

Adaptave Linear Fit to Covid-19 Data: Methods and Results

Report 3

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Three weeks of lockdown in the UK

Abstract

We show a brief comparison of the numbers on March 22, one day before the lockdown was instituted in the UK, and on April 16, the day when a further three weeks of lockdown were announced. Model and other sets of results are presented in the other reports [here](#).

March 22 - April 16, 2020

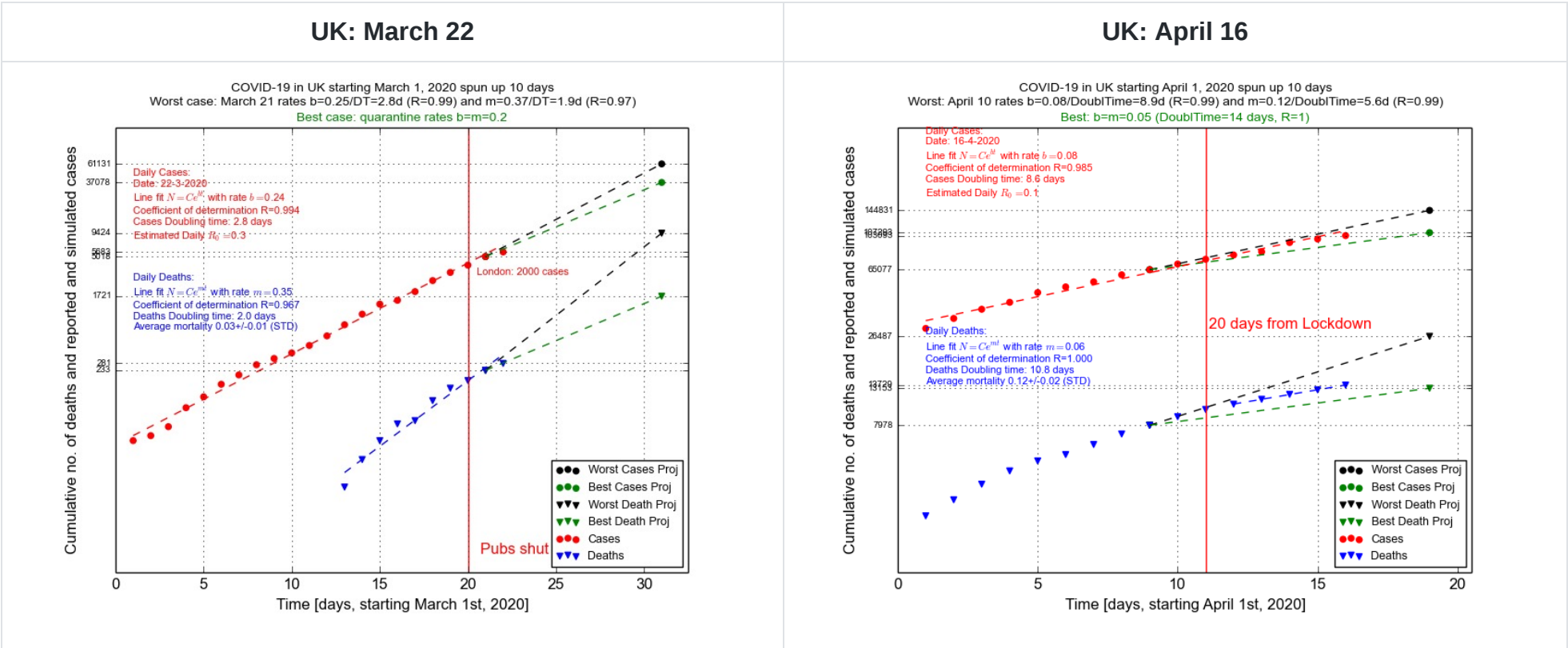


Figure 1 Comparison of reported number of cases (red dots) and reported in-hospital deaths for March 22 (left) and April 16 (right); a set of predictions highlighted in dotted green lines (best case) and dotted black lines (worst case) are shown.

Date	Reported cases	Reported Deaths	Doubling T Cases (days)	Doubling T Deaths (days)	R	Prct. Pop. (M=1%)
22/03	5683	281	2.8	2.0	3	0.7%
16/04	103093	13729	8.6	10.8	0.8	3.2%
16/04(S)	690000	34000	3.5	3.5	2.2	80%

Table 1 Comparison of different parameters on March 22 and on April 16 (actual numbers and simulated numbers; (S) for simulated); parameters are: reported number of cases, in-hospital number of deaths, doubling times (T) in days for reported cases and deaths, R (reproductive number for a 10 days infectious period, computed as $R = \exp(b) - 1$ where b is the to-date growth rate for reported infections, percentage of population (for a fixed fatality M=1%, full explanation in [report](#), numbers in [daily tables](#)); simulated numbers for 16/04(S) assume no lockdown and a constant exponential growth rate for cases and deaths at 0.2 day⁻¹ (daily growth) equivalent to a multiplying factor of $\exp(0.2 \times 24)$ equal to 121.5 for 24 days, from March 22 to April 16. The constant growth rate 0.2 day⁻¹ is the most plausible rate for the UK in-hospital counted infections before lockdown and is reflected in the [continuation of Figure 1\(left\)](#) to March 31, as the growth rate for deaths between March 21 and March 31 when recorded deaths were increasing at a non-lockdown pace, with infections causing them being offset in time by 10-20 days.