**Lay Abstract**

Severe non-pharmaceutic interventions (NPIs) such as “lockdown” measures have been used extensively to help fight the ongoing COVID-19 outbreak. However, previous research has suggested that these NPIs can be fine-tuned or “optimised” to best fight COVID-19 and minimise the harmful effects of NPIs on humans. We explore the concept of intervention optimisation using simple mathematical models.

We find that intervention optimisation is effective, although if implemented wrong, can have disastrous effects on human health. We highlight so called “suboptimal” interventions as an alternative, which are more resistant to mis-implementation and therefore more useful in scenarios where policy makers are uncertain.