IEMAG briefing

7 May 2021





Health Protection Surveillance Centre Lárionad Faire um Chosaint Sláinte





Performance Management and Improvement Unit





Cases per day

Daily cases detected since the beginning of the pandemic, by specimen collection date.





Daily count of the number of laboratory confirmed new cases by date on which the specimen was collected. The vertical dashed lines indicate the dates of escalation and de-escalation of public health restrictions



Cases, numbers in hospital and intensive care

Daily case numbers have increased but the numbers of people in hospital and ICU continue to decrease slowly. Notably, admissions to hospital have averaged 10-15 per day for 5 weeks, a decrease on preceding weeks.

	Apr 2020	Summer 2020	Oct 2020	Dec 2020	Jan 2021	7 Apr	14 Apr	21 Apr	29 Apr	6 May	Daily count 7 May
Cases confirmed per day	859 18-04	8.7 25-06	1158 21-10	262 12-12	6520 10-01	499	400	372	448	451	434
14-day incidence	212 19-04	3.0 04-07	306 26-10	79 09-12	1532 15-01	152	132	113	125	130	130
Hospital in-patients	862 17-04	9 02-08	333 01-11	198 16-12	1949 24-01	254	212	183	164	133	126
Hospital admissions per day	85 04-04	<1 10-07	27 26-10	11 13-12	158 15-01	13	13	13	14	10	15
ICU confirmed cases	150 14-04	4 04-08	43 04-11	26 27-12	217 28-01	50	51	50	46	40	34
ICU admissions per day	14 31-03	<1 03-06	4 03-11	1 16-12	20 17-01	2	2	2	2	1	1
Deaths confirmed per day	46 <i>22-04</i>	<1 30-07	7 01-12	4 17-12	57 03-02	6	12	7	5	4	4

Data are 7-day averages (the indicated day and the preceding 6 days, rounded to the nearest whole number) with the exception of 14 day cumulative incidence, which is the total number of cases in the preceding 14 days per 100,000 population. The highest and lowest values of each indicator are given for each wave of the pandemic, along with the date on which that value was recorded, as well as the data for recent weeks. The historic incidence data may change due to denotification of cases.



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Confirmed cases each day

Daily and weekly count and 5-day rolling average. The 5-day average peaked at 1186 on 21 October, reached a low of 251 on 28 November, peaked again at 6847 on 8 January, and is now **410.** 3215 cases were notified last week, compared with 3117 the week before, an increase of 3%.



Daily count (bars) 5-day average (line) and weekly counts of the number of laboratory confirmed new cases by date on which they were confirmed by HPSC. Case counts may change due to denotification of cases. Weekly case counts are by notification (event) date and standard epidemiological week.



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Daily incidence

Daily incidence remains high but has been relatively stable over the last two weeks at, on average, 450 cases per day. incidence remains approximately 50% higher than in early December, and approximately 40 times what it was in late June 2020.



Daily cases by notification (event) date (black, the date the case was entered on the CIDR database) and specimen collection date (green). The vertical dashed lines indicate the dates of escalation and de-escalation of public health restrictions. Data are 7-day moving averages.





Confirmed cases in acute hospitals

The number of people in hospital with confirmed SARS-CoV-2 infection. The number of people in hospital is decreasing slowly and is now at 131, a level not seen since early October 2020. The number of admissions and newly confirmed cases in hospital per day was plateaued at 20-25 per day throughout March 2021, but is now lower at 10-15 per day.



Hospital in-patients: Daily count of number of COVID-19 confirmed cases in acute hospitals. Admissions: New COVID-19 confirmed admissions and new laboratory confirmations of suspected cases in preceding 24 hours (7-day moving average also shown). Data from HSE PMIU-SDU, 8am census.



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COVID confirmed cases in acute hospital

Confirmed cases in intensive care

The number of people in ICU with confirmed SARS-CoV-2 infection is static or decreasing slowly.





Patients in ICU: Daily count of number of COVID-19 confirmed cases in ICU. IMV: Daily count of number of COVID-19 patients requiring invasive mechanical ventilation. Admissions: daily new COVID-19 confirmed admissions to ICU and new laboratory confirmations of suspected cases in ICU (7-day average also shown). Data from morning census from NOCA



Deaths by setting

The number of deaths per week is static or decreasing slowly. Deaths associated with outbreaks in LTRC have decreased earlier and more rapidly than in the wider community, due to the protective effect of vaccination.



Deaths per week by week of death and the setting in which the death occurred. Deaths with laboratory confirmed SARS-CoV-2 only. Deaths in hospital outbreaks refers to deaths within a cluster of linked cases where the infectionhas been transmitted in the hospital setting, other deaths in hospitals are recorded as 'community' as the infection occurred in the community.





Incidence across different age groups (excluding HCW and LTRC)



Chart shows 5-day rolling average of total incidence (cases per day per 100,000 population) with coloured bands showing the contribution of each age cohort to the total incidence, having adjusted for the number of people in that age cohort (CSO 2016 census data). Healthcare workers and cases associated with outbreaks in long-term residential care are excluded, so that the analysis reflects the pattern of cases in the community. Cases dated by notification date. A number of cases in those aged 65 and older will be linked in the coming days to outbreaks in LTRC.

Week					Age band	ł			
	0-4	5-12	13-18	19-24	25-39	40-64	65-74	75-84	85+
9	0.0	0.0	0.3	0.0	0.1	0.1	0.0	0.0	0.0
10	0.0	0.2	0.3	0.0	0.2	0.7	0.5	1.0	0.0
11	0.6	0.2	0.5	5.4	5.0	4.4	4.6	6.6	7.4
12	4.5	2.4	7.5	22.9	27.6	31.0	25.2	24.9	37.0
13	6.9	4.2	14.5	58.3	73.1	86.3	72.6	88.5	94.7
14	4.5	4.4	6.7	28.1	40.1	50.9	51.1	91.1	125.8
15	5.7	5.6	9.1	31.4	29.3	47.4	47.7	72.8	119.9
16	3.0	5.3	10.8	19.3	20.8	32.2	29.5	50.9	79.9
17	3.3	4.2	7.8	21.7	23.6	26.7	21.4	56.5	97.7
18	4.5	6.4	9.4	20.2	26.0	21.0	18.7	37.7	53.3
19	2.1	2.7	4.8	13.3	15.2	14.4	10.4	19.3	37.0
20	3.6	1.6	4.8	12.1	16.4	12.1	6.7	9.2	13.3
21	3.3	2.7	4.6	8.5	6.3	8.2	7.5	15.3	22.2
22	2.1	2.4	2.2	4.2	5.1	6.8	4.0	4.6	5.9
23	1.2	0.5	1.3	3.0	0.7	1.9	1.6	5.6	3.0
24	2.7	0.7	1.3	1.5	1.4	1.4	1.6	2.0	1.5
25	0.0	0.4	0.5	1.8	1.4	1.0	1.1	1.0	1.5
26	0.6	0.2	0.3	1.8	1.5	0.7	0.8	1.5	3.0
27	1.5	0.4	0.3	1.8	1.9	0.9	0.0	1.0	0.0
28	0.9	1.1	1.1	10.6	1.9	1.0	1.3	1.5	3.0
29	1.2	0.4	0.8	3.3	3.4	2.0	2.9	1.5	3.0
30	1.8	0.5	1.6	3.6	4.3	0.9	1.9	0.0	1.5
31	4.8	2.6	7.3	11.2	8.5	4.6	2.1	2.0	3.0
32	4.5	3.6	6.7	18.4	16.4	10.5	4.6	2.5	3.0
33	6.0	10.0	12.1	27.2	19.5	12.1	8.6	2.5	7.4
34	7.2	7.5	17.5	37.4	16.5	11.4	5.9	5.1	4.4
35	6.3	9.7	13.5	37.1	18.4	11.1	4.8	9.2	5.9
36	13.0	13.1	17.2	47.7	21.6	13.2	11.0	11.7	14.8
37	17.2	17.9	30.1	63.4	28.7	24.4	22.2	8.7	10.4
38	21.7	26.2	43.9	90.6	44.0	34.9	33.2	19.8	19.2
39	12.1	22.6	42.8	146.7	49.9	41.8	32.9	31.0	20.7
40	29.6	28.8	63.2	167.6	68.0	57.8	34.5	26.0	20.7
41	42.8	46.8	132.9	316.7	115.3	89.7	61.6	51.9	60.7
42	78.1	90.6	198.3	434.2	154.4	142.8	90.5	67.2	71.1
43	81.7	93.9	174.7	302.2	123.4	121.7	85.1	82.4	84.4
44	55.8	67.6	95.8	154.9	75.3	77.4	55.2	55.5	59.2
45	34.4	39.7	58.1	84.2	57.7	46.0	42.6	44.3	47.4
46	42.2	37.2	65.7	89.7	45.2	44.6	32.4	42.7	71.1
47	22.0	34.1	59.7	79.1	34.6	33.0	28.9	39.7	62.2
48	23.2	31.3	45.5	66.7	33.8	29.6	22.2	36.1	40.0
49	28.4	36.8	37.7	40.5	33.2	30.1	25.4	28.5	41.4
50	21.4	39.9	44.1	57.4	39.5	35.0	22.5	31.0	22.2
51	51.9	58.5	74.5	128.3	88.0	80.9	54.3	55.0	51.8
52	77.5	76.9	120.0	326.1	175.6	134.5	95.8	94.7	119.9
53	218.1	236.6	513.7	1401.5	760.9	635.7	423.6	350.1	361.2
1	183.7	208.9	569.4	1327.9	790.2	720.5	497.7	446.8	556.6
2	130.6	127.0	303.0	581.2	413.7	418.7	300.9	409.7	574.3
3	93.5	80.9	168.5	327.0	253.2	243.4	170.0	251.9	413.0
4	74.2	60.9	128.4	228.6	155.0	146.2	119.1	161.3	266.4
5	78.1	72.9	126.5	208.0	126.4	123.0	85.4	115.5	213.2
6	92.0	85.7	126.2	225.8	118.3	101.2	68.0	89.1	122.9
7	87.2	76.4	96.1	253.0	106.1	87.8	59.4	77.9	108.1
8	87.5	70.7	89.6	186.6	94.4	76.7	43.4	52.9	85.9
9	67.0	57.0	65.4	124.7	75.2	57.8	44.7	44.3	40.0
10	68.5	68.2	89.6	144.6	79.1	58.5	39.1	39.7	40.0
11	107.7	90.6	78.6	86.4	85.5	61.8	46.3	55.0	56.3
12	107.1	102.2	84.8	103.9	92.4	69.1	41.0	41.7	44.4
13	70.0	86.6	65.4	114.7	80.3	66.1	38.8	34.1	40.0
14	49.8	65.2	57.9	91.8	65.7	48.1	23.8	22.9	20.7
15	50.1	55.8	64.9	74.9	61.3	49.6	25.4	14.8	14.8
16	54.0	65.4	99.6	97.2	78.3	58.4	30.0	20.4	17.8
17	59.7	79.6	105.5	116.8	72.4	57.3	21.2	15.8	10.4



Incidence across different age groups (excluding HCW and LTRC)

Incidence increased between week 15 and 16, most notably in those aged 13-18 years, 19-24 years and 25-39 years; while overall incidence is relatively stable between week 16 and 17, there have been increases in those aged 19-24 years and 5-12 years. Incidence in those aged 75 and older continues to decrease.



Heat map shows age-specific incidence (cases per week per 100,000 population). Healthcare workers and cases associated with outbreaks in long-term residential care are excluded, so that the analysis reflects the pattern of cases in the community. Cases dated by specimen collection date.





14-day incidence/100,000 population by county, as of 7th May



Figure 2: Cumulative incidence rates of confirmed COVID-19 cases per 100,000 population by county notified in Ireland between 23/04/2021 and 06/05/2021





Community Testing: % Positivity Rate Past 7 Days by County as at 06/05/21 (Swabs taken in Community Test Centres for GP and CMP referrals inc. symptomatic and close contacts but ex. serial,

Close contacts of adult confirmed cases

The mean number of close contacts per confirmed case. The number of contacts was very low (2 or less) during April, but increased to 5-6 per case during the summer. The public health measures during October were associated with a progressive reduction in close contacts, to below 3. The number of close contacts remained below 3.3 on average until early December, rose to almost 5 on average by 28 December and fell to 2.1 in January. It has increased to ≈ 2.6 in the latter half of February 2021, and has slowly drifted up to ≈ 2.8



The average number of close contacts per confirmed case. Data from COVID-19 Care Tracker (CCT). Cases dated by case creation date. Cases (but not contacts) aged 18 and younger are excluded. Data are 7-day trailing averages except for the months of June – August where a 21-day trailing average is used due to very low case counts.





Growth rate for case numbers

Growth rate peaked at 13% per day over the 21-day period up to 10 January 2021. While case numbers decreased very rapidly in January (-6 to -10% per day) the rate of decline slowed to -2 to -4% per day from mid-February. Infections were static or grew slowly (growth rate 0% to +2% per day) for the latter half of March, and declined again in early April. . Case numbers have been relatively stable over the last 14 days: the growth rate is currently estimated at 0% to 2% per day.





Growth rate calculated as the average growth rate over a 21-day trailing window, with 95% confidence interval; cases dated by notification (event) date.

Estimates of effective reproduction number (R)

Reproduction number is avery close to 1.0 with moderate levels of uncertainty in its estimation; it is currently estimated at 0.9 - 1.1

Method	Estimate	95% confidence interval
SEIR model-inferred	1.48	1.15 – 1.92
Bayesian model	0.97	0.62– 1.50
Time-dependent R	0.92	0.83 - 1.02
GAM estimate 27 Apr 2021	1.02	0.93 – 1.11
GAM estimate 4 May 2021	1.03	0.87 – 1.20

Estimates generated 5 May 2021, refer to IEMAG technical notes for methodology. Estimates are unreliable when case numbers are low or variable. SEIR-inferred estimate is slow to respond to changes in R. The time-dependent R estimate lags behind other estimates. These R estimates relate to viral transmissions and infections that occurred approximately 7-14 days ago. The estimate of R is influenced by different patterns of transmission in large outbreaks, smaller clusters, and individual transmission.



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Daily Traffic Flow



Google Mobility Ireland - % change from baseline



Situation analysis 7 May 2021



- Incidence is stable but uncertain
 - Cases (5-day average) 416 cases per day; 14-day incidence 130 per 100,000
 - 3215 cases were notified last week, compared with 3117 the week before, an increase of 3%.
 - Test positivity low with increasing referral
 - Reproduction number (R) is estimated at 0.9 1.1, growth rate 0 to +2% per day
- Deaths and numbers in hospital continue to decrease, numbers in ICU static or decreasing slowly
- Significant impact of vaccination in those who have been vaccinated
- The number of close contacts per confirmed case has drifted upwards
- A broadly positive outlook, but we remain vulnerable in the coming weeks as the wider population is not yet sufficiently protected by vaccination
 - The situation remains broadly stable but uncertain
 - Outdoors is lower risk, but we still need to take the basic precautions
 - It is important that people understand the disease profile in their own area
 - We need to keep close contacts low, and minimize the risk of transmission during any close contact



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