Isle of Man Government

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COVID-19 Weekly Surveillance Report

28th October 2021

Public Health Directorate

Introduction

- This report is a summary of indicators which are used to understand the status of the current wave of COVID-19 on the Isle of Man.
- This report will be published each Thursday for data up to and including the previous Sunday e.g. 12th August is for data up to 8th August.
- Time periods, unless otherwise specified, will start from the 28th June which is taken to be the beginning of this current wave.
- Confirmed cases are where a PCR test has returned a positive result.
- The report has been compiled by the Public Health Intelligence Team using data from Manx Care and the Civil Registry.

Wave Surveillance

- Currently the Isle of Man is experiencing a third wave of widespread community transmission, the impact of which is significantly mitigated by the successful roll out of the vaccination programme and is being managed without recourse to statutory measures such as ‘lock down’ or non-pharmaceutical interventions. Consideration of NPIs (hands, face, space, fresh air) is encouraged for all.
- A fourth wave is predicted for the UK during Autumn/Winter 2021-22, although the timing of this is uncertain. It is reasonable to expect a similar wave here although some modelling estimates indicate that there may not be a further significant rise in cases until later in 2022.
- Following border relaxation, rates on island and patterns of incidence have, as expected, aligned with the pattern seen in the UK and this is clearly shown in the maps in this week’s report.
- Over the past week, there is an indication that overall numbers of new cases may be levelling off. This is driven by the continued fall in new infections in children aged 10 – 14 years and a fall this week in new infections in the 15-19 age group. There has been a rise in cases in the 0-4 and some younger adult age groups, but from a lower base and with a shallower trajectory than we previously saw for the 10-14 age group.

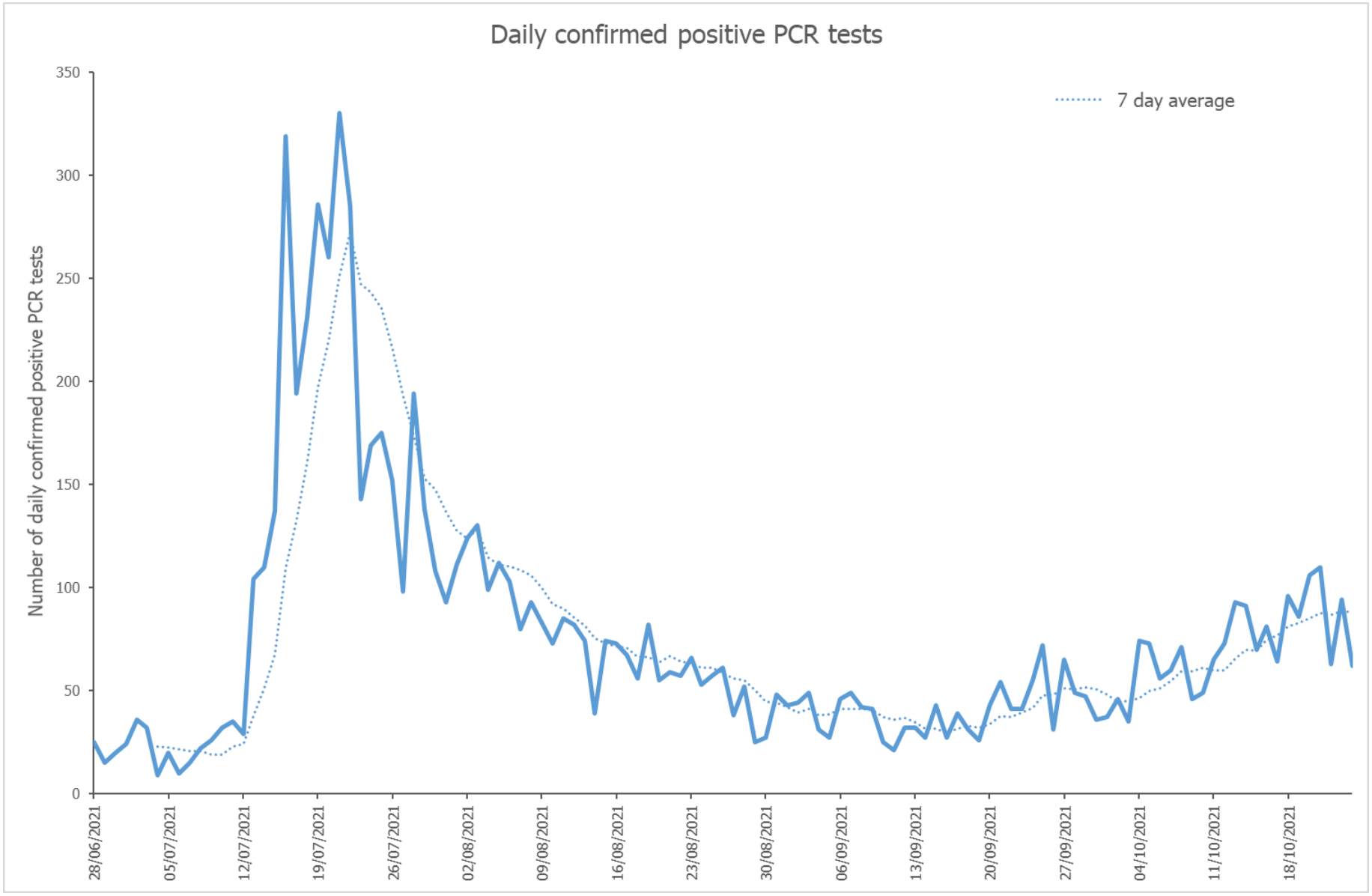
Wave Surveillance

- Autumn/Winter will likely see significant changes in mixing patterns (and hence COVID-19 and other respiratory pathogen transmission) due to people spending more time indoors with lower levels of fresh air/ventilation. Waning immunity from vaccination or previous infection will also impact on rates of spread of COVID-19 over coming months and we have not yet seen the impact of the booster programme and extension of vaccination into younger age groups.
- Winter pressures on health and care may be significantly increased this year if a further wave of COVID-19 coincides with increased incidence of other seasonal respiratory infections (flu, RSV, etc) which were largely suppressed last year, including on Island, due to restrictions on mixing in place across.
- The Island's travel/border restrictions changed as of 00:01 on Thursday 16th September. As a result, we have seen a decrease in PCR tests through the UK arrivals pathway due to the easing of requirements for island residents to be tested on return to the island.

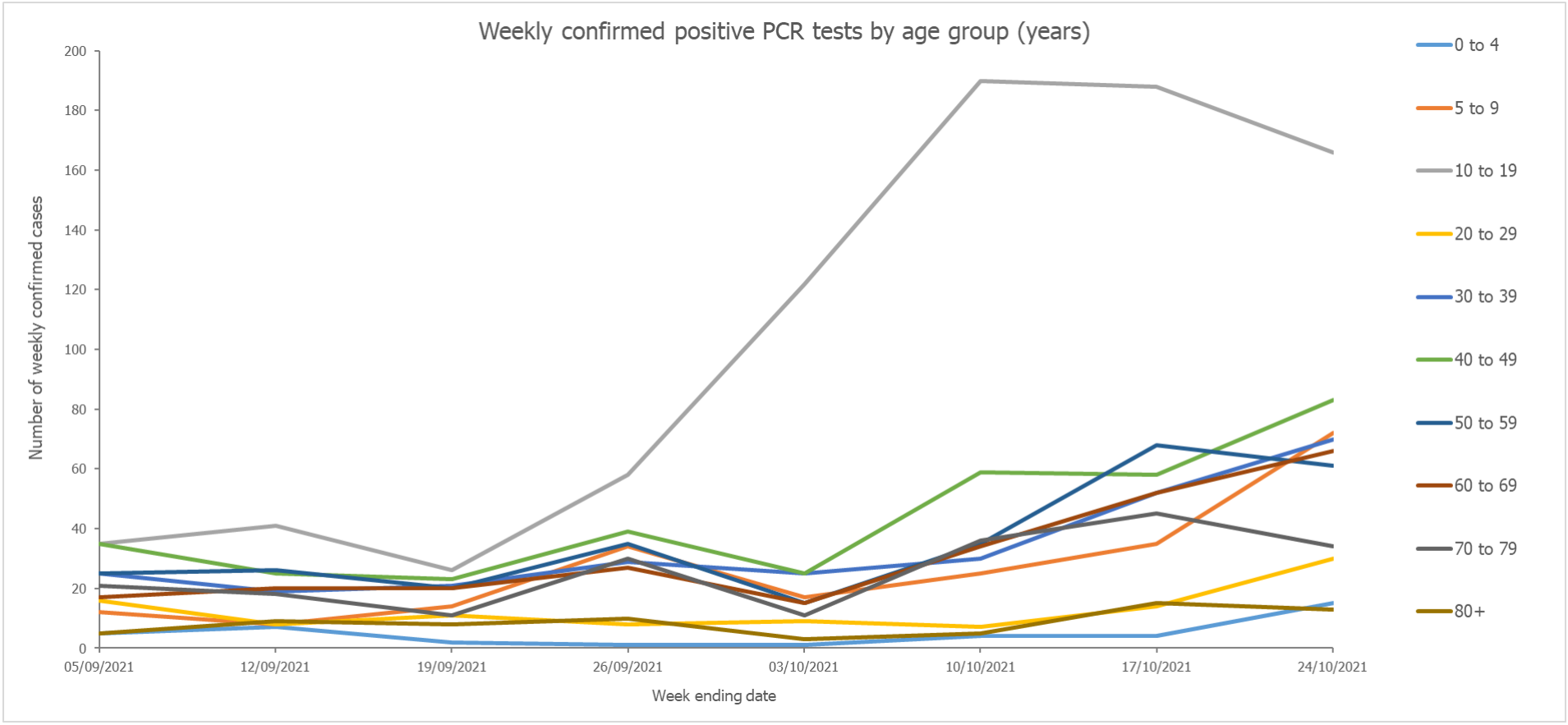
Key Points

- The current 7-day average for confirmed positive cases is around 88.
- The current overall trend of confirmed cases is levelling off.
- Most recent 7-day daily average test positivity rate is 33.4%.
- The percentage of PCR tests from the LFD pathway is slightly increasing, with percentage of UK Arrival tests slightly increasing over the last two weeks.
- 90% of positive PCR tests are from the LFD pathway.
- Over the last 7 days most confirmed positive cases have been in the 10 - 14 age group, all of these cases are unvaccinated.
- The snapshot census of the Hospital shows 13 patients currently admitted with a COVID positive status.
- Daily and Weekly deaths continue to show a level trend overall.

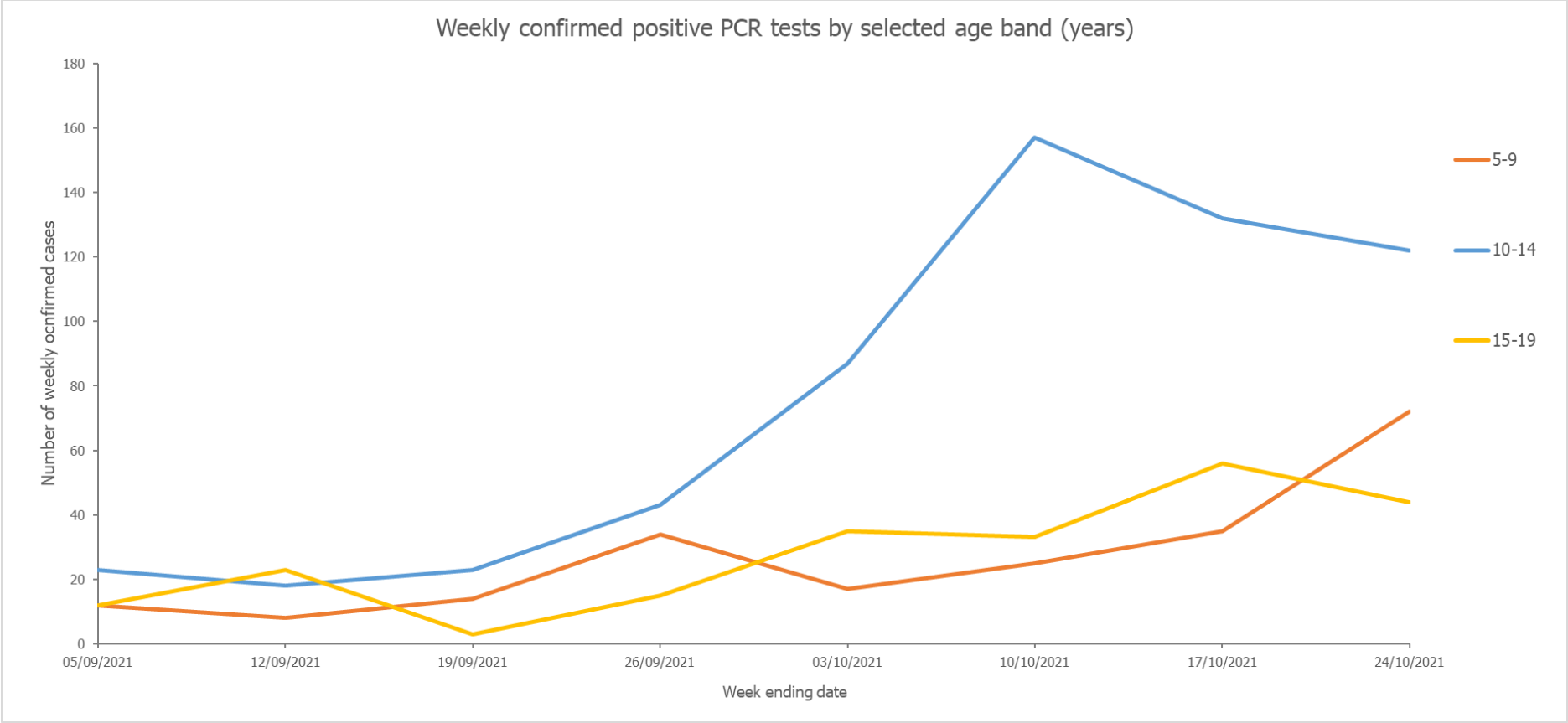
Daily Positive Cases Update



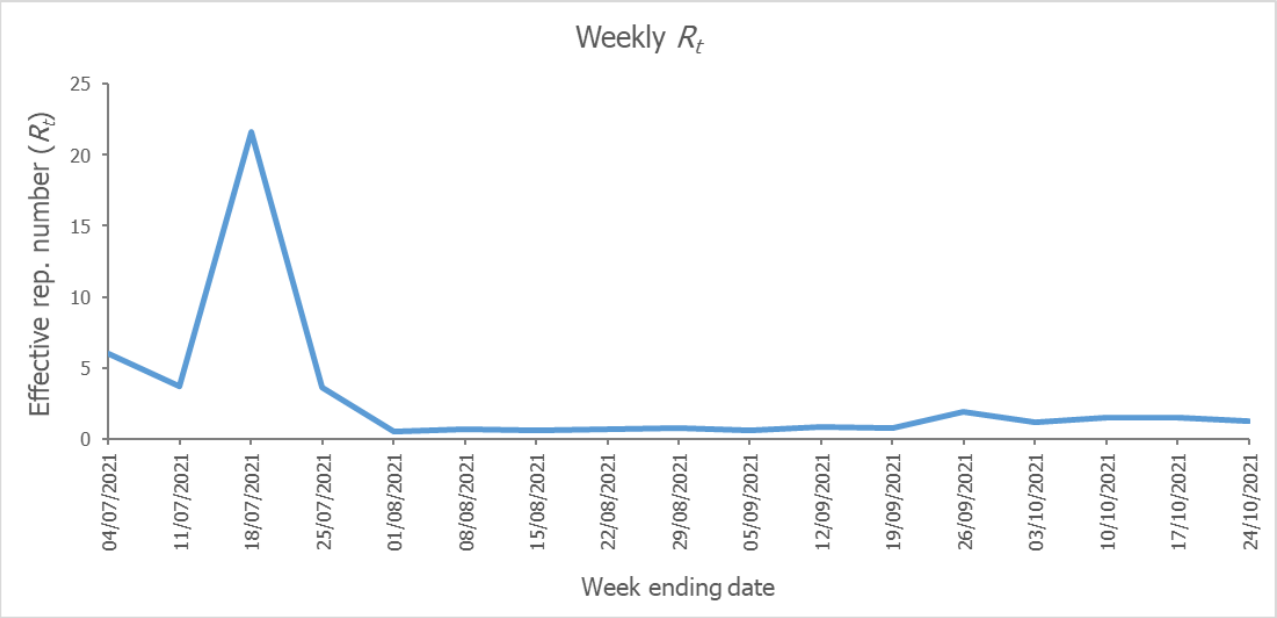
Age Group Analysis



Selected Age Group Analysis



Effective Reproduction Number (R_t)



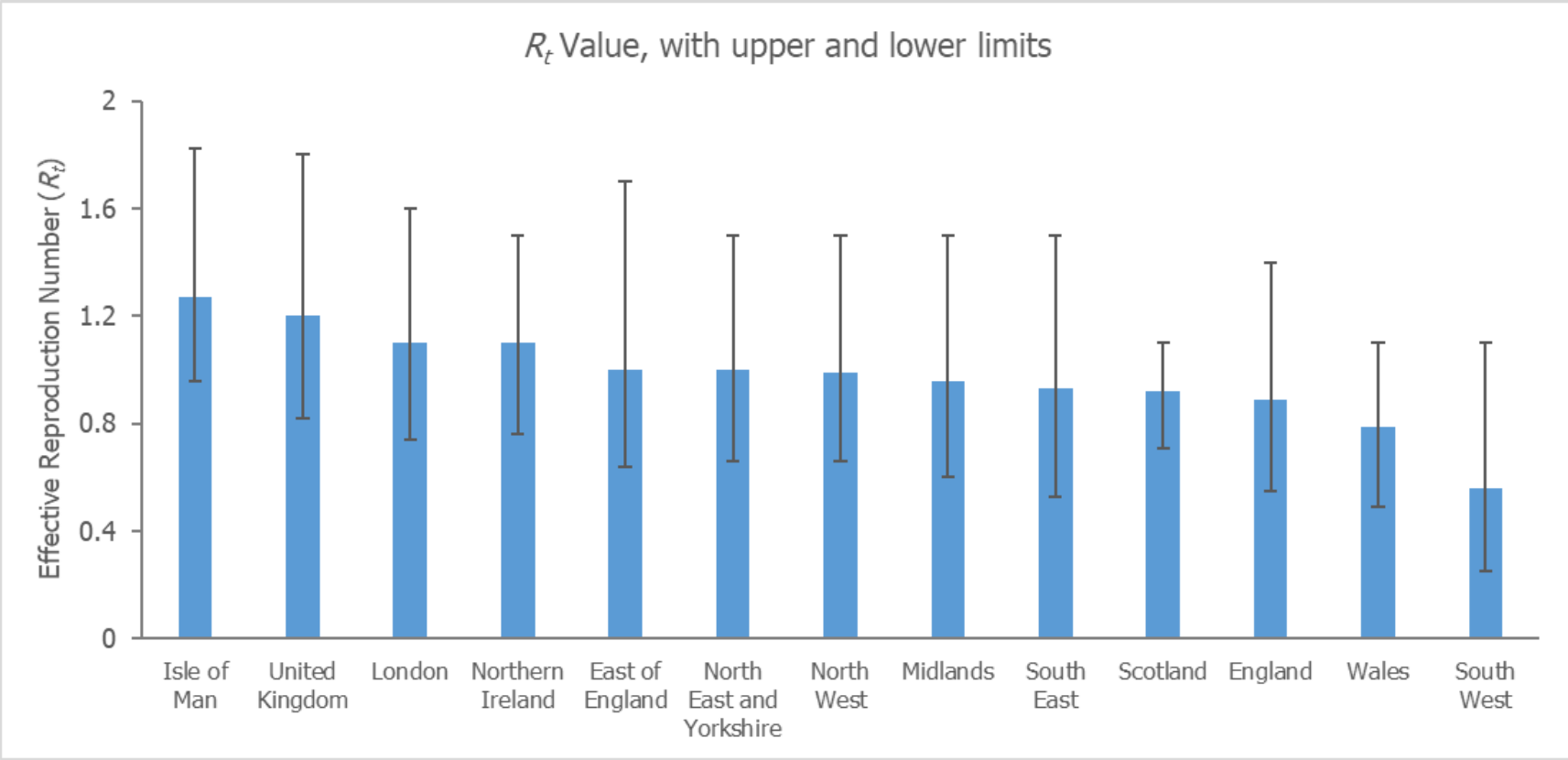
Latest 7 day
$R_t = 1.27$

- The Effective Reproduction Number (R_t) represents the number of secondary infections generated by each case over time 't' (over a week as presented here) and can be dramatically modified by applying effective interventions.
- When $R_t > 1$ there are more new infections than recoveries, thus the number of infected individuals in the population is increasing, while for $R_t < 1$ the number of infected individuals must be decreasing for the opposite reason.
- The calculation of R_t is as follows[1]:

$$R_t\,(t_i) = \frac{\text{New Infections}}{\text{New Recoveries} + \text{New Deaths}}$$

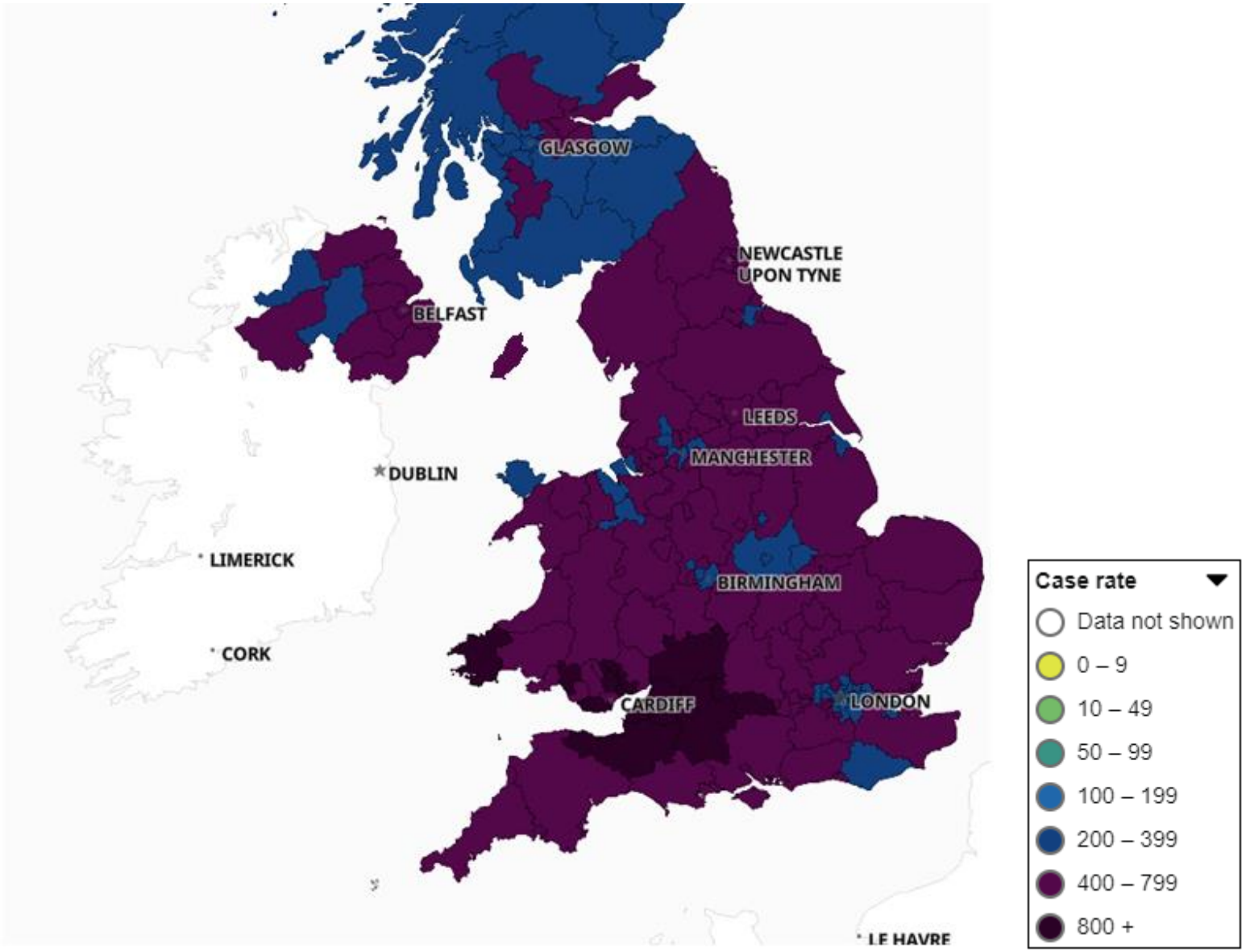
- The UK uses a more complex method of estimating R_t, which we are not able to replicate here. The use of this simplified methodology limits the robustness of comparing our R_t value with UK estimates, however it provides a useful comparison between different time periods on Island. New Recoveries is calculated using the presumed 10 day recovery period from positive PCR test result.
- A full table of daily R_t values for the current wave is available in Appendix 1.

R_t Area Comparison



- R_t values shown are 7 day R_t values for week ending 24/10/2021

7-day Notification Rate Area Comparison

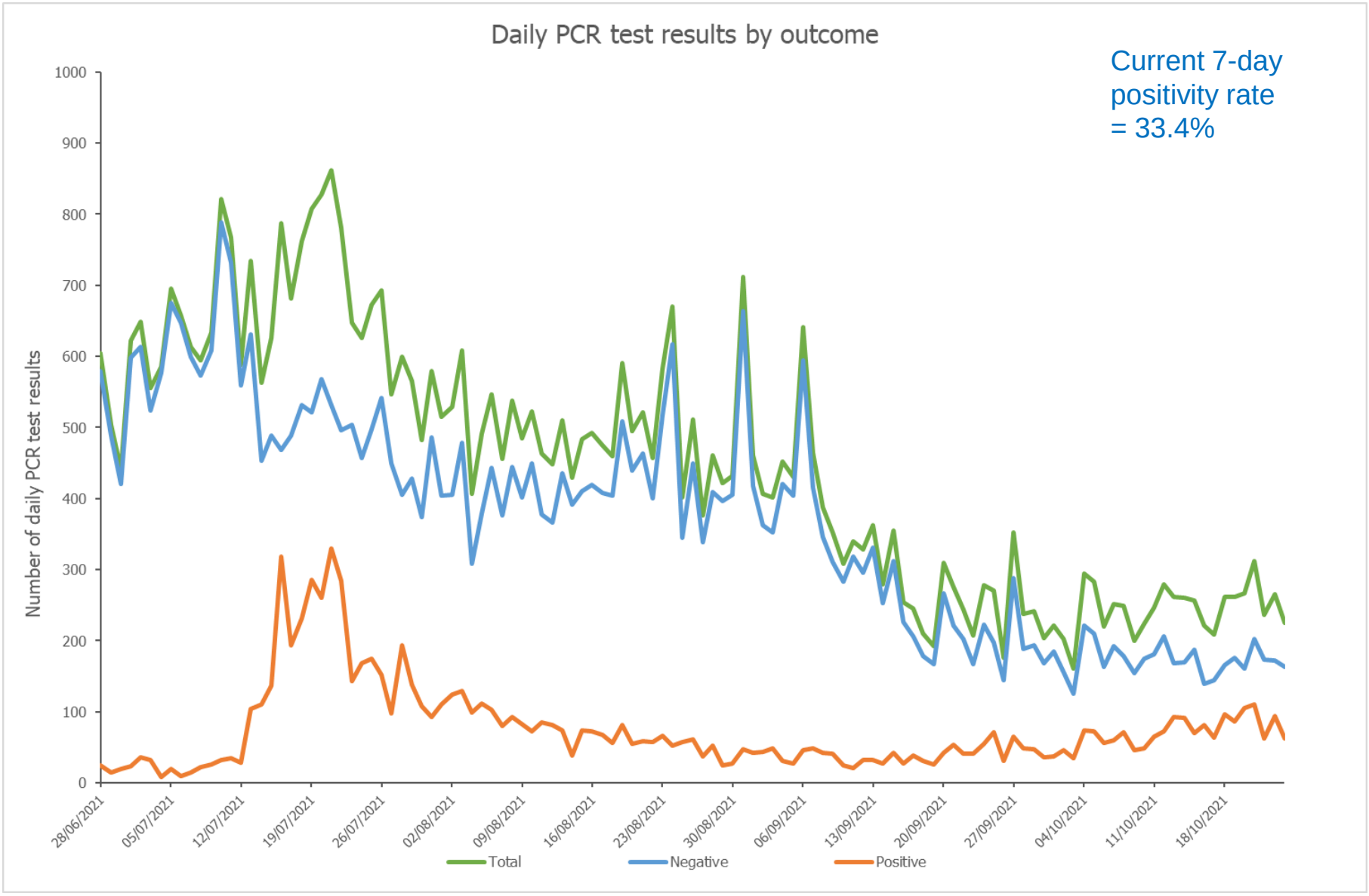


14-day Notification Rate Comparison

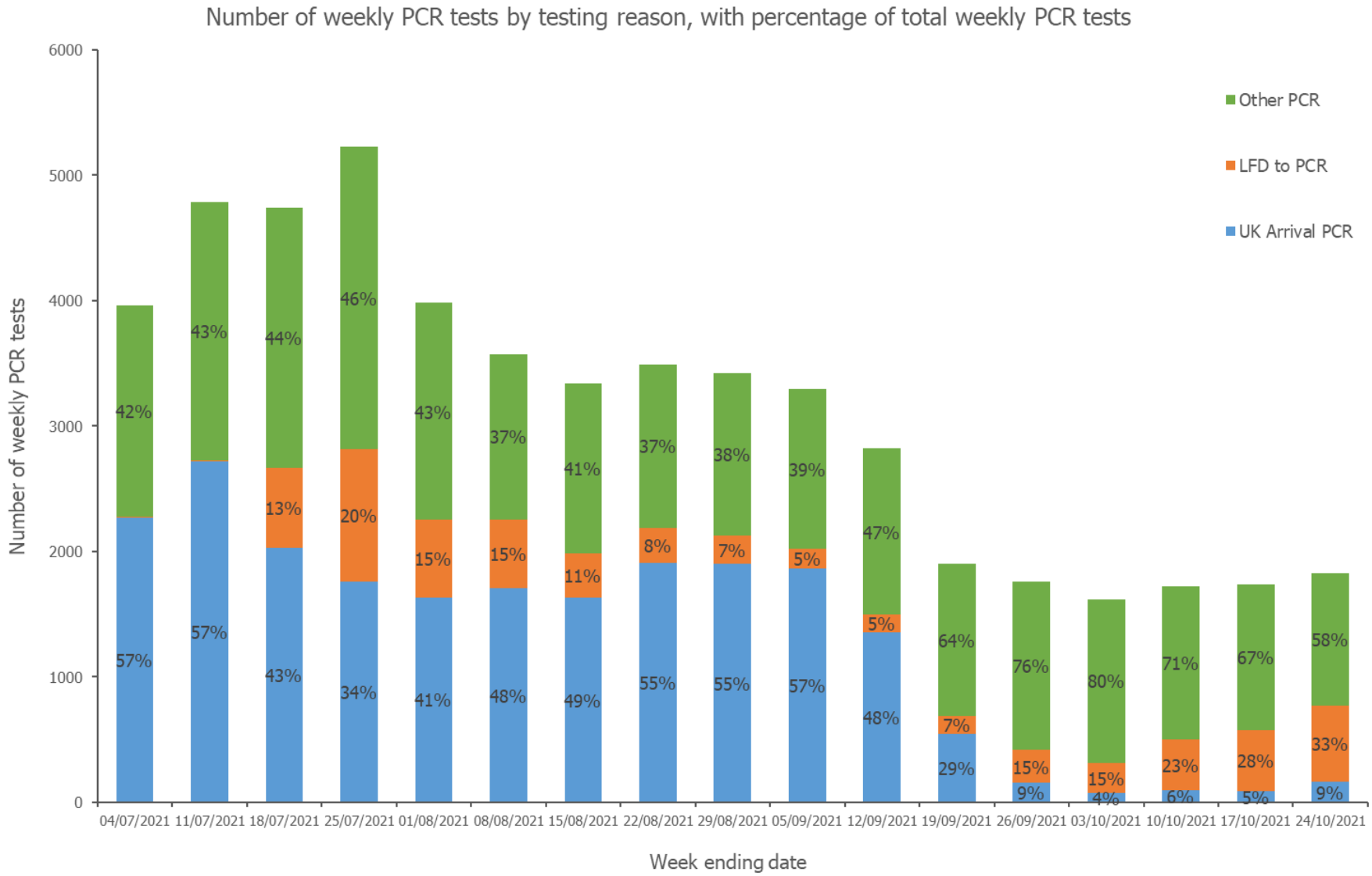
	Isle of Man			United Kingdom
Week ending date	14 day rate	Lower CI	Upper CI	14 day rate
12/09/2021	617.41	612.23	622.60	727.08
19/09/2021	565.67	561.04	570.30	663.56
26/09/2021	660.93	654.07	667.78	643.48
03/10/2021	766.77	760.65	772.89	691.94
10/10/2021	874.96	867.84	882.08	778.05
17/10/2021	1136.04	1128.80	1143.29	805.89
24/10/2021	1357.14	1348.52	1365.75	-

- The 14-day rate is calculated by totalling new confirmed cases over the past 14-day period, dividing this number by the total population, and then multiplying by 100,000 to enable area comparisons.
- Since the week ending 10/10/21, we have had significantly higher 14 day notification rates than the UK

PCR Testing update

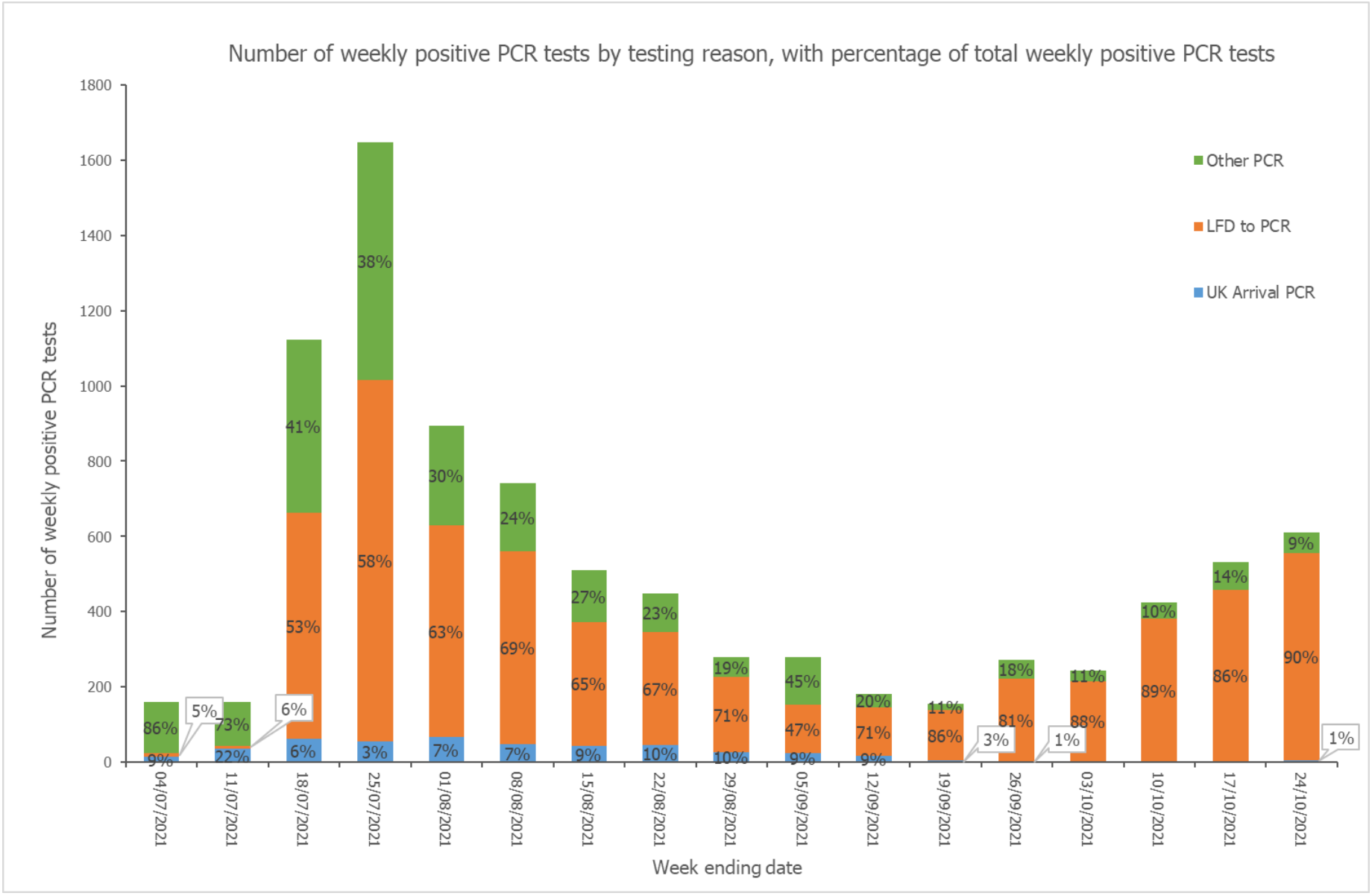


PCR Tests by Pathway



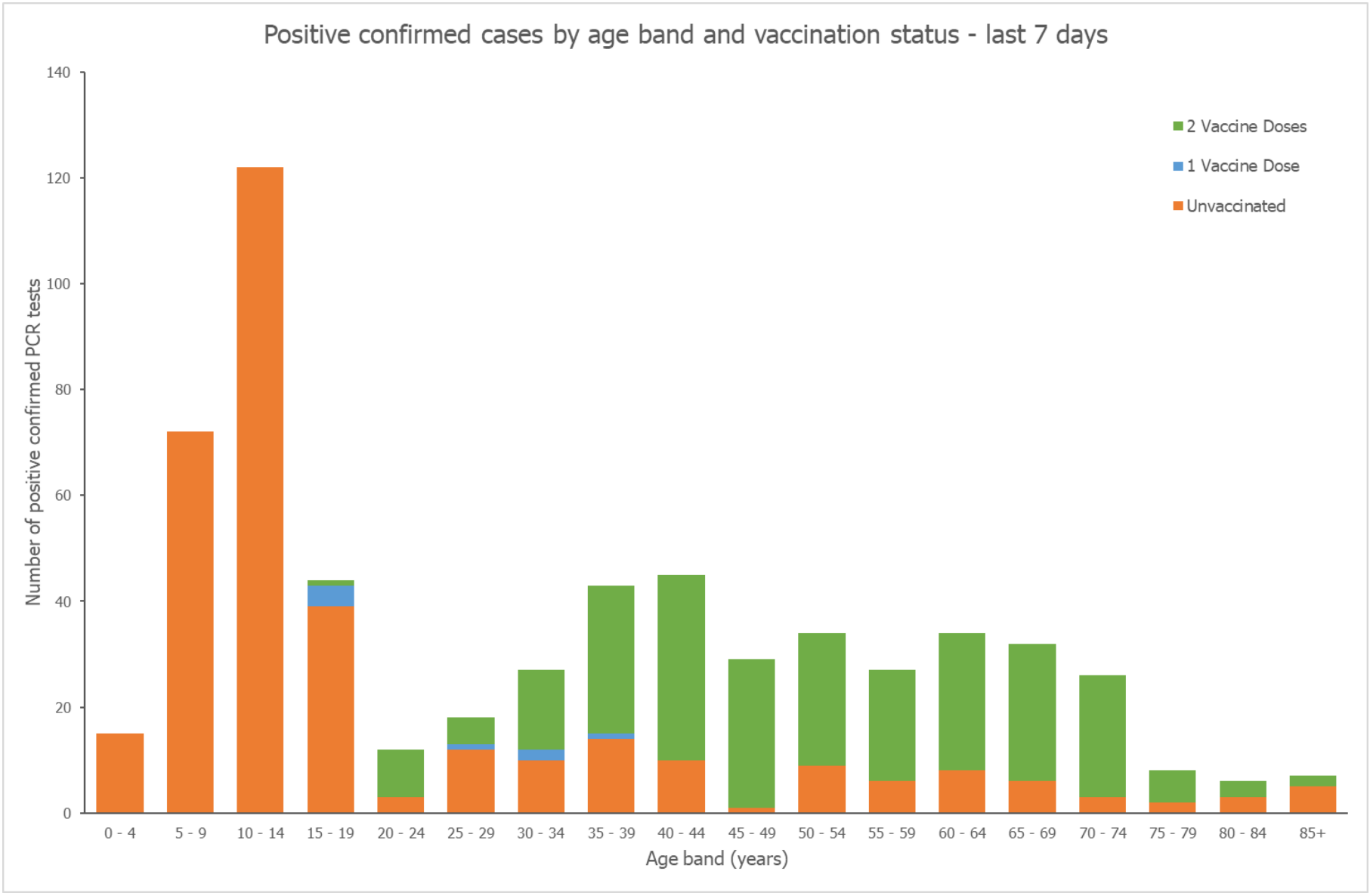
See last page for definitions

Positive PCR Tests by Pathway



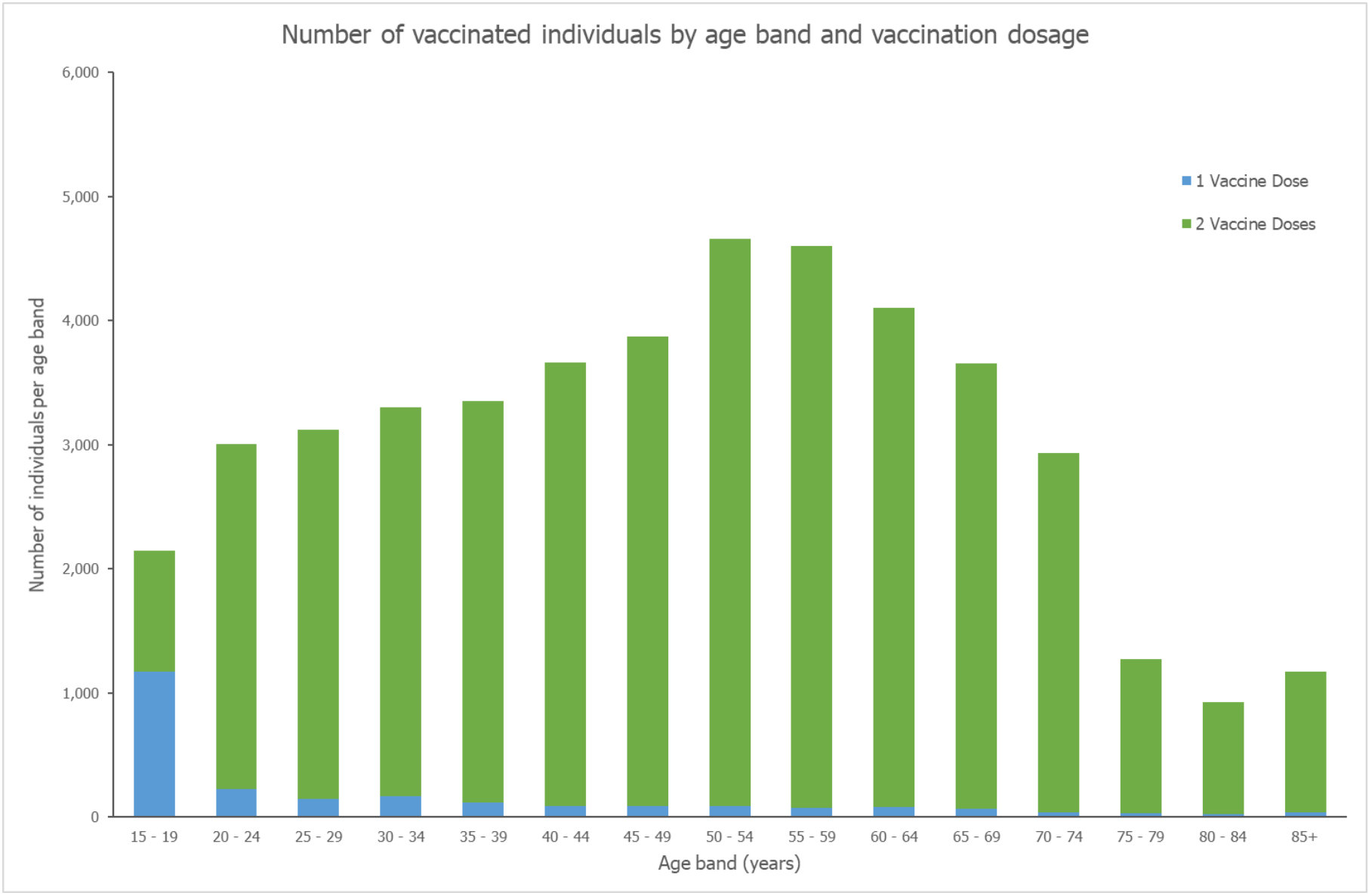
See last page for definitions

Weekly Positive Cases by Age Group



Current available data only allows for most recent 7 days. This will be expanded in future reports

Vaccine uptake and coverage



This data will be expanded in future reports to show % of eligible population vaccinated

Hospitalised Patients

This figure is a snapshot census of the cases in Hospital.

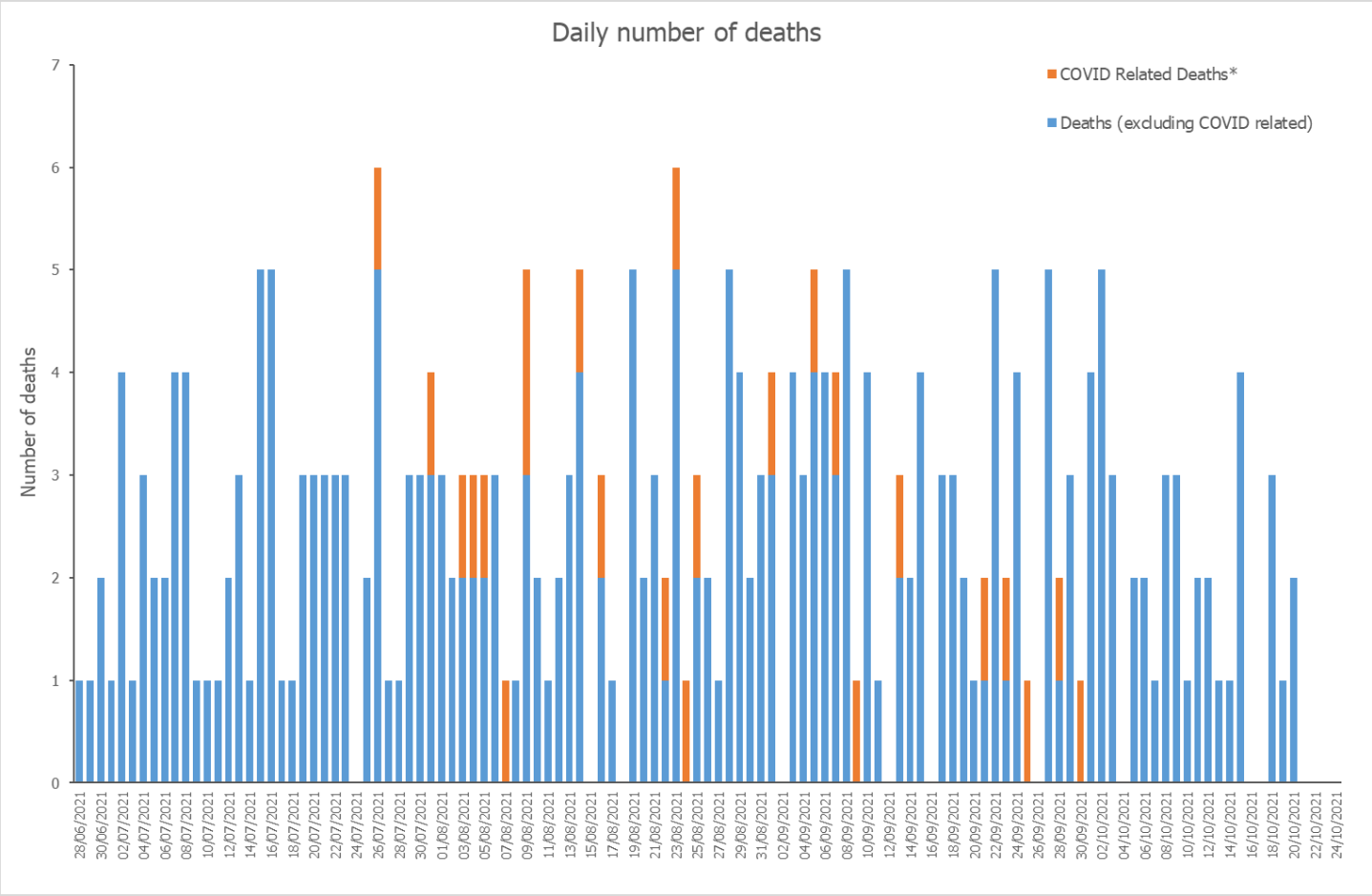
When broken down into vaccination status all numbers are 5 or below. Therefore, further sub-analysis of weekly figures cannot be produced due to the caveats and identifiable nature of small numbers.

SUMMARY

Total Patients	**13**
With COVID-19 Symptoms	100.0%
Without COVID-19 Symptoms	

Vaccination Status of Hospital Admissions	
Fully Vaccinated (2+2)	84.6%
Partially Vaccinated	
Unvaccinated	15.4%

Daily Deaths – current wave



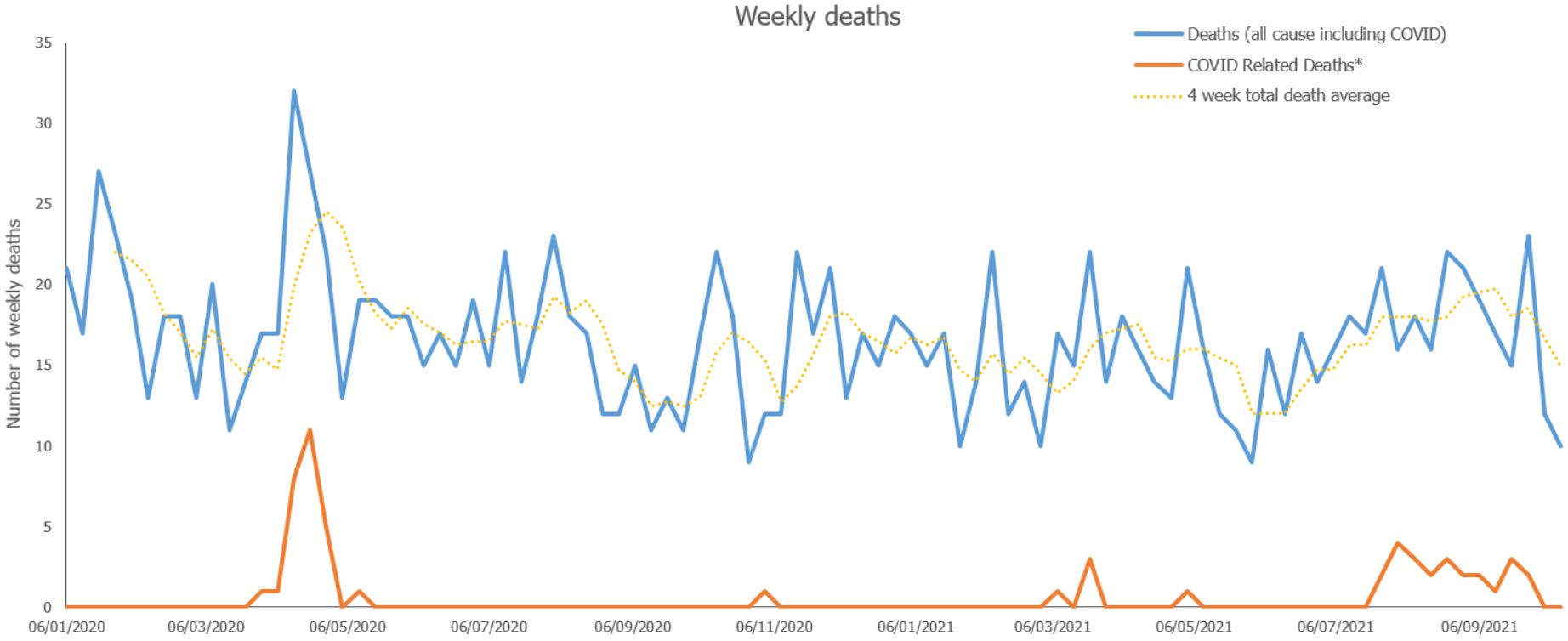
Cumulative COVID Related Deaths = 57

Numbers up to date at time of publication.

Note: Death registrations are often delayed and therefore deaths occurring in a given week may not be input into the week of which death occurred until a later date, meaning figures are likely to change retrospectively as data is updated and the most recent week's numbers will be incomplete.

*COVID deaths are those where COVID-19 is mentioned anywhere within the death certificate

Weekly Deaths – whole pandemic



Numbers up to date at time of publication.

Note: Death registrations are often delayed and therefore deaths occurring in a given week may not be input into the week of which death occurred until a later date, meaning figures are likely to change retrospectively as data is updated and the most recent week's numbers will be incomplete.

*COVID deaths are those where COVID-19 is mentioned anywhere within the death certificate. This differs from the definition used by Public Health England, who classify a COVID death as "people who had had a positive test result for COVID-19 and dies within 28 days of the first positive test result."

Definitions

- **Testing Pathways**
  - Other PCR = hospital, surveillance, symptomatics, other travel
  - LFD to PCR = positive LFD subsequently confirmed by PCR
  - UK Arrivals = identified arrivals from UK requiring PCR testing
- **LFD Pathway**
  - See above LFD to PCR definition
- **Vaccination Status**
  - 2 doses = those who have received two doses
  - 1 dose = those who have received one dose
  - Current available data doesn't allow for confirmation that those who've had 2 doses are fully vaccinated i.e. 2+2

Appendix 1

Date	Daily R_t	Date	Daily R_t	Date	Daily R_t	Date	Daily R_t	Date	Daily R_t	Date	Daily R_t	Date	Daily R_t
01-Jul	6.00	20-Jul	11.67	08-Aug	0.67	27-Aug	0.54	15-Sep	1.63	04-Oct	1.76	23-Oct	0.99
02-Jul	2.67	21-Jul	13.14	09-Aug	0.73	28-Aug	0.79	16-Sep	0.59	05-Oct	1.14	24-Oct	0.67
03-Jul	6.00	22-Jul	9.55	10-Aug	0.64	29-Aug	0.34	17-Sep	0.70	06-Oct	2.24		
04-Jul	5.00	23-Jul	1.13	11-Aug	0.76	30-Aug	0.51	18-Sep	0.86	07-Oct	1.13		
05-Jul	7.00	24-Jul	1.56	12-Aug	0.63	31-Aug	0.78	19-Sep	0.64	08-Oct	1.89		
06-Jul	0.67	25-Jul	1.35	13-Aug	0.48	01-Sep	0.68	20-Sep	2.00	09-Oct	1.15		
07-Jul	7.00	26-Jul	0.47	14-Aug	0.40	02-Sep	0.66	21-Sep	3.62	10-Oct	1.85		
08-Jul	6.00	27-Jul	0.52	15-Aug	0.65	03-Sep	0.77	22-Sep	1.52	11-Oct	2.74		
09-Jul	7.00	28-Jul	0.86	16-Aug	0.63	04-Sep	0.44	23-Sep	1.09	12-Oct	1.97		
10-Jul	2.57	29-Jul	0.48	17-Aug	0.81	05-Sep	0.33	24-Sep	2.33	13-Oct	3.03		
11-Jul	3.50	30-Jul	0.45	18-Aug	0.56	06-Sep	1.07	25-Sep	2.33	14-Oct	1.23		
12-Jul	2.75	31-Jul	0.31	19-Aug	0.92	07-Sep	1.05	26-Sep	1.32	15-Oct	0.96		
13-Jul	13.33	01-Aug	0.45	20-Aug	0.80	08-Sep	1.32	27-Sep	1.89	16-Oct	1.43		
14-Jul	19.60	02-Aug	1.22	21-Aug	0.64	09-Sep	1.17	28-Sep	1.42	17-Oct	1.07		
15-Jul	17.86	03-Aug	0.80	22-Aug	0.66	10-Sep	0.47	29-Sep	2.17	18-Oct	1.36		
16-Jul	150.50	04-Aug	0.51	23-Aug	0.93	11-Sep	0.38	30-Sep	0.74	19-Oct	1.91		
17-Jul	25.57	05-Aug	0.68	24-Aug	1.08	12-Sep	0.62	01-Oct	0.49	20-Oct	2.21		
18-Jul	17.67	06-Aug	0.99	25-Aug	0.78	13-Sep	0.71	02-Oct	1.06	21-Oct	1.73		
19-Jul	18.57	07-Aug	0.38	26-Aug	0.80	14-Sep	0.82	03-Oct	1.20	22-Oct	0.86		

References

[1] Contreras, S., Villavicencio, H. A., Medina-Ortiz, D., Saavedra, C. P., & Olivera-Nappa, Á. (2020). Real-Time Estimation of R_t for Supporting Public-Health Policies Against COVID-19. *Frontiers in public health*, *8*, 556689. https://doi.org/10.3389/fpubh.2020.556689