


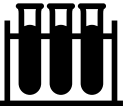
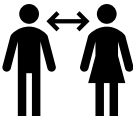


Masks and Other Non- Pharmaceutical Interventions: is it time to return to our pre- pandemic ways?

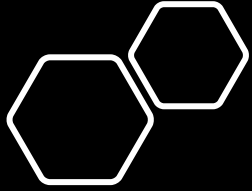
Shira Doron MD FIDSA FSHEA
Hospital Epidemiologist
Tufts Medical Center

December 15, 2022



Mitigation measures then....

Intervention		Acceptability	Ongoing Degree of Individual Effort
Masking Mandates		Moderate to High	High
Testing Programs		High	Moderate to High
Social Distancing, Limitations on Gathering Size		Moderate	Moderate to High
Business, School and Other Closures		Moderate to Low	Variable
Ventilation		High	Low

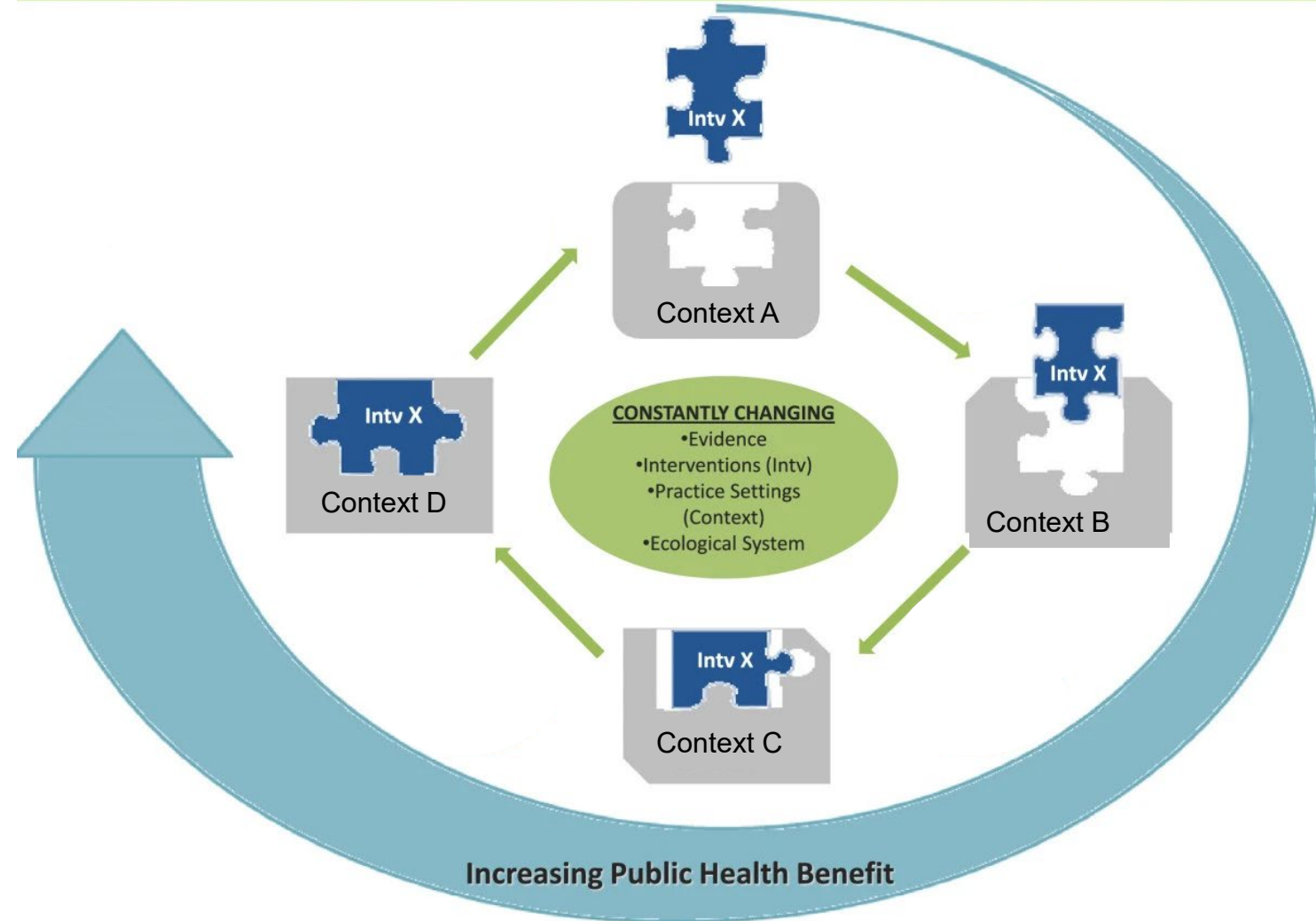


Is Intervention and Policy Effectiveness Static or Dynamic?

Chambers et al. Imp Sci. 2013

The dynamic sustainability framework

The DSF: Managing the Fit Between an Intervention and Context to Optimize Benefit



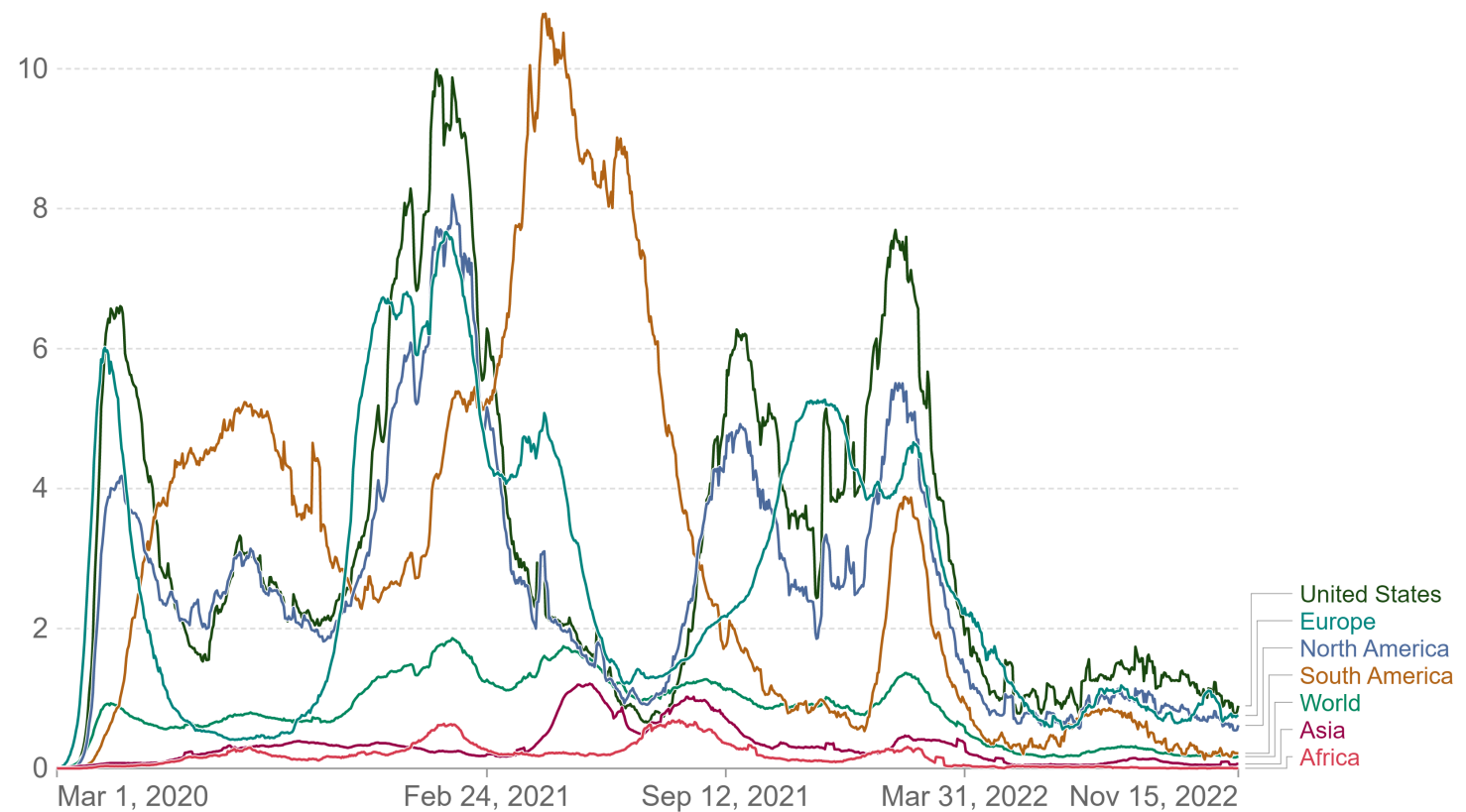
Slide adapted from Westyn Branch-Elliman, MD



Daily deaths from COVID-19 are still too high...but steadily improving

Daily new confirmed COVID-19 deaths per million people

7-day rolling average. Due to varying protocols and challenges in the attribution of the cause of death, the number of confirmed deaths may not accurately represent the true number of deaths caused by COVID-19.



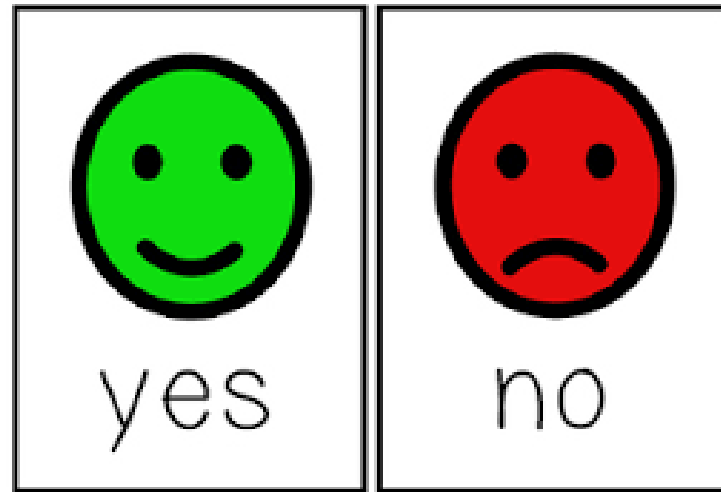
Source: Johns Hopkins University CSSE COVID-19 Data

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Is COVID still more deadly than influenza?

The answer is both yes and no





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Coronavirus pandemic + Add to myFT

Vaccines and Omicron mean Covid now less deadly than flu in England

Recent rise in hospital admissions shows decision to end restrictions still carries risks



The lethality of Covid has decreased over the course of the pandemic. For every 100,000 Omicron infections, 35 will result in death, while the equivalent number of flu infections will lead to 40 fatalities © FT montage/Getty Images

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John Burn-Murdoch and Oliver Barnes in London MARCH 9 2022 143 Feedback

Methodology

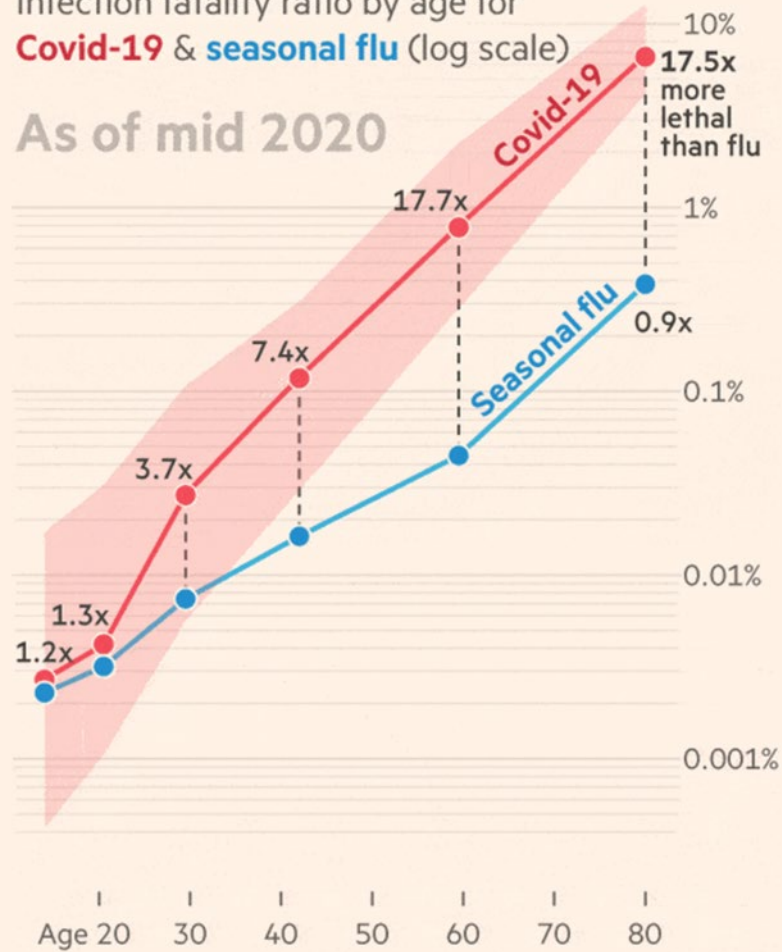
- Infection fatality rate (IFR) for COVID-19 was calculated
- Numerator: deaths where COVID-19 was mentioned on death certificate (England)
- Denominator: estimated total infections from ONS infection survey (England)
- To account for time lag between infection and death, infections shifted forward 26.8 days¹
- Flu IFR was calculated² using CDC data, prior studies, and adapted for English population age structure, resulting in an IFR of 0.04%



When we were first exposed to Covid, it was almost 20 times as lethal as flu for the most vulnerable

Infection fatality ratio by age for Covid-19 & seasonal flu (log scale)

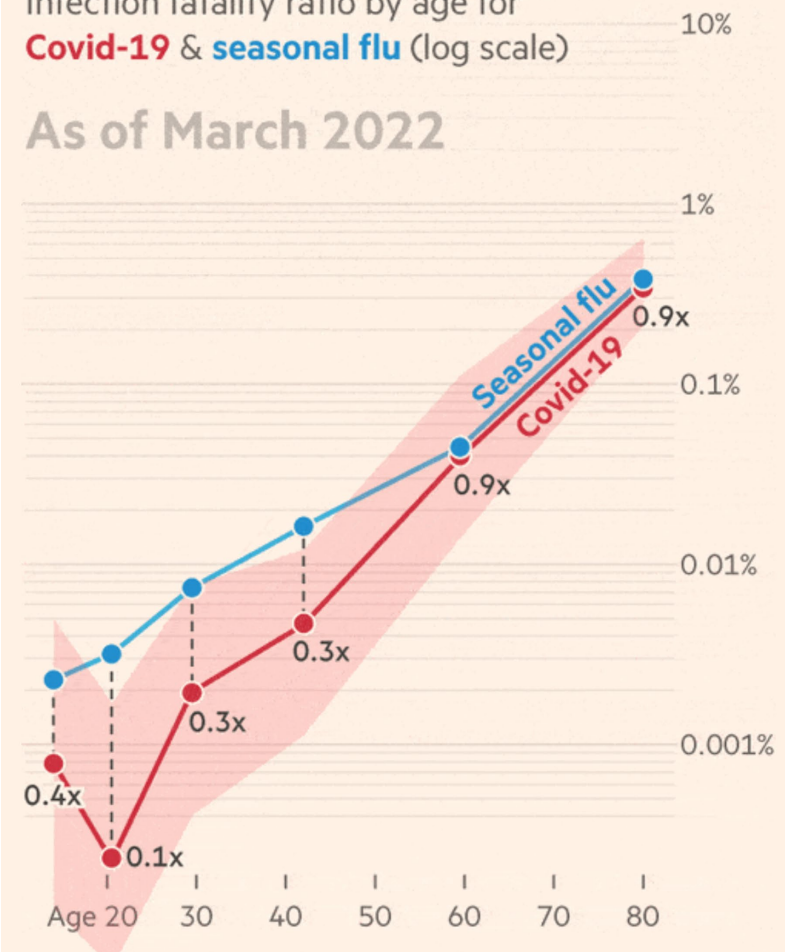
As of mid 2020



Immunity and a less virulent variant have reduced its severity, and it is now less deadly than flu for all age groups

Infection fatality ratio by age for Covid-19 & seasonal flu (log scale)

As of March 2022





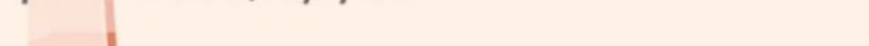
Covid has grown gradually less lethal over the pandemic, mainly due to immunity, and is now slightly less lethal than flu on average

Evolution of Covid-19's infection fatality ratio* in England, relative to seasonal flu



Although Covid is less lethal than a year ago, it still elevated winter respiratory deaths by around 50% compared to a typical flu season

Weekly deaths in England & Wales where underlying cause was Covid, flu or pneumonia, by year



IFR versus crude mortality rate



Burn-Murdoch and Barnes. Financial Times March 9, 2022



In the absence of a dramatic new variant, we expect the decreasing IFR trend to continue

KEY INSIGHTS
3921 seroprevalence studies
in 140 countries and territories
including 32,848,426 participants

[Read biweekly insights here](#)

ABOUT US
SeroTracker is a dashboard and data platform for SARS-CoV-2 serosurveys.
We conduct an ongoing systematic review to track serosurveys (antibody testing-based surveillance efforts) around the world and visualize findings on this dashboard.

[Download CSV](#)

[Access Github](#)

Cite as: *Lancet Inf Dis* article
Database up to date to: **Nov 11, 2022**

Local study
Seroprevalence of anti-SARS-CoV-2 antibodies and cross-variant neutralization capacity after the Omicron BA.2 wave in Geneva, Switzerland

Seroprevalence: 93.8%	Apr 29, 2022 to Jun 9, 2022
Population group	Household and community samples
Location	Geneva, Switzerland
Sample Size	2,521
Antibody Target	Spike, Nucleocapsid (N-protein)
Positive cases	41.8 per 100
Vaccinations	68.6 per 100

Low Risk of bias

FILTERS

Study Information

WHO Unity only

Source Type

Overall Risk of bias

Demographics

Population group

Sex

Age

Test Information

Test Type

Isotypes Reported

Antibody Target

Date Range

2020/04/20 2022/11/10

[Clear all filters](#)

mapbox Not Applicable

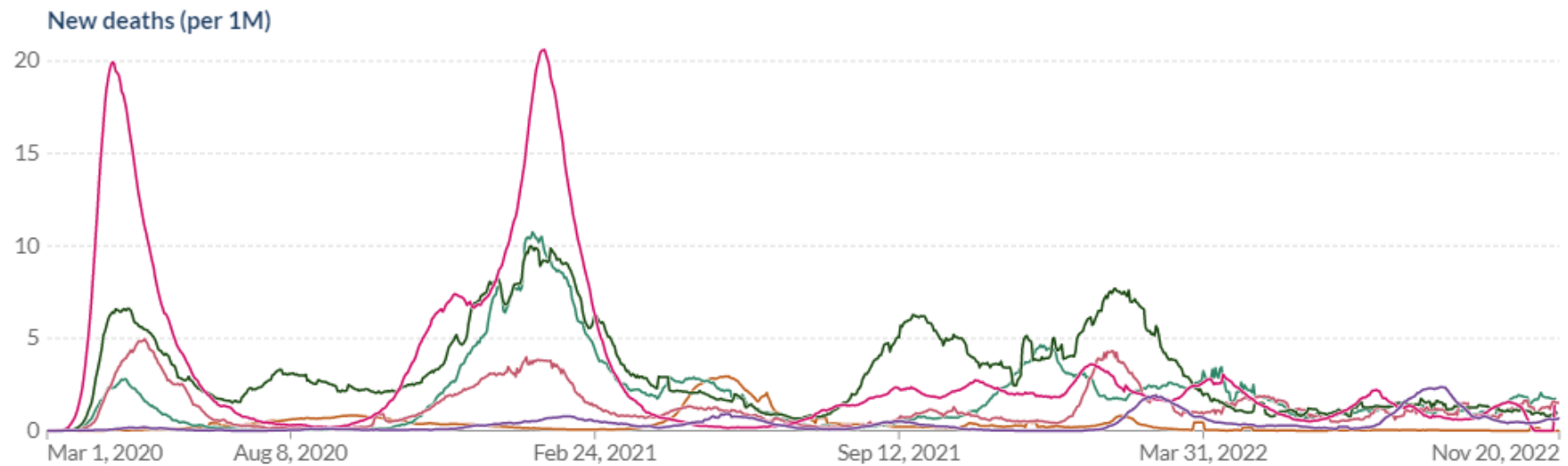
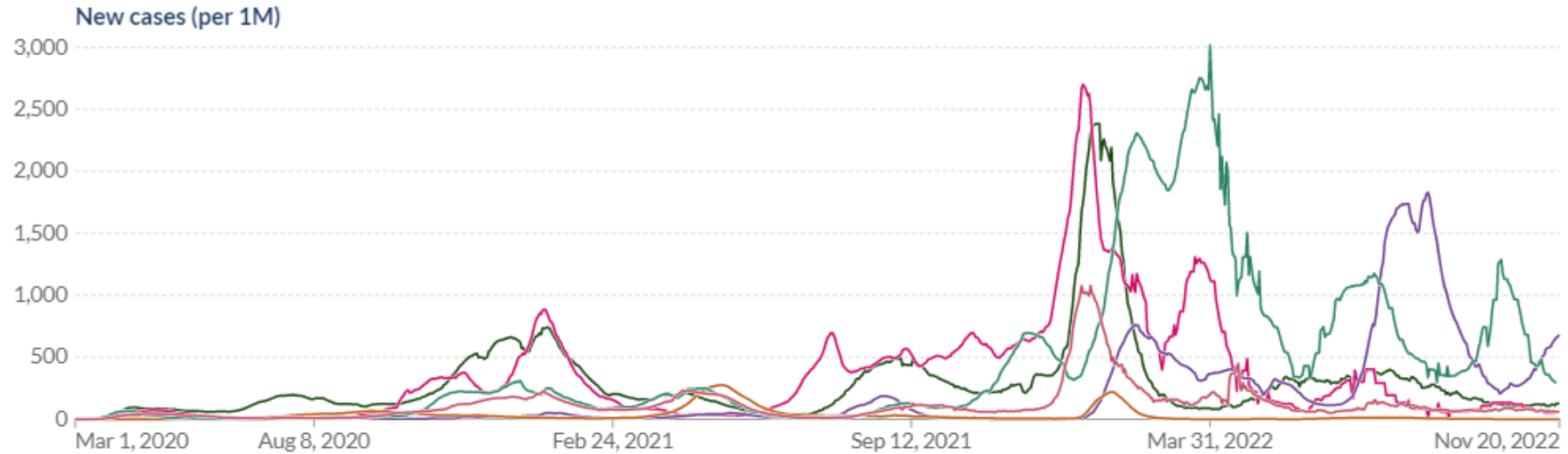


Daily new confirmed COVID-19 cases & deaths per million people

7-day rolling average. Limited testing and challenges in the attribution of cause of death means the cases and deaths counts may not be accurate.

LINEAR LOG Align axis scales

Canada Germany India Japan United Kingdom United States



Source: Johns Hopkins University CSSE COVID-19 Data

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RSV hospitalizations start typically seen in December

By Deidre McPhillips, CNN
Published 4:14 PM EDT, Thu November 3, 2022



How to prevent and treat RSV in babies



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RSV, covid and flu push hospitals to the brink – and it may get worse

By [Sabrina Malhi](#)
November 20, 2022 at 7:00 a.m. EST



Emergency room staff work Nov. 1 at Providence St. Joseph Hospital Orange in California. Orange County officials declared a health emergency because of a wave of respiratory illnesses. (Mark Rightmire/MediaNews Group/Orange County Register/Getty Images)

Messacar K, Baker RE, Park SW, Nguyen-Tran H, Cataldi JR, Grepandemic disruption. Lancet. 2022 Nov 12;400(10364):1663-1665.

Expectations and the Impact of ‘Moving Goal Posts:’ Everyone Gets Fatigued

Figure 4: Self-isolation intentions, by (mis)match between expectations and extension scenarios

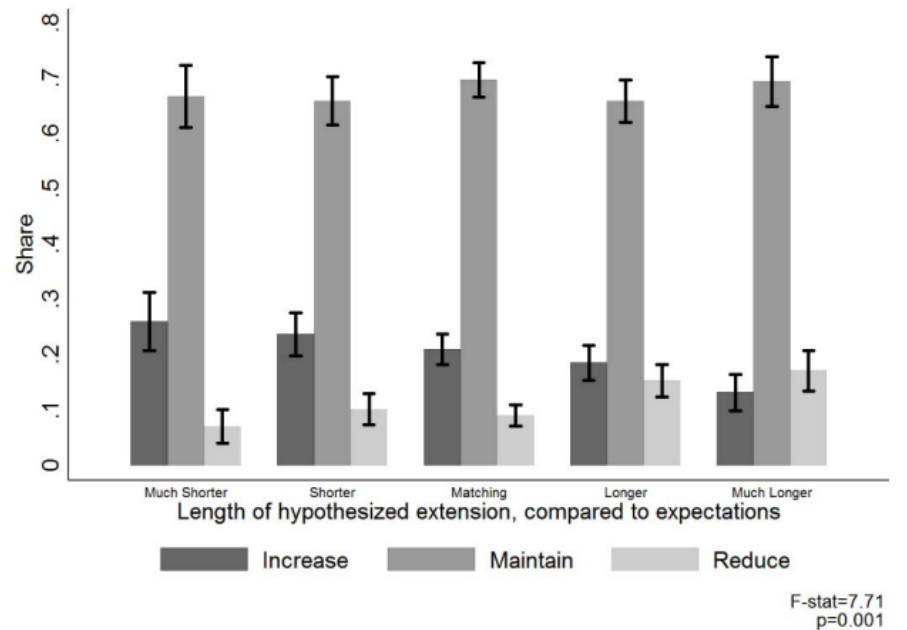
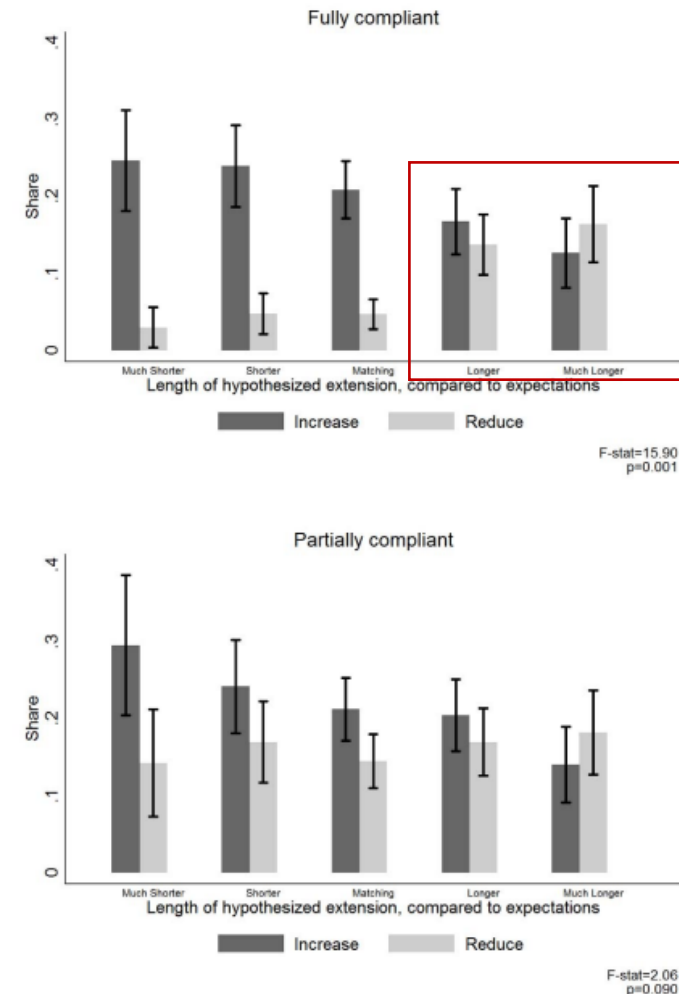


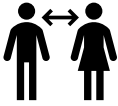






Figure 5: Self-isolation intentions, by (mis)match between expectations and extension scenarios, separately for “fully compliant” and “partially compliant” respondents

Survey March 2020
N=894



Mitigation measures now...

Intervention		Sustainability	Policy Adaptations
Masking Mandates		Low	Shift to individual choice, change recommendations about mask type
Testing Programs		Variable	Based on community risk level and resources, consider non-invasive options
Social Distancing		Very Low	Avoid in current context
Business, School and Other Closures		Very Low	Avoid in current context
Ventilation		High to Very High	Focus on infrastructure upgrades, research
Vaccination		High to Very High	Focus on first doses and tailor boosting messaging
Pre-Exposure Prophylaxis, treatment		High	Ensure access, encourage additional research



Key principles

- Engender trust
- Minimize infringement on freedoms
- Maximize sustainability

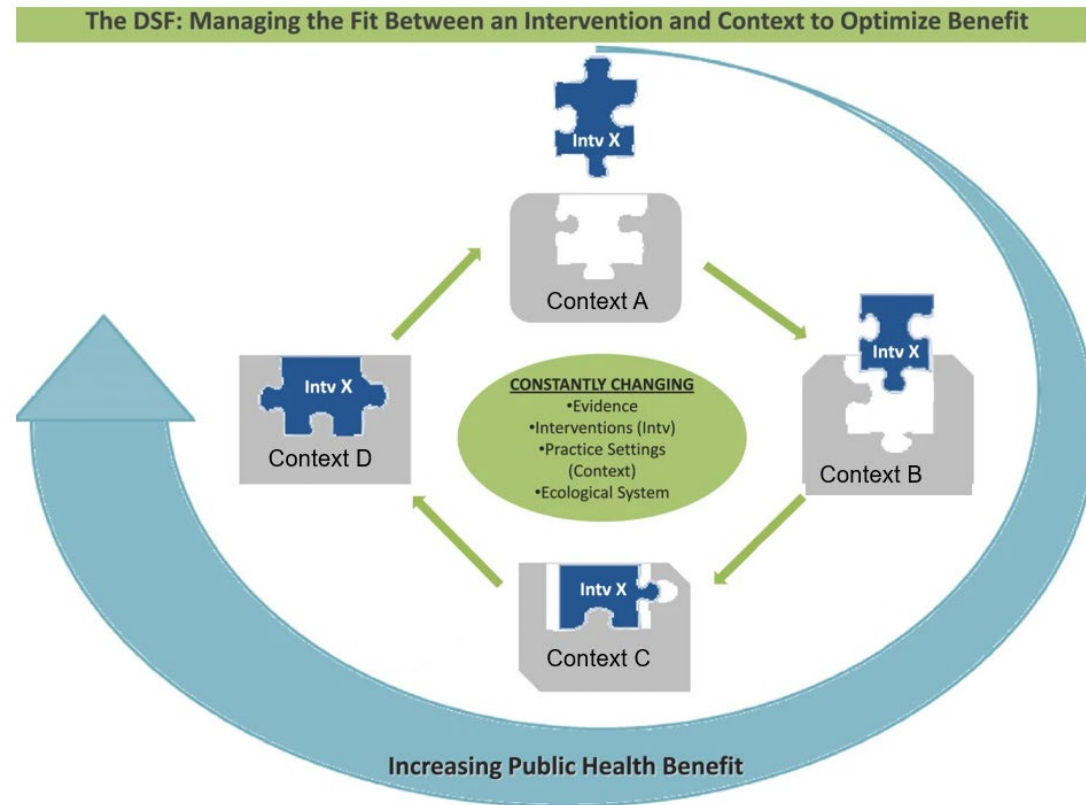
BIOSECURITY AND BIOTERRORISM: BIODEFENSE STRATEGY, PRACTICE, AND SCIENCE
Volume 4, Number 4, 2006
© Mary Ann Liebert, Inc.

Disease Mitigation Measures in the Control of Pandemic Influenza

THOMAS V. INGLESBY, JENNIFER B. NUZZO, TARA O'TOOLE, and D. A. HENDERSON

An overriding principle. Experience has shown that communities faced with epidemics or other adverse events respond best and with the least anxiety when the normal social functioning of the community is least disrupted. Strong political and public health leadership to provide reassurance and to ensure that needed medical care services are provided are critical elements. If either is seen to be less than optimal, a manageable epidemic could move toward catastrophe.

Moving Forward: the effectiveness of mitigation measures has not changed, but the context has.



- Over the course of the pandemic our understanding about mitigation measures has changed, as has the context
- Many factors impact policy effectiveness, including compliance
- Policies that do not require a lot of ongoing effort are likely to be the most effective for preventing serious outcomes
- To sustain effectiveness, policies need to be nimble and dynamic



Is it time to return to our pre-pandemic ways? No way!

- Paid sick leave
- Equitable access to healthcare, including primary care physicians
- Equitable access to vaccines
- Access to COVID-19 testing, treatment and PPE
- Viral “weather map”
- Address the hospital capacity problem

TuftsMedicine

Thank You



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