



Using Face Shields by the General Public to help contain COVID-19.

A Summary of JAMA Viewpoint April 29,2020. Dpi:10.1001/jama.2020.7477. “Moving Personal Protective Equipment into the Community, Face Shields and Containment of COVID-19”

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Overview

The purpose of this white paper is to summarize the key points made in a JAMA published Viewpoint regarding using PPE in the general public. Please refer to the article referenced for specific information. J-Pac makes no claim about the article’s accuracy and this white paper provides an initial overview for the reader.



Transmission of SARS-CoV-2

The JAMA Viewpoint describes evidence that the virus is spread like other respiratory viruses; infected droplets emitted from the respiratory system of an infected individual penetrates the mucus membranes of the eyes, nose or mouth of a non-infected person. Smaller droplets are able to travel further than the 6 ft recommended distancing guideline.

Face Masks

[J-Pac Comment] Chinese supply of face masks became a major liability during the pandemic. Healthcare providers were often able to secure face masks from China. Many of these masks are sold by distributors as rebranded products with sourcing information hidden from the consumer.

To help preserve face masks for healthcare providers, the Centers for Disease Control and Prevention recommended that the general population use cloth face masks in public to control the spread of the virus. However, they have been shown to provide a low level of protection compared to N95 respirators.

Medical Face Shields

The author suggests that medical face shields may provide a better option to cloth masks. Medical face shields provide a clear plastic barrier that covers the face. They appear to reduce the transmission of the influenza virus. In one study, face shields were shown reduced exposure by 96% when worn within 18 inches of a cough. When the distance was increased to 6 feet, the face shield reduced inhaled virus by 92%.

Face shields can offer several potential advantages.

1. Medical masks have limited durability while medical face shields are reusable if made from the proper medical grade materials that can be cleaned.
2. Medical face shields are comfortable to wear and result in less face touching than face masks.
3. Face shields protect more of the exposed mucus membranes that can be entry points of the virus, such as the eyes and ears.
4. Face shields do not need to be removed to communicate.
5. Medical face shields allow visibility to facial expressions and lip movements for speech recognition.
6. Medical face shields are economical with price per use well under \$0.50 if reused.



Conclusions

Adding medical face shields to currently advised containment strategies appear to be an improvement that should be studied further. While not perfect, even vaccines for most infectious pathogens do not require 100% efficacy and the author urges that requiring medical face shields to meet 100% efficacy is not required to drive SARS-CoV-2 to manageable levels.

About J-Pac Medical

J-Pac Medical is a commercial manufacturing partner to innovative medical device companies that market single-use medical and diagnostic devices. J-Pac has more than 40 years of experience in thermoplastics unique to medical device manufacturing and sterile packaging. Its capabilities span three major market segments. J-Pac's Packaging Division provides innovative, turnkey, sterile packaging solutions including package design and validation, device assembly, and sterilization management. J-Pac's Biomedical Textile Division manufactures implantable-class biomedical textiles and bioabsorbable devices. J-Pac's Diagnostics Division designs and manufactures single-dose reagent blisters used on microfluidic test platforms. All of these business segments leverage the company's expertise in fabricating, shaping, forming, and assembling medical devices and packaging that utilize plastic polymers.

