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Revised version
December 2020

Health system considerations: when influenza meets COVID-19

Preparedness and response measures when COVID-19, influenza and acute respiratory infections coincide in the WHO European Region

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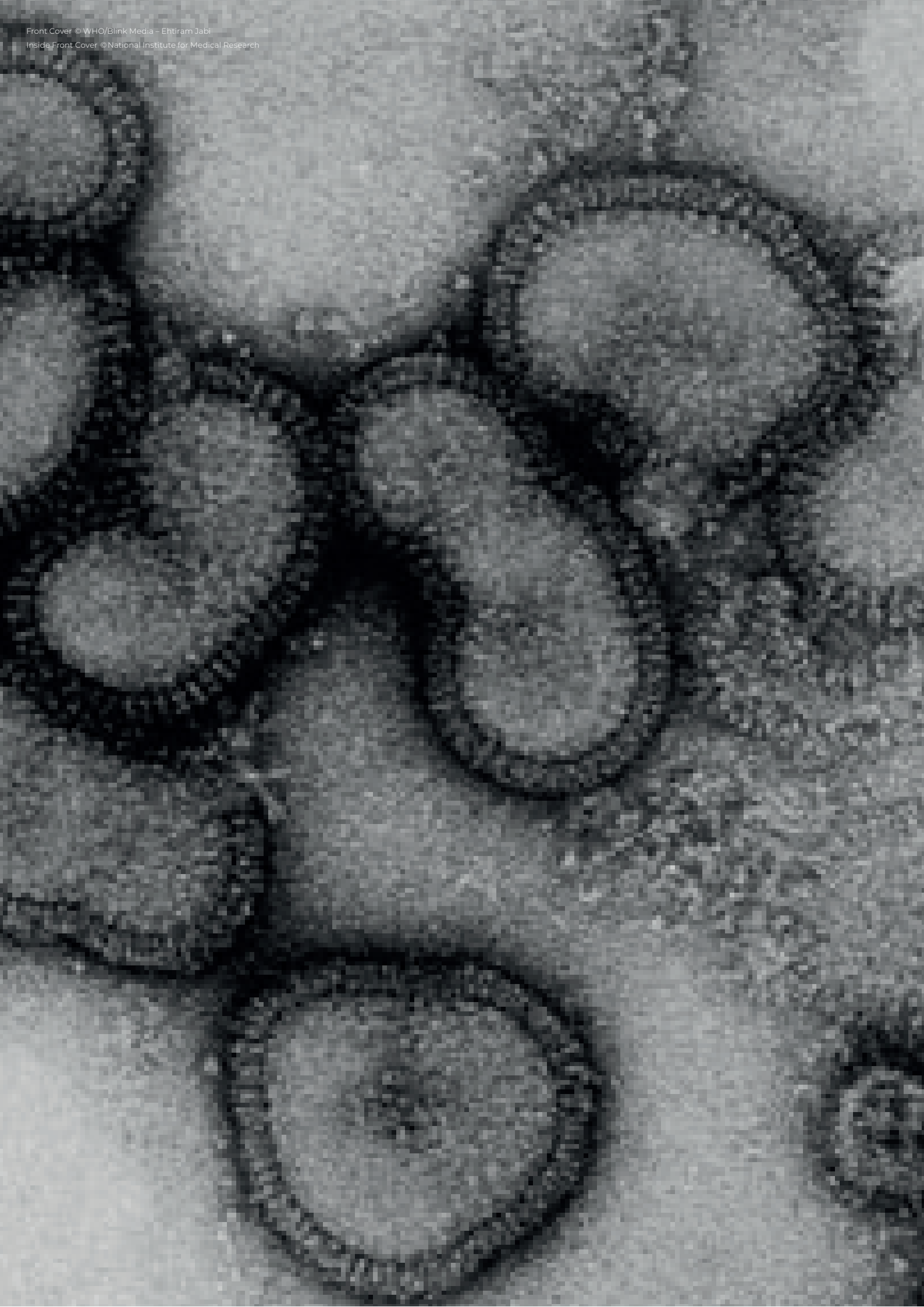

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Document number: WHO/EURO:2020-1248-40998-56605

Designed by: **www.freightdesign.co.uk**

Contents

Acknowledgements

This publication was developed jointly by the Division of Country Health Policies and Systems (CPS) and the Division of Country Support and Emergencies (CSE) at the WHO Regional Office for Europe, under the supervision of Natasha Azzopardi Muscat, Director Health Systems and Policies, and Dorit Nitzan, Regional Emergency Director. The following WHO European Regional Office staff contributed as authors: Stephanie Brickman, Caroline Brown, Gudrun Freidl, Michala Hegermann-Lindencrone, Peter Sousa Hoejskov, Pernille Jorgensen, Margrieta Langins, Paula Vasconcelos Lopes, Ayesha de Lorenzo, Adelheid Marschang, Satish Mishra, Piers Mook, Mark Muscat, Naomi Limaro Nathan, Gabriele Pastorino, Richard Pebody, Ihor Perehinets, Govin Permanand, Adrienne Rashford, Jetri Regmi, Ana Paula Coutinho Rehse, Cristiana Salvi, Tanja Schmidt, Cris Scotter, Ardita Tahirukaj, Elisabeth Waagensen, Simon van Worden, Joanna Zwetyenga.

Additionally, the WHO Regional Office for Europe would like to acknowledge the input and expertise received from: Dr Clemens Auer (Special Envoy for Health from the Federal Ministry for Labour, Social Affairs, Health and Consumer Protection, Austria); the COVID-19 European Strategic Advisory Group to the Regional Director (SAG); the World Organization of Family Doctors (WONCA); and the European Respiratory Society (ERS).

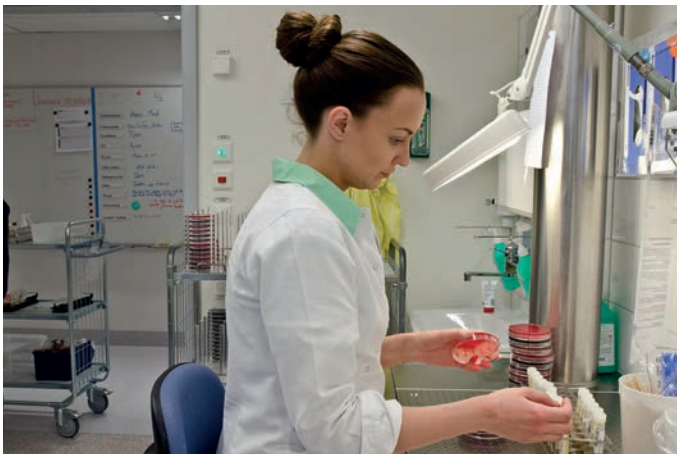
Abbreviations and acronyms

COVID-19	coronavirus disease
ECDC	European Centre for Disease Prevention and Control
EHS	Essential Health Services
HCW	health-care worker
ILI	influenza-like infection
IPC	infection prevention and control
NPI	non-pharmaceutical intervention
PHSM	public health and social measures
PPE	personal protective equipment
RCCE	risk communication and community engagement
SARS-CoV-2	severe acute respiratory syndrome coronavirus-2

Background and rationale

Since the beginning of 2020, the pandemic of coronavirus disease (COVID-19) has had a devastating impact on the health, economies and social fabric of our societies. COVID-19 has revealed global weaknesses in prevention, preparedness and response capacities. It has made clear the importance of global health security and, specifically, the crucial role of strong health systems in contributing to that security.

At the time of writing, there has been a resurgence of cases in many countries, especially as restrictive public health and social measures (PHSM) were eased to help restart economic and societal activity. This upsurge in cases is a cause for concern and countries in the WHO European Region have started re-implementing restrictions. But as COVID-19 will continue into the autumn and winter, the impending threat of seasonal influenza, influenza-like infections (ILIs) and pneumonia in the northern hemisphere will further challenge already overstretched health systems, raising new issues in managing the spread of the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) and resulting COVID-19. These challenges are expected to continue until effective vaccines and antiviral treatments become available.



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Seasonal influenza affects approximately 5–15% of the population in the northern hemisphere, often causing substantial mortality,[a,1,2] and thus puts a strain on national health systems in any given year. Many decision-makers are concerned with how and where to direct already scarce resources, especially with the potential for co-circulation of the two viruses, as well as other respiratory viruses, and the consequent impact on health systems that are already struggling to deal with COVID-19 alone.

This document was developed in response to Member States' direct appeal to the WHO Regional Office for Europe. It outlines a series of measures that countries may apply to their own national contexts. Oriented around existing WHO guidance, these are divided into seven sections:

- Prevention and health system preparedness
- Risk communication and community engagement
- Immunization
- Surveillance
- Clinical management of clusters and cases
- Needs of special settings and groups
- Public health and social measures (including infection prevention and control)

Due consideration is also given to human resources for health and risk communication, which cross-cut all actions. The aim is to help Member States draw on the evolving evidence base and think through how best to operationalize existing guidance in the regional context.

a Worldwide, it is estimated that up to 650 000 people die of respiratory diseases linked to seasonal influenza each year, and up to 72 000 of these deaths occur in the WHO European Region.

Introduction and context

Every influenza season puts pressure on health systems, with the extent of the impact determined by the strain of the virus. If A(H3N2) is the predominant virus, it will result in the highest mortality among older people. An A(H1N1) season tends to result in more hospitalizations and ICU admissions, particularly among middle-aged adults compared with A(H3N2). A difficult 2020/2021 influenza season with co-circulation of SRAS-CoV-2 would potentially stretch health systems that are already overwhelmed for some time. Predictions at this stage are, however, difficult.

The temperate countries of the southern hemisphere have experienced their first full winter season during the COVID-19 pandemic. Australia and New Zealand have seen considerably lower numbers of seasonal influenza cases this year, which have largely been attributed to the impact of PHSM, also known as non-pharmaceutical interventions (NPIs) applied outside of health-care settings. NPIs focus on reducing transmission by personal protective or environmental measures (e.g. hand hygiene, respiratory etiquette); reducing spread in the community (e.g. limiting restaurant and bar opening hours, cancelling mass gatherings); limiting international spread (e.g. traveller screening); and improving implementation of these measures through risk communication with the public. The introduction of stringent PHSM such as school and business closures in combination with personal protective measures have also had an impact on limiting the spread of seasonal influenza. Chile and South Africa have also reported much lower seasonal respiratory infections, including influenza, compared to the 2018/2019 season.[3]

As European countries have followed much of the same COVID-19 guidance as the temperate countries of the southern hemisphere, it is possible that similarly low numbers of seasonal influenza cases will be detected during the 2020/2021 season in this Region. However, the timing, duration and severity of the influenza strain is itself unpredictable in any given season. In addition, it remains uncertain how the COVID-19 wave will behave during the autumn and winter. Although the influenza virus is less infectious than SARS-CoV-2, the environmental conditions of cold(er) winters in Europe, together with ongoing changes in population mixing patterns, have the potential to increase the risk of spread of influenza in a manner that is different from that in the southern hemisphere. Additionally, influenza surveillance systems have been disrupted by the impact of COVID-19. The pandemic has resulted in changes in health-care-seeking behaviour, in the delivery of health services and the use of surveillance systems themselves. Systems need to adapt to ensure that influenza activity is detected promptly, intensity of circulation is monitored accurately, and representative viruses are obtained and characterized to inform future optimal vaccine composition. This uncertainty as to whether co-circulation of the two viruses will happen and what this might bring gives rise to concerns on how to manage both infections should they occur at the same time, especially as they will be difficult to distinguish clinically.

From a health policy-maker's perspective, therefore, the main concern is how to prepare health systems for an increase in COVID-19 cases, which could be further exacerbated by the influenza season – more specifically, how to integrate or align activities and interventions for seasonal influenza and COVID-19 where feasible, and how to separate them, e.g. antivirals and vaccination. Considering the similar modes of transmission and initial clinical manifestations, strategies for screening, triage, infection prevention and control (IPC) and surge capacity requirements used for COVID-19 or for seasonal influenza are likely to be equally effective. However, strategies are needed to address how and where to differentiate them, and to ensure that hospitalized COVID-19 and influenza cases are identified early and managed

separately and appropriately. The understanding is that the capacities and resources required to manage both may be limited and competing, with health-care workers stretched and fatigued. This spans prevention and response measures, surveillance and control, and continues through service delivery and clinical management. It is also important in the application of PHSM (including NPIs) and risk communication and community engagement (RCCE). It is through these lenses, and under the broader umbrella of good health system governance, that a series of potential policy considerations for decision-makers are set out.

Prevention and health systems preparedness

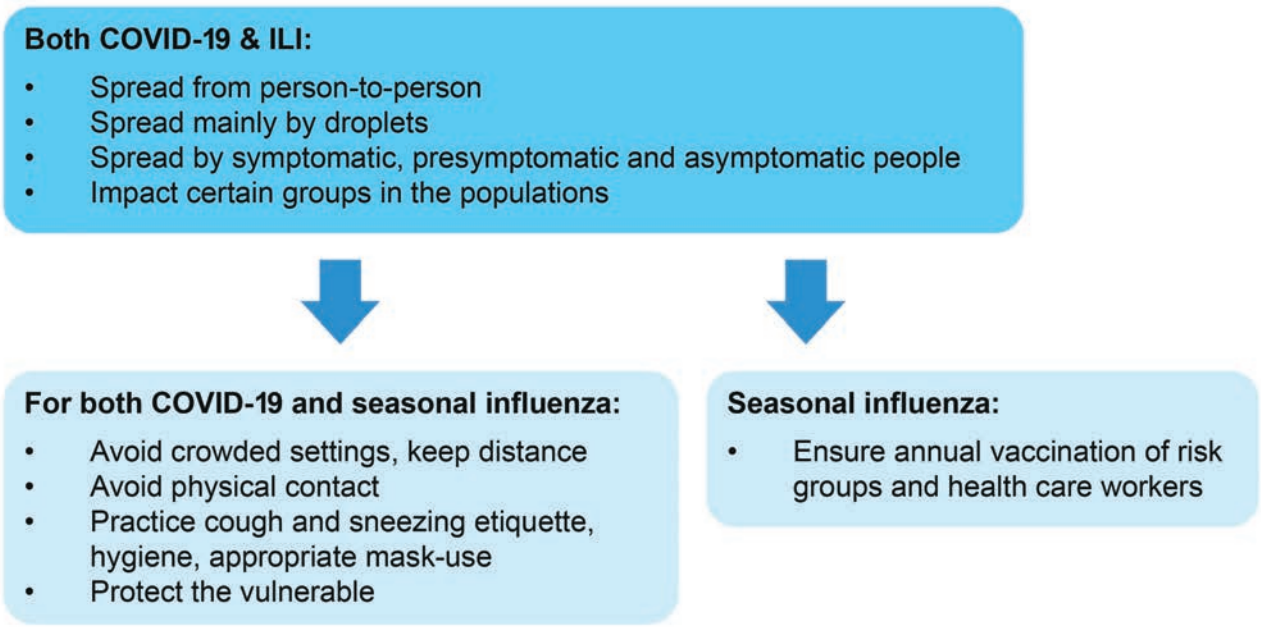
There are many similarities between the influenza virus and SARS-CoV-2, but also some key differences. This has important implications for how Member States can manage both their prevention and response measures.

Similarities and differences

Both viruses are transmitted by the respiratory route, though presymptomatic and asymptomatic spread occurs with both viruses. Both usually present with acute respiratory symptoms such as fever and cough. Some clinical presentations, such as anosmia and ageusia are, however, more typical of COVID-19. Severity of infection ranges from mild clinical features/asymptomatic to severe illness resulting in hospitalization and death. There may be differences in the duration of clinical features as well as the rehabilitation needed. These severe outcomes for both COVID-19 and seasonal influenza are especially prevalent in older persons and those with underlying chronic medical conditions. For influenza, pregnancy is a risk factor for severe outcomes for mothers and newborns, while the evidence for COVID-19 is sparse at present.[4]

The main mechanism of spread for both viruses is primarily through respiratory droplets and contact routes. Aerosol transmission can also occur for both; usually during medical procedures that generate aerosols.[5] Transmission of SARS-CoV-2 and the influenza virus have been reported in crowded, poorly ventilated indoor spaces, particularly where people are shouting or singing. And while aerosol transmission of both viruses may occur in community settings, to date, there are insufficient data to determine the extent. A range of special study protocols for the early investigation of SARS-CoV-2 have been developed by WHO.[b,c6]

Fig. 1. How to prevent the spread of SARS-CoV-2 and influenza virus



b WHO has launched a series of early investigation protocols – the UNITY studies – to help respond to and control the COVID-19 pandemic through the gathering of data on key epidemiological parameters. Study #4, entitled "Schools and other educational institutions transmission investigation protocol for COVID-19", aims to gain an understanding of the transmission dynamics of COVID-19 infection among cases and contacts within schools and other educational institutions.

c At the time of writing, WHO's Technical Advisory Group (TAG) on schools is currently finalizing a practical toolkit to support schools to better prepare for and respond to COVID-19.

In terms of integrated preventive actions – where the same measures can potentially mitigate the spread of both viruses – the WHO guidance on IPC,[7] essential health services,[8] public advice on hygiene and respiratory etiquette,[7] mask-wearing,[9] and protection of certain at-risk groups provide measures for policy-makers and health planners/ managers to apply in their own settings. Fig. 1 provides an initial schema.

Health systems governance and planning

In preparing for the potential co-circulation of COVID-19 and seasonal influenza this autumn and winter, decision-makers and health managers can expect an increase in patients presenting to hospitals/ emergency departments. These patients may worry that they have COVID-19 when they actually have influenza or another common illness due to a respiratory virus instead. This emphasizes the need for strong surveillance, risk communication and testing capacity, contact tracing, and ensuring good planning and governance upfront. As such, policy-makers and planners will need to think through the following (as a minimum), as appropriate to their settings:

- embedding the coordination of national influenza prevention and control programmes in the wider COVID-19 response strategy and modifying existing actions for the COVID-19 response where needed to include influenza, ILIs and pneumonia;
- exchanging critical information in real time between health service providers and public health authorities to enable real-time decision-making for influenza, ILIs, pneumonia and COVID-19;
- developing guidance on screening and triage for early recognition of patients with suspected influenza and COVID-19, followed by rapid implementation of source control measures, detection, treatment, isolation and referral of patients with risk factors for severe disease;
- updating testing strategies that will, where feasible and where resources allow, distinguish early between COVID-19, seasonal influenza and other respiratory illnesses, and should include antigen-based rapid diagnostic tests.[10] Health-care workers (HCWs) in primary care settings and hospitals should be trained in their use;
- training HCWs in primary health care and hospitals in various aspects of clinical management and diagnostics, IPC and surveillance;
- ensuring training and protective measures for HCWs. Occupational health focal points, as well as those for mental health and well-being, should be available in all settings of care to monitor, maintain and manage any requests by the workforce regarding their own safety (physically or virtually);
- developing plans for surge capacities, particularly the rapid scale up of ICU capacities, to ensure that all patients with severe respiratory infections receive treatment, whether COVID-19 or otherwise, and in case co-circulation peaks collide;
- using existing guidance and tools for both influenza and COVID-19 to navigate delivery platforms to review hospital preparedness for COVID-19 using the WHO hospital preparedness checklist;[11]
- reprioritizing risk groups for seasonal influenza vaccination (see below) and ensuring the safe delivery of influenza vaccine to protect vulnerable groups from COVID-19 during vaccination campaigns;
- collecting disaggregated data to inform policy-making;
- identifying which public health measures are necessary to protect vulnerable groups from seasonal influenza and COVID-19;
- ensuring a functional and trusted communications strategy, which aims to ensure that the key population groups and all workforce stakeholders – HCWs, local authorities, unions, associations, educational institutions – each have one single source of information for taking decisions on and managing COVID-19 and seasonal influenza;
- establishing and ensuring partnerships and linkages with other sectors.

Good stewardship of the health system will remain a cross-cutting element to the more practical prevention and response considerations outlined opposite.

Table 1. Similarities and differences between COVID-19 and seasonal influenza

	COVID-19 and Seasonal Influenza	What's different
Signs and symptoms	Influenza-like illness symptoms (fever, cough, sore throat, rhinorrhea, headache, muscle pain, malaise, without shortness of breath or dyspnea) to critical diseases (acute respiratory distress syndrome, multi-organ failure)	**COVID-19** – Loss of smell (anosmia) or loss of taste (ageusia) precedes the onset of respiratory symptoms in some patients.
High risk group	Health care workers, older persons, persons with underlying medical conditions such as: chronic pulmonary disease (e.g. asthma, COPD), cardiac disease (e.g. congestive cardiac failure), metabolic disorders (e.g. diabetes).	**COVID-19** – Smoking, cancer, obesity. **Seasonal Influenza** – children <5 years of age, pregnant women.
Diagnosis	**RT-PCR**	**Seasonal influenza** – Rapid influenza diagnostic tests (Point-of-care test) for use in outpatient settings when influenza is circulating widely and taking into account limitations of sensitivity and specificity **COVID-19** – WHO has recently published guidance on the use of antigen-detection in the diagnosis of SARS-CoV-2 infection using rapid immunoassays.
Vaccine	Vaccination of HCWs and other risk groups	**Seasonal Influenza** – prioritization of HCW and older persons where vaccine supplies are scarce; use of inactivated influenza vaccines (IIV) and live influenza vaccines (LAIV) **COVID-19** – novel vaccine types once licensed for widespread use
Treatment	Standard management of ARDS, use of oxygen, non- and -invasive ventilation. Use of ECMO as per equipment availability and local guidelines	**Seasonal influenza** – oseltamivir can be used when influenza is suspected or known to be circulating. If testing for influenza is not possible, empiric treatment is indicated. **COVID-19** – low dose systemic corticosteroids for severe and critical COVID-19 cases only, and prophylactic anticoagulants.

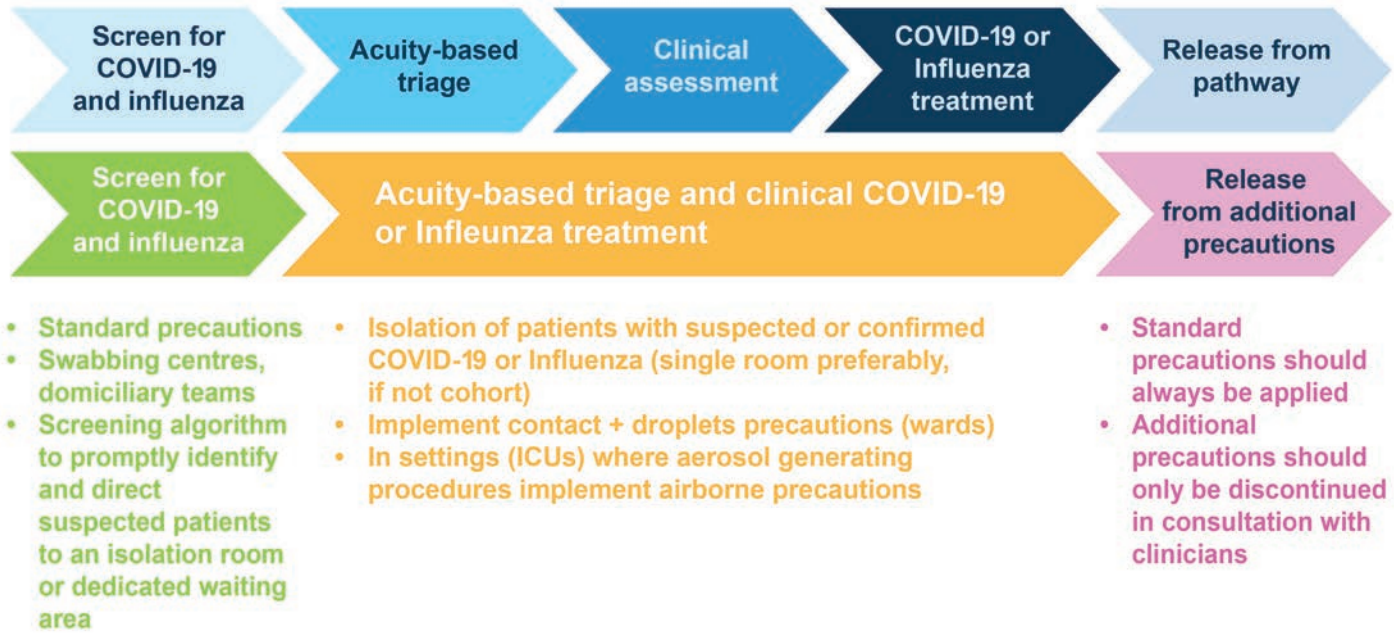
Maintaining essential health services

It is important that essential health services (EHS) are available and working as effectively as possible. WHO has issued comprehensive and updated guidance on maintaining EHS during the COVID-19 pandemic.[12] This takes on additional importance, given the potential impact of seasonal influenza on the health system. It is crucial, while responding to COVID-19 and seasonal influenza, to ensure continuity of safe and quality essential health services in order minimize any increase in mortality and morbidity from other health conditions. As many countries have experienced disruption to their EHS, there is an ongoing challenge to cater for pent-up needs as well as to ensure that a similar situation does not recur. People have foregone routine care during the early stages of the pandemic in the European Region, sometimes not because the service was not available but due to fear of infection. Effective communication and building trust with the population are key to overcoming this barrier and ensuring effective delivery of essential health services.

More specifically, countries are asked to consider the following:

- establishing safe and effective patient flow at all levels, including screening and triage, for early recognition of patients with suspected influenza and COVID-19, rapid implementation of source control measures and targeted referral (Fig. 2);
- ensuring a functional IPC programme, supported by at least one full-time IPC professional or equivalent (nurse or doctor working 100% of the time in IPC) per 250 beds, in all public and private health-care facilities as per WHO's minimum requirements for IPC programmes in general;[13]

Fig. 2. Establishing safe and efficient patient flow for influenza and COVID-19

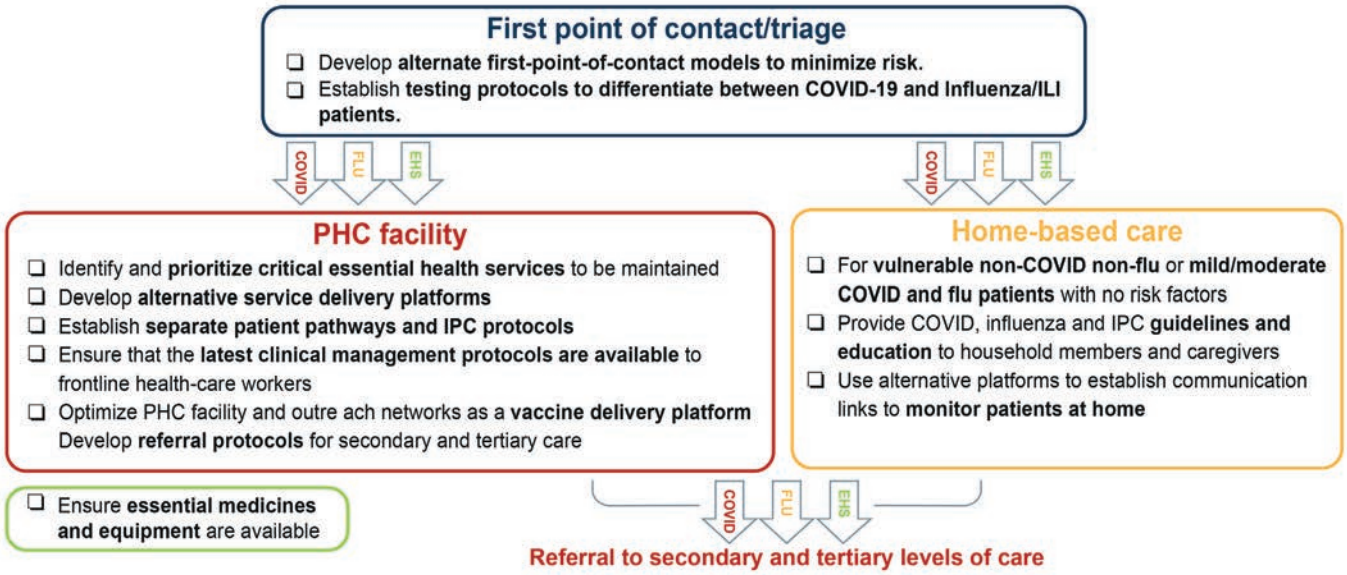


- optimizing service delivery settings and platforms to ensure that a screening algorithm is in place to promptly identify and direct patients with symptoms of acute respiratory infection to an isolation room or dedicated well-ventilated waiting area. At least 1 metre distance between patients, and between patients and health personnel should be maintained. Ensure that IPC supplies (for hand hygiene, cleaning and disinfection products, personal protective equipment, etc.) are readily available, and a clear pathway exists. This pathway should be clearly and prominently displayed within facilities for HCWs to consult and appropriate staff trained in transferring suspected patients;
- adopting and/or scaling up innovative approaches to essential health service delivery, e.g. digital solutions such as telemedicine or telephone consultations. Already available technologies and teleplatforms can be used to determine the need to visit a health facility. Self-monitoring can be done through mobile applications, use of helplines, web applications, video calls;
- establishing/strengthening mechanisms to ensure universal access to the ongoing delivery of EHS, and monitor to identify gaps and the potential need to reorganize referral pathways;
- strengthening communication and community engagement strategies to support the appropriate use of essential services (see also section 4 on risk communication and community engagement);
- optimizing primary health-care facilities and developing strategies for alternative vaccination delivery platforms/sites for routine vaccines, influenza vaccine, and a potential COVID-19 vaccine;
- developing clear referral protocols for secondary or tertiary care, including support for primary health care;
- providing health professionals with training using distance education tools (e.g. webinars, podcasts, virtual classrooms) to address issues identified during the COVID-19 pandemic;
- bolstering public health services by ensuring their ability to deliver essential public health functions, including contact-tracing.

Box 1. Primary health care at the crux

It is critical to establish separate patient pathways for COVID-19 and influenza from the first point of contact onwards to minimize the burden on health systems, to streamline essential health services (EHS) and to use home-based care where possible. The primary care setting, often the first point of contact for patients, represents a key juncture, and one that runs the risk of being stressed, hampering both prevention and response actions from an early stage (Fig. 3).

Fig. 3. Primary health care pathways



One consideration at the primary care level is to develop alternate first point-of-contact models to minimize risk in the upcoming influenza season.[14] This can help target resources, decrease the burden on outpatient clinics and hospitals, especially emergency departments, and also enable the delivery of EHS in settings with a lower transmission risk of COVID-19 and seasonal influenza. Interoperable information management systems between these dedicated facilities and laboratories would allow such centres to also help with monitoring and surveillance, contact-tracing and potential preventive outreach measures. For countries that may already have established such centres for COVID-19, converting them into broader respiratory illness centres could be an easy "win". This would allow for triage, with different pathways for COVID-19 and seasonal influenza at an early stage, and would continue to relieve hospitals while ensuring optimal use of HCWs.

Circulation of COVID-19 and/or seasonal influenza will make it critical to establish separate patient pathways, as much as feasible, from the first point of contact onwards, and to minimize the burden on health systems by streamlining essential health services and using home-based care (with training of family members), where possible, for cases not requiring hospital admission. It will also be essential to optimize primary health care facility and outreach networks to ensure safe delivery of seasonal influenza vaccines.

Risk communication and community engagement

The COVID-19 pandemic has shown that RCCE is a public health intervention in every sense. The more the people trust authorities and are engaged in the response, the more they will follow guidance and adopt a behaviour protective of their health. This contributes to containing the outbreak. It is essential, while responding to COVID-19 and seasonal influenza together, to ensure continuity of the RCCE strategy and principles applied to the double epidemic.

With respect to managing the two infections, countries are advised to consider implementing the following four trust-building measures:

- Transparency and early communication (including the importance of communicating in situations of uncertainty) are key to establishing a trusting relationship with the audience and position authorities as the official information source.
- Coordination of public communication, given the uncertainties and the "infodemic", should be ensured at all levels for message consistency.
- Listening and two-way communication is vital. This means understanding people's perception of the risk for COVID-19 versus influenza and the determinants of service acceptance through:
  - behavioural insights research as the "gold standard" for comparative, generalizable, quantitative knowledge, attitude and practice (KAP)-like data,[15] and
  - digital applications, tools and services for listening, e.g. HealthBuddy[16] chatbot as a qualitative data collection mechanism, and social and mass media monitoring and "infodemic" mitigation.
- Effective channels and influencers can help to ensure targeted and relevant reach through trusted sources. While digital applications and outreach have become widely used, non-digital channels should not be neglected, especially to reach people with "digital poverty".

The goal of frequently asked questions (FAQs) in times of COVID-19 is to ensure that people across the Region take informed decisions on remaining uninfected with influenza during the 2020–2021 season in order to minimize:

- sickness, death and impact on the health system;
- antibiotic resistance;
- the draining effect on the pandemic response.

Every country will need to target relevant audiences based on the circulation of COVID-19 and flu, people's perception of COVID-19 and flu, the protective measures they take, and flu vaccine availability. Messages will need to contribute to informed decision-making about COVID-19 and seasonal influenza, addressing:

- symptom similarities and the consequences of limited testing availability and accessibility, ability to follow up isolation/other recommendations;
- the differences between the infections and the importance of the flu vaccine for at-risk groups, especially now, while avoiding the pitfall of some believing that the flu vaccine protects against COVID-19;
- the similarities in protective behaviours for influenza and COVID-19: hand hygiene, respiratory etiquette; physical distancing and use of masks when and where appropriate;
- a possible increase in uncertainty regarding case count: how many cases are due to flu/how many to COVID-19;
- the tension between demand/supply and differences across countries/subnational levels.

KEY MESSAGE

Risk communication and community engagement

RCCE is a public health intervention crucial for ensuring that people across the Region protect themselves from both COVID-19 and influenza. Campaigns need to take into account the four capacities of RCCE contributing to trust. They need to be tailored to country situations and contexts, and target audiences based on national strategies for NPIs.

Immunization

Immunization is central to prevention. As the influenza vaccine is an important and cost-effective tool in fighting seasonal influenza, it also takes pressure off health systems, allowing them to better cope with COVID-19 or other outbreaks. Going into the autumn period, ensuring high coverage of influenza vaccination and the infrastructure for delivering it is paramount, especially for priority groups such as HCWs. This will also be the case for a potential COVID-19 vaccine, once available.

Focusing on high-risk groups will be key to maximizing an effective influenza vaccine strategy in the context of COVID-19, both to keep influenza morbidity and mortality down, and to conserve and free up much-needed health system resources (human and physical). The WHO Special Advisory Group of Experts on Influenza (SAGE) has issued recent guidance on the influenza vaccine.[17]

The groups emerging as being at high risk for severe complications of COVID-19 are older adults, persons in long-term care facilities and those with specific pre-existing medical conditions (such as hypertension, diabetes, chronic respiratory system disease and cardiovascular disease). In addition, HCWs are at a high risk of infection and also of spreading the infection to vulnerable patients. These risk groups are similar for seasonal influenza, with the addition of pregnant women and young children.

Where feasible, therefore, Member States should consider the following:

- National immunization authorities should maintain seasonal influenza immunization of these high-risk groups or any other groups, according to current national recommendations.
- As older adults are also at an increased risk of pneumococcal disease, countries should follow national guidelines for the use of pneumococcal vaccines.[18] This would prevent respiratory illnesses and hospitalization from seasonal influenza and pneumococcal infection, and free up respiratory medical equipment, medications and HCWs to support patients with COVID-19.

In addition, it is to be stressed that vaccinating HCWs not only helps to protect the individual and maintain health-care services during influenza outbreaks, but also reduces the spread of influenza to vulnerable patients.[19] Given the health system impacts of the disease, in the context of COVID-19, ensuring the health of the health workforce is vital and WHO recommends that HCWs indeed be at the top of the priority list as per WHO SAGE guidance. In order to maximize uptake of influenza vaccination by HCWs, two common barriers must be addressed from the outset. First, seasonal influenza vaccination must be free for HCWs and second, it must be conveniently available in the workplace – peer vaccination is popular in many countries.

With the increased need for influenza vaccines this season, ensuring a sufficient supply and good management and distribution will be more important than ever. WHO guidance documents related to vaccine supply and service delivery can help countries think through their strategies.[20,21,22,23,24] Member States may need:

- to consider prioritizing those at the highest risk within each specific group. For example, in the case of HCWs, staff working in ICUs, emergency departments and long-term care facilities might be vaccinated first. Preventing the occurrence of these vaccine-preventable diseases helps to reduce the health system burden during potential future COVID-19 transmission scenarios;

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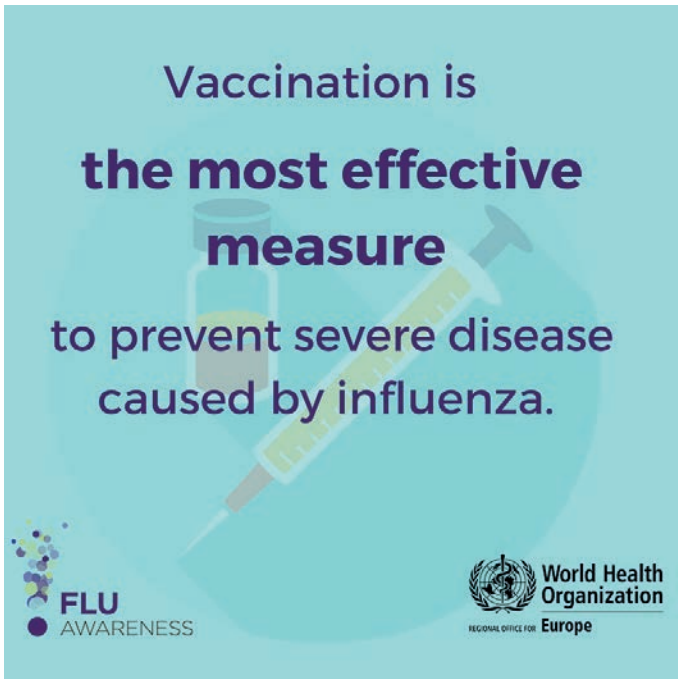

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- to prioritize groups for vaccination in view of potential vaccine shortages. For example, it is crucial to ensure that target groups can be vaccinated during periods of restriction;
- to resume as soon as deemed feasible, and according to national recommendations, routine immunization of any high-risk group where postponement or cancellation has been due to the COVID-19 outbreak;
- to monitor the uptake of influenza and pneumococcal vaccines in risk groups to ensure that targets are met and any gap in coverage is promptly identified and addressed.

Group prioritization should be accompanied by transparent and targeted communications on adopted criteria and measures to ensure that:

- prioritized groups understand the importance of being vaccinated and are encouraged and supported to take action; and
- non-prioritized groups understand the rationale for vaccine distribution.

Established sentinel surveillance networks in primary and secondary care should be utilized to measure influenza vaccine effectiveness (VE) by type/subtype, where feasible. Such data will contribute to decisions at the global WHO Vaccine Composition Meeting in February 2021 as part of the Global Influenza VE initiative (GIVE) to optimize the design of the 2021/2022 northern hemisphere influenza vaccine. This will be important for an eventual COVID-19 vaccine as well.

KEY MESSAGE

Immunization

Influenza vaccination of priority groups can protect vulnerable persons and reduce the pressure on health services this winter, but needs careful planning, as does preparation for future COVID-19 vaccines.

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Surveillance

At present, the prevention and control strategy for SARS-CoV-2 involves the need to detect, isolate and test all suspected cases. This requires comprehensive surveillance. Prevention, treatment and control of influenza, on the other hand, requires a range of measures, including immunization and treatment with antivirals. It does not require the detection of every case. Influenza surveillance aims at detection when circulation of influenza has started; characterizing what are the main viruses circulating; determining the key groups that are affected; measuring the intensity of transmission and impact on the health system; and how well the vaccine for the current season is working.

Strengthening surveillance will be necessary to support timely disease control and prevention measures for COVID-19 and flu. Routine syndromic surveillance for other infectious diseases caused by respiratory pathogens is critical, and the COVID-19 pandemic has made it necessary for countries to repurpose their influenza surveillance systems to also detect SARS-CoV-2. Pre-existing sentinel influenza surveillance systems in primary and secondary care, established as part of the Global Influenza Surveillance and Response System (GISRS) network,25 need to be adapted to monitor COVID-19 spread in addition to influenza, and on a longer-term basis. These systems aim to ensure that an increase in transmission is detected promptly, that the severity and impact can be rapidly assessed, and interventions – in particular, influenza vaccination (and ultimately COVID-19 vaccination as well) – can be evaluated in terms of uptake and effectiveness. Adapting such systems and interpreting the findings presents a variety of challenges, including changes in health-care-seeking behaviour, changes in the delivery of health care and potential shortages of personnel and equipment. The WHO Regional Office for Europe and the European Centre for Disease Prevention and Control (ECDC), which jointly coordinate influenza surveillance in the Region, have issued a technical note on adapting systems, which covers how such issues can be addressed.[d]

All countries need to ensure that comprehensive universal surveillance of COVID-19 is in place to rapidly detect, investigate and respond to suspect cases and clusters of COVID-19. Consolidated WHO guidance is available on public health surveillance for COVID-19.[26]

It is critical that both national and international surveillance for countries continues, including timely reporting of sentinel and comprehensive epidemiological data to the WHO Regional Office for Europe and the ECDC in order to inform improvements in health system preparedness and clinical management.

To support surveillance activities, laboratory testing of suspect cases to distinguish COVID-19 from seasonal influenza will be crucial. Validated, reliable reverse transcriptase-polymerase chain reaction (RT-PCR) assays[27] should be used, including multiplex assays. Equally important is the need to ensure that a sufficient quantity of quality diagnostics is available as well as trained staff and surge capacity (Box 2). Additionally, countries will need to continue their vigilance to detect seasonal influenza virus variants or viruses with pandemic potential. Continued sharing of data and samples, including shipping of specimens to WHO, is critical. This applies to both COVID-19[28] and to seasonal influenza, with the latter informing WHO influenza vaccine recommendations.

d Operational considerations for influenza surveillance in the WHO European Region during COVID-19: interim guidance (in draft).

Box 2. The need for reliable combination diagnostics

As a COVID-19 vaccine is unlikely to be widely available before or during the 2020/2021 influenza season, rapid diagnostic tests, specifically for the detection and differentiation of the viruses that cause influenza and COVID-19, is an overarching priority. Point-of-care combination tests that take and test just a single sample for multiple respiratory diseases would be preferable to individual tests. From a person-centred care perspective, combination tests lessen the burden on individuals. From a health systems perspective, single tests decrease the burden on HCWs, and help to conserve the use of key medical supplies and resources, such as personal protective equipment (PPE), swabs, reagents, among others.

WHO has issued a set of target product profiles (TPPs) for priority diagnostics in the response to COVID-19.[29] These TPPs aim to establish standards and outline "acceptable" and "desirable" product characteristics to guide manufacturers, donors and ministries of health regarding public health needs. Governments that are able to support such research and test development are encouraged to do so in a manner that is beneficial and ensures the widest possible uptake.

Detect, isolate, test, contact trace and quarantine

In light of the likely increase in activity of respiratory viruses during autumn and winter, it is critical that rapid detection, isolation and testing of cases occurs together with prompt, exhaustive contact-tracing.[30] Scale up of contact-tracing services is needed to reduce COVID-19 transmission. While some Member States have already launched their own platforms, guidance is available on optimal contact-tracing models and how to calculate the requirements of a contact-tracing workforce and, subject to ongoing update, to help countries.[31] Digital options are also under development to complement existing contact-tracing approaches.

Detection of clusters/outbreaks of acute respiratory illness in closed settings that often have vulnerable populations, such as long-term care facilities, necessitates prompt laboratory investigation for both flu and COVID-19. This should be accompanied by the implementation of appropriate public health measures, including adequate isolation and quarantine, as appropriate.

As mentioned, the UNITY studies represent a range of tools for early investigation of outbreaks. These have been developed by WHO to support Member States in managing these incidents.[32] Ambitious targets have been established for the proportion of cases that should be promptly isolated and contacts quarantined.[33]

KEY MESSAGE

Surveillance

COVID-19 and/or seasonal influenza are likely to circulate this winter and have a significant impact on health services, systems and populations across Europe. Strengthened surveillance, testing, and laboratory and contact-tracing capacity will be critical to support national and international disease control and prevention measures.

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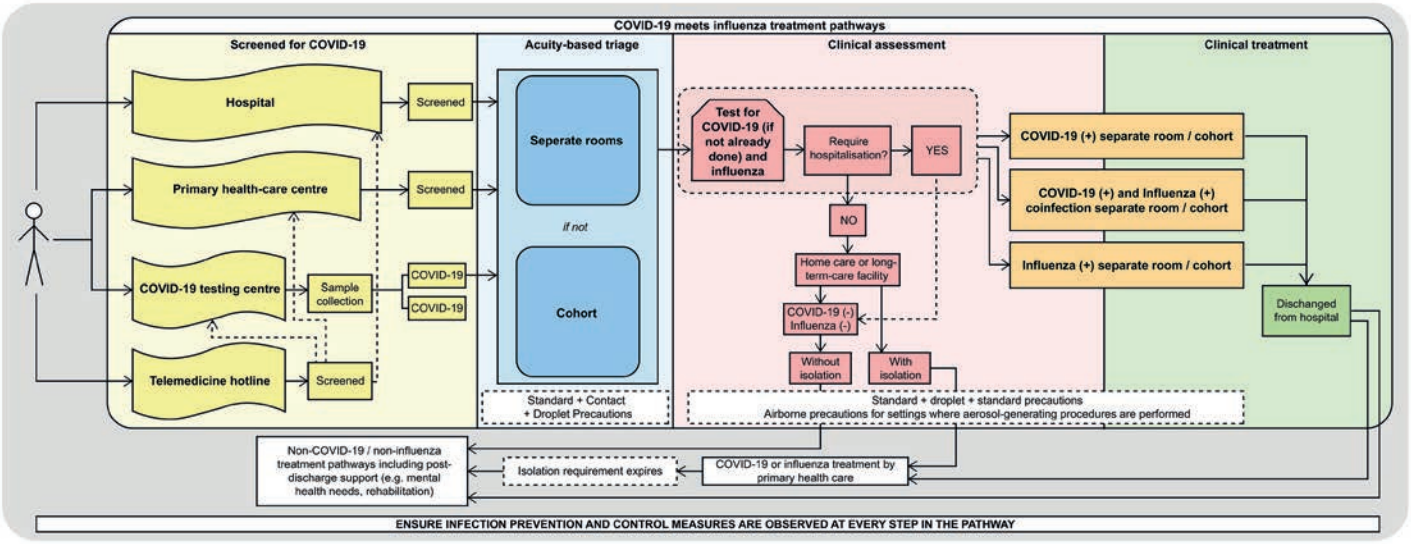
Clinical management and infection control measures

Case management

WHO has developed guidance for the clinical management of patients presenting with severe acute respiratory infection when seasonal influenza and COVID-19 are circulating.[34] Differentiating pathways for case management of COVID-19 and seasonal influenza will be crucial (Fig. 4). More detailed clinical guidelines specific to COVID-19[35] to complement existing guidance for severe influenza, including appropriate use of antivirals for influenza, should be followed.[36]

With respect to integrating actions for flu and COVID-19, Member States should consider home isolation of symptomatic people who have not been tested, and issue clear guidance on criteria for COVID-19 testing (including for when systems are overwhelmed). In differentiating actions, separate pathways should be established for seasonal influenza versus COVID-19, with protocols for detection, isolation, contact-tracing and quarantine. HCWs may need 24-hour support to be available to field any questions from their staff regarding new referral pathways, IPC measures and care procedures (some staff may be working in unfamiliar settings). Additionally, the prompt detection and management of all suspect cases/ clusters and their close contacts should be linked to rapid laboratory investigation.

Fig. 4. Proposed COVID-19 and Influenza Treatment pathways



The treatment pathways described above aim to identify and distinguish COVID-19 and influenza, and to avoid nosocomial infections. The premise is therefore, that while COVID-19 is circulating in the community, any person presenting to the health services should be triaged for COVID-19, even if the clinical presentation is suggestive of an alternative etiology.

1 For guidance on infection prevention and control of other respiratory infections other than influenza and COVID-19, please refer to Infection prevention and control of epidemic- and pandemic-prone acute respiratory infections in health care. World Health Organization. https://apps.who.int/iris/handle/10665/112656

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Infection prevention and control

It is critical to ensure that at least basic IPC standards are in place at the national and health-care facility level to provide the minimum protection to patients, health workers and visitors.[37] In addition, the five IPC strategies required to prevent or limit transmission of COVID-19 in health-care facilities should be in place, as these will also help to reduce transmission of influenza and other acute respiratory virus infections:

1. screening and triage for early recognition of patients with suspected COVID-19, with rapid implementation of source control measures (Fig. 2);
2. applying standard precautions for all patients – including hand and respiratory hygiene and appropriate use of PPE;
3. implementing precautions against contact, droplet and airborne infections, as required;
4. implementing administrative controls, e.g. restricting visitor access;
5. implementing environmental controls, e.g. adequate ventilation and environmental cleaning.[38]

Additionally, from the perspective of the HCW, training and guidance in IPC and care pathways, including social care, needs to be made available to the entire workforce, including workers in long-term care, cleaners and cooking staff, volunteers and temporarily recruited staff.

KEY MESSAGE

Clinical management and IPC

Scaling up systems to enable the rapid identification and confirmation of cases, clusters and their close contacts is essential to enable implementation of optimal public health measures, and clinical and case management this winter. IPC measures are crucial for ensuring patient safety and the quality of care, and are universally relevant to every health worker and patient, at every health-care interaction.

Vulnerable settings and populations, and marginalized groups

WHO has issued guidance on COVID-19 for a number of vulnerable groups, and the 17+ categories of vulnerability identified for the COVID-19 response in the European Region will be relevant also during the upcoming influenza season. The vulnerabilities are expected to be more pronounced as the flu season approaches; applying lessons learned from the ongoing COVID-19 response and other emergency outbreak responses will be crucial. Member States are thus advised to consider the following six key points:

1. Vulnerable groups and settings, and those at risk of becoming vulnerable, should be prioritized from the outset to ensure that they are included in the response, e.g. provided influenza and pneumococcal vaccine, access to care and contact-tracing.
    - Individuals to be included are those in long-term care facilities, orphanages and nurseries, ethnic minorities, those with disability, migrants and refugees, labour migrants, people experiencing homelessness and individuals with comorbidities.
2. Rights-based and gender-sensitive approaches should continue to be followed.
    - Accessible public health information (e.g. through captioning, sign language, braille) and non-discrimination are crucial for the allocation of scarce medical resources (e.g. no triaging should be based on disabilities or unjustified measures of value to society).
3. Stock should be taken of what has worked in the past and communities engaged meaningfully. Vulnerable populations, including persons with disabilities, should be involved at all stages of response planning.
4. The data should be understood in order to tailor approaches.
    - Clearer analysis of subsets of data related to vulnerable groups in the 17+ categories would greatly help in addressing the needs of these groups vis-à-vis inequalities in uptake, immunization, access to appropriate protective equipment, and estimating preparedness needs and supply chain projections more accurately. If necessary, rapid surveys should be conducted where data disaggregation does not allow the identification of vulnerable subgroups that need to be prioritized for action.

5. Standard approaches or "one-size-fits-all" immunization programmes may not reach or convince many low-demand or high drop-out groups, including those at greatest risk of vaccine-preventable diseases.
    - Supplemental protective vaccination programmes may be needed, preferably integrated into existing systems to create culturally appropriate and inclusive services. Support that addresses the needs of specific vulnerable groups (this includes children of parents with fewer years in education or parents with a low income) may also be needed.
6. Timeliness will be key for the prevention and control of seasonal influenza or any outbreak, respiratory or otherwise, among vulnerable populations or those in special settings. Individuals' access to services should be ensured. Measles vaccination may need to be considered in these groups as well.
    - Services should be available free of charge, provided proactively and in a continuum of care. Differentiating between COVID-19 and other respiratory diseases requires outreach and free access to testing of individuals in vulnerable settings.
    - A higher degree of flexibility in health service delivery to vulnerable populations is required to reach where they live and address vulnerability barriers.
7. Communication with vulnerable populations, including migrants and refugees, needs to be culturally and linguistically appropriate to have the desired impact. Vaccination and testing services should be free of charge to all vulnerable categories.

KEY MESSAGE

Vulnerable settings and populations, and marginalized groups

Vulnerable groups will be at high risk during the next season. Tailoring information and strengthoseening management systems, coordination and supply lines to factor in additional needs for vulnerable groups, not only at health facility level, but also outside the health system, will be key to effectively addressing those needs.

Public health and social measures

The appropriate deployment of specific PHSM, specifically NPIs, will be vital to prevent and control the spread of COVID-19 and seasonal influenza.

Modulation of PHSM

All countries should attempt to control COVID-19 by slowing down transmission, thereby preventing illness and death, and limiting the pressure on the health services. Besides case isolation and contact-tracing, other PHSM will contribute to interrupting individual chains of transmission. They will also contribute to reducing the spread of other respiratory viruses, including influenza.

In the early stage of influenza epidemics and pandemics, PHSM/NPIs are often the most accessible interventions, because of the time it takes to make specific vaccines available and because most locations do not have large stockpiles of antiviral drugs. Therefore, these mitigation measures will play a major role in reducing transmission in community settings. Some PHSM/NPIs may be able to delay the start of an epidemic, which could be particularly important if the resulting delay is long enough to allow specific vaccines to be distributed and thus reduce the impact of the epidemic. Once an epidemic has started, PHSM/NPIs may also be used to delay the peak of the epidemic, again allowing time for vaccines to be distributed, or for health-care providers to better prepare for a surge in cases. By reducing transmission in the community, the epidemic may be spread out over a longer period, with a reduced epidemic peak.

PHSM/NPIs usually focus on reducing transmission (e.g. hand and respiratory hygiene, physical distancing, mask use); reducing spread in the community (e.g. isolating and treating patients, closing schools, shops, public spaces and non-essential businesses and cancelling mass gatherings); limiting international spread (e.g. traveller screening); and improving RCCE with key population groups and stakeholders. Countries can select from a menu of measures and calibrate these according to their local situation, including pulsed measures.

As per existing guidance, these measures include:

- personal protective or environmental measures, such as frequent hand hygiene, respiratory etiquette, use of masks, environmental cleaning and disinfection, proper ventilation, physical distancing measures in public spaces, including minimum distance requirements between individuals (WHO recommends at least 1 metre), reduction or cancellation of mass gatherings and avoiding crowded spaces such as public transport, and working from home where possible;
- movement measures, such as limiting movement of persons locally or nationally according to the local epidemiology (protecting health workers also prevents outbreaks in health facilities and long-term care settings);
- ensuring that schooling modalities are guided by a risk-based approach to maximize the educational and health benefit for pupils, staff and the wider community, and help prevent a new community outbreak of COVID-19 or seasonal influenza that is mistaken for COVID-19, or their coinfection.[39,40]

KEY MESSAGE:

Public health and social measures

The appropriate deployment of specific PHSM, with community participation, will be vital for preventing and controlling the spread of a range of respiratory viruses, including COVID-19 and seasonal influenza. And each individual has a critical role to play and must practise physical distancing, respiratory etiquette and hand hygiene.

Concluding remarks

The PHSM that have been put in place to control the COVID-19 pandemic may also reduce the spread of influenza. However, with the increased spread of SARS-CoV-2 in many countries of the WHO European Region, it is unclear what awaits us. Not remaining sufficiently vigilant and attentive to either COVID-19 or seasonal influenza could result in a double burden of morbidity and mortality from both viruses. It is therefore crucial for policy-makers and planners to prevent and control the spread of both viruses during the upcoming autumn and winter season in the European Region. This document offers policy considerations and indicates what issues and type of thinking will be necessary.

References

1 Iuliano AD, Roguski KM, Chang HH, Muscatello DJ, Palekar R, Tempia S et al. Lancet. 2018;391(10127):1285–300 (http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)33293-2/fulltext, accessed 5 August 2020).

2 Nielsen J, Kraus TG, Molbak K. Influenza-associated mortality determined from all-cause | mortality, Denmark 2010/11–2016/17: the FluMomo model. Influenza Other Respir Viruses. 2018;12(5):59– 604 (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6086850/, accessed 12 October 2020).

3 Luhnow D, Uribe A. Covid-19 measures have all but wiped out the flu in the southern hemisphere. In: The Wall Street Journal, 22 July 2020 (https://www.wsj.com/articles/covid-19-measures-have-all-but-wiped-out-the-flu-in-the-southern-hemisphere-11595440682, accessed 8 August 2020).

4 Guideline: coronavirus (COVID-19) infection in pregnancy. BMJ. 2020;369:m1672 (https://www.bmj.com/content/369/bmj.m1672.long, accessed 12 October 2020).

5 Transmission of SARS-CoV-2:implications for infection prevention precautions. Scientific brief. Geneva; WHO; 9July 2020(https://www.who.int/publications/i/item/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations, accessed 12 October 2020).

6 Coronavirus disease (COVID-19) technical guidance: the Unity Studies – early investigation protocols. In: World Health Organization [website] (https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/early-investigations, accessed 12 October 2020).

7 Infection prevention and control during health care when coronavirus disease (COVID-19) is suspected or confirmed: interim guidance. Geneva: WHO; 29 June 2020 (https://apps.who.int/iris/rest/bitstreams/1284718/retrieve, accessed 12 October 2020).

8 Maintaining essential health services: operational guidance for the COVID-19 context: interim guidance. Geneva: WHO; 1 June 2020 (https://apps.who.int/iris/rest/bitstreams/1279080/retrieve, accessed 12 October 2020).

9 Coronavirus diseases (COVID-19) advice for the public: when and how to use masks: interim guidance. In: World Health Organization [website] (https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/when-and-how-to-use-masks, accessed 12 October 2020).

10 Antigen detection in the diagnosis of SARS-CoV-2 infection using rapid immunoassays: interim guidance. Geneva; WHO; 11 September 2020 (https://www.who.int/publications/i/item/antigen-detection-in-the-diagnosis-of-sars-cov-2infection-using-rapid-immunoassays, accessed 12 October 2020).

11 Rapid hospital readiness checklist: harmonized health service capacity assessments in the context of the COVID-19 pandemic. Interim guidance. Geneva: WHO; 25 June 2020 (https://apps.who.int/iris/rest/bitstreams/1284123/retrieve, accessed 12 October 2020).

12 Maintaining essential health services: operational guidance for the COVID-19 context: interim guidance. Geneva: WHO; 1 June 2020 (https://www.who.int/publications/i/item/WHO-2019-nCoV-essential-health-services-2020.1, accessed 12 October 2020).

13 Minimum requirements for infection prevention and control. Geneva: WHO; 2019 (https://apps.who.int/iris/handle/10665/330080, accessed 12 October 2020).

14 Strengthening the health systems response to COVID-19: adapting primary health care services to more effectively address COVID-19. Geneva: WHO Regional Office for Europe; 17 June 2020 (https://apps.who.int/iris/bitstream/handle/10665/332783/WHO-EURO-2020-727-40462-54321-eng.pdf?sequence=1&isAllowed=y, accessed 14 October 2020).

15 WHO tool for behavioural insights on COVID-19. In: World Health Organization Regional Office for Europe [website]. 29 July 2020 (https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/technical-guidance/who-tool-for-behavioural-insights-on-covid-19, accessed 12 October 2020).

16 Health buddy. In: World Health Organization Regional Office for Europe [website] (https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/healthbuddy, accessed 12 October 2020).

17 WHO SAGE seasonal influenza vaccination recommendations during the COVID-19 pandemic: interim guidance. Geneva: WHO; 21 September 2020 (https://www.who.int/immunization/policy/position_papers/Interim_SAGE_influenza_vaccination_recommendations.pdf?ua=1 accessed 13 October 2020).

18 Pneumococcus vaccine position paper. In: World Health Organization: Immunization Vaccines and Biologicals [website] (https://www.who.int/immunization/policy/position_papers/pneumococcus/en/, accessed 13 October 2020).

19 How to implement seasonal influenza vaccination of health workers. Geneva: WHO; 2019 (https://apps.who.int/iris/bitstream/handle/10665/325906/9789241515597-eng.pdf?ua=1, accessed 13 October 2020).

20 Working together: an integration resource guide for planning and strengthening immunization services throughout the life course. Geneva: WHO; 2018 (https://www.who.int/immunization/documents/ISBN_9789241514736/en/, accessed 13 October 2020).

21 Engagement of private/nongovernmental health providers in immunization service delivery: considerations for national immunization programmes. Guidance note. Geneva: WHO; 2017 (https://apps.who.int/iris/bitstream/handle/10665/258968/WHO-IVB-17.15-eng.pdf?sequence=1, accessed 13 October 2020).

22 Planning and implementing high-quality supplementary immunization activities for injectable vaccines: using an example of measles and rubella vaccines: using an example of measles and rubella vaccines. Field guide. Geneva: WHO; 2016 (https://apps.who.int/iris/bitstream/handle/10665/330568/9789241511254-eng.pdf?ua=1, accessed 13 October 2020).

23 Global Routine Immunization Strategies and Practices (GRISP). Geneva: WHO; 2016 (https://apps.who.int/iris/bitstream/handle/10665/204500/9789241510103_eng.pdf?sequence= 1, accessed 13 October 2020).

24 Principles and considerations for adding a vaccine to a national immunization programme: from decisions to implementation and monitoring. Geneva: WHO; 2014 (https://apps.who.int/iris/bitstream/handle/10665/111548/9789241506892_eng.pdf?sequence= 1, accessed 13 October 2020).

25 Operational considerations for COVID-19 surveillance using GISRS: interim guidance. Geneva: WHO; 26 March 2020 (https://apps.who.int/iris/rest/bitstreams/1273099/retrieve, accessed 13 October 2020).

26 Public health surveillance for COVID-19: interim guidance. Geneva: WHO; 7 August 2020 (https://apps.who.int/iris/rest/bitstreams/1291156/retrieve, accessed 13 October 2020).

27 Laboratory testing strategies for COVID-19: interim guidance. Geneva: WHO; 21 March 2020 (https://www.who.int/publications/i/item/laboratory-testing-strategy-recommendations-for-covid-19-interim-guidance, accessed 13 October 2020).

28 WHO guidance for laboratories shipping specimens for COVID-19 testing: interim guidance, Geneva: WHO; 31 March 2020 (https://www.who.int/publications/i/item/guidance-for-laboratories-shipping-specimens-to-who-reference-laboratories-that-provide-confirmatory-testing-for-covid-19-virus, accessed 13 October 2020).

29 WHO target product profiles for COVID-19 therapeutics. Geneva: WHO; 29 July 2020 (https://www.who.int/publications/m/item/who-target-product-profiles-for-covid-19-therapeutics, accessed 13 October 2020).

30 Contact tracing in the context of COVID-19. Geneva: WHO; 10 May 2020 (https://www.who.int/publications/i/item/contact-tracing-in-the-context-of-covid-19, accessed 13 October 2020).

31 Health Workforce Estimator Tool (https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/publications-and-technical-guidance/health-systems/strengthening-the-health-system-response-to-covid-19/surge-planning-tools/health-workforce-estimator-hwfe, accessed 14 October 2020).

32 COVID-19 technical guidance: the Unity Studies: early investigation protocols. In: World Health Organization [website] (https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/early-investigations, accessed 13 October 2020).

33 Public health criteria to adjust social and physical distancing measures. Geneva: WHO; 12 May 2020 (https://www.who.int/publications/i/item/public-health-criteria-to-adjust-public-health-and-social-measures-in-the-context-of-covid-19, accessed 13 October 2020).

34 Clinical care of patients presenting with severe acute respiratory infections: tool kit. Interim guidance. Geneva: WHO; 11 April 2020 (https://www.who.int/publications/i/item/clinical-care-of-severe-acute-respiratory-infections-tool-kit, accessed 13 October 2020).

35 Clinical management of COVID-19: interim guidance. Geneva: WHO; 27 May 2020 (https://www.who.int/publications/i/item/clinical-management-of-covid-19, accessed 13 October 2020).

36 Standard guidance for the management of severe influenza. Initial Guideline Development Group (GDG) meeting. Geneva, 14–16 November 2007 (https://www.who.int/influenza/resources/documents/influenza-meeting-conclusion-27042018.pdf?ua=1, accessed 13 October 2020).

37 Infection prevention and control during health care when coronavirus disease (COVID-19 is suspected or confirmed: interim guidance. Geneva: WHO; 29 June 2020 (https://www.who.int/publications/i/item/WHO-2019-nCoV-IPC-2020.4, accessed 13 October 2020).

38 Cleaning and disinfection of environmental surfaces in the context of COVID-19. Geneva: WHO; 16 May 2020 (https://www.who.int/publications/i/item/cleaning-and-disinfection-of-environmental-surfaces-inthe-context-of-covid-19, accessed 13 October 2020).

39 Schooling in the time of COVID-19: Towards a consensus on schooling in the European Region during the COVID-19 pandemic. WHO: Regional Office for Europe, 14 September 2020 (https://www.euro.who.int/__data/assets/pdf_file/0006/462876/Schooling-COVID-19.pdf , accessed 13 October 2020).

40 UNICEF, WHO, IFRC. Key messages and actions for COVID-19 prevention and control in schools. Geneva: WHO; 10 March 2020 (https://www.who.int/publications/m/item/key-messages-and actions-for-covid-19-prevention-and-control-in-schools, accessed 13 October 2020).

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Document number: WHO/EURO:2020-1248-40998-56605