Strengthening and adjusting public health measures throughout the COVID-19 transition phases

Policy considerations for the WHO European Region

24 April 2020



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Executive Summary

Member States of the WHO European Region are at varying phases of the COVID-19 pandemic. Regardless of the phase, governments and public health authorities must begin to envision, and plan for, the subsequent stages of their response strategy, with the ultimate aim of reaching and maintaining a state of low-level or no transmission.

This document provides key considerations for Member States to help them to decide on the modulation of large-scale restrictive public health measures (i.e. movement restrictions and large-scale physical distancing), while at the same time strengthening core public health service capacities (to identify, isolate, test and treat every patient and quarantine contacts) together with personal protective measures (hand hygiene and respiratory etiquette) and individual physical distancing (>1 metre distance). The transition should be informed by national, subnational or even community-level risk assessments as the transmission of COVID-19 is typically not homogeneous within a country. There are four key components to managing transitions and modulating restrictive measures:



1. Public health and epidemiological considerations must drive the decision-making process.



2. Available capacity for dual-track health system management to reinstate regular health services, while at the same time continuing to address COVID-19.



3. Leveraging social and behavioural perspectives as tools for responsive engagement with populations.



4. Social and economic support to mitigate the devastating effects of COVID-19 on individuals, families and communities. Modulation of restrictive measures, such as the easing of lockdowns and closures, must be taken cautiously and be informed by the best available emerging evidence.

Six conditions should be used as the basis to implement/adapt transitioning of measures:



1. Evidence shows that COVID-19 transmission is controlled.

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2. Sufficient public health and health system capacities are in place to identify, isolate, test and treat all cases, and to trace and quarantine contacts.



3. Outbreak risks are minimized in highvulnerability settings, such as long-term care facilities (i.e. nursing homes, rehabilitative and mental health centres) and congregate settings.



4. Preventive measures are established in workplaces, with physical distancing, handwashing facilities and respiratory etiquette in place, and potentially thermal monitoring.



5. Manage the risk of exporting and importing cases from communities with high-risks of transmission.



6. Communities have a voice, are informed, engaged and participatory in the transition. WHO has previously defined four transmission scenarios to describe the dynamics of the epidemic: no reported cases (whether truly no cases or no detected cases), sporadic cases, clusters of cases and community transmission. A country or area can move from one transmission scenario to another (in either direction) while experiencing different situations at subnational levels. Adaptation of restrictive public health measures (which, ideally, will be localized and time-bound to affected settings) will be required to reach a state of low-level or no transmission. As part of any strategy, it is imperative that the health care workforce is supported and protected in both the COVID-19 response and in the resumption and provision of regular health service delivery.

Four cross-cutting mechanisms are essential enablers throughout the transition process:



1. Governance of health systems.



2. Data analytics to inform decisions.



3. Digital technologies to support public health measures.



4. Responsive communication with populations.

Overall, transition strategies must be guided by public health principles, societal and economic considerations and ensuring that no one is left behind. No single entity can beat the virus alone; united action, both within and across Member States, will strengthen and ensure our collective resilience.

Introduction

World Health Organization (WHO) has previously defined four transmission scenarios to describe the dynamics of the epidemic: no reported cases (whether truly no cases or no detected cases), sporadic cases, clusters of cases and community transmission¹. A country or area can move from one transmission situation to another (in either direction) while experiencing different situations at subnational levels. Adaptation of restrictive public health measures (which, ideally, will be localized and time-bound to affected settings) will be required to reach a state of low-level or no transmission.

Some countries in the WHO European Region are seeing sustained reductions in the numbers of new cases of COVID-19 being reported as a result of the appropriate and bold actions taken, including large-scale restrictive public health measures and other measures to slow down and stop transmission.

This document provides key considerations for Member States to decide when, under what conditions and how they can consider safe and gradual easing of large-scale restrictive public health measures (e.g. community-wide physical distancing and movement restrictions) while strengthening other core public health measures (e.g. identify, isolate, test and treat all patients, and trace and quarantine contacts) together with personal protective measures (hand hygiene and respiratory etiquette), and individual physical distancing (>1 metre distance). This process should be informed by the best available emerging evidence and the epidemiology of COVID-19 in the Member State. This document should be read in conjunction with WHO technical guidance² issued on COVID-19, embracing the principles of human rights and protection of vulnerable populations³. Useful information may also be found on the Health Systems Response Monitor⁴ – a joint effort of WHO, the European Commission and the European Observatory – which brings together more than 40 country profiles from across the European Region as well as thematic analyses to commonly asked policy questions.

It is likely that the transition period of the pandemic will last several months until effective therapeutics and a safe and effective vaccine can be made widely available. Horizon scanning and preparedness to adapt to the available medical technologies that can support safe transition will need to be built into the transition response. WHO will continue to provide updated scientific advice on the appropriate use of safe and valid technologies.

Key components to manage transition

Considerations for easing large-scale restrictive public health measures (e.g. community-wide physical distancing and movement restriction) must carefully balance risks and benefits across four main components based on a country's own real-time risk assessment (Figure 1). Furthermore, throughout the epidemiological considerations, reliance on real-time surveillance systems and the capacity to identify, isolate, test and treat all patients, and trace and quarantine contacts must drive the discussion forward. Decisions will also depend on the buffer capacity in the health system to manage a dualtrack response to prevent, diagnose and treat COVID-19 patients while maintaining operation of regular health services. Leveraging social and behavioural insights is an essential pillar of the response since the transition phase can only be properly managed if the public is effectively engaged and ready to support and comply with the measures being implemented. Social and economic support measures are critical to ensure societal resilience during this difficult phase so that no one is left behind. At the heart of a successful transition lie robust governance mechanisms, strong data analytics, digital solutions and effective communications. Where data analytics and digital solutions may not be sufficiently developed, a strong and expanded public health infrastructure may still have the capacity to adequately identify and isolate cases and track contacts in combination with strong epidemiological surveillance to accurately ascertain what level of transmission a country/region is at.

Figure 1. Key components and cross-cutting mechanisms



Public health and epidemiological considerations

Managing the transition phase effectively will depend on finding the best equilibrium between modulating restrictive large-scale public health interventions and keeping disease transmission under control by strengthening core public health interventions, such as identifying, isolating, testing and caring for all cases, and tracing and quarantining all contacts together with personal protective measures (hand hygiene and respiratory etiquette) and individual physical distancing (>1 metre distance). To ease large-scale public health restrictive measures, WHO-issued guidance⁵ recommends considering the following six conditions:

- 1. Evidence shows that COVID-19 transmission is controlled.
- Sufficient public health and health system capacities are in place to identify, isolate, test and treat all cases, and to trace and quarantine contacts.
- 3. Outbreak risks are minimized in high-vulnerability settings, such as long-term care facilities (i.e. nursing homes, rehabilitative and mental health centres) and congregate settings.
- 4. Preventive measures are established in workplaces, with physical distancing, handwashing facilities and respiratory etiquette in place, and potentially thermal monitoring.
- 5. Manage the risk of exporting and importing cases from communities with high-risks of transmission.
- 6. Communities have a voice, are informed, engaged and participatory in the transition.

Measures must be eased in an incremental, step-wise manner leaving sufficient time (around 2 weeks) to elapse for the true impact of the easing to become fully visible. The time interval between relaxation of two measures depends largely on the quality of the surveillance system and capacity to measure the effect.

Transition is likely to be a bidirectional process and countries must be ready to constantly monitor, adjust, **move forward and quickly reverse processes** depending on the disease transmission patterns and how they change as a result of the shifts in restrictive measures as well as the manner in which people react to the easing of the restrictions. It is extremely important to emphasize that in practice, risk will depend very much on people's interactions, behaviour and cultural or living arrangements. There is no "copy and paste" solution from one country to another.

Due consideration should be given to progressive easing. When deciding which measures should be reversed first, modelling suggests that lower risk activities could include use of public spaces and people allowed out of the home but still keeping a physical distance (>1 metre distance) while higher risk activities could include reopening of bars and restaurants, schools, non-essential retail and some small gatherings. Informed by a risk assessment at national, subnational or even community levels, progressive modulation of measures could be around geographical segmentation starting first in areas of lower population density (rural vs. urban, or small cities vs. large cities), age segmentation (younger people returning to work earlier than older people) or workplace segmentation (with workplaces where physical distancing

Figure 2. Implementation of measures during the transition phases



can be observed more easily opening earlier). Attention should be given to avoid crowding in public areas; for example, transport and transportation hubs.

Until a vaccine is made available, individual physical distancing (e.g. >1 metre distance), hand hygiene and respiratory etiquette by all the population and public hygiene measures must continue to play an important role, even as large-scale restrictive measures are adjusted. For those countries promoting use of medical masks among the population, it is of paramount importance to ensure access to masks for the health workforce first. In addition, it is important for individuals to be aware of the proper use of masks and that their use does not replace the need for individual physical distancing (>1 metre distance) and personal protective measures (hand hygiene and respiratory etiquette) as these measures remain the backbone interventions to interrupt transmission.

Reversal of "shielding" measures are more likely to lead to disease resurgence with serious consequences in vulnerable populations. Easing of these measures should be given additional consideration to determine the conditions at which to ease such interventions.

The impact that easing different measures may have on potential disease transmission remains very uncertain. Figure 3 presents the possible impacts of scaling down effective large-scale restrictive public health measures. Carefully monitoring the reproductive factor (Rt) in real time will be essential. While it is recommended that this is below <1 (declining rate of new cases) to ease large-scale physical distancing measures, it is useful to recall that the R_t is only as accurate, valid and reliable as the epidemiological data that feeds into it. Usually, the Rt is based upon reported case numbers, which can change due to other variables such as testing practice and health care seeking behaviour. More importantly, it should only be one of several indicators that countries use to evaluate disease transmission patterns. Effects of modulation of measures are likely to have a time delay of around 14 days.

- The red line on the right-hand side of Figure 3 indicates the potential transmission scenario that could occur if a lock down was fully lifted. Transmission could return to the same, high, state that it was before the introduction of a lock down.
- The blue line indicates the potential transmission scenario if higher risk activities were allowed. The transmission would still be slightly lower than a fully lifted lock down but would be increasing and potentially necessitate a reintroduction of more stringent measures.
- The grey line indicates the potential transmission scenario if lower risk activities were allowed with people able to leave their homes but still keeping a physical distance. This shows a potential steady state of transmission, not increasing, but remaining persistent in the population.
- The green line indicates the potential transmission scenario if the lockdown is kept and no measures are relaxed or removed. While this is the option that presents the least risk of COVID-19 transmission increase, it has significant implications for the socioeconomic well-being of a population.

Many countries have found ways to surge their health care capacity as they dealt with the COVID-19 crisis. Achieving increased public health and health care (including intensive care) capacities over the transition phase (shown in Figure 3 by the higher grey dashed line) will allow countries to move safely away from lockdowns with constant monitoring in place. The importance of strengthening surveillance and availability of real-time data is a prerequisite for a safe transition. Real-time surveillance should allow sufficient time to reintroduce certain restrictive measures temporarily and hopefully more time-bound and geographically targeted.



Figure 3. Possible impact of easing large-scale public health measures

Capacity for dual-track health system management

Once community transmission is under control, it is essential to strengthen the dual track of health service delivery balancing COVID-19 health services and the recovery of regular service delivery patterns. The transition process provides an opportunity to take a step back and assess service delivery and mortality patterns and identify and address potential problem areas. To govern dual-track service delivery, further adjustments in governance mechanisms are needed linking the governance and management of the emergency response with that of regular service delivery.

Track 1 – Health systems must remain ready to provide the full range of services needed to prevent, diagnose, isolate and treat COVID-19 patients. As presented earlier, it is essential to scale-up public health measures to disrupt chains of transmission through identifying, isolating, testing of cases, and tracing and quarantine of contacts as restrictive measures are gradually eased. This requires significant rapid expansion of surge capacity for public health and laboratory services, and providing training and protection for staff on the frontline. The health system must remain prepared for a potential upsurge of cases during the transition which requires creating "elasticity" in the use of acute and intensive care facilities.

Track 2 – Health systems also need to address accumulated demand from services that may have been crowded out to provide COVID-19 care during outbreak peaks. Although countries have taken great care to ensure that essential health services have remained available,^{6,7} there are increasing reports of low uptake of health care services due to disrupted service offerings, difficulties of taking advantage of new service delivery platforms, and fear of infection. Catch-up programmes for immunization should be considered as a priority. It is also likely that most health systems will see an increase in demand for health services from delayed or previously forgone care seeking for acute conditions, preventive health services and chronic disease management. Increased need for mental health care will be observed. Health services are also likely to face increased need and demand associated with the longer-term health impacts of economic recession.

To strengthen this dual track of service delivery, the following policy directions may be considered:

- 1. Create extended (dual) dashboard indicators
- Identify key tracer indicators on utilization patterns and mortality on both COVID-19 and non-COVID-19 conditions.
- Use the dual dashboard as the basis for governing the dual system of service delivery.

2. Retain preparedness and readiness for the COVID-19 response

- Address bottlenecks to further scale-up the capacity to identify, isolate, test, treat all patients and trace and quarantine contacts.
- Create public health and laboratory surge capacity by joining forces with primary health care, invest in mobile services and digital technologies to aid the process.
- Involve communities to enable people to be the frontline workers to protect their health and well-being.
- Estimate surge demand⁸ under new scenarios, triangulate with available capacity and produce and/or procure supplies.
- Create a step-wise elastic and flexible plan for acute and intensive care use⁹.
- Review repurposed temporary facilities and rethink their use: 1) to aid isolation measures (mild cases, discharged vulnerable cases); 2) to implement separate patient flows for maximum infection prevention and control; and 3) ensure preparedness for further peaks.
- Establish and maintain a mobile pool of resources at national level (e.g. ventilators, PPE, staff etc.) and a protocol for its (re)deployment on to area(s) of a new potential outbreak.

• Develop a financing mechanism for supplementary funding (e.g. a "pay-for-readiness").

3. Recover health service delivery

- Build on and resource primary health care to respond to pent-up demand from chronic conditions and delayed care seeking, including for mental health issues.
- Proactively use primary care population health management information systems to identify and work with high-risk individuals.
- Enhance and resource optimized service delivery platforms (video, phone, Internet), explore task sharing in line with existing scopes of practice, and consider expansion of scope of practice.
- Strengthen coordination between primary health care, social services and social care to provide comprehensive support to older people close to home supported through increased recruitment, cross-training and rapid learning cycles.
- Identify and remove barriers to seeking care.
- 4. Revisit infection prevention and control mechanisms (IPC) at the system level and within all health and long-term care facilities (i.e. nursing homes, rehabilitative and mental health centres) to protect health workers and patients or residents alike
- Improve patient safety and guidelines for care, including IPC,¹⁰ in preparedness for further potential outbreaks; continue training staff, and ensure the availability of COVID-19 specific clinical decision aids at levels of the system.
- Rethink patient flows through the system and consider keeping them separate if there are deficiencies in intra-facility infection prevention and control.
- Rethink all patient and logistics circuits in the different care areas: emergency department, inpatient, operating rooms, ancillary exams, ambulatory and home care managed from hospitals.
- All areas of the facility should implement administrative controls, environmental/engineering controls, and enable an environment for rational use of personal protective equipment (PPE).
- Constantly train and retrain staff in infection prevention and control.
- Consider testing regularly health care workforce and chronic patients.

- 5. Develop strategic approaches to preparing, shaping and supporting the health workforce in alignment with service needs
- Improve alignment of training of health professionals and scopes of practice with service needs – particularly in public health, and primary health care.
- Prioritize flexibility in the way the workforce is prepared, regulated and mobilized.
- Increase investment in the health and social care workforce in terms of remuneration, service-based training supports and psychosocial supports.
- Special focus on understanding how to support the workforce vis-à-vis COVID-19 with mental health (e.g. hotlines, psychological support) and social supports (financial and in-kind support).
- Develop return-to-work policies after illness and rotation between high-intensity and lower-intensity exposures.

Social and behavioural perspectives

Leveraging social and behavioural insights is an essential pillar of the transition response. The transition phase can only be properly managed if the public is effectively engaged and ready to support the measures being implemented. Virus transmission patterns are ultimately very much determined by how people behave. Multiple psychological, societal and cultural factors changing on an ongoing basis increase the complexity of planning for COVID-19 response transitioning. Risk perceptions influence individuals' judgments and evaluations of threats, and can adversely affect public compliance with and response to information communicated by authorities.

A poorly timed and managed transition can threaten the gains collectively achieved. The pandemic and its restrictions may have affected mental and physical well-being, social cohesion, economic stability as well as individual and community resilience and trust. In this complex context, understanding how, why and the context in which humans and communities respond allows authorities to:

- anticipate unwanted scenarios and initiate mitigating measures;
- implement pandemic response measures that are better informed, situated, accepted and thus more effective.

The voices of individuals and communities are a valuable resource for transition planning. The WHO Regional Office for Europe has produced a behavioural insights tool to gather public knowledge and risk perceptions of populations throughout the COVID-19 pandemic.¹¹ Countries should put in place appropriate "listening devices" (e.g. surveys, online polls) that allow health authorities to gauge population response and behaviour in an ongoing and real-time manner. These can be used to explore perceptions, acceptance of restrictions, mental and physical health, behaviours, information needs and misperceptions. This intelligence enables health authorities to anticipate how the public will react, to pilot test measures with certain segments of the population, and to adjust and mitigate early and fast.

Mitigating the social and economic impact

The emerging economic crisis poses a threat to the health and well-being of populations (Figure 4). Immediate action to provide income support to families is vital to enable people to stay at home and comply with the large-scale restrictive public health measures aimed at flattening the curve and minimizing the death toll of the pandemic. Similarly, governments need to introduce unprecedented economic recovery plans to minimize the social impact of the crisis. The health and economic shocks are closely intertwined. The sooner countries can control the spread of the pandemic, the more limited the consequences of the health and economic shocks will be. The larger the economic shock, the greater the adverse health and social effects will be. If the economic shock is not addressed, it may further undermine people's health. International experience shows it is possible to mitigate health and economic shocks¹² through timely policy action with a focus on identifying and supporting the people most in need: shocks do not affect everyone equally. In all decision-making aspects of the transition phase, special attention must be given to those individuals and population groups who are most vulnerable and most likely to be left behind in these challenging times.

Recovery must lead to a different economy – more equal, inclusive and sustainable – where health, social and environmental conditions that determine well-being must be central to the development of the new normal. This has been highlighted in the UN framework for responding to the socio-economic impact of COVID-19 through shared responsibility and global solidarity¹³.

2nd Phase of Social & Economic Impact Shorta		Shortage of informa care and increased	Increase in poverty risk	3	Brd Phase of Soc & Economic Imp	ial act Long-term ill health
Loss of gender equality gains	Food shortages	isolation of older pe Unemployment rises and stays high	ople Mental health problems	Rising crime	Breakdown of social cohesion	Increased inequality
Rising Increase in avoidable suicides hospitalizations		dable Generations Housing increasin	Housing insecurity – Firm increasing homelessness clos		Slower recovery and widening economic and health gaps between geographical areas.	
1st Phase of & Economic	Social	Job loss	Criminal ex sharks and into organi	ploitation, loan recruitment zed crime	Stigma and xenophobia	Increase in avoidable hospitalizations
Employment in	security	Excess mortality and morbidity		Adverse childh experiences	nood	Long-term unemployment
Increase in poverty risk and working poor		ase in Increase i er-based gender-ba nce violence	n ased Increased alcol consumption	Inc fan	Disadvar reasing children nily stress to catch schooling	ntaged less able up on g
Hunger – food fuel insecurity	Higher in margina poor hea health sy	nfection and death rates lized populations and the alth and in territories with ystems	of ose with Incre h fragile of str	ase in levels ess & anxiety	Rising levels of NEETs	Alcoholism and addiction

Figure 4. Phases of social and economic impact

While the health system response is critical, important public policy levers lie outside the health sector, in the hands of those responsible for fiscal policy and social protection. Countries with weaker social protection systems struggle more with responses to health and economic shocks. Building more resilient health and social systems requires sustained increase in public funding for both. This is a political choice. Economic recovery should not become fiscal austerity for health and social protection systems in the medium term.

To mitigate excess morbidity and mortality and prevent increasing health inequities from COVID-19, recovery efforts and transition measures should focus on the following mutually reinforcing priorities:

Reinforce the social fabric: A strong social fabric promotes social inclusion and cohesion, leaving no one behind. It supports the health and recovery of individuals and families across the life-course by ensuring that health and social care needs are equitably met.

- Maintain volunteering programmes at local level for older people and homeless by prioritizing financial support to community-based organizations and nongovernmental organizations and strengthen community resilience.
- Make Internet access available to those who do not have it to enable people to use virtual means of staying connected, accessing support for essential goods and services, including learning.
- Ensure and improve access to safe homes, including for children and young people, and helplines for those exposed to domestic abuse, and provide financial support to providers.
- Adapt early years programmes to prevent children from missing developmental milestones, particularly children from deprived families.
- Scale-up mental health interventions in primary health care and community settings, using social prescribing, outreach and peer support mechanisms.
- Improve occupational safety and health measures to protect workers in the workplace to minimize the direct effects of COVID-19.

Protect economic well-being: Economic well-being ensures financial protection for all who need it while promoting medium- and long-term livelihood resilience and sustainability. This supports health and recovery by preventing a rise in poverty rates and the deterioration of both the skills base within labour markets and economic capacity across sectors.

- Expand and sustain the scope of social protection programmes by covering those falling through the gaps and ensuring access to essential health goods, including food, fuel, and shelter.
- Ease administrative barriers to obtaining social benefits that are incompatible with physical distancing measures and other measures taken to contain COVID-19.
- Increase the adequacy of income guarantees and support successive waves and transitions.
- Support labour market recovery, adjustment and reentry by preserving existing employment and access to work and ensure that these are gender sensitive.

Safeguard peace and stability to enable a strong social fabric and economy. This supports health and recovery by ensuring physical safety and the promotion and protection of human rights through the duration of COVID-19 recovery and transition.

Cross-cutting enablers: governance, data analytics, digital technologies, communications

Governance

Managing the COVID-19 transition phase requires linking up existing governance mechanisms and managing in an environment of complexity. The COVID-19 emergency requires a whole-of-government governance approach which most countries have activated in a short amount of time. During the transition phase, the emergency response must continue and must be balanced with considerations for public health and health services capacity, individual and community resilience and behavioural limits, and economic and social impact. To achieve that, the governance mechanism for the emergency response must be linked with the governance mechanisms for public health and health services, community action for health and wellbeing, and mitigation of economic and social impact. This implies retaining the horizontal nature of governance while strengthening two-way inputs from sectoral action.

In the midst of this complexity, it is essential to retain effective coordination mechanisms with clear roles and responsibilities, and clear lines of responsibility and accountability with pre-determined triggers for modulating (easing / re-introducing) restrictions that are known and agreed to by stakeholders. Employing advance planning in a transparent manner is vital in order to foster engagement and support.

Data analytics

To achieve desired outcomes, public health decisions must be data driven. There is a need to consider integration of different data and information systems at national and subnational levels to closely monitor the impact of COVID-19 from different thematic strands including: strong surveillance systems, flexible and adaptable health systems, leveraging social and behavioural insights, and mitigating adverse social and economic impact.

Countries should establish a suitable set of indicators organized through a data dashboard to allow regional

and country-level understanding and real-time monitoring of the evolving COVID-19 situation and its effects. Indicators should be disaggregated by gender, age and socioeconomic status. This data dashboard should include different sets of variables and indicators grouped by:

- Epidemiology, capacity and saturation of public health and health care providers. To monitor the evolution and the impact of the pandemic.
- Expanded (dual) dashboard of service coverage and delivery indicators. Using key tracer indicators on utilization patterns and mortality on both COVID-19 and non-COVID-19 conditions to manage a dual-track health system.
- Behavioural insights. To monitor the mental and physical impact of various measures on the population, as well as the public's willingness and ability to adhere to those measures.
- Social and economic indicators. To monitor the social and economic impact with special attention on the social protection, economic outcomes and peace and security of the population.

This real-time monitoring tool will be essential for countries and partners to accurately track progress towards COVID-19 transition and recovery, by providing data and information.

Digital technologies

Digital technologies are being actively utilized by Member States as an integral part of their national COVID-19 response efforts and in support of traditional public health approaches for prevention and control in the transition phase. Use of appropriate digital solutions can serve to complement and support health systems and public health capacity, especially those technologies that can help in providing safe and remote care to patients, sharing reliable information with the public and helping people understand the disease, and in supporting a range of response measures. It is of utmost importance that these digital solutions respect human rights and all applicable privacy regulations in the country. An important characteristic of these tools is that they should be capable of providing timely and reliable information to countries in order to monitor the progress to control COVID-19, and to support real-time informed decisions.

In combination with appropriate testing strategies, these applications and digital solutions can be particularly relevant in providing information on the level of virus circulation, in assessing the effectiveness of physical distancing and large-scale public health measures, and in informing steps towards easing of restrictive strategies.

Interest has recently grown for mobile contact tracing apps, in particular, which are being explored by several countries as a means of facilitating what is otherwise an arduous process of manual tracing of contacts of an individual who returns a positive COVID-19 diagnosis. Such apps that involve tracing will obviously raise privacy concerns for many individuals, despite the fact that they do not necessarily require personal identification in order to function and be of value. The efficacy of such solutions and the ethical implications are only just beginning to be explored. It is estimated that between 40–70% of the population would need to be actively using this technology for it to yield meaningful results. This requires that solutions and their use of data is made transparent and that public trust is established for their use.

The exceptional circumstances in the context of a pandemic allow for the use of digital solutions provided that the necessary safeguards are used, including an ethical and privacy review, an oversight mechanism and a sun-setting clause. Below are considerations for the design and implementation of such digital solutions:

- conform to applicable legislation and privacy regulations;
- operate on an "opt-in" basis;
- have user consent information explained in simple and understandable language;
- apply appropriate security measures to all data stored and transmitted;
- ensure that any data gathered will only be used for the stated purpose and be irrevocably destroyed within a short period.

Communications

The nature of the communications approach is key to influencing behavioural change, and encouraging participation in decision-making about emergency measures.

Communication must be simple. Health authorities should have mechanisms in place to know whether their communications are understood by those receiving them. Furthermore, countries should also have mechanisms to counter misinformation and manage infodemics as part of an overall communications strategy.¹⁴

Timely, effective, evidence-based and honest communication is necessary to build public trust. It is important not to raise false expectations and find ways to help people understand that the transition phase may go through periods where restrictive measures may be removed and then implemented again in response to disease resurgence.

Countries are encouraged to adopt a transparent approach to informing people about risk and the triggers being used to implement easing or re-introducing large-scale public health measures. Risk communication should be based on a sound understanding of the factors underlying risk perception, risk attitudes and trust towards communicating authorities. Health authorities should also reach out to the media, stressing their critical role and emphasizing that transition comes with a level of uncertainty that may require a (bidirectional) shift in measures.

Concluding remarks

Transition must be guided by public health principles, economic and societal considerations. The transition phase requires a flexible and elastic response that is continuously adjusted on the basis of the continuous risk assessments at national, subnational, or even community levels. This flexible response should ensure that disease transmission remains controlled at a level that can be safely dealt with by the health services and minimizes avoidable mortality and morbidity. Managing COVID-19 response transitioning cannot be carried out through a "one-size fits all" approach and, depending on their unique combinations of disease transmission patterns, public health and health services capacity, societal behaviour and economic considerations, countries may choose to adopt different timings and step-wise progressions, carefully considering the perceived risks and benefits.

Decisions about when, where and how to attempt the transition to a steady state of low-level or no transmission should be informed by the best available evidence acknowledging that COVID-19 is a new virus and that much uncertainty still prevails. Recognizing this uncertainty, these policy considerations will be updated in line with emerging evidence.

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The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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