

RSC Communicable and Respiratory Disease Report for England

Key Statistics:

Week Number/Year..... 50/2021
 Week Starting - Ending..... 13/12/2021 - 19/12/2021
 No. of Practices..... 500
 Population..... 5,060,049

National (England)

- **Acute Bronchitis** : increased from **6.9** in week 49 to **7.0** in week 50.
- **Asthma** : decreased from **15.7** in week 49 to **15.5** in week 50.
- **Common Cold** : decreased from **3.0** in week 49 to **2.5** in week 50.
- **Influenza-like illness** : decreased from **3.0** in week 49 to **2.4** in week 50.
- **Respiratory System Diseases** : decreased from **281.5** in week 49 to **260.6** in week 50.
- **COVID-19** : increased from **436.8** in week 49 to **673.1** in week 50.

Regional (North, South, London and Midlands and East)

- **Acute Bronchitis** : decreased from **3.9** in week 49 to **2.7** in week 50 in the London region, increased from **10.6** in week 49 to **12.1** in week 50 in the North region, decreased from **6.7** in week 49 to **6.6** in week 50 in the South region, and decreased from **4.9** in week 49 to **4.8** in week 50 in the Midlands And East region.
- **Asthma** : decreased from **13.5** in week 49 to **13.1** in week 50 in the London region, decreased from **19.9** in week 49 to **19.7** in week 50 in the North region, decreased from **14.2** in week 49 to **13.9** in week 50 in the South region, and decreased from **15.0** in week 49 to **14.6** in week 50 in the Midlands And East region.
- **Common Cold** : decreased from **4.2** in week 49 to **2.5** in week 50 in the London region, increased from **2.3** in week 49 to **3.0** in week 50 in the North region, decreased from **2.8** in week 49 to **2.3** in week 50 in the South region, and decreased from **3.0** in week 49 to **2.3** in week 50 in the Midlands And East region.
- **Influenza-like illness** : increased from **2.7** in week 49 to **3.6** in week 50 in the London region, decreased from **3.8** in week 49 to **2.8** in week 50 in the North region, decreased from **3.1** in week 49 to **1.4** in week 50 in the South region, and increased from **1.9** in week 49 to **2.4** in week 50 in the Midlands And East region.
- **Respiratory System Diseases** : decreased from **233.2** in week 49 to **204.2** in week 50 in the London region, decreased from **352.2** in week 49 to **337.4** in week 50 in the North region, decreased from **253.0** in week 49 to **232.6** in week 50 in the South region, and decreased from **284.0** in week 49 to **261.0** in week 50 in the Midlands And East region.
- **COVID-19** : increased from **466.7** in week 49 to **1,140.6** in week 50 in the London region, increased from **341.0** in week 49 to **478.3** in week 50 in the North region, increased from **509.3** in week 49 to **608.6** in week 50 in the South region, and increased from **403.2** in week 49 to **571.1** in week 50 in the Midlands And East region.

Comment:

Overall presentations of respiratory diseases have decreased this week though they are close to the seasonal levels anticipated for this time of year.

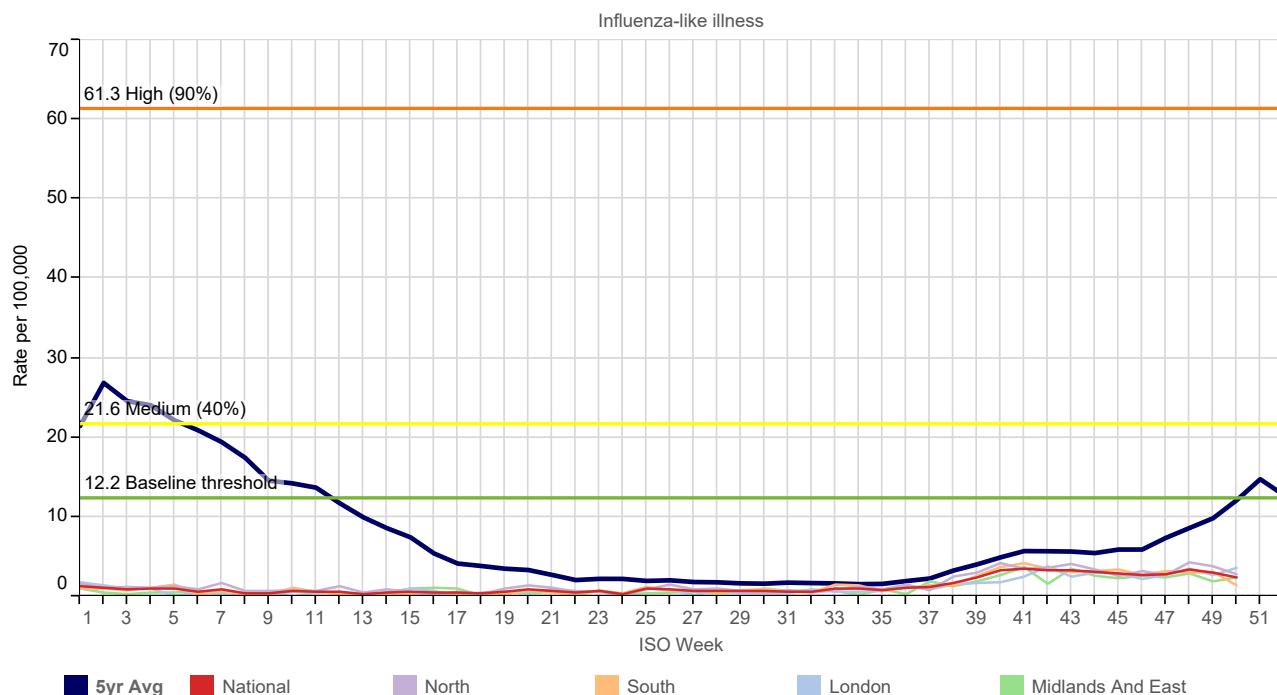
COVID-19 incidence and the number of confirmed cases of COVID-19 have increased in all regions and all age bands with the exception of the population aged under 15 years. The steepest rises are in London Region and the 15 to 64 years age-band. COVID-19 incidence lags behind our other results, as this is a test rather than a clinical diagnosis.

This report includes a virology update. We are seeing circulating COVID-19, respiratory syncytial virus (RSV), and influenza A and B.

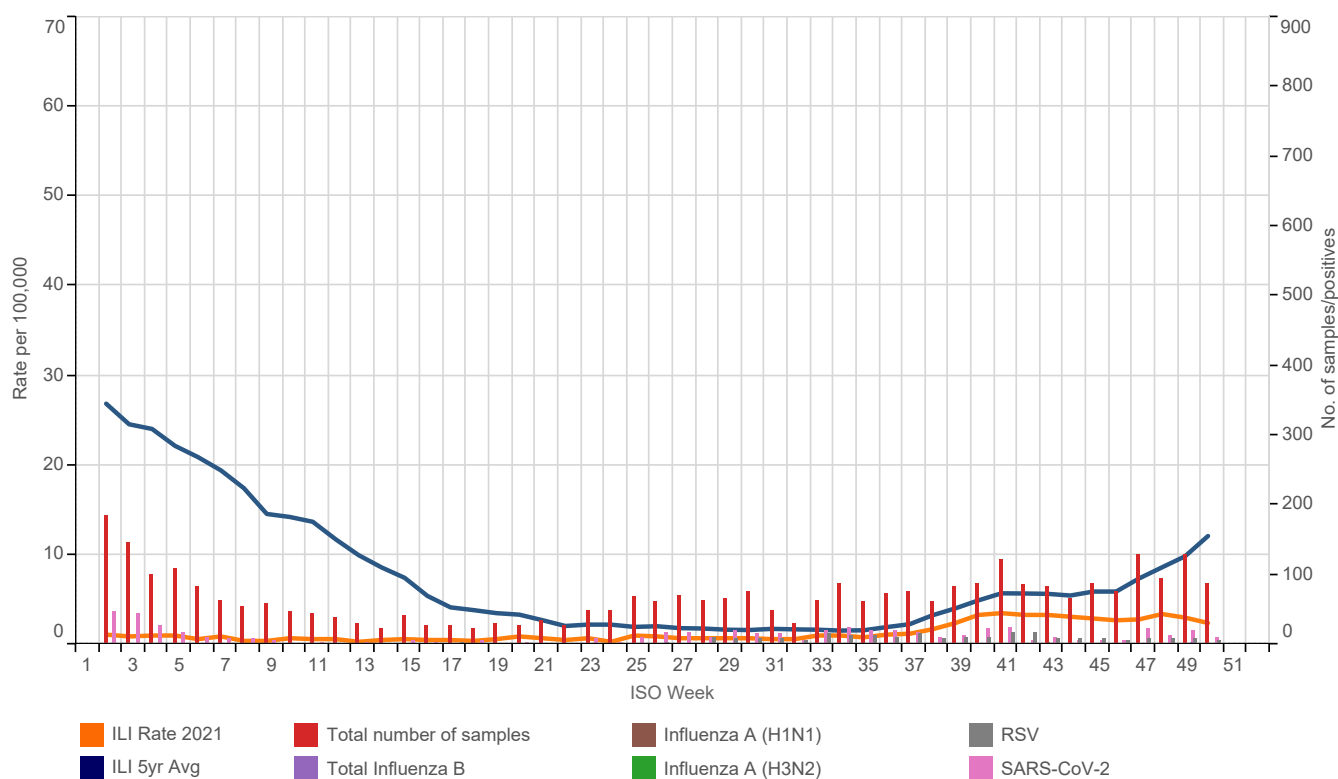
Winter Focus 2020/21

Please see page 15 for explanatory notes on the data.

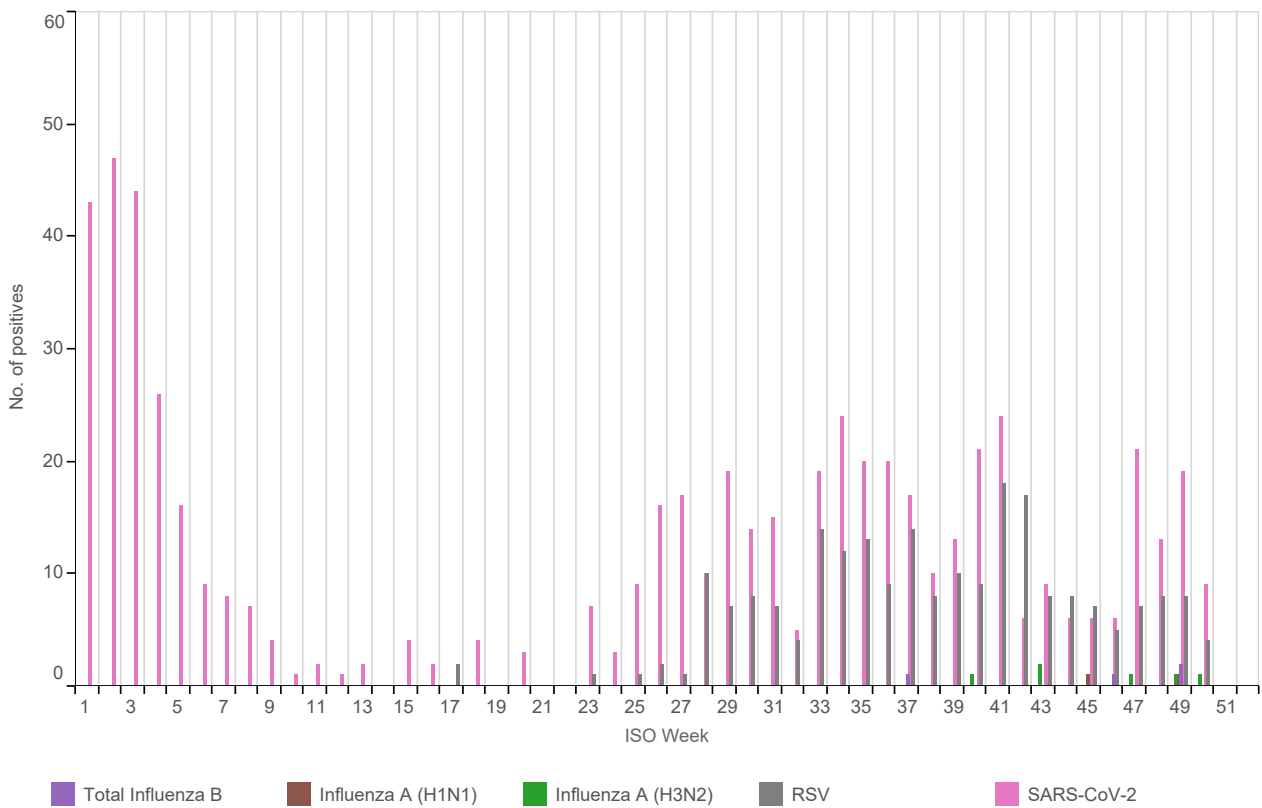
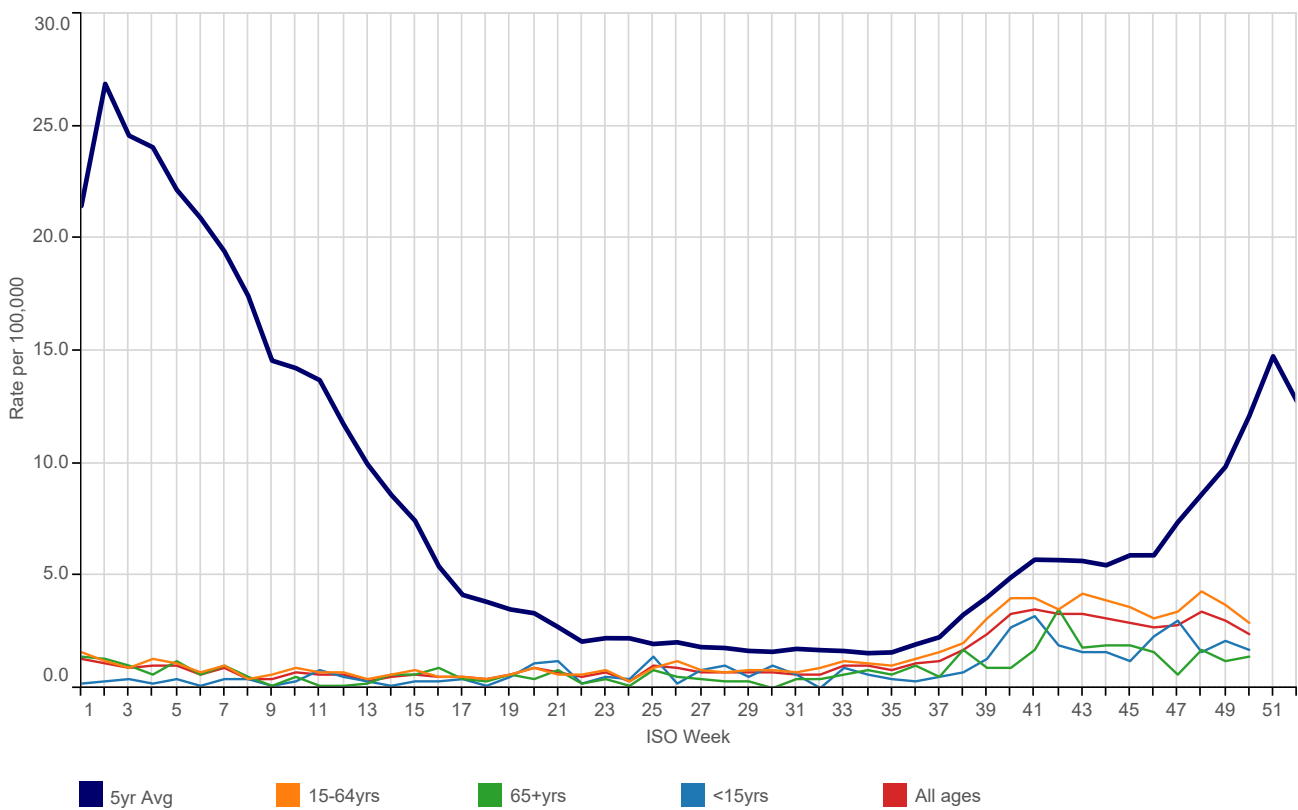
(A) Influenza-like illness: national incidence rate 2021 by region*



(B) RCGP/UKHSA RSV, Influenza and SARS-CoV-2 Virology Swab Surveillance 2021*



* The rolling average line (blue) is based on 5 year historic RCGP RSC level (Graph A). The weekly virology samples displayed are offset from the ISO Week (Graphs B & C).

(C) RCGP/UKHSA RSV, Influenza and SARS-CoV-2 Virology Swab Surveillance 2021 by viral strain***(D) Influenza-like illness: national incidence rate 2021 by age group***

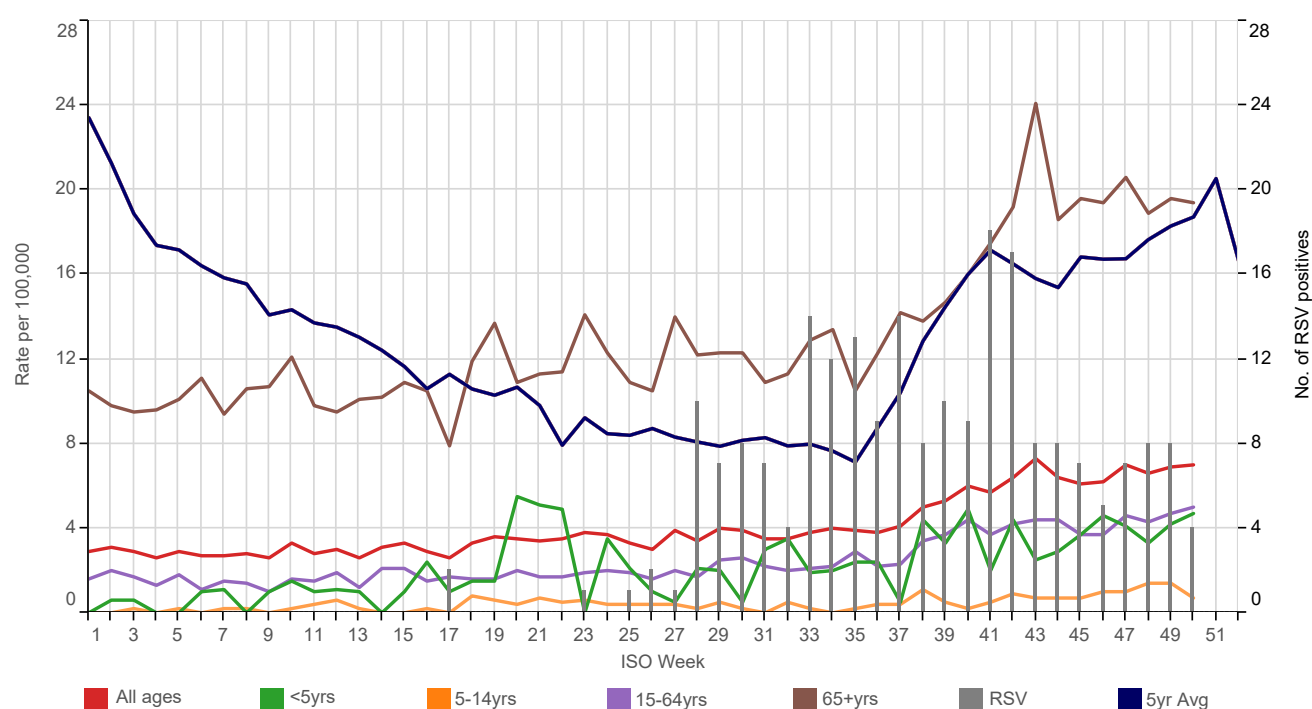
(E) Influenza-like illness: national incidence rate 2021 by age group*

This table shows the level of intensity of ILI by age band. MEM thresholds have been calculated separately for each age band - the ranges are shown in the table Threshold levels by age band.

Table 1	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
<15yrs	0.4	0.1	0.5	1.1	1.2	0.2	0.5	0.4	1.4	0.2	0.8	1.0	0.5	1.0	0.6	0.0	0.9	0.6
15-64yrs	0.5	0.4	0.6	0.9	0.6	0.6	0.8	0.3	0.9	1.2	0.8	0.7	0.8	0.8	0.7	0.9	1.2	1.1
65+yrs	0.4	0.3	0.6	0.4	0.8	0.2	0.4	0.1	0.8	0.5	0.4	0.3	0.3	0.0	0.4	0.4	0.6	0.8
All ages	0.5	0.4	0.6	0.9	0.7	0.5	0.7	0.3	1.0	0.9	0.7	0.7	0.7	0.7	0.6	0.6	1.0	1.0

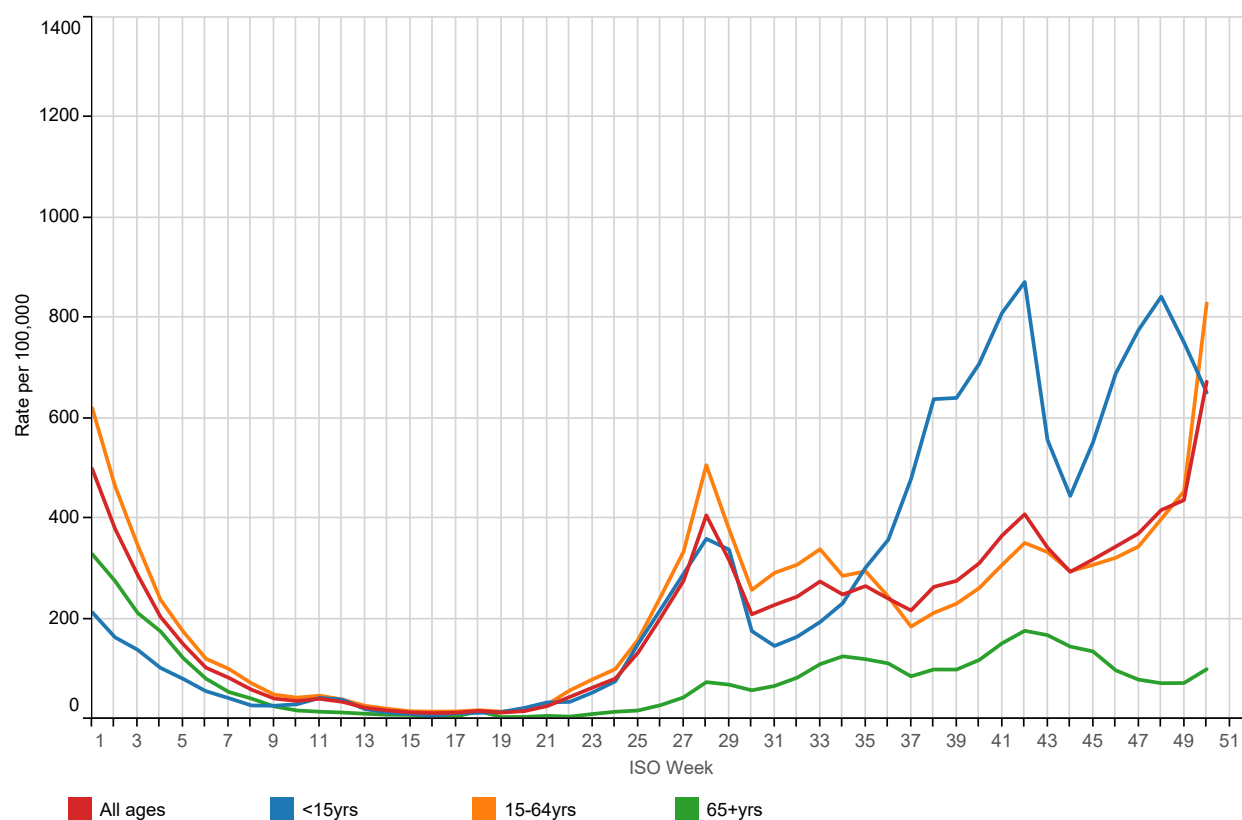
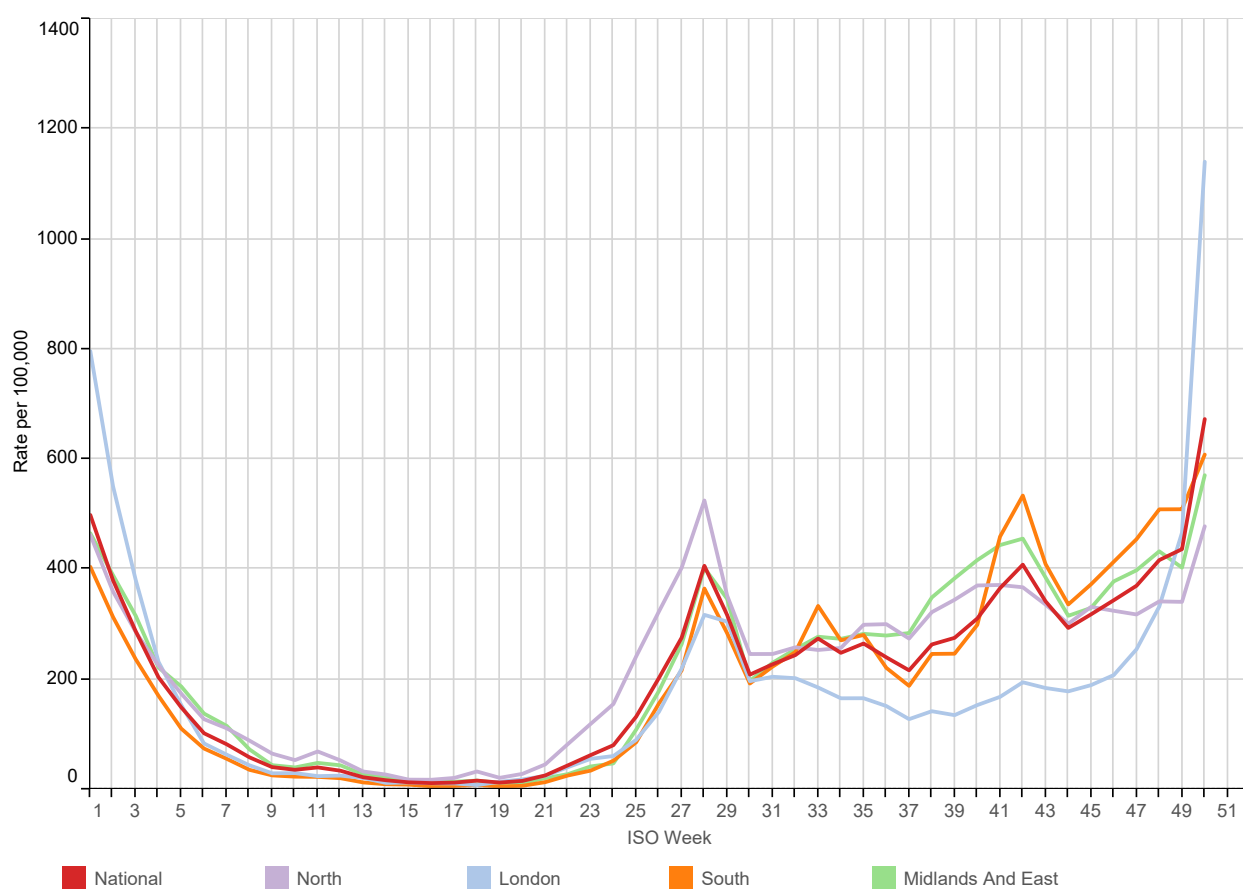
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
<15yrs	0.4	0.3	0.5	0.7	1.3	2.7	3.2	1.9	1.6	1.6	1.2	2.3	3.0	1.6	2.1	1.7		
15-64yrs	1.0	1.3	1.6	2.0	3.1	4.0	4.0	3.5	4.2	3.9	3.6	3.1	3.4	4.3	3.7	2.9		
65+yrs	0.6	1.0	0.5	1.7	0.9	0.9	1.7	3.5	1.8	1.9	1.9	1.6	0.6	1.7	1.2	1.4		
All ages	0.8	1.1	1.2	1.7	2.4	3.3	3.5	3.3	3.3	3.1	2.9	2.7	2.8	3.4	3.0	2.4		

Table 2	Below Threshold ¹	Threshold to Medium ²	Medium to High ³	High to Very High ⁴	Above Very High ⁵
All Ages	<12.2	12.2 to <21.6	21.6 to <61.3	61.3 to <97.3	97.3+
<15yrs	<10.7	10.7 to <17.6	17.6 to <47.7	47.7 to <74.1	74.1+
15-64yrs	<15.0	15.0 to <26.1	26.1 to <63.4	63.4 to <93.8	93.8+
65+yrs	<11.5	11.5 to <16.5	16.5 to <37.8	37.8 to <54.5	54.5+

Threshold levels¹Below baseline threshold²baseline threshold breach to < 40th percentile³40th to <90th percentile⁴90th to <97.5th percentile⁵97.5th+ percentile**(F) Acute Bronchitis: national incidence rate 2021 by age group*****Weekly Influenza-like illness and Acute Bronchitis incidence rates per 100,000 persons**

Influenza-like illness		Bronchitis	
<1yr	6.7	4.4	
1-4yrs	2.8	4.7	
5-14yrs	0.9	0.7	
15-24yrs	2.2	1.7	
25-44yrs	3.0	1.8	
45-64yrs	3.1	10.3	
65-74yrs	2.2	20.1	
75-84yrs	0.0	18.0	
85+yrs	1.7	20.0	
All ages	2.4	7.0	

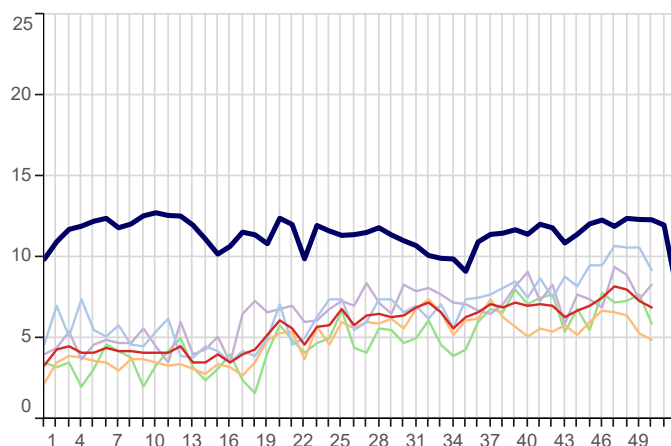
Influenza-like illness		Bronchitis	
London	3.6	2.7	
North	2.8	12.1	
South	1.4	6.6	
Midlands And East	2.4	4.8	
National	2.4	7.0	

(G) COVID-19 : national incidence rate 2021 by age group***(H) COVID-19 : national incidence rate 2021 by region***

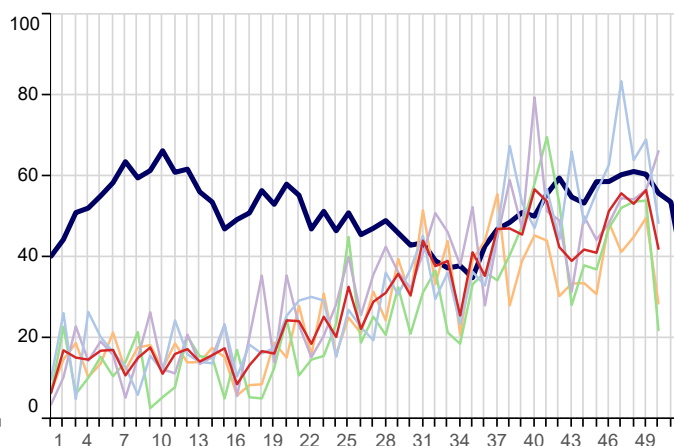
1. Water & Food Borne Disorders:

5yr Avg National London North South Midlands And East

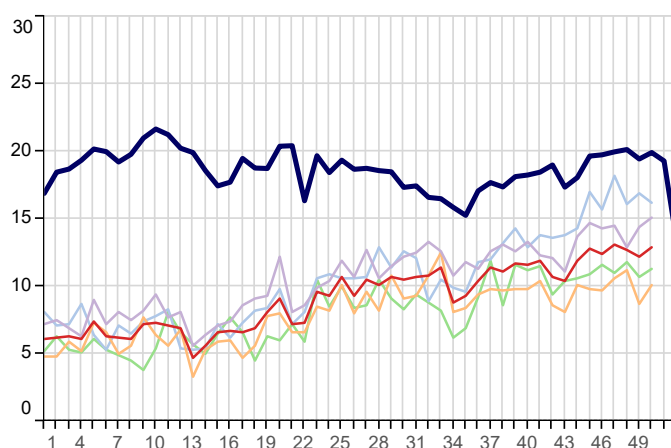
Infectious Intestinal Disease (ICD10: A00-A09)
Weekly incidence (per 100,000 **all ages**) by regions
for 2021 compared with 5 year average



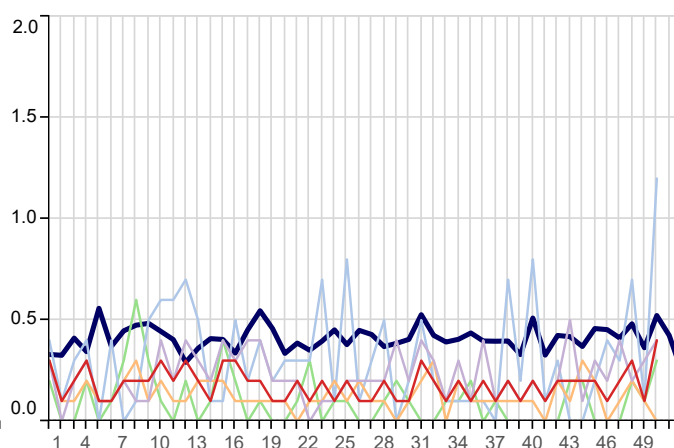
Infectious Intestinal Disease (ICD10: A00-A09)
Weekly incidence (per 100,000 **0-4 years**) by regions
for 2021 compared with 5 year average



Non-Infective Enteritis & Colitis (ICD10: K50-K52)
Weekly incidence (per 100,000 **all ages**) by region
for 2021 compared with 5 year average



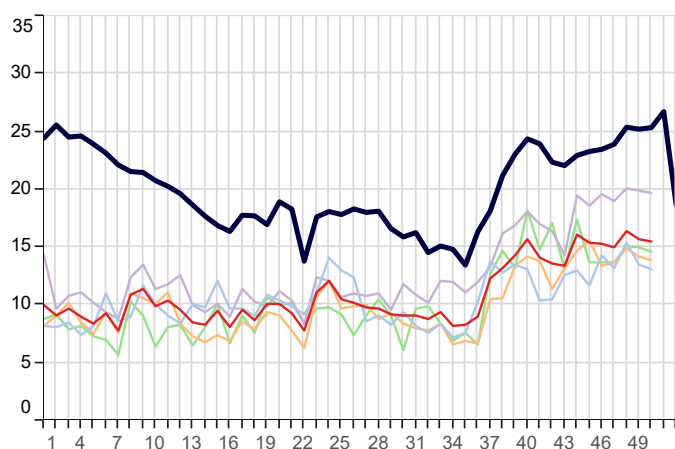
Viral Hepatitis (ICD10: B15-B19)
Weekly incidence (per 100,000 **all ages**) by region
for 2021 compared with 5 year average



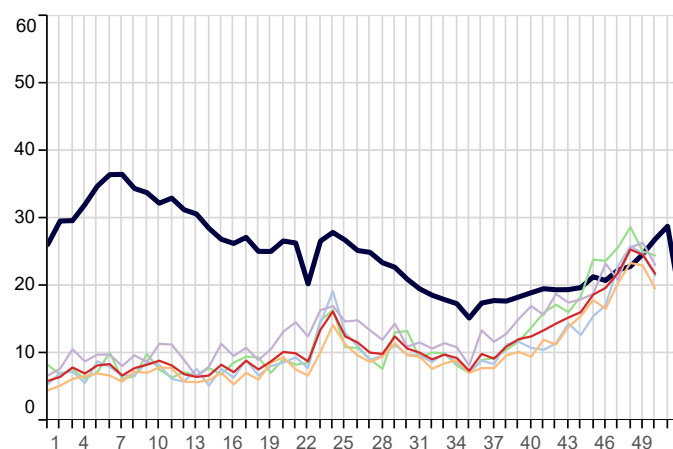
2. Environmentally Sensitive Disorders:

5yr Avg National London North South Midlands And East

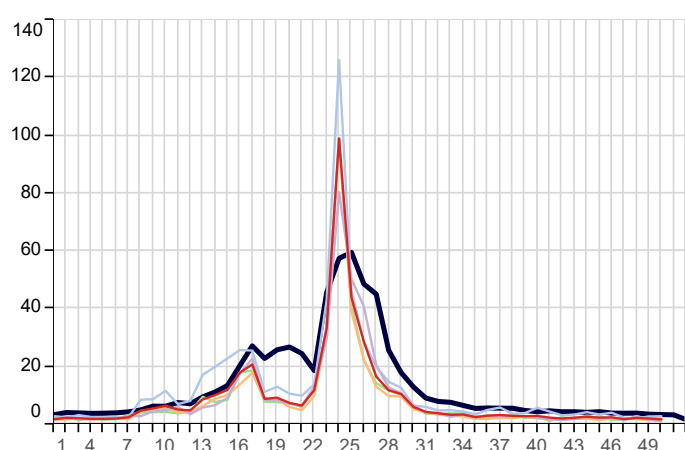
Asthma (ICD10: J45-J46)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



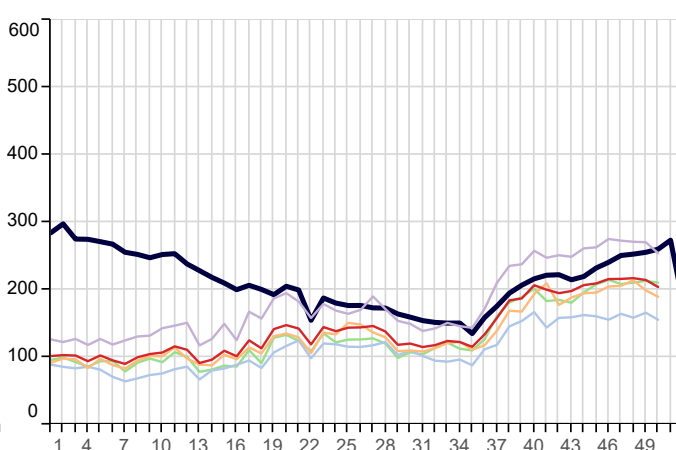
Disorders of Conjunctiva (ICD10: H10-H13)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



Hayfever/Allergic Rhinitis (ICD10: J30)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



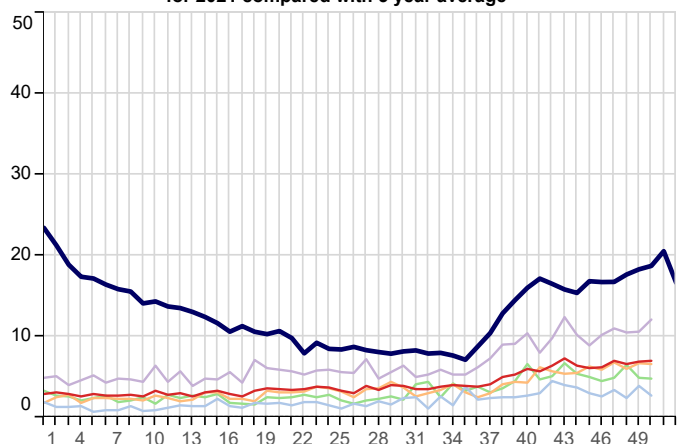
Symptoms involving Respiratory & Chest (ICD10: R05-R07,R09)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



3. Respiratory Infections:

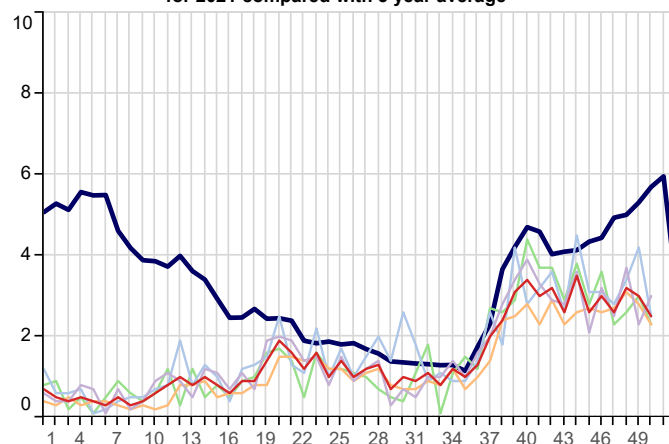
5yr Avg National London North

Acute Bronchitis (ICD10: J20-J21,J40)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average

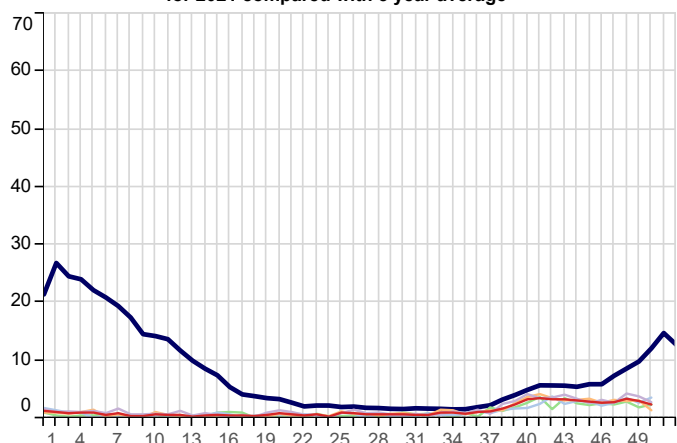


South Midlands And East

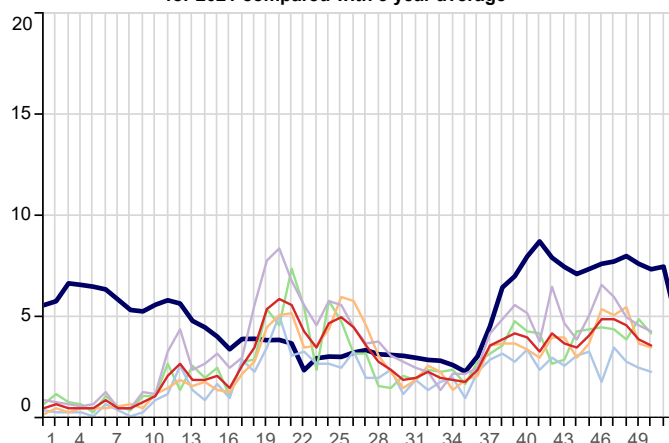
Common Cold (ICD10: J00,J06)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



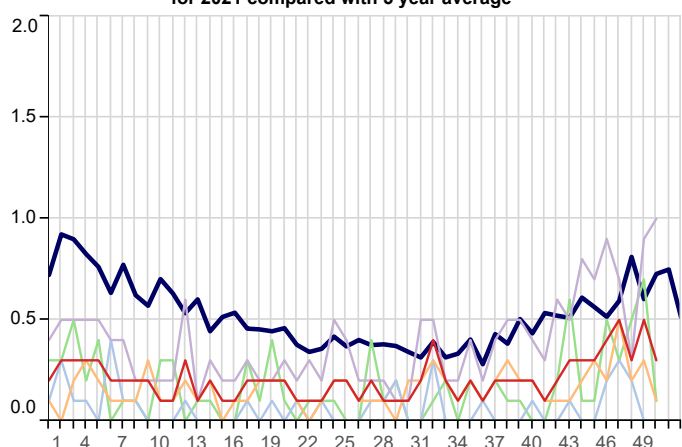
Influenza-like illness (ICD10: J09-J11)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



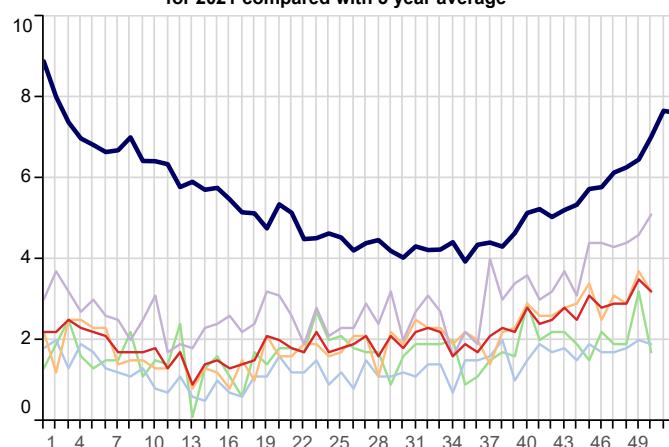
Acute Laryngitis/Tracheitis (ICD10: J04)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



Pleurisy (ICD10: R091)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



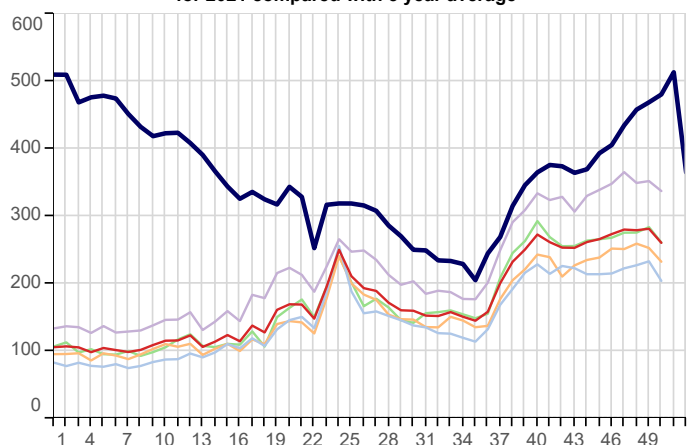
Pneumonia/Pneumonitis (ICD10: J12-J18)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



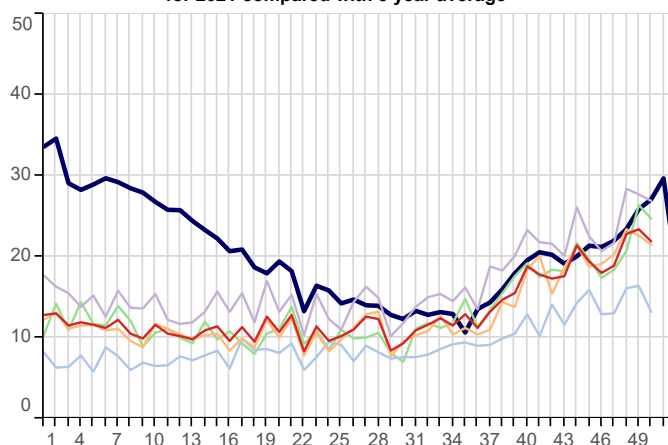
3. Respiratory Infections(Continued):

■ 5yr Avg ■ National ■ London ■ North ■ South ■ Midlands And East

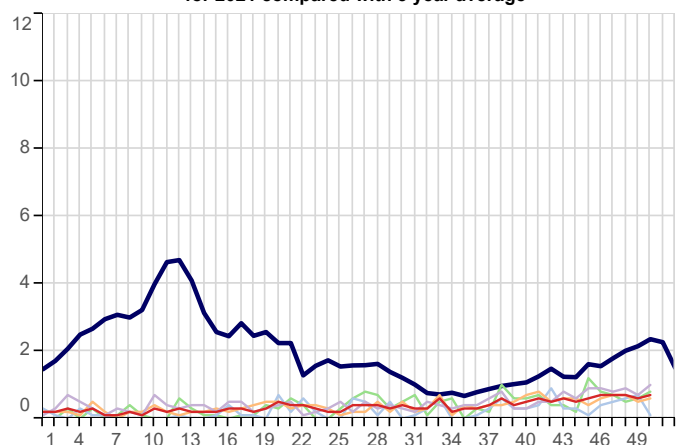
Respiratory System Diseases (ICD10: J00-J99)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



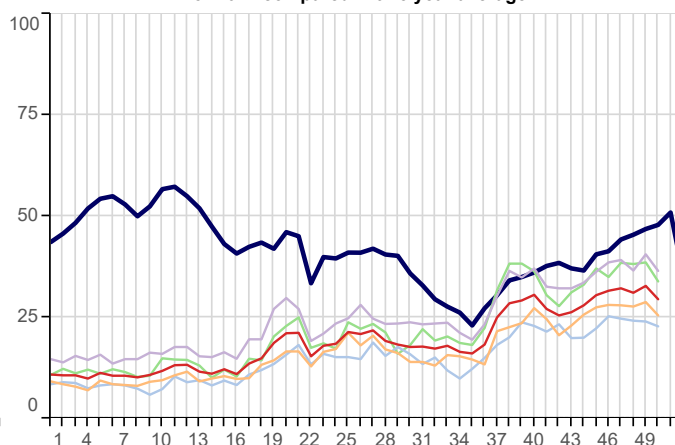
Acute Sinusitis (ICD10: J01)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



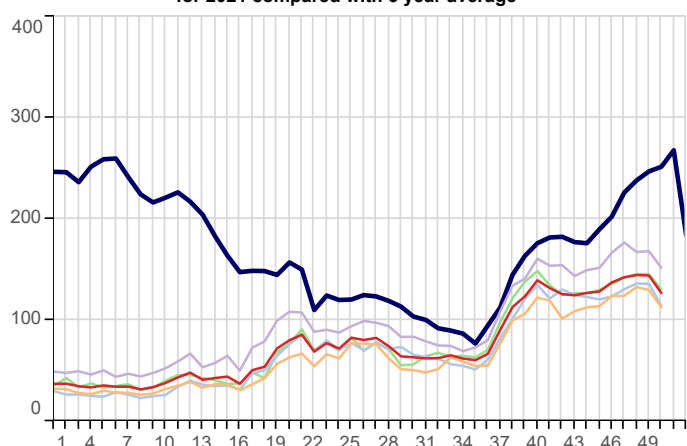
Strep Sore Throat, Scarletina and Peritonsillar Abscess (ICD10: A38,J02,J36)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



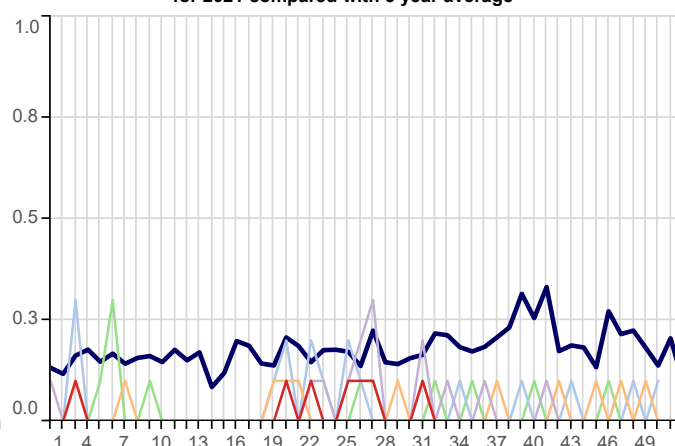
Acute Tonsillitis/Pharyngitis (ICD10: J02-J03)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



Upper Respiratory Tract Infections (URTI)(ICD10: J00-J06)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



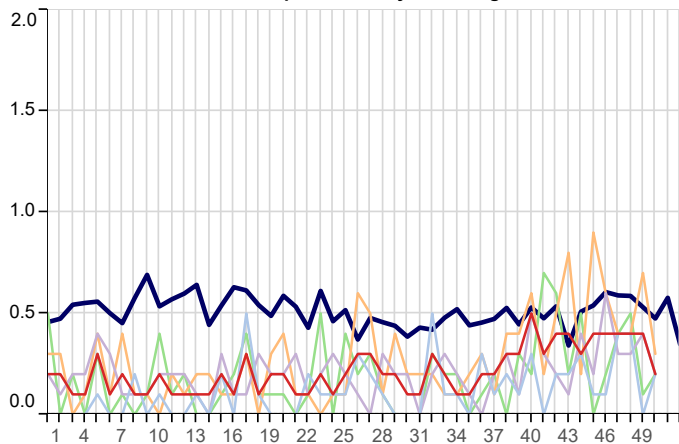
Whooping Cough (ICD10: A37)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



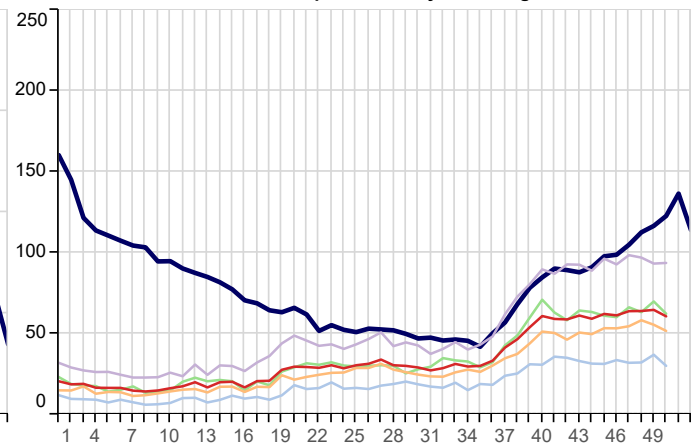
3. Respiratory Infections(Continued):

5yr Avg National London North South Midlands And East

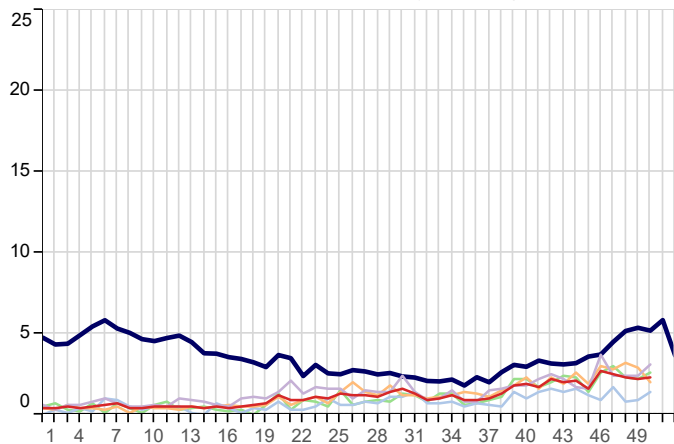
Infectious Mononucleosis (ICD10: B27)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



Lower Respiratory Tract Infections (LRTI)(ICD10: J20-J22)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



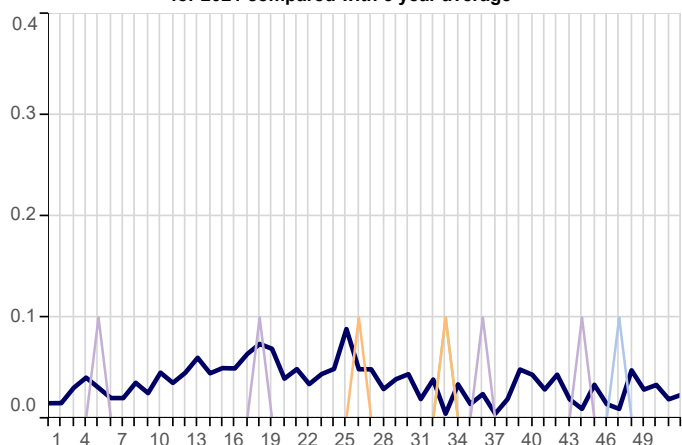
Acute Otitis Media (ICD10: H650-H651,H660,H669)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



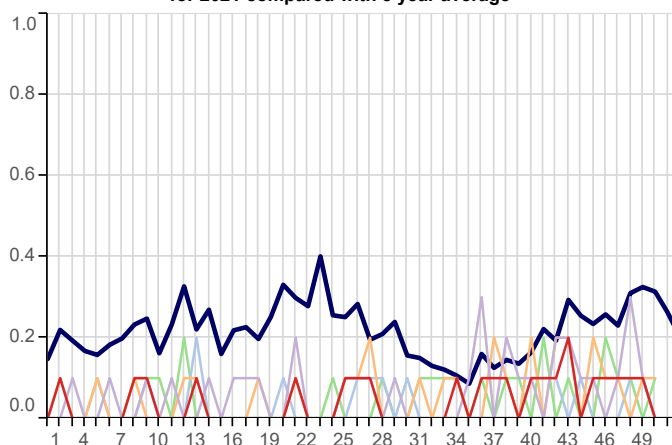
4. Vaccine Sensitive Disorders

5yr Avg National London North South Midlands And East

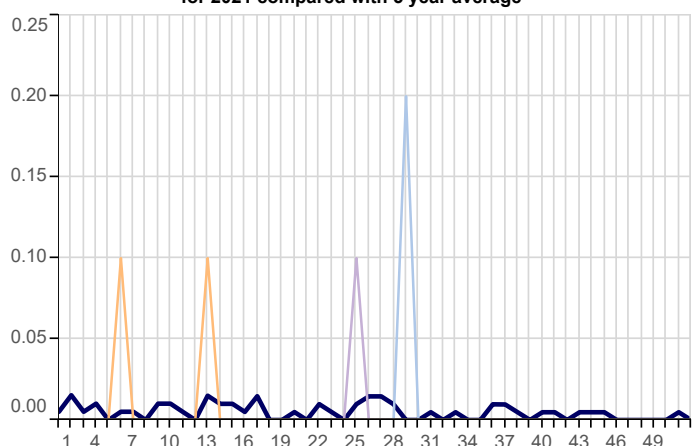
Measles (ICD10: B05)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



Mumps (ICD10: B26)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average

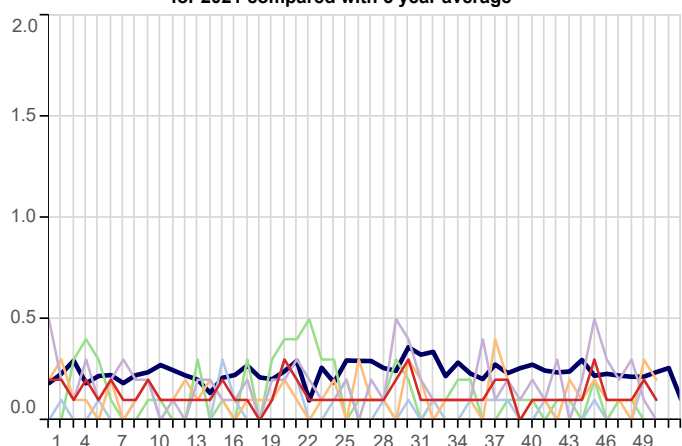


Rubella (ICD10: B06)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average

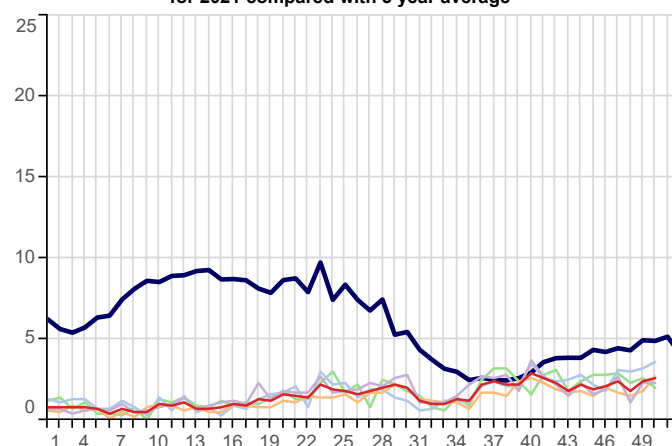


5. Skin Contagions

Bullous Dermatoses (ICD10: L10-L14)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



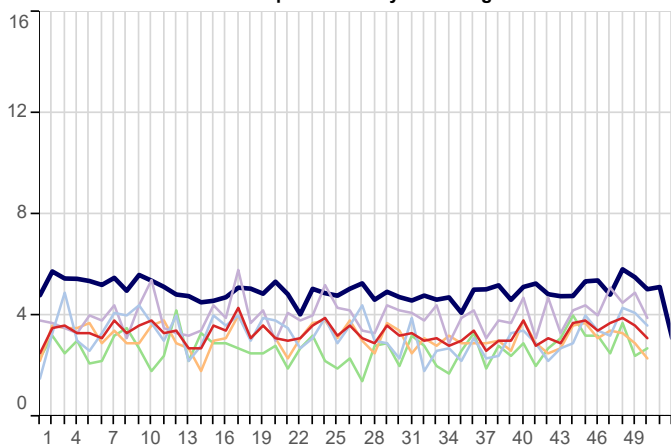
Chickenpox (ICD10: B01)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



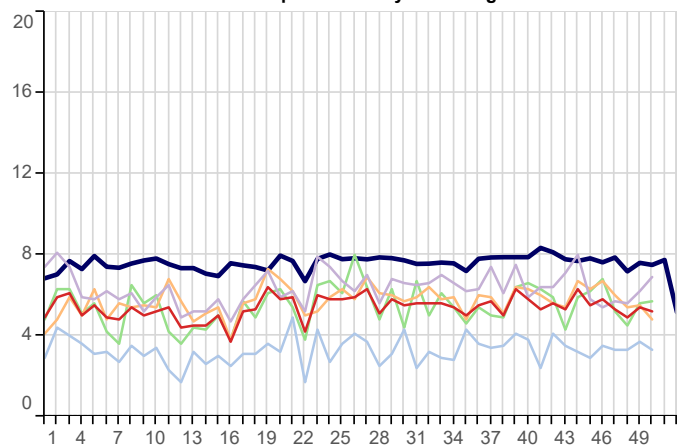
5. Skin Contagions (Continued)

5yr Avg National London North South Midlands And East

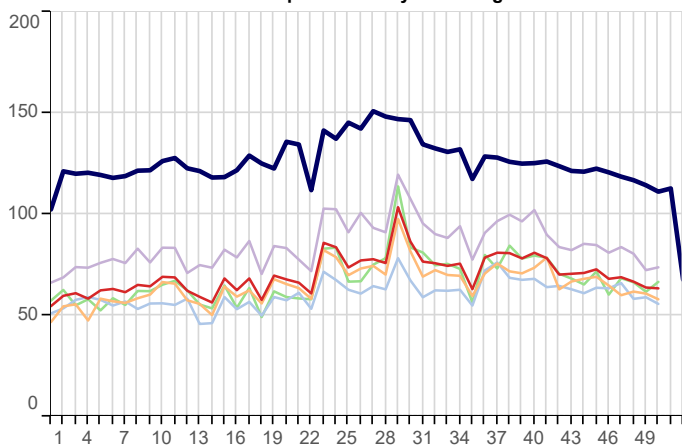
Herpes Simplex (ICD10: B00)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



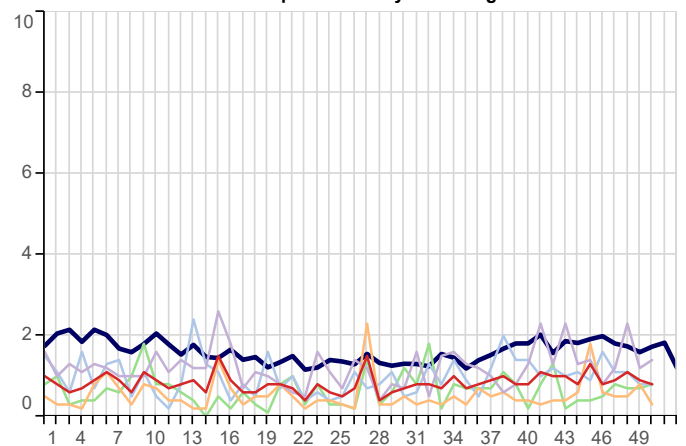
Herpes Zoster (ICD10: B02)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



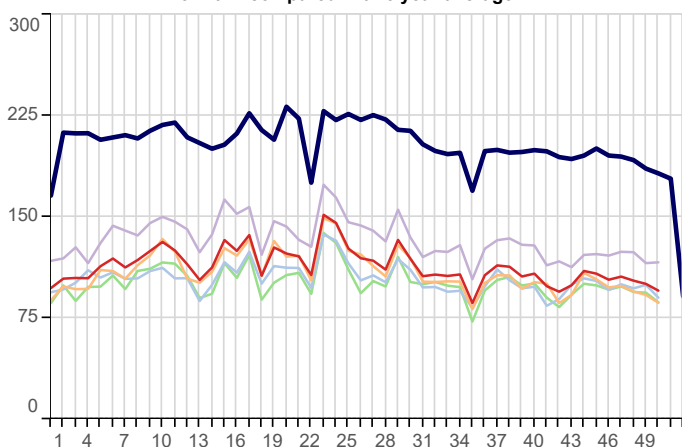
Infections of Skin & Subcutaneous Tissue (ICD10: L00-L08)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



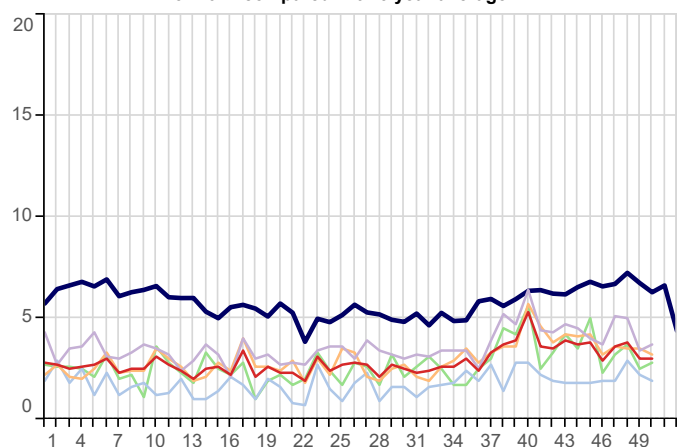
Scabies (ICD10: B86)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



Symptoms involving Skin & Oth Integument Tiss (ICD10: R20-R23)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



Impetigo (ICD10: L01)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



6. Disorders Affecting the Nervous System

5yr Avg

National

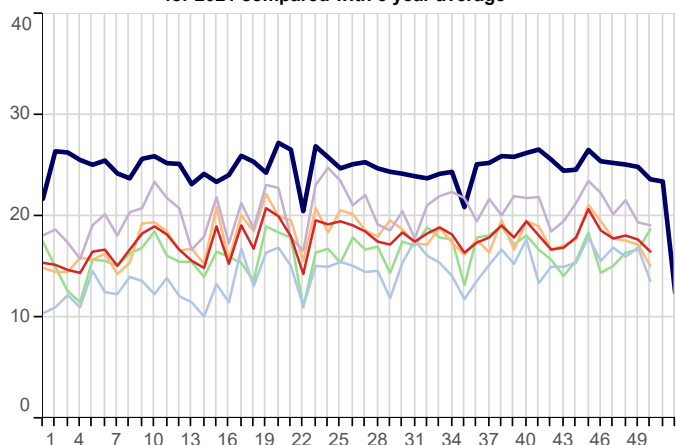
London

North

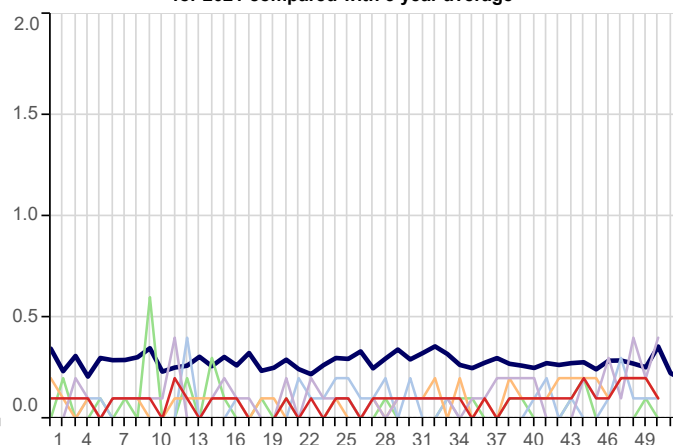
South

Midlands And East

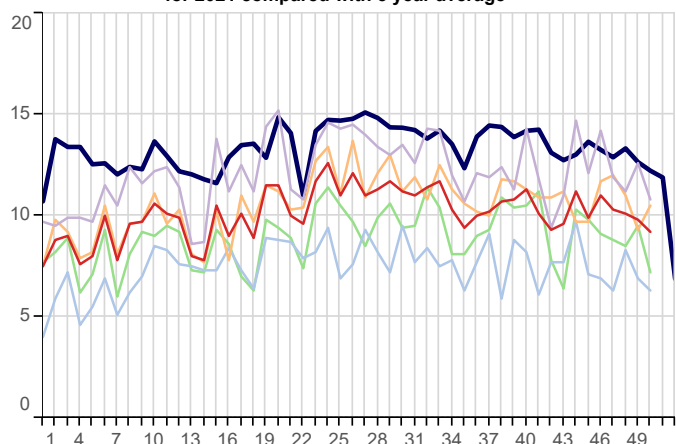
Disorders of The Peripheral Nervous System (ICD10: G50-G64,G70-G72)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



Meningitis/Encephalitis (ICD10: A170-A171, A390, A38-A85, A87, G00-G05)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average

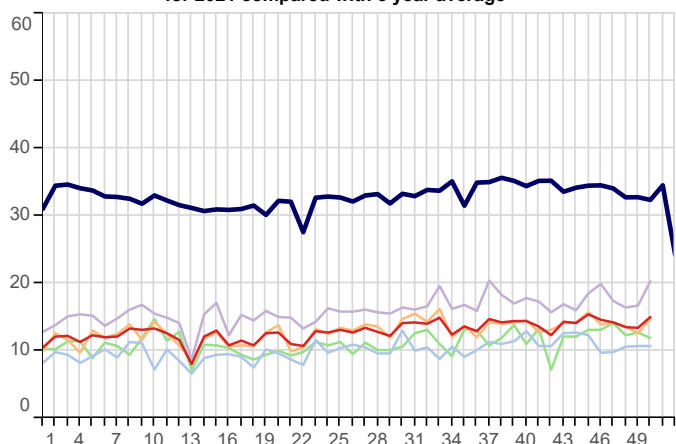


Symptoms Involving Nervous & Musculoskeletal (ICD10: R25-R29)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



7. Genitourinary System Disorders

Urinary Tract Infection/Cystitis (ICD10: N30,N390)
Weekly incidence (per 100,000 all ages) by region
for 2021 compared with 5 year average



8. Tabular Summary by Disease

Disease Name	Week beginning Week ending		13/12/2021 19/12/2021		06/12/2021 12/12/2021		29/11/2021 05/12/2021		22/11/2021 28/11/2021	
	Rate	Numer	Rate	Numer	Rate	Numer	Rate	Numer	Rate	Numer
Allergic Rhinitis	1.8	91	2.1	104	2.3	114	1.9	98		
Asthma	15.5	782	15.7	798	16.4	817	15.0	781		
Bronchitis	7.0	354	6.9	351	6.6	327	7.0	361		
Bullous Dermatoses	0.1	4	0.2	10	0.1	5	0.1	6		
Chickenpox	2.6	134	2.4	120	1.8	92	2.4	127		
Common Cold	2.5	128	3.0	151	3.2	161	2.6	136		
Conjunctival Disorders	21.8	1,103	24.6	1,249	25.4	1,266	21.9	1,139		
Herpes Simplex	3.1	155	3.6	183	3.9	194	3.7	190		
Herpes Zoster	5.2	264	5.4	272	4.9	244	5.3	274		
Impetigo	3.0	151	3.0	154	3.8	190	3.6	187		
Infectious Mononucleosis	0.2	12	0.4	18	0.4	19	0.4	20		
Influenza-like illness	2.4	123	3.0	153	3.4	170	2.8	147		
Infectious Intestinal Diseases	6.9	348	7.3	372	8.0	400	8.2	427		
Laryngitis and Tracheitis	3.6	182	3.9	199	4.6	227	4.9	255		
Lower Respiratory Tract Infections	60.7	3,071	64.7	3,277	64.0	3,193	63.9	3,320		
Measles	0.0	0	0.0	0	0.0	0	0.0	1		
Meningitis and Encephalitis	0.1	7	0.2	8	0.2	9	0.2	8		
Mumps	0.0	2	0.1	5	0.1	6	0.1	3		
Non-infective Enteritis and Colitis	12.9	653	12.2	619	12.7	635	13.1	682		
Otitis Media Acute	2.3	116	2.2	113	2.3	116	2.5	131		
Peripheral Nervous Disease	16.5	837	17.7	895	18.1	904	17.8	924		
Pleurisy	0.3	17	0.5	23	0.3	14	0.5	24		
Pneumonia and Pneumonitis	3.2	161	3.5	178	2.9	144	2.9	152		
Respiratory System Diseases	260.6	13,185	281.5	14,268	279.3	13,928	280.3	14,560		
Rubella	0.0	0	0.0	0	0.0	0	0.0	0		
Scabies	0.8	40	0.9	45	1.1	56	0.9	45		
Sinusitis	21.9	1,107	23.4	1,187	22.8	1,135	18.9	983		
Skin and Subcutaneous Tissue Infections	63.4	3,206	63.8	3,232	66.7	3,328	68.9	3,579		
Strep Throat and Peritonsillar Abscess	0.7	33	0.6	32	0.7	34	0.7	36		
Symptoms involving musculoskeletal	9.2	463	9.8	495	10.1	504	10.3	535		
Symptoms involving Respiratory and Chest	204.0	10,323	214.4	10,869	217.1	10,827	216.0	11,219		
Symptoms involving Skin and Integument Tissues	95.4	4,829	100.4	5,089	102.8	5,127	105.8	5,494		
Tonsillitis and acute Pharyngitis	29.5	1,491	32.8	1,661	31.1	1,550	32.2	1,670		
Upper Respiratory Tract Infections	126.8	6,415	144.1	7,306	144.6	7,212	142.4	7,394		
Urinary Tract Infections	15.0	757	13.4	678	13.5	675	14.2	735		
Viral Hepatitis	0.4	21	0.1	7	0.3	16	0.2	9		
Whooping Cough	0.0	1	0.0	1	0.0	1	0.0	2		
Practice Count		500		501		496		508		
Denom		5,060,049		5,068,832		4,986,217		5,194,175		

FURTHER INFORMATION:

About the report

Winter focus

The first two pages of data within this report focus on Influenza-like illness and COVID-19, in order to provide information about seasonal influenza and early warnings of any epidemic.

Rate calculation

Each weekly incidence rate is presented per 100,000 population. All presentations are for males and females, and for all age groups, unless otherwise stated.

The denominator used for this report is taken from our most recent extract of data from GP practice systems, and includes all patients currently registered with eligible practices. The denominator varies week-on-week as patients register and deregister; it may also be the case that all patients from an individual practice are excluded because of problems with the data extraction from that practice in a specific week. As stated above, patients who have withheld consent for data-sharing are excluded.

In addition to the national rate, we present data for the four NHS England regions: North; Midlands and East; South; and London.

Five-year averages

Weekly rates are set against a five-year average, previously we reported against a ten-year average. The change to a five-year average was made because longer-term trends in the incidence of disease have led to weekly rates for certain diseases becoming increasingly divergent from their ten-year average. The use of five-year averages lessens this effect and enables more meaningful comparison.

Threshold calculation for Influenza-Like Illness (ILI)

We are now using the Moving Epidemic Method (MEM) to calculate threshold and intensity levels for Influenza-Like Illness. MEM works by identifying seasonal epidemic peaks and then calculates thresholds and intensity levels based on the pre and post epidemic values. This allows us to report the severity of ILI against multiple thresholds, rather than a simple comparison with the five-year average as the wide variation in ILI year on year, especially during the seasonal peak, makes the average less representative.

In addition to the All Ages thresholds, we have also calculated thresholds for three age bands: those aged under 15, 15-64 year olds and those aged 65 and over. ILI incidence rates vary among different age groups, and the age-specific thresholds allow us to highlight epidemics where ILI disproportionately affects a particular age group.

This methodology is used by the European Centre for Disease Prevention and Control to standardise reporting of influenza activity across Europe, and is also in use by the UK Health Security Agency. Full details of the methodology can be found in: Vega *et al.* (2012) Influenza surveillance in Europe: establishing epidemic thresholds by the moving epidemic method. Influenza and Other Respiratory Viruses 7(4), 546–558. For ease of graphical representation, the final threshold (Very High) is not included in Graph A, page 2, but it is part of Table 3, page 3.

Both the *all-ages* thresholds and the *age-specific* thresholds are shown in Table 2, page 3. Ten years of data were used for *all-ages* and *age-specific* thresholds calculation (winter seasons 2006/07- 2016/17 excluding 2009/10).

About the Royal College of General Practitioners (RCGP) Research and Surveillance Centre (RSC)

Acknowledgement:

Staff from the Data Science department at the National Physical Laboratory (<https://www.npl.co.uk/data-science>) assisted in the provision of and extension of the primary care national surveillance reports during the 2020 SARS-CoV-2 pandemic; as well as adding resilience.

What we do

The RCGP RSC was established in 1957, with the current name in use since 2009. The Centre is an internationally renowned source of information, analysis and interpretation concerning the onset, patterns, prevalence and trends over time of morbidity in primary care. The RSC is an active research and surveillance unit that collects and monitors data; its most important research is the surveillance of influenza and the monitoring of vaccine effectiveness.

The RSC data and analytics hub is housed at the Oxford-Royal College of General Practitioners Research and Surveillance Centre.

Further information about the RSC can be found on our website:

<http://www.rcgp.org.uk/rsc>

Our data extraction process and information governance

Data are extracted twice weekly from practice systems by Wellbeing data management on the RCGP's behalf. Patients who have withheld consent for data sharing are excluded from the extraction process.

Data are pseudonymised as close to source as possible. Data are held on secure servers at the RCGP data and analytics hub at the Oxford-Royal College of General Practitioners Research and Surveillance Centre. Both Wellbeing data management and the University of Oxford are Registered and compliant with the Data Protection Act and fully compliant with all relevant NHS Digital data information governance best practice.

What the data is used for

The RCGP RSC has been providing reports weekly about health and disease, called the Weekly Returns Service (WRS) since 1964. The WRS monitors the number of patients consulting with new episodes of illness classified by diagnosis in England and provides weekly incidence rates per 100,000 population for these new episodes of illness. It is the key primary care element of the national disease monitoring systems run by the UK Health Security Agency. The bulletin can be found at the following URL:

<https://www.gov.uk/government/publications/syndromic-surveillance-summary>

In addition to the WRS, the data is used for other research studies. Any other uses of the data for research follow ethical approval or agreement from NIHR proportionate review, and where relevant Health Research Authority Confidential Advisory Group advice that further approval is not needed. Full details can be found on our website:

<http://www.rcgp.org.uk/rsc>

For further information

For further information about the work of the RSC, or if you would like to be included on our email notification list, please contact:

RCGP Research & Surveillance Centre
CIRC, First floor
30 Euston Square
London NW1 2FB
Tel: +44 (0)203 188 7690

Director: Professor Simon de Lusignan
MedicalDirectorRSC@rcgp.org.uk

University of Oxford
Nuffield Department of Primary Care Health
Sciences
Eagle House
7 Walton Well Road
Oxford OX2 6ED

