Births attended by skilled health staff (% of total): 43
HIV incidence per 1,000 population: 1.43 [1.13–1.72]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 20%
Suicide mortality rate (per 100,000 per age-standardized population): 7.4%
Net official development assistance received (current US$) (millions): 152.4

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Refugees: 4,850 refugees (as of December 2019), of which about 3,700 refugees from Senegal are searching for naturalization and land formalization[418]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 19
- Global Climate Risk Index (1999 to 2018): 37
- Global Hunger Index (2019): 99 out of 117
- Conflict: No

HUMANITARIAN NEED AND RESPONSE

- Health cluster: No

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 33
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 2.0
  Nursing and midwifery personnel (per 10,000 population): 14
- Full immunization coverage among one-year-olds (%):
  Male: 69.3%
  Female: 69.7%

OTHER DETERMINANTS

- Human Development Index 2019: 178 out of 189
- Subregions with lowest HDI (2018):
  Bafata
  Gabu
  Tomball
- Ambient and household air pollution attributable death rate (per 100,000 population): 108[98–118]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 69.3 %
- Income share held by lowest 20%: 4.5%
- Urban population growth (annual %): 3.5%
- Primary completion rate, total (% of relevant age group): 65%
- Individuals using the Internet (% of population): 3.9%

2.2.19. HAITI

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 19
Regional HLMCI ranking: 1
Low-income country
Population: 11.12 million
Fertility rate, total (births per woman): 3.0
Life expectancy at birth, total (years): 63
Mortality rate, under-5 (per 1,000 live births): 65
Births attended by skilled health staff (% of total): 42%
HIV incidence per 1,000 population: 0.69 [0.50–0.99]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 26.5
Suicide mortality rate (per 100,000 per age-standardized population): 12.2
Net official development assistance received (current US$) (millions): 992.2

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Slum dwellers: The Port-Au-Prince population living in slums is exposed to unsanitary conditions and vulnerable to cholera and mosquito-borne illneses like zika, dengue, and chikingunya[419]
- Rural population: The rural population below the national poverty line according to United Nations is 71.9%[420]
- PLHIV: The incidence of HIV is 160,000 people and the prevalence among adults is 2%[421]
- Migrants: Migrants of Haiti to the Dominican Republic are discriminated and not able to claim nationality; they are, thus, at risk of becoming stateless[422]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 12
- Global Climate Risk Index (1999 to 2018): 3
- Global Hunger Index (2019): 111 out of 117
- Conflict: Legacy of political violence

HUMANITARIAN NEED AND RESPONSE

- Health cluster: No
- In 2019:[423]

  Nearly 2.6 million people were extremely vulnerable

  US $126.2 million were required to implement the Humanitarian Response Plan for Haiti

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 49
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 2.3
  Nursing and midwifery personnel (per 10,000 population): 6.8
- Full immunization coverage among one-year-olds (%):
  Male: 38.7%
  Female: 44.9%

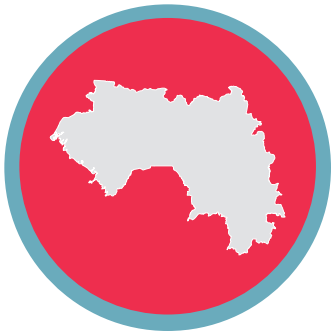
OTHER DETERMINANTS

- Human Development Index 2019: 169 out of 189
- Subregions with lowest HDI (2018):
  Artibonite
  Centre
  Grande-Anse
  South
  South-East
- Ambient and household air pollution attributable death rate (per 100,000 population): 127 [118–137]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 58.5 %
- Income share held by lowest 20%: 5.5%
- Urban population growth (annual %): 3.0%
- Primary completion rate, total (% of relevant age group): 49%
- Individuals using the Internet (% of population): 32.5 %

2.2.20. GUINEA

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 20
Regional HLMCI ranking: 16
Low-income country
Population: 12.41 million
Fertility rate, total (births per woman): 4.8
Life expectancy at birth, total (years): 61
Mortality rate, under-5 (per 1,000 live births): 101
Births attended by skilled health staff (% of total): 55%
HIV incidence per 1,000 population: 0.52 [0.38–0.71]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 22.4%
Suicide mortality rate (per 100,000 per age-standardized population): 10.5
Net official development assistance received (current US$) (millions): 590.6



EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Refugees: 5,526 people including 1,987 asylum seekers (as of April 2020)[424]
- Orphans: Thousands of children lost one or both parents due to the Ebola outbreak of 2014[425]
- Survivors of sexual and gender-based violence
- People with disabilities

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 11
- Global Climate Risk Index (1999 to 2018): 170
- Global Hunger Index (2019): 91 out of 117
- Conflict: Post-conflict

HUMANITARIAN NEED AND RESPONSE

- Health cluster: No
- Low intervention of humanitarian actors

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 37
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 0.788
  Nursing and midwifery personnel (per 10,000 population): 3.84

OTHER DETERMINANTS

- Human Development Index 2019: 174 out of 189
- Subregions with lowest HDI (2018):
  Faranah
  Kankan
  Labe
  Mamou
- Ambient and household air pollution attributable death rate (per 100,000 population): 127 [116–138]
- Poverty headcount ratio at $1.90 a day (2012 PPP) (% of population): 35.3%
- Income share held by lowest 20%: 7.6%
- Urban population growth (annual %): 3.8%
- Primary completion rate, total (% of relevant age group): 60%
- Individuals using the Internet (% of population): 18.0%

2.2.21. BURKINA FASO

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 21
Regional HLMCI ranking: 17
Low-income country
Population: 19.75 million
Fertility rate, total (births per woman): 5.3
Life expectancy at birth, total (years): 61
Mortality rate, under-5 (per 1,000 live births): 76
Births attended by skilled health staff (% of total): 80%
HIV incidence per 1,000 population: 0.12 [0.08–0.19]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 21.7%
Suicide mortality rate (per 100,000 per age-standardized population): 14.8
Net official development assistance received (current US$) (millions): 1,110.6

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Internally displaced populations: 848,329 (as of April 2020)[426]
- Refugees: Burkina Faso hosts more than 23,000 Malian refugees in the Sahel region that are vulnerable as a consequence of the insecurity faced in the area[427]
- Rural communities: Slow economic development and climate change have resulted in high rates of malnutrition and food insecurity 10.4% of children suffer global acute malnutrition[428]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 47
- Global Climate Risk Index (1999 to 2018): 106
- Global Hunger Index (2019): 88 out of 117
- Conflict: Yes

HUMANITARIAN NEED AND RESPONSE

- Health cluster: Yes
- In 2019:[429]
  1.5 million people in need

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 40
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 0.600
  Nursing and midwifery personnel (per 10,000 population): 5.7
- Full immunization coverage among one-year-olds (%):
  Male: 82.1%
  Female: 80.6%

OTHER DETERMINANTS

- Human Development Index 2019: 182 out of 189
- Subregions with lowest HDI (2018):
  Boucle de Mouhoun
  Est
  Sahel
  Sud-Ouest
- Ambient and household air pollution attributable death rate (per 100,000 population): 93 [84–101]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 46.7%
- Income share held by lowest 20%: 6.7%
- Urban population growth (annual %): 5.0%
- Primary completion rate, total (% of relevant age group): 65%
- Individuals using the Internet (% of population): 16.0%

2.2.22. LIBERIA

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 22
Regional HLMCI ranking: 18
Low–income country
Population: 4.82 million
Fertility rate, total (births per woman): 4.4
Life expectancy at birth, total (years): 63
Mortality rate, under-5 (per 1,000 live births): 71
Births attended by skilled health staff (% of total): 61%
HIV incidence per 1,000 population: 0.39 [0.38–0.41]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 17.6%
Suicide mortality rate (per 100,000 per age-standardized population): 13.4
Net official development assistance received (current US$) (millions): 570.8

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Forced labourers - children: Children in Liberia undergo in the worst forms of child labour as domestic work, production of Rubber, and mining. 16.6% of the children population between the ages of 5–14 is reported to be under labour conditions[430]
- Children under five
- Rural communities: Food insecurity affects 16% of the families in Liberia and is particularly acute in the rural areas[431]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 30
- Global Climate Risk Index (1999 to 2018): 165
- Global Hunger Index (2019): 112 out of 117
- Conflict: No

HUMANITARIAN NEED AND RESPONSE

- Health cluster: No
- Low intervention of humanitarian sector

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 39
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 0.373
  Nursing and midwifery personnel (per 10,000 population): 1.01
- Full immunization coverage among one-year-olds (%):
  Male: 52.9%
  Female: 56.9%

OTHER DETERMINANTS

- Human Development Index 2019: 176 out of 189
- Subregions with lowest HDI (2018):
  Bong
  Gbarpolu
  Grand Bassa
  Grand Cape Mount
  River Cess
  River Gee
- Ambient and household air pollution attributable death rate (per 100,000 population): 83 [76–90]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 40.9%
- Income share held by lowest 20%: 7.2%
- Urban population growth (annual %): 3.3%
- Primary completion rate, total (% of relevant age group): 61%
- Individuals using the Internet (% of population): 8%

2.2.23. EQUATORIAL GUINEA

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 23
Regional HLMCI ranking: 19
Middle-income country
Population: 1.31 million
Fertility rate, total (births per woman): 4.6
Life expectancy at birth, total (years): 58
Mortality rate, under-5 (per 1,000 live births): 85
Births attended by skilled health staff (% of total): 68%
HIV incidence per 1,000 population: 4.21 [2.49–6.65]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 22.0%
Suicide mortality rate (per 100,000 per age-standardized population): 22
Net official development assistance received (current US$) (millions): 5.5

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Migrants: By 2005, international migrants accounted for 1% of the total population of Equatorial Guinea total population, by 2019 they were 17% of the population. Migration has been a key determinant factor of the population change in the country[432]
- Children under five
- Young people, including those living with HIV: The prevalence of HIV is 6.2%, young women are three times more affected than men[433]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 53
- Global Climate Risk Index (1999 to 2018): Not available
- Global Hunger Index (2019): Insufficient data
- Conflict: No

HUMANITARIAN NEED AND RESPONSE

- Health cluster: No
- Low intervention of humanitarian sector

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 45
- Health worker density and distribution:
  Medical doctors (per 10,000 population): Not available
  Nursing and midwifery personnel (per 10,000 population): 5

OTHER DETERMINANTS

- Human Development Index 2019: 144 out of 189
- Subregions with lowest HDI (2018):
  Centro Sur
  Kie Ntem
  Wele Nzas
- Ambient and household air pollution attributable death rate (per 100,000 population): 100 [75–120]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): Not available
- Income share held by lowest 20%: Not available
- Urban population growth (annual %): 4.3%
- Primary completion rate, total (% of relevant age group): 41%
- Individuals using the Internet (% of population): 26.2%

2.2.24. BURUNDI

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 24
Regional HLMCI ranking: 20
Low-income country
Population: 11.18 million
Fertility rate, total (births per woman): 5.5
Life expectancy at birth, total (years): 61
Mortality rate, under-5 (per 1,000 live births): 59
Births attended by skilled health staff (% of total): 85%
HIV incidence per 1,000 population: 0.16 [0.10–0.26]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 22.9%
Suicide mortality rate (per 100,000 per age-standardized population): 15
Net official development assistance received (current US$) (millions): 449.8

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Internally displaced populations: 31,908 people (2018)[434]
- Rural communities affected by El Niño: The socio-political crisis of 2015 summed to the vulnerabilities of El Niño floods and natural hazards, left 1.1 million Burundians in need of humanitarian assistance[435]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 15
- Global Climate Risk Index (1999 to 2018): 71
- Global Hunger Index (2019): Insufficient data
- Conflict: Post-conflict

HUMANITARIAN NEED AND RESPONSE

- Health cluster:
- In 2019:[436]

  316.600 people in need

  155.400 people targeted for humanitarian response

  US $4.4 million funds were requested; 60% funded

  Humanitarian actors face challenges such as accessibility to areas in need due to poor infrastructure, as well as difficulties to coordinate with other actors[437]

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 42
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 0.5
  Nursing and midwifery personnel (per 10,000 population): 6.8
- Full immunization coverage among one-year-olds (%):
  Male: 85.6%
  Female: 86.6%

OTHER DETERMINANTS

- Human Development Index 2019: 185 out of 189
- Subregions with lowest HDI (2018):
  East
  Middle
  North
  South
- Ambient and household air pollution attributable death rate (per 100,000 population): 100[91–109]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 71.8%
- Income share held by lowest 20%: 6.9%
- Urban population growth (annual %): 5.7%
- Primary completion rate, total (% of relevant age group): 63%
- Individuals using the Internet (% of population): 2.7%

2.2.25. SUDAN

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 25
Regional HLMCI ranking: 21
Low-income country
Population: 41.80 million
Fertility rate, total (births per woman): 4.5
Life expectancy at birth, total (years): 65
Mortality rate, under-5 (per 1,000 live births): 61
Births attended by skilled health staff (% of total): 78%
HIV incidence per 1,000 population: 0.13 [0.03–0.3]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 26%
Suicide mortality rate (per 100,000 per age-standardized population): 9.5%
Net official development assistance received (current US$) (millions): 963.5 million

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Internally displaced populations: Two civil wars, the Darfur genocide, and the ongoing conflict have resulted in widespread displacement in Sudan. Between January and December of 2019, 272,000 people were displaced as a consequence of disasters and 84,000 as a consequence of conflict and violence. This number, together with previously existing internally displaced populations, brings the total to 2,134,000[438]
- Rural communities: As a result of climatic shocks that lead to inconsistent agricultural production, 5.8 million people are food insecure[439]
- Children: 2.4 million children suffer from acute malnutrition[440]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 8
- Global Climate Risk Index (1999 to 2018): 42
- Global Hunger Index (2019): 107 out of 117
- Conflict: Yes

HUMANITARIAN NEED AND RESPONSE

- Health cluster: Yes
- Intervention of humanitarian actors

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 36
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 4.1
  Nursing and midwifery personnel (per 10,000 population): 8.3
- Full immunization coverage among one-year-olds (%):
  Male: 68.7%
  Female: 71.0%

OTHER DETERMINANTS

- Human Development Index 2019: 168 out of 189
- Subregions with lowest HDI (2018):
  South Darfur
  South Kordofan
  Blue Nile
- Ambient and household air pollution attributable death rate (per 100,000 population): 105 [92–116]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 16.2%
- Income share held by lowest 20%: 6.8%
- Urban population growth (annual %): 3.2%
- Primary completion rate, total (% of relevant age group): 62%
- Individuals using the Internet (% of population): 30.9%

2.2.26. SYRIAN ARAB REPUBLIC

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 60
Regional HLMCI ranking: 3
Low-income country
Population: 16.91 million
Fertility rate, total (births per woman): 2.8
Life expectancy at birth, total (years): 71
Mortality rate, under-5 (per 1,000 live births): 17
Births attended by skilled health staff (% of total): 56%
HIV incidence per 1,000 population: <0.01 [<0.01–<0.01]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 21.8%
Suicide mortality rate (per 100,000 per age-standardized population): 2.4
Net official development assistance received (current US$) (millions): 9,990.8

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Children associated with armed forces or armed groups: The United Nations verifies 806 cases of recruitment and use of children[441]
- Internally displaced populations: 6,495,000 people (as of December 2019); it is the country with the highest number of IDP in the world[442]
- Undocumented individuals
- People living in weapon contaminated areas: As of January 2019, 10.2 million people in Syria are at risk of exposure to explosive hazards[443]
- People in hard to reach areas or areas where territorial control has shifted
- People or families associated with armed groups (IS)

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 4
- Global Climate Risk Index (1999 to 2018): Not available
- Global Hunger Index (2019): Insufficient data
- Conflict: Yes

HUMANITARIAN NEED AND RESPONSE

- Health Cluster: Yes
- In 2019:[444]

  13.7 million people in need

  12.6 million people targeted for humanitarian response

  US $449 million funds were requested; 26.8% funded

  Risks for humanitarian actors include shelling, airstrikes, small arms fire; 120 health facilities attacked in the first half of 2018[445]

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 60
- Health worker density and distribution:
  Medical doctors (per 10,000 population):12.2
  Nursing and midwifery personnel (per 10,000 population): 14.6
- Full immunization coverage among one-year-olds (%):
  Male: 68.8%
  Female: 71.0%

OTHER DETERMINANTS

- Human Development Index 2018: 154 out of 189
- Subregions with lowest HDI (2017): Insufficient data
- Ambient and household air pollution attributable death rate (per 100,000 population): 44 [38–50]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): Not available
- Income share held by lowest 20%: Not available
- Urban population growth (annual %): 0.3%
- Primary completion rate, total (% of relevant age group): 60%
- Individuals using the Internet (% of population): 14.3 %

2.2.27. GUATEMALA

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 61
Regional HLMCI ranking: 2
Middle-income country
Population: 17.25 million
Fertility rate, total (births per woman): 2.9
Life expectancy at birth, total (years): 74
Mortality rate, under-5 (per 1,000 live births): 26
Births attended by skilled health staff (% of total): 66%
HIV incidence per 1,000 population: 0.14 [0.13–0.14]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 14.9%
Suicide mortality rate (per 100,000 per age-standardized population): 2.9
Net official development assistance received (current US$) (millions): 393.6

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Slum dwellers: 34.5% of the urban population in Guatemala lives in slums[446]
- Gang-affiliated youth: youth people are one of the most vulnerable populations of Guatemala. In some municipalities between 61% and 72% of crime is attributed to young people[447]
- Survivors of sexual and gender-based violence
- Rural communities
- Internally displaced populations: 242,000 people as a consequence of conflict and violence (as of December 2019).[448] The main drivers of displacement in Guatemala are gang violence and development projects

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 57
- Global Climate Risk Index (1999 to 2018): 16
- Global Hunger Index (2019): 72 out of 117
- Conflict: No (high levels of urban violence)

HUMANITARIAN NEED AND RESPONSE

- Health Cluster: No
- In 2017:[449]
  1.6 million people were facing urgent unmet critical needs
  Low intervention from humanitarian actors

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 55
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 3.55
  Nursing and midwifery personnel (per 10,000 population): 9.47
- Full immunization coverage among one-year-olds (%):
  Male: 59.2%
  Female: 58.9%

OTHER DETERMINANTS

- Human Development Index 2019: 126 out of 189
- Subregions with lowest HDI (2018):
  North-Occidental
  North
  South Occidental and Peten
- Ambient and household air pollution attributable death rate (per 100,000 population): 50 [43–56]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 9.2%
- Income share held by lowest 20%: 3.5%
- Urban population growth (annual %): 2.7%
- Primary completion rate, total (% of relevant age group): 80%
- Individuals using the Internet (% of population): 65.0 %

2.2.28. VENEZUELA

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 85
Regional HLMCI ranking: 10
Middle-income country
Population: 28.87 million
Fertility rate, total (births per woman): 2.3
Life expectancy at birth, total (years): 72
Mortality rate, under-5 (per 1,000 live births): 25
Births attended by skilled health staff (% of total): 96%
HIV incidence per 1,000 population: No available data
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 18.1%
Suicide mortality rate (per 100,000 per age-standardized population): 3.8
Net official development assistance received (current US$) (millions): 147.13

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Slum dwellers: 32% of the urban population in Venezuela lives in slums[450 451]
- Sex workers: Transactional sex and survival place is commonplace in Venezuela and women and girls face several risks related to human trafficking[452]
- Migrants: Colombian Nationals including refugees have returned to their country as a result of human rights violations[453 454]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 32
- Global Climate Risk Index (1999 to 2018): 59
- Global Hunger Index (2019): 65 out of 117
- Conflict: No

HUMANITARIAN NEED AND RESPONSE

- Health cluster: Yes
- In 2019:[455]

  7 million Venezuelans (25% of the population) were in need of humanitarian assistance

  2.6 million targeted in the Humanitarian Response Plan

  US $223 million required for implementation of the Humanitarian Response Plan; 14% of funds received (through October)

  98 projects in the Humanitarian Response Plan 2019

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 74
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 19.2
  Nursing and midwifery personnel (per 10,000 population): 11.22

OTHER DETERMINANTS

- Human Development Index 2019: 96 out of 189
- Subregions with lowest HDI (2018):
  Apure
  Barinas
  Portuguesa
- Ambient and household air pollution attributable death rate (per 100,000 population): 29 [24–36]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 33.1%
- Income share held by lowest 20%: 3.5%
- Urban population growth (annual %): -1.8%
- Primary completion rate, total (% of relevant age group): 93%
- Individuals using the Internet (% of population): 72.0 %

2.2.29. LEBANON

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 94
Regional HLMCI ranking: 10
Middle-income country
Population: 6.85 million
Fertility rate, total (births per woman): 2.1
Life expectancy at birth, total (years): 79
Mortality rate, under-5 (per 1,000 live births): 7
Births attended by skilled health staff (% of total): 98%
HIV incidence per 1,000 population: 0.02 [0.02–0.03]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 17.9%
Suicide mortality rate (per 100,000 per age-standardized population): 3.2
Net official development assistance received (current US$) (millions): 1,419.63

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Refugees: Lebanon hosts the largest number of Syrian refugees, 949,666 people as of 2018[456]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 44
- Global Climate Risk Index (1999 to 2018): 138
- Global Hunger Index (2019): 53 out of 117
- Conflict: Post-conflict

HUMANITARIAN NEED AND RESPONSE

- Health Cluster: No
- In 2019:[457]
  1.7 million highly vulnerable people
  US $2.62 billion was requested for humanitarian aid

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 73
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 22.7
  Nursing and midwifery personnel (per 10,000 population): 26.45
- Full immunization coverage among one-year-olds (%):
  Male: 58.6%
  Female: 51.5%

OTHER DETERMINANTS

- Human Development Index 2019: 93 out of 189
- Subregions with lowest HDI (2018):
  Beirut
  Northern
- Ambient and household air pollution attributable death rate (per 100,000 population): 52 [43–60]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 0.0%
- Income share held by lowest 20%: 7.9%
- Urban population growth (annual %): 0.7%
- Primary completion rate, total (% of relevant age group): 82%
- Individuals using the Internet (% of population): 78.2 %

2.2.30. MYANMAR

COUNTRY GENERAL CHARACTERISTICS AND HEALTH NEEDS

Global HLMCI ranking: 36
Regional HLMCI ranking: 4
Lower middle-income country
Population: 53.71 million
Fertility rate, total (births per woman): 2.2
Life expectancy at birth, total (years): 67
Mortality rate, under-5 (per 1,000 live births): 46
Births attended by skilled health staff (% of total): 60%
HIV incidence per 1,000 population: 0.20 [0.18–0.22]
Probability (%) of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease: 24.2%
Suicide mortality rate (per 100,000 per age-standardized population): 8.1
Net official development assistance received (current US$) (millions): 1,687.7

EXAMPLES OF POPULATIONS LIVING IN THE LAST MILE

- Individuals fleeing to Bangladesh
- In Kachin state, for instance, more than 100,000 people have been displaced since 2011 due to the internal conflict (longest-lasting civil war in the world); a great number of temporary displacements in the Northern Shan state as well due to the frequent escalation of the conflict
- Stateless people: 495,939 (as of 2018) (458)[458]

CONDITIONS THAT EXACERBATE CRISES

- Fragile State Index 2019: 22
- Global Climate Risk Index (1999 to 2018): 2
- Global Hunger Index (2019): 69 out of 117
- Conflict: Yes

HUMANITARIAN NEED AND RESPONSE

- Health cluster: Yes
- In 2019:
- 1 million people affected
- 995,000 people targeted for humanitarian response
- US $33.7 million funds were requested; 11.5% funded
- 62 partners responding

HEALTH SYSTEM

- Coverage of essential health services (UHC index of service coverage): 61
- Health worker density and distribution:
  Medical doctors (per 10,000 population): 8.6
  Nursing and midwifery personnel (per 10,000 population): 9.79
- Full immunization coverage among one-year-olds (%):
  Male: 58.6%
  Female: 51.4%

OTHER DETERMINANTS

- Human Development Index 2019: 145 out of 189
- Subregions with lowest HDI (2018):
  Shan
  Kayin
- Ambient and household air pollution attributable death rate (per 100,000 population): 116 [104–128]
- Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population): 6.2%
- Income share held by lowest 20%: 7.3%
- Urban population growth (annual %): 1.5%
- Primary completion rate, total (% of relevant age group): 96%
- Individuals using the Internet (% of population): 30.7 %

2.3. IN-DEPTH COUNTRY CASE STUDIES

This section provides in-depth case studies of the last mile in El Salvador, Pakistan, Iraq, and Somalia. On the HLMCI ranking, these countries hold positions 90, 15, 46, and 3 respectively. Countries were selected in consultation with NorCross staff members. They represent settings with diverse experiences and needs in terms of health, development, and humanitarian crises, and with varying levels of strength in the health system.

2.3.1. EL SALVADOR

Country background

The Republic of El Salvador is located in the north-western part of Central America. It shares borders with Honduras, the Pacific Ocean, and Guatemala, and it is the only country in Central America that does not have a coast along the Atlantic Ocean. According to the Multipurpose Household Survey 2018 (Encuesta de Hogares de Propósitos Múltiples -EHPM-),[459] the country's total population is 6,642,767, with 4,096,070 (61.7%) residing in urban areas and 2,546,697 (38.3%) residing in rural areas. The Salvadoran population is mostly young, with more than the 50% of inhabitants under 30 years of age.[460] This results in significant challenges in terms of access to health, education, employment, and development opportunities.

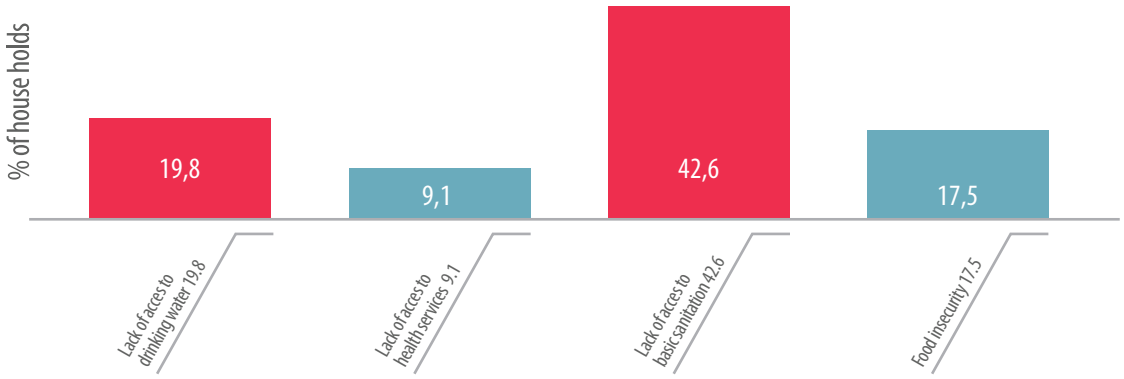
According to the World Bank, El Salvador is a lower middle-income country.[461] The country's economy is primarily based on agriculture and is highly dependent on remittances (20.678% of GDP as of 2018).[462] A total of 28.8% of households live in multidimensional poverty (Multipurpose Household Survey 2018), with 48.9% of rural households living in multidimensional poverty. According to the United Nations Development Programme (UNDP), El Salvador is ranked 121 out of 189 countries included in the Human Development Index.

Available national estimates show that El Salvador suffers from severe food insecurity levels (over 10% as per the Food Insecurity Experience Scale classification), and more than 40% of rural households have issues accessing access basic sanitation. El Salvador faces recurrent and adverse weather conditions (droughts and torrential rains), which limit efforts to reduce poverty and food insecurity. The country ranks 30th in the 2020 Global Climate Risk Index.[463]

Figure 9.

ACCES TO HEALTH AND BASIC SANITATION SERVICES AND FOOD INSECURITY

Multipurpose Household Survey 2018



El Salvador has experienced significant social, political, and economic tensions, along with frequent environmental catastrophes. The country endured a prolonged Civil War (1980–1992) that left more than 70,000 dead – mostly civilians, and more than one million internally displaced persons – and plunged the country into a deep economic and social crisis. The repercussions of this armed conflict are still seen in the profound problems that continue to affect the country, including ongoing gang violence.

The health system in El Salvador has been marked by limited investment in public health, fragmented coverage and insufficient qualified personnel (especially in areas such as mental health, where protocols are practically non-existent). According to the ICRC, despite these deficits, El Salvador's healthcare service (and its networks) is significant for the size of the country, covering 67.2% of the population.[464] The primary issues are healthcare access and the impact of gang violence on the system (patients and healthcare personnel).

Regarding the access to and coverage of health, some advances were made at the institutional level with the implementation of a health reform in 2009 (National Health Strategy 2009–2014). This reform created the Community Family Health Teams to enhance primary care and reach people living in hard-to-reach places and in precarious conditions. This community-based strategy sought to bring primary healthcare services closer to populations with the highest rates of poverty and exclusion. This enabled health authorities to work directly with communities, particularly on preventive healthcare. As of 2019, there were 578 Community Family Health Teams in 187 municipalities; many have been forced to close as a result of gang violence, others as a result of lack of funding or institutional support.[465]

Due to its social, political, and economic context, El Salvador is an representative case of vulnerable populations living in the last mile and trying to access health services in a hostile scenario influenced by internal and external factors. One of the main findings of this study is that the exclusion of neglected and vulnerable populations in El Salvador is a multidimensional issue related to three global problems: violence (gang violence), sexual and reproductive rights of women and girls, and migration.

GANG VIOLENCE AND HEALTH ACCESS: INVISIBLE BORDERS

El Salvador, along with neighbouring countries Honduras and Guatemala, forms part of what is known as the **Northern Triangle of Central America**. This region has, for a longtime, struggled with chronic violence. El Salvador's extremely high homicide rate has long been linked to two dominant and deadly gangs: Mara Salvatrucha and Barrio 18. These two have historically been rivals. Young people of both genders are the primary victims of violence, with around 51.8% of homicide victims between the ages of 15 and 29 years old.[466]

Due to the high homicide rates, Salvadorans can be considered to live in what the WHO defines as a state of endemic violence.[xxxi] According to the World Bank, in 2015, the country topped regional rankings with an alarming rate of 105 homicides per 100,000 people, making El Salvador the most violent country in the Western Hemisphere.[467] In 2019, El Salvador recorded an exceptional decrease in its homicide rate, which dropped to 36 per 100,000 people.[468] [469]

However, the reason behind this unprecedent decline is complex. On the one hand, it could be attributed to the government's strategy of deploying troops on the streets as part of the **Cuscatlan Plan to regain control**.[470] Nevertheless, some analyses attribute this drop to a collaborative and concerted effort between the Mara Salvatrucha and Barrio 18 street gangs to limit homicides in order to maintain territorial control and avoid confrontations with security forces.[471] Maintaining territorial control offers more opportunities for extortion, which is the gangs' primary criminal activity and source of income. Accordingly, the Attorney General's Office reported a 17.2% increase in extortion cases in 2019.[472]

VIOLENCE AND ITS IMPACT ON HEALTHCARE SERVICES

One of the most immediate issues related to gang violence and vulnerable populations' access to healthcare is the **territorial control** of criminal groups. Fear is widespread among the population, and people feel unsafe in both public and private spaces. Due to the ongoing violence, many people have been displaced and forced to leave their homes, communities, and social connections. The constant exposure to high levels of violence impacts the mental health of both direct and indirect victims.

In El Salvador, public spaces are commonly marked by invisible or implicit borders set by local gangs, who monitor those areas in their territories (public health facilities included). Access to health services and healthcare staff is sometimes conditional to negotiations between the different actors involved (local leaders, gang members, etc). Navigating these invisible borders and the associated mobility restrictions means that people are often forced to sacrifice preventive healthcare, necessary medical consultations and health checks, and also they are unable to seek medical or psychosocial support when required, leading to mis- or self-medicating. Going to a health facility is often a last resort, which can cause severe –and sometimes life-threatening– health consequences, even with diseases that are completely preventable.

The **structural barriers to health access** created by **gang violence and security issues** is **two-way**; not only does it create obstacles for communities that are trying to reach health services, but it also reduces the availability of health services due to closures and limited staff. Healthcare personnel are frequently a target of aggression and security threats associated with the endemic violence. Medical staff are forced to leave their workplaces or stop working altogether. As a result, health workers are often unable to reach the communities that need them. This situation mainly impacts the communities that are the most vulnerable, neglected, and hard-to-reach because of geography, violence, or both.

[xxxi] WHO considers a rate of 10 homicides per 100,000 inhabitants or higher to be characteristic of endemic violence. For more information: World Bank. (2016, September). *Urban Violence: A Challenge of Epidemic Proportions.* https://www.worldbank.org/en/news/feature/2016/09/06/urban-violence-a-challenge-of-epidemic-proportions

There are areas where health promoters/staff are unable to enter due to the invisible barriers imposed by gangs, and others where the government has simply not designated the necessary healthcare personnel due to the security conditions present in these **red zones**. Additionally, the stigmatization of certain areas that have been socially and politically blacklisted means that these communities are unable to access necessary medical services, despite efforts to do so.

In El Salvador, approximately 3,300 health promoters are distributed across 262 municipalities, with each promoter responsible for between 200 to 300 homes; 25% of these health promoters live under some kind of threat.[473] An audit of El Salvador's National Health Forum at the end of 2019 found that 11 of the Community Family Health Team centres had been permanently closed, primarily due to a lack of personnel and security issues. These closures have affected about 4,000 people in high-risk areas.[474]

Special attention should be focused on people that have been internally displaced due to threats and violence. Despite being a widespread issue, this phenomenon has been largely **invisible**. Many internally displaced people try to stay as anonymous as possible for fear of reprisals, minimizing the time they spend outside their home in order to remain invisible to both the gang that contributed to their displacement as well as rival gangs. These **invisible borders** profoundly restrict the mobility of many internally displaced people. According to the Internal Displacement Monitoring Centre, in 2018 there were an estimated 246,000 new displacements linked to criminal violence.[475]

Thus, internally displaced people in El Salvador can be categorized as invisible victims, as very little is known regarding their health status, the challenges they face or how they access health services, and the significant stigma they face. Their lack of trust in the authorities and fear of being discovered, as well as the lack of official support, all contribute to their invisibility. As a result, the humanitarian impact of this situation is therefore difficult to measure or quantify.

The economic cost of gang violence has also impacted local health services. The health costs related to treating victims of crime and violence is a public health issue that demands high levels of funding and resources, including human capital, to the detriment of other patients and preventive healthcare services. This situation, combined with the structural shortages of the Salvadoran health system, negatively impacts the population's access to healthcare and increases their vulnerability and suffering.

SEX AND GENDER VULNERABILITIES: THE BURDENS OF BEING A WOMAN IN EL SALVADOR

Being a woman in El Salvador implies a double burden. On the one hand, women and girls are an easy target for violence and crime, as they face high levels of sexual and gender-based violence.[xxxii] On the other hand, the cultural values and norms of the Salvadoran society make difficult the adequate recognition and protection of their sexual and reproductive rights. This means that Salvadoran women face enormous difficulties in accessing appropriate and convenient health services.

These burdens particularly impact **rural women, specifically girls, adolescents, and young women**. In addition to the remoteness of some rural communities and the **geographical barriers** in accessing health services, these women face other institutional, cultural, and structural barriers as a result of the limited coverage and adequacy of these services, and the traditional mindset of the Salvadoran society.[xxxiii] In general, rural young women, girls, and adolescents do not receive appropriate sexual education, and the medical services they do have access to are scarce or inappropriate for their age, mental condition, and needs.

In El Salvador, premature and early pregnancies and unsafe abortion pose significant sexual and reproductive health challenges. According to the United Nations Population Fund, in 2017, there were 19,190 pregnancies registered among girls and adolescents between the ages of 10 and 19.[476] Many of these pregnancies were not planned, but were instead the result of various vulnerabilities that impact the life and welfare of girls and young women in El Salvador. It is important to note that abortion is illegal in the country with no exceptions - including to save the life of the mother.

These kind of pregnancies have high health, psychosocial, and socio-economic costs. Girls and young women are neither physically nor emotionally mature enough for childbearing or the mental challenges of motherhood. According to different reports from civil society organizations working for the sexual rights of women in El Salvador, suicide is a leading cause of indirect maternal death in teenage pregnancies.[477] Studies from the United Nations Population Fund support this finding. A 2014 report published by UNICEF regarding the situation of children and youth in El Salvador found that the majority of girls who experience premature and early pregnancies are concentrated in rural areas.[478] Many of those girls experience compounding vulnerabilities that leave them without options, forcing them into a cycle of poverty and exclusion.

[xxxii] El Salvador has some of the highest homicide and femicide rates in Latin America. According to the National Civil Police, in 2018, approximately 383 murders of women were recorded, with a daily average of 1.05. For more information: Sosa, R. (2019). *Balance criminológico El Salvador.* El Salvador.com. https://www.elsalvador.com/opinion/editoriales/balance-criminologico-el-salvador-2018/556924/2019/

[xxxiii] Accessing sexual and reproductive health education and care, particularly for youth people, is still taboo in El Salvador, and significant cultural, social and legal barriers persist. For more information: IPPF (2014). *Over-protected and under-served. A multi-country study on legal barriers to young people's access to sexual and reproductive health services. El Salvador case study.* https://www.ippf.org/sites/default/files/ippf_coram_el_salvador_report_eng_web.pdf

MIGRATION: THOSE WHO STAY, THOSE WHO DISAPPEAR

Migration in El Salvador is the result of a multitude of factors: poverty, unemployment, lack of opportunities, insecurity and violence, natural disasters and the effects of climate change. Despite the impact of family separation and the risks involved, migration has been, and continues to be, one of the only options for a large part of the population. Official numbers estimate that approximately one-third of the Salvadoran population lives outside the country.[479]

In addition to being a social issue, migration is also an economic issue for El Salvador, which is extremely dependent on remittances. According to the Central Reserve Bank of El Salvador, in 2018, family remittances to El Salvador totaled more than US$5.4 billion equivalent to over 20% of the country's total GDP.[480] Hence, El Salvador is the country in Latin America and the Caribbean where remittances have the second highest weight in GDP, after Haiti.[481]

It is important to note that for the family members who stay in El Salvador, remittances represent a fundamental element for the survival of the family. The dependence on these flows of money leaves them extremely vulnerable and at risk of being left behind. The most vulnerable within this population are the elderly (over the age of 65), a group that is frequently overlooked. Many elderly Salvadorans have been left alone, sometimes even abandoned, by the migration wave. Some have to take care of their grandchildren and other younger family members, often beyond their own physical and economic capacities.

These older adults may find it very difficult to access health services due to their particular health conditions and personal mobility restrictions (physical or economic), in addition to the structural barriers imposed by gang violence. This population often suffers from chronic diseases (diabetes, vascular diseases, etc.), which require long, controlled, and very expensive treatments that represent a fairly large expense for the health system. This population is very vulnerable and might be left behind if not adequate medical and social support is provided.

The families of missing and deceased migrants are also a generally forgotten and highly vulnerable population. This group must deal with the emotional impact of the disappearance of a family member, including facing the uncertainty of not knowing what may have happened to them. In addition to this emotional burden, they must also manage the economic precariousness that results from no longer receiving the remittances they need to live. Thus, families of missing or deceased migrants face economic pressures and emotional stressors that heavily impact their lives, while generally being forgotten or ignored by society and the government.

SANTA ANA: ON THE EDGE OF THE LAST MILE

Located in the western part of El Salvador, Santa Ana is one of the most populated regions of the country, with 593,725 inhabitants as of 2018, with the majority of the population between the ages of 10 and 30 years old.[482] Composed of 13 municipalities, this department shares a border with Guatemala. The capital city of Santa Ana is a major tourist spot and the second largest city in El Salvador, with 264,091 inhabitants as of 2017. The Santa Ana region was long considered to be flourishing, with a growing agricultural and commercial sector and the main commercial centre in the western part of the country.

A study published by the Salvadoran Ministry of Health and the Pan American Health Organization (2011) classified Santa Ana as one of the departments with the lowest levels of social exclusion in health and one with the best rates for hospital beds and medical doctors (per 10,000 inhabitants).[483] According to the UNDP, in 2017, the region had a Human Development Index rating of 0.633, considered medium.[484] Official data from the Multipurpose Household Survey 2018 ranked the department as one of the lowest in terms of multidimensional poverty, with only 27% of households living in multidimensional poverty.[485]

The region is in a high-risk area for natural disasters due to seismic activity, floods, landslides, forest fires and volcanic eruptions, which makes it highly vulnerable to climate change risk. The region is also struggling with mass migration –according to 2018 data from the Central Reserve Bank of El Salvador, Santa Ana is one of the five departments that receives the highest proportion of family remittances (7.9%), which means that many of the region's households are dependent on this flow of money.[486] Additionally, Santa Ana's strategic position, neighbouring Guatemala means that the region is susceptible to illegal trafficking and migration flows.

Thus, over the last decade, some alarming health issues have emerged in the region. These issues are directly correlated with the problem of gang violence and security that the country is facing, as well as with the impact of migration. As previously noted, gang

violence imposes invisible borders that limit mobility constraining access to health services, especially for the most vulnerable populations.

According to data from the National Civil Police, Santa Ana has had one of the highest departmental homicide rates since 2010.[487] As a result, some of its municipalities have been targeted for selected security interventions, such as the 'Safe El Salvador Plan.'[488] Currently, Santa Ana is one of the municipalities prioritized by the federal government's Cuscatlan Plan, which seeks to take back territorial control of the country from the gangs. The invisible borders created by this violence makes it difficult to develop vaccine campaigns, pre-maternal and maternal controls, sanitation campaigns, and prevention activities.

A study conducted by the Institutional Planning and Development Unit to improve health access in areas impacted by violence revealed that 50% of the health professionals in the region who responded to the survey believe that social violence directly affects them, and 51% consider that they are at risk of experiencing violent incidents during their intramural and extramural work days. A total of 34% claim that armed groups have limited the development of both intramural and extramural activities, including home visits (45%), vector control and immunization (18%), and treatment of patients with tuberculosis (10%), which may affect the adequate development and the follow-up offered to patients.

The Ministry of Health has reported an increase in dengue fever cases in the western part of the country, and Santa Ana is one of the three most affected departments. According to the Regional Health Office, the department of Santa Ana has reported the highest number of dengue cases since 2018, and seven children under the age of 10 died of dengue in Santa Ana in 2018 alone.[489] These deaths were completely avoidable, and they could have been prevented if vulnerable populations had proper access to basic health services.

Since 2010, the Santa Ana region has also been one of the top five departments with the highest rates of HIV and advanced HIV cases reported in El Salvador,[490] presenting a combined cumulative rate (women and men) of 190 cases per 100,000 inhabitants of HIV and advanced HIV (January 2008–December 2015).[491] This situation may be due to the high population density of Santa Ana, the invisible barriers imposed by gang violence on access to sexual and reproductive healthcare, and the irregular migration flows affecting the region. According to the International Organization for Migration, violence, poverty, and corruption are characteristic of many stages of the migrant journey, and the presence of transactional and survival sex, as well as non-consensual sex, is common.[492] This situation increases the risk of contagion of STIs and HIV.

Migration flows could have an impact on the spread of some contagious diseases in the area, and it could change the epidemiological profile of the region.[493] Migrant caravans formed by men, women, and children from vulnerable rural and urban areas have continued to depart to the United States, occasionally passing through the Santa Ana region on their way to Mexico via Guatemala. Most of the time, the vulnerable people joining these caravans have no access to proper sanitation and health services and are very much exposed to different pathologies, thus becoming vectors for transmission.

Problems related to nutrition also affect this region. According to official statistics, the department of Santa Ana had the seventh highest prevalence of chronic malnutrition (9.51%).[494] and the sixth highest prevalence of obesity and overweight (13.35%). This suggests the co-existence of obesity and malnutrition among the population, a double burden for a region at the edge of the last mile.

2.3.2. PAKISTAN

Country background

According to the most recent United Nations population prospects,[495] Pakistan is the fifth most populous country in the world, with a fast-growing population and a fertility rate of more than 3.5 children per woman.[496] In 2018, the Pakistani population exceeded 212 million inhabitants,[497] and the United Nations estimates that Pakistan will reach a population of 403 million by 2050.[498] The Pakistani population is irregularly spread over the territory, with over three-quarters of the population concentrated in the Punjab and Sindh provinces.

The significant and uneven demographic growth, combined with rapid urbanization, constitutes a challenge in terms of covering the primary needs of this growing population, including access to healthcare services. Rapid population growth increases the demand for housing, sanitation, health and education facilities and food, while the effects of climate change could easily aggravate the supply of water and food.

Pakistan is a gateway to Central Asia and is strategically located along several important economic corridors. Bordering Afghanistan, China, India, and the Islamic Republic of Iran, its territory is exposed to largescale floods, landslides, droughts, and earthquakes. During the period from 1998-2018, Pakistan was the fifth most affected country by extreme weather events in the world.[499] The country has recently experienced large-scale flooding that has affected and displaced millions of people. Heat stress and droughts have occurred in some regions of the country, resulting in food security issues and associated health problems.

Access to basic sanitation systems and healthcare is still a major challenge in Pakistan, especially for people in remote rural communities, urban slums, and areas affected by conflict. Ranked 152 out of 189 countries in the UNDP Human Development Index, Pakistan continues to be one of the lowest performers in the South-Asia Region on human development indicators and access to basic services, and gender disparities persist.[500]

Some specialized healthcare services are unavailable in many regions, and when they are available, many people cannot afford them. The provision of certain basic health services has become the domain of private providers, making access to health very difficult for some people, particularly the most vulnerable. Another major issue is violence against health workers; doctors, nurses, and other medical staff are very vulnerable to violence in Pakistan, due to conflict and other cultural and social drivers.

Since Pakistan became an independent state in 1947, the country has experienced ongoing political turmoil, instability, and internal and external security problems, as well as constant tensions with some neighbouring countries, which have impacted Pakistan's social and political stability. After 9/11, Pakistan became vulnerable to international pressure to play a part in the war against terrorism, which has been very costly for the country in terms of human loss and economic costs. More than 62,000 Pakistanis lost their lives to terrorism between 2003 and 2017.[501]

The former Federally Administered Tribal Areas have also been a focal point of instability. Bordering Afghanistan, this region remained semi-autonomous until it was merged with neighbouring Khyber Pukhtunkhwa province in May 2018. Decades of conflict in neighbouring Afghanistan, along with the different governance systems and a lack of national investment, obstructed the development of these territories, resulting in a population struggling to access the most basic services.

Living in the last mile in Pakistan: Health needs and barriers

SOCIAL DETERMINANTS OF HEALTH IN PAKISTAN: THE BURDEN OF UNSAFE WATER AND A LACK OF SANITATION

In Pakistan, access to water, sanitation, and hygiene (WASH) services remain a national concern and a challenging issue.[502] Access to WASH services varies across the country and between regions and districts, and there are significant access disparities between rural and urban areas. The population that is most vulnerable to the difficulties of accessing water and sanitation and all the associated problems is women and children, especially those living in poor, rural and hard-to-reach areas. According to WHO and UNICEF, Pakistan presents the greatest rich-poor inequalities in terms of hygiene.[503]

Thus, one of the major determinants of communicable diseases and other health indicators in Pakistan is the insufficient/poor access to WASH services. According to the International Bank for Reconstruction and Development and the World Bank, there is a clear connection between WASH, nutrition, and stunting/wasting rates in Pakistan.[504] Diarrhoeal diseases exacerbate malnutrition and remain one of the leading causes of mortality for Pakistani children.[505] According to statistics from UNICEF, nearly 53,000 Pakistani children die each year from diarrhoeal diseases caused by unclean water and poor sanitation facilities.[506]

Although the WHO and UNICEF estimate that around 89% of the population of Pakistan has at least basic access to drinking water,[507] and the national official figures show that 95% of all households have access to an improved drinking water source, these high percentages disguise a poor quality service and low technical performance. In fact, very few Pakistani cities have a day-to-day, round-the-clock water supply. Users must adapt to these limitations by investing in alternative systems and/or spending time managing their supply.

In terms of sanitation facilities, Pakistan has made significant progress.[509] Access to improved latrines has risen significantly across Pakistan in the last years (especially due to self-provision efforts), and Pakistan is one of the 27 countries that have increased the use of basic sanitation services by more than 20 percentage points between 2000 and 2017.[510] Nevertheless, access has yet to be expanded to the majority of the population, and open defecation is still common, especially in rural areas.[511] This practice not only negatively impacts both the environment and human health, open defecation also represents a significant safety risk, as it increases the exposure of women, young girls, and children to sexual violence and other assaults.

Beyond being a public health matter, sanitation is also a gender issue of crucial importance that has a tangible impact on women's health and quality of life. Women and girls face a number of unseen difficulties in accessing sanitation, living what could be called a **silent crisis**.[512] Women in households without access to improved sanitation often defecate in private (in the house or patio) and then dispose of the excreta. This situation has potential health consequences as well as dignity concerns. Menstruation is also a very deep-rooted social taboo in Pakistan that is not easily discussed.[513] This situation have long prevented women in rural and remote areas from leading normal lives.

THE HEALTH COST OF ENVIRONMENT DEGRADATION AND CLIMATE CHANGE: EXACERBATING VULNERABILITIES

Exposure to climate change risks and environmental degradation have enormous impacts on the Pakistani people and their livelihoods, health, and social roles, as well as on Pakistan's national infrastructure. Excluded and vulnerable populations are the most affected. It is well documented that the most vulnerable groups are more likely to be exposed to higher levels of environmental pollution, particularly to air pollution.[514] This implies serious disadvantages for vulnerable populations, as increased levels of exposure to pollution combined with socio-economic deprivation may lead to diminished health. Thus, pollution aggravates existing inequalities.

In Pakistan, low-income labourers and people who work in construction and farmlands, as well as marginalized groups, are especially vulnerable to this environmental inequality because their work requires them to be exposed to contaminated air all day. The fact that healthcare is not easily accessible for the entire Pakistani population means that only those who can afford it have access to healthcare and other preventive measures to mitigate the effects of breathing contaminated air. According to The Lancet (2015), up to 22% of annual deaths in Pakistan are caused by pollution, primarily air pollution.[515]

In the last decade, Pakistan has experienced extreme flooding scenarios connected to climate change (2010, 2011, 2015, 2019). The 2010 floods affected approximately 20 million people, displacing 11 million. According to the United Nations and the Internal Displacement Monitoring Centre, this was one of the most significant human displacement events within the time period from 2008–2012.[516] Flooding is not a new issue in the country, but the increased intensity and reduced predictability associated with climate change has made each flood more difficult to manage.

The effects of climate change have also caused drought-like scenarios and water stress, which have impacted the food security and the health of the Pakistani people. The Food Security Cluster needs assessment found that 37% of pregnant women and 26% of lactating women from drought-affected areas of Sindh and Balochistan were severely malnourished.[517] This same assessment declared that undernutrition and the associated premature births and low birth weight in the Thar Desert (South-Eastern Pakistan) could be attributed to crop failure resulting from the effects of climate change.[518] In 2018, over 500 children died in Thar of causes such as low birth weight, neonatal sepsis and birth asphyxia.[519]

Another effect of climate change is the migration it provokes and the impact of this migration on social roles and health. Climate change has triggered widespread migration waves in Pakistan. Extreme weather patterns, reduced agricultural output, and persistent dry periods all drive millions of Pakistani people to migrate to large cities. Women and children are the most affected by this adaptation dynamic, with some studies revealing that women are mostly left behind to take care of the farms, children, and households. The women that are left behind face greater health risks and heavier work burdens and must often face difficulties in carrying out tasks traditionally performed by men, such as seeking resolution for disputes over irrigation water.[520]

BARRIERS TO ACCESS HEALTH SERVICES

a) The geographical and transportation barrier

Pakistan has marked disparities between urban and rural environments in terms of distance to the nearest health facility, healthcare delivery, and human resources availability. Disadvantaged areas, mainly remote rural areas, have seen little or slow changes in access to key elements of health coverage.[521] The population of Balochistan province suffers the most when it comes to accessing health facilities, due to the size of the province and its low population density. According to WHO, approximately 40% of Union Councils in Balochistan do not have a single health facility.[522]

In addition to geographical accessibility issues, transportation represents an important barrier to accessing healthcare services in Pakistan. The cost of transportation is highly variable across districts and represents the third largest out-of-pocket expense.[524] According to a study conducted by WHO and the Alliance for Health Policy and Systems Research, the transportation barrier has largely been ignored during national health sector planning.[525]

The transportation barrier also represents a significant issue for people with physical disabilities in Pakistan, for whom public transport is not an option and private transport is not generally affordable. Consequently, people with physical disabilities must rely on local traditional healers for health access.

b) Gender-related barriers

Added to the geographical barriers are gender-related barriers that affect Pakistani women's access to healthcare. There is a wide gap between men and women in terms of access to health services and health outcomes in Pakistan. The Pakistani social structure is highly patriarchal and visibly demarcated by gender roles, and there are significant gender disparities in accessing all kind of existing resources and services.[526] Accessing healthcare in Pakistan is no different to this context and is largely influenced by gender roles. Beyond the role of head of household, men also undertake the responsibility for making decisions, including decisions on women's health needs and mobility.

Women are thus forced into a subordinate position that limits their access to primary health services. There is also a lack of gender differentiation in the provision of health services in Pakistan, especially in rural and remote areas. The location of health services facilities, the ability to access/find transport, mobility restrictions, the availability of female healthcare providers, and the service hours are all important factors that often impede women's access to healthcare services.

One of the principal factors impacting women's access to healthcare services is restricted mobility. The particular social and cultural context of the country restricts female mobility due to concerns about honour and safety. Travel is considered a potentially dangerous activity for women, as it may lead to undesirable interactions with men and a loss of honour.[527] As mobility is essential for accessing healthcare services, this restriction may have direct effects on women's health and rights. For example, women in remote districts may put their health and lives at risk by opting for childbirth at home due to the long distance required to travel to a health facility, as well as the transportation costs, mobility constraints, and the inconveniences of travel.

Additionally, the lack of female healthcare providers represents another limitation for women seeking to access health services, particularly in poor/remote rural areas. For most Pakistani women seeking medical help from male doctors is generally not culturally acceptable. Tribal customs and social and religious norms have obstructed women's ability to seek healthcare, as well as their ability to work as health workers.[528] As a result, very few women are employed in healthcare, which then creates a conflict between the mainly male healthcare system and female patients.

c) The privatization of health in Pakistan: The price of health access

One of the primary issues facing Pakistan's healthcare system is a chronic under investment, which has been worsened by the increasing privatization of healthcare. The decreasing quality of public health services over the last few decades and diminished public health spending in Pakistan have led to the emergence of a robust private healthcare sector that has made healthcare unaffordable for some populations.[xxxiv]

Private sector facilities are, in many cases, more functional than government health centres. This situation, along with the difficult access and poor state of public facilities, means that private providers are more in demand, despite their high cost. This has put Pakistan among the countries with the highest

[xxxiv] Pakistan is one of the countries with the lowest health expenditures relative to GDP worldwide, being it 2.753 % of the GDP. (World Bank data, 2016). For more information: World Bank. (n.d.). *Current health expenditure (% of GDP) - Pakistan*. https://data.worldbank.org/indicator/SH.XPD.CHEX.GD.ZS?locations=PK

rates of out-of-pocket expenditure (around 70% of total health expenditures).[529] These high out-of-pocket healthcare expenditures create the potential for catastrophe, as they push marginalized and vulnerable groups into a poverty trap.

The situation is even more concerning in rural areas, which are at a critical disadvantage in terms of service delivery at primary, secondary, and tertiary healthcare levels. The lack of health facilities in rural areas pushes people to spend more to buy private healthcare services (if available), in addition to the added expense of transportation to reach those private facilities. This not only deepens health service inequality, but is also a significant factor associated with high disease prevalence rates and health problems in rural areas.

THE TRIBAL DISTRICT: ON THE EDGE OF THE LAST MILE

The Tribal District is situated in the northwest part of Pakistan, along the border with Afghanistan. Formerly known as the Federally Administered Tribal Areas (FATA), this region and its people have endured both natural and man-made disasters and crises. Since the creation of Pakistan as an independent state in 1947 until May 2018, the FATA were governed differently than the rest of the country using a set of Colonial-era laws known as the **Frontier Crimes Regulations**. These regulations, and their associated judicial and legal system, were based on older tribal customs that denied basic legal rights, such as the right to a trial, due process, and the right to appeal.[530] This legal framework used severe penalties as collective punishment against tribes or families for individual offenses. The colonial governance system of FATA raised serious human rights concerns and fuelled militancy in the region.[531]

Home to five million people, predominantly Pashtuns, the former FATA region is one of the most marginalized and impoverished regions in Pakistan, consistently reporting some of the lowest human, social, and economic development indicators in the country.[532] As of 2017, the region presented the lowest Human Development Index ranking in Pakistan (0.216),[533] with around 73% of the population living in multidimensional poverty.[534] Healthcare facilities are almost inexistent or have been seriously damaged by armed operations. The region's economy is largely dependent on subsistence agriculture, livestock, and transit trade, and the means for livelihood are limited.

This region has been the focus of international attention since 2001, due to profound problems of violence, terrorism, and extremism.[535] Terrorism, conflict, and large-scale temporary displacement in this region have disrupted people's lives in diverse manners, affecting their access to health and other basic services. A 2013 study on the impacts of terrorism on the social, economic, and political structures of residents found that 54% of men and 44% of women considered that their access to basic health facilities was lacking and that their physical health had been seriously affected by terrorism and military actions.[536]

A vulnerability assessment conducted in August/September 2017 revealed that 64% of FATA's population did not have access to healthcare, and the average distance to the nearest health facility was 11 kilometres.[537] This has had a negative impact on the overall health status of the population. Years of conflict damaged the economic, social, and cultural structures in the region, with a particularly negative impact on the lives of women and children. Women in the Tribal Districts are disproportionally unable to access education and health services due to a lack of gender balanced medical service and restrictions rooted in traditional and cultural practices.

The Taliban's domination of vast portions of the former FATA region was characterized by a hard-line opposition to children's education (particularly girls' education), and to healthcare initiatives, specifically opposing and banning polio immunization campaigns. Frequent attacks on volunteers and polio vaccination teams in Pakistan were common, and the Taliban issued religious edicts (fatwa) against the government vaccination programme and the female health volunteers who were the core workforce for healthcare programmes in the region.[538] This Taliban ban led to the murder and harm of several health workers, putting the healthcare in danger.[539]

Thus, the Taliban ban of polio immunization campaigns, combined with the difficulties of the Pakistani government to provide immunization to children in most of the country's hard-to-reach areas, resulted in a significant polio outbreak in 2014. Polio rates in the country are still high, and Pakistan is one of only three countries where polio remains endemic.[xxxv] The high number of polio cases

[xxxv] Polio remains endemic in only three countries: Afghanistan, Nigeria and Pakistan. World Health Organization. (2018). *Review of Polio Endemic Countries*. https://www.who.int/immunization/sage/meetings/2018/october/4_Review_Polio_Endemic_Countires_Report_IMB_Final_revised.pdf

in the FATA region is a grave concern for Pakistan, as well as the rest of the world, and a relevant red flag in the analysis of health in last mile and the populations living in that zone. The situation also demonstrates the connection between global security issues and the health impact on the most vulnerable populations in conflict areas.

In May 2018, the FATA officially ceased to exist when the region was merged with the Khyber Pakhtunkhwa province through a constitutional amendment. This merger is expected to impact not only the political and legal frameworks in the region, but also the general welfare of its inhabitants. Even if this merger is primarily a counterterrorism strategy, it represents an important step towards bringing constitutional governance, socio-economic development, and peace to these lands, as well as towards mainstreaming the people of the former FATA as an integral part of Pakistan.[540]

A 10-year plan has been adopted to guide the efforts to implement socio-economic development, political stability, and security in the region. The success of this plan will depend largely on the security situation and on the capacity of the provincial and national governments to provide the basic services that have been denied to the people of the former FATA for so long. The region is still very volatile, and insecurity will make it extremely difficult for the Pakistani government to achieve tangible results.[541] Increased security and the provision of basic services will be key factors for the legitimacy of this effort and will be decisive for its success.

2.3.3. SOMALIA

Country background

Somalia is one of the poorest and least developed countries in Sub-Saharan Africa and in the world. According to the World Bank,[542] the country has a population over 15 million (44.97% urban and 55.03% rural), and a life expectancy at birth of around 57 years.[543] It is estimated that approximately 7 out of 10 Somalis live in poverty, which is the sixth-highest poverty rate in the region.[544] Somali people have low access to basic services such as education, healthcare, safe water and sanitation, and suffer considerably from disease outbreaks (e.g. watery diarrhoea and cholera). Poverty is more predominant and severe among internally displaced people and **hard-to-reach** populations, especially rural people and nomadic groups.[xxxvi]

Malnutrition is also a major health concern in Somalia. The country has consistently presented one of the worst malnutrition rates in the world. According to UNICEF estimations, 903,100 children under the age of five were likely to face acute malnutrition in 2019, including 138,200 children that suffer from severe acute malnutrition.[545] The Food Security and Nutrition Analysis Unit estimated that nearly 963,000 children under the age of five are expected to be acutely malnourished through 2020.[546]

The country faces recurring famine episodes, having experienced two severe famines in the last 30 years (1992 and 2011) that killed thousands of people and forced massive displacements. Despite some important improvements in terms of food security in the last years, the nutrition situation continues to be fragile, particularly for displaced and hard-to-reach populations.[547]

The sustained, large-scale humanitarian assistance and rapid response of international donors to alleviate major scenarios of food insecurity (e.g. the prevention of the 2016/2017 famine), along with certain favourable, but episodic, climate conditions, have helped to facilitate a more than 50% drop in the number of people facing crisis levels of food insecurity in recent years.[548] However, these improvements are fragile and can be easily reversed.

Despite the relative improvements in food security, nutrition levels are still poor. Issues accessing healthcare, clean water and proper sanitation, a lack of good hygiene practices, the difficult recovery faced by many vulnerable households following the loss of food and income source after climate shocks (severe drought and floods), and the widespread violence brought by the civil conflict all perpetuate high levels of malnutrition in Somalia.

Although slow and modest progress has recently been made towards becoming a peaceful and sovereign state, Somalia continues to experience an unpredictable and volatile context, with weak performance in terms of human security, human development, and primary health indicators. The country

[xxxvii] According to Eklöw and Krampe (2019), 94% of the nomadic population in Somalia is living in poverty. For more information: Eklöw, K., & Krampe, F. (2019). *Climate-Related Security Risks And Peacebuilding In Somalia*. Stockholm International Peace Research Institute (SIPRI). https://www.sipri.org/sites/default/files/2019-10/sipripp53_2.pdf

has experienced decades of conflict, state collapse and weak transitional governments, and Somalia's population remains highly vulnerable to natural hazard shocks.

The combination of decades of conflict, the reduced presence and capacity of government institutions, along with climate shocks and natural disasters has created a situation of persistent social and humanitarian crisis that prevents progress towards long-term development. Somalia tops the Index for Risk Management (INFORM), which identifies the country as being at very high risk of humanitarian crises and disasters.[549] This ranking is a result of the country's significant exposure to natural disasters (droughts and floods), but also because of man-made crises such as conflict and other human and cultural causes, such as gender inequality. These risks are aggravated by the country's lack of coping capacities.

Climate changes and climate shocks have exacerbated the complex emergency situation in Somalia. Somalia is economically dependent on agriculture and livestock, however, the country's location on the Horn of Africa means that its territory is prone to recurrent flooding and droughts. Although these climate phenomena are not new to this region, they are increasing. Many studies have long predicted that the frequency and intensity of droughts would increase and become more severe as a result of global warming, especially in semi-arid areas.[550] At the same time, some analyses suggest that the impacts of current and recent droughts in East Africa are likely to have been aggravated by climate change.[551] [552]

The healthcare system in Somalia has consistently underperformed, even in comparison to other similar fragile/crisis countries. The healthcare system is poorly resourced, overburdened, fragmented and not equitably distributed throughout the country.[553] [554] This means that many vulnerable people (the poor, rural and nomadic populations) have limited access to health services. Only 20% of Somalia's population has access to any healthcare service, and two-thirds of this 20% use a private healthcare system.[555] The fact that healthcare in Somalia is primarily provided by private providers restricts the affordability of healthcare access for a large portion of the population, particularly the most vulnerable.

The complex emergency scenario in this country has resulted in a severe and protracted humanitarian crisis. Somalia has consistently been highly ranked on the Fragile States Index and was considered to be the second most fragile state in the 2019 ranking.[556] High levels of poverty and vulnerability are persistent in Somalia despite federal government and international and multilateral development efforts. According to UNOCHA, 5.2 million people in Somalia are in need, 4.8 million are in food insecurity, 1.2 million are in stress, and 1.2 million are in an emergency and crisis (most of the households with severe or extreme needs live in the southern, central, and southwest regions).[557] These figures show the persistent complex humanitarian situation in this country.

Living in the last mile in Somalia: Health needs and barriers

CLIMATE CHANGE: AN EXTERNAL FACTOR EXACERBATING THE HUMANITARIAN AND SOCIAL SITUATION IN SOMALIA

Somalia is an interesting case study of the interconnection between climate change, insecurity, conflict, violence, and poverty. The complex and fragile situation in Somalia seriously diminishes the capacity of the Somali people to withstand the escalation of climate phenomena and their accompanying shocks, with nomadic/pastoralist communities often the most affected.

Around 70% of Somalis depend greatly on regular climate patterns in order to meet their basic needs, and due to the country's limited resilience to climate consequences, climate change can also feed armed conflicts by exacerbating tensions between clans.[558] Thus, any climate change-related situation (e.g. severity of droughts and increasing desertification) significantly affects people's lives, causing famines, displacement, violence and distress, and increasing the vulnerability of an already vulnerable population.

Beyond the acute food insecurity droughts can bring, climate shocks create other problems that exacerbate the fragility of vulnerable groups. The death of livestock and crops caused by droughts puts pastoralist populations in a fragile situation due to the fact that their income depends largely on livestock and agriculture. Desperation can lead these populations to sell their animals at giveaway prices and/or to migrate to urban areas in search of new income opportunities. These human flows also change the demographic composition and ethnic makeup of some areas, which can lead to new clan conflicts.[559] Internal displacement in this vulnerable situation also exposes pastoralists and other vulnerable populations to a myriad of protection and safety issues and makes them an easy recruitment target for extremist groups.

Urbanization rates in Somalia are ranked among the highest in the world.[560] [561] Meanwhile, according to the World Bank, the country has the world's lowest rate of access to water and sanitation.[562] The pace of urbanization in Somalia due to climate-related migration, along with forced internal displacement movements related to insecurity, conflict, and violence, has increased pressure in urban areas, expanding the growth of urban slum settlements in which safe water, sanitation, and health services are already scarce. According to the Protection Return and Monitoring Network, in 2019, 770,000 people were displaced, of which around 148,000 people corresponded to drought related displacements and 416,000 corresponded to flood displacements.[563]

The changes caused by climate shocks are also contributing to the exacerbation of existing social and cultural vulnerabilities. Some of the health risks connected to climate shocks include women's health and sexual and gender-based violence. The increase in temperatures makes everyday tasks that are traditionally women's responsibilities (e.g. collecting water, firewood, etc.) more difficult and riskier for their health and well-being.[564] These women must walk longer distances at higher temperatures to find adequate water sources, which not only affects their health, but also their emotional well-being and safety. This also shortens the time women have available to spend with their families, on childcare or on other household tasks, income generating activities, education, or even leisure time. This situation can also expose women to other direct risks, such as gender-based violence.[565]

Although poverty in Somalia is originally embedded in its decades of civil conflict and war, limited food and water resources, natural disasters and lack of an active central government, and the the effects of climate change worsened an already complicated and fragile situation, especially for the most vulnerable, including women, children, and pastoralist/nomadic groups.

HEALTHCARE ACCESS: LACK OF STAFF AND PRICE BARRIERS

Decades of conflict in Somalia have caused a tangible diminishment of the Somali health sector in terms of infrastructure, staff, and the availability of supplies. This has caused the persistent underperformance of Somalia's health system, even in comparison with other neighbouring and conflict-affected countries. The complex and long-standing crisis situation has resulted in restricted access to essential healthcare for the Somali population, and the main gaps within the Somali health service are availability and accessibility.

Per WHO, Somalia has less than 1 health facility per 10,000 people, and many health facilities do not even operate fully due to a lack of human resources and infrastructure.[566] According to the Somalia Drought Impact and Needs Assessment, before the 2017 drought, there were a total of 1,074 health facilities identified, of which 106 were found to be non-functional and 169 inaccessible due to conflict and other related factors.[567] The few functional health facilities are normally gathered in the main urban areas, barely reaching rural populations, nomadic groups or even the urban poor.[568] Thus, an equitable geographical distribution of healthcare facilities is a major challenge.

Another main challenge faced by the Somali health sector is the grave dearth of health workers. The quantity and density of medical personnel is low countrywide. According to WHO, "The overall density of doctors, nurses and midwives remains less than 4 per 10,000 population, which is far below the minimum threshold of 23 per 10,000 population defined as critical shortage."[569] Decades of civil conflict and the difficulty of practising healthcare professions in the country have caused waves of migration, triggering a brain drain of doctors and nurses, which has intensified the national shortage of medical staff.

Finally, cost of access is another key problem that restricts access to healthcare services, especially for vulnerable populations (e.g. transportation, consultation, and treatment costs). Healthcare in Somalia is largely provided by private healthcare services that have filled the gaps left by the Somali public health system, and these private services are growing rapidly. According to an assessment report published by UKAid/HEART in 2015, the private healthcare sector provides over 60% of healthcare in Somalia.[570] These services are normally very costly, and most Somali households cannot afford them. Nevertheless, despite the high costs, private healthcare services are the only option for accessing healthcare for many Somali people.

Beyond the high cost of private health services, a major concern is the low levels of regulation of this sector.[571] No authority is responsible for ensuring that these services meet the basic standards of quality. Different reports, researches, and studies focused on the Somali healthcare system have underlined the negative effects of un-regulated healthcare services, which leads to adverse health results as a consequence of poor quality treatment and poor value for money.[572]

Lack of trust is also a significant problem caused by the privatization of health services. According to a research study, Somali people, despite not having many options, have no trust in their private healthcare system, which is attributed to both a lack of respect to patients by private healthcare providers and their prioritization of money over the quality of care.[573]

PASTORALIST COMMUNITIES: HARD-TO-REACH, HARD-TO-UNDERSTAND, HARD-TO-SEE

Pastoralist communities are characteristic of the drylands of the Horn of Africa region. These groups depend on their livestock and pastoralist activities for their livelihoods. However, they are not a homogeneous group, differing in religious beliefs, cultural traditions, and even in the way that pastoralism is practised.[574] Considering that these communities constantly move in order to look for reliable water sources and pasture for their animals and themselves, they are heavily dependent on seasonal rains. This makes them very vulnerable to any climate change alterations.

For pastoralist populations, every drought that reduces pasture and water availability diminishes their assets – due to animal loss by hunger and disease – and increases their vulnerability. Thus, communities that are already vulnerable due to their social, cultural, and economic structures are put at higher risk. Within

pastoralist communities, women are frequently the most vulnerable, as they usually do not have large numbers of livestock, and they are limited by cultural/customary inequalities regarding property rights, decision-making, and the use and control of income and assets.[575] Women are much more prone to food insecurity, malnutrition risks, and health problems. They are also more likely to migrate to urban areas in fragile conditions. The challenges they face are often associated with the complex gender relationships between women and men in pastoralist communities.[576]

Pastoralist communities are often the poorest and most forgotten populations in Sub-Saharan Africa. According to WHO, this nomadic population has the highest multidimensional poverty index in Somalia.[577] Due to their lifestyle and their limited access to healthcare or other social services, these communities are at greater risk for malnutrition and preventable infectious diseases, such as tuberculosis, malaria, and STIs.[578]

The extent of their vulnerability in terms of health problems, poverty levels, and access to basic social services is often largely unknown. Nomadic pastoralist communities (in Africa in general and in Somalia in particular) have the least access to health services, and no suitable and sustainable strategies have been found to deliver adequate healthcare to these hard-to-reach populations.

Typically, healthcare systems are structured for settled populations and their particular conditions. As a result, these systems are ineffective when it comes to reaching nomadic populations due to cultural, political, and economic obstacles. Pastoralist and nomadic groups struggle to be seen and defined as a **community** in the traditional Western sense (defined geographic location, stable population, political system, economic status, etc.). This makes it very difficult for national governments, international organizations, non-governmental organizations, and other agents to target them and reach them with appropriate project and public policy programming.

Thus, institutional programming and policy are flawed in terms of reaching those nomadic populations. Their social structure, geographical distribution, lifestyle, and diversity make conventional healthcare service provision and preventive health communication/campaigns (e.g. immunization campaigns) a real challenge. The preference of pastoralist groups for traditional healthcare providers that are familiar with their lifestyle and social structure, along with the mistrust that exists among pastoralists regarding regular health service providers, makes reaching this population even more difficult.[579]

Beyond the challenges related to logistics, infrastructure, trust, and public policy programming associated with reaching these populations, there are also challenges related to health service gaps and the perspectives and priorities of the different actors involved. Some studies have revealed that very few institutions, partners, and development actors target interventions that systematically engage hard-to-reach populations.[580]

2.3.4. IRAQ

Country background

Iraq has been ravaged by decades of different conflicts, including the war with Iran in the 1980s, the Gulf War in 1991, and the U.S. invasions in 2003 and 2014. The most recent conflict began in 2014, when the Islamic State in Iraq and the Levant (ISIL/ISIS) forces began seizing control of parts of northern and central Iraq. The intensity of the conflict decreased at the end of 2017, when government forces reclaimed control of the zones that had been seized by ISIS. Many people have returned to their homes since then; this resulted in almost 4.5 million returnees according to the International Organization for Migration.[581] However, there are still significant limitations impacting their return, and many humanitarian and health challenges remain. The context is still unpredictable due to political and security transitions, constant political disputes, social demonstrations, and tribal conflicts over disputed territories.

Paradoxically, although the World Bank considers Iraq to be an upper-middle-income country,[582] the country has a poverty rate of 20.5%,[583] ranks 120 out of 189 countries in the Human Development Index,[584] and is categorized by INFORM as one of the countries with the highest risk of humanitarian crises and disasters.[585] High unemployment rates (especially for youth),[xxxvii] high levels of corruption, and the erosion of public services along with the insufficient provision of basic social goods such as education, healthcare and sanitation, have recently triggered large protest movements. This situation could agitate the explosion of new crises during which some vulnerable communities could be left behind.

At the end of 2019, Iraq was still slowly getting back on track, but yet faced many challenges. Around 1.5 million people are still displaced.[586] According to UNOCHA, 4.1 million people are in need of some form of humanitarian assistance (27% of which are women and 46% of which are children), and 1.77 million people are in acute need.[587] Iraq is also host to 245,810 Syrian refugees, mainly in the north of the country, and the considerable needs of this population amplify the humanitarian situation.[588]

[xxxvii] According to the World Bank, youth unemployment (15-24) stood at 16.52% as of 2019. World Bank data: https://data.worldbank.org/indicator/SL.UEM.1524.ZS?locations=IQ

Many health centres are damaged or destroyed, and there is insufficient trained health staff (particularly in areas such as mental health and treatment for NCDs). Conflict and political unrest along with the violence that Iraqi healthcare professionals experience while exercising their functions, have created a serious medical brain drain that has worsened the shortage of trained medical staff and exacerbated the deterioration of the country's health system.[589]

Medical needs in the country remain severe, with a large number of vulnerable communities living in the last mile in a country that is still struggling to recover. Iraq's society and economy are recovering feebly. Infrastructure (health, education, sanitation) and public services were directly destroyed in a large portion of the country and indirectly affected in the rest of the territory. Today, Iraq is a country that needs to be (re)built.

Although the number of people in need of humanitarian assistance in Iraq has decreased in recent years, the humanitarian situation is still precarious in many conflict-affected areas, as well as in other areas that were not directly affected by the most recent conflict but have been forgotten by both national government and international humanitarian actors. In addition to the current issues of people in need, damaged infrastructure and lack of government and international funding and support, there is also a problem **with the evolution and identification of the needs of vulnerable people**, as well as **new barriers to accessing health services that might emerge** during the country's recovery.

In this phase of recovery, vulnerable people suffer from limited access to health services due to a lack of facilities, but also due to institutional barriers such as identification procedures. In areas where people are returning, most health facilities, including secondary and tertiary health facilities, were damaged and are experiencing a shortage in health personnel. Many displaced families lack the necessary documentation to access different necessary services, such as basic healthcare services.

There are two additional conditions related to conflict and its ravages that affect the health and access to healthcare of already vulnerable communities in Iraq: the environmental effects of conflicts and their impact on the Iraqi people's health, and NCDs. Iraq has suffered decades of tangible environmental degradation (land, air, water) from recurrent conflicts and insecurity. According to WHO, the environmental situation in Iraq impacts the health of the most vulnerable.[590] Existing literature focused on conflict and environmental damage notes that previous conflicts, along with oil industry mismanagement, have left Iraq with a legacy of toxic remnants of war and environmental pollution.[591]

Generally, conflict-related environmental damage and subsequent health risks receive little attention during post-conflict reconstruction and rehabilitation due to more pressing humanitarian concerns.[592] However, these conditions could have severe health consequences for communities, especially for the most vulnerable, thus undermining any reconstruction efforts.

The other forgotten health issue is the burden of NCDs. In a country that is already struggling with a lack of health facilities and limitations when it comes to offering basic healthcare services, NCDs represent a double burden in Iraq: for the people living with those diseases in a country that struggles to cover the health needs of vulnerable populations and for the Iraqi health system that already has structural shortages and deficiencies. According to WHO, in 2016 there were 190,000 deaths caused by NCDs in Iraq (figure 9), representing around 55% of all deaths; the fatalities from said diseases are superior to deaths due to injuries (violence, conflict, etc).[593] The Institute for Health Metrics and Evaluation ranked ischemic heart disease as the second highest cause of death in Iraq in 2017, after conflict and terror. (figure 10)

According to UNOCHA's Humanitarian Coordinator, "the response of humanitarian actors in recent years has been focused on the immediate life-saving needs of those directly affected by the conflict and fleeing combats."[595] Now the focus is on the returned populations, IDPs, and the refugees coming from Syria, which are all very vulnerable communities. Nevertheless, the findings of this present study have shown that there are other communities that have also been highly affected by years of conflict and government neglect. Therefore, it is time to look ahead and rethink the **complexity of the needs of all vulnerable communities** in the country to combine humanitarian actions with targeted and sustainable developments projects

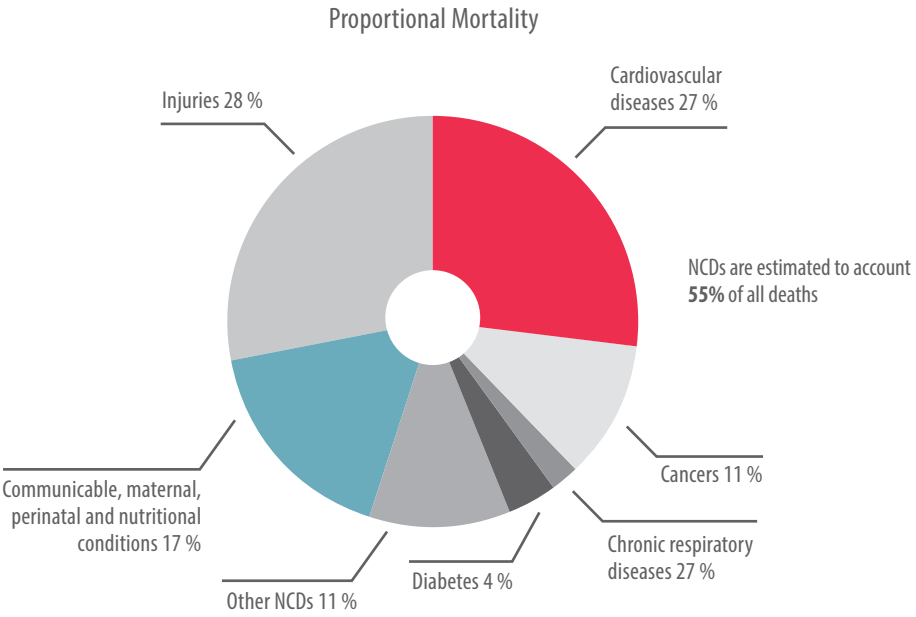
Living in the last mile in Iraq: Health needs and barriers

WOMEN AND GIRLS: THE BURDEN OF SUSPICION, THE INVISIBILITY OF BEING PAPERLESS

The years of conflict endured by the Iraqi population left not only a significant quantity of widowed women and orphaned children, but also worsened the conditions in which women and girls live, making them even more vulnerable. According to Human Rights Watch, "women and girls of Iraq have endured the biggest impact of the conflict and resulting insecurity."[596] Increasing poverty, destabilized government institutions, and social and religious conceptions of punishment have increased the exposure of women and girls to exploitation, including the illegal sex trade, abuse resulting from alleged affiliations, or institutional restrictions to accessing the most basic services or rights because of a lack of necessary documents.

Figure 10.

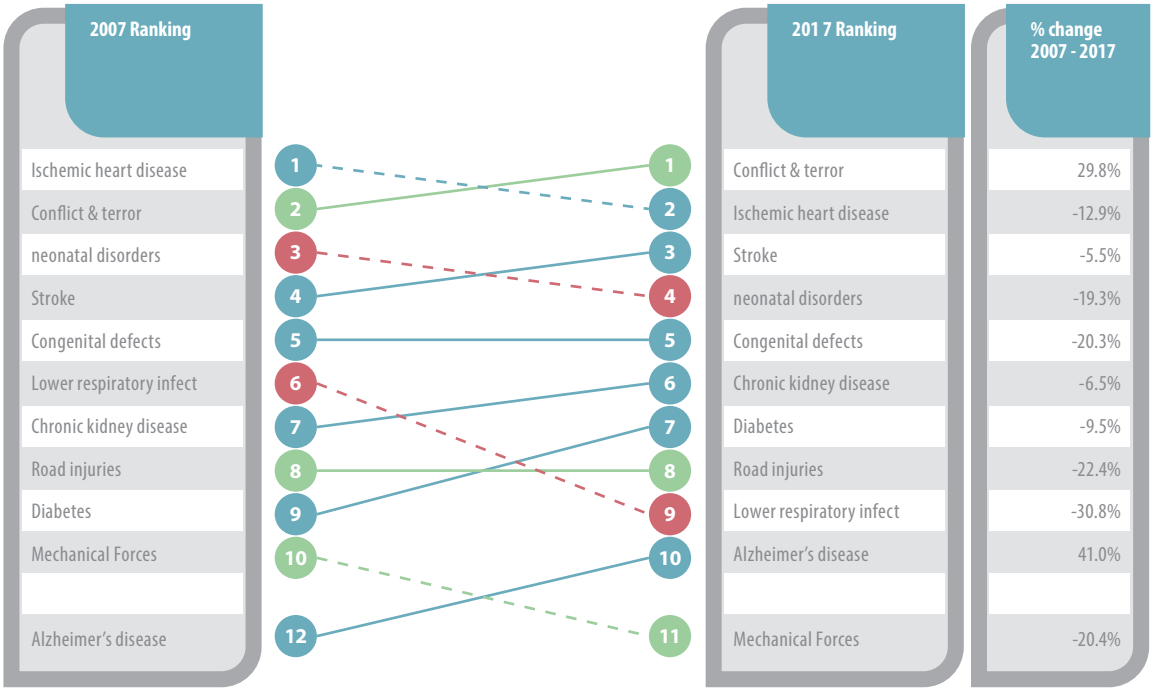
Non-communicable diseases. Iraq 2016 (WHO)



World Health Organization (2018). Noncommunicable Diseases (NCD) Country Profiles- Iraq. WHO. https://www.who.int/nmh/countries/irq_en.pdf?ua=1

Figure 11.

Top 10 causes of death in Iraq in 2017 and percent change, 2007-2017 (all ages)



Institute for Health Metrics and Evaluation. (n.d.). *Iraq- How long do people live?* Health Data. http://www.healthdata.org/iraq

In a post-ISIS country, any individual somehow linked to ISIS – whether they were fighters, civilian collaborators, or mere residents of controlled territories – become a unique target for stigma from local communities, tribal authorities, and even state-allied forces. Family members of alleged ISIS members are often treated as guilty by association, regardless of their own individual culpability.[597] In this context, women and their children who lived in areas previously under the control of ISIS forces, or even who were displaced by hostilities, represent a particularly highly vulnerable and marginalized group.

Those people are punitively called ***Awa'il Dawaish or* ISIS families**.[598] This kind of social punishment results in discriminative practices, restricting these families' access to the most basic services (even identification services), limiting their ability to move freely and, in general, restricting their opportunities and future. According to a Human Rights Watch report, the perceived affiliation with ISIS leaves the door open to abuses and has prevented many displaced women and their families (around 250,000 people per Interior Ministry official estimates) from returning home because of objections from authorities or communities.[599]

According to an extensive Amnesty International report, women living in IDP camps identified as allegedly having ties to ISIS are denied food, water, healthcare, and even civil documentation.[600] They are victims of sexual exploitation or sexual abuse and violations by different camp actors. Women living with the stigma of a supposed ISIS affiliation have even avoided the use of camp toilets in order to minimize the chances of being raped by guards or other camp actors.[601] Thus, in its effort to punish perpetrators of violence and crime, society ends up leaving some fragile groups in an even more vulnerable situation, affecting their access to health.

In addition to the severe abuses that they face due to being socially stigmatized, being paperless also seriously affects women and children and restricts their access to the most basic services, including access to health. In Iraq's recovery stage, many people do not have proof of their legal identity. Some people lost their documents while escaping the fighting and fleeing their homes; others had their documents confiscated by different conflict parties or were issued ISIS documentation, which is no longer valid.

According to the Norwegian Refugee Council, these paperless people find themselves stripped of their human rights, denied a range of public services, and excluded from recovery and reconstruction efforts.[602] These individuals are almost invisible, lacking the proper papers severely limits access to basic healthcare, education, formal employment, government schemes for compensation, and opportunities to own or rent property. People without papers are restricted in their mobility and also face a greater risk of being detained or arrested.

WHERE OIL FLOWS, BUT NOT DRINKING WATER:[603] ACCESS TO SAFE WATER IN THE LAST MILE

After defeating ISIS, the Iraqi government and international actors have focused on rebuilding and providing humanitarian assistance to the north of the country, where the most severe part of the conflict occurred. However, those actors have overlooked the security issues, sanitation, and water situation, as well as the severe poverty, of the south of the country. Basra is one of those forgotten regions.

Southern governorates have long endured chronic vulnerabilities, with an estimated of 123,000 people in need.[604] According to the poverty mapping conducted by the World Bank,[605] the administrative divisions at the sub-district level (nahiya) with the highest poverty rates in Iraq are located in the southern governorates (Maysan, Muthana, and Qadisiya), where child poverty stands around 50%[606] and 16% of the population lives below the poverty line.[607]

Iraq has a severe problem regarding water access, and around 70% of the country's water comes from sources outside of its territory (mainly from Turkey and Iran).[608] Poor water quality is also a persistent problem throughout the country. Iraq currently faces a significant threat of water shortages, which have turned into a major threat for Iraqi national security.[609] This threat is due to internal and external challenges that include poor water resource management, internal political conflicts, lack of local policies, and an insufficient legal framework, climate change, and unstable relationships with neighbouring countries (Turkey, Iran, and Syria).

Basra is the southern-most governorate of Iraq, sharing borders with Iran, Kuwait, and Saudi Arabia. The governorate has a population of 4.5 million people and is a socio-economic hub. Its strategic and economic importance resides in its significant oil reserves, which account for around 95% of Iraq's state revenue at current production rates.[610] The oil industry is both the governorate's primary source of income, and the primary source of pollution. Although the region is rich in oil production, Basra and the rest of southern Iraq have historically suffered from chronic unemployment and poverty, poor public services, and deteriorating infrastructure.

For decades, Iraqi authorities have been unsuccessful in ensuring to Basra residents the access to sufficient safe drinking water, which has caused significant rates of diarrhoea and infectious, water-borne diseases. This critical water access issue reached a peak in 2018, when between 110,000 and 118,000 people were hospitalized for water-borne diseases after drinking water polluted with sewage and toxic waste.[611]

This situation has affected the entire population, being particularly dangerous for the most vulnerable and poorest individuals, who do not have many options to access safe water, becoming very vulnerable to different water-borne diseases. People in Basra are forced to buy bottled water to cope with pollution and shortages, which has a very high cost, especially in times of crisis.[612] Vulnerable families fall into debt and are pulled deeper into poverty due to spending a disproportionate share of their income on drinking water.

A comprehensive report by Human Rights Watch about the water situation in Basra revealed that decades of mismanagement and corruption by public officials and rampant environmental pollution, along with climate change effects, have led the region and its population to this vulnerable situation.[613] This crisis is the result of a combination of complex factors that, in the absence of an adequate response, will likely lead to new water-borne epidemics and pose persistent social and economic challenges. Local and national authorities have done little to address the root causes of the situation.

Thus, recent demonstrations (2018 and 2019) have shown that safe water shortages and pollution crises have serious consequences. According to various civil society organizations, non-governmental organizations, and think tanks, the current crisis in Basra is not a recent development; it is the result of years of inattention from both the international community and the Iraqi government. Immediate investment in urgent solutions and international actors support is required to avoid leaving behind many people.

MENTAL HEALTH: A FORGOTTEN AND OVERWHELMING NEED

Modern Iraqi society has been moulded by the country's recent history of political unrest and repression, punctuated by wars, intermittent violence, and devastating conflict, all of which have diminished basic health service provision and institutional capacity. According to the most comprehensive healthcare survey conducted in the country by WHO, mental health disorders were the fourth leading cause of disease in Iraqis over the age of five.[614]

The continuous environment of conflict has impacted the psychological and emotional well-being of the people of Iraq, intensifying the need for skilled mental health practitioners. In 2016, UNHCR noted that the psychosocial and mental health sector in the country was under-resourced and lacked specialized and trained staff, as the result of poverty, conflicts, international sanctions and brain drain.[615]

In recovery Iraq, there are very limited psychosocial support services available, and the few services that are available are mostly offered by private institutes at a cost that is prohibitive for most families. The meagre number of mental health practitioners working in the regions that most need it (especially northern Iraq), struggle to meet overwhelming needs with limited resources. According to a report on mental health crisis in Iraq, managing the vast need for psychosocial care has pushed local and international organizations to, in some cases, employ under-qualified practitioners who lack the training to treat the severe trauma of the very fragile and vulnerable Iraqi populations.[616] The same report concludes that while Iraqi policy-makers look to rebuild their country after years of conflict, **the provision of mental healthcare is still not a priority**.

For individuals already struggling to access psychosocial services due to the reduced capacity of the country's health services or personal financial hardship, the social stigma around mental illness in Iraq intensifies their vulnerability, leading them to experience isolation and feelings of shame. A 2010 study on the public perception of mental health in Iraq outlined this situation: approximately 60% of respondents agreed with the statement that mental illness is caused by brain disease, 65% declared that psychological problems were borne of personal weakness, and 80% affirmed that people with mental health problems are largely to blame for their condition.[617]

Decades of conflict in Iraq have had a drastic impact on the population's mental health and psychosocial well-being. This impact is unlikely to be limited to the generations that lived this violence directly, but may in fact extend to future generations, even those that could live in peace. Children that are yet to be born may still carry the burden of this multigenerational impact and collective trauma. It is a fact that in today's recovering Iraq, most people are not receiving the mental and psychosocial care they need. Without the appropriate institutional response, mental health problems and collective trauma can have a long-term impact, causing challenges to families, communities, and society.

SECTION 3

RECOMMENDATIONS

SECTION 3: RECOMMENDATIONS

As mentioned before, this study is not meant to settle priorities for humanitarian actors. The 13 recommendations presented below are not meant to offer a definitive path of action or solution to the last mile, but are meant to serve as inputs for future discussions within the humanitarian movement and among humanitarian and development actors. These recommendations focus on addressing the converging factors that push individuals and communities to the last mile: crises, challenges to humanitarian actors' responses, weak health systems, and individual and social determinants that reinforce and compound vulnerability, exclusion, oppression, stigmatization, and marginalization:

1. Universal health coverage should remain a priority in times of crises

Universal health coverage is at the centre of efforts to reduce health inequities. This mandate gains even more importance in times of crises and as part of preparedness and recovery efforts. Building on recommendations from the Call to Action on Universal Health Coverage in Emergencies, efforts should include, but are not limited to, developing systems ready to offer a similar standard of care for people on the move, which in turn requires better collection, storing, and sharing of patient data; putting protection plans for health providers in place; bringing together governments, humanitarian and development partners, and the private sector to develop national and subnational plans for the delivery and financing of quality essential health services for populations in or at risk of being in the last mile; and ensuring health benefit plans consider the needs – both in terms of potential health issues and essential services and commodities – of highly vulnerable populations in times of stability and crises.[618]

2. More investment for resilient health systems is needed

Following the recommendations of the Sendai Framework for Disaster Risk Reduction and the Busan Partnership for Effective Development Co-operation, donors, governments, and humanitarian and development actors should work together to strengthen the resilience of health systems. They also need to join efforts to develop shock resistant infrastructure and social protection systems for at-risk communities. This requires sustained investments in all pillars of the system, including in health financing, service delivery, the workforce, health information, medicines/vaccines/technologies, and leadership and governance. Strengthening routine immunization programmes, for instance, is considered "a low-cost, high-impact preventative health measure to pave the way for stronger and more resilient healthcare systems to reach unprivileged, underserved, and vulnerable populations, including host communities in need of life-saving health services, and mitigate the risks of disease outbreaks."[619]

3. Investing in task sharing/task shifting can help increase the number of health providers prepared to meet the needs of populations in the last mile

Community health workers, peer educators, and other volunteers can play an essential role in reducing barriers to healthcare for populations in the last mile. With the right training and support, they can share roles that are traditionally assigned to other cadres of health providers. For example, using these actors to offer first line support and referral to survivors of sexual and gender-based violence can accelerate efforts to integrate this service into the care package that humanitarian actors offer.

4. Health systems should be closer to populations in the last mile

Interventions to bring the health systems closer to populations in the last mile may include increasing the number and type of health providers or facilities, bringing service provision to the community level, simplifying communication and data storage systems to ensure individuals' records are available for health decision-making processes, and introducing technology (from SMS technology to the use of drones).[620]

5. Implementing intersectional approaches to research, evaluation, and needs assessments, and using data for decision-making at all levels are necessary measures to reduce vulnerability and increase the visibility of individuals in the last mile

Intersectionality – that is, the recognition that individuals may face overlapping and interdependent systems of oppression, discrimination, or disadvantage – should guide research and knowledge generation, evaluation, and needs assessment processes in humanitarian settings. In practice, this requires participatory methodologies to bring diverse voices, as well as the development of disaggregated research questions and indicators. It is also important to consider increasing "agreement on basic data standards and methodology to ensure comparability and interoperability, as well as adherence to a strong 'do-no-harm' approach to data protection and sharing."[621] To achieve this recommendation, it is important to invest in stronger data gathering and analysis capacities across the humanitarian sector and at the national level,[622] and in the creation of mechanisms that encourage the use of data for the design of programmes and initiatives in the last mile.

6. Supply systems should consider the needs of diverse groups

For an individual to aspire to achieve the highest possible standard of health, having access to good quality, sufficient, and sustainable commodities is essential. Having access to optimal diagnosis tools is also a precondition. This becomes more challenging in times of crisis, particularly for populations in the last mile, whose needs are not always prioritized. Therefore, additional efforts are required to do the following: reduce the cost of commodities and other life-saving products; transform infrastructure barriers that limit the delivery of supplies; build resilient supply chain systems; and increase flexibility in decision-making processes related to priority medicines and commodities in order to accommodate the needs of diverse groups.

7. Implementing protection, gender, and inclusion standards is essential to successful health programming by humanitarian actors

In line with the recommendations issued by the International Federation of Red Cross and Red Crescent Societies, humanitarian actors should "provide dignity, access, participation and safety for all people affected by disasters and crises."[623] This can be achieved by implementing standards that "address protection, gender and inclusion concerns by providing practical ways to engage with all members of the community, respond to their differing needs and draw on their capacities in the most non-discriminatory and effective way. This helps to ensure that local perspectives guide assistance delivery."[624]

8. Investing in and empowering local humanitarian actors helps reduce barriers to healthcare access

Local stakeholders at different levels have a better understanding of the health needs of populations in the last mile and of the social dynamics that contribute to the vulnerability of these populations. They also have local knowledge on how different populations navigate barriers to healthcare access. However, they do not always have the capacity to integrate evidence into their programming or access and manage the resources necessary to intervene. Horizontal partnerships with international humanitarian actors, as well as sustained funding to develop their internal policies, human talent, and accountability systems, is critical.

9. Reducing barriers to healthcare for individuals in the last mile requires active collaboration at the subnational and community levels

Funding and capacity building for local actors should not focus only on national level actors. Governments and grassroots groups at subnational levels are well positioned to identify and reach highly vulnerable populations. Their capacity to serve populations in the last mile – as well as to coordinate efforts with national and international partners – can be strengthened, for instance, through the use of technology. Their capacity can also be strengthened with the establishment of more horizontal relationships that promote shared decision-making regarding the use of resources, the target populations and their involvement, and the best strategies to reduce barriers to healthcare access in a particular setting.

10. National laws should prepare to allow effective and timely international assistance

Stronger laws and policies that coordinate and regulate international assistance in the wake of a large-scale response are essential to better prepare countries for international assistance. Local stakeholders should identify "gaps and opportunities in domestic frameworks and provide drafting support to governments to incorporate guidelines in national frameworks."[625] Potential adaptations to legislation and policies include reducing bureaucratic barriers and restrictions that limit timely access to international funds (i.e. rigid money laundering counter-terrorism laws).

11. Additional efforts are required to strengthen coordination efforts between humanitarian and development actors

Humanitarian and development actors should work together to define mid- and long-term outcomes, conduct joint needs assessments and planning, and collaborate on efforts to protect and preserve health systems during times of crisis.[626] Coordination not only supports health programming; it also allows humanitarian actors to implement comprehensive initiatives that consider, for instance, economic empowerment and income generation. This, in turn, gives individuals the opportunity to cover health expenses in the absence of universal health coverage.

12. Securing and sustaining funding for last-mile countries and populations is essential

Information collected for countries in the last mile showed a significant funding gap (resources requested versus funding received). Securing additional funding is an obvious and necessary step to reduce barriers to healthcare. Related to the latter, it is important that "donors define 'value for money' in light of the goal of leaving no one behind and reaching the people most in need – even if doing so is more expensive. This means prioritizing the people who are hardest to reach – making the last mile, the first mile for humanitarian response – and incentivizing assistance through proactive and tailored strategies and

tools. These include allocating funds specifically for the under-supported and hardest-to-reach groups and removing disincentives to working in hard-to-reach areas, including approaches that shift risk down the implementation chain rather than sharing and jointly mitigating the risks."[627]

13. Local and global preparedness and response (in financial, health equipment, logistic, and policy terms) for growing pandemics, that exacerbate existing crises and inequalities, is essential

The COVID-19 pandemic, along with other recent epidemic events in the last decades (SARS, MERS, Ebola, Zika, Chikungunya, among others), have shown that the world is being defied by increasing highly infectious outbreaks. These episodes are bringing a new period of highly challenging and fast-spreading outbreaks, which are increasingly difficult to manage. They not only have a high impact on health, but they can also cause economic, and social, and political crisis that expose and deepen existing inequalities and vulnerabilities. Global and regional stakeholders should build an effective preparedness response, trust and awareness, and create innovative partnerships to handle these new challenges.

Finally, practices such as participatory grantmaking – that is, mechanisms that allow beneficiaries to participate in decision-making about funding recipients and implementers – could be piloted in some settings. While the use of these models could be challenging in emergencies, given the need to prioritize agile and timely disbursement of resources, some pilots can be done in projects that connect the humanitarian response with development efforts. These innovative models of grantmaking contribute to generating ownership of the projects and initiatives funded. It also promotes more equal relationships between implementing organizations and beneficiaries.

ANNEXES*

ANNEX 1. HLMCI SCORE AND RANKING FOR PROJECTED YEAR 2030

A. Results of HLMCI and ranking for 2016 estimates and 2030 forecast

B. Estimates and projection of health, educational, vulnerability, and fragility indicators included in the HLMCI

C. Comparison of the HLMCI estimates to other key indicators

ANNEX 2. COUNTRIES' PROFILES COMPARATIVE TABLE

***(See separated files)**

REFERENCES

[1] World Health Organization Regional Office for Africa. (n.d). *Communicable Diseases*. https://www.afro.who.int/health-topics/communicable-diseases
[2] Women Win. (n.d.). *Defining Conflict/Post Conflict*. https://guides.womenwin.org/gbv/conflict/context/defining-conflict-post-conflict
[3] United Nations. (n.d.). *A New Era of Conflict and Violence*. https://www.un.org/en/un75/new-era-conflict-and-violence
[4] World Bank. (2018). *Pathways for Peace: Inclusive Approaches to Preventing Violent Conflict*. https://olc.worldbank.org/system/files/Pathways%20for%20Peace%20Executive%20Summary.pdf
[5] United Nations. (n.d.). *A New Era of Conflict and Violence*. https://www.un.org/en/un75/new-era-conflict-and-violence
[6] World Health Organization. (n.d.). *Coronavirus*. https://www.who.int/es/health-topics/coronavirus
[7] International Federation of Red Cross and Red Crescent Socieities. (n.d.). *What is a disaster?* https://www.ifrc.org/en/what-we-do/disaster-management/about-disasters/what-is-a-disaster/
[8] International Federation of Red Cross and Red Crescent Societies. (2018) *Leaving No One Behind. World Disasters Report*.
https://media.ifrc.org/ifrc/wp-content/uploads/sites/5/2018/10/B-WDR-2018-EXECSUM-EN.pdf
[9] World Health Organization. (n.d). *Definitions: emergencies*. https://www.who.int/hac/about/definitions/en/
[10] Blackwood, R., & Currie, C. (n.d.). *Population health outcome indicators*. Public Health Action Support Team (PHAST).
https://www.healthknowledge.org.uk/public-health-textbook/research-methods/1c-health-care-evaluation-health-care-assessment/population-health-outcome-indicators
[11] World Health Organization. (n.d.). *Health systems*. http://www.who.int/healthsystems/about/en/
[12] World Health Organization. (2010). *Monitoring the Building Blocks of Health Systems: A Handbook of Indicators and their Measurement Strategies*.
https://www.who.int/healthinfo/systems/WHO_MBHSS_2010_full_web.pdf
[13] Evans, D. B., Hsu, J., & Boerma, T. (2013). *Universal health coverage and universal access- Bulletin of World Health Organization. World Health Organization*.
https://www.who.int/bulletin/volumes/91/8/13-125450.pdf
[14] International Committee of the Red Cross. (2015). *Health care in danger, meeting the challenges*.
https://healthcareindanger.org/wpcontent/uploads/2015/12/4212_002_HCiD-Meeting-the-Challenge.pdf
[15] Hankivsky, O. (2014). *Intersectionality 101*. The Institute for Intersectionality Research & Policy, SFU.
https://www.researchgate.net/profile/Olena_Hankivsky/publication/279293665_Intersectionality_101/links/56c35bda08ae602342508c7f/Intersectionality-101.pdf
[16] World Health Organization. (n.d). *Mental Health; Mental Disorders*. https://www.who.int/mental_health/management/en/
[17] World Health Organization. (2018) *Noncommunicable Diseases*. https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases
[18] Harvard Global Health Institute. (2018). *Global Monitoring of Disease Outbreak Preradness. Harvard*. https://globalhealth.harvard.edu/files/hghi/files/global_monitoring_report.pdf
[19] World Health Organization. (n.d). *Gender and Human Rights*. https://www.who.int/reproductivehealth/topics/gender_rights/sexual_health/en/
[20] United States Agency for International Development. (n.d.). *USAID's Global Health Strategic Framework- Better Health for Development*.
https://www.usaid.gov/sites/default/files/documents/1864/gh_framework2012.pdf
[21] World Health Organization. (2017). *10 facts on health inequities and their causes*. https://www.who.int/features/factfiles/health_inequities/en/
[22] International Federation of Red Cross and Red Crescent Societies. (2018). *World Disaster Report 2018- Leaving No One Behind*.
https://media.ifrc.org/ifrc/wp-content/uploads/sites/5/2018/10/B-WDR-2018-EN-LR.pdf
[23] Jamison, D. T., Summers, L. H., Alleyne, G., Arrow, K. J., Berkley, S., Binagwaho, A., & Ghosh, G. (2013). *Global health 2035: a world converging within a generation*. The Lancet. https://www.thelancet.com/commissions/global-health-2035
[24] United States Agency for International Development. (n.d.). *USAID's Global Health Strategic Framework- Better Health For Development*.
https://www.usaid.gov/sites/default/files/documents/1864/gh_framework2012.pdf
[25] World Health Organization. (2017). *10 facts on health inequities and their causes*. https://www.who.int/features/factfiles/health_inequities/en/
[26] United Nations Development Programme. (2018) *What does it mean to leave no one behind?*
https://www.undp.org/content/dam/undp/library/Sustainable%20Development/2030%20Agenda/Discussion_Paper_LNOB_EN_Ires.pdf
[27] World Health Organization. (n.d.). *Health statistics and information systems- Disease burden and mortality estimates*. https://www.who.int/healthinfo/global_burden_disease/estimates/en/
[28] United Nations. (2019). *World Population Prospects*. https://population.un.org/wpp/Download/Standard/Population/. The definition of projection variants is rich described at United Nations. (2019). *Definition of projection variants*. UN. https://population.un.org/wpp/DefinitionOfProjectionVariants/
[29] Wittgenstein Centre. (n.d.). *Human Capital Data Explorer*. http://dataexplorer.wittgensteincentre.org/wcde-v2/
[30] Information Index: European Commission. (n.d.). *The Global Crisis Severity Index – beta version*. Disaster Risk Management Knowledge Centre:
https://drmkc.jrc.ec.europa.eu/inform-index/Global-Crisis-Severity-Index
[31] Fragile States Index. (n.d.). *Fragile States Index- Data*. https://fragilestatesindex.org/excel/
[32] Jamison, D. T., Summers, L. H., Alleyne, G., Arrow, K. J., Berkley, S., Binagwaho, A., & Ghosh, G. (2013). *Global health 2035: a world converging within a generation*. The Lancet.
https://www.thelancet.com/commissions/global-health-2035
[33] World Bank, World Development Indicators. (2018). *Population* [Data file]. https://data.worldbank.org/indicator/SP.POP.TOTL
[34] World Bank, World Development Indicators. (2017). *Fertility rate, total (births per woman)* [Data file]. https://data.worldbank.org/indicator/SP.DYN.TFRT.IN
[35] World Bank, World Development Indicators. (2017). *Life expectancy at birth, total (years)* [Data file]. https://data.worldbank.org/indicator/SP.DYN.LE00.IN
[36] World Bank, World Development Indicators. (2018). *Mortality rate, under-5 (per 1,000 live births): (% of population)* [Data file].https://data.worldbank.org/indicator/SH.DYN.MORT
[37] World Bank, World Development Indicators. (2017). *Births attended by skilled health staff (% of total): (per 1,000 live births)* [Data file].https://data.worldbank.org/indicator/SH.STA.BRTC.ZS
[38] Joint United Nations Programme on HIV/AIDS. (2018). *Number of new HIV infections per 1,000 uninfected population*. https://aidsinfo.unaids.org/
[39] World Health Organization. (2018). *Global Health Observatory data repository- Mortality attributed to household and ambient air pollution Data by Country*.
https://apps.who.int/gho/data/view.main.GSWCAH37v
[40] World Health Organization. (2018). *Global Health Observatory data repository- Suicide rate estimates, age-standardized Estimates by country*.
http://apps.who.int/gho/data/view.main.MHSUICIDEASDRv
[41] World Bank, World Development Indicators. (2018). *Net official development assistance received (current US$) (millions)* [Data file].
https://data.worldbank.org/indicator/DT.ODA.ODAT.CD
[42] Eckstein, D., Künzel, V., Schäfer, L., & Winges, M. (2019). *Global Climate Risk Index 2020. Germanwatch*. https://germanwatch.org/en/cri
[43] Global Hunger Index. (2019). *2019 Global Hunger Index by Severity*. https://www.globalhungerindex.org/results.html
[44] World Health Organization. (n.d.). *Global Health Observatory - Universal Health Coverage*. http://apps.who.int/gho/portal/uhc-cabinet-wrapper-v2.jsp?id=1010501
[45] World Health Organization. (n.d.). Medical Doctors (per 10,000 population). http://apps.who.int/gho/data/view.main.HWFMEDv
[46] World Health Organization. (n.d.). *Nursing and midwifery personnel (per 10,000 population)*.
https://www.who.int/data/gho/data/indicators/indicator-details/GHO/nursing-and-midwifery-personnel-(per-10-000-population)

[47] World Health Organization. (2019). *Global Health Observatory data repository- Childhood Immunization, Sex Data by Country.*http://apps.who.int/gho/data/node.main.nHE-1588?lang=en
[48] World Health Organization. (2016). *Global Health Observatory data repository- Mortality attributed to household and ambient air pollution Data.*https://apps.who.int/gho/data/view.main.GSWCAH37v
[49] World Bank, World Development Indicators. (2011). *Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population)* [Data file].https://data.worldbank.org/indicator/SI.POV.DDAY
[50] World Bank, World Development Indicators. (2009). *Income share held by lowest 20%* [Data file]. https://data.worldbank.org/indicator/SI.DST.FRST.20
[51] World Bank, World Development Indicators. (2018). *Urban population growth (annual %)* [Data file]. https://data.worldbank.org/indicator/SP.URB.GROW
[52] World Bank, World Development Indicators. (2011). *Primary completion rate, total (% of relevant age group)* [Data file]. https://data.worldbank.org/indicator/SE.PRM.CMPT.ZS
[53] World Bank, World Development Indicators. (2017). *Individuals using the Internet (% of population)* [Data file]. https://data.worldbank.org/indicator/IT.NET.USER.ZS
[54] International Committee of the Red Cross. (2012, March). *Respecting and protecting health care in armed conflicts and in situations not covered byinternational humanitarian law - Factsheet.* https://www.icrc.org/en/document/respecting-and-protecting-health-care-armed-conflicts-and-situations-not-covered
[55] Health Care in Danger. (n.d.). *The Issue -A humanitarian issue of critical concern.* https://healthcareindanger.org/the-issue/
[56] Debarre, A. (2018). *Hard to Reach: Providing Healthcare in Armed Conflict. International Peace Institute (IPI).* https://www.ipinst.org/2018/12/hard-to-reach-providing-healthcare-in-armed-conflict
[57] Health Care in Danger. (n.d.). *The Issue -A humanitarian issue of critical concern.* https://healthcareindanger.org/the-issue/
[58] Leyh, B. M., & Gispen, M. E. (2018). Access to Medicines in Times of Conflict: Overlapping Compliance and Accountability Frameworks for Syria.*Health and Human Rights, 20(1), 237–250.* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6039728/
[59] Gayer, M., Legros, D., Formenty, P., & Connolly, M. A. (2007, November). *Conflict and Emerging Infectious Diseases.* NCBI.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3375795/
[60] Kadir, A., Shenoda, S., & Goldhagen, J. (2019, January). *Effects of armed conflict on child health and development: A systematic review. PLOS One.* https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0210071#pone.0210071.ref104
[61] Relief Web. (2015, December). *Attacks on Humanitarian Aid Workers: Five New Findings.* https://reliefweb.int/report/world/attacks-humanitarian-aid-workers-five-new-findings
[62] Humanitarian Outcomes. (2019). *Aid Worker Security Report 2019—Updated.* https://www.humanitarianoutcomes.org/sites/default/files/publications/awsr_2019_0.pdf
[63] Aid Worker Security. (2018). *Aid Worker Security Report- Figures at a Glance.* https://aidworkersecurity.org/sites/default/files/AWSR%20Figures%202018.pdf
[64] Lindsey-Curtet, C., Holst-Roness, F. T., & Anderson, L. (2004). *Addressing the Needs of Women Affected by Armed Conflict- An ICRC GuidanceDocument. ICRC.* https://www.icrc.org/en/doc/assets/files/other/icrc_002_0840_women_guidance.pdf
[65] World Bank. (2018). *Pathways for Peace: Inclusive Approaches to Preventing Violent Conflict.* https://olc.worldbank.org/system/files/Pathways%20for%20Peace%20Executive%20Summary.pdf
[66] Avert. (n.d.). *Humanitarian Emergencies, Armed Conflict and The HIV Response.* https://www.avert.org/professionals/hiv-programming/emergencies-conflicts-and-hiv-response
[67] Debarre, A. (2018). *Hard to Reach: Providing Healthcare in Armed Conflict. International Peace Institute.* https://reliefweb.int/sites/reliefweb.int/files/resources/1812_Hard-to-Reach.pdf
[68] Samman, E., Lucci, P., Hagen-Zanker, J., Bhatkal, T., Simunovic, A. T., Nicolai, S., & Caron, C. (2018). *SDG progress: fragility, crisis and leaving no onebehind. ODI Report.* https://www.odi.org/sites/odi.org.uk/files/resource-documents/12424.pdf
[69] Collier, J., & Kienzler, H. (2018). *Barriers to cardiovascular disease secondary prevention care in the West Bank, Palestine – a health professional perspective.* Conflict and Health. https://conflictandhealth.biomedcentral.com/articles/10.1186/s13031-018-0165-x
[70] Charlson, F., Ommeren, M. v., Flaxman, A., Cornett, J., Whiteford, H., & Saxena, S. (2019, June). *New WHO prevalence estimates of mental disorders in conflict settings: a systematic review and meta-analysis.* The Lancet. https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)30934-1/fulltext
[71] International Committee of the Red Cross. (n.d.). *Rule 72. Poison and Poisoned Weapons- Customary IHL.* https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule72
[72] Centre for Research on the Epidemiology (CRED). (2018). *Natural disasters 2018.* Relief Web. https://reliefweb.int/sites/reliefweb.int/files/resources/CREDNaturalDisaster2018.pdf
[73] World Health Organization. (2017). Health Emergency and Disaster Risk Management- Overview. https://www.who.int/hac/techguidance/preparedness/who-factsheet-overview-december2017.pdf?ua=1
[74] Thomas, M. (2015, June). *The April earthquake wrecked a third of Nepal's already miserable healthcare facilities. Quartz India.* https://qz.com/india/428062/the-april-earthquake-wrecked-a-third-of-nepals-already-miserable-healthcare-facilities/
[75] Thomas, M. (2015, June). *The April earthquake wrecked a third of Nepal's already miserable healthcare facilities.* Quartz India. https://qz.com/india/428062/the-april-earthquake-wrecked-a-third-of-nepals-already-miserable-healthcare-facilities/
[76] Keenapan, N. (2018, May). *Stopping the next outbreak before it happens.* Bangkok Post. https://www.bangkokpost.com/life/social-and-lifestyle/1455901/stopping-the-next-outbreak-before-it-happens
[77] Sukkar, E. (2015, February). *Supplying medicines to refugees: a logistical nightmare.* The Pharmaceutical Journal. https://www.pharmaceutical-journal.com/news-and-analysis/features/supplying-medicines-to-refugees-a-logistical-nightmare/20067972.article?firstPass=false
[78] Yore, R. (n.d.). *The role of immediate disaster response in the transitional phase to recovery.* University College London. https://www.ucl.ac.uk/risk-disaster-reduction/people/phd-students/rebekah-yore
[79] Jacquet, G. A., Kirsch, T., Durrani, A., Sauer, L., & Doocy, S. (2016, August). *Health Care Access and Utilization after the 2010 Pakistan Floods.* Cambridge University Press. https://www.cambridge.org/core/journals/prehospital-and-disaster-medicine/article/health-care-access-and-utilization-after-the-2010-pakistan-floods/DD38A13497E81CF371A2A2738926EF46
[80] Kim, J., & Klipp, L. (2019). *Health care challenges during and after a natural disaster.* IBM. https://developer.ibm.com/callforcode/blogs/healthcare-challenges-during-and-after-a-natural-disaster/
[81] Avert. (n.d.). *Humanitarian Emergencies, Armed Conflict and The HIV Response.* https://www.avert.org/professionals/hiv-programming/emergencies-conflicts-and-hiv-response
[82] Debarre, A. (2018). *Hard to Reach: Providing Healthcare in Armed Conflict.* International Peace Institute. https://reliefweb.int/sites/reliefweb.int/files/resources/1812_Hard-to-Reach.pdf
[83] Samman, E., Lucci, P., Hagen-Zanker, J., Bhatkal, T., Simunovic, A. T., Nicolai, S., Caron, C. (2018). *SDG progress- Fragility, crisis and leaving no onebehind.* Overseas Development Institute. https://www.odi.org/sites/odi.org.uk/files/resource-documents/12424.pdf
[84] Hunter, L. M., Castro, J., Kleiber, D., & Hutchens, K. (2015, August). *Swimming and Gendered Vulnerabilities: Evidence from the Northern and Central Philippines.* NCBI. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4835034/
[85] MacDonald, R. (2005). How women were affected by the tsunami: A perspective from Oxfam. *PLoS Medicine,* 2(6).https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.0020178
[86] Otto, I. M., Reckien, D., Reyer, C., Marcus, R., Masson, V. L., Jones, L., Serdeczny, O. (2017, February). *Social vulnerability to climate change: a review of concepts and evidence.* Research Gate. https://www.researchgate.net/publication/314091403_Social_vulnerability_to_climate_change_a_review_of_concepts_and_evidence
[87] United Nations. (n.d.). *Climate Change.* https://www.un.org/en/sections/issues-depth/climate-change/
[88] Oxfam International. (n.d.). *5 natural disasters that beg for climate action.* https://www.oxfam.org/en/5-natural-disasters-beg-climate-action
[89] Médecins Sans Frontières Canada. (2018, November). *Climate Change and Health: an urgent new frontier for humanitarianism.* https://www.doctorswithoutborders.ca/sites/default/files/2018-lancet-countdown-policy-brief-msf.pdf
[90] Islam, S. N., & Winkel, J. (2017). *Climate Change and Social Inequality.* UN. https://www.un.org/esa/desa/papers/2017/wp152_2017.pdf
[91] United Nations. (n.d.). *Climate Change.* https://www.un.org/en/sections/issues-depth/climate-change/
[92] World Health Organization Regional Office for Africa. (n.d.). *Climate Change- Key Facts.* https://www.afro.who.int/health-topics/climate-change
[93] World Health Organization. (2018). *Climate change and health.* https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health
[94] Benoît, A. (2019, September). *Climate emergency: A humanitarian call to action.* Médecins Sans Frontières. https://www.doctorswithoutborders.org/what-we-do/news-stories/news/climate-emergency-humanitarian-call-action#p1

[95] Organisation for Economic Co-operation and Development. (2018). *States of Fragility Reports*. http://www.oecd.org/dac/conflict-fragility-resilience/listofstateoffragilityreports.htm
[96] Food and Agriculture Organization. (2010). *Countries in protracted crisis: what are they and why do they deserve special attention? Common features of countries in protracted crisis.* http://www.fao.org/3/i1683e/i1683e03.pdf
[97] Organisation for Economic Co-operation and Development. (2018). *States of Fragility 2018- Highlights*. https://www.oecd.org/dac/conflict-fragility-resilience/docs/OECD%20Highlights%20documents_web.pdf
[98] Organisation for Economic Co-operation and Development. (2018). *States of Fragility 2018- Highlights*. https://www.oecd.org/dac/conflict-fragility-resilience/docs/OECD%20Highlights%20documents_web.pdf
[99] Organisation for Economic Co-operation and Development. (2018). *States of Fragility 2018*. https://www.oecd.org/dac/states-of-fragility-2018-9789264302075-en.htm
[100] Overseas Development Institute. (2018). *SDG progress- Fragility, crisis and leaving no one behind*. https://www.rescue.org/sites/default/files/document/3151/odireport.pdf
[101] Humanitarian Grand Challenge. (2019). *Analysis of Barriers Affecting Innovations in Humanitarian Contexts*. https://humanitariangrandchallenge.org/wp-content/uploads/2019/05/BarrierAnalysis_Final_EN.pdf
[102] Witter, S., Bertone, M. P., Chirwa, Y., Namakula, J., So, S., & Wurie, H. R. (2017, January). *Evolution of policies on human resources for health: opportunities and constraints in four post-conflict and post-crisis settings*. Conflict and Health. https://conflictandhealth.biomedcentral.com/articles/10.1186/s13031-016-0099-0
[103] Chuah, F. L., Tan, S. T., Yeo, J., & Legido-Quigley, H. (2018, August). *The health needs and access barriers among refugees and asylum-seekers in Malaysia: a qualitative study.* Equity in Health. https://equityhealthj.biomedcentral.com/articles/10.1186/s12939-018-0833-x
[104] Overseas Development Institute. (2018). *SDG progress- Fragility, crisis and leaving no one behind*. https://www.rescue.org/sites/default/files/document/3151/odireport.pdf
[105] World Bank. (2011). *Violence in the City- Understanding and Supporting Community Responses to Urban Violence*. http://documents.worldbank.org/curated/en/524341468331181450/pdf/638880WP0Viole00BOX361532B00public0.pdf
[106] United Nations Office on Drugs and Crime. (2016). *Governing Safer Cities: Strategies for a Globalised World*. https://www.unodc.org/documents/justice-and-prison-reform/SaferCities.pdf
[107] Morris, S. C. (2007). *The Causes of Violence and the Effects of Violence on Community and Individual Health. CUGH*. https://www.cugh.org/sites/default/files/62_Causes_Of_Violence_and_Violence__Effects_on_Community_and_Individual_Health_FINAL_0.pdf
[108] Seguridad Justicia y Paz. (2018). *Las 50 ciudades más violentas del mundo 2018*. http://seguridadjusticiaypaz.org.mx/files/estudio.pdf
[109] World Bank. (2016, September). *Urban Violence: A Challenge of Epidemic Proportions*. https://www.worldbank.org/en/news/feature/2016/09/06/urban-violence-a-challenge-of-epidemic-proportions
[110] Savage, K., & Muggah, R. (2012). *Urban Violence and Humanitarian Action: Engaging the Fragile City. TUFFS*- The Journal of Humanitarian Assitance. https://sites.tufts.edu/jha/archives/1524
[111] World Bank. (2011). *Violence in the City- Understanding and Supporting Community Responses to UrbanViolence*. http://documents.worldbank.org/curated/en/524341468331181450/pdf/638880WP0Viole00BOX361532B00public0.pdf
[112] World Health Organization. (2017, December). *Focus on HIV in prisons vital to end AIDS*. https://www.who.int/hiv/mediacentre/news/hiv-in-prison-2017/en/
[113] World Health Organization. (2019, June). *Mental health in emergencies- Key Facts*. https://www.who.int/news-room/fact-sheets/detail/mental-health-in-emergencies
[114] Global Preparedness Monitoring Board. (2019). *A World at Risk. Annual report on global preparedness for health emergencies*. WHO/World Bank. https://apps.who.int/gpmb/assets/annual_report/GPMB_Annual_Report_English.pdf
[115] Centers for Disease Control and Prevention-. (2006). *Definitions from "Principles of Epidemiology in Public Health Practice. Third Edition; An Introduction to Applied Epidemiology and Biostatistics*. https://www.cdc.gov/csels/dsepd/ss1978/
[116] Insecurity Insight. (2019, December). *Attacks on Ebola Response*. http://insecurityinsight.org/wp-content/uploads/2020/01/December-2019-Information-Alert-Attacks-on-Ebola-Response-.pdf
[117] Altstedter, A., Shrivastava, B., Pandya, D. (2020, April). *Doctors Come Under Attack in India as Coronavirus Stigma Grows*. Bloomberg. https://www.bloomberg.com/news/articles/2020-04-13/doctors-come-under-attack-in-india-as-coronavirus-stigma-grows
[118] Global Preparedness Monitoring Board. (2019). *A World at Risk. Annual report on global preparedness for health emergencies*. WHO/World Bank. https://apps.who.int/gpmb/assets/annual_report/GPMB_Annual_Report_English.pdf
[119] Poole, D. N., Escudero, D. J., Gostin, L. O., Leblang, D., & Talbot, E. A. (2020). *Responding to the COVID-19 pandemic in complex humanitarian crises*. International Journal for Equity in Health, 19(1), 1-2. https://equityhealthj.biomedcentral.com/articles/10.1186/s12939-020-01162-y
[120] World Health Organization (2019, June). *1 in 3 people globally do not have access to safe drinking water* – UNICEF, WHO. https://www.who.int/news-room/detail/18-06-2019-1-in-3-people-globally-do-not-have-access-to-safe-drinking-water-%E2%80%93-unicef-who
[121] Rognerud, I., Fonseca, C., Kerk, A. v., & Moriarty, P. (2016). *IRC Trends Analysis, 2016-2025*. IRC. https://www.ircwash.org/sites/default/files/084-201610trendanalysis05.pdf
[122] UNICEF. (2019). *Fast facts: WASH in conflict*. https://www.unicef.org/stories/fast-facts-water-sanitation-hygiene-conflict
[123] World Health Organization. (2019, June). *Sanitation- Key Facts*. https://www.who.int/news-room/fact-sheets/detail/sanitation
[124] World Health Organization. (2019). *Safer water, better health.* 2019 Update. https://apps.who.int/iris/bitstream/handle/10665/329905/9789241516891-eng.pdf?ua=1
[125] World Health Organization. (2019). *Safer water, better health.* 2019 Update. https://apps.who.int/iris/bitstream/handle/10665/329905/9789241516891-eng.pdf?ua=1
[126] World Health Organization. (2019). *Safer water, better health.* 2019 Update. https://apps.who.int/iris/bitstream/handle/10665/329905/9789241516891-eng.pdf?ua=1
[127] International Federation of Red Cross and Red Crescent Societies. (2018). *World Disaste Report- Leaving No One Behind*. https://media.ifrc.org/ifrc/wp-content/uploads/sites/5/2018/10/B-WDR-2018-EN-LR.pdf
[128] International Federation of Red Cross and Red Crescent Societies. (2016,). *Unseen, Unheard Gender-Based Violence in Disasters | Asia-Pacific case studies*. https://www.ifrc.org/Global/Publications/Gender%20and%20Diversity/GBV%20in%20disasters%20AP%20report%20LR.pdf
[129] International Federation of Red Cross and Red Crescent Societies. (2016). *Unseen, Unheard Gender-Based Violence in Disasters | Asia-Pacific case studies*. https://www.ifrc.org/Global/Publications/Gender%20and%20Diversity/GBV%20in%20disasters%20AP%20report%20LR.pdf
[130] International Federation of Red Cross and Red Crescent Societies. (2016). *Unseen, Unheard Gender-Based Violence in Disasters | Asia-Pacific case studies*. https://www.ifrc.org/Global/Publications/Gender%20and%20Diversity/GBV%20in%20disasters%20AP%20report%20LR.pdf
[131] Goodman, J. (2018, December). *Yemen war: Billions in aid, but where's it going?* BBC. https://www.bbc.com/news/world-middle-east-46469168
[132] International Federation of Red Cross and Red Crescent Societies & World Health Organization. (2018). *The Regulation and Management of International Emergency Medical Teams*. https://www.ifrc.org/PageFiles/233516/EMT%20Report%20HR.PDF
[133] International Federation of Red Cross and Red Crescent Societies & World Health Organization. (2018). *The Regulation and Management of International Emergency Medical Teams*. https://www.ifrc.org/PageFiles/233516/EMT%20Report%20HR.PDF
[134] International Federation of Red Cross and Red Crescent Societies & World Health Organization. (2018). *The Regulation and Management of International Emergency Medical Teams*. https://www.ifrc.org/PageFiles/233516/EMT%20Report%20HR.PDF
[135] Scheffler, R. M., Campbell, J., Cometto, G., Maeda, A., Liu, J., Bruckner, T. A., & Evans, T. (2018, January). *Forecasting imbalances in the global health labor market and devising policy responses*. Human Resources for Health. https://human-resourceshealth.biomedcentral.com/articles/10.1186/s12960-017-0264-6
[136] Echezona-Johnson, C. (n.d.). *History of Ebola and Nursing*. RN Journal. https://rn-journal.com/journal-of-nursing/history-of-ebola-and-nursing

[137] McMahon, S. A., Ho, L. S., Brown, H., Miller, L., Ansumana, R., & Kennedy, C. E. (2016, November). *Healthcare providers on the frontlines: aqualitative investigation of the social and emotional impact of delivering health services during Sierra Leone's Ebola epidemic*. NCBI. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5035780/

[138] World Health Organization. (n.d). *Health Financing- Out-of-pocket payments, user fees and catastrophic expenditure.* https://www.who.int/health_financing/topics/financial-protection/out-of-pocket-payments/en/

[139] Xu, K., Soucat, A., Kutzin, J., Brindley, C., Maele, N. V., Touré, H., & Siroka, A. (2018). *Public Spending on Health: A Closer Look at Global Trends*. WHO. https://apps.who.int/iris/bitstream/handle/10665/276728/WHO-HIS-HGF-HF-WorkingPaper-18.3-eng.pdf?ua=1

[140] World Health Organization. (2018). *New Perspectives on Global Health Spending for Universal Health Coverage.* https://apps.who.int/iris/bitstream/handle/10665/259632/WHO-HIS-HGF-HFWorkingPaper-17.10-eng.pdf?sequence=1

[141] Xu, K., Soucat, A., Kutzin, J., Brindley, C., Maele, N. V., Touré, H., & Siroka, A. (2018). *Public Spending on Health: A Closer Look at Global Trends*. WHO. https://apps.who.int/iris/bitstream/handle/10665/276728/WHO-HIS-HGF-HF-WorkingPaper-18.3-eng.pdf?ua=1

[142] World Health Organization. (n.d). *Out-of-pocket expenditure as a percentage of current health expenditure (CHE).*https://www.who.int/gho/health_financing/out_of_pocket_spending/en/

[143] World Health Organization. (2018). *New Perspectives on Global Health Spending for Universal Health Coverage.* https://apps.who.int/iris/bitstream/handle/10665/259632/WHO-HIS-HGF-HFWorkingPaper-17.10-eng.pdf?sequence=1

[144] World Health Organization. (n.d). *Universal Health Coverage.* https://www.who.int/health-topics/universal-health-coverage#tab=tab_1

[145] World Health Organization. Regional Office for South-East Asia. (2017). *Financial protection in the South-East Asia region: determinants and policy implications*. Working paper prepared by World Health Organization Regional Office for South-East Asia. https://apps.who.int/iris/handle/10665/259639

[146] World Health Organization. Regional Office for South-East Asia. (2017). *Financial protection in the South-East Asia region: determinants and policy implications*. Working paper prepared by World Health Organization Regional Office for South-East Asia. https://apps.who.int/iris/handle/10665/259639

[147] World Health Organization. Regional Office for South-East Asia. (2017). *Financial protection in the South-East Asia region: determinants and policy implications*. Working paper prepared by World Health Organization Regional Office for South-East Asia. https://apps.who.int/iris/handle/10665/259639

[148] World Health Organization. Regional Office for South-East Asia. (2017). *Financial protection in the South-East Asia region: determinants and policy implications*. Working paper prepared by World Health Organization Regional Office for South-East Asia. https://apps.who.int/iris/handle/10665/259639

[149] Jowett, M., Dale, E., Griekspoor, A., Kabaniha, G., Mataria, A., Bertone, M., & Witter, S. (2019). *Health financing policy & implementation in fragile & conflict-affected settings: a synthesis of evidence and policy recommendations*. WHO. https://www.who.int/docs/default-source/health-financing/final-draft-fcas.pdf?sfvrsn=b833d5c4_2

[150] World Health Organization. (2018, April). *Vaccines: the powerful innovations bringing WHO's mission to life every day.* https://www.who.int/news-room/commentaries/detail/vaccines-the-powerful-innovations-bringing-who-s-mission-to-life-every-day

[151] UNICEF & World Health Organization. (2019). *Progress and Challenges with Achieving Universal Immunization Coverage.* WHO. https://www.who.int/immunization/monitoring_surveillance/who-immuniz.pdf

[152] Plotkin, S., Robinson, J. M., Cunningham, G., Iqbal, R., & Larsen, S. (2017, July). *The complexity and cost of vaccine manufacturing – An overview.* NCBI. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5518734/

[153] Ensor, C. (2016, August). *Vaccine prices are 20 times higher in refugee camps, aid group charges*. Humanosphere. http://www.humanosphere.org/global-health/2016/08/vaccine-prices-20-times-higher-refugee-camps-aid-group-charges/

[154] Relief Web. (2019). *Pacific: Measles Outbreak - Oct 2019.* https://reliefweb.int/disaster/ep-2019-000139-wsm

[155] Jackson, LC. & Lyons K. (2019, December). *These babies should not have died: How the measles outbreak took hold in Samoa*. The Guardian. https://www.theguardian.com/world/2019/dec/18/these-babies-should-not-have-died-how-the-measles-outbreak-took-hold-in-samoa

[156] Médecins Sans Frontières. (2017, July). *West and Central Africa - No time to lose: overcoming barriers to acceleration of HIV treatment.* https://msfaccess.org/west-and-central-africa-no-time-lose-overcoming-barriers-acceleration-hiv-treatment

[157] Avert. (2019). *HIV AND AIDS In West And Central Africa Overview.* https://www.avert.org/hiv-and-aids-west-and-central-africa-overview

[158] Médecins Sans Frontières. (2017, July). *West and Central Africa - No time to lose: overcoming barriers to acceleration of HIV treatment.* https://msfaccess.org/west-and-central-africa-no-time-lose-overcoming-barriers-acceleration-hiv-treatment

[159] World Health Organization. (2011). *Development of medical device policies* - WHO Medical device technical series. https://apps.who.int/iris/bitstream/handle/10665/44600/9789241501637_eng.pdf?sequence=1

[160] World Health Organization. (2019, April). *Snakebite envenoming.*-Zúñiga, A. (2019, May). *World Health Organization, Costa Rica partner to combat snakebite mortality.* Tico Times: https://ticotimes.net/2019/05/27/who-costa-rica-partner-to-combat-snake-bite-mortality
-Médecins Sans Frontières. (2015, September). *Snakebites slither under the public health radar.* https://msfaccess.org/snakebites-slither-under-public-health-radar
-Ralph, R., Sharma, S. K., Faiz, M. A., Ribeiro, I., Rijal, S., & Kuch, F. C. (2019, January). *The timing is right to end snakebite deaths in South Asia*. BMJ. https://www.bmj.com/content/364/bmj.k5317
-Mohapatra, B., Warrell, DA., Suraweera, W., Bhatia, P., Dhingra, N., Jotkar, RM., & Jha, PB. Rodriguez (2011, April). *Snakebite mortality in India: a nationally representative mortality survey.* National Center for Biotechnology Information. https://www.ncbi.nlm.nih.gov/pubmed/21532748
-F.Williams, H., Vaiyapuri, R., Gajjeraman, P., Hutchinson, G., M.Gibbins, J., & Vaiyapuri, A. B.(2017, February). *Challenges in diagnosing and treating snakebites in a rural population of Tamil Nadu, India: The views of clinicians*. Science Direct. https://www.sciencedirect.com/science/article/pii/S0041010117300715

[161] Cook, T. M. (2020). *Personal protective equipment during the COVID-19 pandemic–a narrative review.* https://www.nejm.org/doi/full/10.1056/NEJMp2006141

[162] Jacobs, A., Richtel, M., & Baker, M. (2020). *'At war with no ammo': doctors say shortage of protective gear is dire.* The New York Times. https://www.nytimes.com/2020/03/19/health/coronavirus-masks-shortage.html

[163] Médecins sans Frontières. (2010, April). *Authorities in Yemen must do all they can to facilitate COVID-19 response.* https://www.msf.org/yemen-authorities-must-do-all-they-can-facilitate-covid-19-response

[164] Harris, K., Keen, D., & Mitchell, T. (2013). *When disasters and conflict collide: improving links between disaster resilience and conflict prevention.* Overseas Development Institute. https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8228.pdf

[165] UNOCHA. (2019). *West and Central Africa- 2019 Regional Funding Status*. Humanitarian Response. https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/sahelfunding11112019_pdf.pdf

[166] Scott, R. (2014). *Imagining More Effective Humanitarian Aid- A Donor Perspective.* OECD. https://www.oecd.org/dac/Imagining%20More%20Effective%20Humanitarian%20Aid_October%202014.pdf

[167] Belle, S. V., Pas, R. v., & Marchal, B. (2017). *Queen bee in a beehive: WHO as metagovernor in global health governance.* BMJ Global Health.https://gh.bmj.com/content/bmjgh/3/1/e000448.full.pdf

[168] United Nations Development Programme. (2018, July). *What Does It Mean To Leave No One Behind?*- A UNDP discussion paper and framework for implementation. https://www.undp.org/content/dam/undp/library/Sustainable%20Development/2030%20Agenda/Discussion_Paper_LNOB_EN_Ires.pdf

[169]Bradby, H., Humphris, R., Newall, D., & Phillimore, J. (2015). *Public health aspects of migrant health: a review of the evidence on health status for refugees and asylum seekers in the European Region.* WHO Regional Office for Europe. http://www.euro.who.int/__data/assets/pdf_file/0004/289246/WHO-HEN-Report-A5-2-Refugees_FINAL.pdf

[170] Khogali, H., Larsen, L., Washington, K., Maasri, YR. (2014, November). *Aid effectiveness and Vulnerability Assessment Framework: determining vulnerability among Syrian refugees in Jordan.* Field Exchange. https://www.ennonline.net/fex/48/aideffectiveness

[171] World Health Organization. (n.d) *Social deteminants of health, Social exclusion.* https://www.who.int/social_determinants/themes/socialexclusion/en/
[172] Samari G. (2016). Islamophobia and Public Health in the United States. *American journal of public health, 106(11), 1920–1925.*
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5055770/
[173] European Institute for Gender Equality. (n.d) Marginalized groups. https://eige.europa.eu/thesaurus/terms/1280?lang=en
[174] World Health Organization. (2019, September). *Children: reducing mortality- Key Facts.*
https://www.who.int/news-room/fact-sheets/detail/children-reducing-mortality
[175] World Health Organization. (2019, September). *Children: reducing mortality- Key Facts.* https://www.who.int/news-room/fact-sheets/detail/children-reducing-mortality
[176] World Health Organization. (2019). *World health statistics 2019: monitoring health for the SDGs, sustainable development goals.*
https://apps.who.int/iris/bitstream/handle/10665/324835/9789241565707-eng.pdf?ua=1
[177] World Health Organization. (2019, September). *Children: reducing mortality- Key Facts.* https://www.who.int/news-room/fact-sheets/detail/children-reducing-mortality
[178] World Health Organization. (2019, September). *Children: reducing mortality- Key Facts.* https://www.who.int/news-room/fact-sheets/detail/children-reducing-mortality
[179] Save the Children. (2019). *Follow the Money.* https://resourcecentre.savethechildren.net/node/15083/pdf/follow_the_money_online_version.pdf
[180] Bado, A. R., & Susuman, A. S. (2016). *Women's Education and Health Inequalities in Under-Five Mortality in Selected Sub-Saharan African Countries, 1990–2015.*
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4956109/
[181] Chowdhury, A. H., Hanifi, S. M., Mia, M. N., & Bhuiya, A. (2017, November). *Socioeconomic inequalities in under-five mortality in rural Bangladesh: evidence from seven national surveys spreading over 20 years.* International Journal for Equity in Health. https://equityhealthj.biomedcentral.com/articles/10.1186/s12939-017-0693-9
[182] Chadoka-Mutanda, N., & Odimegwu, C. O. (2016, June). *Maternal Health- Seeking Behaviour and Under-five Mortality in Zimbabwe.* Researchgate.
https://www.researchgate.net/publication/304249716_MATERNAL_HEALTH-SEEKING_BEHAVIOUR_AND_UNDERFIVE_MORTALITY_IN_ZIMBABWE
[183] World Health Organization. (2018, December). *Adolescents: health risks and solutions- Key facts.* https://www.who.int/news-room/fact-sheets/detail/adolescents-health-risks-and-solutions
[184] UNICEF. (2019). *Maternal mortality declined by 38 percent between 2000 and 2017.* https://data.unicef.org/topic/maternal-health/maternal-mortality/
[185] World Health Organization. (2019, September). *Maternal mortality- Key Facts.* https://www.who.int/en/news-room/fact-sheets/detail/maternal-mortality
[186] World Health Organization. (2019, September). *Maternal mortality- Key Facts.* https://www.who.int/en/news-room/fact-sheets/detail/maternal-mortality
[187] Joint United Nations Programme on HIV/AIDS. (n.d.). *People Living with HIV Receiving Art- As of 30 June.* http://aidsinfo.unaids.org/
[188] HelpAge International. (n.d.). *Older people in disasters and humanitarian crises: Guidelines for best practice.*
https://www.helpage.org/silo/files/older-people-in-disasters-and-humanitairan-crises-guidelines-for-best-practice.pdf
[189] McGivern, V. (2019). *What older people say about their experiences in humanitarian situations.* United Nations.
https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2019/05/What-older-people-say-about-their-experiences-in-humanitarian-situations_Verity-McGivern.pdf
[190] Pawliczko, A., & Desiderio, R. (n.d.). *Demographics of Ageing and the Implications for Humanitarian Crises.* United Nations.
https://www.un.org/development/desa/family/wp-content/uploads/sites/23/2019/06/Demographics-of-Ageing-paper_Pawliczko-and-Desiderio-.pdf
[191] Heise, L., Greene, M. E., Opper, N., Stavropoulou, M., Harper, C., Nascimento, M., & Zewdie, D. (2019, June). *Gender inequality and restrictive gender norms: framing the challenges to health.* The Lancet.
https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(19)30652-X.pdf
[192] World Health Organization. (2018, December). *Road Traffic Injuries.* https://www.who.int/news-room/fact-sheets/detail/road-traffic-injuries
[193] Ellis-Petersen, H. (2019, March). *Brunei introduces death by stoning as punishment for gay sex.* The Guardian
https://www.theguardian.com/world/2019/mar/28/brunei-brings-in-death-by-stoning-as-punishment-for-gay-sex
[194] Kelly, L. (2018, February). *62.1% of transgender youth report mental health woes, study says.* The Washington Times.
https://www.washingtontimes.com/news/2018/feb/5/621-of-transgender-youth-report-mental-health-woes/
[195] World Health Organization. (2017, November). *Violence against women- Key Facts.* https://www.who.int/en/news-room/fact-sheets/detail/maternal-mortality
[196] Neumayer, E., & Plumper, T. (n.d.). *The Gendered Nature of Natural Disasters: The Impact of Catastrophic Events on the Gender Gap in Life Expectancy, 1981–2002.* London School of Economics and Political Science (LSE). http://www.lse.ac.uk/website-archive/GeographyAndEnvironment/neumayer/pdf/Article%20in%20Annals%20(natural%20disasters).pdf
[197] UNFPA. (2020, March). *COVID-19: A Gender Lens. Protecting sexual and reproductive health and rights, and promoting gender equality. Technical brief.*
https://www.unfpa.org/sites/default/files/resource-pdf/COVID-19_A_Gender_Lens_Guidance_Note.pdf
-UNWOMEN. (2020). The COVID-19 Outbreak and Gender: Key Advocacy Points from Asia and the Pacific. Guidance note.
https://asiapacific.unwomen.org/en/digital-library/publications/2020/03/the-covid-19-outbreak-and-gender
[198] Smith, J. (2019). *Overcoming the 'tyranny of the urgent': integrating gender into disease outbreak preparedness and response.* Gender & Development, 27(2), 355-369.
https://www.tandfonline.com/doi/full/10.1080/13552074.2019.1615288
[199] UNESCO. (n.d.). *Education for health and well-being.* https://en.unesco.org/themes/education-health-and-well-being
[200] McGill, N. (2016, August). *Education attainment linked to health throughout lifespan: Exploring social determinants of health. The Nation's Health.*
http://thenationshealth.aphapublications.org/content/46/6/1.3
[201] Shankar, J., Ip, E., Khalema, E., Couture, J., Tan, S., Zulla, R. T., & Lam, G. (2013, September). *Education as a Social Determinant of Health: Issues Facing Indigenous and Visible Minority Students in Postsecondary Education in Western Canada.* NCBI. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3799536/
[202] Taylor, L. (2018, June). *Housing And Health: An Overview Of The Literature.* Health Affairs.https://www.healthaffairs.org/do/10.1377/hpb20180313.396577/full/
[203] Taylor, L. (2018, June). *Housing And Health: An Overview Of The Literature.* Health Affairs.https://www.healthaffairs.org/do/10.1377/hpb20180313.396577/full/
[204] World Health Organization. (2018, p.vi.). *Opportunities for transition to clean household energy: application of the Household Energy Assessment Rapid.* https://apps.who.int/iris/bitstream/handle/10665/274281/9789241514026-eng.pdf?sequence=1&isAllowed=y
[205] World Health Organization. (2018, p.5.). *Opportunities for transition to clean household energy: application of the Household Energy Assessment Rapid.* https://apps.who.int/iris/bitstream/handle/10665/274281/9789241514026-eng.pdf?sequence=1&isAllowed=y
[206] World Health Organization. (n.d). *Health and sustainable development- Housing and health risks.* https://bit.ly/2MUrq9l
[207] World Health Organization. (n.d). *Health and sustainable development- Housing and health risks.* https://bit.ly/2MUrq9l
[208] World Health Organization. (n.d). *Health and sustainable development- Case studies of healthy, sustainable housing.* https://bit.ly/2XW1cto
[209] World Bank. (2019, October). *Poverty.* https://www.worldbank.org/en/topic/poverty/overview
[210] Public Health England. (2017, July). *Chapter 6: social determinants of health.* https://www.gov.uk/government/publications/health-profile-for-england/chapter-6-social-determinants-of-health
[211] United Nations Development Programme. (2018, July). *What Does It Mean To Leave No One Behind?-A UNDP discussion paper and framework for implementation.*
https://www.undp.org/content/dam/undp/library/Sustainable%20Development/2030%20Agenda/Discussion_Paper_LNOB_EN_lres.pdf
[212] International Federation of Red Cross and Red Crescent Societies. (2014). *IFRC Framework for Community Resilience.*
https://media.ifrc.org/ifrc/wp-content/uploads/sites/5/2018/03/IFRC-Framework-for-Community-Resilience-EN-LR.pdf
[213] UNICEF. (n.d.). *Orphans.* https://www.unicef.org/media/orphans
[214] Wagner, Z., Heft-Neal, S., Wise, P. H., Black, R. E., Burke, M., Boerma, T., & Bendavid, E. (2019, October). *Women and children living in areas of armed conflict in Africa: a geospatial analysis of mortality and orphanhood.* The Lancet. https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(19)30407-3/fulltext

[215] Pattisson, P. (2014, May). *Nepal's bogus orphan trade fuelled by rise in 'voluntourism'*. The Guardian.
https://www.theguardian.com/global-development/2014/may/27/nepal-bogus-orphan-trade-voluntourism
[216] Anne, C. (2015, October). *The orphans of Yemen's war*. Al Jazeera. https://www.aljazeera.com/news/2015/09/orphans-yemen-war-150929054938666.html
[217] 702 Channel (2020, March). *How are orphanages dealing with COVID-19 in South Africa*. https://omny.fm/shows/702/how-has-covid-19-affected-the-childrens-home#description
[218] Al Jazeera. (2017, January). *Yemen's orphans face 'catastrophe' as fighting rages*. https://www.aljazeera.com/news/2017/01/yemen-orphans-170105052409798.html
[219] UNICEF. (2019). *Yemen Country Office Humanitarian Situation Report- Highlights*.https://www.unicef.org/appeals/files/UNICEF_Yemen_Humanitarian_Situation_Report_Nov_2019.pdf
[220] Consortium for Street Children. (n.d.). *Street children are one of the most vulnerable children on the planet*. Street Children.https://www.streetchildren.org/about-street-children/
[221] Save the Children. (2016, October). *How drug addiction is becoming a part of the lives of children on streets and in child care.*
https://www.savethechildren.in/resource-centre/articles/how-drug-addiction-is-becoming-a-part-of-the-lives-of-children-on-streets
[222] Humanium. (n.d.). *Street Children- Children living on the street*. https://www.humanium.org/en/street-children/
[223] Rizk, HI.,El, Rifai., & Aboulghar, HM.(2017, March). *Health problems among street children seeking care in the Center for Social and Preventive Medicine in Egypt*. NCBI.
https://www.ncbi.nlm.nih.gov/pubmed/28332102
[224] Save the Children. (n.d.). *Life on the street*. https://www.savethechildren.in/sci-in/files/08/08c7e6ee-f8c0-4ef6-b956-3c26f6601409.pdf
[225] Save the Children. (n.d.). *Life on the street*. https://www.savethechildren.in/sci-in/files/08/08c7e6ee-f8c0-4ef6-b956-3c26f6601409.pdf
[226] The State of Pakistan's Children. (2018). *Introduction & Overview of Child Rights*. SPARCPK. http://www.sparcpk.org/images/sopc18/Intro.pdf
-Janjua, H. (2018, March). 'I've never been to school': child waste pickers living on Pakistan's streets. The Guardian.
https://www.theguardian.com/global-development/2018/mar/20/child-waste-pickers-living-pakistan-streets
-United States Department of State. (June, 2018). 2018 Trafficking in Persons Report - Pakistan. Refworld. https://www.refworld.org/docid/5b3e0ab0a.html
[227] UNICEF. (2007). *The Paris Principles and Guidelines on Children Associated With Armed Forces or Armed Groups*. https://www.unicef.org/protection/files/Paris_Principles_EN.pdf
[228] International Committee of the Red Cross. (2017). *Children associated with armed forces or armed groups*.
https://www.icrc.org/en/publication/0824-children-associated-armed-forces-or-armed-groups
[229] UNICEF. (2011). *Child recruitment by armed forces or armed groups*. https://www.unicef.org/protection/57929_58007.html
[230] United Nations. (n.d.). Child Recruitment and Use. United Nations Office of the Special Representative of the Secretary-General for Children and Armed Conflict.
https://childrenandarmedconflict.un.org/six-grave-violations/child-soldiers/
[231] UNICEF. (2018). *Kasai: A Children's Crisis*. https://www.unicef.org/publications/files/UNICEF_DRC_Kasai_Children_in_Crisis_2018.pdf
[232] The Observers. (2018, January). Theatre helps heal child soldiers in DR Congo. https://observers.france24.com/en/20180126-theatre-former-child-soldiers-congo
[233] World Bank. (2016, September). *Urban Violence: A Challenge of Epidemic Proportions*.
https://www.worldbank.org/en/news/feature/2016/09/06/urban-violence-a-challenge-of-epidemic-proportions
[234] O'Brien, K., Daffern, M., Chu, C. M., & Thomas, S. (2013, June). *Youth gang affiliation, violence, and criminal activities: A review of motivational, risk, and protective factors.*
Agression and Violent Behavior, 18(4), 417–425.
https://www.researchgate.net/publication/259158335_Youth_gang_affiliation_violence_and_criminal_activities_A_review_of_motivational_risk_and_protective_factors
[235] Jütersonke, O., Muggah, R., & Rodgers, D. (2009, September). *Gangs, Urban Violence, and Security Interventions in Central America. Security Dialogue, 40(4–5).*
https://www.researchgate.net/publication/44789459_Gangs_Urban_Violence_and_Security_Interventions_in_Central_America
[236] Gilman, A. B., Hill, K. G., & Hawkins, J. D. (2014, March). *Long-Term Consequences of Adolescent Gang Membership for Adult Functioning*.
American Journal of Public Health, 104 (5). https://www.researchgate.net/publication/260808450_LongTerm_Consequences_of_Adolescent_Gang_Membership_for_Adult_Functioning
[237] Miller, E., Levenson, R., Herrera, L., Kurek, L., Stofflet, M., & Marin, L. (2012, February). *Exposure to Partner, Family, and Community Violence:*
Gang-Affiliated Latina Women and Risk of Unintended Pregnancy. Springer Link. https://link.springer.com/article/10.1007/s11524-011-9631-0
[238] Youth.gov. (n.d.). *Youth Involved in Gangs*. https://youth.gov/youth-topics/preventing-gang-involvement/adverse-effects
[239] Red Nose Day. (2020, March). *How COVID-19 is affecting the most vulnerable children*. https://rednoseday.org/news/how-covid-19-affecting-most-vulnerable-children
[240] United States Department of State. (2018). *Country Reports on Human Rights Practices. Bureau of Democracy, Human Rights and Labo.*
https://www.state.gov/wp-content/uploads/2019/03/Liberia-2018.pdf
[241] International Committee of the Red Cross. (2020). *Health and human rights in prisons*. https://www.icrc.org/en/doc/resources/documents/misc/59n8yx.htm
[242] Law Library - American Law and Legal Information (n.d.). *Prisons for women: Problems and unmet needs in the contemporary.*
https://law.jrank.org/pages/1805/Prisons-Prisons-Women-Problems-unmet-needs-in-contemporary-women-s-prison.html
[243] International Committee of the Red Cross. (2015). *Health care in detention*. https://www.icrc.org/en/publication/4213-health-care-detention-practical-guide
[244] Grey Ellis, E. (March, 2020). *Covid-19 Poses a Heightened Threat in Jails and Prisons*. Wired. https://www.wired.com/story/coronavirus-covid-19-jails-prisons/
-Huertas-Diaz, O. (2020, May). *Release detainees and convicted inmates: between the prison crisis and COVID-19*. UNPeriodicoDigital.
https://unperiodico.unal.edu.co/pages/detail/release-detainees-and-convicted-inmates-between-the-prison-crisis-and-covid-19/
[245] World Health Organization. (2019). *New WHO report: Ignoring the health of people in prisons now comes at a high cost for society later.*
http://www.euro.who.int/en/media-centre/sections/press-releases/2019/new-who-report-ignoring-the-health-of-people-in-prisons-now-comes-at-a-high-cost-for-society-later
[246] United States Department of State. (2018). *Country Reports on Human Rights Practices. Bureau of Democracy, Human Rights and Labor.*
https://www.state.gov/wp-content/uploads/2019/03/Liberia-2018.pdf
[247] United Nations Human Rights. Office of the High Commissioner (1949). *Geneva Convention relative to the treatment of prisoner of war.*
https://www.ohchr.org/EN/ProfessionalInterest/Pages/TreatmentOfPrisonersOfWar.aspx
[248] Van Hout, M. C., & Mhlanga-Gunda, R. (2019). *Prison health situation and health rights of young people incarcerated in sub-Saharan African prisons and detention centres: a scoping review of extant literature. BMC international health and human rights, 19(1), 17.* https://bmcinthealthhumrights.biomedcentral.com/articles/10.1186/s12914-019-0200-z
[249] UNHCR. (n.d.). *Convention and protocol relating to the status of refugees*. https://www.unhcr.org/3b66c2aa10.html
[250] International Rescue Committee. (2019, September). *Missing Persons: Refugees Left Out and Left Behind the Sustainable Development Goals*.
https://www.rescue.org/sites/default/files/document/4121/missingpersonreport100319.pdf
[251] Internal Displacement Monitoring Center. (2019, May). *More people displaced inside their own countries than ever before.*
https://www.internal-displacement.org/global-report/grid2019/downloads/press_releases/2019-grid-pressrelease-global-en.pdf
[252] Internal Displacement Monitoring Center. (2019, May). *More people displaced inside their own countries than ever before.*
https://www.internal-displacement.org/global-report/grid2019/downloads/press_releases/2019-grid-pressrelease-global-en.pdf
[253] Rosenberg, J. S., & Bakomeza, D. (2017). *Let's talk about sex work in humanitarian settings: piloting a rights-based approach to working with*
refugee women selling sex in Kampala. Tandfonline.https://www.tandfonline.com/doi/pdf/10.1080/09688080.2017.1405674?needAccess=true
[254] Women's Refugee Commission. (2016). *Mean Streets: Identifying and Responding to Urban Refugees' Risks of Gender-Based Violence*. Refworld. https://www.refworld.org/docid/56d68f464.html
[255] UNHCR. (1995). *Refugee health EC/1995/SC.2/CRP.29*. https://www.unhcr.org/excom/EXCOM/3ae68bf424.html

[256] World Health Organization. (2020, March). *OHCHR, IOM, UNHCR and WHO joint press release: the rights and health of refugees, migrants andstateless must be protected in COVID-19 response.* https://www.who.int/news-room/detail/31-03-2020-ohchr-iom-unhcr-and-who-joint-press-release-the-rights-and-health-of-refugees-migrants-and-stateless-must-be-protected-in-covid--19-response

[257] World Health Organization. (2019). *Promoting the health of refugees and migrants*. https://apps.who.int/gb/ebwha/pdf_files/WHA72/A72_25-en.pdf?ua=1

[258] Women's Refugee Commission. (n.d.). *Reports On Gender-Based Violence.* https://www.womensrefugeecommission.org/gbv/resources

[259] UNHCR. (n.d.). *Statelessness Around the World*. https://www.unhcr.org/uk/statelessness-around-the-world.html

[260] Burki, T. (2017, April). *Life in limbo for millions of stateless people worldwide.* The Lancet. https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)30942-X/fulltext

[261] BBC News. (2014, November). *Who, what, why: What does it mean to be stateless?* https://www.bbc.com/news/blogs-magazine-monitor-30079580

[262] Desmon, S. (2017, October). *A Stateless People, A Public Health Crisis. Johns Hopkins*. Center for Communication Programs. https://ccp.jhu.edu/2017/10/17/ccp-aids-rohingya-people-bangladesh/

[263] Desmon, S. (2017, October). *A Stateless People, A Public Health Crisis. Johns Hopkins. Center for Communication Programs*. https://ccp.jhu.edu/2017/10/17/ccp-aids-rohingya-people-bangladesh/

[264] International Organization for Migration. (2019). *Migrants and their Vulnerability to Human Trafficking, Modern Slavery and Forced Labour.* https://publications.iom.int/books/migrants-and-their-vulnerability-human-trafficking-modern-slavery-and-forced-labour

[265] Rijken, C., van Waas, L., Gramatikov, M., & Brennan, D. (2015). *The nexus between statelessness and human trafficking in Thailand. Institute on Statelessness and Inclusion*. https://files.institutesi.org/Stateless-Trafficking_Thailand.pdf

[266] Burki, T. (2017, April). *Life in limbo for millions of stateless people worldwide.* The Lancet. https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)30942-X/fulltext

[267] World Health Organization. (2016). *Health In the Context of Migration and Forced Displacement.* https://www.who.int/migrants/publications/UNGA_SideEvent_Report.pdf?ua=1

[268] Bempong, N.-E., Sheath, D., Seybold, J., Flahault, A., Depoux, A., & Saso, L. (2019). *Critical reflections, challenges and solutions for migrant andrefugee health: 2nd M8 Alliance Expert Meeting*. World https://www.worldhealthsummit.org/fileadmin/user_upload/downloads/Dokumente/M8_Alliance_-_Topics/Migrant_and_Refugee_Health/Bempong_et_al_2019.pdf

[269] International Organization for Migration. (2018). *Global Migration Indicators: Insights from the Global Migration Data Portal.* https://publications.iom.int/system/files/pdf/global_migration_indicators_2018.pdf

[270] Centers for Disease Control and Prevention. (2019, June). *National Institute for Occupational Safety and Health (NIOSH)- Cobalt.* https://www.cdc.gov/niosh/topics/cobalt/default.html

[271] Castelli, F., & Sulis, G. (2017). *Migration and infectious diseases. Clinical Microbiology and Infection, 23(5), 283–289.* https://www.sciencedirect.com/science/article/pii/S1198743X17301787

[272] Truman, B. I., Tinker, T., Vaughan, E., Kapella, B. K., Brenden, M., Woznica, C. V., ... & Lichtveld, M. (2009). Pandemic influenza preparedness and response among immigrants and refugees. American Journal of Public Health, 99(S2), S278–S286. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4504387/

[273] Aagaard-Hansen, J., Nombela, N., & Alvar, J. (2010). *Population movement: a key factor in the epidemiology of neglected tropical diseases*. Wiley Online Library. https://onlinelibrary.wiley.com/doi/full/10.1111/j.1365-3156.2010.02629.x

-Bawa, S., Afolabi, M., Abdelrahim, K., Abba, G., Ningi, A., Tafida, S. Y., & Braka, F. (n.d.). Transboundary nomadic population movement: a potential for import-export of poliovirus. https://bmcpublichealth.biomedcentral.com/track/pdf/10.1186/s12889-018-6190-2

-Ndiaye, S., Ahmed, M. A., Denson, M., Craig, A. S., Kretsinger, K., Cherif, B., & Tuma, J. (2013). Polio Outbreak Among Nomads in Chad: Outbreak Response and Lessons Learned. The Journal of Infectious Diseases, 210 (suppl1:S74-84). https://pubmed.ncbi.nlm.nih.gov/24154734/

-Carr, S. M., Lhussier, M., Forster, N., Goodall, D., Geddes, L., Pennington, M., & Michie., S. (2014, July). Outreach programmes for health improvement of Traveller Communities: a synthesis of evidence. NCBI. https://www.ncbi.nlm.nih.gov/books/NBK262870

[274] Condon, L., Bedford, H., Ireland, L., Kerr, S., Mytton, J., Richardson, Z., & Jackson, C. (2019). *Engaging gypsy, roma, and traveller communities in research: maximizing opportunities and overcoming challenges*. Qualitative health research, 29(9), 1324–1333. https://journals.sagepub.com/doi/full/10.1177/1049732318813558

[275] Maduma-Butshe, A., & McCarthy, N. (2013). *The burden and impact of measles among the Gypsy–Traveller communities, Thames Valley, 2006–09.*Journal of Public Health, 35(1), 27-31. https://academic.oup.com/jpubhealth/article/35/1/27/1590018

[276] Padela, A. I., & Zaidi, D. (2018). *The Islamic tradition and health inequities: A preliminary conceptual model based on a systematic literature review of Muslim health-care disparities*. NCBI. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5782414/

[277] Bixby Center for Global Reproductive Health. (n.d.). *Islamophobia is a public health issue. University of California, San Francisco.*https://bixbycenter.ucsf.edu/news/islamophobia-public-health-issue

[278] Hamdan, A. (2018, June). *Islamophobia as a Public Health Issue. The Public Health Advocate. University of California Berkeley.* https://pha.berkeley.edu/2018/06/17/islamophobia-as-a-public-health-issue/

[279] Bixby Center for Global Reproductive Health. (n.d.). *Islamophobia is a public health issue. University of California, San Francisco.* https://bixbycenter.ucsf.edu/news/islamophobia-public-health-issue

[280] Bailey, S.P. (2019, February). *Some anti-vaccination parents cite religious exemptions. Measles outbreaks could change that.* The Washington Post. https://www.washingtonpost.com/religion/2019/02/21/some-anti-vaccination-parents-cite-religious-exemptions-measles-outbreaks-could-change-that/

[281] Hall, G. H., & Patrinos, H. A. (2014). *Indigenous Peoples, Poverty, and Development.* Cambridge University Press. https://www.cambridge.org/US/academic/subjects/economics/economic-development-and-growth/indigenous-peoples-poverty-and-development

[282] Comisión Económica para América Latina y el Caribe (CEPAL). (2017). *Situación de las personas afrodescendientes en América Latina y desafíos de políticas para la garantía de sus derechos*. https://repositorio.cepal.org/bitstream/handle/11362/42654/1/S1701063_es.pdf

[283] Comisión Económica para América Latina y el Caribe (CEPAL). (2017). *Situación de las personas afrodescendientes en América Latina y desafíos de políticas para la garantía de sus derechos*. https://repositorio.cepal.org/bitstream/handle/11362/42654/1/S1701063_es.pdf

[284] Hutchins, S. S., Fiscella, K., Levine, R. S., Ompad, D. C., & McDonald, M. (2009). *Protection of racial/ethnic minority populations during an influenza pandemic.* American journal of public health, 99(S2), S261-S270. https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2009.161505

[285] Bauer, I. (2008). *The health impact of tourism on local and indigenous populations in resource-poor countries*. Travel medicine and infectious disease, 6(5), 276–291. https://www.sciencedirect.com/science/article/abs/pii/S1477893908000781

[286] Bauomy, J. (2020, March). *COVID-19 and xenophobia: Why outbreaks are often accompanied by racism.* Euronews. https://www.euronews.com/2020/03/05/covid-19-and-xenophobia-why-outbreaks-are-often-accompanied-by-racism

[287] Matthews, R. (2017, January). *The cultural erosion of Indigenous people in health care.* NCBI.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5235932/

[288] United Nations. (n.d.). *Department of Economic and Social Affairs- Health*. https://www.un.org/development/desa/indigenouspeoples/mandated-areas1/health.html

[289] United Nations Development Programme. (2011). *Afrocolombianos: sus territorios y condiciones de vida.* https://www.undp.org/content/dam/colombia/docs/DesarrolloHumano/undp-co-cuadernoafro-2012.pdf

[290] United Nations Development Programme. (2011). *Afrocolombianos: sus territorios y condiciones de vida.* https://www.undp.org/content/dam/colombia/docs/DesarrolloHumano/undp-co-cuadernoafro-2012.pdf

[291] Dedios, M. C. (2017). *Poor health outcomes amongst Afro-Colombians are driven by discrimination as well as economic disadvantage.* LSE. https://blogs.lse.ac.uk/latamcaribbean/2017/10/31/poor-health-outcomes-amongst-afro-colombians-are-driven-by-discrimination-aswell-as-economic-disadvantage/

[292] United Nations Development Programme. (2011). *Afrocolombianos: sus territorios y condiciones de vida.* https://www.undp.org/content/dam/colombia/docs/DesarrolloHumano/undp-co-cuadernoafro-2012.pdf

[293] Dedios, M. C. (2017). *Poor health outcomes amongst Afro-Colombians are driven by discrimination as well as economic disadvantage*. LSE.
https://blogs.lse.ac.uk/latamcaribbean/2017/10/31/poor-health-outcomes-amongst-afro-colombians-are-driven-by-discrimination-aswell-as-economic-disadvantage/
[294] International Labour Organization. (2015). *Global evidence on inequities in rural health protection. Social-Protection.*
https://www.social-protection.org/gimi/gess/RessourcePDF.action;jsessionid=r86sHFqsxyQ82UeOxo8l1EhiTdgzF0UZDfVqF8E1mHPIjb_bU70H!2052637978?id=51297
[295] International Labour Organization. (2015). *Global evidence on inequities in rural health protection. Social-Protection.*
https://www.social-protection.org/gimi/gess/RessourcePDF.action;jsessionid=r86sHFqsxyQ82UeOxo8l1EhiTdgzF0UZDfVqF8E1mHPIjb_bU70H!2052637978?id=51297
[296] Green, S. (2009, June). *Rural disease response should differ from urban areas (Study)*. Kansas Health Institute.
https://www.khi.org/news/article/study-rural-disease-response-should-differ-urban-a
[297] Bhaduri, S. D. (2018). *Doctors for rural India*. The Hindu. https://www.thehindu.com/opinion/op-ed/doctors-for-rural-india/article22791210.ece
[298] Sharma, D. C. (2015, December). *India still struggles with rural doctor shortages*. The Lancet. https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)01231-3/fulltext
[299] Willingham, A., & Elkin, E. (2018, June). *There's a severe shortage of mental health professionals in rural areas. Here'swhy that's a serious problem*.CNN.
https://edition.cnn.com/2018/06/20/health/mental-health-rural-areas-issues-trnd/index.html
[300] Acaps. (2018). *Spike in farmer-herder violence in the Middle Belt*
https://www.acaps.org/sites/acaps/files/products/files/20181218_acaps_risk_report_nigeria_spike_in_farmer-herder_violence.pdf
[301] International Peace Institute. (2019). *Providing Healthcare in Armed Conflict: The Case of Nigeria*. https://www.ipinst.org/wp-content/uploads/2019/01/IPI-E-RPT-Providing-HealthcareNigeria.pdf
[302] Acaps. (2018, July). *Displacement in Plateau state- Nigeria*. https://www.acaps.org/sites/acaps/files/products/files/180713_start_nigeria_plateau_displacement_-_update_1.pdf
[303] Acaps. (2018, October). *Nigeria Flood Update II*. https://www.acaps.org/sites/acaps/files/products/files/20181002_acaps_briefing_note_nigeria_floods_update_ii.pdf
[304] World Health Organization. (2018, November). *This year's World malaria report at a glance*. https://www.who.int/malaria/media/world-malaria-report-2018/en/
[305] Onyiri, N. (2015, November). *Estimating Malaria Burden in Nigeria: A Geostatistical Modelling Approach*. Geospatial Health. https://www.geospatialhealth.net/index.php/gh/article/view/306/417
[306] Ezeh, A., Oyebode, O., Satterthwaite, D., Chen, Y.-F., Ndugwa, R., Sartori, J., & Lilford, R. J. (2017, February). *The history, geography, and sociology of slums and the health problems of people who live in slums*. The Lancet. https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(16)31650-6/fulltext
[307] Chen, J., Chu, S., Chungbaek, Y., Khan, M., Kuhlman, C., Marathe, A., & Xie, D. (2016). *Effect of modelling slum populations on influenza spread in Delhi. BMJ open, 6(9), e011699*. https://bmjopen.bmj.com/content/bmjopen/8/1/e017353.full.pdf
[308] Snyder, R. E., Marlow, M. A., & Riley, L. W. (2014). *Ebola in urban slums: the elephant in the room*. The Lancet Global Health, 2(12), e685.
https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(14)70339-0/fulltext
[309] Schnirring, L. (2015, December). *Conditions in Liberia's urban slums helped fuel Ebola spread*. Center for Infectious Disease Research and Policy, University of Minnesota.
http://www.cidrap.umn.edu/news-perspective/2015/12/conditions-liberias-urban-slums-helped-fuel-ebolaspread
[310] Human Dignity Trust. (n.d.). *Criminalising Homosexuality and LGBT Rights in Times of Conflict, Violence and Natural Disasters*.
https://www.humandignitytrust.org/wp-content/uploads/resources/8.-Criminalisation-Conflict-and-Natural-Disasters.pdf
[311] The Lancet. (2016). *Meeting the unique health-care needs of LGBTQ people*. https://www.thelancet.com/action/showPdf?pii=S0140-6736%2816%2900013-1
[312] Commonwealth Lawyers Association. (2015). *The Criminalisation of Consensual Same-Sex Sexual Relations Across the Commonwealth Developments and Opportunities*. Human Dignity Trust (HDT).
https://www.humandignitytrust.org/wp-content/uploads/resources/HDT_Commonwealth_Criminalisation_Report_2015.pdf
[313] Hoppe, T. (2009). *The Health of Sexual Minorities: Public Health Perspectives on Lesbian, Gay, Bisexual, and Transgender Populations*. SpringerLink.
https://link.springer.com/book/10.1007/978-0-387-31334-4
[314] Chibbaro, L. (2020, March). *Groups say LGBTQ people more vulnerable to Coronavirus*. Washington Blade.
https://www.washingtonblade.com/2020/03/12/groups-say-lgbtq-people-more-vulnerable-to-coronavirus/
[315] Lopez, O. (2020, march). *LGBT+ community at heightened risk of coronavirus, groups warn*. Reuters.
https://www.reuters.com/article/us-health-coronavirus-lgbt-trfn/lgbt-community-at-heightened-risk-of-coronavirus-groups-warn-idUSKBN20Y3JS
[316] UN News. (2011, December). *UN issues first report on human rights of gay and lesbian people*.
https://news.un.org/en/story/2011/12/398432-un-issues-first-report-human-rights-gay-and-lesbian-people
[317] Front Line Aids. (n.d.). Deep Engagement Uganda. https://frontlineaids.org/our-work-includes/deep-engagement-uganda/
[318] International Federation of Red Cross and Red Crescent Societies. (2016). *Unseen, Unheard; Gender-Based Violence in Disasters, Asia-Pacific case studies*.
https://www.ifrc.org/Global/Publications/Gender%20and%20Diversity/GBV%20in%20disasters%20AP%20report%20LR.pdf
[319] International Federation of Red Cross and Red Crescent Societies. (2015). *The Responsibility to Prevent and Response to Sexual and Gender-Bases Violence and Disasters and Crisis*. https://media.ifrc.org/ifrc/wp-content/uploads/sites/5/2018/07/17072018-SGBV-Report_Final.pdf.pdf
[320] United Nations. (2017). *Report of the Secretary-General on Conflict-Related Sexual Violence*. RefWorld. https://www.refworld.org/docid/5912d5b74.html
[321] UNFPA. (2020, March). *COVID-19: A gender lens. Technical brief on protecting sexual and reproductive health and rights, and promoting gender equality.*
https://www.unfpa.org/resources/covid-19-gender-lens
-Fraser E. (2020, March). Impact of COVID-19 Pandemic on Violence against Women and Girls. VAWG Helpdesk Research Report, UKaid.
http://www.sddirect.org.uk/media/1881/vawg-helpdesk-284-covid-19-and-vawg.pdf
[322] International Federation of Red Cross and Red Crescent Societies. (2015). *Unseen, unheard: Gender-based violence in disasters* – Global study.
https://www.ifrc.org/Global/Documents/Secretariat/201511/1297700_GBV_in_Disasters_EN_LR2.pdf
[323] Relief Web. (2012 , October). *Sex workers need help too*. https://reliefweb.int/report/kenya/sex-workers-need-help-too
[324] Centers for Disease Control and Prevention. (2019, November). HIV Risk Among Persons Who Exchange Sex for Money or Nonmonetary Items. https://www.cdc.gov/hiv/group/sexworkers.html
[325] World Health Organization. (n.d.). *HIV/AIDS- Sex work*. https://www.who.int/hiv/topics/sex_work/about/en/
[326] Dodds, P. (2017, April). *UN peacekeepers in Haiti implicated in child sex ring*. Independent.
https://www.independent.co.uk/news/world/americas/un-haiti-peacekeepers-child-sex-ring-sri-lankan-underage-girls-boys-teenage-a7681966.html
[327] Hall, A. (2020, April). *Sex workers and STIs: the ignored epidemic*. IQ Solutions. https://www.iqsolutions.com/section/ideas/sex-workers-and-stis-ignored-epidemic
[328] Kerrigan, D., Wirtz, A., Semini, I., N'Jie, N. D., Stanciole, A., Butler, J., & Beyrer, C. (2012). *The global HIV epidemics among sex workers*. The World Bank.
http://documents.worldbank.org/curated/en/682211468331196525/pdf/The-global-HIV-epidemics-among-sex-workers.pdf
[329] Avert. (2019, October). *Sex Workers, Hiv And Aids*. https://www.avert.org/professionals/hiv-social-issues/key-affected-populations/sex-workers
[330] Platt, L., Grenfell, P., Meiksin, R., Elmes, J., Sherman, S. G., Sanders, T., & Crago, A.-L. (2018, December). *Associations between sex work laws and sex workers' health: A systematic review and meta-analysis of quantitative and qualitative studies*. National Center for Biotechnology Information. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6289426/
[331] United Nations. (2006). *Convention of the Rights of Persons with Disabilities (CRDP)*.
https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities/convention-on-the-rights-of-persons-with-disabilities-2.html
[332] World Health Organization. (2018, January). *Disability and health*. https://www.who.int/news-room/fact-sheets/detail/disability-and-health
[333] Inter-Agency Standing Committee (IASC). (2019). *Guidelines on the Inclusion of Persons with Disabilities in Humanitarian Action.*

https://interagencystandingcommittee.org/iasc-task-team-inclusion-persons-disabilities-humanitarian-action/documents/iasc-guidelines
[334] Handicap International. (2015). *Disability in humanitarian contexts- Views from affected people and field organisations*. United Nations.
https://www.un.org/disabilities/documents/WHS/Disability-in-humanitarian-contexts-HI.pdf
[335] Inter-Agency Standing Committee (IASC). (2019). *Guidelines on the Inclusion of Persons with Disabilities in Humanitarian Action*.
https://interagencystandingcommittee.org/iasc-task-team-inclusion-persons-disabilities-humanitarian-action/documents/iasc-guidelines
[336] Word Health Organization. (2020, March). *Disability considerations during the COVID-19 outbreak*.
https://www.who.int/publications/i/item/disability-considerations-during-the-covid-19-outbreak
[337] Word Health Organization (2018, June). *Noncommunicable diseases key facts*.
https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases
[338] World Health Organization (n.d.). *Migration and health: Key Issues*.
http://www.euro.who.int/en/health-topics/health-determinants/migration-and-health/migration-and-health-in-the-european-region/migration-and-health-key-issues
[339] Roberts, M. (2020, April). *Coronavirus: Advice for people with health conditions*. BBC News. https://www.bbc.com/news/health-51703892
[340] Salinas, A. M., & Kones, R. (2018). *Barriers to global action plan for the prevention and control of noncommunicable diseases: proposal modifications to the voluntary targets. J Prev Med, 3(01), 1-5.*
https://www.researchgate.net/publication/322370152_Barriers_to_Global_Action_Plan_for_the_Prevention_and_Control_of_Noncommunicable_Diseases_Proposal_Modifications_to_the_Voluntary_Targets
[341] Slama, S., Kim, H. J., Roglic, G., Boulle, P., Hering, H., Varghese, C., & Tonelli, M. (2016). *Care of non-communicable diseases in emergencies*.
https://www.who.int/emergencies/kits/care-of-non-communicable-diseases-in-emergencies-the-lancet.pdf?ua=1
[342] Slama, S., Kim, H. J., Roglic, G., Boulle, P., Hering, H., Varghese, C., & Tonelli, M. (2016). *Care of non-communicable diseases in emergencies*.
https://www.who.int/emergencies/kits/care-of-non-communicable-diseases-in-emergencies-the-lancet.pdf?ua=1
[343] Kayali, M., Moussally, K., Lakis, C., Abrash, M. A., Sawan, C., Reid, A., & Edwards, J. (2019). *Treating Syrian refugees with diabetes and hypertension in Shatila refugee camp, Lebanon: Médecins Sans Frontières model of care and treatment outcomes*. Conflict and Health, 13(1), 12. https://conflictandhealth.biomedcentral.com/articles/10.1186/s13031-019-0191-3
[344] UNHCR. (2020). *Central African Republic Regional Refugee Response*. Operational Portal. https://data2.unhcr.org/en/situations/car
[345] Child Soldiers International. (2018). *Child Soldiers International- Annual Report 2017-18*. Relief Web. https://reliefweb.int/sites/reliefweb.int/files/resources/CSI_annual_report_2018.pdf
[346] International Lesbian, Gay, Bisexual, Trans and Intersex Association. (2019, December). *State-Sponsored Homophobia, global legislation overview update.*
https://ilga.org/downloads/ILGA_World_State_Sponsored_Homophobia_report_global_legislation_overview_update_December_2019.pdf
[347] World Health Organization. (2018, December). *2019 Humanitarian Response Plan*- Central African Republic.
https://www.who.int/health-cluster/countries/central-african-republic/HRP-CAR-ENG.pdf?ua=1
[348] World Food Programme, Emergency Telecommunications Cluster. (2019, December). *Central African Republic Conflict - ETC Situation Report #30 (Reporting Period: 01/12/2019 to 31/12/2019)*. Relief Web. https://reliefweb.int/report/central-african-republic/central-african-republic-conflict-etc-situation-report-30-reporting
[349] ACAPS. (2018, August). *Humanitarian Access overview- August 2018*. Relief Web.
https://reliefweb.int/sites/reliefweb.int/files/resources/acaps_humanitarian_access_overview_august_2018_0.pdf
[350] UNHCR. (2020). *Chad: all refugees*. Operational Portal. https://data2.unhcr.org/en/country/tcd
[351] UNCHR. (2020). *Chad: all refugees*. Operations Portal. https://data2.unhcr.org/en/country/tcd
[352] International Lesbian, Gay, Bisexual, Trans and Intersex Association, ILGA. (2019, December). *State-Sponsored Homophobia, global legislationoverview update.*
https://ilga.org/downloads/ILGA_World_State_Sponsored_Homophobia_report_global_legislation_overview_update_December_2019.pdf
[353] World Health Organization. (n.d.). *Health Resources Availability Monitoring System (HeRAMS)*. https://www.who.int/hac/herams/en/
[354] Relief Web. (2019, July). *Aid workers killed 2018*. https://reliefweb.int/report/world/aid-workers-killed-2018
[355] UNHCR. (2020). CCCM Cluster Somalia. Somalia Overview. *Operational Portal*. https://data2.unhcr.org/en/situations/cccm_somalia
[356] UNICEF. (2019). *Female Genital Mutilation Country Profiles*. https://data.unicef.org/resources/fgm-country-profiles/
[357] International Lesbian, Gay, Bisexual, Trans and Intersex Association, ILGA. (2019, December). *State-Sponsored Homophobia, global legislation overview update.*
https://ilga.org/downloads/ILGA_World_State_Sponsored_Homophobia_report_global_legislation_overview_update_December_2019.pdf
[358] World Health Organization. (2019, January). *2019 Humanitarian Response Plan- Somalia*. https://www.who.int/health-cluster/countries/somalia/HRP-Somalia-2019.pdf?ua=1
[359] Humanitarian Response. (2018). *Somalia Health Cluster Strategy – for the period through to the end of 2018.*
https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/somalia_health_cluster_strategy_2018_final.pdf
[360] UNHCR. (2020). *South Sudan. IDPD's in South Sudan*. Operational Portal. https://data2.unhcr.org/en/country/ssd
[361] Office of the Special Representative of the Secretary-General for Children and Armed Conflict. (2019). *Syrian Arab Republic*. https://childrenandarmedconflict.un.org/south-sudan/
[362] International Lesbian, Gay, Bisexual, Trans and Intersex Association, ILGA. (2019, December). *State-Sponsored Homophobia, global legislation overview update.*
https://ilga.org/downloads/ILGA_World_State_Sponsored_Homophobia_report_global_legislation_overview_update_December_2019.pdf
[363] World Health Organization. (n.d.). *Somalia- Saving Somali children from vaccine-preventable diseases*. ReliefWeb.
https://reliefweb.int/report/somalia/saving-somali-children-vaccine-preventable-diseases
[364] ACAPS. (2018). *Humanitarian Access overview- August 2018*. Relief Web. https://reliefweb.int/sites/reliefweb.int/files/resources/acaps_humanitarian_access_overview_august_2018_0.pdf
[365] UNHCR. (2020). *Mali*. Operational Portal. https://data2.unhcr.org/en/country/mli
[366] UNHCR. (2020). *Mali*. Operational Portal. https://data2.unhcr.org/en/country/mli
[367] International Campaign to Ban Landmines – Cluster Munition Coalition. (2019, November). *Land Mine Monitor 2019, 20-year review*. ReliefWeb.
https://reliefweb.int/sites/reliefweb.int/files/resources/Landmine-Monitor-2019-WEB-Final.pdf
[368] Food and Agriculture Organization & Centre de cooperation internationale en recherche agronomique pour le développement. (2012). *Information system on pastoralism in the Sahel 1970–2012.*
http://www.fao.org/3/a-i2601e.pdf
[369] Save the Children. (2018). *Peace for my Homeland Mali: Lessons learnt report from consultations held in Mali.*
https://resourcecentre.savethechildren.net/library/peace-my-homeland-mali-lessons-learnt-report-consultations-held-mali
[370] Humanitarian Response. (2018, December). *Plan De Réponse Humanitaire 2019- Mali.*
https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/mali_hrp2019_version_finale_1.pdf
[371] ACAPS. (2018, August). *Humanitarian Access overview- August 2018*. Relief Web.
https://reliefweb.int/sites/reliefweb.int/files/resources/acaps_humanitarian_access_overview_august_2018_0.pdf
[372] Lesotho National Federation of Organisations of the Disabled. (n.d). *Disability in Lesotho*. http://www.lnfod.org.ls/disability-in-lesotho.html
[373] United Nations Population Fund. (2018). *Lesotho Humanitarian Emergency*. https://www.unfpa.org/data/emergencies/lesotho-humanitarian-emergency
[374] UNHCR. (2020). *Nigeria. All IDPDs*. Operational Portal. https://data2.unhcr.org/en/country/nga
[375] Conflict Office of the Special Representative of the Secretary-General for Children and Armed Conflict. (2019). *Secretary-General Annual Report onChildren and Armed*. UN.
https://www.un.org/ga/search/view_doc.asp?symbol=S/2019/509&Lang=E&Area=UNDOC

[376] Minority Rights Group International. (2019). *Peoples Under Treath*. https://peoplesunderthreat.org
[377] Minority Rights Group International. (2019). *Peoples Under Treath*. https://peoplesunderthreat.org
[378] World Health Organization. (2018, December). *Humanitarian Response Strategy 2019- Nigeria*. https://www.who.int/health-cluster/countries/nigeria/HRP-2019-Nigeria.pdf?ua=1
[379] ACAPS. (2018, August). *Humanitarian Access Overview August 2018*. https://reliefweb.int/sites/reliefweb.int/files/resources/acaps_humanitarian_access_overview_august_2018_0.pdf
[380] World Bank. (2009, January). *Escaping Stigma and Neglect: people with disabilities in Sierra Leone*.
http://documents.worldbank.org/curated/en/180911468299196149/pdf/499260PUB0stig1010fficial0Use00nly1.pdf
[381] Statistics Sierra Leone (SSL). (2017, October). *Sierra Leone 2015 Population and Housing Census Thematic Report on Disability*. UNFPA Sierra Leone.
https://sierraleone.unfpa.org/sites/default/files/pub-pdf/Disability%20Report.pdf
[382] World Health Organization Regional Office or Africa. (n.d). Sierra Leone. https://www.afro.who.int/countries/sierra-leone
[383] World Health Organization. (2018, May). *Country Cooperation strategy at Glance- Sierra Leone*. https://apps.who.int/iris/bitstream/handle/10665/136868/ccsbrief_sle_en.pdf?sequence=1
[384] UNHCR. (2019). *Democratic Republic of the Congo. Global Focus*. UNHCR Operations Worldwide. http://reporting.unhcr.org/node/4874?y=2019#year
[385] Office of the Special Representative of the Secretary-General for Children and Armed Conflict. (2019). *Democratic Republic of the Congo*.
https://childrenandarmedconflict.un.org/countries-on-the-security-council-agenda-democratic-republic-of-the-congo/
[386] UNFPA. (2019). *Gender Based Violence in the Democratic Republic of the Congo: Key Facts and Priorities of humanitarian actors*.
https://reliefweb.int/report/democratic-republic-congo/gender-based-violence-democratic-republic-congo-key-facts-and
[387] World Health Organization. (n.d). *Health Cluster: Democratic Republic of Congo*. https://www.who.int/health-cluster/countries/democratic-republic-of-the-congo/en/
[388] UNHCR. (2020). *Yemen*. Operational Portal. https://data2.unhcr.org/en/country/yem
[389] Office of the Special Representative of the Secretary-General for Children and Armed Conflict. (2019). *Yemen*. https://childrenandarmedconflict.un.org/where-we-work/yemen/
[390] World Health Organization. (n.d.). *Yemen*. https://www.who.int/health-cluster/countries/yemen/en/
[391] ACAPS. (2018, August). *Humanitarian Access overview- August 2018*. Relief Web.
https://reliefweb.int/sites/reliefweb.int/files/resources/acaps_humanitarian_access_overview_august_2018_0.pdf
[392] UNHCR. (2020). *Cote d'Ivoire. People at risk of statelessness and stateless people*. Operational Portal. https://data2.unhcr.org/en/country/civ
[393] UNHCR. (n.d). *The lost children of Cotê d'Ivoire*. https://www.unhcr.org/ibelong/the-lost-children-of-cote-divoire/
[394] International Organization for Migration. (2018). *World Migration Report 2020*. https://publications.iom.int/system/files/pdf/wmr_2020.pdf
[395] UNHCR. (2019). *Afghanistan. Global Focus*. UNHCR Operations Worldwide. http://reporting.unhcr.org/afghanistan
[396] UN News. (2019, February). *Rising landmine blast toll in Afghanistan highlights long-term care needs of survivors*.https://news.un.org/en/story/2019/02/1032141
[397] International Committee of the Red Cross. (2019). *Afghanistan: Record number of disabled Afghans seek assistance in ICRC's 30th year*.
https://www.icrc.org/en/document/afghanistan-record-number-disabled-afghans-seek-assistance-icrcs-30th-year
[398] Office of the Special Representative of the Secretary-General for Children and Armed Conflict. (2019). *Afghanistan*. https://childrenandarmedconflict.un.org/where-we-work/afghanistan/
[399] World Health Organization. (n.d). *Health Cluster: Afghanistan*. https://www.who.int/health-cluster/countries/afghanistan/en/
[400] ACAPS. (2018). *Humanitarian Access Overview August 2018*. https://reliefweb.int/sites/reliefweb.int/files/resources/acaps_humanitarian_access_overview_august_2018_0.pdf
[401] UNICEF. (2018). *Country Profiles: Eswatini*. https://data.unicef.org/country/swz/
[402] Integrated Food Security Phase Classification IPC. (2019, July). *Eswatini- IPC Acute Food Insecurity Analysis June 2019 – March 2020*.
https://reliefweb.int/sites/reliefweb.int/files/resources/IPC_Eswatini_AFI_2019June2020March.pdf
[403] United Nations Population Fund. (2017). *Eswatini Humanitarian Emergency*. UNFPA. https://www.unfpa.org/data/emergencies/eswatini-humanitarian-emergency
[404] UNHCR. (2020). *Niger*. Oprations Portal. https://data2.unhcr.org/fr/country/ner
[405] Humanitarian Response. (2018, p.5-9). *2019. Aperçu Des Besoins Humanitaires- Niger*.
https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/ner_hno_2019.pdf
[406] World Health Organization. (n.d). *Health Cluster: Niger*. https://www.who.int/health-cluster/countries/niger/en/
[407] UNHCR. (2020). *Pakistan*. Operational Portal. https://data2.unhcr.org/en/country/pak
[408] Malik, M. S., Afzal, M., Farid, A., Khan, F. U., Mirza, B., & Waheed, M. T. (2019). *Disease status of Afghan refugees and migrants in Pakistan. Frontiers in Public Health, 7, 185*.
https://www.frontiersin.org/articles/10.3389/fpubh.2019.00185/full
[409] Minority Rights Group. (2019). *Peoples Under Threat, Pakistan*. https://peoplesunderthreat.org/countries/pakistan/#background
[410] UN Habitat. (2016). *World Cities Report 2016*. http://wcr.unhabitat.org/main-report/
[411] United Nation Statistics Division. (2015). *Millenium Development Goals Indicators*. Pakistan Data. http://mdgs.un.org/unsd/mdg/Data.aspx
[412] World Health Organization. (n.d). *Health Cluster: Pakistan*. https://www.who.int/health-cluster/countries/pakistan/en/
[413] UNHCR. (2020). *Mauritania*. Operational Portal. https://data2.unhcr.org/en/country/mrt
[414] UNHCR. (2019). *Operational Update – Mauritania*. https://reliefweb.int/sites/reliefweb.int/files/resources/67708-2.pdf
[415] European Commission. (2019). *Mauritania Factsheet*. https://ec.europa.eu/echo/where/africa/mauritania_en
[416] World Food Programme, WFP. (2020). *WFP Benin Country Brief*. https://www.wfp.org/countries/benin
[417] UNICEF. (n.d.). *29 Countries, more than 125 million girls and women*. https://www.unicef.org/spanish/protection/files/00-FMGC_infographiclow-res.pdf
[418] UNHCR. (2019, December). *Operation Portal, Refugee Situations – Guinea-Bissau*. https://data2.unhcr.org/en/country/gnb
[419] Médecins Sans Frontières. (2017). *Sanitation Activities for Slum Dwellers in Haiti, testimonies*. https://msf.lu/en/news/testimonies/sanitationactivities-for-slum-dwellers-in-haiti
[420] United Nations Statistics Division. (2015). *Millennium Development Goals Indicators – Haiti Series Data*. http://mdgs.un.org/unsd/mdg/Data.aspx
[421] UNAIDS. (2018). *Country overview: Haiti*. https://www.unaids.org/en/regionscountries/countries/haiti
[422] Young., S. (2017). *In our backyard: The Caribbean's statelessness and refugee crisis*. Brookings Institution.
https://www.brookings.edu/blog/order-from-chaos/2017/06/20/in-our-backyard-the-caribbeans-statelessness-and-refugee-crisis/
[423] UN Office for the Coordination of Humanitarian Affairs. (2019). *Haiti: Humanitarian Response Plan January 2019 - December 2020*. Relief Web.
https://reliefweb.int/report/haiti/haiti-humanitarian-response-plan-january-2019-december-2020
[424] UNHCR. (2020). *Guinea. Operation Portal*. https://data2.unhcr.org/en/country/gin
[425] UNICEF. (2014, September) *Press Centre: Thousands of children orphaned by Ebola*. UNICEF. https://www.unicef.org/media/media_76085.html
[426] UNHCR. (2020). *Burkina Faso*. Operational Portal. https://data2.unhcr.org/en/country/bfa
[427] UNHCR. (n.d) *Burkina Faso*. https://www.unhcr.org/burkina-faso.html
[428] World Food Programme, WFP. (2020, January). *WFP Burkina Faso Country Brief*. https://www.wfp.org/countries/burkina-faso
[429] World Health Organization. (n.d). *Health Cluster: Burkina Faso*. https://www.who.int/health-cluster/countries/burkina-faso/en/
[430] U.S Department of Labour. (2018) *Liberia, 2018 Findings on the worst forms of child labor*.https://www.dol.gov/agencies/ilab/resources/reports/child-labor/liberia
[431] World Food Programme, WFP. (2020). *WFP Liberia Country Brief*. https://www.wfp.org/countries/liberia

[432] International Organization for Migration. (2019). *World Migration Report 2020*. https://publications.iom.int/system/files/pdf/wmr_2020.pdf
[433] UNICEF. (2017). *UNICEF Annual Report 2017 – Equatorial Guinea*.https://www.unicef.org/about/annualreport/files/Equatoria__Guinea_2017_COAR.pdf
[434] UNHCR. (2019). *Burundi. Global Focus*. UNHCR Operations worldwide. http://reporting.unhcr.org/burundi
[435] Food and Agriculture Organization. (2016). *Burundi Situation Report – May 2016*.http://www.fao.org/fileadmin/user_upload/emergencies/docs/FAOBurundi_sitrep_5May2016.pdf
[436] World Health Organization. (n.d). *Health Cluster: Buundi*. https://www.who.int/health-cluster/countries/burundi/en/
[437] ACAPS. (2018, August). *Humanitarian Access Overview; august 2018*. https://reliefweb.int/sites/reliefweb.int/files/resources/acaps_humanitarian_access_overview_august_2018_0.pdf
[438] International Displacement Monitor Centre. (2018) *Sudan, Country Information*. https://www.internal-displacement.org/countries/sudan
[439] World Food Programme. (2019, December). *Where we work - Sudan*. https://www.wfp.org/countries/sudan
[440] World Food Programme. (2019, December). *Where we work - Sudan*. https://www.wfp.org/countries/sudan
[441] Office of the Special Representative of the Secretary-General for Children and Armed Conflict. (2019). *Syrian Arab Republic*. https://childrenandarmedconflict.un.org/where-we-work/syria/
[442] International Displacement Monitoring Centre. (2019). *Syria*. https://www.internal-displacement.org/countries/syria
[443] Humanity & Inclusion. (2019). *Issue Brief – Syria. Explosive Weapons in Populated Areas (EWIPA), Contamination and Mine Action*. https://hi.org/sn_uploads/document/IB-2-EWIPA-web-2019.pdf
[444] World Health Organization. (2018). *Country Cooperation Strategy at a Glance, Angola*.
https://apps.who.int/iris/bitstream/handle/10665/136994/ccsbrief_ago_en.pdf;jsessionid=542124B5879FD4441AE57E37BEB0EB66?sequence=1
[445] ACAPS. (2018). *Humanitarian Access Overview – August 2018*. https://reliefweb.int/sites/reliefweb.int/files/resources/acaps_humanitarian_access_overview_august_2018_0.pdf
[446] United Nations Statistics Division. (2015, December). *Millennium Development Goals Indicators – Guatemala*. http://mdgs.un.org/unsd/mdg/Data.aspx
[447] Interpeace & Programa POJLUVE (2009). *Violencia juvenil, maras y pandillas en Guatemala, Informe para la discusión*.
https://www.interpeace.org/resource/youth-violence-maras-and-pandillas-in-guatemala-spanish/
[448] International Displacement Monitor Centre. (2019). *Guatemala*. https://www.internal-displacement.org/countries/guatemala
[449] UN Office for the Coordination of Humanitarian Affairs. (2018, March). *2017 Guatemala Humanitarian Needs Overview at a Glance*. Relief Web.
https://reliefweb.int/report/guatemala/2017-guatemala-humanitarian-needs-overview-glance-nov-2017
[450] United Nations Human Rights Council. (2015, May). *Venezuela Fact Sheet for ECHO: Highlights of Targeted Actions and Beneficiaries For 2015*.
https://www.acnur.org/fileadmin/Documentos/RefugiadosAmericas/Venezuela/Venezuela_fact_sheet_for_ECHO_May_2015.pdf
[451] United Nations Statistics Division. (2015, December). *Millennium Development Goals Indicators – Venezuela*. http://mdgs.un.org/unsd/mdg/Data.aspx
[452] CARE. (2019, May). *CARE Rapid Gender Analysis - Latin America & Caribbean: Venezuelan Migrants & Refugees in Colombia*.
https://reliefweb.int/report/colombia/care-rapid-gender-analysis-latin-america-caribbean-venezuelan-migrants-refugees
[453] International Organization for Migration. (2019, October). *Venezuela Refugee and Migrant Crisis*. https://www.iom.int/venezuela-refugee-and-migrant-crisis
[454] UNHCR. (n.d) *Venezuela | Global Focus*. UNHCR Operations Worldwide. http://reporting.unhcr.org/node/10327
[455] UN Office for the Coordination of Humanitarian Affairs. (n.d.). *News and Updates*. https://www.unocha.org/
[456] UNHCR. (n.d) *Lebanon | Global Focus*. UNHCR Operations Worldwide. http://reporting.unhcr.org/node/2520
[457] UN Humans Rights Council. (2019). *Lebanon Crisis Response Plan (2017–2020)*. https://www.unhcr.org/lb/wp-content/uploads/sites/16/2019/04/LCRP-EN-2019.pdf
[458] UNHCR. (n.d). *Myanmar | Global Focus*. UNHCR Operations Worldwide. http://reporting.unhcr.org/node/2541
[459] Dirección General de Estadísticas y Censos, Digestyc. (2018). *Encuesta de Hogares de Propósitos Múltiples (EHPM)*.
http://www.digestyc.gob.sv/index.php/novedades/avisos/869-ya-se-encuentra-disponible-la-publicacion-ehpm-2018.html
[460] Dirección General de Estadísticas y Censos, (2018). *Encuesta de Hogares de Propósitos Múltiples (EHPM)*.
http://www.digestyc.gob.sv/index.php/novedades/avisos/869-ya-se-encuentra-disponible-la-publicacion-ehpm-2018.html
[461] The World Bank. (n.d). *Data for El Salvador, Lower middle income*. https://data.worldbank.org/?locations=SV-XN
[462] The World Bank. (n.d). *Personal remittances, received (% of GDP) - El Salvador*. https://data.worldbank.org/indicator/BX.TRF.PWKR.DT.GD.ZS?locations=SV
[463] Eckstein, D., Künzel, V., Schäfer, L., & Winges, M. (2019). *Global Climate Risk Index 2020*. Germanwatch.
https://germanwatch.org/sites/germanwatch.org/files/20-2-01e%20Global%20Climate%20Risk%20Index%202020_10.pdf
[464] International Committee of the Red Cross. (2018). *A Matter of Life and Death: Tackling Violence against Health Care in Pakistan, Peru and El Salvador*.
https://healthcareindanger.org/wp-content/uploads/2017/12/4330_002_HCiD_Selected_Experiences_pakistan-peru-el-salvador-12-2017-.pdf
[465] Lemus, R. (2019, September). *Pandillas ponen en riesgo la atención de salud comunitaria en San Martín*. El Mundo.
https://elmundo.sv/pandillas-ponen-en-riesgo-la-atencion-de-salud-comunitaria-en-san-martin/
[466] Igarape Institute. (n.d). *Homicide Monitor*. https://homicide.igarape.org.br/
[467] The World Bank Data. (n.d). *Intentional homicides (per 100,000 people) - El Salvador*. https://data.worldbank.org/indicator/VC.IHR.PSRC.P5?locations=SV
[468] Ministerio de Justicia y Seguridad Pública. (2019, November). *El Salvador cerraría 2019 con una tasa de 36 homicidios por cada 100,000 habitantes*.
http://www.pnc.gob.sv/portal/page/portal/informativo/novedades/noticias/El%20Salvador%20cerrar%EDa%202019%20con%20una%20tasa%20de%2036%20homicidios%20por#.XkSloK3vWSO
[469] InSight Crime. (2020, January). *InSight Crime's 2019 Homicide Round-Up*. https://www.insightcrime.org/news/analysis/insight-crime-2019-homicide-round-up/
[470] Territorial Recuperation Control Plan. (n.d.). *Plan Cuscatlan*. https://www.plancuscatlan.com/
[471] Papadovassilakis, A. (2020, January). *Are El Salvador's Gangs Behind Historic Murder Drop? InSight Crime*.
https://www.insightcrime.org/news/analysis/gang-truce-behind-el-salvador-historic-murder-drop/
[472] Arévalo, M. (2020, January). *Fiscalía reporta un aumento de las extorsiones*. La Prensa Gráfica.
https://www.laprensagrafica.com/elsalvador/Fiscalia-reporta-un-aumento-de-las-extorsiones-20200113-0687.html
[473] Hernandez, E. (2019, November). *Promotores de salud, guardianes anónimos en las comunidades*. ElSalvador.com.
https://www.elsalvador.com/eldiariodehoy/promotores-de-salud-guardianes-anonimos-en-las-comunidades/659705/2019/
[474] Hernandez, W. (2020, February). *El largo viaje de Flor para conseguir salud*. Séptimo Sentido. https://7s.laprensagrafica.com/el-largo-viaje-de-flor-para-conseguir-salud/
[475] International Displacement Monitoring Center, IDMC. (n.d). *El Salvador*. Country Information. https://www.internal-displacement.org/countries/el-salvador
[476] UNFPA. (2017). *Mas De 19 Mil Razones Para La Proteccion De Ninas Y Adolescentes*. https://elsalvador.unfpa.org/sites/default/files/pub-pdf/Mapa%20EmbarazosSV_%202017.pdf
[477] Agrupación Ciudadana. (2018). *El suicidio es la primera causa de muerte materna indirecta en adolescentes*.
https://agrupacionciudadana.org/el-suicidio-es-la-primera-causa-de-muerte-materna-indirecta-en-adolescentes/
-Agrupación Ciudadana. (2013). Excluidas, Perseguidas, Encarceladas. El Impacto de la Criminalización Absoluta del Aborto en El Salvador.
https://www.reproductiverights.org/sites/crr.civicactions.net/files/documents/crr_ElSalvadorReport_Sept_25_sp.pdf
-UNFPA. (2019). ¿Sin opciones? muertes maternas por suicidio. El Salvador, 2019.
https://agrupacionciudadana.org/el-suicidio-es-la-primera-causa-de-muerte-materna-indirecta-en-adolescentes/
-Camacho, A.V. (n.d.). La maternidad en la Niñez. Enfrentando el reto del embarazo adolescente. UNFPA.

http://www.codajic.org/sites/www.codajic.org/files/3La%20mortalidad%20materna%20en%20adolescentes%20Alma%20Camacho.pdf

[478] UNICEF. (2014). *Informe de Situación de la Niñez y Adolescencia en El Salvador. Transformar inequidades en oportunidades para todas las niñas, niños y adolescentes.* https://www.unicef.org/elsalvador/sites/unicef.org.elsalvador/files/2018-12/Analisis_de_Situacion_de_la_Infancia_El_Salvador_UNICEF_2014.pdf

[479] Relief Web. (2017). *Politica Nacional para la Proteccion y Desarrollo de la Persona Migrante Salvadorena y su Familia.* https://reliefweb.int/sites/reliefweb.int/files/resources/Politica%20Nacional%20para%20la%20Proteccion%20y%20Desarrollo%20de%20la%20Persona%20Migrante%20Salvadorena%20y%20su%20Familia.pdf

[480] Banco Central de Reserva. (2019). *Remesas familiares de El Salvador crecen 8.4% y superan los $5,400 millones en 2018.* https://www.bcr.gob.sv/esp/index.php?option=com_k2&view=item&id=1281:remesas-familiares-de-el-salvador-crecen-84-y-superan-los-$5400-millones-en-2018&Itemid=168&tmpl=component&print=1

[481] Pérez, R. P., Santamaría, J., & Villarreal, F. G. (2019). *Estrategias para el uso productivo de remesas familiares e inclusión financiera: estudio de caso de la cadena de tomate y chile verde en El Salvador.* CEPAL. https://repositorio.cepal.org/handle/11362/44934

[482] Salud Gob. (2018). *Piramide Poblacional.* https://www.salud.gob.sv/archivos/DVS/piramides2018/p_santa_ana2018.pdf

[483] Pan American Health Organization. (2011). *El Salvador Estudio de Caracterización y Análisis de Exclusión Social en Salud 2002-2010.* https://www.paho.org/els/index.php?option=com_docman&view=download&alias=1561-estudio-de-caracterizacion-y-analisis-de-exclusion-social-en-salud-2002-2010-1&category_slug=publicaciones-destacadas&Itemid=364

[484] United Nations Development Programme. (2018). *Informe sobre Desarrollo Humano El Salvador 2018- ¡SOY JOVEN! ¿Y ahora qué?* https://www.undp.org/content/dam/el_salvador/docs/IDHES%202018%20WEB.pdf

[485] Dirección General de Estadísticas y Censos, Digestyc. (2018). *Encuesta de Hogares de Propósitos Múltiples (EHPM).* http://www.digestyc.gob.sv/index.php/novedades/avisos/869-ya-se-encuentra-disponible-la-publicacion-ehpm-2018.html

[486] Banco Central de Reserva. (2019). *Remesas familiares de El Salvador crecen 8.4% y superan los $5,400 millones en 2018.* https://www.bcr.gob.sv/esp/index.php?option=com_k2&view=item&id=1281:remesas-familiares-de-el-salvador-crecen-84-y-superan-los-$5400-millones-en-2018&Itemid=168&tmpl=component&print=1

[487] Pan American Health Organization. (2012). *Health in the Americas- El Salvador.* https://www.paho.org/salud-en-las-americas-2012/index.php?option=com_docman&view=download&category_slug=hia-2012-country-chapters-22&alias=129-el-salvador-129&Itemid=231&lang=en

[488] UNDP El Salvador. (2016, June). *Informe Anual PNUD El Salvador 2015.* https://www.sv.undp.org/content/el_salvador/es/home/library/informes-anuales/informe-anual-pnud-el-salvador-2015.html

[489] Hernandez, N., Perez, S., & Hernandez, E. (2019, July). *Occidente es el más azotado por alza de casos de dengue en El Salvador.* El Salvador.com. https://www.elsalvador.com/eldiariodehoy/occidente-zona-mas-afectada-por-alza-de-casos-de-dengue/618137/2019/

[490] Ministerio de Salud, Dirección de Vigilancia Sanitaria y Sistema Único de Monitoreo, Evaluación y Vigilancia Epidemiológica de personas con VIH(SUMEVE). 2014.Comisión Nacional Contra el Sidad, CONASIDA. (2016). *Plan Estratégico Nacional Multisectorial de VIH e ITS 2016-2020.* Asp Salud.
http://asp.salud.gob.sv/regulacion/pdf/planes/plan_estrategico_nacional_multisectorial_vih_its_2016_2020_v2.pdf
-Ministerio de Salud. (2011). Informe Nacional Sobre el Estado de Situación del VIH en El Salvador en Cumplimiento del Plan Nacional de Monitoreo Y evaluación Año 2010. Salud Gob.
https://www.salud.gob.sv/archivos/situacion_epid_VIH/Informe_VIH_2010.pdf

[491] Comisión Nacional Contra el Sidad, CONASIDA. (2016). *Plan Estratégico Nacional Multisectorial de VIH e ITS 2016-2020.* Asp Salud. http://asp.salud.gob.sv/regulacion/pdf/planes/plan_estrategico_nacional_multisectorial_vih_its_2016_2020_v2.pdf

[492] International Organization for Migration. (2016). *Estudio Exploratorio. Condición de salud, accesso a los servicios e identificación de riesgos y vulnerabilidades asociados a la migración en El Salvador.* Salud y Migracion.https://saludymigracion.org/es/system/files/repositorio/condicion_de_salud_el_salvador.pdf

[493] International Organization for Migration. (2016). *Estudio Exploratorio. Condición de salud, accesso a los servicios e identificación de riesgos y vulnerabilidades asociados a la migración en El Salvador.* Salud y Migracion.https://saludymigracion.org/es/system/files/repositorio/condicion_de_salud_el_salvador.pdf

[494] Conasan. (2018, November). *Lanzamiento Oficial Del Comité Departametal De Seguridad Alimentaria Y Nutricional- Santa Ana.* ReliefWeb. https://reliefweb.int/report/el-salvador/lanzamiento-oficial-del-comit-departametal-de-seguridad-alimentaria-y-nutricional

[495] United Nations, Department of Economic and Social Affairs, Population Division. (2019). *World Population Prospects 2019: Highlights.* https://population.un.org/wpp/Publications/Files/WPP2019_Highlights.pdf

[496] World Bank. (2019). *Fertility rate, total (births per woman) - Pakistan.* https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=PK

[497] World Bank. (n.d.). *Population, total - Pakistan.* https://data.worldbank.org/indicator/SP.POP.TOTL?locations=PK

[498] United Nations, Department of Economic and Social Affairs, Population Division. (2019). *World Population Prospects 2019: Highlights.* https://population.un.org/wpp/Publications/Files/WPP2019_Highlights.pdf

[499] Eckstein, D., Künzel, V., Schäfer, L., & Winges, M. (2019, December). *Global Climate Risk Index 2020.* Germanwatch. https://germanwatch.org/sites/germanwatch.org/files/20-2-01e%20Global%20Climate%20Risk%20Index%202020_10.pdf

[500] United Nations Development Programme. (2019). *Human Development Report 2019. Inequalities in Human Development in the 21st Century.*Briefing note for countries on the 2019 Human Development Report. Pakistan. http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/PAK.pdf

[501] Sabri, F. (2017, May). *67,399 people killed in terror attacks during past 15 years.* Pakistan Today. https://www.pakistantoday.com.pk/2017/05/20/67399-people-killed-in-terror-attacks-during-past-15-years/

[502] United Nations Development Programme. (2017). Pakistan National Human Development Report 2017. *Unleashing the Potential of a Young Pakistan.* http://hdr.undp.org/sites/default/files/reports/2847/pk-nhdr.pdf

[503] World Health Organization & the United Nations Children's Fund. (2017). *Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines.* WHO. https://www.who.int/mediacentre/news/releases/2017/launch-version-report-jmp-water-sanitation-hygiene.pdf

[504] International Bank for Reconstruction and Development & World Bank. (2018). *When Water Becomes Hazard: A Diagnostic Report on the State of Water Supply, Sanitation, and Poverty in Pakistan and Its Impact on Child Stunting.* Relief Web. https://reliefweb.int/sites/reliefweb.int/files/resources/131860-WP-P150794-PakistanWASHPovertyDiagnostic.pdf

[505] UNICEF. (2019, July). *Annual report Pakistan 2018.* https://www.unicef.org/pakistan/reports/unicef-pakistan-annual-report-2018

[506] UNICEF. (2019). *Every Child Lives in a Safe and Clean Environment.* Country Programme of Cooperation between the Government of Pakistan and UNICEF 2018–2022. https://www.unicef.org/pakistan/reports/every-child-lives-safe-and-clean-environment

[507] World Health Organization & the UNICEF. (2017). *Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines.* WHO. https://www.who.int/mediacentre/news/releases/2017/launch-version-report-jmp-water-sanitation-hygiene.pdf

[508] National Institute of Population Studies. (2019). *Pakistan Demographic and Health Survey (PDHS) 2017-18.* Government of Pakistan. https://dhsprogram.com/pubs/pdf/FR354/FR354.pdf

[509] National Institute of Population Studies. (2019). *Pakistan Demographic and Health Survey (PDHS) 2017-18.* Government of Pakistan. https://dhsprogram.com/pubs/pdf/FR354/FR354.pdf

[510] World Health Organization & UNICEF. (2019). *Progress on household drinking water, sanitation and hygiene 2000-2017. Special focus on inequalities.* WHO.

https://www.who.int/water_sanitation_health/publications/jmp-report-2019/en/

[511] UNICEF Pakistan, Government of Pakistan. (2017). *Situation Analysis of Children in Pakistan, 2017.* https://www.unicef.org/pakistan/reports/situation-analysis-children-pakistan

[512] Ahmed, W., Miankhel, B., Kanaganathan, R., & Villeminot, N. (2015). *Access to emergency sanitation for Pakistani Women: a case study in Khyber Pakhtunkhwa, Pakistan. 38th WEDC International Conference, Loughborough University.* WEDC Knowledge. https://wedc-knowledge.lboro.ac.uk/resources/conference/38/Ahmed-2210.pdf

[513] WaterAid Pakistan. (2018). *Bringing back hope through WASH in Schools*. https://www.wateraid.org/pk/sites/g/files/jkxoof326/files/WinS%20booklet.pdf

[514] O'Neill, M. S., Jerrett, M., Kawachi, I., Levy, J. I., Cohen, A. J., Gouveia, N., Schwartz, J. (2003, December). *Health, wealth, and air pollution: advancing theory and methods.* Environmental Health Perspectives. https://ehp.niehs.nih.gov/doi/abs/10.1289/ehp.6334

-Michael Jerrett. (2009, March). Global Geographies of Injustice in Traffic-Related Air Pollution Exposure. *Epidemiology, 20 (2), 231–233.* https://journals.lww.com/epidem/Fulltext/2009/03000/Traffic_Related_Air_Pollution_and_Socioeconomic.14.aspx

-Ringquist, E. J. (2005, March). *Assessing evidence of environmental inequities: A meta-analysis*. Wiley Online Library. https://onlinelibrary.wiley.com/doi/abs/10.1002/pam.20088

-Islam, S. N., & Winkel, J. (2017). *Climate Change and Social Inequality*. United Nations. https://www.un.org/esa/desa/papers/2017/wp152_2017.pdf

[515] Cohen, A.J., Brauer, M., Burnett, R., Anderson, H.R., Frostad, J., Estep, K., Balakrishnan, K., Brunekreef, B., Dandona, L., Dandona, R. and Feigin, V.(2015). *Estimates and 25-year trends of the global burden of disease attributable to ambient air pollution: an analysis of data from the Global Burden of Diseases Study.* The Lancet. https://www.thelancet.com/action/showPdf?pii=S0140-6736%2817%2930505-6

[516] Internal Displacement Monitoring Centre. (2013). *Global estimates 2012- People displaced by disasters*. http://www.internal-displacement.org/sites/default/files/publications/documents/2012-global-estimates-corporate-en.pdf

-United Nations. (2011). *A year after Pakistan's devastating floods, UN continues effort to rebuild lives*. https://news.un.org/en/story/2011/07/382952-year-after-pakistans-devastating-floods-un-continues-effort-rebuild-lives

[517] Food Security Cluster, Pakistan. (2016). *Sindh Drought Needs Assessment: The State of Agriculture, Livelihood, Food Security, Nutrition, Water and Sanitation in Drought Affected Communities in Sindh.* Humanitarian Response.https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/assessments/sindh_drought_needs_assessment-_2016.pdf

[518] Food Security Cluster, Pakistan. (2016). *Sindh Drought Needs Assessment: The State of Agriculture, Livelihood, Food Security, Nutrition, Water and Sanitation in Drought Affected Communities in Sindh.* Humanitarian Response.https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/assessments/sindh_drought_needs_assessment-_2016.pdf

[519] DAWN. (2018). Over 500 children died in drought-hit Thar this year, Murad told. https://www.dawn.com/news/1440059/over-500-children-diedin-drought-hit-thar-this-year-murad-told

[520] Gioli, G., Khan, T., Bisht, S., & Scheffran, J. (2014, August). *Migration as an Adaptation Strategy and its Gendered Implications: A Case Study From the Upper Indus Basin.* BioONe, 34(3), 255–265. https://bioone.org/journals/Mountain-Research-and-Development/volume-34/issue3/MRD-JOURNAL-D-13-00089.1/Migration-as-an-Adaptation-Strategy-andits-Gendered-Implications/10.1659/MRD-JOURNAL-D-13-00089.1.full

-Nizami, A., & Ali, J. (2017, May). Climate change and women's place-based vulnerabilities – a case study from Pakistani highlands. Regional Studies Association 9(2017), 662–670. https://rsa.tandfonline.com/doi/abs/10.1080/17565529.2017.1318742

[521] Zaidi, S., Idrees, N., & Riaz, A. (2017). *PRIMARY rg SYSTEMS (PRIMASYS)- Comprehensive case study from Pakistan.* World Health Organization, Alliance for Health, Policy and Systems Research. http://origin.who.int/alliance-hpsr/projects/AHPSR-PRIMASYS-Pakistan-comprehensive-v2.pdf

[522] World Health Organization. (2018). *Review Of Polio Endemic Countries*. https://www.who.int/immunization/sage/meetings/2018/october/4_Review_Polio_Endemic_Countires_Report_IMB_Final_revised.pdf

[523] Zaidi, S., Bhutta, Z. A., Saeed, A., Agha, A., Akhund, G. H., Lassi, Z., Vakani, F. S., Kureshi, Y., Faisal, M., Hussain, T., Charania, M. (2009). *Feasibility study on result-based financial mechanisms for MNCH*.https://ecommons.aku.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1211&context=pakistan_fhs_mc_chs_chs

[524] Zaidi, S., Idrees, N., & Riaz, A. (2017). *PRIMARY rg SYSTEMS (PRIMASYS)- Comprehensive case study from Pakistan.* World Health Organization, Alliance for Health, Policy and Systems Research. http://origin.who.int/alliance-hpsr/projects/AHPSR-PRIMASYS-Pakistan-comprehensive-v2.pdf

[525] Zaidi, S., Idrees, N., & Riaz, A. (2017). *PRIMARY rg SYSTEMS (PRIMASYS)- Comprehensive case study from Pakistan.* World Health Organization, Alliance for Health, Policy and Systems Research. http://origin.who.int/alliance-hpsr/projects/AHPSR-PRIMASYS-Pakistan-comprehensive-v2.pdf

[526] Durrant, V. L., & Sathar, Z. (2000). *Greater investments in children through women's empowerment: A key to demographic change in Pakistan?* Knowledge Commons. https://knowledgecommons.popcouncil.org/departments_sbsr-pgy/277/

-Jejeebhoy, S. J., & Sathar, Z. A. (2001). Women's Autonomy in India and Pakistan: The Influence of Religion and Region. EconPapers, 27 (4), 687–712. https://econpapers.repec.org/article/blapopdev/v_3a27_3ay_3a2001_3ai_3a4_3ap_3a687-712.htm

[527] Adeel, M., Yeh, A. G., & Zhang, F. (2017). *Gender inequality in mobility and mode choice in Pakistan*. Transportation, 44(6), 1519–1534. https://link.springer.com/article/10.1007/s11116-016-9712-8

[528] Mumtaz, Z., Salway, S., Waseem, M., & Umer, N. (2003). *Gender-based barriers to primary health care provision in Pakistan: the experience of female providers*. Health policy and planning, 18(3), 261–269. https://academic.oup.com/heapol/article/18/3/261/792221

[529] Khalid, M., & Sattar, A. (2016). *Households Study on Out-of-Pocket Health Expenditures in Pakistan*. Fata Research Centre. https://www.fccollege.edu.pk/wp-content/uploads/2017/03/Paper-5-Households-Study-on-Out-Of-Pocket-Health-Expenditures-in-Pakistan-by-Mahmood-Khalid-and-Abdul-Sattar.pdf

[530] Akins, H. (2017). *FATA and the Frontier Crimes Regulation in Pakistan: The Enduring Legacy of British Colonialism.* The Howard H. Baker Jr Center for Public Policy. http://bakercenter.utk.edu/wp-content/uploads/2017/11/PolicyBrief5-2017.pdf

[531] Haider, Z. (2009). *Mainstreaming Pakistan's Tribal Belt: A Human Rights and Security Imperative*. Belfer Center for Science and International Affairs, Harvard Kennedy School. https://www.belfercenter.org/publication/mainstreaming-pakistans-tribal-belt-human-rights-and-security-imperative

[532] Khan, MZ. (2017, August). *Fata population grows by 57pc (%).* Dawn. https://www.dawn.com/news/1354818

[533] United Nations Development Programme. (2017). Pakistan National Human Development Report 2017. *Unleashing the Potential of a Young Pakistan.* http://hdr.undp.org/sites/default/files/reports/2847/pk-nhdr.pdf

[534] United Nations Development Programme & Human Development Initiative. (2016). *Multidimensional Poverty in Pakistan.* https://www.pk.undp.org/content/dam/pakistan/docs/MPI/Multidimensional%20Poverty%20in%20Pakistan.pdf

[535] Sheikh, MK. (2018). *New conflict lines in Pakistan's tribal areas*. Danish Institute for International Studies. https://www.diis.dk/en/research/new-conflict-lines-in-pakistans-tribal-areas

-Shah, A. (2018). Political Reforms, Local Elites and Power: A Study of the Federally Administered Tribal Areas (FATA) of Pakistan [Doctoral dissertation, University of Bath]. https://purehost.bath.ac.uk/ws/portalfiles/portal/187910547/SHAH_MianAbid_PHD_Thesis_Final_25_07_2018.pdf

-Gunaratna, R., & Nielsen, A. (2008). Al Qaeda in the tribal areas of Pakistan and beyond. Studies in Conflict & Terrorism, 31(9), 775–807. https://www.tandfonline.com/doi/full/10.1080/10576100802291568

[536] Chughtai, M. W. (2013). *The Impact of Rising Terrorism and Military Operation on Socio Economic Culture of Federally Administered Tribal Areas (FATA) of Pakistan*. A Journal of Peace and Development, 3(1), 18–32. http://frc.org.pk/wp-content/uploads/2013/07/2.pdf

[537] United Nations Office for the Coordination of Humanitarian Affairs NOCHA. (2018). *Allocation Strategy Paper Pakistan Humanitarian Pooled Fund 2018 1st Standard Allocation*. Humanitarian Response. https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/phpf_staandard_allocation_strategy_paper_2018_002.pdf

[538] Roul, A. (2014). *The Pakistani Taliban's Campaign Against Polio Vaccination*. CTC Sentinel. https://ctc.usma.edu/app/uploads/2014/09/CTCSentinel-Vol7Iss85.pdf

[539] The Economist. (2012, December). *Killing disease*. https://www.economist.com/asia/2012/12/22/killing-disease

[540] Sheikh, MK. (2018). *New conflict lines in Pakistan's tribal areas*. Danish Institute for International Studies. https://www.diis.dk/en/research/new-conflict-lines-in-pakistans-tribal-areas

[541] International Crisis Group, ICG. (2018). *Shaping a New Peace in Pakistan's Tribal Areas*. RefWorld. https://www.refworld.org/docid/5b9920614.html
[542] World Bank. (n.d.). *Data- Somalia*. https://data.worldbank.org/country/somalia
[543] World Bank. (n.d.). *Data- Somalia*. https://data.worldbank.org/country/somalia
[544] Pape, U., & Karamba, W. (2019, December). *From data to development: Poverty and policy in Somalia*. World Bank Blogs.
https://blogs.worldbank.org/africacan/data-development-poverty-and-policy-somalia
[545] UNICEF. (2019). *Somalia- Humanitarian Situation Report*. https://www.unicef.org/appeals/files/UNICEF_Somalia_Humanitarian_SitRep_Nov_2019.pdf
[546] Food Security and Nutrition Analysis Unit, FSNAU/FAO. (2020, February). *Despite improvements, up to 1.3 million people in Somalia face acute food security Crisis or worse outcomes More than 960 000 children likely to be acutely malnourished*. https://www.fsnau.org/in-focus/despite-improvements-13-million-people-somalia-face-acute-food-security-crisis-or-worse-out
[547] Food and Agriculture Organization. (2018). *Somalia- Humanitarian Response Plan 2018*. http://www.fao.org/3/I8534EN/i8534en.pdf
[548] Food and Agriculture Organization. (2019). *Somalia- Humanitarian Response Plan 2019*. http://www.fao.org/3/CA3145EN/ca3145en.pdf
[549] European Commission. (2019). Index for Risk Management, INFORM. https://drmkc.jrc.ec.europa.eu/inform-index/Results/Global
[550] Dai, A. (2013). *Increasing drought under global warming in observations and models*. Nature Climate Change, 3, 52–58. https://www.nature.com/articles/nclimate1633
-Taylor, I. H., E. Burke, L. McColl, P. D. Falloon, G. R. Harris, & D. McNeall. (2013). The impact of climate mitigation on projections of future drought.Hydrolology and Earth System Sciences, 17(6), 2339–2358. https://www.researchgate.net/publication/260724598_The_impact_of_climate_mitigation_on_projections_of_future_drought
-Cook, B. I., J. E. Smerdon, R. Seager, & S. Coats. (2014). Global warming and 21st century drying. Climate Dynamics 43, 2607–2627.
https://link.springer.com/article/10.1007%2Fs00382-014-2075-y
[551] Carty, T. (2017). *A climate in crisis: How climate change is making drought and humanitarian disaster worse in East Africa*. OXFAM.
https://www-cdn.oxfam.org/s3fs-public/mb-climate-crisis-east-africa-drought-270417-en.pdf
[552] FEWS Net. (2017, January). *Drought conditions exacerbated by above-average surface temperatures over Eastern Horn*. Seasonal Monitor.
http://www.fews.net/east-africa/seasonal-monitor/january-2017
[553] World Health Organization. (2015). *Humanitarian Response Plans*. Somalia. https://www.who.int/hac/donorinfo/somalia.pdf
[554] UNOCHA. (2019). *Humanitarian Needs Overview Somalia 2020*. Humanitarian Response.
https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/hno_2020-for_somalia.pdf
[555] Gele, A. A., Ahmed, M. Y., Kour, P., Moallim, S. A., Salad, A. M., & Kumar, B. (2017). *Beneficiaries of conflict: a qualitative study of people's trust in the private health care system in Mogadishu,Somalia*. Dovepress Journal. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5548277/pdf/rmhp-10-127.pdf
[556] Fund for Peace. (2019). Fragile States Index Annual Report. https://fundforpeace.org/wp-content/uploads/2019/04/9511904-fragilestatesindex.pdf
[557] UNOCHA. (2019). *Humanitarian Needs Overview Somaila 2020*. Humanitarian Response.
https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/hno_2020-for_somalia.pdf
-United Nations Office for the Coordination of Humanitarian Affairs. (2020). Somaila- Situation Report. Relief Web.
https://reliefweb.int/sites/reliefweb.int/files/resources/Situation%20Report%20-%20Somalia%20%20-%2012%20Jan%202020.pdf
[558] Kuele, G & Miola, AC. (2017, November). *Somalia: the Role of Climate Change in Recurring Violence*. Igarapé Institute. https://igarape.org.br/en/somalia/
[559] Eklöw, K., & Krampe, F. (2019). *Climate-Related Security Risks And Peacebuilding In Somalia*. Stockholm International Peace Research Institute(SIPRI).
https://www.sipri.org/sites/default/files/2019-10/sipripp53_2.pdf
[560] UNOCHA. (2017). *Humanitarian Needs Overview Somalia 2018*. Humanitarian Response.
https://reliefweb.int/sites/reliefweb.int/files/resources/20172911_somalia_humanitarian_needs_overview_2018.pdf
[561] AFIDEP. (2018, June). *What challenges does urbanisation in Somalia pose?* AFIDEP and other regional stakeholders explore solutions at forum.
https://www.afidep.org/what-challenges-and-concerns-does-urbanisation-in-somalia-pose-afidep-and-other-regional-stakeholders-explore-solutions-at-forum/
[562] World Bank. (2018). *Federal Republic of Somalia. Systematic Country Diagnostic*. Report No. 123807-SO.
http://documents.worldbank.org/curated/en/554051534791806400/pdf/SOMALIA-SCD-08152018.pdf
[563] UNHCR. (2020, January). *Internal Displacements Monitored by Protection & Return Monitoring Network (PRMN)*. https://data2.unhcr.org/en/documents/download/73565
[564] Eklöw, K., & Krampe, F. (2019). *Climate-Related Security Risks And Peacebuilding In Somalia*. Stockholm International Peace Research Institute (SIPRI).
https://www.sipri.org/sites/default/files/2019-10/sipripp53_2.pdf
[565] Thulstrupa, A. W., Habimanab, D., Joshic, I., & Oduori, S. M. (2018, September). *Uncovering the challenges of domestic energy access in the context of weather and climate extremes in Somalia*. Science Direct. https://www.sciencedirect.com/science/article/pii/S2212094717301020
[566] World Health Organization. (2015). *Strategic review of the Somali health sector: Challenges and Prioritized actions*. Online Somali Library.
https://somalilibrary.net/2018/01/30/strategic-review-of-the-somali-health-sector-challenges-and-prioritized-actions/
[567] World Bank. (2018). *Somalia drought impact and needs assessment: synthesis report (English)*. http://documents.worldbank.org/curated/en/901031516986381462/synthesis-report
[568] Warsame, A., Handuleh, J., & Patel, P. (2015, September). *Prioritization in Somali health system strengthening: a qualitative study*. Oxford Academic.
https://academic.oup.com/inthealth/article/8/3/204/2458853
[569] World Health Organization. (2015). *Strategic review of the Somali health sector: Challenges and Prioritized actions*. Online Somali Library.
https://somalilibrary.net/2018/01/30/strategic-review-of-the-somali-health-sector-challenges-and-prioritized-actions/
[570] Buckley, J., O'Neill, L., & Aden, A. M. (2015). *Assessment of the Private Health Sector in Somaliland, Puntland and South Central*.
https://www.heart-resources.org/wp-content/uploads/2016/02/Assessment-of-the-Private-Health-Sector-in-Somaliland-Puntland-and-South-Central.pdf
[571] World Health Organization. (2015). *Strategic review of the Somali health sector: Challenges and Prioritized actions*. Online Somali Library.
https://somalilibrary.net/2018/01/30/strategic-review-of-the-somali-health-sector-challenges-and-prioritized-actions/
[572] Buckley, J., O'Neill, L., & Aden, A. M. (2015). *Assessment of the Private Health Sector in Somaliland, Puntland and South Central*.
https://www.heart-resources.org/wp-content/uploads/2016/02/Assessment-of-the-Private-Health-Sector-in-Somaliland-Puntland-and-South-Central.pdf
[573] Gele, A. A., Ahmed, M. Y., Kour, P., Moallim, S. A., Salad, A. M., & Kumar, B. (2017, p.133.). *Beneficiaries of conflict: a qualitative study of people's trust in the private health care system in Mogadishu, Somalia. Dovepress Journal*. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5548277/pdf/rmhp-10-127.pdf
[574] Haydarov, R., Anand, S., Frouws, B., Toure, B., Okiror, S., & Bhui, B. R. (2016). *Evidence-based engagement of the Somali pastoralists of the horn of Africa in polio immunization: overview of tracking, cross-border, operations, and communication strategies*. Global Health Communication, 2(1), 11–18. https://www.tandfonline.com/doi/full/10.1080/23762004.2016.1205890
[575] International Fund for Agricultural Development. (n.d.). Women and pastoralism.
https://www.ifad.org/documents/38714170/39148759/Women+and+pastoralism.pdf/bc1ac853-bfd4-420e-aeae-1d63dd7ea3e1
[576] Flintan, F. (2008, September). *Women's Empowerment in Pastoral Societies*. ICIMOD. https://lib.icimod.org/record/14505
[577] World Health Organization. (2015). *Strategic review of the Somali health sector: Challenges and Prioritized actions*. Online Somali Library.
https://somalilibrary.net/2018/01/30/strategic-review-of-the-somali-health-sector-challenges-and-prioritized-actions/
[578] Sheik-Mohamed, A., & Velema, J. P. (2002, January). *Where health care has no access: the nomadic populations of sub-Saharan Africa*. WileyOnline Library.

https://onlinelibrary.wiley.com/doi/abs/10.1046/j.1365-3156.1999.00473.x

[579] Schelling, E., Weibel, D., & Bonfoh, B. (2008). *Learning from delivery of social services to pastoralists: Elements of good practice*. WISP/IUCN. https://www.iucn.org/sites/dev/files/import/downloads/social_services_to_pastoralists___english___2.pdf

[580] Haydarov, R., Anand, S., Frouws, B., Toure, B., Okiror, S., & Bhui, B. R. (2016). *Evidence-based engagement of the Somali pastoralists of the horn of Africa in polio immunization: overview of tracking, cross-border, operations, and communication strategies*. Global Health Communication, 2(1), 11-18. https://www.tandfonline.com/doi/full/10.1080/23762004.2016.1205890

[581] International Organization for Migration. (n.d.). *Iraq Mission*- Displacement Tracking Matrix | DTM. DTM-Iraq. http://iraqdtm.iom.int/

[582] World Bank. (n.d). *World Bank Data*, Iraq. https://data.worldbank.org/?locations=IQ-XT

[583] United Nations (2019). *First National Voluntary Review on Sustainable Development Goals* (The Triumph of National Will). https://sustainabledevelopment.un.org/content/documents/23789Iraq_VNR_2019_final_EN_HS.pdf

[584] United Nations Development Programme. (n.d.). Iraq- Human Development Indicators. http://hdr.undp.org/en/countries/profiles/IRQ

[585] European Commission. (2019). I*ndex for Risk Management, INFORM*. https://drmkc.jrc.ec.europa.eu/inform-index/Results/Global

[586] International Organization for Migration. (n.d.). *Iraq Mission*- Displacement Tracking Matrix | DTM. DTM-Iraq. http://iraqdtm.iom.int/

[587] UNOCHA. (2019, November). *Humanitarian Needs Overview- Iraq*. Relief Web. https://reliefweb.int/sites/reliefweb.int/files/resources/iraq_hno_2020.pdf

[588] Operational Data Portal UNHCR. (2019, December). *Syria Regional Refugee Response- Total Persons of Concern*. https://data2.unhcr.org/en/situations/syria/location/5

[589] International Committee of the Red Cross. (2018, November). H*ealth Care in Danger campaign: Stop violence against medical personnel and facilities in Iraq*. https://www.icrc.org/en/document/health-care-danger-campaign-stop-violence-against-medical-personnel-and-facilities-iraq

-International Committee of the Red Cross. (2015, November). Health Care in Danger. Meeting the Challenges. https://healthcareindanger.org/wp-content/uploads/2015/12/4212_002_HCiD-Meeting-the-Challenge.pdf

-Al-Khalisi, N. (2013). The Iraqi medical brain drain: a cross-sectional study. International Journal of Health Services, 43(2), 363–378. https://journals.sagepub.com/doi/abs/10.2190/HS.43.2.j

[590] World Health Organization. (n.d.). *Iraq- Environmental health*. http://www.emro.who.int/irq/programmes/environmental-health.html

[591] Weir, D. (2015). Civilian protection, environmental pollution and conflict – a role for the public health community. Taylor & Francis Group. 31(1),4–12. https://www.tandfonline.com/doi/full/10.1080/13623699.2015.1020103

-Zwijnenburg, W., & Postma, F. (2017, May). Living under a black sky- Conflict pollution and environmental health. PAX. https://www.paxforpeace.nl/publications/all-publications/living-under-a-black-sky

-AM, Al-S. (2016, June). Environmental pollutions associated to conflicts in Iraq and related health problems.Rev Environ Health, 31(2), 245–50. https://www.ncbi.nlm.nih.gov/pubmed/26512425

[592] Zwijnenburg, W. (2017, November). *A Toxic Legacy: Remediating Pollution in Iraq*. New Security Beat. https://www.newsecuritybeat.org/2017/11/toxic-legacy-remediating-pollution-iraq/

[593] World Health Organization. (2018). World Health Organization - *Noncommunicable Diseases (NCD) Country Profiles*. IRAQ. https://www.who.int/nmh/countries/irq_en.pdf?ua=1

[594] Institute for Health Metrics and Evaluation. (n.d.). *Iraq- How long do people live? Health Data*. http://www.healthdata.org/iraq

[595] Humanitarian Response. (2019). *Humanitarian Response Plan -HRP- Iraq*. https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/iraq_2019_hrp_26_02_2019final_english.pdf

[596] Human Rights Watch. (2015). *Iraq: Vulnerable Citizens at Risk*. https://www.hrw.org/news/2011/02/21/iraq-vulnerable-citizens-risk.

[597] Al Tuma, A. (2018). *Will to Punish. The Shia View of Dealing with ISIS Suspects in the Hands of Iraqi Justice*. United Nations University Center. https://collections.unu.edu/eserv/UNU:6551/WillToPunish.pdf

[598] Wille, B. (2019, June 14). Iraq: Not a Homecoming. Human Right Watch. https://www.hrw.org/news/2019/06/14/iraq-not-homecoming

[599] Wille, B. (2019, June 14). Iraq: Not a Homecoming. Human Right Watch. https://www.hrw.org/news/2019/06/14/iraq-not-homecoming

[600] Amnesty International. (2018). *The Condemned- Women and Children Isolated, Trapped and Exploited in Iraq*. https://www.amnesty.org/download/Documents/MDE1481962018ENGLISH.PDF

[601] Taub, B. (2018, December). *Iraq's Post-ISIS Campaign of Revenge*. Retrieved from The New Yorker. https://www.newyorker.com/magazine/2018/12/24/iraqs-post-isis-campaign-of-revenge

[602] Saieh, A. & Petersohn, N. (2019). *Paperless People of Post-conflict Iraq: Denied rights, barred from basic services and excluded from reconstruction efforts*. Norwegian Refugee Council. https://www.nrc.no/globalassets/pdf/reports/paperless-people-of-post-conflict-iraq/paperless_people_medium_single_pages.pdf

[603] Ali, L. (2019, July). *À Basra, le pétrole coule à flots, mais pas l'eau potable*. UNICEF. https://blogs.unicef.org/fr/blog/basra-le-petrole-coule-flots-mais-pas-leau-potable/

[604] Relief Web. (2018). *Humanitarian Needs Overview Iraq- 2019*. https://reliefweb.int/sites/reliefweb.int/files/resources/irq_2019_hno.pdf

[605] Vishwanath, T., Sharma, D., Krishnan, N., & Blankespoor, B. (2015). *Where are Iraq's poor? mapping poverty in Iraq (English)*. World Bank. http://documents.worldbank.org/curated/en/889801468189231974/Where-are-Iraq-s-poor-mapping-poverty-in-Iraq

[606] Ministry of Planning. (2018). *Strategy for Reduction of Poverty in Iraq 2018-2022*. UNESCO/IIEP. https://planipolis.iiep.unesco.org/en/2018/strategy-reduction-poverty-iraq-2018-2022-executive-summary-6726

[607] UNDP. (2015, May). *The Basra Compact, a flagship partnership to revive the economy in southern Iraq*. Relief Web. https://reliefweb.int/report/iraq/basra-compact-flagship-partnership-revive-economy-southern-iraq

[608] Aboulenein, A., & Kucukgocmen, A. (2018. June). *Turkish dam project threatens rift with Iraq over water shortages*. Reuters. https://www.reuters.com/article/us-iraq-turkey-dam/turkish-dam-project-threatens-rift-with-iraq-over-water-shortages-idUSKCN1J11YL

[609] Al-Muqdadi, S. W., Omer, M. F., Abo, R., & Naghshineh, A. (2016). *Dispute over Water Resource Management—Iraq and Turkey*. Scientific Research Publishing Inc. https://pdfs.semanticscholar.org/7015/779747f0d04593daf864a7e7a4509ed36ce0.pdf

[610] Norwegian Refugee Council. (2018, September). *Basra Fact Finding Mission Report #1*. Relief Web. https://reliefweb.int/sites/reliefweb.int/files/resources/NRC%20Basra%20Key%20Findings_FINAL_9Oct.pdf

[611] Human Rights Watch. (2019, July). *Basra is Thirsty- Iraq's Failure to Manage the Water Crisis*. https://www.hrw.org/report/2019/07/22/basra-thirsty/iraqs-failure-manage-water-crisis

[612] Ali, L. (2019, July). À Basra, le pétrole coule à flots, mais pas l'eau potable. UNICEF. https://blogs.unicef.org/fr/blog/basra-le-petrole-coule-flots-mais-pas-leau-potable/

[613] Human Rights Watch. (2019, July). *Basra is Thirsty- Iraq's Failure to Manage the Water Crisis*. https://www.hrw.org/report/2019/07/22/basra-thirsty/iraqs-failure-manage-water-crisis

[614] Hamid, H., & Everett, A. (2007, October). *Developing Iraq's Mental Health Policy. Research Gate*. https://www.researchgate.net/publication/5931036_Developing_Iraq's_Mental_Health_Policy

[615] UNAMI/OHCHR. (2016). *Report on the Rights of Persons with Disabilities in Iraq*. Relief Web. https://reliefweb.int/sites/reliefweb.int/files/resources/UNAMI_OHCHR___Report_on_the_Rights_of_PWD_FINAL_2Jan2017.pdf

[616] Enabling Peace in Iraq Center. (2017, May). *Iraq's Quiet Mental Health Crisis*. EPIC. https://www.epic-usa.org/iraq-mental-health/

[617] Sadik, S., Bradley, M., Al-Hasoon, S., & Jenkins, R. (2010, October). *Public perception of mental health in Iraq*. International Journal of Mental Health Systems. https://ijmhs.biomedcentral.com/articles/10.1186/1752-4458-4-26

[618] UHC 2030. (2018, September). *Universal health coverage in emergencies – a call to action at UNGA*. https://www.uhc2030.org/news-events/uhc2030-news/universal-health-coverage-in-emergencies-a-call-to-action-at-unga-509417/

[619] UHC 2030. (2018, September). *Universal health coverage in emergencies – a call to action at UNGA*. https://www.uhc2030.org/news-events/uhc2030-news/universal-health-coverage-in-emergencies-a-call-to-action-at-unga-509417/

[620] Pwc. (2017, November). *Improving Global Health Outcomes Through Last Mile Logistics*- Special Focus Forum – Global Health and Humanitarian Supply Chains. https://www.pwc.com/us/en/health-industries/health-services/assets/global-health-outcomes-through-last-mile-logistics.pdf
[621] International Federation of Red Cross and Red Crescent Societies. (2018). *World Disaste Report- Leaving No One Behind*. https://media.ifrc.org/ifrc/wp-content/uploads/sites/5/2018/10/B-WDR-2018-EN-LR.pdf
[622] International Federation of Red Cross and Red Crescent Societies. (2018). *World Disaste Report- Leaving No One Behind*. https://media.ifrc.org/ifrc/wp-content/uploads/sites/5/2018/10/B-WDR-2018-EN-LR.pdf
[623] International Federation of Red Cross and Red Crescent Societies. (2018). *Minimum standards for protection, gender and inclusion in emergencies*. https://media.ifrc.org/ifrc/wp-content/uploads/sites/5/2018/11/Minimum-standards-for-protection-gender-and-inclusion-in-emergencies-LR.pdf
[624] International Federation of Red Cross and Red Crescent Societies. (2018). *Minimum standards for protection, gender and inclusion in emergencies*. https://media.ifrc.org/ifrc/wp-content/uploads/sites/5/2018/11/Minimum-standards-for-protection-gender-and-inclusion-in-emergencies-LR.pdf
[625] International Federation of Red Cross and Red Crescent Societies (2018) *Legislating for Climate Smart Disaster Risk Management in the Pacific Workshop Report*. https://www.ifrc.org/PageFiles/234240/Pacific%20CC%20DRM%20Law%20Workshop%20Report%20FINAL%20for%20PARTICIPANTS.pdf
[626] Thompson, R., & Kapila, M. (2018). *Healthcare in Conflict Settings: Leaving No One Behind*. World Innovation Summit for Health. https://www.wish.org.qa/wp-content/uploads/2018/11/IMPJ6078-WISH-2018-Conflict-181026.pdf
[627] International Federation of Red Cross and Red Crescent Societies. (2018). *World Disaste Report- Leaving No One Behind*. https://media.ifrc.org/ifrc/wp-content/uploads/sites/5/2018/10/B-WDR-2018-EN-LR.pdf