

Modelling the COVID-19 epidemic; the Reproduction Number and other indicators

Current estimate of R_t (new positive tests): 0.95-1.15 (7 days previous 1.05-1.20)

Current estimate of R_t (hospital admissions): 0.90 – 1.10 (7 days previous 0.95-1.10)

Average number of new positive tests per day last 7 days: 1287 (7 days previous 1268)

7 day incidence based on new positive tests: 474 / 100k (7 days previous 467)

14 day incidence based on new positive tests: 936 / 100k (7 days previous 881)

7 day average of total positive individuals (pillar 1/2): 7.6% (7 days previous 7.4%)

7 day daily average tests completed: 17,410 (7 days previous 17,797)

Number of new positive tests in over 60s in last 7 days: 995 (8 days previous 961)

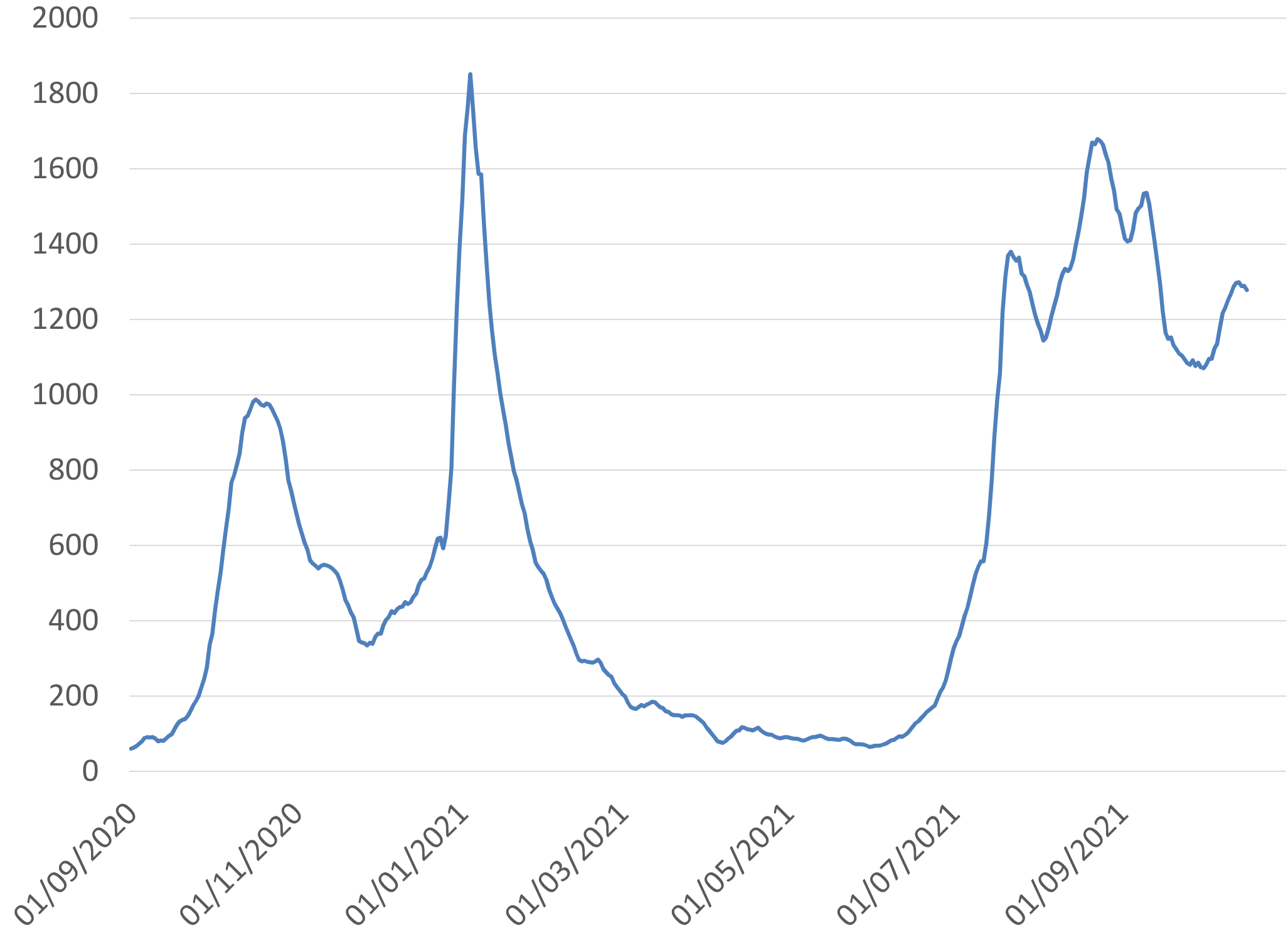
Proportion of total positive tests occurring in over 60s: 11.1% (9 days previous 10.8%)

COVID-19 +ve hospital admission in last week: 186 (7 days previous 198)

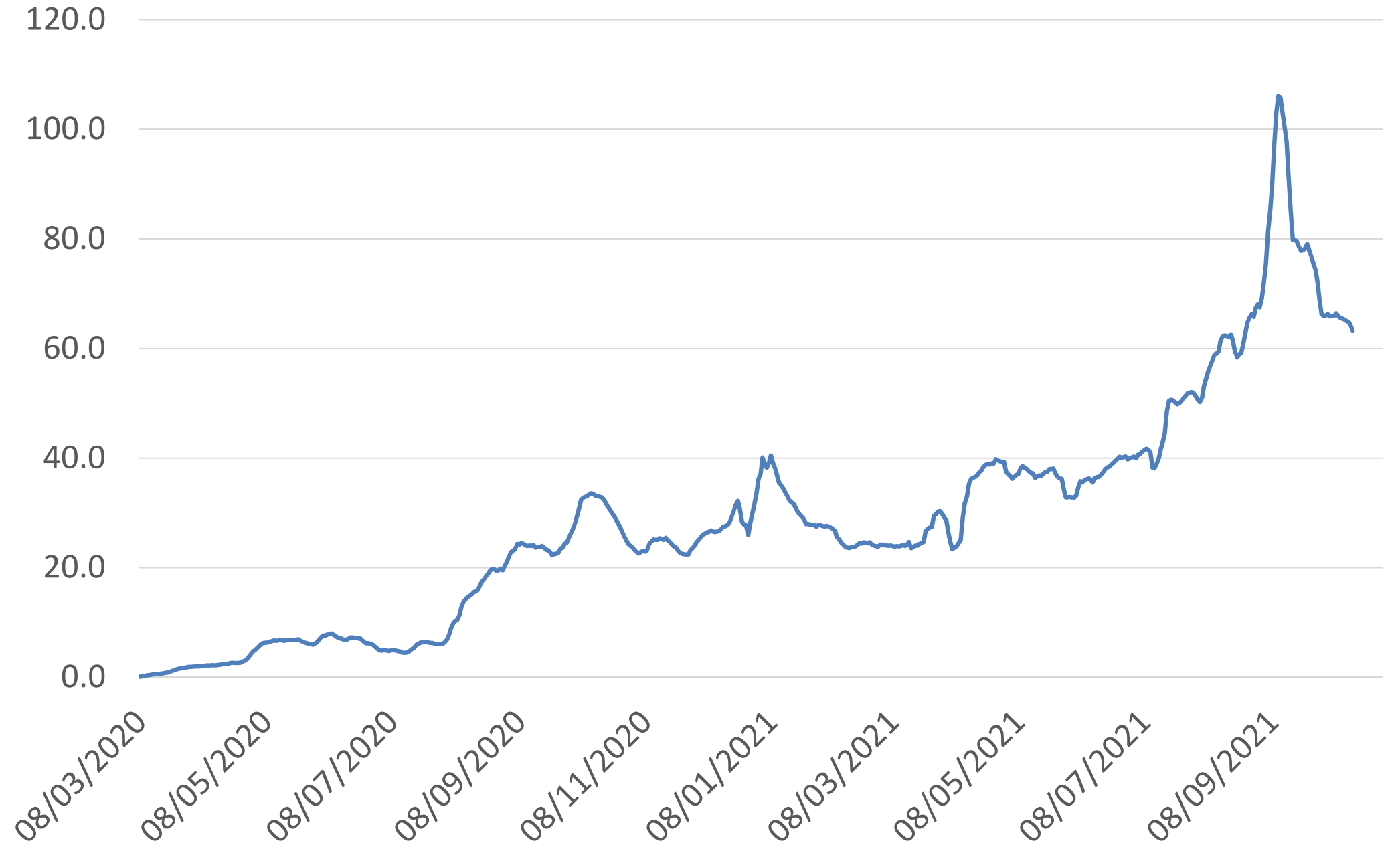
Number of COVID-19 inpatients: 325 (7 days previous 331)

COVID-19 +ve ICU patients: 34 (7 days previous 35)

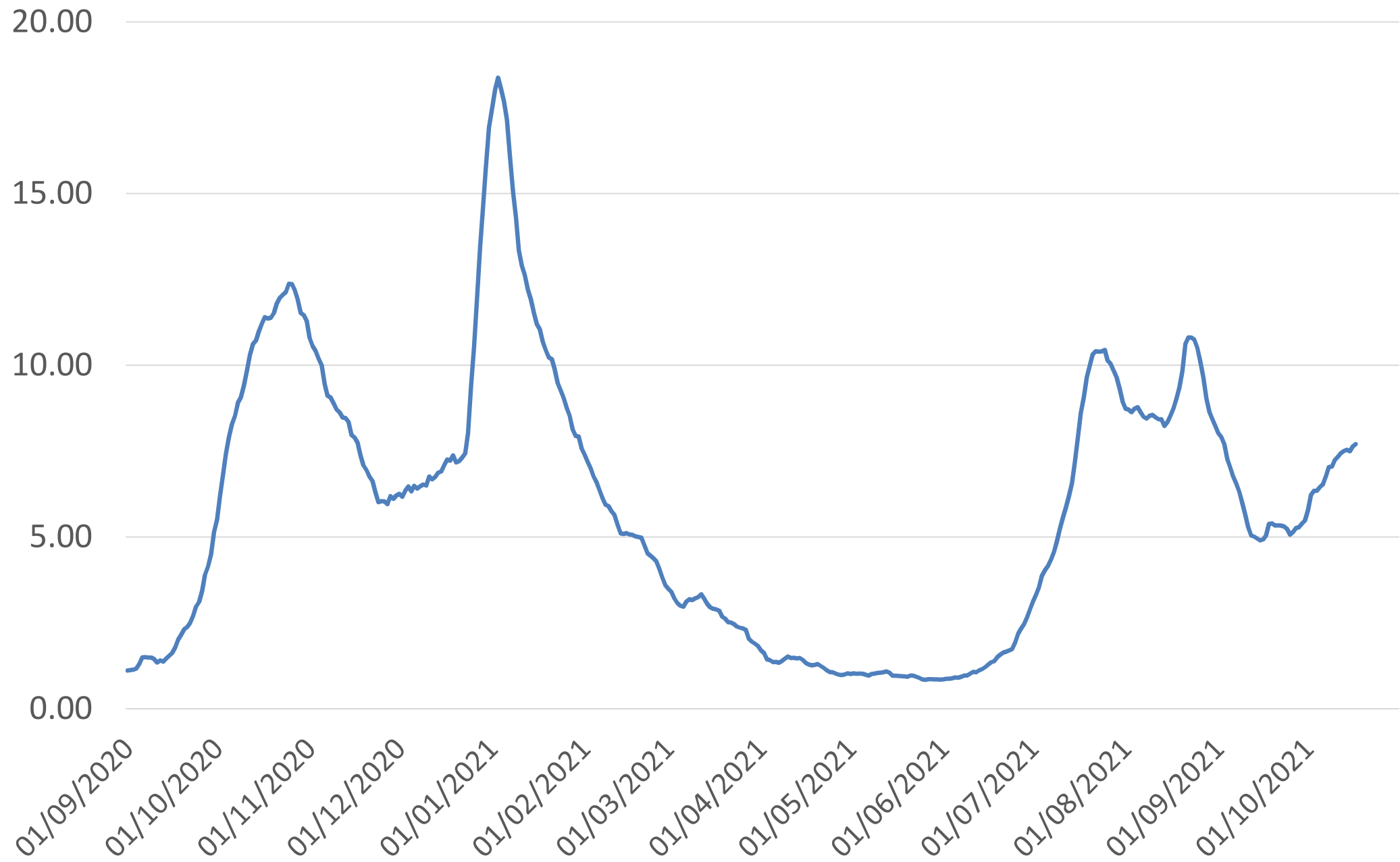
7 day rolling average new cases/day



7 day rolling average tests per 1000 population

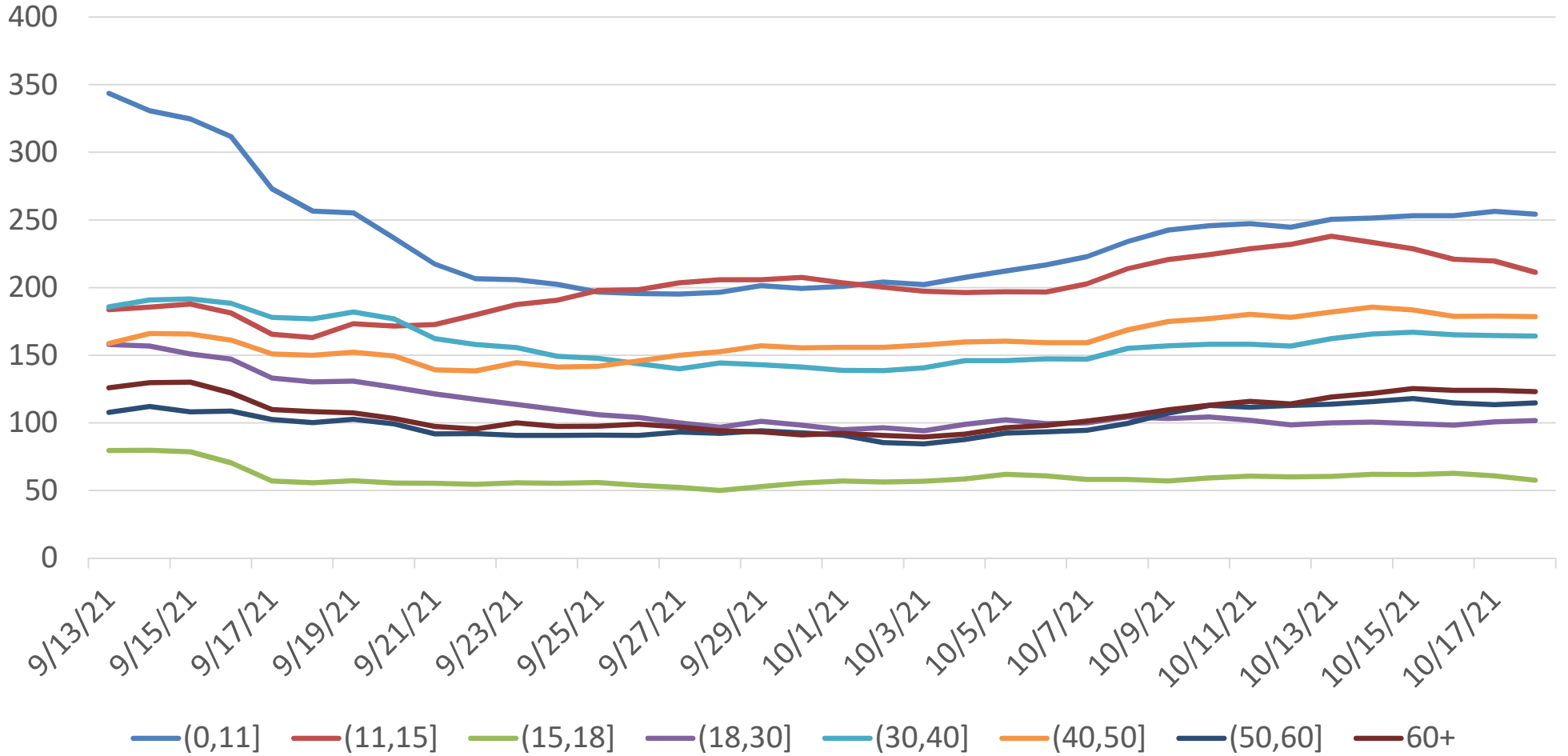


7 day rolling average test positivity (%)



Daily Cases by Age Band

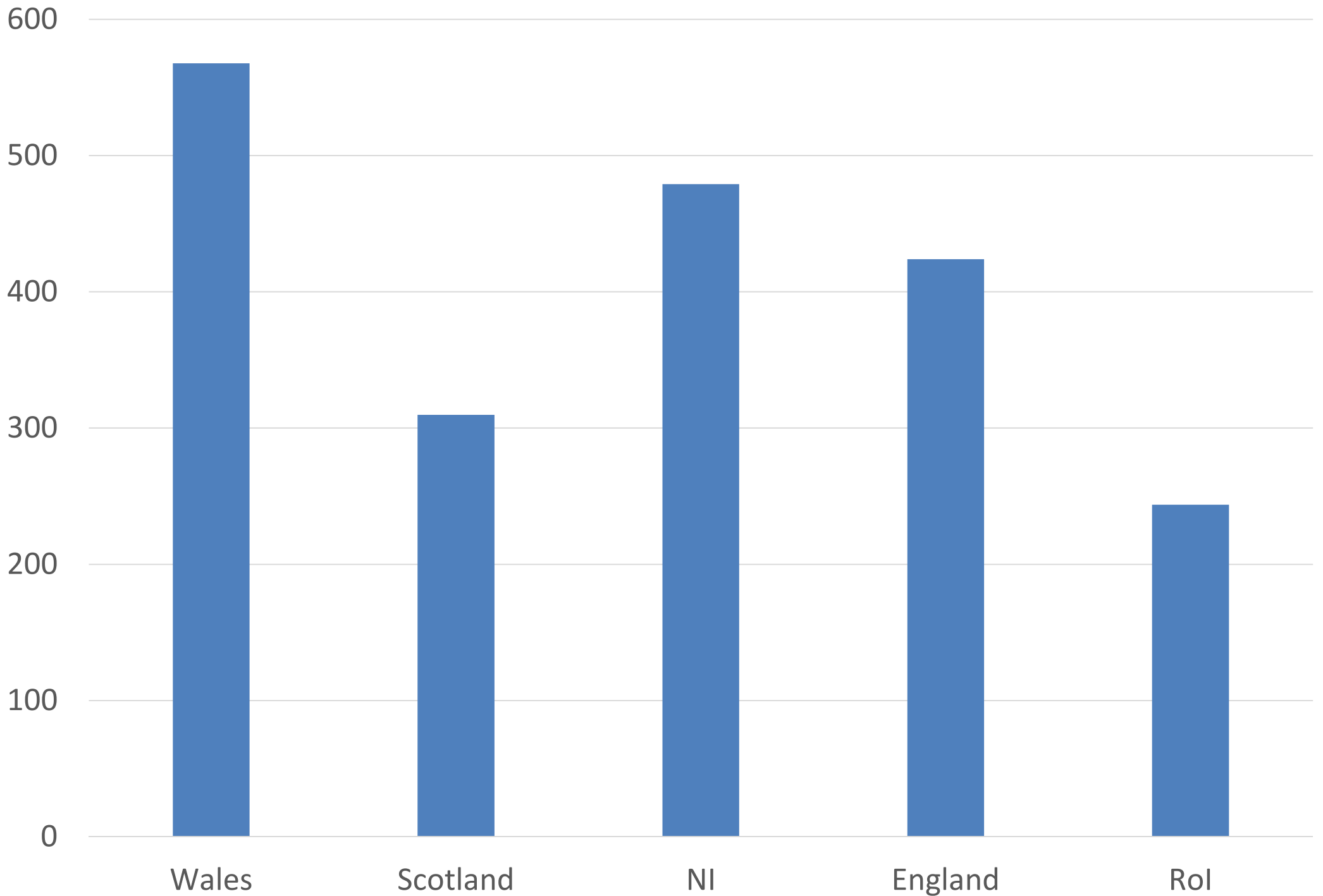
(7 days moving average)



7-day total cases / 100,000 population by LGD

11th Oct	12th Oct	13th Oct	14th Oct	15th Oct	16th Oct	17th Oct	18th Oct	LGD
486	516	525	520	530	535	537	546	Antrim and Newtownabbey
419	432	450	457	476	463	479	477	Ards and North Down
521	551	554	562	567	575	566	586	Armagh City, Banbridge and Craigavon
436	445	444	457	463	463	466	461	Belfast
459	461	456	465	468	470	485	492	Causeway Coast and Glens
395	382	391	389	376	366	341	347	Derry City and Strabane
546	524	545	555	522	497	491	492	Fermanagh and Omagh
460	472	487	485	496	500	501	481	Lisburn and Castlereagh
410	426	417	422	420	419	429	416	Mid and East Antrim
503	479	471	442	430	422	395	345	Mid Ulster
470	487	463	468	460	453	434	425	Newry, Mourne and Down

7 day cumulative total cases/100k population

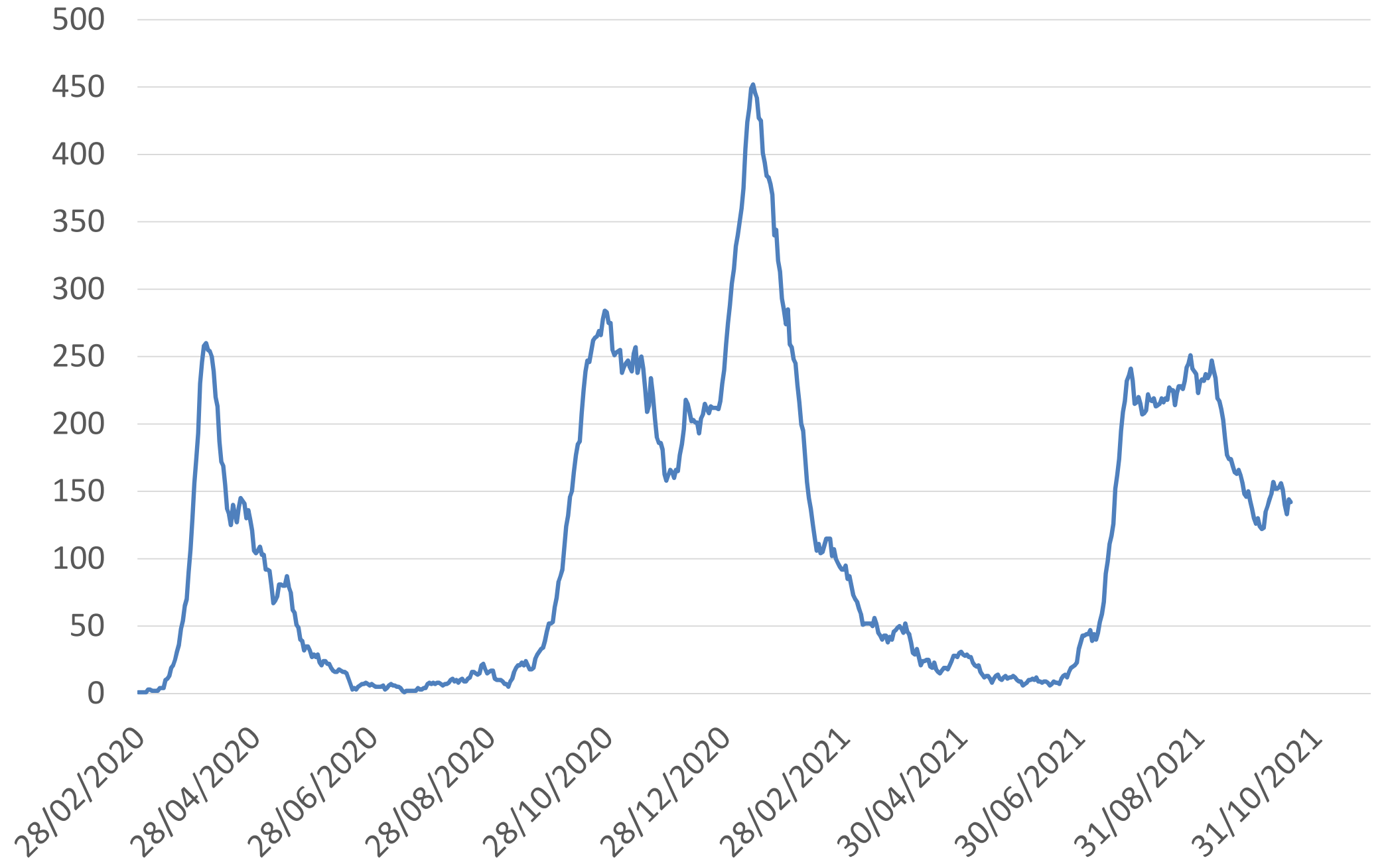


ONS COVID-19 Infection Survey

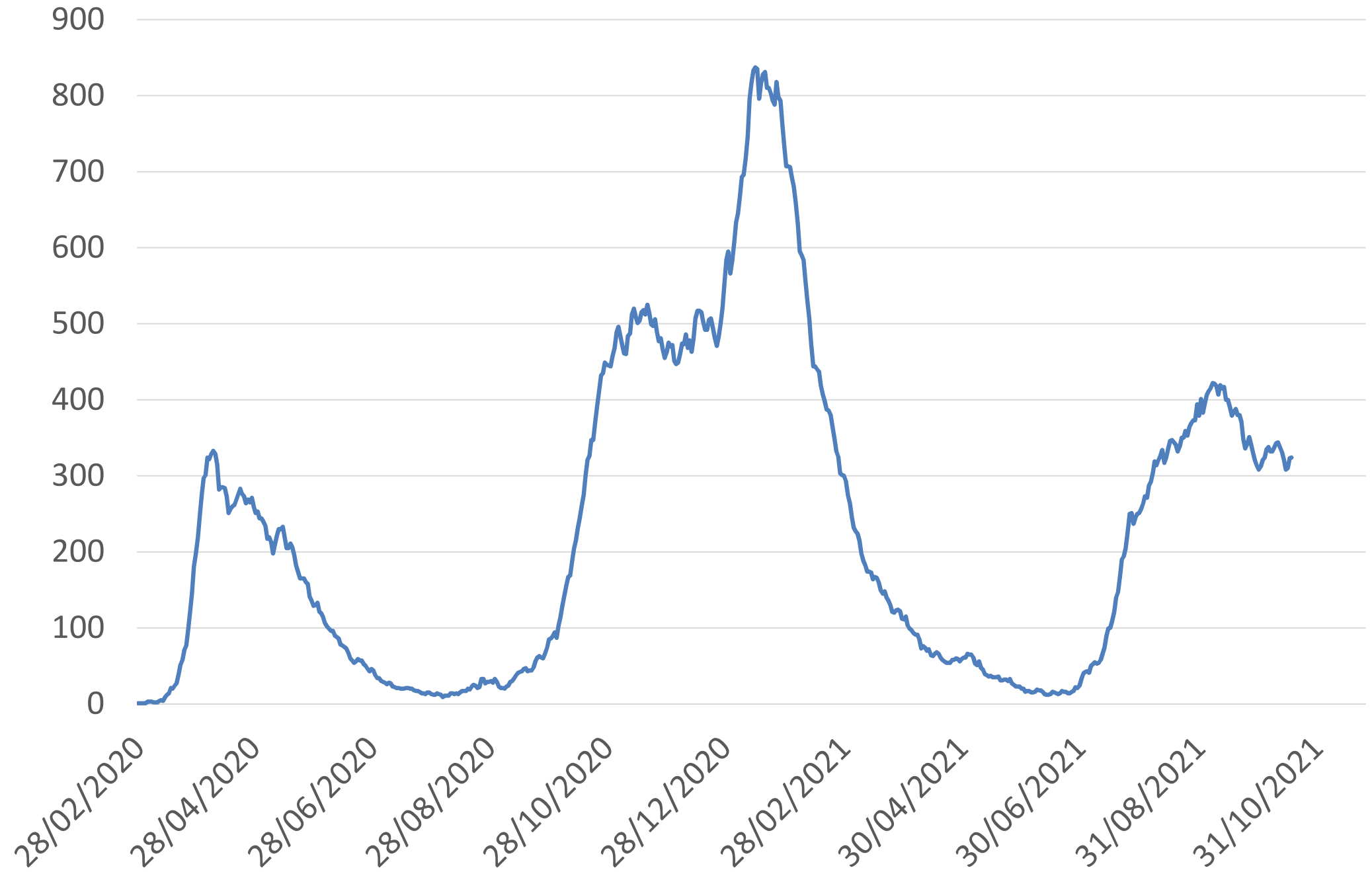
Week up to 9th Oct

Country	Estimated average % of the population that had COVID-19	95% credible interval		Estimated average number of people testing positive for COVID-19	95% credible interval		Estimated average ratio of the population that had COVID-19	95% credible interval	
		Lower	Upper		Lower	Upper		Lower	Upper
England	1.63	1.54	1.73	890,000	839,700	941,300	1 in 60	1 in 65	1 in 60
Wales	2.18	1.79	2.61	66,200	54,400	79,300	1 in 45	1 in 55	1 in 40
Northern Ireland	0.82	0.53	1.18	15,100	9,700	21,700	1 in 120	1 in 190	1 in 85
Scotland	1.26	1.02	1.54	66,600	53,900	80,900	1 in 80	1 in 100	1 in 65

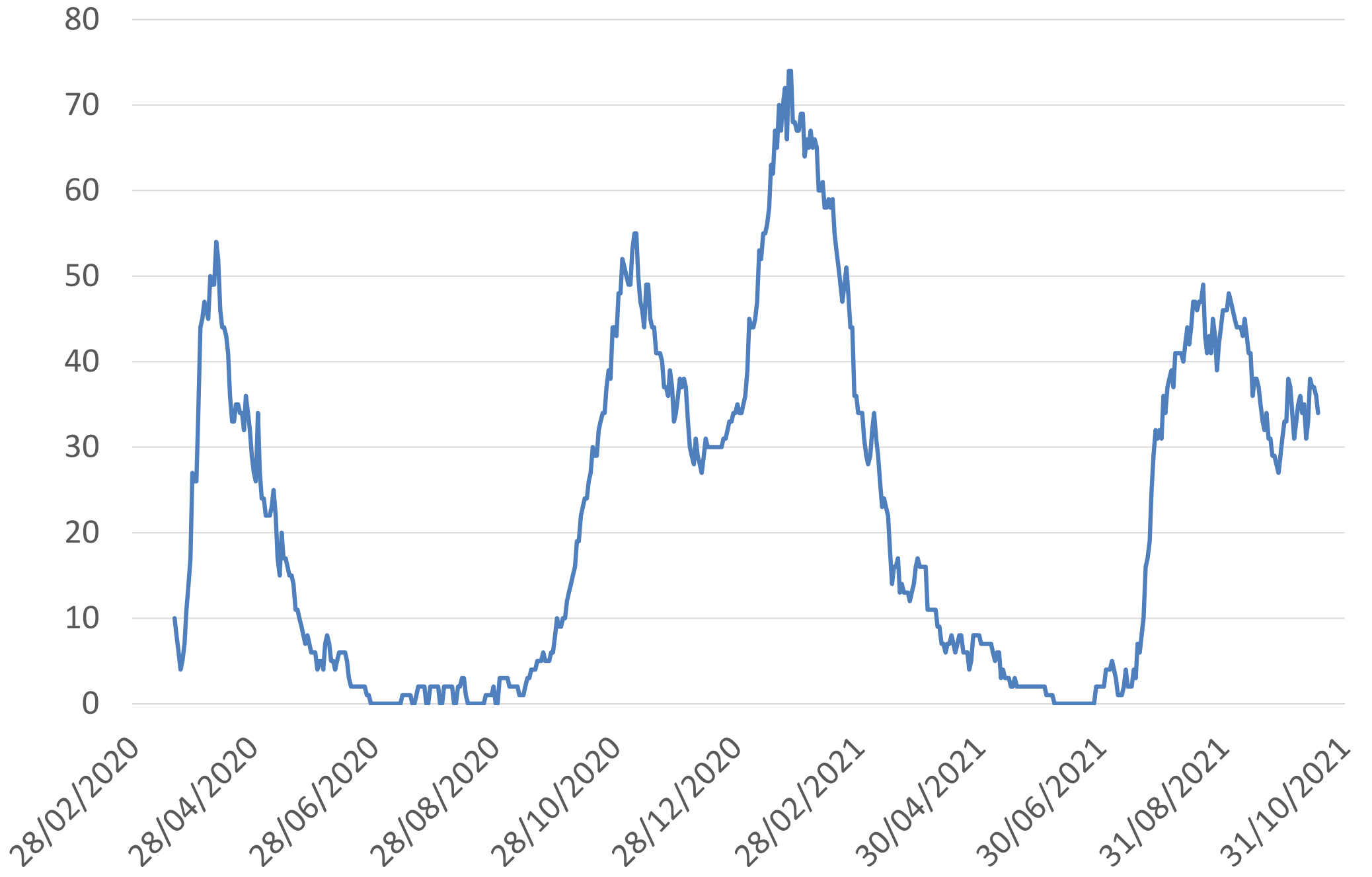
7 day rolling total first COVID +ve hospital admission



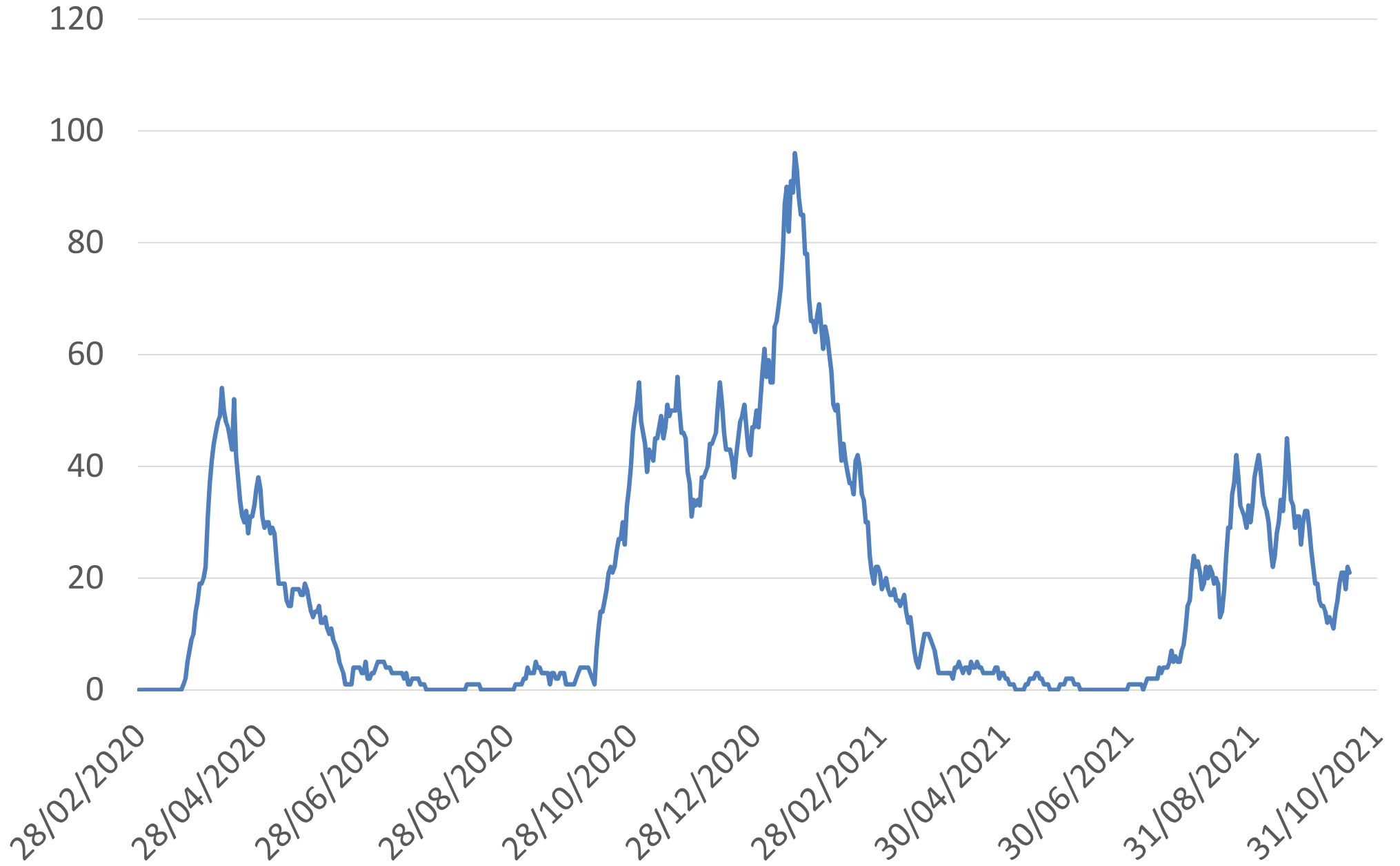
COVID +ve total inpatients



COVID +ve patients in ICU



Covid-19 7 day total hospital deaths



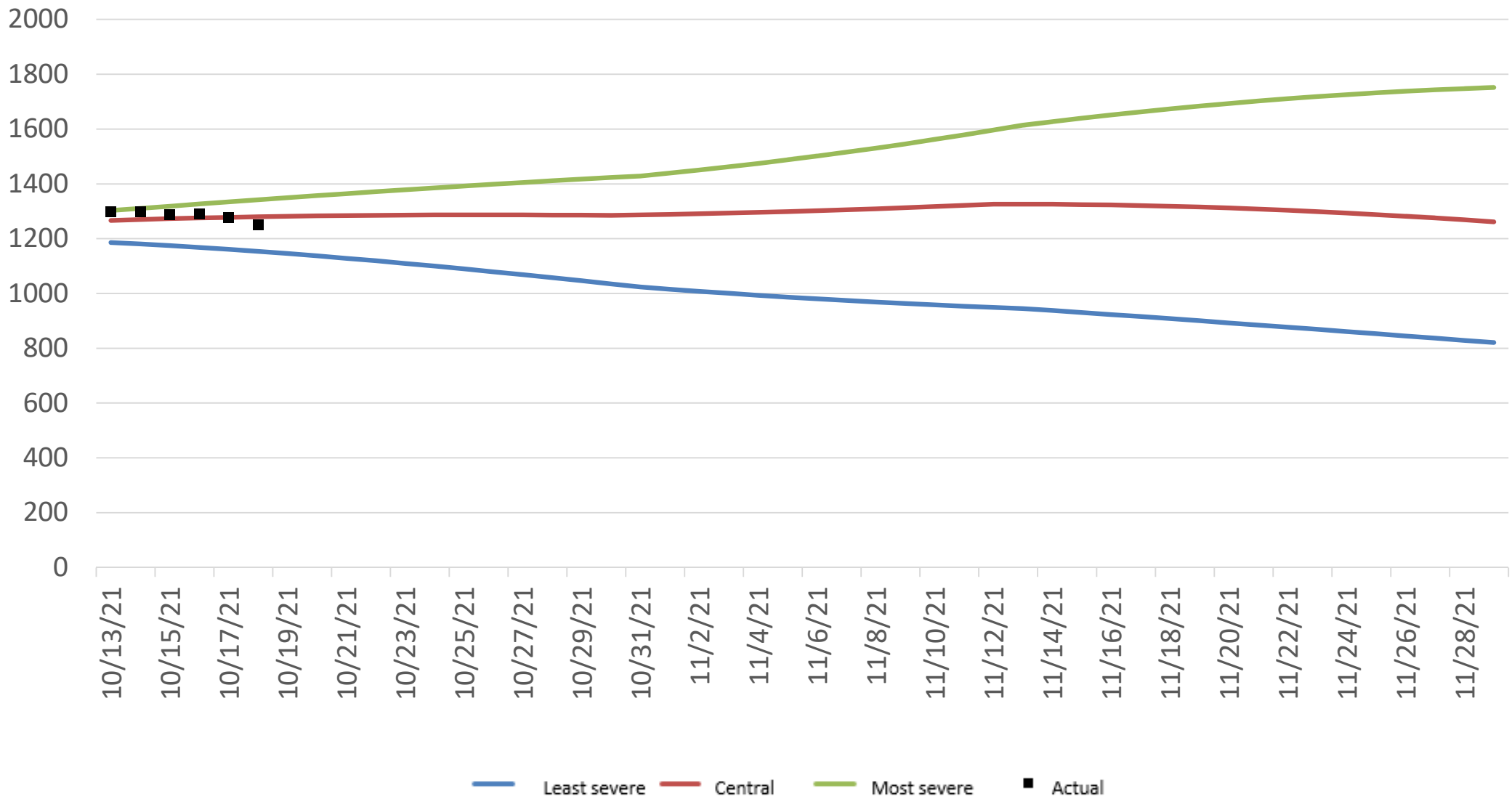
Changes in Assumptions

- Central estimates used with Increase in baseline $R(t)$ from schools opening reduced from 0.5 to 0.2 (more inline with most recent observed data)
- Waning Immunity post 6 months after 2nd dose:-
 - Reduction in transmission falls to 30%/35%/40% (L/M/H)
 - Reduction in risk of hospitalisation falls:-
 - ❖ AZ[40%/45%/50%] (L/M/H)
 - ❖ PH[65%/70%/75%] (L/M/H)
- Boosters – current trends applied
- Relaxations of 31/10/2021 assumes 10% increase in contact patterns [1]
- Seasonality adjusted
- Impact from Halloween school holidays excluded

[1] Understanding the effectiveness of government interventions against the resurgence of COVID-19 in Europe, Sharma et al

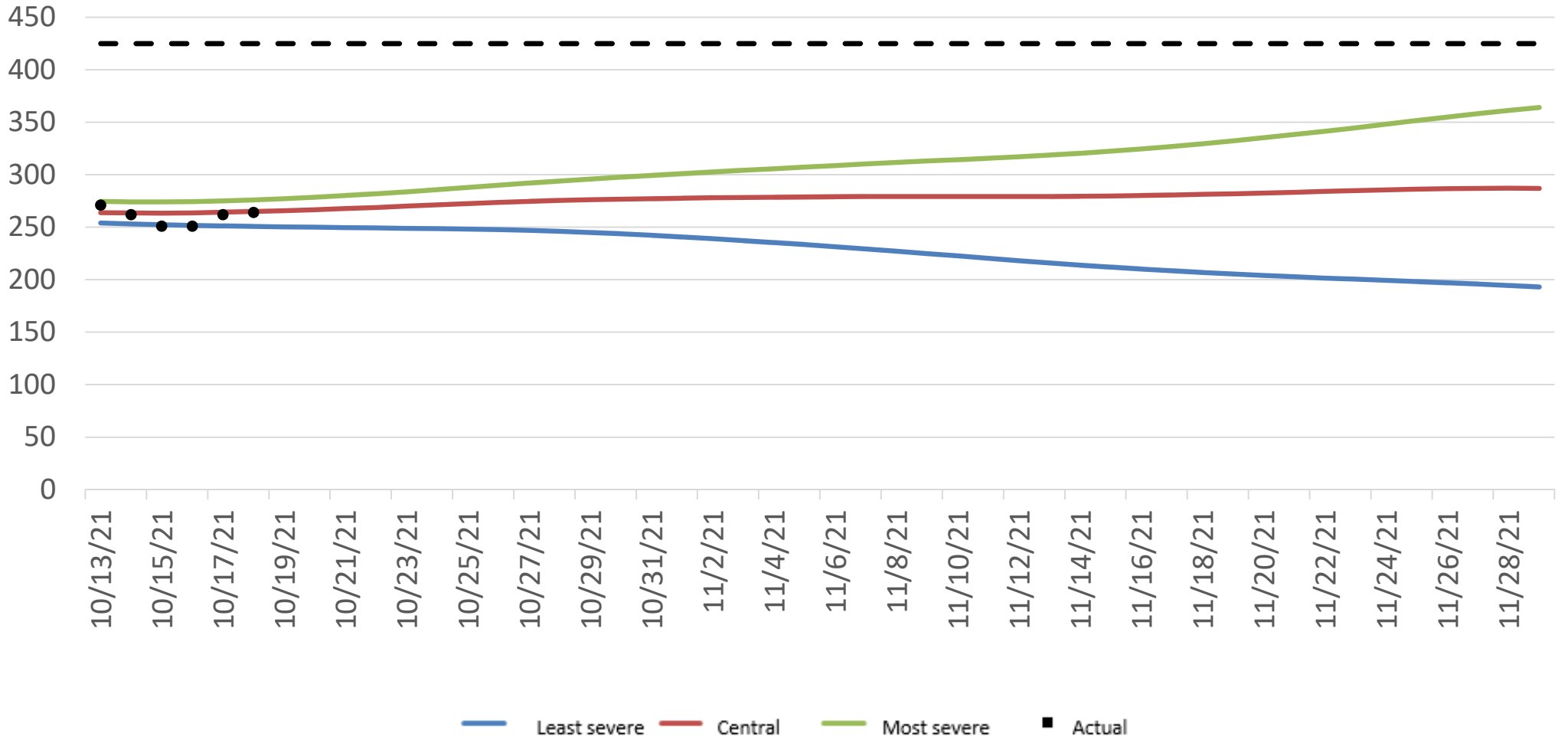
Daily Cases: Scenario Projection - Seven day moving average

(This is not a prediction)



Community Acquired Inpatients: Scenario Projection

(This is not a prediction)



• Previous 3 days 'Actual' data likely to rise due to reporting lags