World Health Organization
REGIONAL OFFICE FOR **Europe**

Strengthening the health system response to COVID-19

Recommendations for the WHO European Region

Policy brief (1 April 2020)

The early experience in countries with large-scale community transmission (China, Iran, Italy and Spain) shows that COVID-19 requires unprecedented mobilization of health systems. By acting urgently, countries that have not yet entered community transmission may have a narrow opportunity to slow transmission and prepare their health systems to mitigate the impact of the outbreak. This note summarizes recommendations to strengthen the health system response to COVID-19 in the WHO European Region, to break chains of transmission and to diagnose and treat cases while maintaining essential services. The 16 recommendations reflect the characteristics of COVID-19, existing evidence- and experience-informed practices in health system organization and financing, and emergent practices in the response to COVID-19 within the Region and globally. (*profilassi*) (*sanità*) (*misure di contenimento e gestione*)

Table 1. Summary of 16 health system recommendations to respond to COVID-19

1. Expand capacity for communication and proactively manage media relations.	2. Bolster capacity of essential public health services to enable emergency response.	3. Clarify first-point-of-contact strategy for possible COVID-19 cases: phone, online, physical.	4. Protect other potential first-contact health system entry points.
5. Designate hospitals to receive COVID-19 patients and prepare to mobilize surge acute and ICU capacity.	6. Organize and expand services close to home for COVID-19 response.	7. Maintain continuity of essential services while freeing up capacity for COVID-19 response.	8. Train, repurpose and mobilize the health workforce according to priority services.
9. Protect the physical health of frontline health workers.	10. Anticipate and address the mental health needs of the health workforce.	11. Review supply chains and stocks of essential medicines and health technologies.	12. Mobilize financial support and ease logistical and operational barriers.
13. Assess and mitigate potential financial barriers to accessing care.	14. Assess and mitigate potential physical access barriers for vulnerable groups of people.	15. Optimize social protection to mitigate the impact of public health measures on household financial security.	16. Ensure clarity in roles, relationships and coordination mechanisms in health system governance and across government.

Motivation

European Member States share common concerns about the readiness and capacity of their health systems to respond to the novel coronavirus (SARS-CoV-2) COVID-19 pandemic. The profile of the disease suggests that while 80% of cases are mild, some 15% of people react severely and another 5% become critically unwell (septic shock, respiratory and organ failure). Severe cases disproportionately affect older people and those with underlying conditions such as cardiovascular disease, hypertension and diabetes; this is a particular concern in many European countries characterized by older populations.

In China, 15-20% of cases required hospitalisation, with around 15% severe and 5% requiring intensive care[1]. In Italy, approximately 40% of patients have been hospitalised, with close to 7% admitted to intensive care units[2]. There is significant variation in acute care and intensive care capacity in the WHO European Region. The number of intensive care beds per 100 000 population ranges from 4.2 in Portugal to 46 in Turkey, with 6.6 in the United Kingdom, 9.7 in France, 12.5 in Italy and 29.2 in Germany. The number of doctors per 1000 population ranges from 1.9 in Turkey to 5.2 in Austria. Relevant skills, competencies and pandemic training also vary.

During community transmission, countries will need to find ways to create surge capacity to treat COVID-19 patients while maintaining essential services. This requires a comprehensive and well aligned set of policies to reorient the complex machinery of health systems. The extent to which health systems need to be reoriented depends on the success of public health measures (including social distancing) to slow transmission and spread incidence over a longer time period (flattening the curve). These approaches are critical to reduce surge capacity needs during the outbreak, ensure that health systems can cope, and prevent hospital care units and ICUs from becoming overwhelmed. (*misure di contenimento e gestione*)

WHO has issued a wide range of technical guidance on the COVID-19 response[3], including on country-level coordination, planning and monitoring; surveillance, rapid response teams and case investigation; national laboratories; case management (hospital care and home care); infection prevention and control; early investigation protocols; risk communication and community engagement; operational support and logistics; reduction of transmission from animals to humans; and points of entry and mass gatherings. Many of these guidance documents already include important health system measures and policies reflecting clinical and public health action.

This policy brief aims to provide additional guidance on strengthening health systems and rapidly reorganizing service delivery to respond to COVID-19, including through the expansion of capacity for management of emergency, respiratory and intensive care, while maintaining core essential services across the continuum of care.

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[1] https://jamanetwork.com/journals/jama/fullarticle/2762130.

[2] https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(20)30110-8/fulltext.

[3] All COVID-19 technical guidance by topic: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance.

Policy recommendations

1. **Expand capacity for communication and proactively manage media relations.** Boost the communication team at ministries of health, public health agencies and local governments in charge of coordinating the response. To supplement risk-communication efforts[4], develop clear messages related to symptom recognition, first contact, appropriate use of health services, financial access and social protection measures related to COVID-19. In addition, increase communication efforts related to essential (non-COVID-19-related) health services to reassure the population about the continuity and supply of these services, medicines and equipment. Several countries have found it useful to hold daily or twice-daily media briefings to share accurate and up-to-date information. Work with the media, including social media, on the public health response by using official updates and information from trusted sources. Rely on trusted and well known clinical figures to deliver messages of calm and guide people in the appropriate use of health services. Create a joint task force with relevant journalists and influencers, develop brief trainings to convey structured messages and provide preferential access to information briefs. High-level officials can act as role models (for example, by practising social distancing at cabinet meetings). (*comunicazione*)

2. **Bolster capacity of essential public health services to enable emergency response.** National and local public health services play an integral role in the response to COVID-19, providing essential services to the government, the health- and social-care systems, and the general public. Experience in countries such as China, Iran, Italy and Spain has been that key public health services need to be delivered on an unprecedented scale, and countries should urgently establish surge capacity to deliver services such as: (a) laboratory testing, contract tracing and risk assessment; (b) epidemiological analysis and surveillance; (c) evidence-informed policy advice on non-pharmaceutical interventions and guidance to the health and other sectors on their roles in the response; (d) identification of vulnerable groups such as older people and migrants, and tailored interventions to account for their needs; and (e) evidence-informed information for the general public. (*misure di sorveglianza*)

3. **Clarify first-point-of-contact strategy for possible COVID-19 cases: phone, online, physical.** As the outbreak moves into community transmission, an increasing number of people will seek health services. Develop a first-point-of-contact strategy with commensurate capacity-expansion plans. Make an effort to clearly communicate this process to all people, including vulnerable groups and foreign nationals. The main options for first contact include a centralized hotline, an online platform, and physical locations in specially established temporary centres or primary care facilities. In Wuhan, China, and in a number of western European countries (Spain, the United Kingdom), people with COVID-19 suspicion or symptoms have been urged to contact the health system through emergency hotlines and online platforms with chatbots to alleviate some of the burden on the call centres and health facilities. This approach protects health workers in primary care centres and hospitals, as well as individuals visiting those health facilities for other reasons. The call centres must have clear algorithms and visual aids to triage calls and indicate the appropriate patient pathway[5]. These should be based on a single, nationally available triage

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[4] Technical guidance on risk communication and community engagement: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/risk-communication-and-community-engagement.

[5] Technical guidance on patient management: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/patient-management.

protocol for responding to COVID-19 that addresses potential pathways. To cope with the increased numbers of calls or online notifications to call centres, more staff will be needed; this surge capacity can also be achieved through trained volunteers or, where appropriate, redeployed government workers. These individuals will need training on triage and activation of relevant patient pathways.

4. **Protect other potential first-contact health system entry points.** Even with an effectively communicated first-point-of-contact strategy, assume that people may not follow instructions and may approach health facilities not designated or prepared to act as first-contact entry points (primary- and community-level services, pre-hospital and ambulance services, emergency departments, acute medicine departments, children's and maternity services, services for armed forces, health and justice services, occupational health departments of organizations/business, or other public institutions). Unprotected health workers are at elevated risk of possibly severe outcomes, based on the experience of China and Italy. It is therefore critically important to prepare health facilities and protect health workers not on the official pathway to deal with unexpected cases. To do so, put in place and activate standard operating procedures that include measures for assessing and isolating individuals, preventing and controlling infection[6], protecting staff, and initiating notification systems. Ensure that the national triage protocol is available to guide and initiate the most appropriate care pathway[7]. (See also policy recommendation 9 on protecting health workers.) (*presidi ospedalieri*) (*personale*)

5. **Designate hospitals to receive COVID-19 patients and prepare to mobilize surge acute and ICU capacity.** Assess, estimate and continuously review needed hospital capacity to provide care to COVID-19 patients with severe or critical presentations, by region. Surge calculators can help feed in demographic data, outbreak characteristics and treatment guidelines. The experience of countries ahead of the epidemic curve can also provide helpful insights into the share of patients needing hospitals and ICU beds, although this also depends on treatment protocols. Designate hospitals to manage COVID-19 cases. Evaluate their readiness to treat COVID-19 patients without jeopardizing their ability to treat other people (see the WHO hospital readiness checklist for COVID-19[8]). Hospitals organized in pavilions continue to exist in many countries of the Region and can help to prevent intra-facility transmission by concentrating COVID-19 patients in one pavilion. In particular, review critical care and ICU capacity while considering regional demography, and postpone non-urgent and elective procedures to repurpose operating rooms and recovery rooms into ICUs. (See also policy recommendation 6 on organizing and expanding services.) (*presidi ospedalieri*)

6. **Organize and expand services close to home for COVID-19 response.** Patients with mild symptoms and without underlying chronic conditions may be cared for at home[9]. Mild cases will not need any intervention. However, it may be helpful to establish communication with local

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[6] Technical guidance on infection prevention and control: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/infection-prevention-and-control.

[7] Technical guidance on patient management: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/patient-management.

[8] Hospital readiness checklist for COVID-19: http://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/novel-coronavirus-2019-ncov-technical-guidance/coronavirus-disease-covid-19-outbreak-technical-guidance-europe/hospital-readiness-checklist-for-covid-19.

[9] Interim guidance on home care for patients with COVID-19 presenting with mild symptoms and management of their contacts: https://www.who.int/publications-detail/home-care-for-patients-with-suspected-novel-coronavirus-(ncov)-infection-presenting-with-mild-symptoms-and-management-of-contacts.

health-care providers so they can check on patients via telephone or digital solutions, educate household members about home isolation procedures, observe the progression of conditions and act if severity increases. Primary care enrollment databases can be used in well digitalized health systems to quickly identify patients and their contact numbers and tag them for follow-up. There will be large variation in the availability of home-based care across the European Region. Some countries with existing home-care support can activate and expand it easily. Others may need to repurpose community health networks. There are countries where this option will not be available due to resource constraints. Where it is activated, it is important to involve health professionals, including from primary care centres, community public health organizations and community health networks, in designing the mechanism for expanding home care.

7. **Maintain continuity of essential services while freeing up capacity for COVID-19 response.** Identify essential medicines, services and equipment whose continuity must be maintained (for example, for antenatal care, births, management of chronic diseases, renal dialysis, urgent response, critical care services, etc.). Protect populations seeking care for other health conditions from contact with COVID-19 patients in health facilities by reinforcing standard operating procedures for facility-based infection control mechanisms in primary care, during transport and in hospitals, including separated pathways and dedicated hospital equipment. Reduce the number of people that have access to hospitals, namely patients, students, medical representatives, patient visitors, etc. Identify services, including elective treatment, that can be postponed or delivered through alternative mechanisms. Consider mechanisms, for example, to postpone all non-urgent hospitalizations and specialist visits, to extend the length of prescription for chronic patients, and to move more primary care and non-urgent activities to online/digital platforms. In many countries, acute hospital beds are occupied by patients requiring social care and could be more actively discharged to step-down and other facilities, in synergy with community and home-care providers. Use telephone and digital health tools to free up health personnel and to reduce emergency department attendances and hospital admissions.

8. **Train, repurpose and mobilize the health workforce according to priority services.** As services shift in their priorities, the workforce will need to be repurposed, mobilized and reassigned to deliver these services. Anticipate health workers coming down with illness despite protection efforts either through work- or community-acquired infection, and build in contingencies. Consider internal mobilization before seeking support externally (for example, armed forces, volunteers). Implement existing plans to increase surge capacity, or rapidly develop new pragmatic ones to enable care for affected people in their place of residence. For example, review staff rosters and mobilize reserve capacity; mobilize staff from other specializations with basic training in infection control and physical care skills; rely on pharmacists to provide front-line advice to the public and to resolve supply chain difficulties; and call on volunteers. Retired staff may be encouraged to return to work in low-risk environments, thereby releasing serving staff with lower-risk status to support the COVID-19 responses (noting infection control guidelines). Final-year students should also be considered for employment in support of COVID-19 responses (within the limits of their competence and within infection control guidelines). Member States might consider moving employed staff at risk of elevated mortality to lower-risk care settings. Mobilization efforts need to be reinforced by measures to reprofile and upskill the workforce with appropriate training and supervisory support, aligned with scopes of practice as necessary. (*personale*)

9. **Protect the physical health of frontline health workers.** Regard health workers as a risk group. Access to personal protective equipment (PPE) for the health workforce in all services (public and

private, community and hospital) will be necessary, along with clear guidance on how and under what circumstances to use it, how it can be accessed, and how to report shortages. Secure and control PPE stock. Ensure that health workers have adequate rest and recuperation time, and consider putting in place other measures to protect them and their families, such as dedicated accommodation facilities for highly exposed staff to use during rest periods.

10. **Anticipate and address mental health needs of the health workforce.** Establish a dedicated hotline for psychological support. This may involve preparing and training members of the community (teachers, members of the police force, fire personnel, store keepers and volunteers) who can be involved in psychological first aid to alleviate emotional burnout and distress among people in the community[10].

11. **Review supply chains and stocks of essential medicines and health technologies.** There may be supply-chain problems for essential medicines and health technologies due to the slowdown of production and logistics processes. Prioritize health conditions and direct supplies accordingly. Adopt good pharmaceutical procurement practices, including restriction of purchases to the essential medicines list, determination of order quantities based on reliable needs estimation. Specific products[11] for emergency situations should be procured following minimum standards for quality, and could follow the WHO technical specifications developed for COVID-19. Ensure that emergency mechanisms for procurement, registration and accurate stock management are in place. To address potential shortages of hand sanitizers[12] and surface disinfectants, regulate and promote their local production in community and hospital pharmacies.

12. **Mobilize financial support and ease logistical and operational barriers.** Introduce emergency legislation[13]. Mobilize emergency reserve funds to pay for increased costs. Relax procurement and hiring rules related to the emergency response. Clarify any barriers to redeployment or short-term contracting of health workers for the purposes of surge capacity.

13. **Assess and mitigate potential financial barriers to accessing care.** Review health coverage policy to ensure that no one faces financial barriers to health visits, diagnostic tests, treatment (including medicines), care or emergency transport. Waive all user charges (co-payments) for COVID-19-related care-seeking and treatment. Make coverage rules explicit and communicate them clearly to reassure people who may be concerned about seeking care due to cost. This is particularly important in contexts with informal payments.

14. **Assess and mitigate potential physical access barriers for vulnerable groups of people.** Establish a list of vulnerable groups and assess the different access barriers they may experience (especially to first contact and transport). Establish mechanisms to monitor the outbreak among these groups and their access to care. Develop a tailored intervention package to facilitate prevention efforts and support access, to be activated in case of need. Consider a wide range of vulnerabilities

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[10] Psychological first aid for field workers:
https://www.who.int/mental_health/publications/guide_field_workers/en/.

[11] COVID-19 disease commodity package: https://www.who.int/publications-detail/disease-commodity-package---novel-coronavirus-(ncov).

[12] WHO-recommended handrub formulations: https://www.who.int/gpsc/5may/Guide_to_Local_Production.pdf. 13 COVID-19 strategic preparedness and response plan: https://www.who.int/docs/default- source/coronaviruse/covid-19-sprp-unct-guidelines.pdf.

associated with the nature of the epidemic itself and with the sociodemographic, economic and environmental conditions of households. In general, vulnerable groups may include the following.

- Children
- People in older age groups
- People with mental health problems
- Migrants, refugees and asylum-seekers
- People with physical and/or mental disability (for example, visual or hearing impairment, mobility limitations, cognitive disorders)
- People who have low literacy or are non-native speakers
- People who are geographically, culturally or socially isolated or homebound
- People on low incomes
- People who are medically or chemically dependent
- People who are homeless or with transient living conditions
- People without access to phone and/or internet
- People in prison

15. **Optimize social protection to mitigate the impact of public health measures on household financial security**. Public health measures can have a direct and indirect economic impact on household financial security, which in turn can have adverse effects on health, care-seeking and adherence. A wide range of social protection measures is needed to ensure financial security, including sick-leave entitlements and sickness benefits (without waiting periods) for COVID-19-related illness, self-isolation or quarantine; compensations for workers taking care of children due to school closures; compensation for workers who need to care for friends or relatives due to the closure of nursing homes and day-care centres or if carers are unable to work; compensation for heavily affected industries (catering, tourism, aviation); and mortgage and debt repayment relief. Change administrative procedures if necessary.

16. **Ensure clarity in roles, relationships and coordination mechanisms in health system governance and across government.** To implement the range of measures above, roles, relationships and coordination mechanisms need to be clarified and reinforced before the outbreak moves into community transmission. Transparency in decision-making will ensure trust in the response and cooperation by (health) professionals and the public. As countries prepare for community transmission, coordination between the governance structure of the emergency management team and the governance structure in health services delivery is particularly important. This can ensure adequate organization of first contact, timely estimation and preparation of surge capacity, and protection of health workers. In anticipation of significant service delivery reconfigurations, designate a focal point for essential health services early on and include them as a member of the COVID-19 emergency management team. Also consider reinforcing or establishing a health service coordinating structure to bring public and private hospital care, primary care and social care together, and reporting through the COVID-19 emergency management team to the overall health system governance structure. Intergovernmental mechanisms are equally important, in particular with: (a) ministries of finance to ensure that additional financial resources are mobilized when and where they are needed; (b) ministries of economy to design proportionate responses that put health protection first, but account for the

economic impact of the different scenarios/solutions being considered; (c) ministries of labour to develop special legislation or adapt existing legislation with regard to, for instance, telework or sick leave and other related permits; and (d) ministries of education and social services to protect nursing homes and to involve teachers and social workers in disease prevention and identification of potential cases among students or vulnerable groups (see policy recommendation 14). Actively use coordination mechanisms to harmonize regional and national governance responses, including planning, coordination and monitoring.