

WV's updated recommendations on masks. 20/4/2020

World Vision is not recommending or purchasing N95 masks for staff or for donation to health services. This is because these masks are only needed for health workers working in intensive care units of hospitals. All other health workers and carers of sick people can function with a regular surgical/medical mask. ***WV now recommends the use of cloth face coverings, but only in certain settings (see below).***

The WV recommendations for who needs a mask as part of their work has been detailed in the [OCS Guidance on Staff and Volunteer Protection during COVID-19 Reponse guidelines](#). The recommendations have been based on the WHO guidance which states that masks are not needed for healthy people if they maintain social distance of 1.5-2 meters and maintain good hygiene through hand washing with soap, and cough and sneeze etiquette. However, if a person is caring for someone who is sick or suspected as having coronavirus, they should wear a surgical/medical mask, as they cannot maintain the appropriate distance and appropriately care for them.

For tasks that WV workers do in an office, a mask is not needed. To protect staff against visitors who may be sick, it is recommended that plastic screens be erected at reception desk or other fixed locations where staff interact with the public. Also, staff who are sick or have a sick person in their home should not come to work but work from home. For field staff and volunteers who are working in close proximity of someone who is or may be sick, it is recommended that they wear a surgical mask, and at the same time maintain good hand hygiene, [wear the mask correctly and dispose of it correctly, and be careful not to touch the front of the mask](#). Field staff who are doing distributions, home visits with close contact with the community – such as CHWs, case managers, drivers who may be transporting sick staff or community members – should be issued surgical masks. Other staff who are holding meetings that can maintain distance, no-touch distributions to households and community construction do not need a mask but should maintain social distance and maintain hand and cough hygiene.

WV is aware of the recommendations by CDC and the United States to wear a scarf or cloth face covering in order to preserve medical masks for health workers. However, the research on use of cloth masks is not conclusive on their effectiveness. Research by [MacIntyre \(2015\)](#) with health workers showed that penetration of many simple cloth masks by particles was almost 97% (compared to 44% with surgical masks and <0.01%-0.1% with N95 masks). Even where there is a promotion of the use of cloth face coverings (e.g. by the CDC), the guidance states that these types of face coverings may not be effective in blocking virus particles that may be transmitted by coughing, sneezing or certain medical procedures. They do not provide a high degree of protection from virus particles because of a potential loose fit, and the small degree to which some masks block particles given the loose weave in most do-it-yourself cloth face coverings. Their guidelines also mention that all current physical distancing and hygiene prevention methods should be maintained along with using the cloth face covering. The WHO has not adopted this same guidance on cloth face coverings. One reason for that is the fear that promoting cloth face coverings, which are only marginally effective (and indeed any use of masks in community settings), may lead to a “false sense of security, leading to potentially less adherence to other preventive measures such as physical distancing and hand hygiene.”

When to use Cloth Face Coverings (do-it-yourself masks) and Fabrics to Use:

In (1) countries where cloth face coverings are mandated by the government, and (2) in situations where physical distancing is impossible (e.g. crowded markets), cloth face coverings should be used. In other countries and in situations where physical distancing can be maintained, WV COVER H&N staff agrees with the WHO that wearing a mask may lead to complacency and a reduction of handwashing, social distancing and other preventative measures. Therefore, WV is not recommending cloth face coverings for general use in countries where they are not mandated or in areas where physical distancing can be maintained as we cannot be assured that our staff and volunteers will be protected.

The fabric used for these masks vary widely in their ability to filter the type of very small droplets¹ that are often expelled with coughing or sneezing, and thus in their ability to offer protection against COVID-19. The following guidelines should be taken into account when choosing a mask fabric.

- Choose a fabric that is dense enough to filter out more viral particles but still breathable and that can fit close to the face without gaps. A recent study on aerosol filtration efficiency of different fabrics also found that gaps (as caused by an improper fit of the mask) can result in over a **60% decrease** in the filtration efficiency of a cloth facemask.²
- **Cloth and other materials that score the highest on filtering small droplets include a cotton quilt (>90% filtration³), four-layers thick of 600-count pillowcases (60% filtration), flannel (57% filtration⁴), and tea (kitchen) towels that are made of a tightly woven absorbent (48% filtration).** (For reference, a typical surgical mask has a filtration efficiency ranging from 60 to 80 percent, which is less efficient than a N95 medical mask which filters about 95% of very small particles.)
- **AVOID use of single layers of other fabrics** (e.g. single layer of cotton pillowcase, 22% filtration), **loosely-woven materials** (e.g. thick woollen scarves, 21% filtration), **and even 2-4 layers of thin materials like cotton bandannas** (18-19.5% filtration, also called a kerchief).⁵
- When trying to choose between two suitable fabrics, hold the fabric up to a bright light. If *more* light passes easily through the fibres of one of them, it is probably not as good of a fabric for a facemask that allows *less* light to pass through it.
- In addition to using the best available material, a recent study found that **adding an outer layer made from a band of nylon stockings to a homemade face covering may boost its filtering ability to match the capability of a surgical mask (60-80%) by creating a tighter seal between the mask and the wearer's face.**⁶ Other researchers (Konda et al) found that filtration efficiencies improved to >80% when **using combinations of different fabrics together** (e.g. cotton+2 layers of silk, cotton+2 layers of chiffon, cotton+one layer of flannel) which is likely due to the combined effect of mechanical and electrostatic-based filtration.



Other guidance on how to put on, take off and wash cloth face masks:

<https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/diy-cloth-face-coverings.html>

Other references: [WHO Advice on the Use of Masks in the context of COVID-19](#); [WHO Q&A for masks](#); [WHO rational use of PPE for Coronavirus disease \(COVID-19\) and considerations during severe shortages.](#)

¹ ≥ 0.3 microns.

² See Konda et al (21 Apr 2020): <https://pubs.acs.org/doi/pdf/10.1021/acs.nano.0c03252>

³ Konda, *op cit*

⁴ Konda, *op cit*

⁵ See quotes by Dr. Yang Wang, who won an international award for aerosol research, at <https://www.nytimes.com/article/coronavirus-homemade-mask-material-DIY-face-mask-ppe.html>.

⁶ See Mueller and Fernandez (17 Apr 2020): <https://www.medrxiv.org/content/10.1101/2020.04.17.20069567v2.full.pdf> and also Cooper et al (1983): <https://www.ncbi.nlm.nih.gov/pubmed/6650392>