Technical Advisory Group: Use of Masks in the context of COVID-19 (Face Coverings and Medical Masks)

- In light of changes to policies in England and by the World Health Organisation on the use of medical masks (herein face masks) and face coverings for the COVID-19 pandemic, Welsh Government Technical Advisory Group supported by Health Technology Wales has considered the available evidence and guidance. If further important scientific evidence emerges this advice will be updated.

- A face covering serves a different purpose to a facemask (Annex I). A face covering principally acts to **protect others** by retarding the transmission of small droplets containing viral particles into the environment. Well-fitted medical face masks serve to **protect the wearer** from infection and others from transmission if the wearer is infectious.

- Face masks and face coverings are different, and this difference should be emphasised in advice given to the public, and a consistent use of vocabulary ensured in communications from government.

- **Public risk and science communication should provide clear, practical and understandable advice on when to wear face coverings and how to make, source, wear and dispose of coverings**.

- The use of face masks or face coverings does not remove the need for hand washing and other personal actions that are currently recommended to prevent transmission. Face coverings and face masks may provide an additional measure that collectively could reduce infection risk, but their use does carry a risk of behavioural change that will more than negate any benefit they may offer.

- Other control measures to reduce exposure are more impactful (e.g. physical barriers, social distancing, good sanitation, regular handwashing). In general, the use of face coverings may represent a measure that could supplement other control measures to provide a benefit to reduce transmission.

Face coverings

- A homemade or purchased face covering might reduce the transmission of SARS-CoV2 from one person to another if made, worn, handled and disposed of properly.

- Scientific evidence is not robust on the benefits of face coverings, with mainly observational findings supporting the role in preventing transmission. It should

be noted that this has not been extensively studied to date, and further studies are expected.

- Not all face coverings will have the same benefit. There will need to be clear guidance for homemade and purchased face coverings to ensure that they meet a minimum standard. WHO has recommended a minimum of three layers in a face covering, with an appropriate material to ensure good filtration and breathability.

- Members of the public should be encouraged to wear face coverings where it is difficult or not possible to observe social distancing (e.g. public transport, busy shops).

- Face coverings should be considered when in settings where other control measures other control methods for reducing exposure are not effective (e.g. elimination, substitution, engineering or administrative controls).

- It is extremely important that any communication of advice relating to face coverings emphasises that other measures such as social distancing remain of critical importance and should not be relaxed when wearing a face covering.

- Face coverings are likely to benefit others, as much as or more than they do for the wearer.

- Evidence suggests that asymptomatic, mildly or pre-symptomatic individuals are involved in disease transmission. Wearing a mask is not a substitute for individuals that are symptomatic. Symptomatic individuals should still self-isolate (7 days) or undergo household quarantine (14 days) and seek testing.

- Public risk and science communication should provide clear, practical and understandable advice on when to wear face coverings and how to make, source, wear and dispose of coverings.

- Clear guidance on the escalation or de-escalation of wearing face coverings in public should be considered.

- Clear guidance should be provided on who should not or cannot wear face coverings (e.g. elderly people with cognitive impairment, young children). Similarly clear guidance on the disadvantages of wearing face coverings should be communicated (e.g. difficulty for those who are Deaf or have hearing impairments, skin problems, false sense of security).

Face masks

- There is clear scientific evidence on the benefits of wearing face masks as part of a personal protection equipment (PPE) ensemble in concert with other

Infection Prevention and Control measures (e.g. correct removal of PPE, hand hygiene and decontamination of environment and equipment).

- There would be benefit of recommending, and in certain circumstances providing, medical masks to people who are more likely to have adverse outcomes from contracting COVID-19 (e.g. shielded individuals, BAME, homeless, over 60s).

- The effectiveness of medical grade face masks for personal protection is dependent upon wearing them correctly, and effort should be expended to ensure that this is effectively communicated to the public.

- It may be necessary for government to take steps to protect supplies of medical grade face masks, to prevent hoarding by individuals who are not in the key at risk groups.

- In some cases, it may not be advisable for individuals with underlying respiratory conditions to wear face masks or face coverings as these could make it harder to breathe. It may be that additional measures will need to be considered in workplaces, hospitals and care settings to reduce risk to vulnerable individuals whose medical condition means they cannot safely wear face masks

- As with face coverings, clear sensible guidance should be provided on when and where to wear face masks (e.g. where social distancing cannot be observed, hospitals and care settings).

Further more detailed national guidance on the use of face coverings and face masks in health and care settings will be issued.

Annex I

The WHO guidance on "use of masks in the context of COVID-19" provides useful definitions replicated here for clarity:

- Medical Masks (face masks) are defined as surgical or procedure masks that are flat or pleated. They are tested to a set of standardised test methods, and provide high filtration, adequate breathability and optional fluid resistance.
- In the UK medical mask recommended in the UK IP&C guidance for direct care of patients with suspected or proven COVID-19 within 2m is a Fluid Resistant Surgical Mask (FRSM) type IIR. Type I or type II masks (not fluid resistant) are appropriate medical masks to be used for source control.
- Filtering Face Piece (FFP) Respirators are the masks recommended for use when performing aerosol generating procedures – these masks require fit testing for correct use. WHO recommends FFP2 masks or above for aerosol

2. Risk of **exposure** to the COVID-19 virus
   - due to epidemiology and intensity of transmission in the population: if there is community transmission and there is limited or no capacity to implement other containment measures such as contact tracing, ability to carry out testing and isolate and care for suspected and confirmed cases.
   - depending on occupation: e.g., individuals working in close contact with the public (e.g., social workers, personal support workers, cashiers).
3. **Vulnerability** of the mask wearer/population: for example, medical masks could be used by older people, immunocompromised patients and people with comorbidities, such as cardiovascular disease or diabetes mellitus, chronic lung disease, cancer and cerebrovascular disease.(69)
4. **Setting** in which the population lives: settings with high population density (e.g. refugee camps, camp-like settings, those living in cramped conditions) and settings where individuals are unable to keep a physical distance of at least 1 metre (3.3 feet) (e.g. public transportation).
5. **Feasibility**: availability and costs of masks, access to clean water to wash non-medical masks, and ability of mask wearers to tolerate adverse effects of wearing a mask.
6. **Type** of mask: medical mask versus non-medical mask

Based on these criteria, Table 2 provides practical examples of situations where the general public should be encouraged to wear a mask and it indicates specific target populations and the type of mask to be used according to its purpose. The decision of governments and local jurisdictions whether to recommend or make mandatory the use of masks should be based on the above criteria, and on the local context, culture, availability of masks, resources required, and preferences of the population.

Table 2. Examples of where the general public should be encouraged to use medical and non-medical masks in areas with known or suspected community transmission

Situations/settings	Population	Purpose of mask use	Type of mask to consider wearing if recommended locally
Areas with known or suspected widespread transmission and limited or no capacity to implement other containment measures such as physical distancing, contact tracing, appropriate testing, isolation and care for suspected and confirmed cases.	General population in public settings, such as grocery stores, at work, social gatherings, mass gatherings, closed settings, including schools, churches, mosques, etc.	Potential benefit for source control	Non-medical mask
Settings with high population density where physical distancing cannot be achieved; surveillance and testing capacity, and isolation and quarantine facilities are limited	People living in cramped conditions, and specific settings such as refugee camps, camp-like settings, slums	Potential benefit for source control	Non-medical mask
Settings where a physical distancing cannot be achieved (close contact)	General public on transportation (e.g., on a bus, plane, trains) Specific working conditions which places the employee in close contact or potential close contact with others e.g., social workers, cashiers, servers	Potential benefit for source control	Non-medical mask
Settings where physical distancing cannot be achieved and increased risk of infection and/or negative outcomes	Vulnerable populations: • People aged ≥60 years • People with underlying comorbidities, such as cardiovascular disease or diabetes mellitus, chronic lung disease, cancer, cerebrovascular disease, immunosuppression	Protection	Medical mask
Any setting in the community*	Persons with any symptoms suggestive of COVID-19	Source control	Medical mask

*This applies to any transmission scenario

Potential benefits/advantages

The likely advantages of the use of masks by healthy people in the general public include:

- reduced potential exposure risk from infected persons before they develop symptoms;
- reduced potential stigmatization of individuals wearing masks to prevent infecting others (source control) or of people caring for COVID-19 patients in non-clinical settings;(70)
- making people feel they can play a role in contributing to stopping spread of the virus;