

THE UNSUSTAINABILITY OF FACE MASK USE

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In these dark times when the pandemic reigns and common sense gives few signs of life, the use of face masks is imposed in public spaces in large parts of the globe. The fact that their advantages are prevalent over the negative aspects deriving from their use has to be accepted as a dogma of faith by the population. Those self-styled experts who lend their credibility to the various governments mostly use emotional statements and methods to impose their views.

Mask use is recommended by the World Health Organization. This recommendation, on which governments base their authority to impose the use of masks, is disseminated by means of a publicly available document, a so-called *interim guidance*. Five versions of it have been published up to now. The latest one appeared on Dec. 1st, 2020, and is available at this URL:

[https://www.who.int/publications/i/item/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-\(2019-ncov\)-outbreak](https://www.who.int/publications/i/item/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-(2019-ncov)-outbreak)

The document is 22 pages long. Most of the material addresses mask use in clinical settings, and I will thus ignore it. I will focus here on the part that deals with mask use in day-to-day situations by healthy people in a community setting.

One prominent excerpt from the front page of the document deserves to be quoted:

WHO advises that the general public should wear a non-medical mask in indoor (e.g. shops, shared workplaces, schools (...)) or outdoor settings where physical distancing of at least 1 metre cannot be maintained.

I find it difficult to believe that viruses can be so well trained to maintain themselves constantly in a nicely packed sphere with a 1-metre radius around their former carrier. *It is obvious that, if a person is walking, the eventual viruses that are expelled by him or her will remain behind, in the air where the person has passed!* Light breeze will transport the viruses elsewhere, too. This simple consideration should be sufficient to render common measures of social distancing **logically unfit** in the perspective of remaining virus-free.

An interesting consequence of this official WHO advice is, nevertheless, that **the recommendation to wear masks should be considered void when no other persons are present within one metre of the subject**. If governments base on this document the validity of the freedom-limiting rules they impose, **the imposition of face masks in settings where no other individuals are encountered should not be contemplated**.

Eventually, the only page of the WHO document that deserves my attention is page 8. This is where the WHO focuses on **Guidance on mask use in community settings**, which is what I am

interested in, since I have the good luck of not having to spend time in hospitals.

I will analyze the contents of the first sub-header, entitled:

Evidence on the protective effect of mask use in community settings

and I will see if the evidence is convincing.

If you are confident that your government acts in your best interest, you will accept their recommendations and their orders acritically. But what if you had some doubts? What if you have had frequent evidence in the news that the interests of single politicians, for reasons of monetary reward or just to satisfy power cravings, gain the upper hand?

There is sufficient reason for wishing to make up your own mind. On first impression, the WHO should be offering evidence to help you exactly with that.

If evidence is convincing, then the following guidance will carry the necessary authority. Otherwise, I will be entitled by my ethical judgment to greatly reduce its influence on my decisions.

Here is how the section begins:

At present there is only *limited* and *inconsistent* scientific evidence to support the effectiveness of masking of healthy people in the community to prevent infection with respiratory viruses, including SARS-CoV-2.

That matches my impression. Since this is the *fifth* version of the interim guidance document, appearing *almost one year* after the beginning of a pandemic that has all but halted the world economy at large, blessing only a few lucky individuals - among them, certainly, face mask producers - I would have expected more.

I deduce that **The WHO recommends, and the governments impose around the world, the use of face masks by healthy individuals, in the absence of consistent scientific evidence.**

One document is cited at the onset:

A large randomized community-based trial in which 4862 healthy participants were divided into a group wearing medical/surgical masks and a control group found *no difference* in infection with SARS-CoV-2.

You can find the paper here:

<https://doi.org/10.7326/M20-6817>

This is the stated objective of the research:

To assess whether recommending surgical mask use outside the home reduces wearers' risk for SARS-CoV-2 infection in a setting where masks were uncommon and not among recommended public health measures.

Let me note in passing how difficult it is as of now to encounter a setting where masks are uncommon.

Data collection took place between April and June, 2020, and the paper was published on Nov. 18th, 2020. Here are the conclusions of its authors:

The recommendation to wear surgical masks to supplement other public health measures did not reduce the SARS-CoV-2 infection rate among wearers by more than 50% in a community with modest infection rates, some degree of social distancing, and uncommon general mask use. The data were compatible with lesser degrees of self-protection.

In a nutshell, masks were deemed not particularly useful in protecting healthy, properly-behaving Danes.

The WHO then cites a second paper:

A recent systematic review found nine trials (of which eight were cluster-randomized controlled trials in which clusters of people, versus individuals, were randomized) comparing medical/surgical masks versus no masks to prevent the spread of viral respiratory illness. Two trials were with healthcare workers and seven in the community. The review concluded that wearing a mask may make *little or no difference* to the prevention of influenza-like illness or laboratory confirmed illness.

The paper can be found here:

<https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD006207.pub5/full>

I cite here what the report writes, in its [Main Results](#) paragraph which refers to [Medical/surgical masks compared to no masks](#):

There is low certainty evidence from nine trials (3507 participants) that wearing a mask may make *little or no difference* to the outcome of influenza-like illness compared to not wearing a mask. There is moderate certainty evidence that wearing a mask probably makes *little or no difference* to the outcome of laboratory-confirmed influenza compared to not wearing a mask.

Up to here, everything makes sense.

Here is the third study cited by the WHO:

By contrast, a small retrospective cohort study from Beijing found that mask use by entire families before the first family member developed COVID-19 symptoms was 79% effective in reducing transmission.

This is an article from the British Medical Journal. You can find it here:

<https://gh.bmj.com/content/5/5/e002794>

This study proudly affirms that it “provides the first evidence of the effectiveness of mask use, disinfection and social distancing in preventing COVID-19.”

We have here a so-called *retrospective cohort study*. What happened is that the researchers interviewed, or tried to interview, the families of all covid cases reported in Beijing by Feb. 28th, 2020. Eventually, their sample was made up of:

- **41** families without secondary transmission (other members of the family catching the illness), **20** of them with severe or critical gravity.

- 83 families with secondary transmission, 8 of them with severe or critical gravity.

A very small sample, and the results were produced by statistical regression analysis from data that was collected by telephone interview, days after the reported events. I just remind the reader that *China is a dictatorial state*, which happens to be *by far the largest producer of face masks in the world*.

The next study to be mentioned by the WHO is this one:

A case-control study from Thailand found that wearing a medical or non-medical mask all the time during contact with a COVID-19 patient was associated with a 77% lower risk of infection.

I could find this paper here:

https://wwwnc.cdc.gov/eid/article/26/11/20-3003_article

This is another example of a telephone-interview study. Between April 30th and May 27th, 2020, researchers called contacts of covid cases obtained from contact tracing,

...and asked details about their contact with a COVID-19 index patient, such as dates, locations, duration, and distance of contact. We asked whether contacts wore a mask during the contact with the index patient, the type of mask, and the frequency of wearing a mask, *which we defined as compliance with mask-wearing*. We asked whether and how frequently contacts washed their hands while with the index patient. We asked whether contacts performed social distancing and whether they had physical contact with the COVID-19 index patient...

It is to be noted that, as mentioned in the paper, mask-wearing became compulsory in Thailand on March 26th. I let you judge how reliable the collected data could be when interviewees, not protected by any form of anonymity, were reporting on potentially unlawful acts. How sound can statistical conclusions be, when obtained from such data?

The WHO report continues as follows:

Several small observational studies with epidemiological data have reported an association between mask use by an infected person and prevention of onward transmission of SARS-CoV-2 infection in public settings.

I decide to bypass this paragraph because *the studies are characterized as small*, and especially because *what I object about is the obligation to wear masks being imposed on healthy individuals*.

The next statement by the WHO:

A number of studies, some peer reviewed but most published as pre-prints, reported a decline in the COVID-19 cases associated with face mask usage by the public, using country- or region-level data.

Let's look at the peer-reviewed ones.

Reference #82, found here:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7392429/>

A very short letter to the editor, comparing statistical data from Taiwan and Singapore.

Reference #83, found here:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7177146/>

A text by Hong Kong-based university researchers trying to prove the superiority of their approach to covid by simply comparing WHO-provided statistical data. Reported data differences may or may not depend on the usage of face masks.

Reference #84, found here:

https://www.researchgate.net/publication/344600504_Mask-Wearing_During_the_COVID-19_Pandemic

Bases its deductions on the statistical analysis of data from the *Imperial College - YouGov personal measures survey*. I tried to access this page to gain more information about this survey:

<https://yougov.co.uk/topics/international/articles-reports/2020/03/17/personal-measures-taken-avoid-covid-19>

but we obtained a page without any useful information.

Here is the ending phrase of the conclusions by the authors:

In summary, due to the confounding variables and the variations in the type of mask and its usage, randomized control trials of mask usage in populations are needed to determine the true effect of mask-wearing on mitigating the transmission of infectious respiratory diseases.

I agree with that. Provided data are less than useful.

Reference #85, found here:

<https://www.healthaffairs.org/doi/10.1377/hlthaff.2020.00818>

Again, a statistical work. This time, based on US data, comparing states and counties where face mask use was imposed with other parts of the country where people was permitted to remain mask-free.

The happy conclusion of the document is that

The study provides evidence that US states mandating the use of face masks in public had a greater decline in daily COVID-19 growth rates after issuing these mandates compared with states that did not issue mandates.

The authors have nevertheless to admit that “*these effects were observed conditional on other existing social distancing measures.*”. Which is something that must not be forgotten: the imposition to wear masks did not come isolated. How can one know which measure causes what? Anyway, the concluding graph of the study shows a regular, constant decrease in **daily case rates expressed in percentage**. But the regularly decreasing value drop is only of a **meagre 2%** at the end of the three-week period being analyzed.

We must not forget that **the imposition of face mask use was concomitant, all around the globe, with fear-inducing narrative spread in a uniquely coordinated fashion by mass media**, that modified the behaviour of the population in a way that, just by itself, might induce a drop in the rate of active cases by a couple of percentage points in three weeks.

The second graph offered (Exhibit 2) shows the same data, but limiting the sample to areas where face mask use was only imposed on employees at work, and not to the general public. This second graph shows *an increase* in case rates for the first ten days after the measures were taken. The authors have to conclude that

Overall, these results indicate no evidence of declines in daily COVID-19 growth rates with employee-only mandates.

Reference #86, found here:

<https://www.cdc.gov/mmwr/volumes/69/wr/mm6940e3.htm>

An article examining data about the US state of Arizona. The online version contains no data graphs, but only an advertising-leaflet-like informational panel. On the other hand, the PDF version, that you can find here:

<https://www.cdc.gov/mmwr/volumes/69/wr/pdfs/mm6940e3-H.pdf>

contains a detailed plot of the number of reported cases against time, together with the indication of the time coordinates of various personal-freedom-limiting measures.

I do not know how this study can ever be made to represent a “*decline in the COVID-19 cases associated with face mask usage by the public*” (as implied by the WHO when citing this paper). The graph shows a **steep, almost constant** growth in the rate of cases between May 26th and June 29th. After that date, the rate drops, again with a **steep, almost constant** rate.

You can have a precise idea of how the life of Arizonians changed on June 29th by reading the text of the executive order that the state governor signed on that day. The document is available here:

<https://azgovernor.gov/file/35147/download?token=4zgksq5W>

The consequence of the order has been to freeze social life in the state of Arizona. There is an interesting statement in this document:

... there has not been sufficient time for mask mandates and limiting groups to have a demonstrable effect on containing the spread ...

And how much more time would have been required?

Indeed, the face mask aspect had been dealt with **on June 17th**, when “local officials (were made) able to mandate and enforce wearing of masks.” This resulted in the mandate being issued in one county on June 18th, in three more counties (including Maricopa and Pima counties, where you find the only two large urban agglomerations in the state, Phoenix and Tucson) the next day, and in one more two days later.

The data provided shows *practically no concrete consequence* in terms of rate of contagion in imposing face mask use in the territory under scrutiny.

On the other hand, the effect of **freezing the social life** of urban communities is very clearly evident.

Now we come back to the WHO document:

One study reported an association between community mask wearing policy adoption and increased movement (less time at home, increased visits to commercial locations).

The preprint is available here:

<https://www.medrxiv.org/content/10.1101/2020.05.23.20111302v2>

This study demonstrates that American people stayed at home about 40 minutes less per day after the order to wear mask came into being.

An interesting detail can be seen in Fig. 3, which differentiates among sites where the added time not at home was spent. **You will notice that the value for “restaurants & other eating places” represents more than double the value of the second-ranked location category.**

We think it is worth noting that **in restaurants, compared to the other proposed locations, you need to remove your masks.** I for one did deeply enjoy, when this was still possible, to remove my masks when sitting at the restaurant table.

This data could just be evidencing one of the few possible sign of protest when a humbling measure such as face mask usage imposition is enforced.

Again from the WHO document:

These studies differed in setting, data sources and statistical methods and have important limitations to consider, notably the lack of information about actual exposure risk among individuals, adherence to mask wearing and the enforcement of other preventive measures.

We agree with their deduction. The WHO continues:

Studies of influenza, influenza-like illness and human coronaviruses (not including COVID-19) provide evidence that the use of a medical mask can prevent the spread of infectious droplets from a symptomatic infected person to someone else and potential contamination of the environment by these droplets.

This is what we have been told all the time during this year. It is obvious that masks block droplets from spreading in the air. At the same time, it is known that they are not efficient in blocking aerosols, both from leaving and from entering.

The most important element here is that practically all masks available for community use permit a significant percentage of the air we breathe to escape its filtering effect. Most of the air we breathe when we wear a mask will come from the gaps around the mask, no matter how close-fitting it is.

The above paragraph by the WHO is only meaningful when applied to mask use by infected persons, and adds nothing when self-protection is considered.

There is *limited* evidence that wearing a medical mask may be beneficial for preventing transmission between healthy individuals sharing households with a sick person or among attendees of mass gatherings.

Here, too, a host of papers is cited as comforting evidence. The first document cited has been mentioned already above (see the *second paper* mentioned on P.3). I won't comment further about it. Let's have a look at the other six documents.

Reference #109, found here:

<https://pubmed.ncbi.nlm.nih.gov/27044522/>

I could only recover the abstract. It is a statistical study from 2016. Here is its conclusion (*MG* stands for *mass gathering*):

A modest proportion of attendees of MGs use facemask, the practice is more widespread among health care workers. Facemask use seems to be beneficial against certain respiratory infections at MGs but its effectiveness against specific infection remains unproven.

My conclusion: influenza-like illnesses (in their vast majority non-lethal; we share with them this planet since our species emerged from monkey-hood) will presumably decrease if everybody wears facemasks all the time. Do I want to live in such a planet? No, thanks.

Reference #110, found here:

<https://pubmed.ncbi.nlm.nih.gov/25336079/>

A study that appears to originate from the same group as the above one. Published in 2014 from data collected in 2011. Focuses on *Hajj* pilgrims.

The authors lament that *laboratory results did not show any difference between the two groups (supervised mask use and no supervised mask use)*.

Reference #111, found here:

<https://pubmed.ncbi.nlm.nih.gov/19652172/>

The study is from 2009. Data is from Hong Kong. In the results of the study we read:

Hand hygiene with or without facemasks seemed to reduce influenza transmission...

I interpret this sentence as meaning that the effect of facemasks was found to be irrelevant. It is not clear how the authors were then able to state, in their conclusions, that

Hand hygiene **and** facemasks seemed to prevent household transmission of influenza virus.

Reference #112, found here:

https://wwwnc.cdc.gov/eid/article/10/4/03-0628_article

Published in 2004. A telephone study targeted at the large majority of SARS patients from Hong Kong. The sample is made up of 1192 persons, or about 68% of the estimated 1755 people who contracted SARS in Hong Kong - a megalopolis of about **7.5 million people**, just to put things in proportion.

Statistical data prove that SARS patients washed their hands less often, disinfected their house less often, and used a face mask less often than a random sample of those who remained healthy. The conclusion of the WHO is that face masks are useful to protect you from respiratory diseases. My own conclusion is that *you had to be very, very sloppy to catch SARS in Hong Kong*.

Reference #113, found here:

<https://www.sciencedirect.com/science/article/pii/S2666142X20300126>

This is a meta-research based on analyzing the conclusions of 58 other papers, some of them already cited above. In order to give an informed judgment on this paper, I'd have to analyze each of the papers that the authors base their conclusions on. Within the present frame, I will limit myself to not accepting the method.

Thus I cannot accept the conclusion printed in bold, that:

Findings suggest that the correct and early use of facemask or face covering could prevent the spread respiratory virus transmission including COVID-19 than when it is not used.

The findings of the authors of this paper do **not** suggest this kind of conclusion to me.

Reference #114, found here:

https://wwwnc.cdc.gov/eid/article/10/2/03-0730_article

Another Hong Kong-based SARS-related article. By multivariate analysis, the authors deduce that:

... persons who always wore masks had a 70% lower risk of being diagnosed with clinical SARS compared with those who never wore masks, and persons with intermittent mask use had a 60% lower risk.

In connection with this statement, I would like to remind the reader that an estimate 8,422 cases worldwide have contracted SARS. The illness was dangerous (11% of fatality rate), but was very difficult to get infected from, even at the center of its diffusion.

It is evident that a 60-70% reduction of a risk that is already infinitesimal is of no great consequence.

Back to the WHO report.

A meta-analysis of observational studies on infections due to betacoronaviruses, with the intrinsic biases of observational data, showed that the use of either disposable medical masks or reusable 12–16-layer cotton masks was associated with protection of healthy individuals within households and among contacts of cases.

The meta-analysis can be found here:

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31142-9/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31142-9/fulltext)

This analysis is comparable to one I recently described. The fact that it was published by *The Lancet* confers to it no special aura of sanctity: the same magazine has recently had to retract an article it had published about the remedy *hydroxychloroquine* - read here the full story:

<https://www.webmd.com/lung/news/20200605/lancet-retracts-hydroxychloroquine-study>

Here, too, I'd have to parse through the quoted bunch of studies. If this were my paid job, I might find it interesting to catalog a complete list of these studies, finding out how often they are cross-cited, and how often shaky conclusions from a large bunch of studies taken together are used as substitute for a solid base for one's statements.

Still, the WHO's statement that *the use of either disposable medical masks or reusable 12–16-layer cotton masks was associated with protection of healthy individuals within households and among contacts of cases* found no specific corroboration from the material contained in the article. Their statement appears to be based on this phrase from the article:

For the general public, evidence shows that physical distancing of more than 1 m is highly effective and that face masks are associated with protection, even in non-health-care settings, with either disposable surgical masks or reusable 12–16-layer cotton ones, although much of this evidence was on mask use within households and among contacts of cases.

In my opinion, the phrase carries a different message, compared to what the WHO suggests. The WHO report continues as follows:

This could be considered to be indirect evidence for the use of masks (medical or other) by healthy individuals in the wider community; however, these studies suggest that such individuals would need to be in close proximity to an infected person in a household or at a mass gathering where physical distancing cannot be achieved to become infected with the virus. Results from cluster randomized controlled trials on the use of masks among young adults living in university residences in the United States of America indicate that face masks may reduce the rate of influenza-like illness but showed *no impact* on risk of laboratory-confirmed influenza.

Again, nothing more than suggestions. But it is on this that world governments decide to limit our freedom to breathe, polluting the world in the process. Let's not forget that the plastic that is used to produce most face masks will take several hundred years to decompose naturally.

This concludes my analysis of the section called **Evidence on the protective effect of mask use in community settings.**

After spending a whole weekend examining this evidence, I state that it is far from convincing, at least for me. There is no substance in it to justify the violation of civil liberties. There is no substance for forcing human beings to breathe in their catabolytes, augmented by colonies of bacteria and fungi that thrive in the hot and humid microclimate that very rapidly forms inside any type of face mask as soon as you start to breathe into it. There is no substance for axing away the most rewarding, most satisfactory part of what human interrelationship constitutes - direct, non-mediated contact. And there is no substance for imposing on a generation of children a stunted, inefficient immune system, that will make of them unhealthy, frail creatures for life, equipped with the handicapped psyche that will be a consequence of limited perception of other persons' faces.

The WHO greatly disappoints when, at the outset of its **guidance** section, the authors of what is supposed to be an *interim guidance* write the following nonsense:

Despite the limited evidence of protective efficacy of mask wearing in community settings, in addition to all other recommended preventive measures, the GDG advised mask wearing...

What?

You are invited to read the WHO's specification about the settings where face mask usage is advised. The list is less obnoxious than what most of the governments of this planet have imposed to their obeying subjects. If the WHO has not been able to offer satisfactory evidence for their guidance, just ask yourselves where world governments could have sourced the basis for their authoritarian stance.

I would like to conclude this paper by citing, and commenting on, the *key messages* that are contained in an often-quoted article from the British Medical Journal. You can find the article here:

<https://www.bmj.com/content/369/bmj.m1435>

The authors, after providing a description of the existing evidence that is not, and cannot be, more convincing than the one proposed by the WHO, invoke the quasi-religious application of a misguided precautionary principle.

Near the end of their propagandist article, the authors propose four self-styled *key messages*. I will comment on each of them.

The precautionary principle states we should sometimes act without definitive evidence, just in case.

The precautionary principle seems to provide little or no indication about when, and in which directions, we should act when we follow it. "*Just in case*" could be used to prompt you to act in any possible direction. Throwing a dice, flipping a coin...

Or do the authors propose to be the ones who will whisper to our ears and suggest the *right* direction to orient our precautionary principled selves?

My opinion is that definitive evidence is quite useful, quite irrenounceable.

Whether masks will reduce transmission of covid-19 in the general public is contested.

There they have a point.

Even limited protection could prevent some transmission of covid-19 and save lives.

That's where the trick is hiding. The ace comes out of the sleeve when an emotional note is inserted where there should not be any. Here, *definitive evidence* should quantize with precision the damage that may come to others from not wearing face masks, and be compared with the damage, both physical and psychical, that comes from inserting into our collective consciousness the dogma that face masks are unavoidable and unescapeable. And innocent.

Because covid-19 is such a serious threat, wearing masks in public should be advised.

Covid-19 may, may not, may have been, may not have been, *such a serious threat*. This last self-styled key-message is the biggest *non-sequitur* ever.