

Strengthening Preparedness for COVID-19 in Cities and Urban Settings

Interim Guidance for Local Authorities



WHO/2019-nCoV/Urban_preparedness/2020.1

© World Health Organization 2020

Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

Under the terms of this licence, you may copy, redistribute and adapt the work for non-commercial purposes, provided the work is appropriately cited, as indicated below. In any use of this work, there should be no suggestion that WHO endorses any specific organization, products or services. The use of the WHO logo is not permitted. If you adapt the work, then you must license your work under the same or equivalent Creative Commons licence. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: "This translation was not created by the World Health Organization (WHO). WHO is not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition".

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization.

Suggested citation. Strengthening preparedness for COVID-19 in cities and other urban settings: interim guidance for local authorities. Geneva: World Health Organization; 2020 (WHO/2019-nCoV/Urban_preparedness/2020.1). Licence: [CC BY-NC-SA 3.0 IGO](https://creativecommons.org/licenses/by-nc-sa/3.0/igo).

Cataloguing-in-Publication (CIP) data. CIP data are available at <http://apps.who.int/iris>.

Sales, rights and licensing. To purchase WHO publications, see <http://apps.who.int/bookorders>. To submit requests for commercial use and queries on rights and licensing, see <http://www.who.int/about/licensing>.

Third-party materials. If you wish to reuse material from this work that is attributed to a third party, such as tables, figures or images, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

General disclaimers. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by WHO in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by WHO to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall WHO be liable for damages arising from its use.

Index

Acknowledgements	2
Executive summary	3
I Introduction	4
II Target audience and purpose	4
III Why urban settings are unique	4
IV Considerations in planning for urban preparedness for COVID-19	5
V Key areas of focus for urban preparedness for an effective response to COVID-19	7
1 Coordinated local plans in preparation for effective response to health risks and impacts	7
2 Risk and crisis communication and community engagement that encourage compliance with measures	7
3 Contextually appropriate approaches to public health measures, especially physical distancing, hand hygiene and respiratory etiquette	8
4 Access to healthcare services for COVID-19 and the continuation of essential services	10
VI Preparing for future emergencies	11
Additional resources	11
References	12
Annex 1: Considerations and recommendations for urban areas in preparing for COVID-19	14

Acknowledgements

This interim guidance was developed by the Health Security Preparedness Department of the WHO Health Emergencies Programme, with valuable inputs from:

- **WHO headquarters:** Health Emergencies Programme; Social Determinants of Health Department, Health Promotion Department; and Environment, Climate Change and Health Department
- **WHO Regional Office for Europe**
- **UN-Habitat:** COVID-19 Core coordination team; Urban Practices Branch; Programme Development Branch; Geneva Office
- **Local Authorities:** Local Authorities of Surabaya and Semarang, Indonesia; Greater London Authority, United Kingdom; Local Health Authority ASL Roma 1; Italy; and a city in Japan
- **Government of the Republic of Singapore**
- **Norwegian Public Health Institute**
- **Resolve to Save Lives**

Executive summary

Preparedness in cities and other urban settlements is critical for effective national, regional and global responses to COVID-19. These settings face unique dynamics that affect preparedness – they serve as travel hubs, have a higher risk of disease spread due to high population densities, and many have extensive public transport networks. Diverse subpopulations have different sociocultural needs and contain vulnerable groups. Some live in crowded and substandard housing, lack access to safe water, sanitation and hygiene facilities, and those in informal settlements are also more often unemployed or dependent on informal economies. Cities also have centres for advanced medical care and are critical to broader health systems. Local authorities have governance and policy-making responsibilities and play an important role throughout the emergency management cycle – from preparedness and readiness to response to and eventual recovery from COVID-19.

To be effective, any public health measure must be implementable and designed in a way that will promote willingness to comply. Urban authorities should:

- adopt a coordinated multisectoral, whole-of-government and whole-of-society approach;
- promote coordination and coherence in measures across governance levels;
- identify existing hazards and vulnerabilities;
- identify and equitably protect vulnerable subpopulations;
- consider diverse social and cultural interactions with health issues, norms and perceptions;
- consider the extent of reliance on the informal sector or economy;
- consider the most appropriate means of communication of information;
- ensure continued provision of essential services;
- ensure that health facilities are prepared for COVID-19 and identify and mobilize additional resources;

- ensure adequate housing, reduce risk of homelessness and anticipate outward-migration and mobility;
- ensure that due consideration is given to maintaining good mental wellbeing;
- ensure that measures are rooted in a robust evidence-base as far as possible and account for the resulting impact on lives and livelihoods.

In addition to the COVID-19 strategic preparedness and response plan (SPRP)¹ and the COVID-19 strategy update², there are four key areas that local authorities of cities and urban settlements should focus on in ensuring preparedness for a robust response to COVID-19:

- coordinated local plans in preparation for effective responses to health risks and impacts;
- risk and crisis communication and community engagement that encourage compliance with measures;
- contextually appropriate approaches to public health measures, especially physical distancing, hand hygiene and respiratory etiquette; and
- access to health care services for COVID-19 and the continuation of essential services.

During recovery or between epidemic peaks, cities and other urban settlements should refer to the interim guidance on adjusting public health and social measures in the context of COVID-19³, in ensuring that the stepping down of measures is in keeping with the considerations described, is balanced against the risk of disease resurgence, and ensures that any escalation of spread can be rapidly detected. Urgent actions for COVID-19 must set the stage for sustainable capacity development for concurrent or future health emergencies. Documentation, learning and sharing of COVID-19 experiences will help to inform and build better preparedness for reducing the risks and impacts of future health emergencies.

I. Introduction

Cities and other urban settlements are at risk of COVID-19. Many densely populated areas have experienced high case numbers and deaths, which reflects the ease of introduction and spread of the virus in such places. Urban settings face unique dynamics that have a direct impact on the achievement of preparedness for all types of health emergencies, including COVID-19. These dynamics shape the capacity of authorities to mount an effective response, which further underscores the need to learn from the experiences and best practices of others, implement appropriate measures for preparedness before a public health emergency occurs and to adjust them as necessary.

II. Target audience and purpose

This document aims to support local authorities, leaders and policy-makers in cities and other urban settlements in identifying effective approaches – taking into consideration urban vulnerabilities – and in implementing recommended actions that enhance the prevention, preparedness and readiness for COVID-19 and similar events in urban settings, and that ensure a robust response and eventual recovery. It covers key areas unique to urban settings, supplements other COVID-19 documents, including the WHO strategic preparedness and response plan (SPRP)¹ and the strategy update², and is neither exhaustive nor prescriptive.

There are many variations in definition for the term “urban setting”. For the purposes of this document, it refers to areas with a large and dense population that may be within certain administrative or political boundaries⁴.

III. Why urban settings are unique

Cities, including megacities, are highly complex settlements that are regionally and globally dependent on each other and on neighbouring towns, rural areas and places where migrants come from. They often serve as subnational, national and international hubs, with major points of entry (e.g. airports, seaports, ground crossings). These transport routes often serve as foci for transmission. Given the high population density, the risk of spread of infectious diseases is often elevated, especially in congested areas (e.g. crowded sidewalks, supermarkets, mass gatherings including cultural, sporting and religious events), and their people often rely on extensive and crowded public transportation networks to get from one place to another. There are also communities with crowded and substandard housing, have shared toileting facilities, and that lack access to safe water, sanitation and hygiene (WASH) facilities.

Urban areas also have diverse subpopulations and neighbourhoods with different sociocultural needs and vulnerable groups with regards to public health emergencies, including COVID-19 (see examples in Table 1). Rapid rural-urban migration in many parts of the world has resulted in unmanaged and unplanned urbanization, including the development of informal settlements. A substantial proportion of those living in such settlements are often unemployed or dependent on informal economies to survive. There can also be a great variety of sources of information, including word-of-mouth, leading to an increased risk of misinformation that can compound health emergency challenges in urban areas.

Table 1:

Examples of vulnerable groups in urban settings in COVID-19 outbreaks

- Informal settlements
- Urban poor
- Homeless and people living in inadequate housing conditions
- Refugees and migrants including labour markets
- Older persons, especially those at risk of isolation
- Persons with underlying medical conditions
- Socially marginalized groups
- Individuals at risk of interpersonal violence or self-inflicted harm due to physical distancing measures

Cities often have referral centres for tertiary and specialized medical care, although some serve large populations with poor access to care – at times due to financial barriers – or have health systems at risk of being overwhelmed when there is a surge in patient demand. These hospitals and health facilities are often critical to the strength of broader local and national health systems. Cities also act as points of entry for the arrival of medical and humanitarian aid.

Collectively, these dynamics call for unique preparedness measures for cities and other urban settlements. The presence of pressing health vulnerabilities and social disparities requires that they address the needs of the most vulnerable populations and build resilience in an inclusive manner. Local authorities have governance and policy-making responsibilities that often include some public health or health services and play an important role in the whole emergency management cycle – from preparedness and readiness to response and eventual recovery from COVID-19. This includes rapidly establishing new governance arrangements and partnerships to address the crisis.

IV. Considerations in planning for urban preparedness for COVID-19

Optimal preparedness in cities and urban settlements is critical for effective national, regional and global responses to COVID-19. The strategic preparedness and response plan¹; the strategy update² and critical preparedness, readiness and response actions⁵ provide key considerations and actions that all countries need to take for COVID-19. To be effective, any public health measure must be implementable and designed in a way that will promote willingness to comply. As such, in planning for health and other sectors across all stages of emergency management, urban authorities need to additionally undertake the following.

1. **Adopt a coordinated multisectoral, whole-of-government and whole-of-society approach** to preparedness to harness local resources in ensuring the effective implementation of measures (see examples in Table 2). This includes accounting for the way that public services are organized and financed locally, and for the roles of civil society and the private sector.

Table 2:

Examples of sectors that should be involved in COVID-19 preparedness in urban settings

- Health
- Social services / protection
- Mental health services
- Transport
- Housing and energy
- Education
- Communication
- Water, sanitation, hygiene
- Civil defence, security
- Commerce and economy
- Veterinary and animal health
- Parliamentarians
- ... and many others

- 2. Promote coordination and coherence in measures across different levels of governance**, from national to intermediate (e.g. state) and municipal/ local levels.
- 3. Identify existing hazards and vulnerabilities** that could emerge as concurrent health emergencies that may need to be managed alongside COVID-19. This includes the use of local risk assessments, profiles and mapping based on epidemiological risk, and the anticipated risks that may emerge from the implementation of public health measures.
- 4. Identify and equitably protect vulnerable subpopulations** at risk of poorer outcomes (see Table 1) and identify partners who may be able to reach out to these people. This includes considering the likely impact of the pandemic and public health measures on mental health and introducing safeguards, as well as the continued provision of essential social services.
- 5. Consider the diverse social and cultural interactions with health issues, norms and perceptions** in subpopulations that may influence the local uptake and effectiveness of public health measures. This includes working with community-based organizations or ethnic/religious media channels that may be trusted by certain communities. It is thus important to provide clear public health messages that are tailored to different audiences and communities and that are transmitted by suitable means. Cultural and religious traditions are also important considerations in the management of deaths.
- 6. Consider the extent of reliance on the informal sector or economy** as an important source of livelihood, especially for poorer segments of society, and possibly a source of essential goods such as food and fuel. Measures that disrupt the informal sector and livelihoods could affect the ability of populations to comply and may compromise access to essential services and lead to increased levels of crime and insecurity.
- 7. Consider the most appropriate means of communication of information**, including online and device access. This includes their use by off-site government teams and other stakeholders in coordinating the response and in interactions with the general public.
- 8. Ensure continued provision of essential services** including emergency medical and surgical services, sexual and reproductive health services, drug and alcohol misuse services, vaccination, public transport, energy supplies and repairs, housing, communication, water, sanitation and garbage disposal with safe management of infectious hazards.
- 9. Ensure that existing health facilities are prepared for COVID-19, and identify and mobilize additional resources** including those owned by local government, available in the community and other sectors, and that can be repurposed or contribute to preparedness or response activities (e.g. faith-based organizations, manufacturing plants). This includes identifying human resources and facilities to supplement health care facilities in anticipation of a surge of patient demand. Stadiums, convention centres, hotels, dormitories, military health personnel, logistics and engineering sectors, including collaboration with higher authorities at the intermediate/state and national/federal levels;

- 10. Ensure adequate housing, reduce the risk of becoming homeless and anticipate outward-migration and mobility** of population subgroups, including liaison with the local authorities at their destinations to contain further spread and ensure social protection and basic needs.
- 11. Ensuring that due consideration is given to maintaining good mental wellbeing.** This includes, where appropriate, daily access to outdoor space for exercise and ensuring safe access to public areas such as keeping parks open, with measures to reduce crowding and maintain physical distancing.
- 12. Ensure preparedness measures are rooted in a robust evidence-base as far as possible and account for the resulting impact on lives and livelihoods.** This includes proactively searching to determine how similar urban settings have managed COVID-19, learning and appropriately adapting from their experiences, and sharing evidence with one another. Local authorities should build on their experiences of COVID-19 to build sustainable capacities for longer-term health threats.

V. Key areas of focus for urban preparedness for an effective response to COVID-19

There are four key areas that local authorities of cities and other urban settlements should focus on to prevent the spread of COVID-19 and to develop resilience to and preparedness for events of a similarly disruptive nature (see Annex 1 for more details).

1. Coordinated local plans in preparation for effective responses to health risks and impacts

Cities are at the frontline in implementing the measures adopted by national governments such as the issuance of stay-at-home notices and the closure of public areas. These include nationwide measures or tailored measures in line with national frameworks. Cities also complement efforts by addressing challenges on the ground, for example by introducing targeted measures for specific vulnerable groups.

Each city and urban settlement is unique and should develop, adapt and implement its own local multisectoral and inter-jurisdictional plans to ensure that measures for COVID-19 and similarly disruptive events meet the needs of local populations. Plans must be flexible enough to react to rapidly changing epidemiological situations and account for local contexts and capacities to respond. Local authorities can also learn from similar urban settings that have already had experience of managing COVID-19.

Furthermore, coordination between different levels of government when responding to health emergencies is essential. Regardless of decentralization, cities and urban settlements need to coordinate with higher authorities in the country⁶.

Examples:

- London, United Kingdom, has established a Mutual Aid Cell that deploys volunteers and other public health expertise around the system to address capacity needs⁷.
- Through a COVID-19 Presidential Task Force, cities such as Lagos, Abuja and Kano, Nigeria, have been able to take on a comprehensive multisectoral approach to preparedness⁸.
- The Bloomberg Philanthropies' Partnership for Healthy Cities has created a learning and sharing network for urban COVID-19 response⁹.
- United Cities and Local Governments and UN-Habitat have launched the Live Learning series of webinars to allow for learning and sharing of local experiences and COVID-19 responses¹⁰.

2. Risk and crisis communication and community engagement that encourage compliance with measures

Clear and consistent public health messages are needed for all segments of society. This includes communicating local ordinances and other regulatory measures to limit spread so as to facilitate compliance. Advantage should be taken of all the multiple opportunities available in urban settings to disseminate information that supports preparedness and response measures in order to help counter the potentially rapid spread of misleading, ambiguous, and false information. The right channels and community-based networks and influencers to promote

scientific and public health messages should be identified¹¹.

Communications should be paired with active community involvement and the co-creation of solutions, such as the mobilization of volunteers through civil society organizations, civil protection and universities for the rapid deployment of knowledge and innovation. These can improve the chances of compliance, especially among vulnerable populations. It may also be challenging for people to adhere to stay-at-home orders for long periods of time, which may have an impact on mental well-being¹². Cities and other urban settlements should consider leveraging their advantage in the delivery of essential services, including food supply, WASH, health and social services in densely populated neighbourhoods, especially for vulnerable groups. Local authorities should also work with organized community groups (e.g. micro-credit groups, women's and youth networks, those engaged in informal settlements) to identify the most vulnerable within communities, combat misinformation and stigma, and enable access to medical and other essential services.

Examples:

- Singapore city implemented a communication strategy that regularly involved its Prime Minister and a WhatsApp system that transmits the Government's messages in the four official languages¹³.
- Religious leaders in some Africa cities, such as in Nairobi, Kenya, have been working with local governments to provide worshipers with information on how to protect themselves from COVID-19¹⁴.
- Municipal police in some cities in Turkey have been taking food orders from elderly people and delivering them to their homes¹⁵. Likewise, the Tunis municipality has been home delivering essential food to vulnerable populations to strengthen compliance with the general lockdown¹⁶.

- Kerala, India opened community kitchens and has been delivering cooked food at a low price to ensure that no one goes hungry during the lockdown¹⁷.
- New York City has launched a website to involve residents in the city's response to COVID-19 by self-reporting symptoms with a view to obtaining a better picture of where potential COVID-19 patients or people in self-quarantine are, and to facilitate the city government's communications with those populations¹⁸.

3. Contextually appropriate approaches to public health measures, especially physical distancing, hand hygiene and respiratory etiquette

Timely implementation of public health measures, especially physical distancing, hand hygiene and respiratory etiquette, are important to slow transmission of respiratory diseases such as COVID-19 and to allow health facilities to cope better with patient demand. Given their densely populated nature, physical distancing in cities and other urban settlements may be harder for many to achieve (e.g. multiple families in a shared space). Where physical distancing in domestic settings is not feasible, local authorities should identify public facilities where people can be quarantined. Local authorities should provide temporary and emergency accommodation to those without secure housing to enable physical distancing. Furthermore, extraordinary measures may be necessary to secure the right to housing by implementing measures such as moratoriums on evictions, deferring mortgage payments and suspension of utility costs.

Measures should balance the continued provision of essential goods and services

while maintaining physical distancing. This includes operational changes to maintain public transport services for health and essential workers while avoiding crowding. In some places, promoting safe active mobility (e.g. cycling and walking) that also supports healthy behaviours may help. There may also be a need to temporarily convert narrow vehicular roads to exclusive use by pedestrians.

Those that rely on the informal economy/sector may have difficulties in complying with measures such as the mandated closure of non-essential businesses and restrictions on population movement. Such closures may also increase job losses, especially in the food sector, and affect producers who rely on these markets. Cities and urban settings can explore coordination with non-profit and private sectors to mitigate losses in food and agriculture while maintaining access to food, especially for vulnerable subpopulations. In addition, ways to link businesses and consumers, such as through the internet, should be encouraged.

Where possible, cities and urban settlements should introduce measures to enforce physical distancing in public spaces, markets and streets without closing them entirely. This includes placing markings on the ground and restricting the direction of walking. Support by religious leaders should also be sought for suspending or modifying observances and ceremonies. Advice on the use of masks in the context of COVID-19 should also be based on the interim guidance that has been published¹⁹.

Some areas, such as informal settlements, may not have adequate access to safe WASH, which may make it difficult to comply with generic hand-

washing recommendations. These challenges necessitate community consultation and education, anticipating and meeting critical economic and basic (e.g. food and water) needs, and innovative approaches to improving access to wash stations, soaps and disinfectants, including deploying additional WASH infrastructure. This includes in facilities in public buildings, health care settings, schools and public transport stations^{20,21}.

Examples:

- In Ethiopia and Kenya where soap and water are in low supply, antimicrobial fabric requiring a minimal amount of water²², water-efficient taps and low-cost foaming soaps have been tested²³.
- Sao Paulo City Hall, Brazil has also installed sinks with potable water in streets to improve hand hygiene in crowded locations²⁴.
- The number of passengers allowed on board a single bus has been reduced in Latvia, with passengers only allowed to take every second seat²⁵. In some cities, sale of tickets by bus drivers has stopped and passengers are only allowed board through rear doors²⁶. Bogota, Colombia, closed streets to cars to create more space for people to walk and cycle, promoting physical distancing in their daily commute²⁷.
- Morocco introduced measures to help families and individuals working in the informal sector directly affected by the COVID-19 lockdown²⁸.
- The Municipality of Barcelona, Spain, finalized an agreement with the Touristic Business Association to allocate 200 apartments, originally destined for tourism, as emergency housing for families in vulnerable situations and homeless²⁹. Rio de Janeiro, Brazil has made rooms available in local hotels to host elderly residents of informal settlements to enable proper physical distancing³⁰.

4. Access to healthcare services for COVID-19 and the continuation of essential services

Urban settings often have national referral centres and need to be prepared to manage surges in demand. This includes having a plan for case management of COVID-19 in health facilities and the community^{31,32}, ways to increase the capacities of health services and transfers between health facilities for load-balancing. Where possible, cities and urban settlements should project surge using modelling and health care data from affected areas. Barriers to accessing health care, including testing, may be amplified during emergencies and should be addressed to maximize continued access by all who require it. Social care plays an important role in providing access to healthcare and supporting demand management within the healthcare system. Essential health services for other medical conditions, including vaccinations, must continue to prevent excess morbidity and mortality³³. Continuation of primary health care services is also essential and, where possible, technological solutions such as telemedicine should be considered. Scarce personal protective equipment (PPE) should also be prioritized for health care workers to ensure sufficient protection while carrying out their work.

Ensuring the continuity of essential services beyond health also contributes to the prevention and control of COVID-19. This includes having a clear list of essential public services and infrastructure, ensuring prioritization and their continued provision, whether provided by local governments or independent service providers. Essential services include social services, including home care, public transport, WASH services including waste disposal, and food and energy supplies.

Examples:

- Private hospitals in Islamabad, Pakistan have offered beds, isolation rooms and ventilators to increase the city's capacity in managing COVID-19³⁴.
- The Jawaharlal Nehru Stadium in New Delhi, India, has been converted into a quarantine facility for COVID patients³⁵. Madrid, Spain has converted an ice rink into a morgue³⁶ and London, United Kingdom has turned a convention centre into a hospital for COVID-19 patients³⁷.
- Both Ministries of Health and of University and Research in Italy expedited the graduation of final-year medical students to increase the healthcare workforce at city levels³⁸.
- Cities in the United States of America have rolled out drive-through COVID-19 testing sites to reduce demand on health care facilities³⁹.

risk³. This includes assessing the sustainability and impact of measures, especially for vulnerable groups.

Urgent actions taken by cities and other urban settlements for COVID-19 must set the stage for sustainable capacity development for concurrent or future health emergencies. Funding for managing COVID-19 should be applied in a manner that contributes to these interrelated objectives, and actions to respond urgently to the pandemic should transition into longer-term actions, anchored in plans and health systems that can surge to meet the needs imposed by other health emergencies. Special consideration to these aspects should be given when urban settings are in the preparedness and readiness phase, are moving from response to recovery or are between COVID-19 epidemic peaks.

VI. Preparing for Future Emergencies

In the transition to recovery or to periods between epidemic peaks, cities and urban settlements should ensure that the phased transition away from measures for COVID-19 is conducted in keeping with the considerations described above, and will enable the sustainable suppression of transmission at a low-level whilst enabling the resumption of some parts of economic and social life, prioritized by carefully balancing socio-economic benefit and epidemiological

Cities and urban settlements should also document, learn, share and adapt during their COVID-19 experience, including taking proactive steps to collect evidence and advocate for the financing of sustainable capacities. When appropriate, they may also wish to conduct a formal after action review (AAR). Doing so would ensure that progress in emergency preparedness made during the current outbreak confers benefits to the wider health system and helps to inform and build better preparedness for reducing the risks and impacts of future events.

Additional Resources

Local authorities of urban settings may find additional information on COVID-19 that is relevant to them at the following website: <https://www.who.int/teams/risk-communication/cities-and-local-governments/>

Additional preparedness resources can be found at the Strategic Partnership for IHR and Health Security Website: <https://extranet.who.int/sph/>

References

1. Strategic preparedness and response plan for the new coronavirus. Geneva, World Health Organization, 2020. (<https://www.who.int/publications-detail/strategic-preparedness-and-response-plan-for-the-new-coronavirus>, accessed 24 April 2020).
2. COVID-19 Strategy Update. Geneva, World Health Organization, 2020. (<https://www.who.int/docs/default-source/coronaviruse/covid-strategy-update-14april2020.pdf>, accessed 24 April 2020).
3. Considerations in adjusting public health and social measures in the context of COVID-19. Geneva, World Health Organization, 2020. (https://apps.who.int/iris/bitstream/handle/10665/331773/WHO-2019-nCoV-Adjusting_PH_measures-2020.1-eng.pdf, accessed 24 April 2020).
4. United Nations Expert Group Meeting on Sustainable Cities, Human Mobility and International Migration, New York, 7–8 September 2017: report of the meeting. New York: United Nations; 2017 (https://www.un.org/en/development/desa/population/events/pdf/expert/27/2017_09-EGM_ReportoftheMeeting.pdf, accessed 24 April 2020).
5. Critical preparedness, readiness and response actions for COVID-19. Geneva, World Health Organization, 2020. (<https://www.who.int/publications-detail/critical-preparedness-readiness-and-response-actions-for-covid-19>, accessed 24 April 2020).
6. Operational Planning Guidelines to Support Country Preparedness and Response. Geneva, World Health Organization, 2020. (<https://www.who.int/docs/default-source/coronaviruse/covid-19-sprp-unct-guidelines.pdf>; accessed 24 April 2020).
7. Mayor of London, London Assembly. Coronavirus (COVID-19) Volunteering. 2020. (<https://www.london.gov.uk/what-we-do/volunteering/coronavirus-covid-19-volunteering>, accessed 24 April 2020).
8. Di Caro B, Beech P. COVID-19 in Africa: insights from our 23 April WHO media briefing. World Economic Forum. 23 April 2020. (<https://www.weforum.org/agenda/2020/04/covid19-in-africa-our-media-briefing-with-who>, accessed 24 April 2020).
9. Partnership for Healthy Cities launches online platform to support city leaders responding to COVID-19. New York: Partnership for Health Cities; 15 April 2020 (<https://www.bloomberg.org/press/releases/partnership-for-healthy-cities-launches-online-platform-to-support-city-leaders-responding-to-covid-19/>, accessed 24 April 2020).
10. #BeyondTheOutbreak (live learning experience beyond the immediate response to the outbreak) [webinar series facilitated by United Cities and Local Governments, Metropolis and UN-Habitat]. Barcelona: United Cities and Local Governments; 2020 (<https://www.uclg.org/en/issues/live-learning-experience-beyondtheoutbreak>, accessed 24 April 2020).
11. Risk Communication and Community Engagement (RCCE) Action Plan Guidance COVID-19 Preparedness and Response. Geneva, World Health Organization, 2020. ([https://www.who.int/publications-detail/risk-communication-and-community-engagement-\(rcce\)-action-plan-guidance](https://www.who.int/publications-detail/risk-communication-and-community-engagement-(rcce)-action-plan-guidance), accessed 24 April 2020).
12. Mental health and psychosocial considerations during the COVID-19 outbreak. Geneva, World Health Organization, 2020. (<https://www.who.int/publications-detail/WHO-2019-nCoV-MentalHealth-2020.1>, accessed 24 April 2020).
13. Campbell E, McGregor L. These five strategies have helped Singapore fight off the coronavirus outbreak. Can they keep it at bay? ABC News. 31 March 2020 (<https://www.abc.net.au/news/2020-03-31/coronavirus-singapore-how-it-fought-the-virus/12100072>, accessed 24 April 2020).
14. Religious leaders join COVID-19 fight in Africa. WHO Regional Office for Africa. 23 April 2020. (<https://www.afro.who.int/news/religious-leaders-join-covid-19-fight-africa>, accessed 24 April 2020).
15. Cvorak M. From bingo to ballet: communities connect during coronavirus lockdown – video report. The Guardian. 24 March 2020 (<https://www.theguardian.com/world/video/2020/mar/24/from-bingo-to-ballet-communities-find-ways-to-connect-during-coronavirus-lockdown-video-report>, accessed 24 April 2020).
16. Coronavirus-solidarité: Des couffins livrés à domicile, par la municipalité de Tunis. Kapitalis. 4 April 2020. (<http://kapitalis.com/tunisie/2020/04/04/coronavirus-solidarite-des-couffins-livres-a-domicile-par-la-municipalite-de-tunis/>, accessed 24 April 2020).
17. Swamy R. This is how Kerala govt, police and residents are helping the poor and fighting Covid-19. The Print. 30 March 2020 (<https://theprint.in/india/this-is-how-kerala-govt-police-and-residents-are-helping-the-poor-and-fighting-covid-19/389533/>, accessed 24 April 2020).
18. Freed B. New York City launches portal to crowdsource COVID-19 information. Statescoop. 31 March 2020 (<https://statescoop.com/new-york-city-coronavirus-information-portal/>, accessed 24 April 2020).
19. Advice on the use of masks in the context of COVID-19. Geneva, World Health Organization, 2020. ([https://www.who.int/publications-detail/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-\(2019-ncov\)-outbreak](https://www.who.int/publications-detail/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-(2019-ncov)-outbreak), accessed 24 April 2020).
20. Water, sanitation, hygiene and waste management for COVID-19. Geneva, World Health Organization, 2020. (<https://www.who.int/publications-detail/water-sanitation-hygiene-and-waste-management-for-covid-19>, accessed 24 April 2020).
21. Recommendations to Member States to improve hand hygiene practices to help prevent the transmission of the COVID-19 virus. Geneva, World Health Organization, 2020. (<https://www.who.int/publications-detail/recommendations-to-member-states-to-improve-hand-hygiene-practices-to-help-prevent-the-transmission-of-the-covid-19-virus>; accessed 24 April 2020).

22. White S, Petz JF, Desta K, Larsen TH. Could the Supertowel be used as an alternative hand cleaning product for emergencies? An acceptability and feasibility study in a refugee camp in Ethiopia. *PLOS One*. 2019;14(5): e0216237. <https://doi.org/10.1371/journal.pone.0216237>.
23. Whinnery J, Penakalapati G, Steinacher R, Wilson N, Null C, Pickering AJ. Handwashing with a water-efficient tap and low-cost foaming soap: the Povu Poa "Cool Foam" system in Kenya. *Glob Health Sci Pract*. 2016;4(2):336–41. <https://dx.doi.org/10.9745%2FGHSP-D-16-00022>.
24. Updates from March 26 to 31, 2020. Sao Paulo City International Affairs. 1 April 2020. (<https://www.docdroid.net/kSmLieL/covid19-pmsao-paulo-city-aprilo1-pdf>, accessed 24 April 2020).
25. Rules for public transport bus use change in Latvia to limit Covid-19 spread. *Baltic News Network*. 27 March 2020 (<https://bnn-news.com/rules-for-public-transport-bus-use-change-in-latvia-to-limit-covid-19-spread-211793>, 24 April 2020).
26. Meeting Report - Extraordinary Meeting of the WHO European Healthy Cities Network and National Network Coordinators. 19 March 2020.
27. Colombia bans gatherings of more than 50, Bogotá and Medellín declare "calamity". *The City Paper*. 16 March 2020 (<https://thecitypaperbogota.com/news/colombia-bans-gatherings-of-more-than-50-bogota-and-medellin-declare-calamity/24114>, accessed 24 April 2020).
28. Kasraoui S, Hekking M. Morocco announces financial assistance for informal sector workers. *Morocco World News*. 27 March 2020 (<https://www.moroccoworldnews.com/2020/03/297815/morocco-announces-financial-assistance-for-informal-sector-workers/>, accessed 24 April 2020).
29. Barcelona dispondrá de 200 apartamentos turísticos para alojar a familias vulnerables. *El País*. 20 March 2020. (<https://elpais.com/espana/catalunya/2020-03-20/barcelona-dispondra-de-200-apartamentos-turisticos-para-alajar-a-familias-vulnerables.html>, accessed 24 April 2020).
30. Agência Brasil. Rio: idosos de comunidades podem ficar em hotéis para evitar covid-19. *Correio Braziliense*. 26 March 2020 (<https://www.correio braziliense.com.br/app/noticia/brasil/2020/03/26/interna-brasil,839963/rio-idosos-de-comunidades-podem-ficar-em-hotéis-para-evitar-covid-19.shtml>, accessed 24 April 2020).
31. Coronavirus disease (COVID-19) technical guidance: Patient management. Geneva, World Health Organization, 2020. (<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/patient-management>, accessed 24 April 2020).
32. Operational considerations for case management of COVID-19 in health facility and community. Geneva, World Health Organization, 2020. (<https://www.who.int/publications-detail/operational-considerations-for-case-management-of-covid-19-in-health-facility-and-community>, accessed 24 April 2020).
33. COVID-19: Operational guidance for maintaining essential health services during an outbreak. Geneva, World Health Organization, 2020. (<https://www.who.int/publications-detail/covid-19-operational-guidance-for-maintaining-essential-health-services-during-an-outbreak>, accessed 24 April 2020).
34. Private hospitals in Islamabad offer 1,000 beds, 80 ventilators for Covid-19 patients. *Dawn*. 25 March 2020 (<https://www.dawn.com/news/1543497>, accessed 24 April 2020).
35. Jawaharlal Nehru Stadium to be converted into quarantine centre after Delhi government's request: SAI. *India Today*. 30 March 2020 (<https://www.indiatoday.in/sports/other-sports/story/coronavirus-pandemic-jawaharlal-nehru-stadium-quarantine-centre-delhi-governments-request-sai-training-centres-covid-19-patients-1661501-2020-03-30>, accessed 24 April 2020).
36. Goodman A, Maestro LP, Formanek I, Ramsay M, Kottasová I. Spain turns ice rink into a morgue as coronavirus deaths pile up. *CNN*. 24 March 2020 (<https://edition.cnn.com/2020/03/24/europe/spain-ice-rink-morgue-coronavirus-intl/index.html>, accessed 24 April 2020).
37. Coronavirus: Nightingale Hospital opens at London's ExCel centre. *BBC*. 3 April 2020 (<https://www.bbc.com/news/uk-52150598>, accessed 24 April 2020).
38. Di Donata V, McKenzie S. Fresh out of medical school, young Italian doctors are being fast-tracked to the coronavirus frontline. *CNN*. 30 March 2020 (<https://edition.cnn.com/2020/03/30/europe/italy-young-doctors-coronavirus-intl/index.html>, accessed 24 April 2020).
39. Yancey-Bragg N. Going to a drive-thru COVID-19 testing site? Here's a step-by-step look at what to expect. *USA Today*. 21 March 2020 (<https://eu.usatoday.com/story/news/health/2020/03/20/drive-thru-coronavirus-testing-step-step-look-what-expect/2873324001/>, accessed 24 April 2020).

ANNEX 1: Considerations and recommendations for urban areas in preparing for COVID-19

Objective	Considerations in Urban Areas	Recommendations for Urban Areas
<p>Coordinated local plans in preparation for effective responses to health risks and impacts</p>	<p>Local authorities may have significant governance, coordination and policy-making responsibilities that may change as the outbreak evolves</p>	<ul style="list-style-type: none"> • In developing a local COVID-19 response plan, adopt a local multisectoral and multi-stakeholder approach to collaboration and coordination, including involvement of local authorities and relevant sectors in preparedness and response plans. This includes the identification of supply chains, mobilization of cross-sectoral workforce, engagement of local institutions, established community leaders and groups, and professional associations. • Conduct capacity assessments and risk analysis: to determine potential hot-spots at high risk of transmission, such as marketplaces, public transport lines; to identify infrastructure vulnerabilities including location of vulnerable groups and their access to public services such as health care, WASH and food distribution; and to map local assets and facilities that can support the expansion and continuation of essential services. • Develop a coherent strategy to contain the spread and mitigate the impacts of COVID-19 during different stages of the outbreak. This includes approaches for contact tracing, quarantine for the exposed, isolation for those who are ill, access to food, and support to food systems in urban and outward-migration areas. • Guided by the COVID-19 strategic preparedness and response plan (SPRP) and national plans, determine and implement priority actions that would lead to better capacities to prevent, detect, assess and respond at the local level. Investments are also needed for sustainable capacities for future and concurrent emergencies beyond COVID-19.
	<p>Local authorities (e.g. municipalities, governorates) need to coordinate with surrounding and higher authorities to ensure coherent, aligned and effective preparedness and response</p>	<ul style="list-style-type: none"> • Establish and test two-way communication with higher authorities (e.g. subnational/state and national) and surrounding local authorities, including regular updates on the local situation and federal/national guidance on measures for preparedness and response. • Establish and test two-way coordination with higher authorities and surrounding local authorities, including access to supply chains and the deployment of resources such as health care personnel, medicines, supplies and other logistics. Local measures should be aligned with nationwide measures or in keeping with national frameworks.

Objective	Considerations in Urban Areas	Recommendations for Urban Areas
Coordinated local plans in preparation for effective response to health risks and impacts	Cities are highly connected to other parts of the country and internationally via points of entry	<ul style="list-style-type: none"> • Develop, test and implement points of entry preparedness measures with appropriate and proportionate restrictions on non-essential domestic and international travel. Plans should include the use of points of entry for the delivery of medical and humanitarian supplies. • Develop measures to manage urban–rural movement and vice versa, to minimize disease spread and ensure support to food systems.
	The wealth of experience can be shared with others for better preparedness and response	<ul style="list-style-type: none"> • Learn from the experiences and adapt relevant actions of similar urban settings that are facing or have managed COVID-19. This includes the activation of relevant inter-city networks, and through case studies collated by WHO and circulated through the Global Strategic Preparedness Network (GSPN). • Develop a mechanism to document actions on strengthening capacities, experiences and lessons, and share these with other urban settings.
Risk and crisis communication and community engagement that encourage compliance with measures	Populations have access to multiple sources of information, some of which may lead to misinformation	<ul style="list-style-type: none"> • Develop, test and implement innovative but pragmatic solutions for health risk communication appropriate to the local context. This includes transparency, clarity and consistency, explaining the rationale of measures, and the use of traditional, non-traditional and social media. These messages may change as the situation evolves and should be in local languages. • Monitor and analyse public perceptions, knowledge and attitudes (e.g. through rapid surveys), including identifying gaps and misinformation. • Develop, test and implement proactive steps to correct misinformation. • Develop, test and implement health risk communication messages for specific groups of workers that need to be protected while conducting essential services (e.g. in grocery stores and postal services).
	Vulnerable populations are harder to reach and may have challenges in complying with measures, especially in areas with housing inequalities	<ul style="list-style-type: none"> • Identify and map vulnerable subpopulations in urban areas, develop and test innovative but pragmatic solutions to reach out to these groups, and disseminate information, including through civil society partners. • Develop pragmatic measures and evaluate their expected impact on lives and livelihoods, especially for vulnerable populations. This includes considering the sustainability of measures and their impact on physical, social and mental health. <p style="text-align: right;"><i>[continued overleaf]</i></p>

Objective	Considerations in Urban Areas	Recommendations for Urban Areas
<p>Risk and crisis communication and community engagement that encourage compliance with measures</p>	<p>Vulnerable populations are harder to reach and may have challenges in complying with measures, especially in areas with housing inequalities</p>	<ul style="list-style-type: none"> ▪ Maximize the wide range of available community resources (i.e. adopting a local whole-of-society approach) for the outreach and implementation of measures. This includes tapping on community leaders, social networks for community engagement such as grassroots movements and religious leaders, and the private sector. ▪ Build on existing community networks used for delivering other health intervention, such as immunization.
<p>Contextually appropriate approaches to public health measures, especially physical distancing, hand hygiene and respiratory etiquette</p>	<p>There are large numbers of people to manage, spread may be faster in congested places, and there are heterogenous subpopulations with unique needs</p>	<ul style="list-style-type: none"> ▪ Develop and test possible innovative but pragmatic solutions for physical distancing in public places appropriate to the local context. This includes measures such as limiting mass gatherings, and the selective closure of enclosed public venues. Consider ways to promote physical distancing in public spaces that remain open (e.g. green and natural spaces, temporary closure of narrow vehicular roads). ▪ Develop and test possible innovative but pragmatic solutions to physical distancing in domestic settings appropriate to the local context. This includes home isolation of cases, home quarantine of contacts, and measures to limit movement out of homes while reducing overcrowding within homes. Where this is not feasible, the use of public assets and facilities should be explored. ▪ Develop and test possible innovative but pragmatic solutions to limiting physical contact in social settings. This includes alternatives to handshakes, hugs and cheek kissing, as well as closures of schools, religious centres, entertainment venues, and limiting visits to elderly and chronic care centres and prisons. ▪ Set in place protective measures to facilitate physical distancing measures (e.g. food delivery services, temporary and emergency housing in vacant units or repurposed buildings) and implement extraordinary measures to reduce the risk of homelessness, such as postponing rental and mortgage payments and evictions.

Objective	Considerations in Urban Areas	Recommendations for Urban Areas
<p>Contextually appropriate approaches to public health measures, especially physical distancing, hand hygiene and respiratory etiquette</p>	<p>Physical distancing at centres of commerce and economic activity, that employ large numbers of individuals, are needed</p>	<ul style="list-style-type: none"> Engage businesses, associations and corporations in implementing physical distancing measures, including encouraging and testing business continuity plans including working from home where possible or necessary and substituting physical shopping with delivery services / options for pick-up. Develop ways to mitigate the impact of physical distancing measures on livelihoods especially for those that dependent on the informal economy (e.g. relief packages).
	<p>Health risks on public transportation, used for movement within urban areas, should be reduced</p>	<ul style="list-style-type: none"> Develop, test and implement innovative but pragmatic solutions for reducing health risks on public transportation systems, appropriate to the local context. This includes protecting public transport workers. Operational changes to maintain services while reduce crowding should be considered. This includes encouraging working remotely and travelling during non-peak periods, rearranging routes and the number of public transport vehicles, promotion of safe active mobility (e.g. walking and cycling), as well as cleaning and disinfection procedures. Priority should be given to essential workers who need to continue to travel to work.
	<p>Subpopulations may not have good access to WASH facilities</p>	<ul style="list-style-type: none"> Develop, test and implement innovative but pragmatic solutions for personal, hand hygiene and respiratory etiquette in the community, appropriate to the local context. This includes the use of simple and accurate educational materials, installing additional WASH infrastructure and practical alternatives for subpopulations with limited access to WASH facilities.
<p>Access to health care services for COVID-19 and the continuation of essential services</p>	<p>Hospitals and health facilities in cities and other urban settings are often national referral centres</p>	<ul style="list-style-type: none"> Establish and test a plan for case management of COVID-19 in health facilities and the community, with the support of an emergency operations centre if possible, including managing a surge in demand, deployment of healthcare personnel and additional resources and facilities (e.g. stadiums and military health services), and meeting infection prevention and control needs. Develop and test innovative solutions to increase capacities of health services while ensuring adequate protection for healthcare workers. This includes involvement of private hospitals, mobilisation of qualified volunteers (e.g. retirees, final year medical students), as well as increasing the quantity of medical devices and personal protective equipment (PPE). Plan for transfer arrangements between overloaded hospitals. This includes between cities within a country or internationally.

Objective	Considerations in Urban Areas	Recommendations for Urban Areas
<p>Access to health care services for COVID-19 and the continuation of essential services</p>	<p>Essential health services may be affected due to diversion of resources</p>	<ul style="list-style-type: none"> Establish and test a plan to ensure the continuity of essential medical services. This includes emergency medical and surgical services and vaccinations. Continuing primary care is essential and where possible, the use of technological solutions such as telemedicine should be considered.
	<p>Subpopulations may not have good access to testing services and healthcare facilities required for COVID-19</p>	<ul style="list-style-type: none"> Develop and test possible innovative but pragmatic solutions for access to COVID-19 evaluation, testing and contact tracing and prepare healthcare facilities. This include mobile testing units and drive-in testing facilities. Develop and test possible innovative but pragmatic solutions to ensure that populations have access to medical care for COVID-19, at home or in health facilities, or remotely through telemedicine when necessary.
	<p>The number of deaths may stress or exceed existing capacities of the burial and crematory services</p>	<ul style="list-style-type: none"> Develop arrangements for the alternate and temporary management of funerals, burials and cremations appropriate to the local context. This includes adequate physical distancing at ceremonies.
	<p>There is a need to ensure the continuation of essential public services beyond the health sector</p>	<ul style="list-style-type: none"> Define the list of essential public services and basic needs that must be maintained and those that can be postponed, and communicate this widely. Develop and test standard operating procedures (SOPs) and business continuity plans (BCPs) for urban areas to ensure the continuation of essential public services based on scenarios such as workplace absenteeism, teleworking and limited resources (e.g. funds, staff, and logistics). These procedures and plans may include moving services online, freeing up internet bandwidth, involvement of volunteers and the private sector where necessary.

