

# FRAMEWORK FOR STRENGTHENING HEALTH EMERGENCY PREPAREDNESS IN CITIES AND URBAN SETTINGS

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## Executive summary

**Cities and urban settings are crucial to preventing, preparing for, responding to, and recovering from health emergencies,** and therefore enhancing the focus on urban settings is necessary for countries pursuing improved overall health security.

**Urban areas, especially cities, have unique vulnerabilities that need to be addressed and accounted for in health emergency preparedness.** An unprepared urban setting is more vulnerable to the catastrophic effects of health emergencies, and can exacerbate spread of diseases, whilst they are also very often the frontline for response efforts. This has been seen in past outbreaks and the COVID-19 pandemic. It is therefore crucial that health emergency preparedness in urban settings is addressed through policy development, capacity building, and concrete activities, undertaken at the national, subnational and city levels.

The COVID-19 pandemic has brought health emergency preparedness to the forefront of the political agenda, at the highest level of government. Heads of state are paying attention to the importance of being better prepared, and as they were often the epicentre of the pandemic and frontline of the response, cities have become the centre of this conversation. It is thus **an opportune moment for countries to build on the momentum of the COVID-19 pandemic** and related discussions to ensure that their cities and urban settings are better placed to prevent, detect and respond to future health threats and emergencies in the future.

This **framework intends to facilitate an increased focus on cities in health emergency preparedness.** Different tools and resources that contribute to strengthening health emergency preparedness in urban settings – both existing and to be developed in the future – can be linked to the framework, supporting its implementation and contributing to a coordinated approach among the multiple stakeholders working for strengthened urban preparedness.

The framework is targeted towards **policymakers in all sectors** engaged in health emergency preparedness in cities and urban settings at **both national and sub-national levels**, as well as **relevant stakeholders within the international community**. It has been developed as an outcome of the *Technical Working Group on Advancing Health Emergency Preparedness in Cities and Urban Settings during COVID-19 and Beyond*, co-hosted by WHO and the Government of Singapore in early 2021 (1). It supports the implementation of WHA Resolution 73.8 on *Strengthening preparedness for health emergencies: implementation of the International Health Regulations (2005)* (2) and builds on both the guidance *Strengthening Preparedness for COVID-19*



*in Cities and Urban Settings: Interim Guidance for Local Authorities, and the tool Practical actions in cities to strengthen preparedness for the COVID-19 pandemic and beyond: An interim checklist for local authorities* developed and published by WHO during the COVID-19 pandemic.

It details **eight key areas** for health emergency preparedness in cities and urban settings:

- Governance and financing for health emergency preparedness
- Multisectoral coordination for preparedness
- High population density and movement
- Community engagement and risk and crisis communication
- Groups at risk of vulnerability
- Data, evidence and information
- Commerce, industry and business
- Organisation and delivery of health and other essential services



# 1. CONTEXT AND SCOPE

Urbanization is one of four demographic mega-trends expected to continue<sup>1</sup>. Urban areas, especially cities, have unique vulnerabilities that need to be addressed and accounted for in health emergency preparedness. An unprepared urban setting is more vulnerable to the catastrophic effects of health emergencies, and can exacerbate spread of diseases, whilst they are also very often the frontline for response efforts. This has been seen in past outbreaks and the COVID-19 pandemic. In an age of globalization, where regions, countries and cities are more interconnected than ever before, cities share responsibility with national authorities and other stakeholders for their inhabitants (regardless of legal status), each other, and the wider global community. It is therefore crucial that health emergency preparedness in urban settings is addressed through policy development, capacity building, and concrete activities, undertaken at the national, subnational and city levels.

In order to achieve this, preparedness for health emergencies in cities and urban settings must be a priority at the highest level of government in all Member States. In this increasingly urbanized world, the status quo is not fit for purpose – health emergency preparedness is underfunded and has been focused predominantly at the national level, the requisite capabilities and training are often lacking, and both the built and social infrastructure of cities needs rethinking. In the COVID-19 pandemic, cities were epicentres of transmission and at the forefront of the response but often found themselves inadequately prepared. Moreover, urban centres present a distinctly unique scenario for preparedness, primarily due to the higher density of population, specific infrastructure, contextual laws and cultures, the high diversity of population groups with social, ethnic, political, linguistic, religious and income differences, and the particular dynamics with high mobility and rapidly shifting power relationships.

Addressing this requires a political and technical shift in how we approach and implement the all-hazards approach to health emergency preparedness at the local, urban level. Past operating models need to be reviewed and revised, including mandates, financing, and the interface between national policy and local service delivery. COVID-19 and the resultant increased political focus on urban preparedness presents an opportunity that must be taken now.

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<sup>1</sup> The Commission on Population and Development addressed urbanization in its 51st session and took note of the report of the Secretary General on World Demographic Trends (E/CN/9/2018/5).

The extreme diversity of cities, both within and between countries, means that there is no one-size-fits all approach, even within a single country. Different urban settings have different characteristics, and whilst this diversity often offers opportunities and potential, it also increases the risk of the emergence, spread, and impact of health emergencies. Countries that have invested in contextualised health emergency preparedness at the urban level will be better equipped to respond to these threats, locally, nationally, and internationally – investing in and improving urban preparedness is in the national interests of countries.

High-level political commitment is necessary for strengthening health emergency preparedness in urban settings. It requires coordination across all levels of government, the engagement of multiple sectors and stakeholders across the whole-of-government and the whole-of-society, and capacity building at both national and sub-national levels.

To address this necessity, respond to Member State requests to further consolidate work in the area (2), and build upon the increased high-level political attention paid to health emergency preparedness in urban settings as a consequence of the COVID-19 pandemic, WHO has developed this *Framework for strengthening health emergency preparedness in cities and urban settings*. The framework is intended to support and guide the contextualised approaches needed in each city and urban setting. It addresses health emergencies arising from all types of hazards, using the all-hazards approach (see Box 1) to health emergency preparedness policy and practice, but with a focus on infectious disease epidemics and outbreaks.

### Box 1: All hazards approach

**All hazards approach:** As different types of hazards are associated with similar risks to health, and many emergency and disaster risk management (EDRM) functions are similar across hazards (e.g. planning, logistics, risk communications), it is neither efficient nor cost-effective to develop separate, stand-alone capacities or response mechanisms for each individual hazard. Health emergency management policies, strategies and related programmes should therefore be designed to address common issues across all hazards, using a foundation of common capacities that are supplemented by risk-specific capacities. (3)

## 1.1 Key definitions

There are a multitude of differing opinions on what should constitute a city or urban settlement. This includes using variables such as population size and density, with or without an administrative definition. Even so, population thresholds vary between countries, and there have been different concepts to define a city including “city proper”, “urban agglomeration” and “metropolitan area”. (4) UN Habitat partnered

with the European Commission to develop a global definition, introducing the "degree of urbanisation" approach (5). This framework does not attempt to further discuss these definitions. For the purposes of this document, it simply refers to areas with a large and dense population that may be within certain administrative or political boundaries (single or multiple), under the national structure (6).

The framework uses the *WHO Health Emergency and Disaster Risk Management Framework (WHO Health EDRM) Glossary* definition of emergency preparedness as: "the knowledge and capacities developed by governments, response and recovery organizations, communities and individuals to effectively anticipate, respond to and recover from the impacts of likely, imminent or current disasters." (7)

## 1.2 Objectives

This framework is intended to support the strengthening of overall urban health emergency preparedness in countries. It has two main objectives:

- To provide an overview of, and insight into, the key areas that national and sub-national authorities may consider focusing on in strengthening health emergency preparedness at the urban level
- To guide and support the development of policies and capacity building activities at both the national and sub-national level to strengthen health emergency preparedness in cities and urban settings, based on priority risks and existing gaps.

## 1.3 Target audience

This document aims to support policy-makers and decision-makers in the public health sector, as well as other relevant actors and stakeholders across sectors that are engaged in health emergency preparedness in cities and urban settings. Whilst the framework primarily addresses national level considerations, the multi-level nature of urban preparedness means that it should also serve to support those working at all other levels of government – regional, local, and municipal.

It is also of relevance to international organisations working in the area of health emergency preparedness in urban settings.

## 1.4 Why a framework?

There are existing WHO tools that support health emergency preparedness in countries. However, traditionally these have not fully considered the sub-national level. The framework intends to contribute to addressing this, by facilitating an increased focus on cities in health emergency preparedness. Different tools and resources that contribute to strengthening health emergency preparedness in urban settings – both existing and to be developed in the future – can be linked to

the framework, supporting its implementation and contributing to a coordinated approach among the multiple stakeholders working for strengthened urban preparedness.

The significant diversity and heterogeneity of cities and urban settings means that contextualised approaches will need to be pursued and applied in different instances. These tailored approaches will be needed for urban settings in different countries, but also for different urban settings within a single country – there is no one-size-fits-all approach. Therefore, the framework is neither prescriptive nor exhaustive; rather aiming to serve as a starting point for the development of contextualised policies and capacity building activities that are fit for purpose.

In order to support the implementation of this framework, a WHO operational guidance document that accompanies it is planned: *Strengthening health emergency preparedness in cities and urban settings: operational guidance for national and local authorities in member states*<sup>2</sup>. By highlighting the key challenges for urban preparedness and proposing various approaches and actions that can be considered and adapted to the unique contexts in countries and their cities, it is intended, along with this framework, to contribute to enhanced prevention, preparedness, and readiness for health emergencies in cities and urban settings, as well as a robust response and eventual recovery.

## 1.5 Development process

In response to the increasing focus on the urban setting to health emergency preparedness, including its mention in resolution 73.8 at the 73<sup>rd</sup> World Health Assembly (2), WHO and the Government of the Republic of Singapore jointly established and co-hosted the *Technical Working Group on Advancing Health Emergency Preparedness in Cities and Urban Settings during COVID-19 and Beyond*. Membership of the working group included representatives from Member States across all WHO regions, partners, international organizations, non-governmental organizations, city networks, as well as WHO Regional Offices.

The Working Group met six times between February to April 2021. Over the course of the meetings, members shared their experiences of managing COVID-19 in cities and urban settings, discussed challenges faced, explored potential solutions and approaches, the roles of key stakeholders, and the tools and resources necessary for risk assessment, gap analysis and capacity building for better urban preparedness. A number of recommendations and proposed ways forward were also made during the final meeting, including to further advance the work on health emergency preparedness in urban settings (1).

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<sup>2</sup> Forthcoming

This framework is developed from the discussions of the Working Group. It builds upon both the WHO guidance *Strengthening Preparedness for COVID-19 in Cities and Urban Settings: Interim Guidance for Local Authorities* (8), and the tool *Practical actions in cities to strengthen preparedness for the COVID-19 pandemic and beyond: An interim checklist for local authorities* (9) developed and published by WHO during the COVID-19 pandemic. It also takes forward initial discussions at a high-level conference organized by WHO and supported by the Government of France in December 2018 (10).

Consultation included members of the working group, technical experts, representatives of national and local governments, national public health institutes, donors, international organisations and partners. Its development included inputs from across WHO Regional Offices, and Headquarters.

The full list of contributors can be found in the acknowledgements.

## 2. INTRODUCTION

### 2.1. Background: strengthening urban health emergency preparedness

Given the importance of cities in preventing, preparing for, responding to, and recovering from health emergencies, enhancing the focus on urban settings is necessary for countries pursuing improved overall health security. It is in the national interest of countries to prioritise this focus and mainstream it through existing activities for health emergency preparedness.

#### *The nature of cities and urban settings*

Cities and urban settings are highly complex settlements that are influenced by other cities, neighbouring towns and peri-urban areas, the urban rural fringe, rural areas and other places, both regionally and globally. These linkages can be social, economic, physical, political and cultural. The linkages and key support functions that cities often have with these surrounding areas make them important elements of a system and strategy needed for national preparedness and response efforts.

They are also complex and living systems in and of themselves, shifting and adapting to the context within which they operate. They often serve as subnational, national and international hubs, with major points of entry (e.g. airports, seaports, ground crossings). These transport routes may serve as foci for transmission of diseases, making mobility dynamics an important consideration in urban preparedness. For example, cities can represent spaces of vulnerability where mobile populations interact with stationary local communities, which in some circumstances can create an environment conducive to communicable disease transmission. Effective response thus requires a detailed understanding of mobility pathways and associated health risks and vulnerabilities.

Given the high population density, the risk of spread of infectious and communicable diseases is often elevated, especially in congested areas, and their people often rely on extensive and crowded public transportation networks to get from one place to another. There are also often communities with crowded and substandard housing that has inadequate or lacking water, sanitation and hygiene (WASH) facilities (8). Overurbanization has led to the proliferation of informal settlements where this is often the case, such as slums, which require specific attention from a public health and preparedness perspective.



Urban areas also have diverse subpopulations and neighbourhoods with different sociocultural needs, and often harbour the groups most at risk of vulnerability from public health emergencies. Rapid rural–urban migration in many parts of the world has resulted in unmanaged and unplanned urbanization, including the development and growth of informal settlements / slums. A substantial proportion of those living in such settlements are often vulnerable, unemployed or dependent on informal economies to survive, exacerbating vulnerabilities to diseases already existing from unhealthy living conditions. For example, migrants (who may be undocumented), refugees and internally displaced persons are often found in these informal settings, and the relationship between their mobility and health is both dynamic and complex. The heterogenous populations existing in cities, with different languages, literacy/education levels, cultures, and customs also demand for community specific risk communication. There can be a great variety of sources of information, spread by different means, that lead to an increased risk of misinformation that can serve to compound health emergency challenges in urban areas (8).

These heterogenous populations have to be understood as communities that must be integrated into a contextualized strategy for emergency preparedness, requiring preparedness in cities and urban settings to be based upon vulnerability mapping and needs based planning. Importantly, health emergency preparedness, response and building back better in cities and urban settings needs to take into consideration gendered experiences in the strengthening of systems that will be resilient and gender-inclusive, gender-responsive and gender-reflective.

### ***Health emergencies in urban settings***

COVID-19 is not the only health emergency that cities and urban settings have faced in recent years. Other recent epidemics include the Severe Acute Respiratory Syndrome (SARS) outbreak in 2003, the H1N1 influenza pandemic in 2009, the Middle East Respiratory Syndrome coronavirus (MERS-CoV) outbreak in 2015, the Ebola outbreak in West Africa in 2014-15 and the Zika virus epidemic in 2015-16. There are also endemic diseases to be managed on a regular basis, including vector-borne diseases, food- and waterborne diseases and zoonoses, other respiratory diseases, and vaccine-preventable diseases. Diseases transmitted by animals can also emerge and significantly impact the urban populations. Climate and environmental change that has led to an increased frequency of extreme weather events can also have catastrophic impact on the health of populations in cities and urban settings.

Although cities by their nature pose challenges to the risk management necessary to prevent, prepare for and respond to these health emergencies, they also hold many opportunities to build a safer future. Health authorities, including authorities of other relevant sectors, are usually represented in cities, facilitating multisectoral prevention and control operations. They often serve as importation hubs for response efforts, receiving and coordinating resources, both human and physical, necessary for an effective response. Building the requisite capacities in cities to improve health emergency preparedness will also help to strengthen overall resilience of the health

system, which is crucial to achieving universal health coverage and improved health security.

The *International Health Regulations (IHR) (2005)* require states parties to strengthen their capacity for detection, assessment of, and response to disease outbreaks and other public health emergencies at national, sub-national (e.g. state / metropolitan) and local (e.g. city) levels (11). Cities and urban settings are increasingly at the forefront of effectively operationalizing many of these requirements and are important elements of national plans and efforts towards IHR implementation. Therefore, strengthening health emergency preparedness in cities and urban settings is an important prerequisite for all countries to effectively strengthen capacities under their commitments to the IHR (2005).

Other overarching frameworks such as the WHO Health EDM (3) also provide an opportunity for stronger sub-national integration. Effective health EDM can only be achieved through the active participation of local governments, civil society and volunteer organizations, the private sector, and individual citizens, in a "whole-of-society" approach.

Health emergencies have a disproportionate effect on women. This is especially applicable to cities, where there is a concentration of 'frontline' workers – including the health and social care workforce, as well as in other sectors such as education – which are predominantly women (12). Therefore, health emergency preparedness needs to be undertaken through a gendered lens, and with a focus on mitigating the disproportionate impact on women.

### ***Alignment with other urban initiatives***

The need for better health emergency preparedness in cities and urban settings has also been called for by many other international actors. Key recent reports include the, the Lancet Infectious Diseases Commission on preparedness for emerging epidemic threats (13), and a report by the Norwegian Institute of Public Health on urbanization and preparedness for outbreaks with high-impact respiratory pathogens, commissioned by the Global Preparedness Monitoring Board (GPMB) (14). There are also many ongoing initiatives that complement each other in the UN system<sup>3</sup>. Importantly, however, it is the work of many non-governmental organisations and community groups and associations working on the ground in cities and urban settings all over the world that can have the biggest impact on preparedness in a particular context; and this work needs to be supported, financed, and integrated into international and national agendas.

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<sup>3</sup> On a broader scale, urban preparedness is aligned to the need to build resilient cities, as embodied in the Making Cities Resilient 2030 (MCR2030) initiative by the United Nations Office for Disaster Risk Reduction<sup>3</sup>, and the need for sustainable cities through the work of UN-Habitat to advance the New Urban Agenda<sup>3</sup>. The International Organization for Migration (IOM) and its work on migrants in cities, who make up a significant proportion of urban populations, is also particularly relevant given the complex and dynamic relationship between mobility and public health emergency preparedness, as are the many other city focused initiatives, activities, and work undertaken by other international organizations – both within and beyond the UN system.

## 2.2 The COVID-19 pandemic: a call to action and an opportunity

The COVID-19 pandemic has highlighted the vulnerabilities and important roles that cities and other urban settings play in health emergencies. In the United Nations Secretary General policy brief on COVID-19 in an urban world, it was noted that urban areas had become epicentres of the pandemic, with the size of their populations and high level of global and local interconnectivity making them particularly vulnerable to spread of the virus (15). The pandemic has highlighted the far-reaching consequences of health emergencies, affecting lives, livelihoods, economies and societies. In its annual report, the GPMB, stated that COVID-19 has cost over US\$11 trillion and counting, to fund the response, with future loss of US\$10 trillion in earnings. Emergency preparedness, on the other hand, is relatively cost-effective, and would have only cost an addition US\$5 per person annually (16).

Beyond COVID-19, countries need to ensure that cities and urban areas are sustainably prepared to manage concurrent or future health emergencies, including disease epidemics, and do not create opportunities for amplification of disease transmission. At a United Nations General Assembly side event, it was agreed that the world cannot afford a repeat of the “panic-then-forget” cycle, where investments and advancements made in response to past emergencies are not sustained beyond the acute phase and countries and their cities return to a state of unpreparedness (17).

### ***Policy window***

However, COVID-19 has also brought health emergency preparedness to the forefront of the political agenda, at the highest level of government. Heads of state are paying attention to the importance of being better prepared, and as they were often the epicentre of the pandemic and frontline of the response, cities have become key to these discussions. The *World Cities Report 2020* described how cities can turn the COVID-19 pandemic into an opportunity to “build back better” (18). Importantly, this opportunity extends beyond cities; improving urban preparedness does not only impact the individual respective cities, but rather also results in improved preparedness for populations outside the cities, whether they are in peri-urban or more rural settings.

It is opportune for countries and the international community to build on the momentum of the COVID-19 pandemic and related discussions to ensure that their cities and urban settings are better placed to prevent, detect and respond to future health threats and emergencies. This needs to be translated into political commitments at the highest level, supported by funding and resources for capacity building. Whilst it requires discrete attention and engagement as an area, existing global policy frameworks such as the *IHR (2005)* (11), the *Sendai Framework for Disaster Risk Reduction 2015-2030* (19), and the *United Nations 2030 Agenda for Sustainable Development* and its 17 SDGs (20), can also be leveraged.

## 2.3 Role of the international system

In order for effective progress to be made, and for it to be sustainable, countries need to work together, as made clear during the COVID-19 pandemic. Global solidarity and cooperation are key to effective health emergency preparedness, even at the local, urban level. Epidemics and pandemics do not respect national, regional or city borders and even more so with the high connectivity accorded by travel and trade hubs. Therefore, urban preparedness efforts must be coordinated jointly across levels of government, including the global level, with a particular focus on and understanding of global interconnectivity – political, cultural, economic and human.

The international system, and the international organizations and other actors that operate within it, have a key role to play in strengthening health emergency preparedness at the urban level. This includes supporting governments and cities in capacity building, advocating for preparedness at highest political levels, and using their convening function to bring together different levels of government and stakeholders through policy dialogues, trainings, simulations and assessments.

However, the support provided to countries needs to be better consolidated, coordinated and aligned. An increased focus on cities and urban preparedness, as well as the increasing importance of cities within national political systems, has led to a proliferation of activity at the international level intended to support cities. This includes the exponential development of tools and resources, with varying degrees of relevance to health emergency preparedness. This can be overwhelming for cities, which often operate within limited capacities and resources, but it can also present an opportunity to synergise and pool resources that are sometimes available to different systems functioning in silos. Converging efforts across different international actors can help provide more manageable and streamlined support, ensuring that local authorities have their health emergency preparedness needs met.

## 2.4 Key stakeholders

Health emergencies impact the whole of society, and all sectors. Just as responding to them therefore requires engagement beyond the health sector, so does preparing for them in a multisectoral whole-of-government and whole-of-society manner (21). This follows the WHO health in all policies approaches which is based on the *1986 Ottawa Charter for Health Promotion* (22). A starting point and key principle therefore is that approaches must be inclusive. As a starting point, the *WHO Multisectoral Preparedness Coordination Framework* (23) lists the following actors as stakeholders relevant for health emergency preparedness:

- Human health, animal health and environmental sectors
- Finance sector
- Foreign policy and international relations
- Ministries of interior and defence
- National parliaments

- Private sector
- Non-state actors

When focusing on cities and urban settings, additional layers of complexity are added from the governance perspective. Approaches need to not only be multi-stakeholder, but also multi-level; there needs to be vertical coherence between these different levels of governance – from national through to local. Further, in cities and urban settings, more stakeholders are involved, as there are additional and different actors at the local or city levels. Therefore, there must also be horizontal coherence across the different sectors involved. Achieving this requires multilateral, multi-level systems for structured dialogue and decision making, which include local government views. This includes collaborative mechanisms and agreements between different levels of government that facilitate working together towards common interests.

Table 1 – not exhaustive – provides an overview of the key stakeholders and some examples of their common key roles in strengthening health emergency preparedness at the urban level. Different contexts require different stakeholders, and different conglomerations of stakeholders. In each instance, the roles of each stakeholder may vary. Whilst it is thus not possible to strictly define the distribution of roles across stakeholders in urban preparedness, Table 1 provides general categorizations.

**Table 1.** Stakeholders in health emergency preparedness in cities and urban settings and their key roles

Stakeholder	Key roles (general categorization)
<b>All stakeholders</b>	<ul style="list-style-type: none"> <li>• Engage in all hazards, whole-of-society and multi-level approaches; collaborate with all actors; advocate amongst respective audiences; share information and data where possible</li> </ul>
<b>National level</b>	
<b>Office of Head of State/ Head of government</b>	<ul style="list-style-type: none"> <li>• Leadership; coordination (of whole-of-government, whole-of-society; multi-level, and multi-stakeholder approaches); diplomacy; advocacy</li> </ul>
<b>National governments</b>	<ul style="list-style-type: none"> <li>• Coordination (of whole-of-government, whole-of-society, multi-level, and multi-stakeholder approaches); leadership; diplomacy; prioritization of budgets and financing for preparedness needs</li> </ul>
<b>Political leaders</b> (Ministers, MPs, elected representatives)	<ul style="list-style-type: none"> <li>• Leadership; act as political champions; represent constituents' needs; make clear prioritizations for building preparedness; advocacy.</li> </ul>
<b>Ministry of Health</b>	<ul style="list-style-type: none"> <li>• Coordination; policy guidance; capacity building; conduct risk and needs assessments; planning; administration of funds for health programmes; risk communication</li> </ul>

<b>Ministry of Interior</b> (or equivalent managing cities/ local governments)	<ul style="list-style-type: none"> <li>• Coordination and engagement (of cities and local governments); planning and administration of funds</li> </ul>
<b>Ministry of Finance</b>	<ul style="list-style-type: none"> <li>• Needs-based allocation and distribution of funds for essential public health services; acknowledging the importance of financing health emergency preparedness</li> </ul>
<b>Other relevant ministries</b>	<ul style="list-style-type: none"> <li>• Contribute from a health-in-all-policies perspective (e.g. those responsible for environment, urban planning, transport, water, energy, emergency services, law enforcement/civil protection, communication, and technological infrastructure)</li> </ul>
<b>Public health institutions</b>	<ul style="list-style-type: none"> <li>• Policy guidance; capacity building; conduct risk and needs assessments; surveillance data collections and analysis; planning and administration of programmes and resources</li> </ul>
<b>Subnational</b>	
<b>Local/ Regional/ State/ Municipal/ Metropolitan governments</b>	<ul style="list-style-type: none"> <li>• Coordination (whole-of-government approach at the local level); mainstreaming of preparedness; provision of technical and financial support to other cities; urban planning and regulation</li> </ul>
<b>Governors/ Mayors / City Leaders / City councillors and their offices</b>	<ul style="list-style-type: none"> <li>• Leadership; local level coordination (whole-of-government approach at local level; whole-of-society approaches); community engagement; advocacy (towards national level of government and communities);</li> </ul>
<b>Relevant local government departments/ sectors</b>	<ul style="list-style-type: none"> <li>• Share data and experiences; engage with whole-of-government and whole-of-society approaches; coordination of sectoral responses where necessary</li> </ul>
<b>Public health institutions</b>	<ul style="list-style-type: none"> <li>• Capacity building; conduct risk and needs assessments</li> </ul>
<b>Third sector</b>	
<b>Development partners/ humanitarian organisations</b>	<ul style="list-style-type: none"> <li>• Work with governments to fund priority areas; engage communities and societies; advocacy; support capacity building and response activities; risk communication</li> </ul>
<b>Non-governmental organizations</b>	<ul style="list-style-type: none"> <li>• Engage communities and societies (especially related to vulnerable groups and gender equity); advocacy; support capacity building and response activities, risk communication</li> </ul>
<b>Civil society organisations/ community groups/ leaders</b>	<ul style="list-style-type: none"> <li>• Engage, mobilize and organize communities and societies (especially related to vulnerable groups); advocacy; risk communication</li> </ul>
<b>Research institutes</b>	<ul style="list-style-type: none"> <li>• Share and analyse data; support scientific research and development of policy guidance; work with governments</li> </ul>
<b>Citizens and residents</b>	<ul style="list-style-type: none"> <li>• Contribute to the development and adherence of public health measures; organize / support community responses; advocacy and lobbying</li> </ul>

Private sector and Media	
<b>Private sector</b>	<ul style="list-style-type: none"> <li>• Work with governments to fund necessary areas; share and analyse data; support logistics, preparedness and response activities; and engage communities</li> </ul>
<b>Media</b>	<ul style="list-style-type: none"> <li>• Work with governments to counter misinformation and ensure appropriate risk communication</li> </ul>
Academia	
<b>Academic institutions</b>	<ul style="list-style-type: none"> <li>• Share and analyse data; support scientific research and development of policy guidance; work with government</li> </ul>
International Organizations	
<b>WHO</b>	<ul style="list-style-type: none"> <li>• Technical support; normative guidance; convening functions; advocacy towards highest level of governments; coordination of international partners in urban preparedness</li> </ul>
<b>UN Development System, agencies and country teams</b>	<ul style="list-style-type: none"> <li>• Technical support; normative guidance; convening functions; advocacy towards highest level of government</li> </ul>
<b>Other international organizations</b>	<ul style="list-style-type: none"> <li>• Convening functions; sharing of experiences; advocacy</li> </ul>



### 3. LINKS BETWEEN URBAN HEALTH EMERGENCY PREPAREDNESS AND OVERALL PREPAREDNESS

Strengthening health emergency preparedness in cities and urban settings does not take place in a vacuum; rather, it contributes to and complements other activities taking place within a country that are undertaken in order to strengthen overall health emergency preparedness and health security. Furthermore, these efforts should be embedded in the wider local health systems strengthening efforts as the capacities generated through strengthened urban preparedness will also have a broader impact on health systems resilience. This ensures that investments made towards emergency preparedness are sustainably retained and benefit wider public health efforts, thus contributing to overall systems resilience.

Achieving strengthened overall emergency preparedness in a country is dependent on activities such as risk assessments, surveillance, monitoring and evaluation, capacity building, and partnerships. Traditionally, these have tended to be weighted towards, or are undertaken predominantly at, the national level, without the requisite consideration or engagement of the local level - such as cities or urban settings. By increasing the focus on urban preparedness, ongoing country activities will be more comprehensive (covering national and to a better extent, sub-national), thus ensuring that a country will be better and more comprehensively prepared for future health emergencies.

This relationship is visualised in Figure 1, which shows the concurrent contribution of both the local level (blue box, and in this instance representing specifically city/urban), and the national level (orange box), to activities for health emergency preparedness in the country (yellow pillar). This is all contributing to achieving the overall desired goal of strengthening overall health emergency preparedness.



**Figure 1.** Strengthening overall health emergency preparedness – the role of cities and urban settings

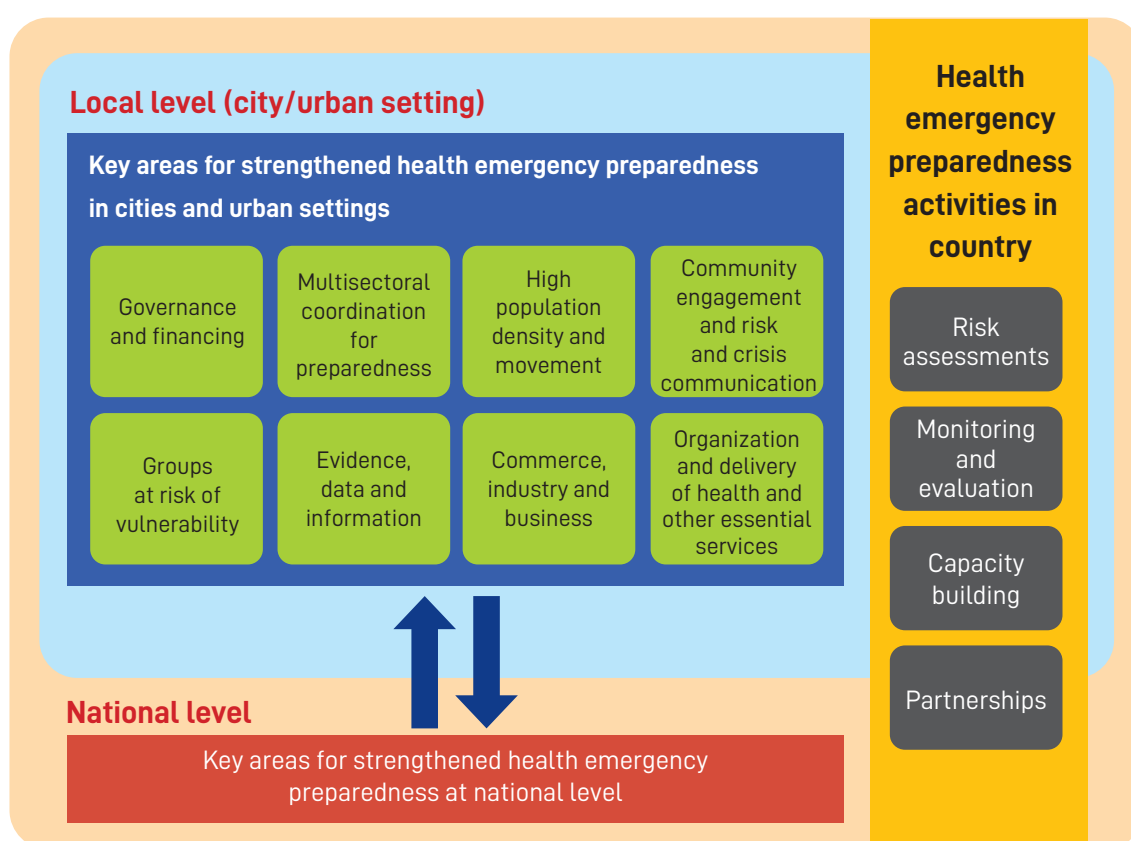


Figure 1 also shows a number of key areas of focus for strengthening health emergency preparedness in cities and urban settings (green boxes)<sup>4</sup>. These areas are not discrete, but rather overlap, interact, determine, and influence each other. They are discussed in detail in the next section. As this framework is focusing on cities/urban settings – the key areas at the national level are not detailed in the figure – whilst some will remain the same, many will differ due to the different roles of the authorities at the different levels. However, the purple arrows signify the symbiotic relationship that exists between the necessary areas of focus at the two different levels (as well as with other levels such as regional).

<sup>4</sup> These eight areas are borne out of previous discussions and consultations that led to the development and publication of the WHO guidance *Strengthening Preparedness for COVID-19 in Cities and Urban Settings: Interim Guidance for Local Authorities*, and the tool *Practical actions in cities to strengthen preparedness for the COVID-19 pandemic and beyond: An interim checklist for local authorities*. They were then refined through expert consultation and discussed further by the technical working group.

## 4. KEY AREAS AND CONSIDERATIONS FOR STRENGTHENING HEALTH EMERGENCY PREPAREDNESS IN CITIES AND URBAN SETTINGS

The following sections outline and explore the key areas of focus for strengthening health emergency preparedness in cities and urban settings that can be seen in Figure 1, as well as considerations for related policy development. Focusing on, and addressing, these areas, will contribute to improving overall health emergency preparedness in a country, as cities and urban settings are important elements of this. Depending on their local context and needs, countries and cities may prioritise different key areas of the framework, giving them greater attention than others. This should be informed by the best available data and evidence, risk assessment, and other health emergency preparedness and disaster risk reduction activities.

For various specific approaches and actions in each of the below areas that both national and local authorities can take and adapt to the different contexts in their countries and cities, see the forthcoming WHO operational guidance document that accompanies this framework: *Strengthening health emergency preparedness in cities and urban settings: operational guidance for national and local authorities in member states*<sup>5</sup>.

### 4.1 Governance and financing for health emergency preparedness

Governance and financing are both key to effective health emergency preparedness, without which it will be impossible to achieve. Focusing on preparedness at the sub-national level (such as the city / urban level) adds a layer of complexity from a governance perspective. It requires robust and effective mechanisms by which the different levels of government involved (national, regional, local for example) can coordinate, and a clear delineation of roles, responsibilities and accountabilities. These systems need to facilitate the meaningful engagement of all minority groups. In emergencies, these may change from 'peace time', and it is important that systems are ready to adapt for response when necessary, and that any existing legislative gaps are identified and closed. The multiple layers of governance involved may also complicate financing, as budget lines, financing flows, and the distribution of funds may be different before and during an emergency. It is therefore important that mechanisms are in place to ensure funds can be released and redistributed as

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<sup>5</sup> Forthcoming

necessary in an emergency, without delays caused by the extra layers of governance. The mechanisms need to be informed by data, gender-disaggregated where possible, in order to aid needs-based redistribution.

## **Governance**

Many leaders and local authorities of cities and urban settings have competencies and responsibilities in the management of day-to-day matters. This may include the management of local incidents, health systems (such as public health programmes and/or health services), and other support services such as water, sanitation, and hygiene (WASH). This also include services outside the health system, such as the management of animal slaughtering or food safety. In order for these services to be delivered effectively, including during an emergency, it is important to ensure that these competencies are adequately supported and resourced - from the national and/or regional levels.

Local authorities of cities and urban settings are also the closest level of government to the people, and therefore have in-depth local knowledge. This can be of hazards, human settlement and mobility patterns, sociocultural characteristics, distribution of vulnerable populations (*see also section 4.6 on evidence, data and information*). To effectively leverage on this knowledge and address a health threat, countries need to have good coordination and coherence across all levels of governance, from national and federal levels to subnational and local levels – using a whole-of-government approach. This requires governance architecture that is multi-level and multi-stakeholder, including emergency management structures/ systems that incorporate all levels of governance and facilitate collaboration.

Health emergency preparedness also requires ensuring that local contexts and needs, as well as clear roles for local authorities and other relevant stakeholders, are well-reflected in national and subnational emergency preparedness and response plans. This includes alignment and ensuring coherence. Doing so increases the likelihood of successful implementation including through improved risk and crisis communications.

Local governments also need to work closely, in coordination and collaboration with authorities in other areas – regions, cities and urban settings, as well as adjacent peri-urban and rural areas, in particularly within the urban-rural fringe (see Box 2). Health emergencies, including infectious diseases, do not respect borders, and are thus likely to impact many jurisdictions at once. Cities and urban settings often hold tertiary/specialised medical services, including intensive care units, and may need to support adjacent regions that may be more badly affected, pool resources (e.g. deployment of medical staff or supplies), provide surge capacity, distribute clinical workloads, or move patients. This is especially important for ensuring the continuation of essential services during and in the aftermath of an emergency. Increasingly, collaboration may also extend to cities in other countries, such as the sharing of experiences, expertise and best practices through networks or other platforms.

## Box 2. The urban-rural fringe: working across administrative boundaries

Effective urban preparedness requires looking beyond the city as a single entity and requires an expansion to focus also on suburbs or peri-urban areas, as well as the borders, or 'fringe' between these areas and rural areas. The urban-rural fringe is a key area for infectious disease surveillance and response in urban areas given its unique environmental and social characteristics. Further, it is often an administratively complex area, as it tends to lie at administrative boundaries. It is therefore important that cities and local governments are able to work closely and effectively with neighbouring authorities, regardless of their size or administrative differences (in mandates or competencies).

Clear distribution of responsibility and leadership – which should be gender-balanced – is needed at all levels of governance, including mayors and other local political and community leaders in cities and urban settings, in order to make prompt, evidence-based decisions and facilitate coordination across multiple sectors beyond health. Members of parliament at all levels (national and sub-national) play an important role in facilitating legislative and regulatory changes needed for effective implementation, as well as providing important oversight and accountability, for example for the implementation of emergency preparedness plans and strategies, which may take precedence over, or reorient, existing policy agendas during the response and recovery periods. They also ensure that emergency preparedness is kept high on political agendas and reflect the needs of their constituents. Local parliaments and councils are important in ensuring the emphasis remains on those potentially most affected. Ideally, platforms for engagement and participation of these constituencies, ensuring minority representation, should be put in place to ensure preparedness and response measures address the needs of the most vulnerable.

In emergencies and crises, countries often experience a shift in governance context towards a time-limited system of emergency governance. This commonly includes countries declaring a 'state of emergency', or in some instances, a 'public health emergency'. Intricates differ across countries, but these situations often include either the centralisation of power and competencies to the national level (relieving regional, local, or city authorities of decision-making power), or the decentralisation of competencies, allowing regions within a country autonomy over the laws and regulations that are put in place to respond to the emergency. They may include the redistribution of some responsibilities to the military, law enforcement, or emergency services for example. Whilst these tend to be designed to be short term, there are instances where they are extended for prolonged periods of time. Under these circumstances, mandates, responsibilities, accountability lines and financing are likely to change. From a preparedness perspective, therefore, it is important to account for the likelihood of the implementation of such emergency measures, and ensure systems are ready to adapt to operate efficiently and effectively even under the new emergency structures and processes.

## ***Financing***

Adequate and sustained financing is important to ensure that capacities for health emergency preparedness as part of national health security agendas are also built at local levels. This is especially since this is where prevention, detection and response activities take place, and particularly in urban settings, where the majority of the population and unique capacities (e.g. airports as points of entry) are found. Financing is needed for building strong and resilient health systems that are necessary to absorb the shock of a health emergency and reduce disruption to essential health services. Many capacities crucial to preparedness can only be built over time, requiring sustained commitment and funding. Countries should therefore ensure that an appropriate proportion of funding is allocated to these longer-term activities that focus on the building of sustainable capacities (e.g. such as upskilling of the workforce, training to improve national surveillance, health information management and risk communication, and essential logistic requirements).

Governance and financing may face challenges when there are competing political interests and conflicting agendas for limited resources. In particular, financing for preparedness is often not earmarked but is instead subsumed under the overall budgets of the health or interior sectors, and at risk of being underfunded when an imminent risk is not perceived. Emergency preparedness is also often also seen to be a national concern, to be dealt with at the national level, and therefore leading to the underfunding of requisite local institutions, programmes and initiatives in cities and urban settings. Further, due to the long-term nature of goals of preparedness, funding is often reduced in favor of other, more acute needs. Political cycles are also important to consider, as the results of health emergency preparedness are often less visible than other investments into infrastructure, for example. However, this investment is critical, and must be sustained across political cycles, otherwise the long-term capacities needed cannot be built.

Timely access to financing at different stages of emergency management must also be ensured for local governments and all involved actors. This can sometimes be hindered by clearance procedures and bureaucratic processes surrounding the distribution of funds; something often seen in cities and urban settings where local political leadership may differ to those at the national level. If strengthening health emergency preparedness at the urban level is to be achieved, funding must be depoliticised.

## **4.2 Multisectoral coordination for preparedness**

Strengthening health emergency preparedness at the urban level requires the support of multiple sectors and partners beyond health at all levels – from global to national, subnational and local levels, including within cities and urban settings (see section 2.4 on key stakeholders). Coordination across sectors and partners is vital to ensure coherence in preparedness activities and increase resilience, and should include all actors, including the private sector and civil society. This requires the use of whole-of-government and whole-of-society approaches, with coordination

often coming from the highest level of each government, including the offices of city leaders (e.g. Mayors and Governors), as well as potentially mainstreaming preparedness across departments at the operational level.

Multi-sectoral coordination is closely linked with section 4.1 on *Governance and Financing*, as it requires the appropriate governance mechanisms and structures to initiate and facilitate. However, there is a benefit in addressing it discretely, as it also presents a challenge to many of the other governance and financing challenges that beset the strengthening of emergency preparedness in cities. Furthermore, it would remain a key area of focus if the governance and financing for urban preparedness was adequate and functioning.

### ***Sectors and stakeholders***

There are many critical interdependencies between health and other sectors that form the backbone of a local concerted plan to address an emergency or threat in an urban setting. Some examples are included in Box 3.

#### **Box 3. Examples of critical interdependencies between health and other sectors for emergency preparedness in cities and urban settings**

- With the animal health sector to mitigate the risk of zoonotic diseases, such as at live animal markets in cities, or food poisoning, contamination or safety issues.
- With the travel, transport, tourism, customs, law enforcement and migration sectors for a) the prioritised safe movement of essential workers and supplies and other persons travelling for essential reasons, b) the mitigation of risks associated with travel during health emergencies, including at points of entry and the use of public transport, and c) for efforts taken to limit the transmission of public health threats across borders and enable safe population mobility without unwarranted travel and trade restrictions.
- With WASH to improve access to facilities that would reduce disease spread especially in informal settlements.
- With media for dissemination of clear and accurate information that meet the diverse and heterogenous subpopulations in cities
- With commerce and industry for the safe conduct of businesses and protection of livelihoods (*see also section 4.7 on commerce, industry and business*).
- With the education sector to promote public health literacy and safe learning environments, as well as to support health human resource needs for health security.

- With social and housing sectors to identify vulnerable groups who are likely to be more affected in an emergency, including those without safe housing to protect themselves (*see also sections 4.5 on groups at risk of vulnerability and 4.8 on organization and delivery of health and other essential services*).
- With the protection sector to ensure continued life-saving support to survivors of violence, including domestic violence and gender-based violence.
- With urban planning to provide healthy places including social and technical infrastructure as well as resilient housing environments.

Many sectors, and stakeholders within them, such as private sector and civil society or non-governmental organizations can contribute resources to meet local needs in a health emergency. For example, stadiums, hotels, exhibitions centres, or other appropriate commercial premises can serve as quarantine, isolation and temporary housing sites, vaccination centres, field hospitals, or other necessary infrastructure and services in emergencies. Coordination need not solely be for the identification and use of physical assets, however, but also for support in logistics – with the supply chains (such as cold chains) used by the private sector often key for utilisation in an emergency in order to move medical supplies or other necessary cargo. This is proving to be particularly relevant in the COVID-19 vaccine rollout.

Multisectoral preparedness coordination may face challenges partly due to siloes existing at different levels of government – national, regional, and local, including those arising from the fundamental foundations and structure of organizations and institutions. Some stakeholders also may not be aware of the relevance of emergency preparedness for themselves, leading to less willingness to collaborate, especially once the acute phase of an emergency is over. There is therefore a benefit in including these sectors and actors in simulation exercises and other drills, as these activities promote coordination, build relationships, open soft and informal avenues for communication, and help facilitate the working cultures necessary for multisectoral coordination.

### ***Multisectoral Preparedness Coordination Framework***

Good multisectoral preparedness coordination at local levels is part of adopting a whole-of-society approach. WHO has published the *Multisectoral Preparedness Coordination Framework* which helps provide countries with an overview of and case studies for the key elements for overarching, all-hazard, multisectoral coordination for emergency preparedness and health security (23). It describes the need for country ownership; identifying champions and selecting leaders; developing multisectoral coordination structures; stakeholder mapping and analysis; conducting



a joint needs assessment; formalising the multisectoral preparedness coordination; the importance of transparency, trust and accountability in implementation; effective communication; securing health security preparedness funding; and monitoring the multisectoral preparedness coordination. Many of these can also be applied at local levels in cities and urban settings.

### 4.3 High population density and movement

Cities and urban settings often contain large numbers of people, leading to high population densities and crowding where people live, play and work. This means that health emergencies can impact a larger number of people at once, especially when it involves infectious diseases. Areas of high population densities lead to an increased chance of being in crowded situations. In epidemics, especially those spread by droplets or aerosols, this increases the risk of disease spread. This includes shared spaces and public areas with high human traffic or are frequently used (e.g. high-touch surfaces that may be contaminated, such as door handles), and public transportation. Crowded situations often found in cities and urban settings include mass gatherings such as religious events, concerts and sporting events, or poorly-ventilated areas such as bars and nightclubs. Other locations such as nursing/care homes, dense forms of housing, refugee camps and commercial venues such as shopping centres may also pose risks. Overurbanization has also led to a proliferation of informal settlements / slums emerging. Population densities tend to be higher in these impoverished settings, that also use communal and often inadequate water, sanitation and hygiene (WASH) facilities. These areas require specific actions and areas for attention for preparedness.

The compact nature of cities and urban settings also means that many people travel in, out, and within them each day. Daytime populations include those living in surrounding peri-urban and rural areas but commute for work, and who may in turn lead to disease transmission to their communities at home. Many people within cities and urban settings also rely on public transportation to get around. These tend to be crowded especially during peak periods, and their convenience allows for greater mobility within a day. Many are also trade and travel hubs for international, national, regional and local connections, which may make them conduits for the exportation or introduction and further spread of disease to other communities and countries. Major air and sea ports and land crossings are points of entry (PoEs) for countries and play important roles in national measures to prevent disease exportation or importation, via the use of risk mitigation measures such as testing and quarantine of travellers. If not adequately managed, the overcrowding of travellers at points of entry may exacerbate risks during health emergencies throughout the travel continuum. However, transportation links and hubs also enable the transportation and distribution of essential workers and medical resources during health emergencies, and if adequately prepared, can improve the response.

Consequently, health emergencies in cities and urban settings may result in higher absolute numbers of affected persons, with dense settings and transport hubs



amplifying disease spread (24). Necessary public health preparedness systems and activities such as contact tracing and geographically targeted interventions, such as at the neighbourhood level, or for particular at-risk groups, may therefore be complex to implement and therefore less effective.

### ***Reducing the risk from population movement***

To address the challenges presented by population movement in cities, stemming from the high population density and enhanced travel and movement patterns that exist within and between cities, effective risk management is needed to strengthen urban preparedness. The implementation of risk mitigation measures that may impact or reduce travel and transport (i.e. quarantine of travellers, testing requirements and other screening procedures), and mass gatherings or crowded places in cities (e.g. the reorganizing or postponing of large or mass gatherings), as well as other adaptations to enhance safety for people in cities should be informed by thorough and regular risk assessment. This entails risk evaluation or risk assessment (identify and quantify), risk mitigation (adopting precautionary measures), and risk communication (to adequately inform communities and ensure their compliance with adopted measures) (*see also section 4.4 on community engagement and risk and crisis communication and 4.6 on evidence, data and information*). Otherwise, inadvertently these measures may generate unsafe environments- heightening the risk of violence due to overcrowded spaces, or limited access to support systems such as referral services for survivors of gender-based violence.

The rationale of any and all measures introduced should be duly communicated to all authorities, travellers, event organizers and the general public to enable and promote compliance (*see also section 4.4 on community engagement and risk and crisis communication*). When relating to international travel, this should also ensure that measures introduced are necessary and duly justified, so that they do not result in the unnecessary interference with international traffic as per the *IHR (2005) (11)* provisions.

### ***Urban planning and design***

Urban settings, and their design – or lack thereof, as rapid urbanisation often leads to the unplanned and unregulated expansion of cities and urban settings – can exacerbate the risk of the emergence and spread of infectious diseases. Some examples include:

- Some vector-borne diseases have been linked to urbanization (e.g. mosquito breeding sites in urban settings and diseases such as chikungunya, dengue and Zika)
- Encroachment of settlements on surrounding ecosystems has been linked to zoonotic disease outbreaks such as tick-borne diseases as residential human settlement and wildlife habitats are connected.
- Ventilation in the built environment has been linked to the spread of respiratory diseases (requiring work also with the housing sector).

In addition to the heightened risk of spread of infectious diseases, the risk of gender-based violence in urban settings increases due to overcrowding, increased anonymity and reduced social support systems especially for migrant population, with important health implications including unwanted pregnancies, heightened risk of sexually transmitted infections, including HIV, and increased maternal morbidity and mortality risk due to unsafe abortions.

Urban environments and their design are critical in mitigating the risks presented by high population density and associated congestion and its impacts. Dynamic and innovative urban planning and design is necessary to create urban spaces that are adaptable and resilient to shocks such as health emergencies. A greater integration of urban planning and design into emergency preparedness planning and activities can have a wide array of benefits. This include creating spaces that remain habitable, safe and accessible in the aftermath of emergency events and as a result of public health measures taken to respond to a health crisis. For example, social distancing measures, reduction in availability or access to the use of public transport, the need to reduce mass gatherings, or to organize ad-hoc distributions centres and shelters, may all have an impact on urban living spaces and avoid crowded congested spaces during an outbreak. As illustrated by COVID-19, a greater focus on safe active transport choices, such as walking and cycling, can help people avoid hotspots (such as congested public transport) during high disease transmission. Greater availability of public and green and blue spaces that are accessible to all can be key to providing fresh air, and for mitigating the mental health impacts of emergency events and public health measures, including restricted movement in response to outbreaks. Designed spaces should be planned to make all people feel safe, especially women, girls and vulnerable groups.

The integration of urban planning and design into preparedness should move beyond simply the physical or built environment, towards a consideration of the city or urban setting as a multi-dimensional environment. Therefore, focus cannot only be on physical – or traditional – infrastructure, but also on social and digital infrastructure – for example to communicate public health messaging as well as for remote school and working environments. Urban settings need to be designed from a social, intersectional perspective – urban environments are used differently by different groups of people, and at different times of the year, or day. This also entails promoting healthy lifestyles and a better understanding of the interface between humans and our surrounding ecologies (25). Therefore, gender, equity, migration status, vulnerable groups, and the needs of different communities in the city need to be considered – a city or urban setting can only be adequately prepared for a health emergency if it is prepared for everybody within in. Urban planning should focus on integrating health promotion and prevention in general, in order to reduce the vulnerability of different communities through less initial exposure to public health issues such as air and noise pollution. Furthermore, urban planning is needed to support the provision of basic services by ensuring that they are close to people's homes and accessible by public transport, as access to healthcare is a key element of preparedness.

Urban planning and design must also include digital infrastructure and systems. This is especially given the importance of digital platforms in collecting, accessing, and utilising data, which is such a critical element for preparedness (*see also section 4.6 on data, evidence and information*) – for example to anticipate hotspots due to crowding, and mobility patterns ahead of time in order to limit spread and transmission of a disease.

### **Mass gathering events**

Mass gathering events (i.e. Olympic & Paralympic Games) present an opportunity to include urban planning and design into preparedness, leaving behind a positive urban legacy. Mass gathering events include significant public health preparations and considerations, that can subsequently help inform public health measures when organizing similar events in the future, therefore providing a long-lasting public health legacy for city. They also serve as public health capacity building, as the experiences can also be applied to other elements of city management. Potential public health benefits include:

- Improved health systems (as a consequence of their involvement in ensuring safety of planned interventions).
- Upgraded infrastructures (e.g. meeting venues, public transportation networks).
- Enhanced behaviours and well-being (e.g. through health education messages, or by promoting fairness in the context of sports events, or by strengthening sense of community through religious events).
- Overall advancements in terms of coordination, knowledge, experience, understanding, capacity and capability for all those involvement in the organization and implementation of the event.

These experiences can also be shared with other cities who are also involved in organization of mass gatherings.

## **4.4 Community engagement and risk and crisis communication**

As health threats emerge at local levels, communities play an important role in health emergency preparedness and risk reduction. Community members participating from the earliest stages of policy and programme formulation help clarify local priorities, challenges, and pathways for practical and sustainable action. This requires sustained and meaningful community involvement (beyond just engagement), such as through community led-approaches, participatory governance mechanisms, social participation methods, and the co-creation of solutions. Often, there is insufficient engagement, integration and protection of communities in cities and urban settings in health emergency preparedness plans. Whilst engagement can be challenging for a variety of reasons, the perspectives which they offer enhance policy and programme development and ensure effective translation and

implementation. Doing so also engenders trust in governments and public systems at all levels. Effective involvement and engagement of communities cannot be achieved without effective communication, tailored to the respective specific target audience.

### ***The challenges of diversity***

Diversity of populations tends to be higher in urban settings than other parts of a country. Cities and urban settings tend to be heterogeneous in composition, including migrants who have been a key driver in urbanisation. Nearly one in five of the world's foreign-born population live in established global gateway cities, and in some instances, account for more over half of the city's population (26). This enhanced diversity leads to more heterogeneous subpopulations, which may have different social, cultural and religious norms that may impact access to (due to a lack of information being made available in languages they understand, stigma, and discrimination), the acceptability of, and compliance to preparedness and response measures. Local politics, and the mix of influential organisations, individuals, groups and businesses that tend to exist within cities and urban settings can also sometimes lead to polarisation and violence between communities and groups. This can exacerbate differences in how different communities access their information (through both formal and informal communication channels), or the behaviours that they may show towards accessing health, social or other essential services. Greater polarisation leads to less integration, which may mean that different traditional or cultural beliefs exist towards health and well-being, levels of health literacy or social literacy differ, and differences in impact of the underlying social determinants of health are more pronounced. These differences may also exist *within* communities, such as by age or sex.

In cities and urban settings, a multitude of communities, groups, and people will be found living side by side, which poses increased challenges for engagement and communication. However, engaging the wide variety of groups that often comprise an urban population is important to achieve adequate coverage from a preparedness perspective, and increase the likelihood of a holistic response.

In cities and urban settings, community representation may operate through formal or informal structures, with leaders, spokespeople, or representatives being recognised by existing governance structures in some cases (e.g. through a registered association, religious or faith-based organisation, or other NGO or CSO), whilst in other cases it may be simply as a leader or elder socially recognised within a specific community – for example leveraging urban neighbourhood leaders as part of a community messaging/engagement network. When engaging specific communities, it is important that these structures are meaningfully recognised, utilised, included and engaged, in order to increase community ownership, buy-in, engagement with, compliance with, and uptake of any response activities such as public health and social measures that may need to be introduced in response to a health emergency.

The importance of engaging the community affected does not only relate to vulnerable groups, but to all communities that exist within a city, including those with

a higher socioeconomic status. Issues such as vaccine hesitancy, trust in authorities (both national and local), and exposure to misinformation are issues that permeate across society. Addressing these issues and ensuring a response will be as broad and as effective as possible, requires communities and the people within them to be engaged – both in preparedness and response activities.

### ***Risk and crisis communication***

Engaging communities requires the ability to communicate effectively with them. Risk and crisis communication and community engagement (RCCE) for health emergencies are essential for community uptake of recommendations by national and local governments in mitigating the risk and impact of health emergencies. Just as health threats emerge at local levels, communities play an important role in emergency preparedness and must be considered as a full and fair shareholder (27). This includes their inclusion in RCCE policy and programme formulation and understanding local factors that act as barriers for the uptake of public health services and recommendations. RCCE, and the importance of community engagement is not solely in relation to groups at risk of vulnerability.

Effective RCCE accounts for diversity and is essential for building community awareness and participation in health initiatives. This includes building teams, processes, and trust with community influencers well in advance of a crisis, for example community health workers, religious leaders and established civil society organizations, including those representing disadvantaged and minority groups. The methods and messages need to be tailored to the needs of particular groups and continually updated to reflect evolving evidence and best practices emerging through research and feedback loops. This includes appealing to different values, translating information into different languages, and accounting for differences across population groups – across age, gender, ethnicity and others – in literacy and education. While mass media campaigns may be effective for motivating single or episodic behaviours such as annual flu vaccination, communication through local trusted influencers may be more effective for establishing new and continuing practices such as mask wearing, in certain instances. For example, in 1991 the death toll from the Gorky Cyclone in Bangladesh was five times higher for women than men. Part of the reason was that early warning information about the cyclone and the floods was transmitted by men to men in public spaces, rarely reaching women directly (28). Designing tailored and innovative communication strategies for hard to reach population groups, including minority groups, people with disabilities, and women and girls.

Social sciences play an important role, including facilitating community-led participatory approaches and understanding drivers of change and knowledge models of health emergencies in local communities. This is achieved by an intersectional approach to health emergency preparedness, using a whole-of-society approach to engage all stakeholders from all relevant sectors. Cities are also well-placed to safeguard human rights, including the prevention and mitigation of stigma,

discrimination and violence, seen for example during the COVID-19 response. The success of health initiatives also depends on ensuring universal access to reliable health information as a fundamental human right.

### ***Infodemics***

Part of the support that communities need to build local capacity for preventing, detecting and responding to emerging threats, is the skills to manage “infodemics”. This is the overabundance of information, including some that may be inaccurate or false. Ensuring that continuous, clear, timely and accurate information reaches and is shared within communities, and the correction of misinformation occurs, can make or break a public health preparedness and response plan. It is also closely linked to fostering and engendering trust in governments and institutions, in order to secure engagement and uptake.

The need to manage infodemics tends to be higher in cities and urban settings where information is readily available and quickly propagated. In urban settings, information tends to be more easily accessed from a diversity of digital sources (e.g. social media), is quickly propagated, and may exacerbate the urban-rural digital divide (29). Initiatives improving access to digital technologies need to support advancements in digital literacy to assist stakeholders (especially vulnerable groups) in safely navigating the digital communication ecosystem. Messages also need to be understandable by target audiences, including being free of technical jargon, translated into different languages when necessary and accounting for the needs of the illiterate. Local community groups including CSOs, faith groups should be meaningfully engaged and involved in developing and delivering key messages in all available modalities. Close collaboration between city leaders, local groups and local media channels that use programmes that reach out to different social groups (e.g. young people, women, men, migrant workers) can dispel myths and correct false information in the community. Social listening and response initiatives are necessary in cities and urban settings in order to bridge the online-offline gap.

## **4.5 Groups at risk of vulnerability**

Cities and urban settings are centres for inequalities and groups at risk of vulnerability. For instance, it is estimated that 70 percent of people displaced across or within national borders live in cities, and migrants are overrepresented among the urban poor (30). In 2018, 61% of refugees were living in urban areas 47% of which were women and girls, and many of whom were residing in informal settlements or other inadequate housing situations (31). Children are also exposed to specific vulnerabilities, as child labour becomes a survival strategy for families whose main source of income may have fallen ill, or conversely, they are placed as caretakers for the sick (32). These groups are disproportionately impacted by health emergencies, due to the compounded effect of structural economic, social, and gender inequalities, as well as being disproportionately affected by issues such as crowding, lack of



access to health care (due to cost or exclusion from national health care systems), lack of culturally and linguistically appropriate information, and discrimination or stigma.

Aside from vulnerabilities specific to certain diseases or emergencies (e.g. Zika virus and pregnancy, COVID-19 and persons with medical comorbidities), there are also persons that are generally vulnerable to the direct or indirect impacts of health emergencies. For instance, during the COVID-19 pandemic, periods of restricted movements risked the loss of livelihoods of people dependent on the informal economy. During the 2014-2016 Ebola outbreak, although no biological sex differences were identified in relation to infection vulnerability, gender differentials were observed in the infection rates. This was later found to be correlated with the high risk of transmission among those caring for the sick at home and those conducting funeral activities; which were two specific gender roles that sociocultural norms dictate for women in West Africa (and other regions) (33, 34).

Furthermore, when planning for mobility, health, and safety among other areas does not adequately consider varying needs across population groups, new vulnerabilities arise. People may be isolated and unable to access to health and social services, including due to the high cost or inconvenient locations. Others may not have received the critical prevention information or be able to access WASH facilities and supplies necessary to protect themselves, such as soap and water, disinfectants or masks that may be recommended by national and local authorities. For communities living in temporary housing arrangements as well as informal settlements and slums may also find it difficult to comply with quarantine, isolation and physical distancing recommendations may be challenging at best, or impossible to follow. Migrants, who are not documented, can be excluded during beneficiary registration and therefore may be unable to access emergency relief services, including health.

The COVID-19 pandemic outbreak also highlighted how certain workers are at a higher risk of vulnerability due to their working conditions, for example essential workers in transport, supermarkets, cleaning, and other service industry employment, as well as those working in factories, food processing plants, and other similar environments. Examples of groups particularly at risk of vulnerability can be seen in Box 4:

**Box 4. Examples of groups at risk of vulnerability**

- People living in informal settlements / slums
- People dependent on the informal economy
- Urban poor
- Working children
- People with disabilities
- People experiencing homelessness, particularly children or older persons, and people living in inadequate housing conditions

- Refugees, migrants, internally displaced persons
- Children and older persons, especially those at risk of isolation
- Persons with medical comorbidities
- Women and girls, who often take caregiving roles which expose them further to disease
- Socially or geographically marginalized and isolated groups
- People with language limitations respective to their city/urban setting
- People suffering from addiction
- Individuals at risk of interpersonal violence or self-inflicted harm due to public health and social measures
- Individuals exposed to environmental dangers in cities, such as vector breeding sites

When health emergencies occur, these groups tend to be disproportionately affected. Evidence points out that leaving structural inequalities outside of preparedness and response planning has further compounded those inequalities (35). Therefore, effective preparedness for a health emergency in an urban setting includes anticipating and preparing for vulnerabilities linked to the direct or indirect impact of all-hazards. Countries and their local communities are as strong as their weakest link, and preparedness and response plans will not be as effective if the needs of vulnerable populations are not looked after. This includes building community resilience to the impacts of health emergencies. In this regard, trusted community leaders and civil society organizations including those with established initiatives in working with and supporting vulnerable populations, may serve as an important resource.

### ***Mapping vulnerabilities***

Challenges that may be faced include not knowing how best to define, locate and reach out to vulnerable subpopulations, and understanding the perspectives, concerns and expectations of these groups. This is especially difficult if left until health emergencies have already hit. This is an area where local and city authorities are critical – as the closest level of government to the people, and most familiar with their constituencies, it is they that have the best knowledge of who the groups most at risk of vulnerability are, where they are, and how to reach them most effectively. Established groups with shared interests, such as schools, clubs, women's groups and taxi drivers, can provide useful entry points to identifying these community groups. Working with local actors (such as the private sector, local government, neighbourhood leaders and community groups) can be vital in restarting, supporting and strengthening existing services instead of replacing them. They are likely to know which NGOs, CSOs, and local community groups represent communities and groups



most at risk, and will be able to work in conjunction with them to ensure they are not forgotten or bypassed by national preparedness and response policies that may not be refined enough to adapt to the unique contextualities within different cities and urban settings. Mapping existing vulnerabilities through needs assessments, and then basing preparedness and response plans on these assessments, is therefore necessary for strengthened preparedness in cities and urban settings in particular (*see also section 4.6 on data, evidence and information*). It is also important to ensure that gender considerations are mainstreamed across all preparedness and response activities.

### ***Recognising and addressing structural inequalities***

Whilst many of the key health equity challenges and structural inequalities faced by disadvantaged populations, or those at risk of vulnerability, are similar to those living in peri-urban or rural settings, the issues are often exacerbated by the urban environment. This leads to many challenges that are contextualised to cities and urban settings in particular, many of which can be partially addressed through emergency preparedness activities. Issues of mobility and access to transport, air pollution, housing and urban planning, access to green and blue spaces and safety and crime, and their impact on health and well-being, all tend to be exacerbated within cities and urban settings (36). The vulnerable in cities are disproportionately impacted due to the underlying structural inequalities which limit their coping capacities, and which impact on the determinants of health across societies, as well as by health emergencies when they occur. When it comes to the everyday lived experiences of people within these groups, challenges in areas such as mobility, health, and safety are not experienced in isolation. Rather, these challenges accumulate and compound one another, feeding into systemic social and economic inequities.

Addressing the underlying structural determinants of health, existing health inequities and inequalities, and other factors that render people more vulnerable to health emergencies is therefore a key element of effective preparedness. A city will never be adequately prepared whilst certain groups are still at risk of vulnerability. This requires addressing the issues in cities that make people vulnerable – such as informal settlements / slums, inadequate WASH facilities in neighbourhoods, or the lack of enforcement of hygiene standards in food markets. It also requires adequate social protection, welfare, and ensuring proper working conditions (including health insurance and sick pay). Doing so will leave fewer people at risk of vulnerability to health emergencies and reduce the catastrophic impact that they can have on certain groups.

Addressing these issues, and vulnerability in general, will require working with affected communities (see section 4.4 on Community engagement and risk and crisis communication), as well as other relevant sectors, such as social, environment, transport and education. A key approach is the empowerment of vulnerable communities by building upon the specific resources that these communities

have, be they professional, cultural, or social. Integrating emergency preparedness activities in cities and urban settings with work on the social and environmental determinants of health and health inequalities is an opportunity to ensure that people within cities and urban settings are better prepared to respond, and are more resilient to, health emergencies. Existing vulnerabilities should also be accounted for and addressed in health emergency preparedness plans and activities, and mechanisms to provide timely public health data to urban authorities established.

## 4.6 Data, evidence and information

Data represents a challenge to cities globally; often it is missing or limited, or when available, fragmented, siloed or outdated. Local authorities of cities and urban settings often hold a wealth of data which should be used to strengthen health emergency preparedness and response, for some examples see Box 5. Such information can help guide efforts to improve preparedness and build community resilience, including leveraging crowd sourced data or sentinel sites for surveillance and sense-making. Aside from event detection, it can help monitor impact and assess the uptake and effectiveness of response measures and recommendations.

### Box 5. Data often held by authorities of cities and urban settings

- Urban settlement data such as:
  - demographics
  - informal settlements and other vulnerable communities
  - housing and zoning
  - transport networks and usage
  - public and private facilities and resources
  - environmental quality (e.g. air, noise, access to green and blue, heat islands)
- Emergency, disaster and risk management data, such as:
  - evacuation routes
  - supply chains
  - information on current and future hazards
  - vulnerabilities
  - capacities, and scenarios
  - population demographics

As mentioned above, as local authorities are the closest level of government to the people, and used well, these can help to provide insights on neighbourhoods and subpopulations that are vulnerable to emergencies, thereby providing valuable information that can help with preparedness and building overall resilience. Likewise,

health considerations, including health emergency preparedness, also needs to be integrated into building sustainable cities for the future. The use of data also needs to be done in a manner that respects personal privacy, data confidentiality, and ensures that the (economic) value is for the public good. Furthermore, evidence-based decision making needs to be adhered to routinely.

Many cities and urban areas also hold academic centres and public health institutes that may help support national and local efforts in collecting and processing big data and generating evidence that would help with the management of future health threats and emergencies. Data collection includes systems to detect the occurrence of an incident, monitor its impact and assess the uptake and effectiveness of public health and social measures to help refine preparedness and response plans.

### ***Data gaps and the use of data***

Cities and urban settings also need to regularly assess their emergency preparedness status, identify existing preparedness capacity gaps so that they can be closed. Identifying key information required and subsequently filling data gaps is important. This can be done by coordinating with other sectors and stakeholders who have access to data, such as other levels of government or research institutes and academia, as well as potentially the private sector. Filling data gaps would allow for the subsequent analysing of the data, allowing it to be used to guide decision-making and preparedness and response policies. Where possible, data collected should be disaggregated and analysed by gender to address gender gaps that often exist. The community itself also has a key role to play in obtaining data; for example, community surveillance data. This extends beyond contact tracing, also including data on specific health behaviours and trends. It is especially important in the context of gaining access to vulnerable groups such as people experiencing homelessness.

It is important to also regularly test the functionality of capacities and interactions with stakeholders, such as through conducting simulation exercises. Information can also be gleaned through documentation of actual experiences, such as through intra- and after-action reviews, and the sharing of best practices with other cities and urban settings.

A lack of capacity – either to collect data in surveillance systems, analyse and/or disseminate and use data effectively can often be a barrier to authorities in cities. Filling data gaps, as well as the subsequent analysis and use of it requires investing in capacity building, and providing adequate and sustainable financing for human resources, training and equipment. The present scarcity of information and reporting at the subnational level poses significant challenges for targeted response efforts and is in stark contrast to the rich variety of data and analytics technologies available. National governments and authorities can collate data on hazards and emergencies that cut across many regions and cities but will also then need to share processed data with city and local authorities for improved local sense-making that will allow for prompt responses. This will allow the data to be used for risk

assessment and health emergency preparedness planning including the mapping mentioned above.

Other challenges that may be faced include difficulties in aligning and merging datasets for analysis, especially if held by different local entities, and insufficient manpower, expertise and computing power to process and make sense of large amounts of data. Knowledge may also be evolving, meaning that evidence is not always available for emerging threats. Furthermore, despite opportunities for data collection in urban centres there may be data gaps especially in very poor sections of society, including transitory and undocumented populations. In many countries and cities data is not disaggregated by gender or ethnicity, making it difficult to assess the incidence among specific groups. In other countries this information, if collected, is not made officially available. However, there are also many initiatives (e.g. among informal settlements) that can provide important data for possible integration and use alongside official statistics. Importantly, data must be shared amongst all entities that need it for effective preparedness activities. This is not merely within a country, but cities can document and institutionalise lessons learned and share approaches with other cities, in order to learn from experiences in a peer-to-peer manner.

### ***Generating evidence***

Data is also crucial to the ability of countries and their cities to generate evidence. In turn, it ensures that emergency preparedness and response policies and plans are evidence-based and informed by the best available science. This is particularly important in the context of emergencies, where understanding of a novel threat and its characteristics may change over time. Robust evidence also can help reduce the risk of misinformation and the speed at which it travels that can create doubts, even at the level of policy-makers (*see also section 4.4 on community engagement and risk and crisis communication*).

## **4.7 Commerce, industry and business**

Cities and urban settings are also centres for commerce and many industries, employing large numbers of individuals. They are also responsible for places where groups of people spend a substantial amount of time each day. In addition to this, many local businesses are community-centred with good networks, relationships and local knowledge. Therefore, businesses and corporations can serve as a partner and resource for national and local governments in preparing for health emergencies, in particular when it comes to innovating in order to better prepare, detect and respond to novel and emerging challenges posed by future and ongoing health emergencies. This can cover a broad range of areas, including risk communication and risk management, for example occupational health and safety including prevention of zoonosis, infection and contamination of food at live animal markets, instituting remote working arrangements where possible, and implementing public

health measures to reduce the spread of infectious diseases at the workplace where remote working is not possible,, as well as providing resources in an emergency, such as the repurposing of manufacturing plants to producing personal protective equipment and the reorganization of commercial spaces or services to accommodate public health measures. They are also important for maintaining logistics and supply chains for the continued provision of essential services, for example for food and medical supplies, or the repurposing of manufacturing plants and using hotel rooms for quarantine and temporary housing for the homeless.

During the COVID-19 pandemic, for example, there were many instances where the private sector was able to actively contribute to contingency and preparedness plans, logistics for responses, risk reduction strategies, and increasing capacities for service delivery where necessary. Working with other stakeholders such as academia and public health institutions, the private sector can also be an important driver of innovation in preparing for and responding to health emergencies. This includes novel health, social and economic interventions, and supporting risk and crisis communication. For example, in COVID-19, pharmaceutical companies were critical in the development of therapeutics and vaccines. This crisis provides an opportunity to leverage the collaborations and relationships built and ensure that capacity and value is sustained and contributes added to future preparedness, as opposed to solely being utilised in response.

Given the widespread effects on trade and commerce in a health emergency, employers play an important role in supporting the welfare of people by securing their livelihoods and providing social protection. This is especially in situations where employment remains tied to access to healthcare (e.g. health insurance). To reduce disruption, large and small entities alike should conduct business continuity planning for different contingencies, as guided by local governments and other stakeholders. This heterogeneity of economic and commercial operators is an important consideration when planning for local preparedness: the assets and resources available to larger commercial actors with national operations are different to local and community-based businesses. Both have a role to play and understanding the heterogeneity will enable a more efficient response.

There may be sensitivities in local governments working with businesses and corporations and clear goals as well as appropriate engagement processes may need to be identified beforehand. Nevertheless, there is benefit in also engaging private sector stakeholders in peacetime including as participants in emergency scenarios and preparation, rather than only during a crisis, as it allows for more efficient cooperation when responding.

Another crucial area of focus is the informal economy. Often in many cities and urban settings around the globe there is a form of an informal economy that is an important element of employment for those living there. The relative ease of finding some form of economic gain through the informal economy, as opposed to formally, is also a motivation for many people to migrate to cities and urban settings, either for daily,

shorter, or longer-term periods. When crises hit, vulnerable people working in the informal economy are often disproportionately affected, through unemployment or others forms of loss of livelihood. Not only does this leave them more vulnerable to the impacts of health emergencies but can also exacerbate the spread of infectious diseases. For example, during the COVID-19 pandemic, movement patterns were influenced by loss of livelihoods in the informal economy, as it led to many economic migrants moving back to rural areas, therefore contributing to a spread of the virus.

## **4.8 Organisation and delivery of health and other essential services**

Health systems, in particular the delivery of health services, play a critical role in preparedness, response and recovery for all types of hazards. These range from primary and community care to tertiary level hospitals. For example, surveillance, detection and notification; vaccinations to prevent outbreaks (including prophylaxis of major zoonotic diseases in pets and livestock); infection prevention and control to prevent further spread of disease; and treatment to save lives are all dependent on the health system. Urban settings, especially major cities, tend to hold a full suite of services that can include academic hospitals with health specialists, advanced diagnostics, medical equipment, supplies and intensive care units, all of which are crucial capacity in an emergency. However, there can also be huge disparities and gaps in access to services in urban settings, especially by those of lower socio-economic status and hard-to-reach populations, leading to unequal health outcomes, delays in event reporting and contact tracing.

Many cities' health service providers also support referrals from adjacent peri-urban and rural areas and planning for service delivery thus needs to consider possible surge from surrounding areas. This would include plans for referral, clinical triage, temporarily repurposed facilities (e.g. stadiums, conference centres) and the flexible deployment of staff to areas with greatest needs. During a health emergency, universal health coverage (UHC) and the continuation of essential services are at risk when cities and urban areas are under prepared. This applies not only to people living in cities, but also those who would be referred from other geographically dispersed parts of the health system. UHC is an important aspect of preparedness in order to avoid situations in which segments of society are not able to access essential services during an emergency. Often the barriers that exist to accessing healthcare in peacetime are more likely to have a catastrophic effect during an emergency, for example issues of access - including administrative/policy/financial/technical/information-related barriers - have decreased the ability of certain groups such as migrants to access vaccinations during roll-out campaigns, undermining public health efforts as a whole.

Planning should therefore control for both the reception and provision of surge capacities, as well as include assessments to determine the status of health systems components necessary for resilience and health security.



## ***Health system resilience***

Strong health systems are important for health security. Health facilities in urban areas therefore need to be safe, flexible, and resilient to disasters and emergencies. This includes preparedness capacities to be built in service delivery, scalable capacities, providing safe services to patients, visitors and staff, and investments in health infrastructure. This requires adequate investments into health system components for emergency preparedness - the "building blocks" of leadership; financing; service delivery; health workforce; information; medical products, vaccines and technologies (37). WHO developed the *Health Systems for Health Security Framework*, which guides countries on how to develop capacities for the *IHR (2005)*, and components in health systems and other sectors that work in synergy to meet the demands imposed by health emergencies while maintaining the continuity of essential health services throughout (38).

## ***Delivery of health services***

Adopting a people-centred primary health care approach remains critical in promoting equitable access to health services, especially to vulnerable and hard-to-reach populations. Primary care services are often the first point of contact between population and health systems, and therefore are critical in an emergency. During the COVID-19 outbreak for example, community health workers engendered trust in local health systems and authorities (39). This approach also helps with load-rebalancing where possible, freeing up capacity at higher levels of care and safeguarding the continuity of essential health services. It is also important to ensure mechanisms are in place to sustain the delivery of these essential health services, to contain the compounding effect that can be produced when minimum life-saving services are disrupted as a result of crises. This requires the clear identification of minimum standards for health services in emergency settings, including on sexual and reproductive health, health services for survivors of violence, and other key health services.

## ***Beyond health: other essential services and wider benefits***

It is not only the health system that is key to preparedness, however. Given the widespread impact of health emergencies, there is a need to ensure the safe and continued provision of essential services beyond health, such as social services and education. These sectors have critical interdependencies with health in supporting efforts to prevent, detect and control threats and emergencies. They also help to mitigate the socioeconomic impact of health emergencies. Continuity of operations plans that reduce the risk of disruption and prepare key organisations and their staff for the challenges of health emergency response and recovery should also be developed and widely adopted. This can be through the use of simulation exercises and drills that involve all relevant actors.

Improved measures in cities and urban settings to advance preparedness would also have benefits beyond health. Some examples are upgraded infrastructures (e.g.



events/meeting venues, public transportation networks), enhanced health literacy and behaviours (e.g. through public health education messages and campaigns) and overall advancements in terms of coordination, knowledge, experience, understanding, capacities and capabilities for those involved in their planning and implementation. This legacy also extends beyond preparedness. After the Ebola crisis, use of health-care services increased, leading to declines in child morbidity (40). The H1N1 crisis in Mexico persuaded people to permanently change their handwashing practices (41). As demonstrated by past experience, strengthened health systems and essential services can improve health and well-being more broadly, advance Universal Health Coverage and help implement the 2030 Agenda for Sustainable Development.

Beyond health facilities, cities and urban areas also often host other critical infrastructure that needs to remain operational regardless of the emergency (e.g. PoEs, power and fresh water plants, security & safety services, communication & ICT infrastructure, financial organizations, and others). Crisis including disease outbreaks can have cascading effects and without the continued operation of this critical infrastructure the country/area is likely to descend into further disruption. Having contingency plans that have been regularly tested in order to ensure that critical infrastructure remains operational is therefore a crucial element of urban preparedness.

## 5. MOVING FROM CONCEPT TO IMPLEMENTATION

Implementing this framework requires that cities and urban settings be regarded predominantly as important elements of, or as opportunities and entry points to, overall strengthened health emergency preparedness in countries.

Strengthening health emergency preparedness in cities and urban settings contributes to national health security (see Figure 1). This is primarily achieved through risk assessment, monitoring and evaluation, capacity building, and partnerships. There are many existing WHO tools that support these activities in countries, some of which are as described in Box 6.

### Box 6. Existing WHO tools for health emergency preparedness

- Risk assessment
  - Joint Risk Assessment Operational Tool (JRA OT) for threats at the human-animal-environment interface (42)
  - Strategic Tool for Assessing Risks (STAR tool) (43)
  - International travel (44)
  - Mass gatherings (45)
- Monitoring and Evaluation
  - State Party self-assessment annual reporting tool (SPAR) (46)
  - Joint External Evaluation (JEE) (47)
  - Simulation Exercises (SimEx) (48)
  - After Action Review (AAR) (49)
  - Inter-action review (IAR) (50)
- Capacity building
  - National Action Plans for Health Security (51)
  - IHR-Performance of Veterinary Services (IHR-PVS) Bridging Workshop (52)
  - Health Systems for Health Security (38)
  - WHO Benchmarks for IHR capacities (53)
  - Resource Mapping and impact analysis on health security (54)
- Partnerships
  - Strategic Partnership for Health Security and Emergency Preparedness Portal (55)
  - Global Strategic Preparedness Network (GSPN)

From a disaster risk management perspective, the WHO Health EDM (3) supports the Sendai Framework for Disaster Risk Reduction 2015-2030 (19) and the United Nations 17 Sustainable Development Goals and is also applicable as a key document to support cities and urban settings in implementing this framework. The WHO Health in All Policies approach is also important in ensuring that health considerations are streamlined across and throughout all policies. This approach is expanded in the training manual (56).

In the use of these tools moving forward, countries should **increasingly consider the inputs and considerations of cities and urban settings**. For instance, in order to obtain an accurate national assessment of existing risks and capacity gaps in preparedness, findings at subnational and local levels should be incorporated, including that of major cities where many key capacities and functions are sited. To this end, some countries have started using subnational evaluations to inform their national assessments. This is likewise for capacity building, since prevention, detection and response to health emergencies take place first and foremost at local and community levels. Accounting for the inherent complexity of urban areas improves the operational effectiveness of these capacities.

At the same time, it may also be possible to **adapt and apply relevant national tools to local levels**, including in cities and urban settings. One such example is the WHO COVID-19 simulation exercise for urban settings, which was tailored for use by city authorities in preparing for the pandemic. It is also in the interest of city and urban authorities to know and mitigate their local risks.

Finally, cities, as essential actors in the global community, also have a role in the **sharing of expertise, lessons learnt and resources** through various city networks including those focusing on resilience, emergency preparedness and health in general. This includes leveraging on the wider WHO Global Strategic Preparedness Network (GSPN).

For guidance on various specific approaches and actions that national and local authorities can take and adapt to their needs, see the planned **WHO operational guidance document** that accompanies this framework: *Strengthening health emergency preparedness in cities and urban settings: operational guidance for national and local authorities in member states*<sup>6</sup>.

**WHO, across all three levels of the organisation – Headquarters, Regional Offices, and Country Offices - will continue to support Member States in strengthening health emergency preparedness in countries and their cities and urban settings.**

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<sup>6</sup> Forthcoming

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