

Summary of 15 WHO recommendations for non-pharmaceutical public health measures for mitigating the risk and impact of epidemic and pandemic influenza. Source: Table 4 within ISBN 978-92-4-151683-9 © World Health Organization 2019

Measures	Recommendations	Quality of Evidence	Strength of Recommendations	When to Apply
Hand hygiene	Hand hygiene is recommended as part of general hygiene and infection prevention, including during periods of seasonal or pandemic influenza. Although RCTs have not found that hand hygiene is effective in reducing transmission of laboratory-confirmed influenza specifically, mechanistic studies have shown that hand hygiene can remove influenza virus from the hands, and hand hygiene has been shown to reduce the risk of respiratory infections in general.	Moderate (lack of effectiveness in reducing influenza transmission)	Recommended	At all times
Respiratory etiquette	Respiratory etiquette is recommended at all times during influenza epidemics and pandemics. Although there is no evidence that this is effective in reducing influenza transmission, there is mechanistic plausibility for the potential effectiveness of this measure.	None	Recommended	At all times
Face masks	Face masks worn by asymptomatic people are conditionally recommended in severe epidemics or pandemics, to reduce transmission in the community. Although there is no evidence that this is effective in reducing transmission, there is mechanistic plausibility for the potential effectiveness of this measure. A disposable surgical mask is recommended to be worn at all times by symptomatic individuals when in contact with other individuals. Although there is no evidence that this is effective in reducing transmission, there is mechanistic plausibility for the potential effectiveness of this measure.	Moderate (lack of effectiveness in reducing influenza transmission) Moderate (lack of effectiveness in reducing influenza transmission)	Conditionally Recommended Recommended	In severe epidemics or pandemics At all times for symptomatic individuals
Surface and object cleaning	Surface and object cleaning measures with safe cleaning products are recommended as a public health intervention in all settings in order to reduce influenza transmission. Although there is no evidence that this is effective in reducing transmission, there is mechanistic plausibility for the potential effectiveness of this measure.	Low (lack of effectiveness in reducing influenza transmission)	Recommended	At all times
Other environmental measures	Installing UV light in enclosed and crowded places (e.g. educational institutions and workplaces) is not recommended for reasons of feasibility and safety. Increasing ventilation is recommended in all settings to reduce the transmission of influenza virus. Although there is no evidence that this is effective in reducing transmission, there is mechanistic plausibility for the potential effectiveness of this measure. There is no evidence that modifying humidity (either increasing humidity in dry climates, or reducing humidity in hot and humid climates) is an effective intervention, and this is not recommended because of concerns about cost, feasibility and safety.	None Very low (effective) None	Not recommended Recommended Not recommended	N/A At all times N/A
Contract Tracing	Active contact tracing is not recommended in general because there is no obvious rationale for it in most Member States. This intervention could be considered in some locations and circumstances to collect information on the characteristics of the disease and to identify cases, or to delay widespread transmission in the very early stages of a pandemic in isolated communities.	Very low (unknown)	Not recommended	N/A
Isolation of sick individuals	Voluntary isolation at home of sick individuals with uncomplicated illness is recommended during all influenza epidemics and pandemics, with the exception of the individuals who need to seek medical attention. The duration of isolation depends on the severity of illness (usually 5–7 days) until major symptoms disappear.	Very low (effective)	Recommended	At all times
Quarantine of exposed individuals	Home quarantine of exposed individuals to reduce transmission is not recommended because there is no obvious rationale for this measure, and there would be considerable difficulties in implementing it.	Very low (variable effectiveness)	Not recommended	N/A
School measures and closures	School measures (e.g. stricter exclusion policies for ill children, increasing desk spacing, reducing mixing between classes, and staggering recesses and lunchbreaks) are conditionally recommended, with gradation of interventions based on severity.	Very low (variable effectiveness)	Conditionally recommended	Gradation of interventions based on severity; school closure can be considered in severe epidemics and

	Coordinated proactive school closures or class dismissals are suggested during a severe epidemic or pandemic. In such cases, the adverse effects on the community should be fully considered (e.g. family burden and economic considerations), and the timing and duration should be limited to a period that is judged to be optimal.			pandemics
Workplace measures and closures	Workplace measures (e.g., encouraging teleworking from home, staggering shifts, and loosening policies for sick leave and paid leave) are conditionally recommended, with gradation of interventions based on severity. Extreme measures such as workplace closures can be considered in extraordinarily severe pandemics in order to reduce transmission.	Very low (effective)	Conditionally recommended	Gradation of interventions based on severity; workplace closure should be a last step only considered in extraordinarily severe epidemics and pandemics
Avoid crowding	Avoiding crowding during moderate and severe epidemics and pandemics is conditionally recommended, with gradation of strategies linked with severity in order to increase the distance and reduce the density among populations.	Very low (unknown)	Conditionally recommended	Moderate and severe epidemics and pandemics
Travel advice	Travel advice is recommended for citizens before their travel as a public health intervention in order to avoid potential exposure to influenza and to reduce the spread of influenza.	None	Recommended	Early phase of pandemics
Entry and exit screening	Entry and exit screening for infection in travellers is not recommended, because of the lack of sensitivity of these measures in identifying infected but asymptomatic (i.e. presymptomatic) travellers.	Very low (lack of effectiveness in reducing influenza transmission)	Not recommended	N/A
Internal travel restrictions	Internal travel restrictions are conditionally recommended during an early stage of a localized and extraordinarily severe pandemic for a limited period of time. Before implementation, it is important to consider cost-effectiveness, acceptability and feasibility, as well as ethical and legal considerations in relation to this measure.	Very low (effective)	Conditionally recommended	Early phase of extraordinarily severe pandemics
Border closure	Border closure is generally not recommended unless required by national law in extraordinary circumstances during a severe pandemic, and countries implementing this measure should notify WHO as required by the IHR (2005).	Very low (variable effectiveness)	Not recommended	N/A

IHR: International Health Regulations; N/A: not applicable; NPI: non-pharmaceutical intervention; RCT: randomized controlled trial; UV: ultraviolet; WHO: World Health Organization.