

# Is Face Mask with Face Shield More Effective than Face Mask Alone in Reducing SARS-CoV-2 Transmission? A Systematic Review

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## ABSTRACT

**Background.** The use of face shield in addition to face mask is thought to reduce the transmission of SARS-CoV-2 by blocking respiratory droplets and by preventing one from touching facial orifices.

**Objective.** To determine the effectiveness of face mask with face shield, compared to face mask alone, in reducing transmission of SARS-CoV-2.

**Methods.** We searched MEDLINE, Cochrane Library, as well as trial registers, preprint sites and COVID-19 living evidence sites as of 30 September 2021. We included studies that used face shield with face mask versus face mask alone to prevent COVID-19. We screened studies, extracted data, assessed the risk of bias and certainty of evidence using the GRADE approach. Review Manager 5.4 was used to estimate pooled effects.

**Results.** There is no available direct evidence for face shield plus face mask versus face mask alone in the general public. Five (5) observational studies with very low certainty of evidence due to serious risk of bias and indirectness were included. Participants in all the studies were health care workers (HCWs) who used the face shield with their standard personal protective equipment (PPE). Four (4) of the studies were in the hospital setting (three case control studies, one pre- and post-surveillance study); one was done in the community (one pre- and post-surveillance study) in which HCWs visited the residence of the contacts of SARS-CoV-2 positive patients. The case control studies done in the hospital setting showed a trend toward benefit with the use of face shield or goggle but this was inconclusive (OR 0.85, 95% CI 0.68-1.08) while the pre- and post-surveillance study showed significant benefit when face shield (OR 0.28, 95% CI 0.22-0.37) use became a requirement for HCWs upon hospital entry. In the study done in the community setting, significant protection for HCWs was noted with the use of face shield (OR 0.04, 95% CI 0.00-0.69) but the results were limited by serious risk of bias and imprecision.

**Conclusion.** In the hospital setting, there was a lower likelihood of COVID-19 infection in HCWs who used a face shield or goggles on top of their PPE. For the general public in the community, there is presently no study on the use of face shield in addition to the face mask to prevent COVID-19 infection.

**Keywords:** *personal protective equipment, COVID-19, face mask, surgical mask, face shield, goggles, eye visor, eye protector*

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## INTRODUCTION

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is mainly transmitted through respiratory droplets and close contact, with a concern for airborne transmission especially during aerosol-generating procedures. In SARS-CoV-2, SARS or MERS, a reduced risk of infection was observed using surgical or 12-16 layer cotton masks (OR=0.15, 95% CI 0.07-0.34). There was also significant protection with the use of eye protectors (OR=0.22, 95% CI 0.12-0.39), translating to 78% relative risk reduction.<sup>1</sup> Using face shield was found to reduce the potential for autoinoculation by preventing one from touching the front and side of the face, and protecting viral entry into the eyes, nose and mouth.<sup>2</sup> However, respiratory droplets may enter through the large gaps at the open-top, at the bottom, and the sides of the face shield. When a face shield was combined with a face mask, it is unknown which of the two is better in preventing SARS-CoV-2 transmission.<sup>1</sup> The objective of this report is to determine the effectiveness of face mask with face shield, compared to face mask alone, in reducing transmission of SARS-CoV-2.

## METHODS

We comprehensively searched various electronic databases that included MEDLINE via PubMed, Cochrane Library, ChinaXiv, MedRXIV, BioRXIV, as well as the following registries for ongoing and completed trials: ClinicalTrials.gov (USA); ChiCTR.org. (China); and the International Clinical Trials Registry Platform (ICTRP, WHO). We also searched for published or ongoing studies on COVID-NMA, the COVID-19 Open Living Evidence Synthesis: <https://covid-nma.com/> and the COAP Living Evidence on COVID-19. The last search date was September 30, 2021 using a combination of subject headings and keywords based on population, intervention, comparator, outcome (PICO): P – general public; I – face shield with face mask, face shield; C – no face shield; and O – prevalence of SARS-CoV-2 transmission. (Appendix 1). We included any type of study investigating the effects of face shield or face mask on the incidence of SARS-COV-2 infection. We checked the reference lists of included papers and relevant systematic reviews. We also did a free search of online sources, preprint articles, and various coronavirus resource centers. We screened abstracts, reviewed full texts and extracted relevant information on study design, settings, population and outcomes. There was no language restriction. We screened studies, extracted data, assessed the risk of bias and certainty of evidence using the GRADE approach. Disagreement was settled by a third reviewer. Review Manager 5.4 was used to estimate pooled effects.

## RESULTS

There was no available direct evidence for face shield plus face mask versus face mask alone in the general public.

Five (5) observational studies with very low certainty of evidence due to serious risk of bias and indirectness were found among health care workers (HCWs) who used the face shield with their standard personal protective equipment (PPE).

A summary of the included studies (three case control and two pre- and post-surveillance studies)<sup>3-7</sup> is shown in Appendix 2 and the critical appraisal is shown in Appendix 3. There were issues related to representativeness, selection of controls, and ascertainment of exposure. The overall certainty of the evidence was judged to be very low (Appendix 4).

The three case-control studies<sup>3-5</sup> included in this review enrolled a total of 1164 healthcare workers in a hospital and/or healthcare setting. Of these, 608 used or always used face shield or goggle while 556 did not use or did not always use face shield or goggle. In the former group, 295 tested positive for COVID-19; in the latter, 291 had positive results. The pooled estimate for the outcome of COVID-19 infection showed a trend toward benefit with the use of face shield or goggles, but this was inconclusive (OR 0.85, 95% CI 0.68-1.08) (Appendix 4 and Appendix 5).

The pre- and post-surveillance study of Mojajer et al.<sup>6</sup> done in a healthcare setting reported that before the use of face shield was instituted in their hospital, 166 individuals out of 2486 tested had positive RT-PCR results. After the hospital-wide directive on face shield use, only 80 of the 4041 tested were positive on RT-PCR. This study showed significant benefit in using face shield (OR 0.28, 95% CI 0.22-0.37); however, the certainty of the evidence was very low because of serious risk of bias and indirectness (Appendix 4 and Appendix 5).

The pre-and post-surveillance study done in the community by Bhaskar and Arun<sup>7</sup> involved 62 healthcare workers serving in the community. Before using face shield, 12 of the healthcare workers contracted COVID-19. After the initiation of face shield use, none of the remaining 50 contracted the infection. While the data showed significant protection with the use of face shield (OR 0.04, 95% CI 0.00-0.69), the certainty of the evidence was assessed to be very low because of very serious risk of bias, imprecision and indirectness.

## DISCUSSION

There was no direct evidence to answer the question whether among the general public, face mask with face shield versus face mask alone is protective against COVID-19 infection. In the five studies cited in this review, the sample population was all on HCWs who used the face shield with their standard PPEs. Four of the studies<sup>3-6</sup> were in the hospital setting; and one in the community<sup>7</sup> in which

HCWs visited the residence of SARS-CoV-2 positive patients to counsel asymptomatic family contacts.

SARS-CoV-2 is highly infectious and the main route of transmission is via respiratory or aerosol droplets. An infected patient is the main source of transmission, even in the asymptomatic stage and this could be spread through close person-to-person contact during talking, coughing, sneezing and singing.<sup>8</sup> The infected droplet may lodge in the mucous membrane of the eyes or on parts of the face not covered by the mask, infecting another person. This is the rationale on using an eye protector which may either be a face shield, goggle or a visor primarily if the suggested physical distancing of at least 1 meter is not maintained. In our review, very low certainty of evidence showed that using an eye protector effectively prevents of SARS-CoV-2 infection among HCWs. Our results are similar to a previous study in SARS-CoV, also a viral respiratory illness caused by the coronavirus, in which there was an increased risk of SARS infection in those who never wore goggle while operating on a SARS positive patient (OR 4.05 95% CI 0.54-30.34).<sup>9</sup> Another case-control study identified potential risk factors for SARS among HCWs. Of the 56 potential factors, using a face shield was protective (OR 0.499 95% CI 0.270-0.749) on univariate analysis but not on multivariate analysis.<sup>10</sup>

A simulation study<sup>11</sup> quantified the health risk posed by infectious droplets and percentage reduction in exposure provided by face shield and face mask. Using two mannequin heads placed one meter apart, aerosols of different sizes were generated and a particle counter was used to evaluate face mask and face shield performance. The reduction factor of the total particles aspirated was lower when the receiver used a face mask than the face shield (21.8% versus 54.8%,  $p = 0.002$ ). If the emitter wore a protective device, either a face mask or face shield, the level of received particles was reduced by 96.8% ( $p = \text{N.S.}$ ). When both the emitter and receiver wore a face mask or a face shield, there was a 97.3% and 98% reduction, in the number of particles transmitted, respectively ( $p = 0.001$ ). When receiver and emitter wore a face mask or a face shield, the face shield performed significantly better with a reduction factor of 97.7% versus 96.8% for the face mask in the range of  $<0.3 \mu\text{m}$  particles ( $p = 0.01$ ); 97.8% versus 97.1% for the face mask in the range of  $0.3\text{--}0.5 \mu\text{m}$  ( $p = 0.052 \text{ NS}$ ). For particles over  $1 \mu\text{m}$  in size, face masks and face shields worn by the emitter and the receiver reduced the number of inhaled particles by over 99%.

In the community setting, using an eye protector and a face mask in the prevention of SARS-CoV-2 infection is debated in the mainstream media and by public health authorities. The evidence that was used during the initial<sup>12</sup> and present recommendation was the same – the study<sup>7</sup> done in the community setting with HCWs wearing the face shield while counselling household members of COVID infected patients. In the initial review done in May 2021, it was considered that the face shield provided additional mechanical protection with a face mask against SARS-

CoV-2 transmission, especially in high-risk environments such as crowded public transit, poorly ventilated spaces, and thus, suggested the use of face shield with face mask in areas with sustained community transmission of infection. In the present review done in September 2021, other factors related to using face shield were considered including public preference and compliance, additional cost, vaccination rates and environmental concerns with plastic disposal (Appendix 6). During the consensus panel with infectious disease specialists and other stakeholders, it was decided that using a face shield with a face mask will only be recommended in areas with sustained community transmission. It will no longer be required for the general public in non-health care setting. Moreover, the meta-analysis of Chu<sup>1</sup> showed a 78% reduction in MERS and SARS transmission with the use of an eye protector by HCWs. All 13 studies cited were performed in a hospital. In this setting, there is a higher risk of infection due to direct contact with severe and critically ill patients, use of aerosol generating procedures and with limited ventilation in an enclosed area.

## CONCLUSION

In summary, this review presented the available evidence on the use of eye protector in addition to the face mask and other standard PPE. Very low certainty evidence has shown that an eye protector is effective in preventing COVID-19 infection among HCWs. However, there is presently insufficient evidence to require the addition of an eye protector in addition to face mask among the general public in the non-health care setting. There is presently a need for more studies on the use of face shield in addition to face mask as protection against COVID-19 infection for the general public in the community during the pandemic.

## Recommendations from Other Groups

The Center for Disease Control<sup>13</sup> as of 19 April 2021, recommends the use of masks in addition to staying at least 6 feet apart in the following situations: (1) when indoors around people who don't live in the same household; (2) traveling on a plane, bus, train, or other form of public transportation traveling into, within, or out of the United States and in U.S. transportation hubs such as airports and stations; (3) in public settings and when around people who don't live in the same household; and (4) inside the house if a household member is sick with symptoms of COVID-19 or has tested positive for COVID-19. Goggles or other eye protection may be used in addition to a mask.

The World Health Organization,<sup>14</sup> as of 01 December 2020, recommends the use of mask in areas where the virus is circulating, when at least 1 meter distance from others is not possible, poor or unknown ventilation which depends on the rate of air change, recirculation and outdoor fresh air. There was no recommendation made on the use of face shield.

The Interagency Task Force<sup>15</sup> for the Management of Emerging Infectious Disease, as of 14 December 2020, recommends that all persons are mandated to wear full-coverage face shields together with face masks, ear-loop masks, indigenous, reusable, or do-it-yourself masks, or other facial protective equipment which can effectively lessen the transmission of COVID-19, whenever they go out of their residences. On 23 September 2021, this was amended to limit the use of face shields, on top of face mask, in high-risk activities in closed, crowded areas and if with close contact. On 16 November 2021, the use of face masks with face shield was limited to areas with sustained community transmission of the virus.

### Statement of Authorship

All authors contributed in the conceptualization of work, acquisition and analysis of data, drafting and revising the manuscript, and approved the final version submitted.

### Author Disclosure

All authors declared no conflicts of interest.

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## APPENDICES

## Appendix 1. Search Yield and Results

1. (((("COVID-19" [Supplementary Concept] OR "COVID-19 diagnostic testing" [Supplementary Concept] OR "COVID-19 drug treatment" [Supplementary Concept] OR "COVID-19 serotherapy" [Supplementary Concept] OR "COVID-19 vaccine" [Supplementary Concept] OR "severe acute respiratory syndrome coronavirus 2" [Supplementary Concept] OR "2019-nCoV" OR "2019nCoV" OR "cov 2" OR "Covid-19" OR "sars coronavirus 2" OR "sars cov 2" OR "SARS-CoV-2" OR "severe acute respiratory syndrome coronavirus 2" OR "coronavirus 2" OR "COVID 19" OR "COVID-19" OR "2019 ncov" OR "2019nCoV" OR "corona virus disease 2019" OR "cov2" OR "COVID-19" OR "COVID19" OR "nCov 2019" OR "nCoV" OR "new corona virus" OR "new coronaviruses" OR "novel corona virus" OR "novel coronaviruses" OR "SARS Coronavirus 2" OR "SARS2" OR "SARS-COV-2" OR "Severe Acute Respiratory Syndrome Coronavirus 2") OR ((19[tiab] OR 2019[tiab] OR "2019-nCoV" OR "Beijing" OR "China" OR "Covid-19" OR epidem\*[tiab] OR epidemic\* OR epidemy OR new[tiab] OR "novel"[tiab] OR "outbreak" OR pandem\* OR "SARS-CoV-2" OR "Shanghai" OR "Wuhan") AND ("Coronavirus Infections"[Mesh] OR "coronavirus"[MeSH Terms] OR coronavirus\*[all] OR corona-virus\*[all] OR cov[tiab] OR pneumonia-virus\*[tiab]))) AND 2019/12/1:3000/12/31[PDAT])
2. (((systematic review[ti] OR systematic literature review[ti] OR systematic scoping review[ti] OR systematic narrative review[ti] OR systematic qualitative review[ti] OR systematic evidence review[ti] OR systematic quantitative review[ti] OR systematic meta-review[ti] OR systematic critical review[ti] OR systematic mixed studies review[ti] OR systematic mapping review[ti] OR systematic cochrane review[ti] OR systematic search and review[ti] OR systematic integrative review[ti]) NOT comment[pt] NOT protocol[ti] OR protocols[ti])) NOT MEDLINE [subset] OR (Cochrane Database Syst Rev[ta] AND review[pt]) OR systematic review[pt]
3. Masks OR "respiratory devices" OR "respiratory protective devices" OR "filtering facepiece respirators" OR "respiratory protective devices" OR N95 OR "face mask" OR "surgical mask" OR "medical masks" OR "N95 respirator" OR "filtering facepiece respirator"
4. face shield or eye goggles or eye protector

## Appendix 2. Included Studies on the Use of Face Shield Among Health Care Workers

Study	Setting	Population	COVID (+)	COVID (-)	Intervention	Comparator	Outcome
<b>Khalil SN</b>	Dhaka, Bangladesh	190 Medical staff in 19 health facilities	98	92	Face shield	No face shield	Number of HCW with face shield infected with COVID-19
<b>Mojajer A</b>	Houston, Texas	6527 HCP of a quarternary health hospital	246	6281	Face shield <sup>1</sup> with standard PPE	Standard PPE	Number of HCP infected before and after implementation of use of face shield with standard PPE  Number of HCP with HAI before and after implementation of use of face shield with standard PPE
<b>Bhaskar</b>	India	112 HCW	12	100	Face shield and PPE	PPE alone	Number of HCW with COVID-19 before and after implementation of use of face shield with PPE
<b>Chatterjee</b>	India	751 symptomatic HCW	378	373	Use of face shield or goggles (either or both)	No face shield/goggles	Number of HCW with face shield infected with COVID-19
<b>Rodriguez Lopez</b>	Cali, Colombia	223 HCW with or without symptoms	120	103	Use of face shield/goggles always	Use of face shield/goggles not always	Number of HCW with face shield infected with COVID-19

<sup>1</sup> Face shield used was a Lazarus 3D (Corvallis, OR, USA)

<sup>2</sup> Personal protective equipment included alcohol hand rub, 3-layered surgical masks, gloves, and shoe covers and physical distancing

Abbreviation: HCW - health care workers; HCP - health care personnel; HAI - hospital acquired infection; PPE - personal protective equipment

**Appendix 3. Detailed Appraisal of Included studies, using Newcastle Ottawa Scale**

Case control studies	Khalil 2020	Chatterjee 2020	Rodriguez-Lopez 2021
<b>Selection</b>			
<i>Is case definition adequate</i>	Yes (RT PCR +)	Yes (RT PCR+)	Yes (RT PCR+)
<i>Representatives of the cases</i>	Not stated how they were selected from the list	Not stated how they were selected from the data portal	Selected by random sample from those identified as HCW with or without symptoms
<i>Selection of control</i>	Not stated how they were selected from the list	Not stated how they were selected from the data portal	Selected by random sample from those identified as HCW with or without symptoms
<i>Definition of control</i>	Yes (RT PCR -)	Yes (RT PCR -)	Yes (RT PCR -)
<b>Comparability</b>			
<i>Comparability of cases and controls on the basis of the design and analysis</i>	Yes (Cases and controls were selected on the basis of their RT PCR tests). No difference in the baseline characteristics of cases and controls	Yes (Cases and controls were selected on the basis of their RT PCR tests). In those who were positive, there were more males and with duration of work in the workplace >1 year)	Yes (Cases and controls were selected on the basis of their RT PCR tests); There were more COVID positive who were males, worked in high risk areas and night shift
<b>Exposure</b>			
<i>Ascertainment of Exposure</i>	Information was obtained online thru a Google form using a predesigned structured questionnaire	No statement that the telephone interviewer was blinded to COVID status of the interviewee (no interviewer variability was reported)	Data collected by two trained researchers by telephone interview using structured questionnaire who were blinded to the COVID status of the subject. However, recall bias might still exist
<i>Same method of ascertainment for cases and controls</i>	Yes (thru questionnaire)	Yes (telephone interview)	Yes (telephone interview)
<i>Non response rate</i>	All patients accounted for	Only 64% response rate	All patients accounted for

Cohort studies	Bhaskar 2020	Mojajer 2021
<b>Selection</b>		
<i>Representative of the exposed cohort</i>	Yes (after the face shield was implemented)	Yes (after the face shield was implemented)
<i>Selection of the non exposed cohort</i>	Yes (before the face shield was implemented)	Yes (before the face shield was implemented)
<i>Ascertainment of exposure</i>	Self report by signs and symptoms and COVID PCR test	Data was obtained from the surveillance clinic (but not stated whether this was electronic data or medical records)
<i>Demonstration that outcome of interest was not present at the start of the study</i>	Yes. All of them were COVID (-) before the community work	Yes. HCW who were previously COVID (+) were excluded
<b>Comparability</b>		
<i>Comparability of cohorts on the basis of design or analysis</i>	Study controls were those who did not wear face shield in working in the community	Pre-surveillance was the period before face shield was implemented with face mask
<b>Outcome</b>		
<i>Assessment of outcome</i>	Self report and thru COVID-19 PCR test	COVID-19 PCR test
<i>Was follow up long enough for outcome to occur?</i>	Yes as two weeks follow up sufficient to know whether they have developed COVID	Yes as two weeks follow up sufficient to know whether they have developed COVID
<i>Adequacy of follow up</i>	All subjects accounted for	All subjects accounted for

**Appendix 4. GRADE Evidence Profile: Face Shield Compared to No face shield for health care workers**

**A. Case control studies**

*Bibliography*

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Certainty assessment							No. of patients		Effect		Certainty	Importance
No. of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Face Shield	No Face Shield	Relative (95% CI)	Absolute (95% CI)		
<b>COVID 19 Infection (assessed with: RT PCR)</b>												
586 cases; 578 controls 295/608 exposed 291/556 unexposed (3 studies)	observational studies	very serious <sup>a</sup>	serious <sup>b</sup>	serious <sup>c</sup>	not serious	strong association all plausible residual confounding would reduce the demonstrated effect	586 cases 578 controls 295/608 exposed 291/556 unexposed	-	OR 0.85 (0.68 to 1.08)	-	⊕○○○ VERY LOW	
							-	0.0%		0 fewer per 1,000 (from 0 fewer to 0 fewer)		

CI: confidence interval; OR: odds ratio

*Explanations*

<sup>a</sup> Compliance with face shield use and other health protocols was not assessed; some studies were based on interview or structured questionnaire and may have caused recall bias

<sup>b</sup> Research question should answer Use of Face shield and face mask vs Face mask alone

<sup>c</sup> Considerable heterogeneity (I<sup>2</sup>=92%) with overlap on the confidence intervals of the studies

**B. Pre- and post-surveillance study among health care workers**

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Certainty assessment							No. of patients		Effect		Certainty	Importance
No. of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Face Shield	No Face Shield	Relative (95% CI)	Absolute (95% CI)		
<b>In the Hospital Setting – COVID-19 Infection (assessed with COVID-19 RT-PCR)</b>												
6527 participants (1 study)	observational study	serious <sup>a</sup>	not serious	very serious <sup>b</sup>	not serious	strong association	80/4041 (2.0%)	166/2486 (6.7%)	OR 0.28 (0.22 to 0.37)	48 fewer per 1,000 (from 52 fewer to 42 fewer)	⊕○○○ VERY LOW	
<b>In the Community Setting – COVID-19 Infection (assessed with COVID-19 RT-PCR)</b>												
112 participants (1 study)	observational study	very serious <sup>a</sup>	not serious	very serious <sup>b</sup>	very serious <sup>c</sup>	none	0/50 (0.0%)	12/62 (19.4%)	OR 0.04 (0.00 to 0.69)	186 fewer per 1,000 (from 60 fewer to –)	⊕○○○ VERY LOW	

CI: confidence interval; RR: risk ratio

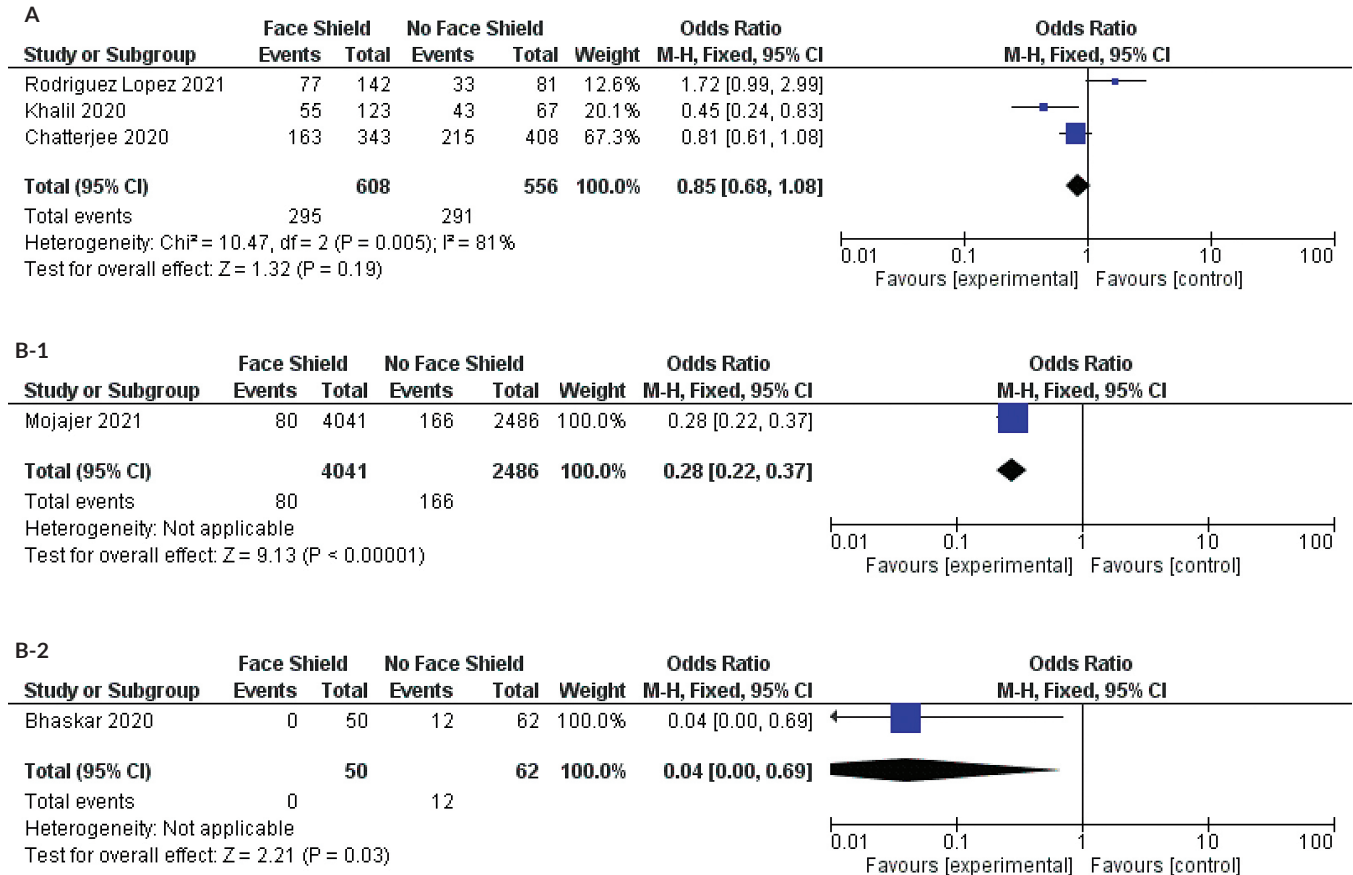
*Explanations*

<sup>a</sup> Compliance with face shield use and other health protocols was not assessed

<sup>b</sup> Study was not done in the general population but among healthcare workers. Research question should answer Use of Face shield and face mask vs Face mask alone

<sup>c</sup> Very wide confidence interval

Face Mask with Face Shield in Reducing COVID-19 transmission



Appendix 5. Forest plots. (A) Case control studies. (B) Pre- and post-surveillance study among health care workers. (B-1) In the hospital / health setting. (B-2) In the community setting.



## Appendix 6. Evidence to Decision. Summary of initial judgements prior to the actual panel meeting (N = 8)

Factors	Judgement				Research evidence/additional considerations from panel members		
	No	Yes (8)					
<b>Problem</b>							
<b>Benefits</b>	Large (3)	Moderate (3)	Small (1)	Uncertain (1)			<ul style="list-style-type: none"> <li>• NO EVIDENCE for the reduction of risk in the general public</li> <li>• BENEFIT among healthcare workers in both hospital (OR 0.28, 95% CI 0.23-0.37) and community settings; INCONCLUSIVE BENEFIT from 3 cohort studies among HCW in hospital</li> <li>• These PPE can prevent transmission of other respiratory infectious organisms</li> </ul>
<b>Harm</b>	Large (2)	Small (6)	Uncertain	Varies			<ul style="list-style-type: none"> <li>• OR 0.85, 95% CI 0.68 – 1.08: Tendency to have minimal risk of COVID-19 infection among HCW in the hospital setting</li> </ul>
<b>Certainty of evidence</b>	High	Moderate (2)	Low (4)	Very low (2)			<ul style="list-style-type: none"> <li>• The overall certainty of evidence: VERY LOW</li> </ul>
<b>Balance of effects</b>	Favors drug (4)	Does not favor drug	Uncertain (4)	Varies			
<b>Values</b>	Important uncertainty or variability (3)	Possibly important uncertainty or variability (3)	Possibly NO important uncertainty or variability (2)	No important uncertainty or variability			
<b>Resources required</b>	Uncertain	Large cost (1)	Moderate Cost (6)	Negligible cost (1)	Moderate savings	Large savings	<ul style="list-style-type: none"> <li>• No cost-effectiveness studies available.</li> <li>• Costing (1): <ul style="list-style-type: none"> <li>• Facemask + Face shield: PhP 50 to 250</li> <li>• Facemask: PhP 25 to 200</li> </ul> </li> </ul>
<b>Certainty of evidence of required resources</b>	No included studies (5)	Very low (2)	Low (1)	Moderate	High		<ul style="list-style-type: none"> <li>• No cost-effectiveness studies available.</li> </ul>
<b>Cost effectiveness</b>	No included studies (6)	Favors the comparison (1)	Does not favor either the intervention or the comparison (1)	Favors the intervention			<ul style="list-style-type: none"> <li>• No cost-effectiveness studies available.</li> </ul>
<b>Equity</b>	Uncertain (3)	Reduced (2)	Probably no impact (1)	Increased (2)			<ul style="list-style-type: none"> <li>• No local studies available.</li> </ul>
<b>Acceptability</b>	Uncertain (1)	No (5)	Yes (2)	Varies			<ul style="list-style-type: none"> <li>• In the survey of 400 adults, 90.75% perceived that face mask is the most effective PPE. 35/400 among adults in Metro Manila believed that face shield is most effective PPE (2)</li> <li>• Ease of use</li> <li>• Vaccination status should be considered</li> </ul>
<b>Feasibility</b>	Uncertain	No (1)	Yes (7)	Varies			<ul style="list-style-type: none"> <li>• No local studies available.</li> </ul>

## References:

1. DOH. Updated suggested retail price (SRPs) for emergency essential medicines and medical devices due to the coronavirus disease 2019 (COVID-19) health event. In: Health Do, editor. 2021.
2. Galope F, Co S, Davantes P. A study on the knowledge, attitudes, and practices among adult Filipinos on wearing proper personal protective equipment in Metro Manila during the COVID-19 pandemic. *Int J Progress Res Sci Eng.* 2021;2:75-91.