

South Africa - Rapid reviews of the effects of cloth and medical masks for preventing transmission of SARS-CoV-2 in community and household settings

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Report generated on: October 21, 2020

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Overview

Identification

ID NUMBER

Rapidreviewsoftheeffectsofclothandmedicalmasks

Overview

ABSTRACT

Abstract Background

Evidence on mask use in the general population is needed to inform SARS-CoV-2 responses.

Objective

To assess effects of cloth and medical masks for preventing SARS-CoV-2 transmission in community settings.

Research Methods

Two rapid reviews were conducted searching three electronic databases (PubMed, Embase, Cochrane Library) on 30 and 31 March 2020 and two trials registries: www.clinicaltrials.gov <<http://www.clinicaltrials.gov/>>; and WHO ICTRP (<<https://www.who.int/ictcp/en/>>). Records were screened independently in duplicate. Inclusion criteria were randomized controlled trials (RCTs) for masks that prevented any respiratory virus infections. Eligibility, critical appraisal and risk of bias assessments of full-text articles were conducted independently in duplicate. Data were extracted and analysed (REVMAN 5.3). GRADE assessments were conducted.

Results

Reviewers screened 821 records and assessed nine full-text articles for eligibility. One and seven RCTs were included for cloth and medical mask reviews, respectively.

Cloth masks

No SARS-CoV-2 specific RCTs were identified. There were no cloth mask RCTs in community settings; a single RCT in health care workers provided indirect evidence. Compared to medical masks, cloth masks probably increase clinical respiratory illnesses (relative risk (RR)=1.56, 95% CI: 0.98, 2.49) and laboratory-confirmed respiratory virus infections (RR=1.54, 95% CI: 0.88, 2.70). GRADE certainty was moderate. Evidence for influenza-like illnesses (ILI) was uncertain (RR=13.00, 95% CI: 1.69, 100.03) due to very serious imprecision.

Medical masks: Community settings

Two RCTs evaluated medical masks versus no masks for protecting wearers from ILI among university students in residence. These trials provide low certainty evidence that medical masks may make little to no difference to infection risk versus no masks (RR=0.98, 95% CI: 0.81, 1.19). Evidence was downgraded for serious bias and indirectness.

Household settings

Five RCTs provide low certainty evidence that medical masks may slightly reduce infection risk by 19% versus no masks (RR=0.81, 95% CI: 0.55, 1.20). The effect ranged from 45% risk reduction to 20% increased risk. Evidence was downgraded for serious bias and imprecision.

Conclusion

A hospital-based RCT provided indirect evidence that cloth masks increased infection risk versus medical masks. There were no studies of cloth masks in community settings. There was low certainty evidence of infection risk reduction in medical masks versus no masks. Direct supportive evidence for cloth and medical mask efficacy and effectiveness are lacking. Decision-making for mask use may consider other factors such as feasibility, absence of harms and SARS-CoV-2 transmission factors; however, well-designed comparative effectiveness studies are required to inform policy and future

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pandemic preparedness.

Producers and Sponsors

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Sampling

No content available

Questionnaires

No content available

Data Collection

Data Collection Dates

Start	End	Cycle
2020-03-01	2020-03-31	N/A

Data Processing

No content available

Data Appraisal

No content available

Documentation

Reports

Cloth masks rapid review

Title Cloth masks rapid review
Author(s) Ramokolo
Date 2020
Country South Africa
Language English
Filename http://medat.samrc.ac.za/data/rapid_reviews_effects_masks/Cloth_Masks_Rapid_Review.pdf

CMSA_CPHM_Guidance_on_COVID19_and_cloth_face-masks_20_10_2020

Title CMSA_CPHM_Guidance_on_COVID19_and_cloth_face-masks_20_10_2020
Author(s) Ramokolo
Date 2020
Country South Africa
Language English
Filename http://medat.samrc.ac.za/data/rapid_reviews_effects_masks/CMSA_CPHM_Guidance_on_COVID19_and_cloth_face-masks_20_10_2020.pdf

CMSA_CPHM_Guidance_on_COVID-19_and_Medical_Masking_20_10_2020

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Medical_Masks_Rapid_Review

Title Medical_Masks_Rapid_Review
Author(s) Ramokolo
Date 2020
Country South Africa
Language English
Filename http://medat.samrc.ac.za/var/www/html/data/rapid_reviews_effects_masks/Medical_Masks_Rapid_Review.pdf

Other materials

FP with Cowling 2009

Title FP with Cowling 2009
Author(s) Ramokolo
Date 2020
Country South Africa

Language English

Filename http://medat.samrc.ac.za/data/rapid_reviews_effects_masks/FP_with_Cowling_2009.png

Table1_Characteristics_of_included_studies

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Date 2020

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Language English

Filename http://medat.samrc.ac.za/data/rapid_reviews_effects_masks/Table1_Characteristics_of_included_studies.xlsx
