Don't be a maskhole, Karen.

"I'm telling you to wear a mask. Wear a damn mask!"
(Jared Polis, King of Colorado, July 9, 2020)

Caoimhín P Connell
September 18, 2020

In 1863, the US Congress granted a charter to The National Academy of Sciences with a mandate that requires The Academy to advise the US Federal Government on scientific and technical matters. The Institute of Medicine (IOM) was established in 1970 by the National Academy of Sciences "…*to secure the services of eminent members of appropriate professions in the examination of policy matters pertaining to the health of the public. The Institute acts under the responsibility given to the National Academy of Sciences by its congressional charter to be an adviser to the federal government and, upon its own initiative, to identify issues of medical care, research, and education*."

In 2006, the IOM, Board on Health Sciences Policy, convened the Committee on the "Development of Reusable Facemasks for Use During an Influenza Pandemic." This was an austere assemblage of eminent professionals from the University of Chicago, The Johns Hopkins University School of Public Health, University of Minnesota, Albert Einstein College of Medicine, Centers for Disease Control, Georgia Institute of Technology, Yale University School of Medicine, and others.

Collectively, The Committee produced a report titled "Reusability of Facemasks During an Influenza Pandemic: Facing the Flu"[1]

One of the fundamental findings of The Committee was the foundational understanding of how politicians may be swept away with the urge to use a pandemic to manipulate people; and politics may rear its ugly head taking US policy makers down the path of tyranny using junk science to support their agenda.

The Committee prophetically cautioned:

> *Any public health effort aimed at extending the usefulness of existing devices must be delivered with clarity and truthfulness. The public is likely to forgive lack of knowledge but will not be willing to trust public health officials in the next instance if they have in any way been misinformed or misled.*

Today's leaders, belonging almost exclusively to the Left of the political spectrum, have ignored this caution, and have embarked on a campaign of misinformation and propaganda bereft of science. It will take a lot of hard work for those individuals and agencies to regain any credibility.

As of today, September 18, 2020, there is not the slightest shred of scientific evidence to support the practice of community face-masks as an effective tool in curbing the transmission of the SARS-CoV-2 virus. Indeed, we have far greater evidence that the use of community masking is actually increases the spread of such viruses.[2,3]

As the nutty mask craze emerged, I was given a list of articles by someone who believed the articles were scientific proof of the effectiveness of community masks in curbing the current virus (links to all of the previous articles are given below). Each article rose and/or fell on its own merits - some were very good and some were very bad indeed. However, good or bad, NONE of the articles withstood even the most simple test of applicability or validity regarding face masks as an effective NPI, and not a single article provided scientific support for the idea of community masking as an effective tool for controlling the transmission of a virus.

This is my 9th and last review of the articles that was presented to me as "scientific proof" for the effectiveness of community mask wearing.

Article Under Review

Zeng N, Li Z, Ng S, Chen D, Zhou H, *Epidemiology reveals mask wearing by the public is crucial for COVID-19 control*. (Medicine in Microecology, https://doi.org/10.1016/j.medmic.2020.100015)

The very first sentence of the paper is found in the abstract and establishes the authors' willingness to engage in contentious, subjective hyperbole:

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[1] ISBN 978-0-309-10182-0 | DOI 10.17226/11637

[2] Reference links at the bottom of this article to previous discussions on this topic.

[3] Fischer E, Fischer M, Grass D, Henrion I, Warren W, Westman E, *Low-cost measurement of facemask efficacy for filtering expelled droplets during speech* (Science Advances Publish Ahead of Print, published on August 7, 2020 as doi:10.1126/sciadv.abd3083)

The pandemic 2019 Coronavirus disease (COVID-19) is the greatest concern globally.

In the very first sentence of the actual article, the authors immediately begin to back-peddle their opening claim and instead, the authors modify their position with:

The Coronavirus disease 2019 (COVID-19) pandemic is of significant global concern.

Within two sentences we see a recurrent problem with rush-to-publish papers during the 2020 pandemic. Papers that are sloppy, poorly prepared, poorly thought out, irrelevant, and that make spurious claims that simply can't be supported by the authors own data.

The paper is fraught with misspellings, and grammatical errors and it's difficult to believe the paper was proofread or reviewed by a knowledgeable editor l*et al*one peer-reviewed. For example:

> *We organized the publicly available daily data from various countries into a data. frame, used R (version 3.6.3) and R package ggplot2 [8] to visualized the daily cases to a bar plot, and used the generalized additive model (GAM) [9] to model the daily infection curve and daily reported curve.*

Questionable Papers

As I have addressed elsewhere, questionable scientific papers are not new, and not restricted to the COVID-19 pandemic. We see junk-science publications in other aspects of Industrial Hygiene and medicine as recently noted by Chang and Gershwin with regard to "scientific studies" on mycotoxicosis where a few months ago they observed that the field is "*rampant with studies of questionable scientific merit*." [4]

Many of the flawed COVID-19 articles appear to be politically motivated, such as the myriad of flawed studies suddenly emerging that pretend to demonstrate the effectiveness of "face-masks" against the spread of SARS-CoV-2 (thus trying to overturn some 80 years of legitimate research and the entire body of scientific knowledge to the contrary).

We have recently seen embarrassing publications from such reputable publications as *The Lancet*[5] and the *New England Journal of Medicine*[6] and even from the Proceedings of the National Academy of Sciences.[7]

The second sentence found in the Zeng, *et al*, paper doesn't help with the authors' credibility:

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[4] Chang, C., Gershwin, M. (2019). *The Myth of Mycotoxins and Mold Injury*. Clinical Reviews in Allergy & Immunology, 57(3), 449-455.

[5] Mehra R, Desai SS, Ruschitzka F, *et al* "*Hydroxychloroquine or chloroquine with or without a macrolide for treatment of COVID-19: a multinational registry analysis*" (RETRACTED) Published: May 22, 2020 (DOI:https://doi.org/10.1016/S0140-6736(20)31180-6)

[6] Mehra M, Desai SS, Kuy S, *et al* "*Cardiovascular Disease, Drug Therapy, and Mortality in Covid-19*" June 18, 2020, N Engl J Med 2020; 382:e102 DOI: 10.1056/NEJMoa2007621

[7] Zhang R, Annie Y Zhang L, Wang Y, Molinae M: *Identifying airborne transmission as the dominant route for the spread of COVID-19* (fast-tracked through the PNAS on June 11, 2020)

… there are 1279722 confirmed cases and 72616 confirmed deaths as of April 8, 2020.

One of the ways the pandemic has been distorted for political gain is by playing fast and loose with definitions of words in a manner that borders on intentional linguistic confusion. As of September 18, 2020, the CDC reported 200,900 COVID deaths in the US. But what does that number really mean? Well, on the face of it, one would assume that the virus killed 200,900 people in the US. But is that really the case? (If you will excuse the pun).

In reality, the death rate is not what the public thinks it is. The reported death value is a result of "reporting bias," this is not the same as "media biased reporting." "Reporting bias" is a type of epidemiological problem called "informational bias" that can manifest itself in many ways. For example, in 1917, the percentage of US death certificates listing more than one pathology as an underlying or contributing cause of death was 35 percent; in 1979, that proportion "skyrocketed" to 73%.[8] Are we to conclude people in the US were contracting and dying from a greater number of illnesses in 1979 versus 1917? Are we to conclude that the Spanish Flu was exclusively responsible? More likely, we could interpret the data to indicate that in 1979 people were living longer, and therefore, a greater number of pathologies were being recognized, and also, that physicians were diagnosing more pathologies and certifying agencies were beginning to believe that a more accurate picture of pathologies at the time of death were providing valuable information and so including that information on the death certificate.

In 1917, it may have been deemed adequate to merely pick one of any prominent pathologies that were manifest and call that the cause of death. Then in 1979, when a multiplicity of factors were contributing to the death, physicians and certifiers were including those but, importantly, without necessarily quantifying the degree of contribution of the pathology. Therefore, how much real information is contained in the newer certificates? These are examples of information bias and the bias can occur as changes in the desire to produce more complete data, changes in diagnostics, changes in health care practices, changes in demographics and many other factors.

We now know that during this pandemic, reporting entities (hospitals, local governments, etc.), have not only been mixing "manifestational cases," but they have also been mixing prevalence cases with incident cases and even going so far as including "assumed" cases of death based on literally nothing more than a criteria of convenience (patient who fell out of bed and broke their neck had a fever at the time, therefore, patient died of COVID-19).

The net result is that it appears we are now dealing with a crude mortality rate that is, for all practical purposes not statistically significantly greater than expected, from previous "bad flu" years such as the 2017-2018 flu season, but the deaths being reported are not actual case mortality data (called the "causal criteria reporting criteria" - that is, the actual cause of death).

To illustrate, consider 89 year old Aunt Sally who contracts the SARS-CoV-2 virus in February 2020. Her infection is a an "inapparent infection" (no symptoms and no illness), and she completely recovers a month later in March.

Then in May 2020, Aunt Sally comes down with a nasty *Streptococcus pneumonia* infection resulting in pneumonia and as a result of her compromised immunity, dear old Aunt Sally gets Aspergillosis. August 2020 find Aunt Sally deceased as a multifactorial result of old age,

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[8] Israel RA, Rosenberg HM, Curtin LR, *Analytical potential multiple cause-of-death data*, American J of Epidemiology 1986; No. 124: 161-179

pneumonia and the opportunistic mycoses; what is the cause of death? Was it "old age"? Was it the aspergillomas in her lungs? Was it the fever from the Strep infection or the fluid in her lungs from the pneumonia?

Since the nursing home has phial of Aunt Sally's blood, they look for SARS-CoV-2 antibodies and since she had the virus in February, Aunt Sally is "positive" and she is posthumously identified as a new "case" and the nursing home tells the family Aunt Sally died from COVID-19. But is it true? No, it is not true, it is a "manifestational reporting criteria" report and not a "causal criteria" report.

This problem was brought into stark reality a couple weeks ago on August 23, 2020, when the CDC reported on its website that of all the reported COVID-19 deaths thus far, only 6% of the deaths had the SARS-CoV-2 virus identified as the sole etiology. That is, of the some 150,000 deaths reported as COVID-19 deaths, 94% were dear Aunt Sally and only 9,200 Americans had died with the virus being the only etiology identified.

We have seen these shenanigans from the beginning of this pandemic, when, for example, NYC arbitrarily added some 3,700 post manifestational cases in ONE DAY (it is unknown how many of those people actually died of COVID-19, but it could have been as few as 200, or 20, nobody knows). Virtually every State in the US and in my state, Colorado, states have admitted intentionally inflating their death rates. Earlier this year, Colorado falsely inflated the reported death rate by 23 % and got caught and was forced to roll back its numbers. Witness Minnesota, where state officials are now admitting that every single person who died in a nursing home after testing positive is now deemed to have died from the virus even though 25% of all natural deaths in a given week occur in nursing homes. Witness the recent disclosure that the manager of San Diego County discovered that of the 196 reported COVID-19 deaths, it turns out only six of those actually died from COVID-19.

It is not just the US, in July 16, 2020, The Centre for Evidence-Based Medicine reported[9] problems with Public Health England's (PHE) figures apparently demonstrating a staggering daily toll of more than a hundred COVID-associated deaths several days per week. Yet surrounding regions were constantly reporting days with no COVID-associated deaths whatsoever. How could this be?

One reason was found to be the way that PHE compiles "out of hospital" deaths data:

> *Linking data on confirmed positive cases (identified through testing by NHS and PHE laboratories and commercial partners) to the NHS Demographic Batch Service: when a patient dies, the NHS central register of patients is notified (this is not limited to deaths in hospitals). The list of all lab-confirmed cases is checked against the NHS central register each day, to check if any of the patients have died.*

Essentially, upon a death notification, the PHE looked for people on the NHS database who have ever tested positive for the virus (even if it was a false positive), and simply checks to see if they are still alive or not. PHE doesn't consider how long ago the COVID test result was, or if it was a valid positive, nor whether the person was actually ever ill, or even if the "case" was successfully treated in hospital and discharged. Anyone who tested COVID positive and then

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[9] Loke YK, Heneghan C, *Why no-one can ever recover from COVID-19 in England – a statistical anomaly* (The Centre for Evidence-Based Medicine, July 16, 2020)

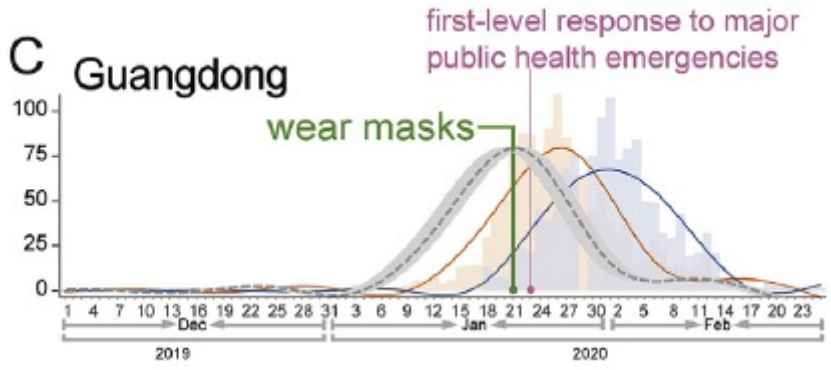
died at a later date by <u>any cause</u> (including automobile accidents) were included on the PHE COVID death roll.

These are the same types of death numbers being used by Zeng *et al*, in the current article under review as source data without consideration of what those data are actually saying. Unfortunately, it's worse than that for Zeng *et al*, who state that their source data were "collated" news articles, press releases and published reports from public health agencies. As a result, the Zeng analysis (even if it did support their conclusion) is hopelessly flawed.

At the heart and soul of the Zeng "analysis" is a Duhem-Quine flaw of assuming, without any justification and without any explanation, that just one factor, (mask-wearing) was responsible for all the claimed changes and masks were the sole cause of the claimed decline in infections to the exclusion of all other factors. Thus Zeng *et al*, note that "*On 23rd January, the epidemic prevention and control headquarters of Wuhan city announced suspension of the city's public transport, and temporarily closed the airport and railway station. These measures officially put Wuhan, the epicenter of the outbreak, into lockdown. On 24th January, the first day of the Chinese New Year holiday, the traffic outside Wuhan area peaked because of the annual reunion of families. From 23rd to 25th of January, thirty provinces, autonomous regions and municipalities across the country declared the first-level response to major public health emergencies [2,10]. Under the first-level response situation, all possible measures are undertaken to contain the epidemic, and these include setting up designated medical institutions and fever clinics, quarantining infected and suspected cases and compulsorily mask wearing by the public. Additionally, maximum restriction on movement and public gatherings is imposed even during the Spring Festival*. " Yet, Zeng *et al*, conclude that NONE of these other actions had any impact on the spread of the disease, and all claimed changes were due exclusively to mask-wearing. Nowhere in the article does Zeng *et al*, explain how they have justified this claim and nowhere do they provide any data to demonstrate the claimed changes, and nowhere do they explain the similar progression of the infections in societies that didn't implement the Draconian mask-wearing mandates.

Remarkably, Zeng *et al*, provide as support remarkable graphs which by all accounts demonstrate exactly the opposite of the conclusions of the authors. Zeng produces graphics that purport to show how the infections were curbed once the mask mandates were implemented.

Below is a representative example. Here the solid blue trend line to the far right of the "wear masks" vertical, is the number of daily reported cases. Surely it doesn't take a genius to look at this presentation and see that there is something amiss with the interpretation of the data vis-à-vis masks.



More importantly, nowhere, absolutely nowhere in the article, have the authors actually shown how they came to the conclusion that community mask wearing had any impact on the spread of the virus in the areas they claimed to study. There is no explanation of how they drew their conclusions that any of the nonpharmaceutical interventions may have impact the spread of the infection, or how they have decided to attribute the claimed decline of the infection to masks. The authors have failed to demonstrate a temporal association of mask wearing to the spread of the virus. The authors have failed to explain how the number of infections continued to increase steadily in each of their "study areas" well after the implementation of mask-wearing mandates. The authors have entirely failed to address confounders found in their own data, or address any aspects of sensitivity of the data to the presumed effector (wearing masks).

In short - this paper was a "rush-to-publish" apparently for the sole purpose of getting one's name on a paper regardless of how really poorly thought-out the paper may be or flimsy the "evidence" is.

So on a scale of one to ten capsid icosahedral sub-units I'm going to award Zeng *et al* a solid T-1 for their brazen attempt to pretend they have provided real science.

Conclusion - To date, there is no scientifically valid evidence that community face-mask wearing, as we are currently watching, has the slightest impact on the spread of the virus. Community masking "for safety" can be compared to wearing a seat-belt at your dinner table in the event that a car should come crashing through your house, and believing your seat belt will protect the driver. Community masks really are that silly.

Caoimhín P. Connell, Forensic Industrial Hygienist, September 18, 2020

Previous COVID-19 articles by CP Connell-

Masks, and the new Doctor Schnabel von Rom
Stadnytskyi V, Bax CE, Bax A, Anfinru P, The airborne lifetime of small speech droplets and their potential importance in SARS-CoV-2 transmission (Approved by PNAS May 2020: https://www.pnas.org/cgi/doi/10.1073/pnas.2006874117)

Pathological Science - Zhang *et al* and the PNAS: Zhang R, Annie Y Zhang L, Wang Y, Molinae M: *Identifying airborne transmission as the dominant route for the spread of COVID-19* (fast-tracked through the PNAS on June 11, 2020)

Defacing Mask Science - Rossettie S, Perry C, Pourghaed M, Zumwalt M, "*Effectiveness of manufactured surgical masks, respirators, and home-made masks in prevention of respiratory infection due to airborne microorganisms*" The Southwest Respiratory and Critical Care Chronicles 2020;8(34):11–26

Vivek Kumar, Sravankumar Nallamothu, Sourabh Shrivastava, Harshrajsinh Jadeja, Pravin Nakod, Prem Andrade, Pankaj Doshi, Guruswamy Kumaraswamy "*On the utility of cloth facemasks for controlling ejecta during respiratory events* "

A Brief Description of filtering mechanisms and size. Size matters!

Konda A, Prakash A, Moss GA, Schmoldt M, Grant GD, Guha S "Aerosol Filtration Efficiency of Common Fabrics Used in Respiratory Cloth Masks" (American Chemical Society, April 2020)

Jeremy Howard, Austin Huang, Zhiyuan Li, Zeynep Tufekci, Vladimir Zdimal, Helene-Mari van der Westhuizen, Arne von Delft, Amy Price, Lex Fridman, Lei-Han Tang, Viola Tang, Gregory L. Watson, Christina E. Bax, Reshama Shaikh, Frederik Questier, Danny Hernandez, Larry F. Chu, Christina M. Ramirez, Anne W. Rimoin *Face Masks Against COVID-19: An Evidence Review NOT PEER-REVIEWED | Posted: 13 May 2020*

Anna Davies, BSc, Katy-Anne Thompson, BSc, Karthika Giri, BSc, George Kafatos, MSc, Jimmy Walker, PhD, and Allan Bennett, MSc *Testing the Efficacy of Homemade Masks: Would They Protect in an Influenza Pandemic*? (Disaster Med Public Health Preparedness. 2013;7:413-418)

Eikenberry SE, Mancuso M, Iboi E, Phan T, Eikenberry K, Kuang Y, Kostelich E, Gumel AB "*To mask or not to mask: Modeling the potential for face mask use by the general public to curtail the COVID-19 pandemic*" (Infectious Disease Modelling 5 (2020) pp. 293-308)

Cheng VC, Wong S, Chuang V, So S, *et al* "*The role of community-wide wearing of face mask for control of coronavirus disease 2019 (COVID-19) epidemic due to SARS-CoV-2*" (Journal of Infection April 30, 2020;16:13)

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