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CORRESPONDENCE

Flu advice in the U.S. news media changed during the COVID-19 pandemic but not the evidence

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Advice in the United States news media on preventing seasonal influenza appeared to change drastically during the COVID-19 pandemic. Notably, health experts began recommending the use of face masks, six-foot social distancing, and improved ventilation to prevent getting and spreading the flu. These interventions were introduced in the U.S. during the COVID-19 pandemic as a means of controlling a novel pathogen in the absence of a vaccine and treatments. They are currently not included in the Centers for Disease Control and Prevention's (CDC) "Preventive Steps" for flu season [1] and were only rarely recommended by medical experts in the news media prior to the pandemic.

The shift in these recommendations seems to have occurred in the absence of any significant changes to the evidence base for flu prevention. The Cochrane Library recently published an updated meta-analysis on the use of physical interventions to interrupt or reduce the spread of respiratory viruses, which reports minimal changes to the evidence from the pre-COVID to post-COVID period. Evidence for masking for influenza prevention remains "poor", quality data does not exist to make a determination on social distancing practices, and there are no completed randomized controlled trials (RCTs) on ventilation as a method of reducing the transmission of respiratory viruses [2]. It is with this background that we sought to identify any significant changes in the U.S. media's presentation of public health advice that occurred during the COVID-19 pandemic by reviewing news coverage on flu prevention before and after 2020. We also aimed to determine whether these shifts align with the current CDC guidelines for flu prevention.

We conducted a systematic search in Factiva of the print editions of the top ten U.S. newspapers by circulation, with two search periods representing pre- and post-pandemic media coverage: 2018–2019 and 2021–2022. We omitted 2020, a year marked by widespread global concern with COVID-19 and irregular media coverage on seasonal influenza. Newspaper articles with flu prevention advice were identified, abstracted, and coded for the specific advice provided. Main measures include the frequency of each recommendation in each period, the percent of recommendations aligned with CDC guidelines in each period, and changes in frequency of each recommendation (2-proportion Z-tests, p-value 0.05 significance).

In total, 128 flu prevention articles met our inclusion criteria for the 2018–2019 period and 122 articles for 2021–2022. The percentage of articles with advice to wear a mask for influenza prevention increased by 1494.8% (3.9 vs. 62.3%; $p = < 0.00001$; Fig. 1), the percentage of articles recommending social distancing for flu prevention increased by 495.5% (2.3 vs. 13.9%; $p = 0.001$), and the percentage of articles recommending improved ventilation increased by 1368.9% (0.8 vs. 11.5%; $p = 0.0004$). The percentage of articles advising a flu vaccine declined by 14.5% (93.0 vs. 79.5%; $p = 0.002$; Fig. 1), the percentage of articles with a recommendation to cover your cough or sneeze declined by 52.8% (15.6 vs. 7.4%; $p = 0.041$), and the percentage of articles with a recommendation to disinfect surfaces declined by 76.7% (7.0–1.6%; $p = 0.038$). There was also a decline of 32.8% observed in the number of recommendations for flu vaccines as a percent of the total number of recommendations coded in each time period ($p = 0.0002$). No significant differences were observed in the percentage of articles recommending hand washing, seeking antivirals, staying home when sick, avoiding sick people, or not touching your face, nose, and eyes.

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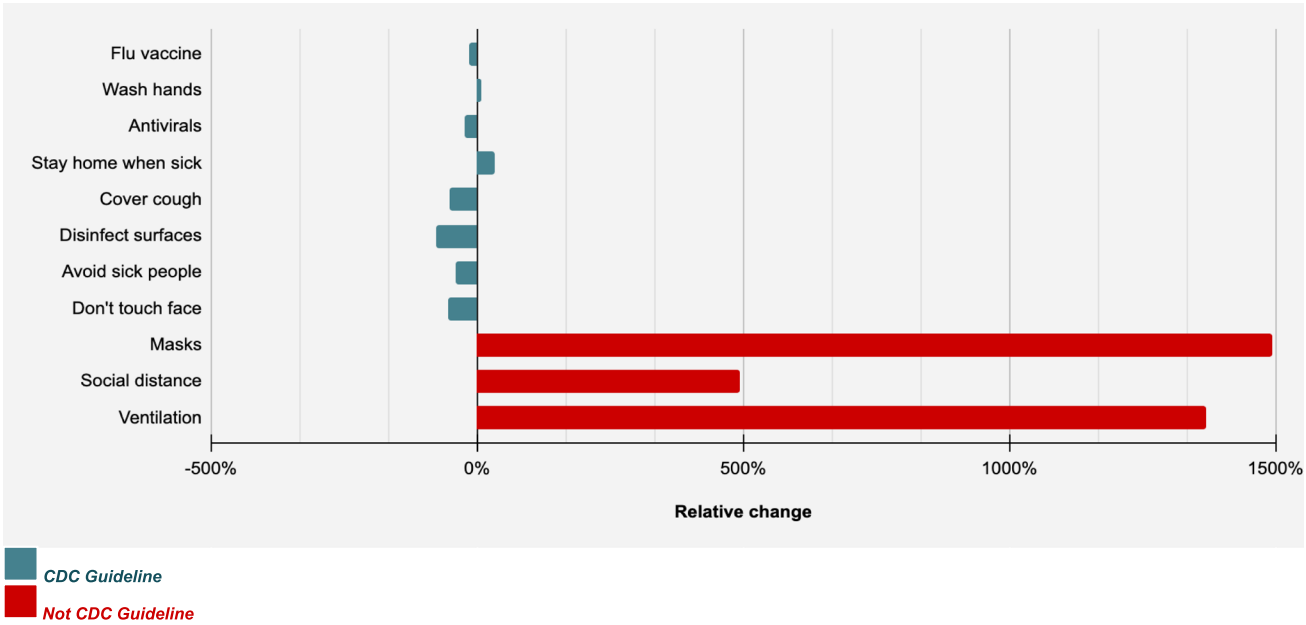

Fig. 1 Relative changes in flu prevention advice in the media before and after the COVID-19 pandemic

Our analysis confirms that expert advice on flu prevention, as presented in the top 10 U.S. newspapers, changed significantly during the COVID-19 pandemic. Most notably, strategies like getting a flu vaccine, covering one's mouth during a sneeze or cough, and disinfecting surfaces were advised less frequently, while strategies like wearing a mask, social distancing, and increased ventilation were advised more frequently. The recommendations that increased in frequency are not currently included in the CDC's annual flu prevention guidelines and were only rarely recommended by health experts in the news media before the pandemic. In comparing the media's recommendations to the CDC's "Preventive Steps" for flu season, 96.3% of media recommendations align with CDC guidelines pre-COVID, while just 63.9% of media recommendations align with CDC guidelines for flu prevention in the post-COVID period.

These findings are important because the news media is a powerful tool for directing the public's attention toward specific health issues, increasing health literacy across communities, and influencing individual attitudes around health decisions and behavior. To be effective, the public needs to view the news as a trustworthy source of information. Confidence in the medical establishment and the public health experts providing the advice is also critical. However, trust in these institutions in the United States is tragically low. Recent surveys from the Pew Research Center found that less than half of U.S. adults (45%) have confidence in the news media [3], while trust in scientists and medical providers is below pre-pandemic levels. Less than a third of U.S. adults surveyed (29%) say they have a great deal of confidence in medical scientists to act in the best interests of the public, down from 40% in November 2020 [4].

This is also concerning because issues of trust stemming from the pandemic have the potential to "spill over" and impact the success of other public health efforts. For example, polarization surrounding the COVID-19 vaccine appears to have created vulnerabilities regarding annual flu vaccination efforts. Specifically, low COVID-19 vaccination rates were found to be associated with decreases in influenza vaccination rates [5]. Evidence of declining enthusiasm toward childhood vaccination campaigns in the United States is also distressing. Coverage against measles in the U.S. dropped to the lowest it's been in more than a decade [6] and opposition to requiring the childhood measles, mumps and rubella (MMR) vaccine for entering public school now stands at 35%, an increase of 12% since in 2019 [7].

The role of the news media as a vehicle for dispersing credible information from public health experts is especially important at a time when people in the United States are increasingly turning to less credible sources—such as social media, celebrities, and pundits—for health advice. Misinformation campaigns, "fake news", and the expanding influence of social media are commonly blamed for the erosion of trust in public health and resulting vaccine hesitancy. However, it is important to consider how dramatic shifts in advice communicated by public health experts through the traditional news media—in the absence of scientific consensus—may also be contributing to the problem.

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Declarations

Conflict of interest The authors have not disclosed any competing interests.

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