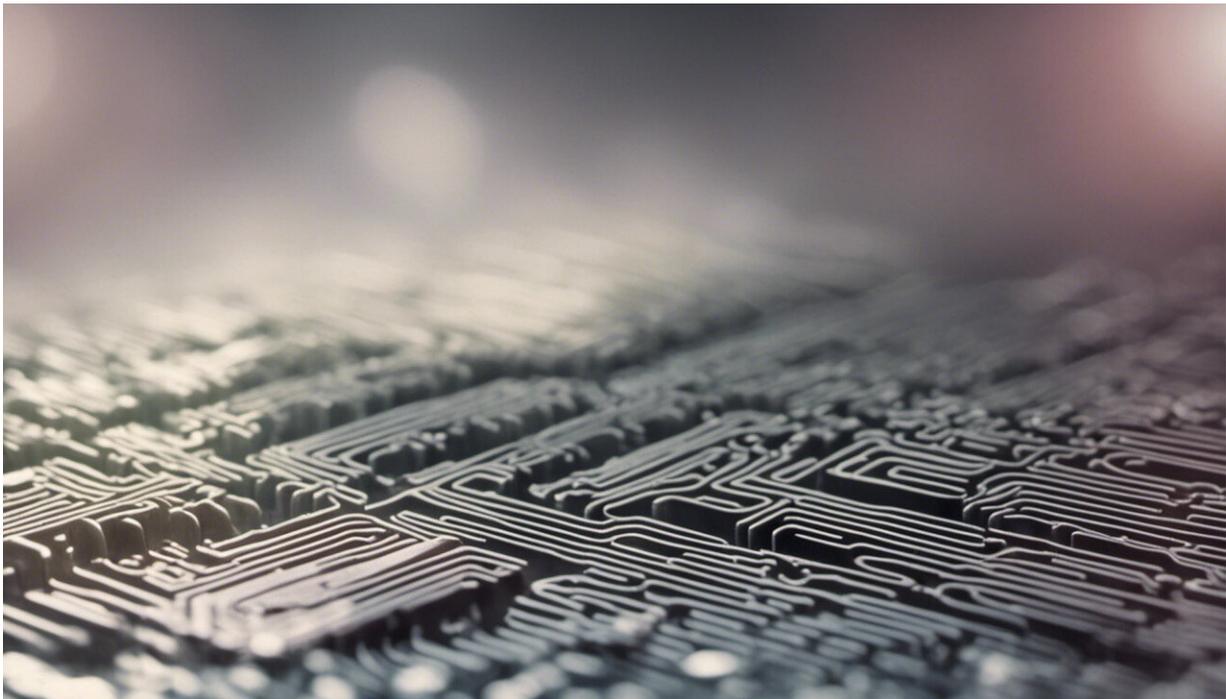


Shielding the vulnerable using a risk calculator, and why it won't be enough

November 11 2020, by Andrew Kunzmann, Justin Feldman



Credit: AI-generated image ([disclaimer](#))

In recent weeks, there have been [controversial proposals](#) to ask older, more vulnerable adults to isolate from society, while younger adults build herd immunity to COVID-19. These strategies have been criticized by leading figures as "[practically impossible](#)" and "[unethical](#)." Yet calls for shielding from COVID "[stratified by risk](#)" persist.

A new high-quality algorithm to predict people's risk of catching and dying from COVID-19, [published in the BMJ](#), may add credence to these proposals. This algorithm could be useful for enhancing shielding support measures for high-risk individuals through furlough schemes or GP advice. But the predictions won't be as accurate if lower-risk adults, assuming they are safe, [are less cautious and increase their risk of catching COVID](#). Given how quickly [coronavirus](#) can spread, an algorithm-based approach that asks young people to risk getting sick could make the A-level results algorithm look like a success.

To properly inform someone that they are at a "low risk" from COVID, we would need better information on exactly what they are at a low risk of. While the algorithm can predict risk of hospitalization and death from the disease, we can't yet adequately predict the risk of long-term health effects, known as "long COVID."

[Long COVID](#) is poorly understood, but reports of it causing [debilitating fatigue, brain fog or shortness of breath](#) for months in young, healthy people with milder cases suggest that it is an outcome that shouldn't be ignored.

Lower risk doesn't mean low risk. Deciding who is at an acceptably low risk—and how many of us this would amount to—will be complex. While most COVID deaths were concentrated in [older adults](#) or those with health conditions, half of the admissions to critical care due to COVID were in [adults aged under 60 years](#). Therefore, we may need to shield a considerable proportion of the working population. Many employees will want to decide for themselves whether the risk is acceptable to them, and they may struggle to say no to a boss who wants them back at work.

With infectious disease, the main issue isn't necessarily individual risk, [it's group risk](#). Many [young people](#) live in multigenerational households,

and their main desire may be not to pass it on to more vulnerable loved ones. While rises in infections often start in the young, they quickly pass on to [older](#) groups.

Not workable

Separating households for months isn't a workable solution, especially for families with informal caring responsibilities—and employers may be hesitant to allow low-risk workers who live with high-risk adults to work from home.

Although shielding advice can be helpful, it may not be enough to protect higher-risk people if we were to encourage or accept a higher level of infections in younger populations. The algorithm's predictions, trained using data when shielding and precautions were in place, show that groups advised to shield remained at a massively [disproportionate risk of death](#).

A further difficulty for shielding strategies could be providing safe medical care for their other health conditions. People receiving chemotherapy may be classed as high risk from COVID but would need to reduce their shielding in order to continue to receive treatment.

Although every effort is being made to [make hospitals COVID-free](#), increased incidence in younger populations, including doctors, nurses, carers and taxi drivers, would make attendance for medical treatments riskier.

Structural inequalities and racism will affect who is able to [work from home](#), take [sick leave](#), rely on public transport and live in crowded households. These all put working-class and minority ethnic individuals at a [greater risk from COVID-19](#).

The desire to reduce these discrepancies probably led to the inclusion of ethnicity and deprivation indicators into the algorithms. However, using an algorithm to selectively exclude people from society and workplaces based on race, age, deprivation or health conditions, isn't an equitable solution. Particularly if those who are most likely to be asked to isolate live in cramped households.

With a [recession looming](#), already marginalized workers could risk losing their jobs, training or promotions based on their postcode and ethnicity.

Asking [vulnerable adults](#) to shoulder the burden of the pandemic, in fearful isolation for an unknown period, would undermine core principles of public health. Isolating everybody indefinitely or having repeated lockdowns do not sound like appealing solutions either. The UK is already in a second lockdown and if it doesn't get infections low enough to fit on an Excel spreadsheet, it could be facing a third.

Difficult decisions lie ahead on whether we need to pursue a more aggressive suppression strategy in order to reopen more fully.

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