UPDATE ALERTS

Update Alert 7: Masks for Prevention of Respiratory Virus Infections, Including SARS-CoV-2, in Health Care and Community Settings

This is the seventh update alert for a living rapid review (1) on the use of masks for prevention of respiratory virus infections, including SARS-CoV-2, in health care and community settings. The first 3 updates (2–4) were monthly, after which the interval was switched to bimonthly (5, 6). After the last update (7), done through 2 June 2021, the interval was extended to biannually. For this update, searches were done from 3 June to 2 December 2021 using the same search methods as the original review. Inclusion was restricted to randomized trials and observational studies that controlled for confounders. Non-peer-reviewed studies were excluded unless they were based on data collected after February 2021, when the Delta variant emerged. The update searches identified 1554 citations. One preprint study (8) done in a health care setting and 6 studies (9–14) done in community settings (including 1 new cluster randomized trial) (9) on masks and SARS-CoV-2 infection met inclusion criteria for this update (Supplement Tables 1 to 3).

COMMUNITY SETTINGS

One new cluster randomized trial (9) and 5 new observational studies (10–14) evaluated the effects of mask use in a community setting and risk for SARS-CoV-2 infection. In previous updates, the evidence for mask use versus no use for prevention of SARS-CoV-2 infection in community settings was previously assessed as low strength favoring mask use, based on 1 prior randomized controlled trial (15) and 3 observational studies (16–18). The new randomized controlled trial was a large cluster randomized trial (>340,000 persons) designed to assess a mask promotion and distribution intervention in Bangladesh (a country with low baseline mask use) (Supplement Table 1), with further randomization to surgical or cloth masks along with various other mask promotion interventions (9). Mask promotion intervention villages were associated with decreased symptomatic SARS-CoV-2 seroprevalence (adjusted prevalence ratio, 0.90 [95% CI, 0.82 to 0.995]) and prevalence of COVID-19 symptoms according to World Health Organization criteria (adjusted prevalence ratio, 0.88 [CI, 0.83 to 0.93]) (Supplement Table 5). In an analysis stratified according to mask type, the mask promotion intervention was associated with decreased symptomatic SARS-CoV-2 seroprevalence in surgical mask villages (adjusted prevalence ratio, 0.89 [CI, 0.78 to 0.997]), with no difference in cloth mask villages (adjusted prevalence ratio, 0.94 [CI, 0.78 to 1.10]).

In summary, new evidence slightly strengthened the evidence of benefit of masks versus no masks in community settings to low-moderate, with no change in insufficient strength of evidence for N95 versus surgical masks in health care settings. A final update is planned for 6 months.

Roger Chou, MD
Tracy Dana, MLS
Rebecca Jungbauer, DrPH
Pacific Northwest Evidence-based Practice Center, Department of Medical Informatics and Clinical Epidemiology, Oregon Health & Science University, Portland, Oregon

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Corresponding Author: Roger Chou, MD, Oregon Health & Science University, 3181 SW Sam Jackson Park Road, Mail Code BICC, Portland, OR 97239; e-mail, chour@ohsu.edu.

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