

Note importante:

Le contenu des diapositives et du texte qui suit est le fruit des études et des traitements personnels du Dr. Laudani. Ce texte ne vise pas à donner une indication thérapeutique ou diagnostique pour laquelle chaque individu devra s'adresser à son médecin traitant.

Article du 2020, une méta-analyse: étude de plusieurs études sur l'impact de l'utilisations des masques comme protection contre la grippe (le résultat est souligné en jaune)

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Policy Review

Nonpharmaceutical Measures for Pandemic Influenza in Nonhealthcare Settings—Personal Protective and Environmental Measures

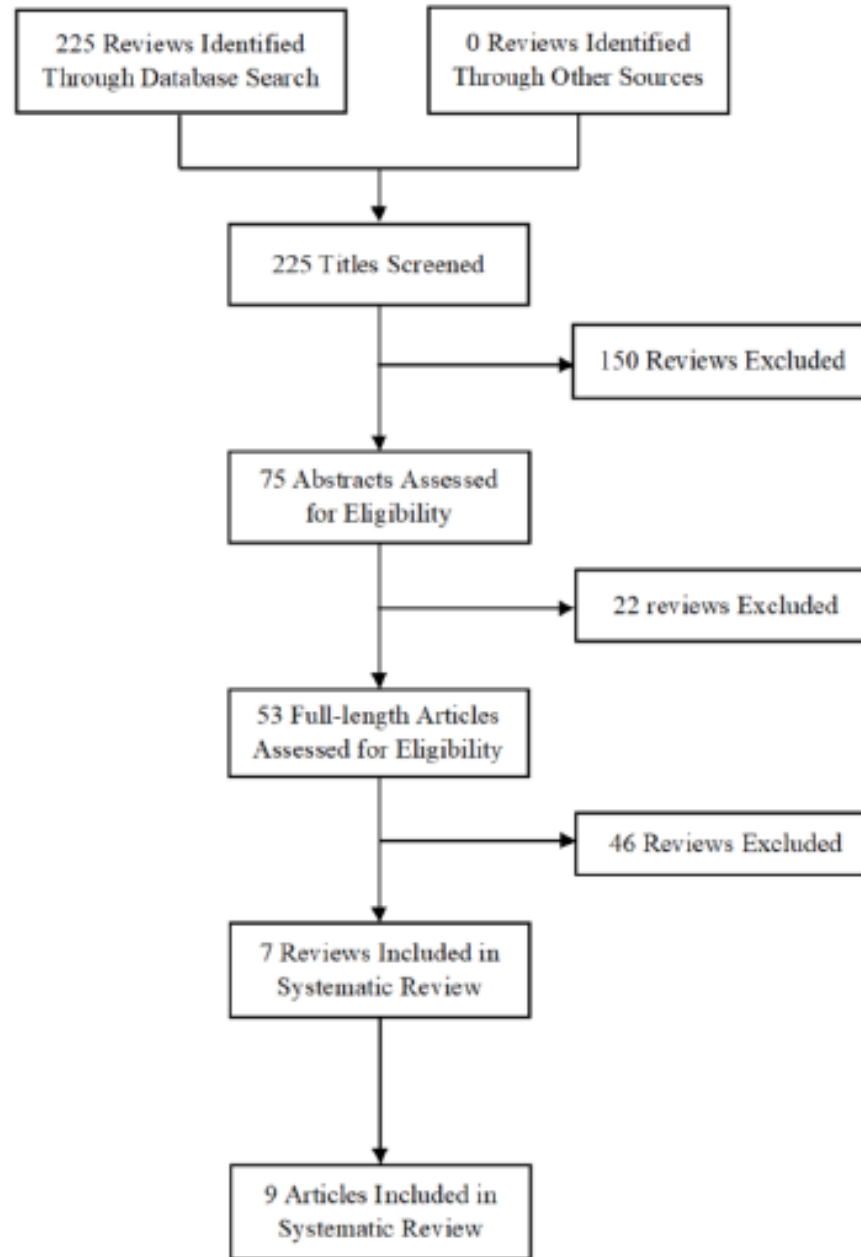
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[Methods and Results](#)

Cette étude sélectionne environ 200 études au départ pour arriver à environ à 9 études validés les plus significatives

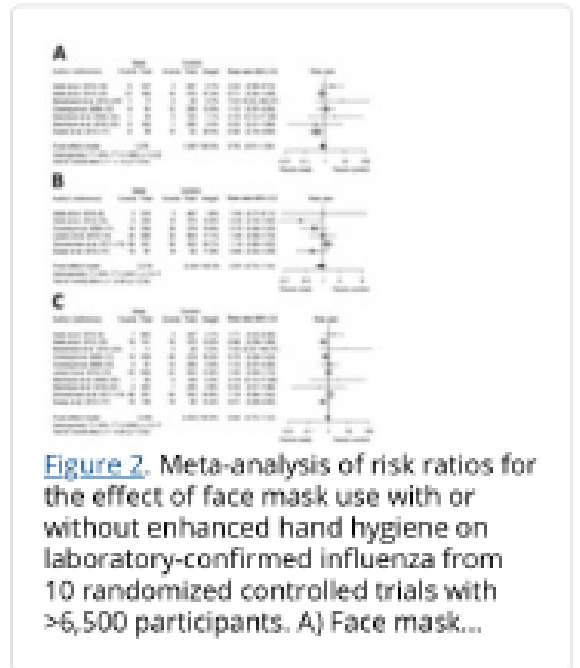


Résultats :

Extrait n.1

Face Masks

In our systematic review, we identified 10 RCTs that reported estimates of the effectiveness of face masks in reducing laboratory-confirmed influenza virus infections in the community from literature published during 1946–July 27, 2018. In pooled analysis, we found no significant reduction in influenza transmission with the use of face masks (RR 0.78, 95% CI 0.51–1.20; $I^2 = 30\%$, $p = 0.25$) (Figure 2). One study evaluated the use of masks among pilgrims from Australia during the Hajj pilgrimage and reported no major difference in the risk for laboratory-confirmed influenza virus infection in the control or mask group (33). Two studies in university settings assessed the effectiveness of face masks for primary protection by monitoring the incidence of laboratory-confirmed influenza among student hall residents for 5 months (9,10). The overall reduction in ILI or laboratory-confirmed influenza cases in the face mask group was not significant in either studies (9,10). Study designs in the 7 household studies were slightly different: 1 study provided face masks and P2 respirators for household contacts only (34), another study evaluated face mask use as a source control for infected persons only (35), and the remaining studies provided masks for the infected persons as well as their close contacts (11–13,15,17). None of the household studies reported a significant reduction in secondary laboratory-confirmed influenza virus infections in the face mask group (11–13,15,17,34,35). Most studies were underpowered because of limited sample size, and some studies also reported suboptimal adherence in the face mask group.



Extrait n.2

Disposable medical masks (also known as surgical masks) are loose-fitting devices that were designed to be worn by medical personnel to protect accidental contamination of patient wounds, and to protect the wearer against splashes or sprays of bodily fluids (36). There is limited evidence for their effectiveness in preventing influenza virus transmission either when worn by the infected person for source control or when worn by uninfected persons to reduce exposure. Our systematic review found no significant effect of face masks on transmission of laboratory-confirmed influenza.

We did not consider the use of respirators in the community. Respirators are tight-fitting masks that can protect the wearer from fine particles (37) and should provide better protection against influenza virus exposures when properly worn because of higher filtration efficiency. However, respirators, such as N95 and P2 masks, work best when they are fit-tested, and these masks will be in limited supply during the next pandemic. These specialist devices should be reserved for use in healthcare settings or in special subpopulations such as immunocompromised persons in the community, first responders, and those performing other critical community functions, as supplies permit.

In lower-income settings, it is more likely that reusable cloth masks will be used rather than disposable medical masks because of cost and availability (38). There are still few uncertainties in the practice of face mask use, such as who should wear the mask and how long it should be used for. In theory, transmission should be reduced the most if both infected members and other contacts wear masks, but compliance in uninfected close contacts could be a problem (12,34). Proper use of face masks is essential because improper use might increase the risk for transmission (39). Thus, education on the proper use and disposal of used face masks, including hand hygiene, is also needed.

Extrait n. 3

Hand hygiene is a widely used intervention and has been shown to effectively reduce the transmission of gastrointestinal infections and respiratory infections ([26](#)). However, in our systematic review, updating the findings of Wong et al. ([8](#)), we did not find evidence of a major effect of hand hygiene on laboratory-confirmed influenza virus transmission ([Figure 1](#)). Nevertheless, hand hygiene might be included in influenza pandemic plans as part of general hygiene and infection prevention.

We did not find evidence that surgical-type face masks are effective in reducing laboratory-confirmed influenza transmission, either when worn by infected persons (source control) or by persons in the general community to reduce their susceptibility ([Figure 2](#)). However, as with hand hygiene, face masks might be able to reduce the transmission of other infections and therefore have value in an influenza pandemic when healthcare resources are stretched.

It is essential to note that the mechanisms of person-to-person transmission in the community have not been fully determined. Controversy remains over the role of transmission through fine-particle aerosols ([3,46](#)). Transmission by indirect contact requires transfer of viable virus from respiratory mucosa onto hands and other surfaces, survival on those surfaces, and successful inoculation into the respiratory mucosa of another person. All of these components of the transmission route have not been studied extensively. The impact of environmental factors, such as temperature and humidity, on influenza transmission is also uncertain ([47](#)). These uncertainties over basic transmission modes and mechanisms hinder the optimization of control measures.

Extrait n. 4

In this review, we focused on 3 personal protective measures and 1 environmental measure. Other potential environmental measures include humidification in dry environments ([48](#)), increasing ventilation ([49](#)), and use of upper-room UV light ([50](#)), but there is limited evidence to support these measures. Further investigations on the effectiveness of respiratory etiquette and surface cleaning through conducting RCTs would be helpful to provide evidence with higher quality; evaluation of the effectiveness of these measures targeting specific population groups, such as immunocompromised persons, would also be beneficial ([Table 2](#)). Future cost-effectiveness evaluations could provide more support for the potential use of these measures. Further research on transmission modes and alternative interventions to reduce influenza transmission would be valuable in improving pandemic preparedness. Finally, although our review focused on nonpharmaceutical measures to be taken during influenza pandemics, the findings could also apply to severe seasonal influenza epidemics. Evidence from RCTs of hand hygiene or face masks did not support a substantial effect on transmission of laboratory-confirmed influenza, and limited evidence was available on other environmental measures.

Conclusions : cette analyse montre qu'il n'existe pas de différence significative en termes de risque réel d'une transmission efficace de grippe entre celui qui porte le masque et celui qui ne la porte pas