

Life under Italian lockdown rules

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For the last decade I have lived in the city of Brescia, in Lombardy, northern Italy. I came here as my PhD research focused on an Alpine valley about 70 km north of the city and because, having lived in the UK and USA, I wanted to try living somewhere where I would have to function in a language other than English.

Around *Carnevale* (24/25 February) it became clear that Covid-19 posed a threat: a cluster of cases south of here, around Codogno, was growing rapidly. About 10 towns around Codogno were put under lockdown and, a couple of weeks later, that lockdown was extended to the whole of Lombardy and several other *regioni*, the first level of government below the nation state itself. For about two weeks now, the whole country has been under lockdown.

The UK, too, is about to undergo this experience, as announced by the PM on the evening of 23 March. Unlike the UK, Italy has no exemption for exercise, unless it involves walking a pet. In fact, a variety of rather tired looking pets has apparently been seen, as their owners have taken any excuse to get out of the house! Since last weekend, parks and cycle routes have also been closed. Here, if one leaves the house, one must carry a self-certification (downloaded and printed) that states that one is going to necessary work, going food shopping or going to a medical appointment/pharmacy. As of last weekend, many factories have also been closed, non-factory workers having already been encouraged to work from home.

I have seen little evidence of UK-style panic buying, despite the stereotypical view of the Italian character...

I have been outside the apartment complex three times in the past 28 days, each time to go shopping. What do I do with my time now that I cannot go out? Skype is a great way to engage in "safe social contact". The Metropolitan Opera and the Berliner Philharmoniker have made lots of excellent concerts available free online. I am catching up on reading – the new Mantel beckons once I finish MacCulloch's biography of Thomas Cromwell. I am also writing research papers and building statistical models. Finally, I can do translation work online.

Is it odd to spend almost all of one's time indoors? Obviously the answer is "yes". I am lucky enough to have a fairly large balcony – it has been 20C a few times in recent days – and the apartment complex covers almost a hectare and has fairly large amounts of green space and underground garages in which one can (legally) walk or jog.

Lombardy has, to date, been the worst hit *regione*, with 28,761 confirmed cases and 3,776 fatalities. My home city of Brescia has a large number of cases and the excellent local hospital system (a university teaching hospital plus others) is definitely under strain. However, in the past two days we have seen possible evidence that the lockdown is working. The growth rate of cases and deaths in the *regione* of Lombardy and in Italy overall has fallen day by day. I read economics, with an emphasis on the statistical and mathematical side, while at Robinson (although I have since broadened my skills with an MPhil and PhD in (quantitative) archaeology) and I have kept up and enhanced my data-analytic skills. I have been tracking the UK and Italian Covid-19 experience using official data and GIS/statistics. The first image below shows the current rate of infection in each

regione of Italy – with a maximum of around 0.3% (for comparison, the highest rate recorded by Public Health England thus far is around 0.05% in Kensington & Chelsea, so about one-sixth of Italian levels). The second image shows a logistic model of disease spread that I fit to the data (the maximum case number is somewhat arbitrary) for the whole of Italy along with the actual case data. It is easy to see that the daily new cases are falling progressively below the levels suggested by the model – the lockdown measures are having an effect. The third image shows the day-to-day growth in cases at the national level: the downtrend, with oscillations, is reasonably clear. The fourth and final image shows the natural logarithm of total cases – its slope is the growth rate – and a clear flattening trend is visible.

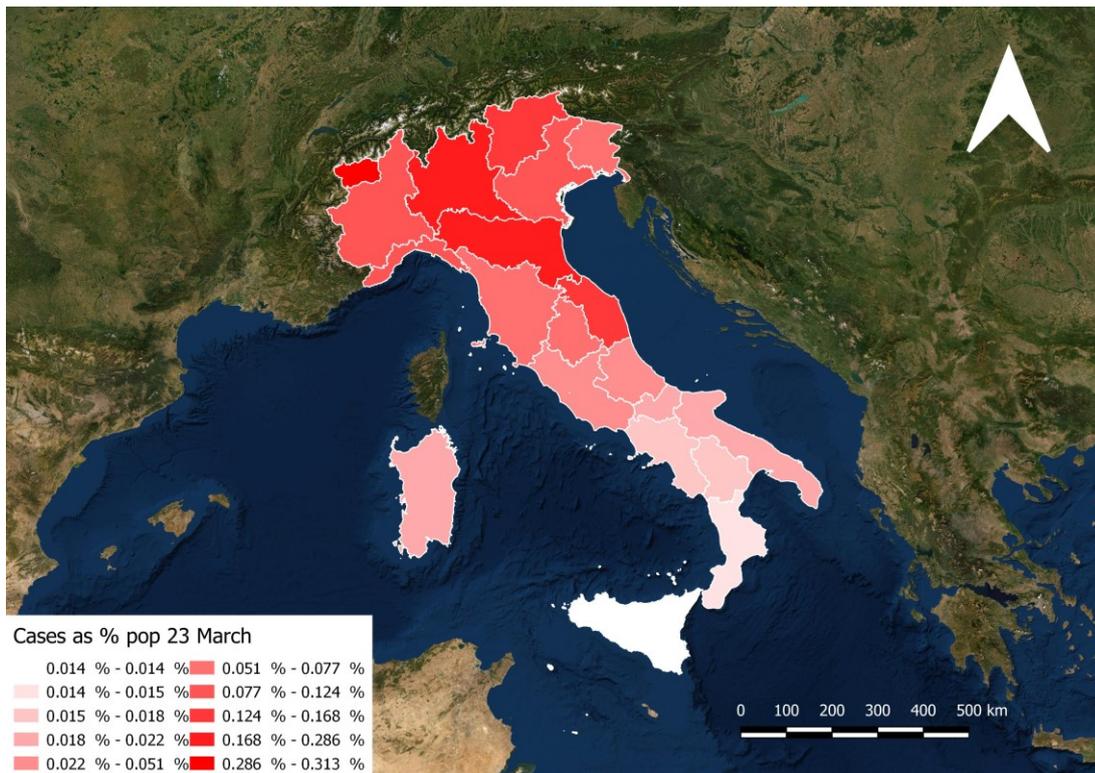


Figure 1 - Infection rates by regione

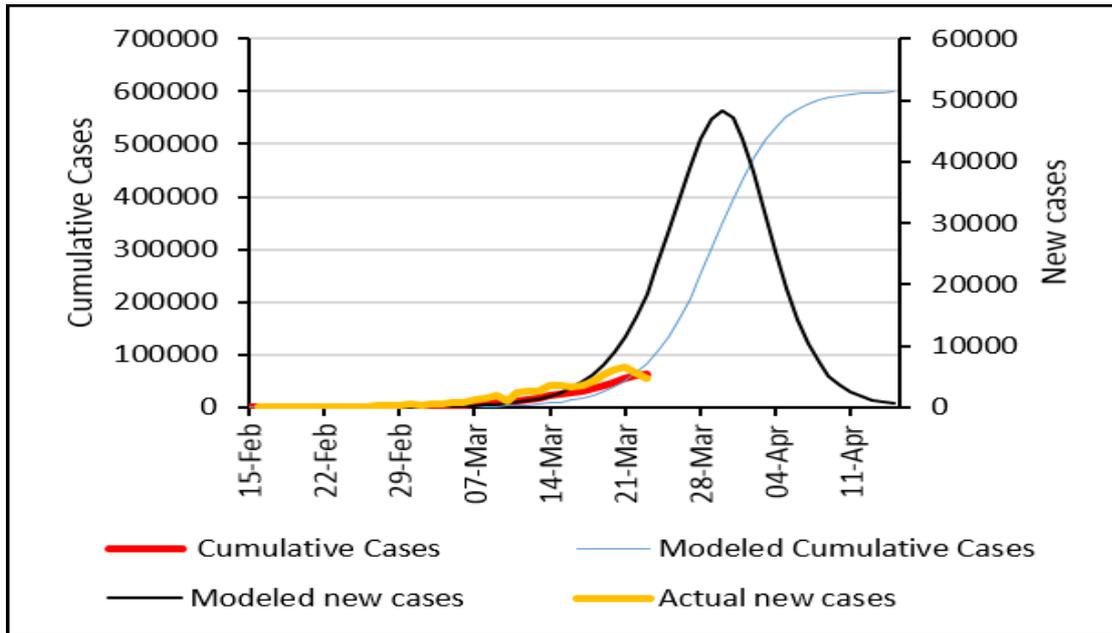


Figure 2 - Modelled and actual cumulative and daily cases in Italy

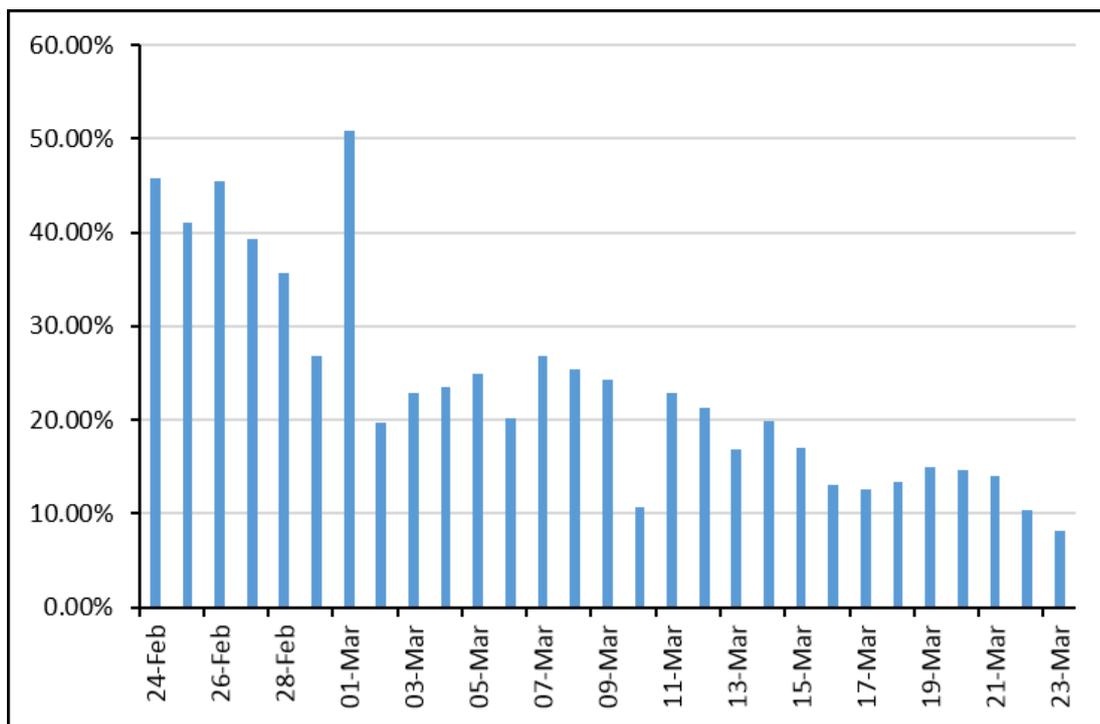


Figure 3 - Day-to-day case growth in Italy

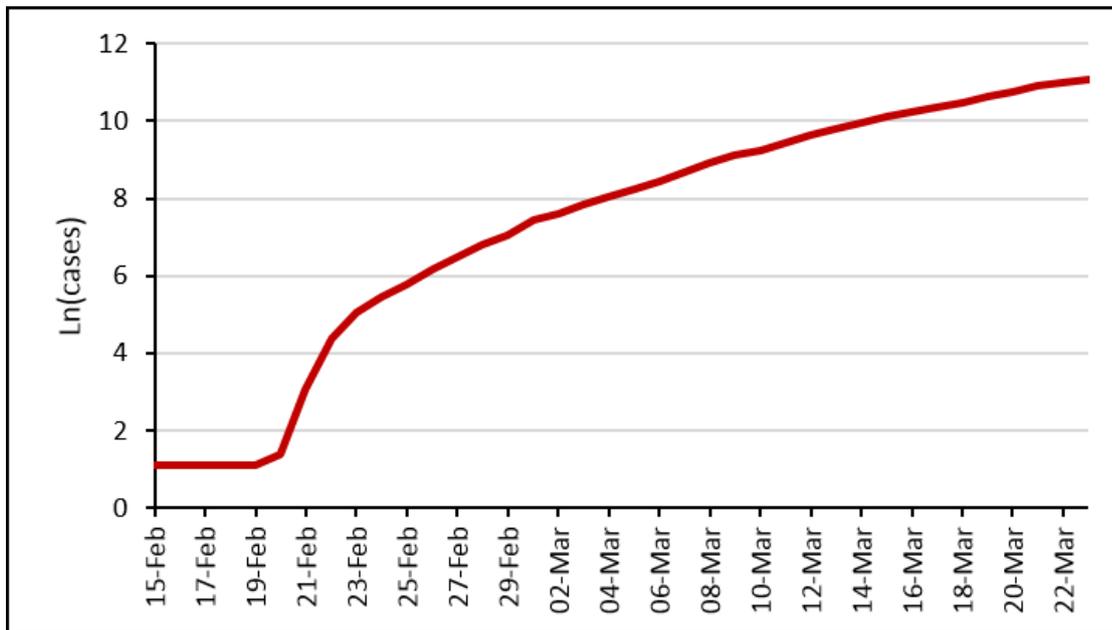


Figure 4 - Log of cumulative cases in Italy

We must hope that these trends continue here in Italy and that the (perhaps somewhat tardy) measures taken in the UK are similarly effective. Social distancing is the best current strategy to slow the spread of this virus.