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# PREVENTIVE MEASURES AGAINST SARS-CoV-2 IN THE COMMUNITY: WHAT DOES THE EVIDENCE SAY?

MEDIDAS PREVENTIVAS CONTRA EL SARS-COV-2 EN LA COMUNIDAD: ¿QUÉ DICE LA EVIDENCIA?

Jhonattan J. Villena-Prado<sup>1,a</sup>

## Mr. Editor

The COVID-19 pandemic has had a strong impact globally and nationally. Until July, 27, Peru occupies the seventh place in the world with confirmed cases, with more than 400,600 diagnosed cases and 18,816 people who died<sup>(1)</sup>. In addition, the mandatory quarantine which was imposed on the population since March, is now over (in a great amount of the regions of Peru). Therefore, it is necessary to make an emphasis on the importance and efficacy of communitary preventive measures, based on the evidence that they have demonstrated benefits when it comes to mitigating the appearance of new cases<sup>(2)</sup>.

One of the most diffused measures is social distancing. A first meta-analysis performed on April, which is still in revision, calculates the effectiveness of this measure on acute respiratory diseases and it concluded that it could be used as an additional measure to control the propagation of respiratory viruses, but its evidence is still inappropriate since it just disposes of one clinical trial that supports it<sup>(3)</sup>. Likewise, in June, a second meta-analysis about the effectiveness of this measure on SARS-CoV-2 and COVID-19, and it is concluded that there is a noticeable reduction of absolute risk with distances of at least one meter but ideally two metres<sup>(4)</sup>.

Another widely propagated measure is the use of masks. On the first meta-analysis, it was concluded that the only use of facial masks did not have a significant effect on decline or interruption of respiratory viruses transmission and propagation<sup>(3)</sup>. In contrast, the second meta-analysis found favourable and significant evidence in terms of statistics about the use of communitary masks as a protective factor against viral contagion due to COVID-19 in the population in general; and a remarkable superiority in terms of efficiency in the use of N95 masks against the use of surgical masks<sup>(3)</sup>.

The last adopted measure is the use of protective glasses and face shields. The first research did not find trials that used ocular protection as an only measure<sup>(3)</sup>. In the second meta-analysis, studies are provenient basically of MERS and SARS data, since against COVID-19 the study of Burke et al. was the only one found<sup>(5)</sup>, and there there was no contagion between people with and without use of ocular protection. In spite of that, by extrapolating results of studies with other coronaviruses, the evidence of its effectiveness as a protective factor against the transmission of the infection due to respiratory viruses is consistent, but there is no difference between glasses and face shields.

Since nowadays the first meta-analysis is still in revision, a stronger evidence will be taken: the second meta-analysis. Likewise, this one uses the Grading of Recommendations, Assessment, Development and Evaluation (for its initials, GRADE) system in order to evaluate the evidence and solidness of its conclusions and recommendations. (Table 1)

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In conclusion, these simple measures have scientific evidence of their effectiveness in reducing the transmission of contagion between person to person and are those recommended in national regulations. It is strongly recommended that emphasis should

be placed on urging the population not to neglect themselves and to continue with protective measures, especially in the context of the end of compulsory quarantine, in order to avoid the spread of incidence and mortality due to this disease in our country.

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**Table 1.** Summary of the findings according to GRADE system.

Study and participants	Relative effect	Anticipated absolute effect (95% CI) e.g.: possibility of viral infection or transmission		Difference (95% CI)	Certainty level	Meaning (standardized terminology according to GRADE)
		Comparative group	Intervention group			
Physical distance ≥1m vs <1m	aOR: 0.18 (0.09-0.38) naRR 0.30 (95% IC 0.20-0.44)	Short distance 12.8%	Great distance 2.6% (1.3 - 5.3)	-10.2% (-11.5 a -7.5)	Moderate	Physical distance of more than one meter probably results in a great reduction of viral infection risk. For each meter of distance, the relative effect increases 2.02 times.
Use of masks against no use of masks	aOR: 0.15 (0.07-0.34) naRR 0.34 (95% IC 0.26-0.45)	No use of masks 17.4%	Use of masks 3.1% (1.5-6.7)	-14.3% (-15.9 a -10.7)	Low	The use of surgical masks could make a great reduction of viral infection risk. N95 masks may be associated with a greater reduction of infection risk compared to surgical masks and others.
Ocular protection against no ocular protection	naRR 0.34 (0.22-0.52)	No ocular protection 16.0%	Protección ocular 5.5% (3.6-8.5)	-10.6% (-12.5 a -7.7)	Low	The use of ocular protection could make a great reduction of viral infection risk.

aOR = adjusted odds ratio. naRR = no adjusted relative risk  
Adapted from Chu DK. Lancet 2020;395(10242):1979



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