**Guidance on Homemade Cloth Mask**

### Instructions:
The purpose of this document is to provide guidance on how to manufacture/assemble, disinfect and wear a homemade mask for low-resource community settings. Please, read through this entire document before implementing the guidance to ensure that the recommendations are appropriate for context.

### Introduction:
Compared to medical masks (surgical, N95, FFP2), homemade cloth masks yield higher infection rates caused by droplet and airborne microorganisms. These increased infection rates are mostly due to higher rates of particle penetration compared to their medical counterparts (MacIntyre, et. al., 2015, Rengasamy, et. al., 2010).

Yet, a homemade cloth mask might be needed in certain community settings. For example, in community settings where community-based transmission has been documented, a homemade cloth face mask should be worn by community members (CDC, 2020). The purpose of wearing a homemade cloth mask is to reduce the transmission of the COVID-19 virus in community settings from individuals who may be asymptomatic but spreading the virus (CDC, 2020).

In short, homemade cloth masks may offer marginal protection from droplet and airborne infections from asymptomatic persons by reducing the number of respiratory droplets from them to others (MacIntyre & Chughtai, 2015, Institute of Medicine, 2006, Rengasamy, et. al., 2010). Of note, wearing a homemade medical mask for asymptomatic individuals in communities with community transmission is similar in principle to an individual coughing or sneezing into their inner elbow.

### Key Recommendations for homemade cloth masks:
- Symptomatic individuals in the community should wear a medical/surgical mask if possible, as these types of masks provide greater protection from droplet infections. Specifically, medical/surgical masks are three times more effective at blocking the transmission of microorganisms than homemade cloth masks (Davies, et. Al. 2013). Medical/surgical masks are single-use masks.
- Homemade cloth masks should not replace respirators (i.e. N95, FFP2). They should not be used if an AGP (aerosol-generating procedure) is being performed on a patient. An N95 mask should be used in these cases (CDC, 2020). Furthermore, health care workers (HCWs) are not advised to wear homemade cloth masks (MacIntyre et. al., 2015). In providing routine care to a COVID-19 patient, HCWs should wear a surgical mask (WHO, 2020).
- Homemade cloth masks can be assembled from many different materials readily available within the community. Yet, preliminary data show that masks made up of two or more cloth layers are more effective at keeping particle penetration lower than single-layered masks (Edwards, 2020).
- Homemade cloth masks may be made from the following materials: cotton blends, a thick woven fabric like batik, quilting cotton, thick interwoven teacloth/towel, and/or gauze (Edwards, 2020, Jenkins, 2020, van der Sande, et. al., 2008, MacIntyre, et. al., 2015). In short, if sunlight can penetrate through the mask, then the fabric is too thin and should not be used.
- Physical distancing of at least 1-metre and adopting sound hand hygiene practices should accompany the wearing of a homemade face mask, especially in crowded community settings (CDC, 2020). Of note, wearing a homemade cloth mask does not replace good hand hygiene and physical distancing. Some studies suggest that when used in combination (cloth masks and hand hygiene), rates of infection decline (MacIntyre, et. al, 2015).
- Make sure to keep the homemade cloth mask dry at all times. Even moisture from exhaling could potentially make the fabric more prone to transmitting infection (Edwards, 2020).
- Homemade masks should:
  - fit snugly but comfortably against the side of the face and cover the nose and mouth
  - rest on the bridge of the nose and be moulded onto the face and side of the face
  - come down below the chin
  - be a conical or tetrahedral shape
  - be secured with ties or ear loops
  - include multiple layers of fabric
  - allow for breathing without restriction
  - be able to be laundered, cleaned, or disinfected (CDC, 2020).

### Homemade Cloth Mask Manufacturing and Disinfection

**Bibliography:**

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### Note:
- **MASK SHOULD NOT BE SHARED, EVEN AMONG FAMILY MEMBERS. ONE MASK PER PERSON**

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**World Health Organization**

**Africa**

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**YOU NEED:**
- Two cotton fabrics (25 cm length and 15 cm wide)
- Four cotton threads (20 cm length each)
- Two pieces of elastic (15 cm length)
- Needle or sewing machine
- Scissors
- Fabrics made of cotton blends, a thick woven fabric, like batik, “quilter's cotton,” thick interwoven teacloth/towel can be used.

1. Cut two pieces of cotton fabric (length of 25 cm and height of 15 cm each)
2. Hem the edges of the two fabrics by cutting any excess or jagged fabric away if fabric is ripped from large fabric spool.
3. Place the two pieces of fabric on top of each other on a table. Needle or sewing machine. You may have a seamstress make the mask, if possible.
4. Fold the outer piece of fabric (the one touching the table) over slightly on top of the other piece. Sew the folded over piece onto the top piece. Perform this for both the top and bottom parts of the mask.
5. Place the four cotton threads or two elastic pieces on either side of the mask. Fold over the outer and inner pieces together on top of the threads or elastic. Sew these two sides pieces to securely hold the threads or elastic pieces in place.
6. Tie the unsewn ends of the threads or elastic into a secure knot. Make sure the knot is tight.