CHAPTER 4: WORRYING ABOUT A RIPPLE ...

The dire situation in northern Italy focused minds in the next SAGE meeting on Tuesday 10 March. I relayed chilling status reports from my contacts there. It was battlefield medicine, deciding who to save and who to leave to die. Doctors were traumatised at having to choose who to put on the last ventilator. This wasn't China, or Korea, or any other country five thousand miles away. This was a sophisticated, rich country on our doorstep, and the health service was collapsing.

The UK was heading down the same terrible path: the country was already more stricken than anyone had realised and about to be hit with, literally, a wave of devastation. My attitude was changing too: if Italy had no option but to copy China, the UK would have to follow suit. I would have to question my own prejudices about what was possible or acceptable. I believe that what happened in Italy, and its decision to copy China in locking down, altered the course of the pandemic in Western Europe and radically changed attitudes in this country.

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Epidemics tend to follow a curve that is shaped by how transmissible the disease is. Plotted against time, the line starts rising almost imperceptibly, as one case becomes two or three, and two become four or six. For a highly transmissible disease, it does not take long for the gradient to tick upwards sharply, as numbers rise exponentially to a peak

A quantity rises 'exponentially' when its rate of change is dependent on the quantity itself. Think of it like a person spreading a disease: if Patient Zero infects three people, and those three go on to infect another nine, and then those nine infect another 27, each generation of infection encompasses significantly more people. That is why graphs of Covid-19 infections plotted over time start slowly but climb rapidly. This is the reason that experts advocate early intervention to stop spread.