



UK Health  
Security  
Agency

# **Emergency Department Syndromic Surveillance System Bulletin (England) 2021 Week 52**

## Key messages

### Data reported to: 02 January 2022

During week 52, COVID-19-like ED attendances continued to increase across all age groups but small decreases were noted in London and South West regions. Acute respiratory infection and influenza-like illness attendances remained stable.

**Please note** this bulletin includes data up to and including 2 January 2022, including 2 bank holidays, which is expected to result in increased ED attendances.

## Syndromic indicators at a glance

**Table 1: The current trend (based on previous weeks, not only the current week) and the level (compared to the expected baseline), of each indicator included in this bulletin.**

Indicator	Trend <sup>1</sup>	Level
Total attendances ( <b>Figure 1</b> )	No trend	No baseline
COVID-19-like ( <b>Figure 2</b> )	Increasing	No baseline
Acute respiratory infections ( <b>Figure 3</b> )	No trend	Similar to baseline
Acute bronchiolitis or bronchitis ( <b>Figure 4</b> )	Decreasing	Below baseline
Influenza-like illness ( <b>Figure 5</b> )	No trend	Below baseline
Pneumonia ( <b>Figure 6</b> )	Increasing	Below baseline
Asthma ( <b>Figure 7</b> )	Decreasing	Below baseline
Gastroenteritis ( <b>Figure 8</b> )	Decreasing	Above baseline
Cardiac ( <b>Figure 9</b> )	No trend	Below baseline
Myocardial ischaemia ( <b>Figure 10</b> )	No trend	Below baseline
Acute alcohol intoxication ( <b>Figure 11</b> )	No trend	Similar to baseline
Mental health ( <b>Figure 12</b> )	No trend	No baseline
Impact of cold ( <b>Figure 13</b> )	No trend	No baseline

<sup>1</sup> trend reports on the trend seen over most recent and earlier weeks

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# About this syndromic surveillance system

This bulletin presents data from the UK Health Security Agency (UKHSA) emergency department syndromic surveillance system.

Syndromic surveillance can be used to:

- assess current trends
- assess current trends and levels compared to historical baselines
- compare trends between age groups/areas

Syndromic surveillance should not be used to:

- estimate total burden or number of 'cases' of a condition (see **Notes and caveats**)
- compare levels between age groups/areas

Fully anonymised, daily ED data are analysed and reported here, to identify and describe trends for a variety of syndromic indicators:

- syndromic indicators include groupings such as acute respiratory tract infections, gastroenteritis and myocardial ischaemia
- syndromic indicators are based on:
  - the primary diagnosis for each attendance
  - other diagnoses may be recorded, but are not used for indicator grouping
  - diagnoses may be based on signs/symptoms and may not be laboratory confirmed
- **Key messages** describes any notable trends nationally (England), by age group and/or by geographical area (based on UKHSA Regions)
- the full list of syndromic indicators reported here, along with their current level and trend, are summarised in **Table 1**
- charts are provided for each syndromic indicator, on a national basis, by age group and by geographical area (UKHSA Region). Each chart includes a year of data with:
  - 7-day moving averages (adjusted for weekends and bank holidays) to aid in the identification of trend
  - statistical baselines (where available) to aid in the assessment of level compared to historical expectations

For further information please see the **Notes and caveats** section.

Previous weekly bulletins from this system are available [here](#).

## Data quality issues of note this week

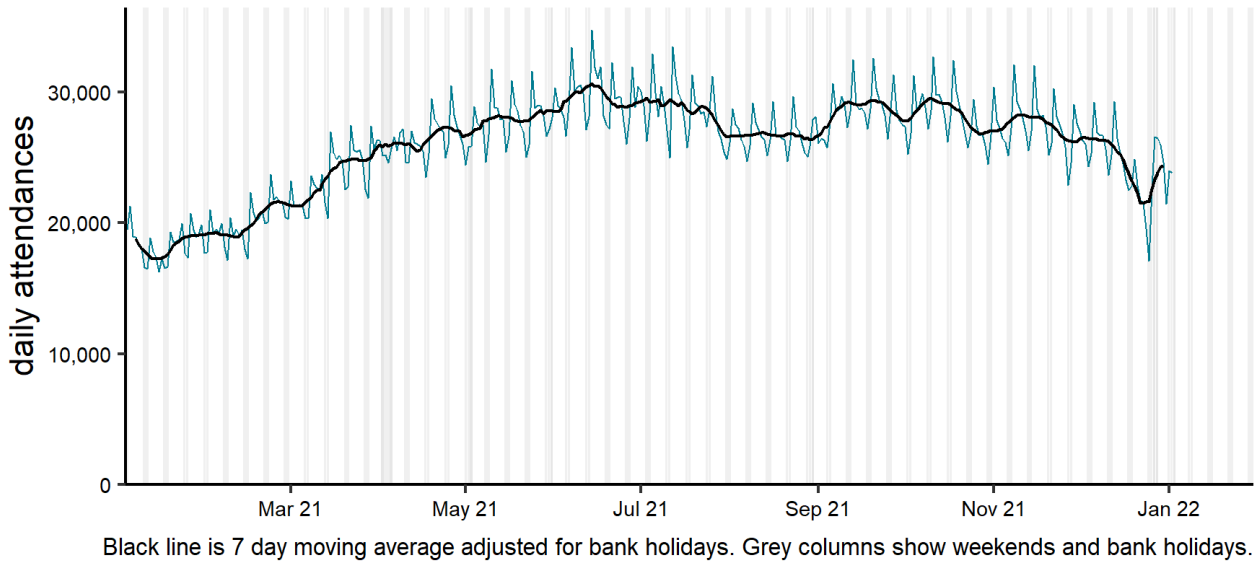
No issues identified.

See **Table 2** and **Table 3** for the numbers of EDs included this week.

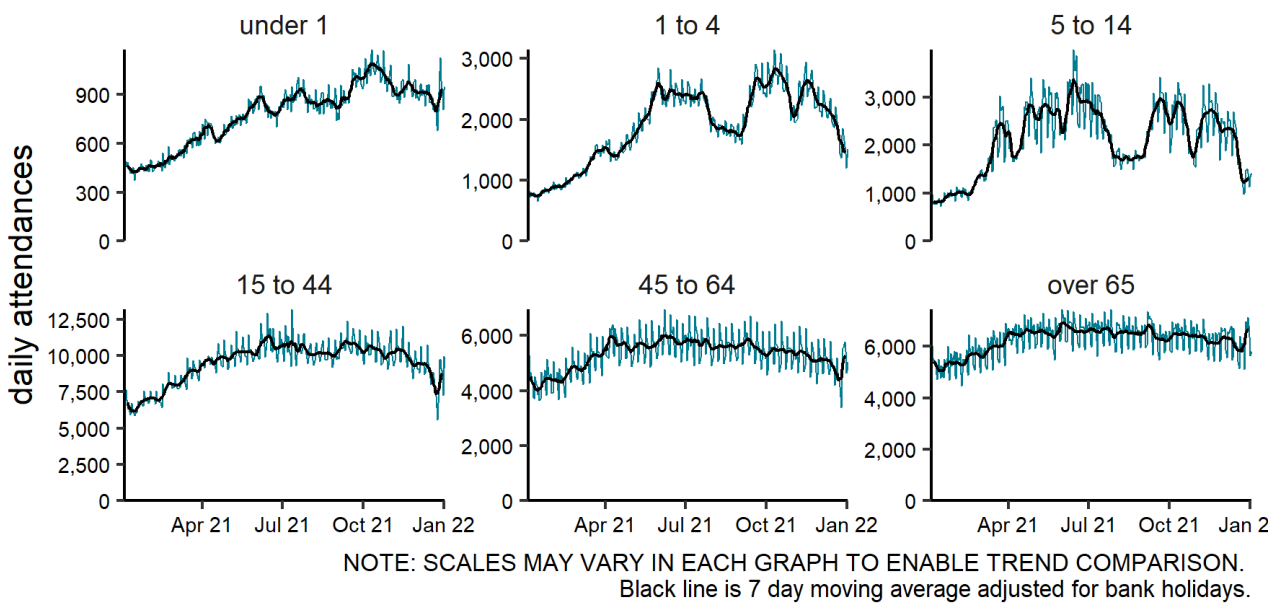
# Total attendances

**Figure 1: Daily number of ED attendances (and 7-day moving average adjusted for bank holidays) recorded in this sentinel syndromic surveillance system in England (a) nationally, (b) by age and (c) by UKHSA Region.**

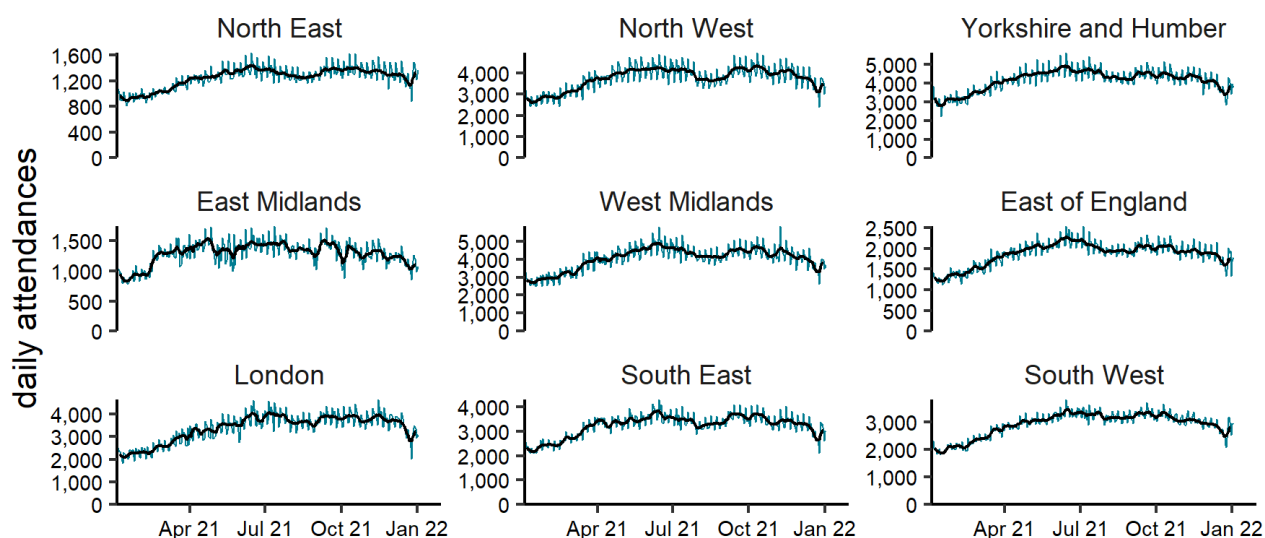
**(a)** Total attendances 03/01/2021 - 02/01/2022



**(b)** Total attendances by age group (years) 03/01/2021 - 02/01/2022



(c) Total attendances by region 03/01/2021 - 02/01/2022



NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON. Black line is 7 day moving average adjusted for bank holidays.

**Table 2: The number of emergency department (ED) attendances and number with a diagnosis code included in surveillance each day during the most recent week.**

Date	Total attendances <sup>2</sup>	Diagnoses included <sup>2</sup>
27 December 2021	26,572	17,234
28 December 2021	26,457	17,621
29 December 2021	25,959	16,435
30 December 2021	24,676	15,954
31 December 2021	21,478	13,885
01 January 2022	23,992	15,368
02 January 2022	23,846	15,390

**Table 3: The number of EDs in total and in each UKHSA Region included in surveillance each day during the most recent week.**

UKHSA Region	Number of EDs <sup>2</sup>
North East	7
North West	16
Yorkshire and Humber	16
West Midlands	16
East Midlands	4
East of England	8
London	13
South West	15
South East	15
Total	110

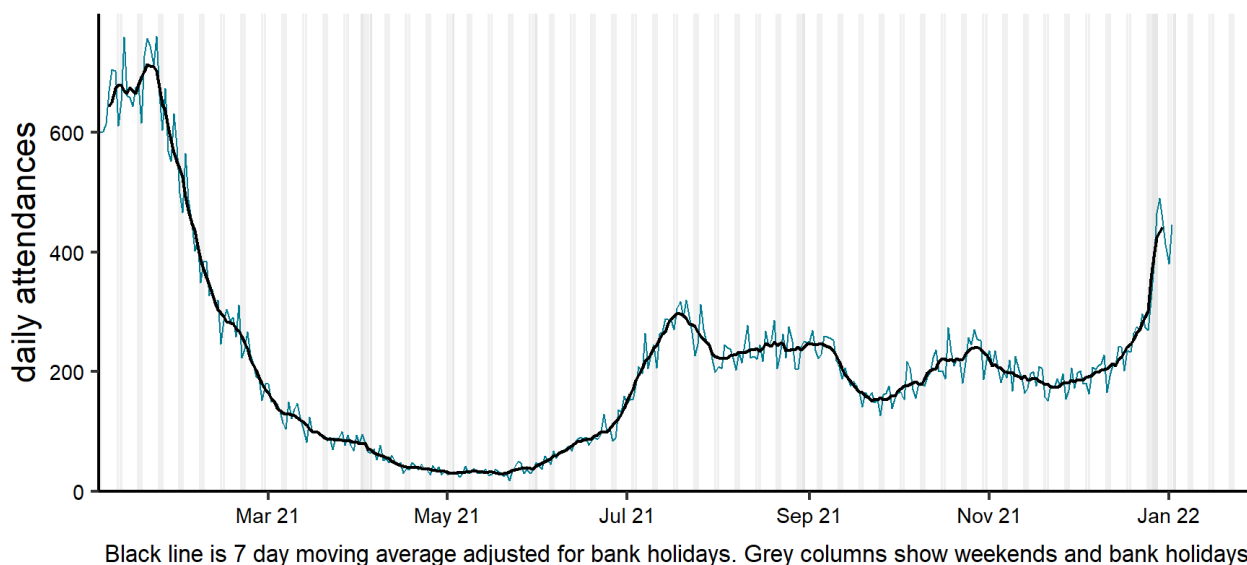
<sup>2</sup> only attendances from Type 01 EDs meeting the weekly reporting criteria are included in this report, see **Notes and caveats** for further details.

# Respiratory conditions

## COVID-19-like

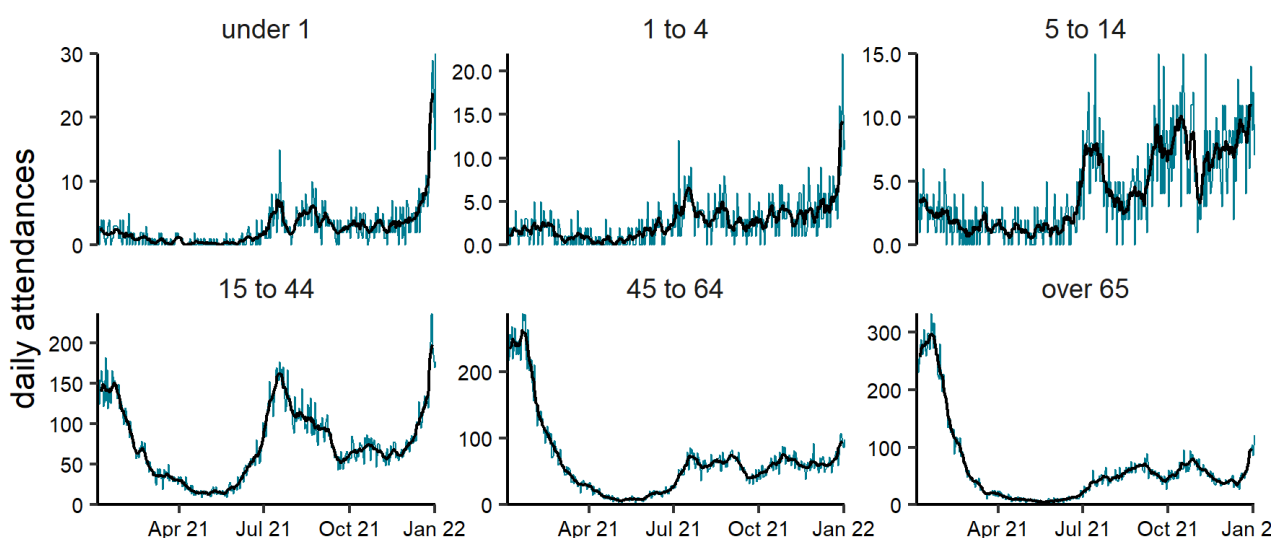
**Figure 2: Daily number of COVID-19-like ED attendances (and 7-day moving average adjusted for bank holidays), England (a) nationally, (b) by age and (c) by UKHSA Region.**

**(a)** COVID-19-like 03/01/2021 - 02/01/2022



Black line is 7 day moving average adjusted for bank holidays. Grey columns show weekends and bank holidays.

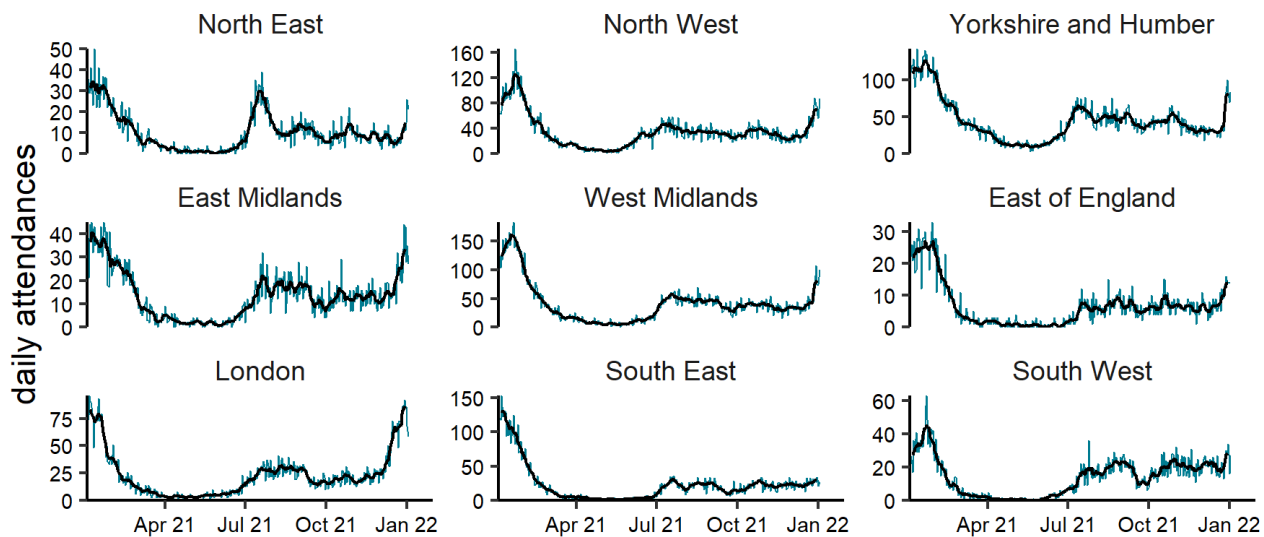
**(b)** COVID-19-like by age group (years) 03/01/2021 - 02/01/2022



NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON. Black line is 7 day moving average adjusted for bank holidays.

(c)

COVID-19-like by region 03/01/2021 - 02/01/2022

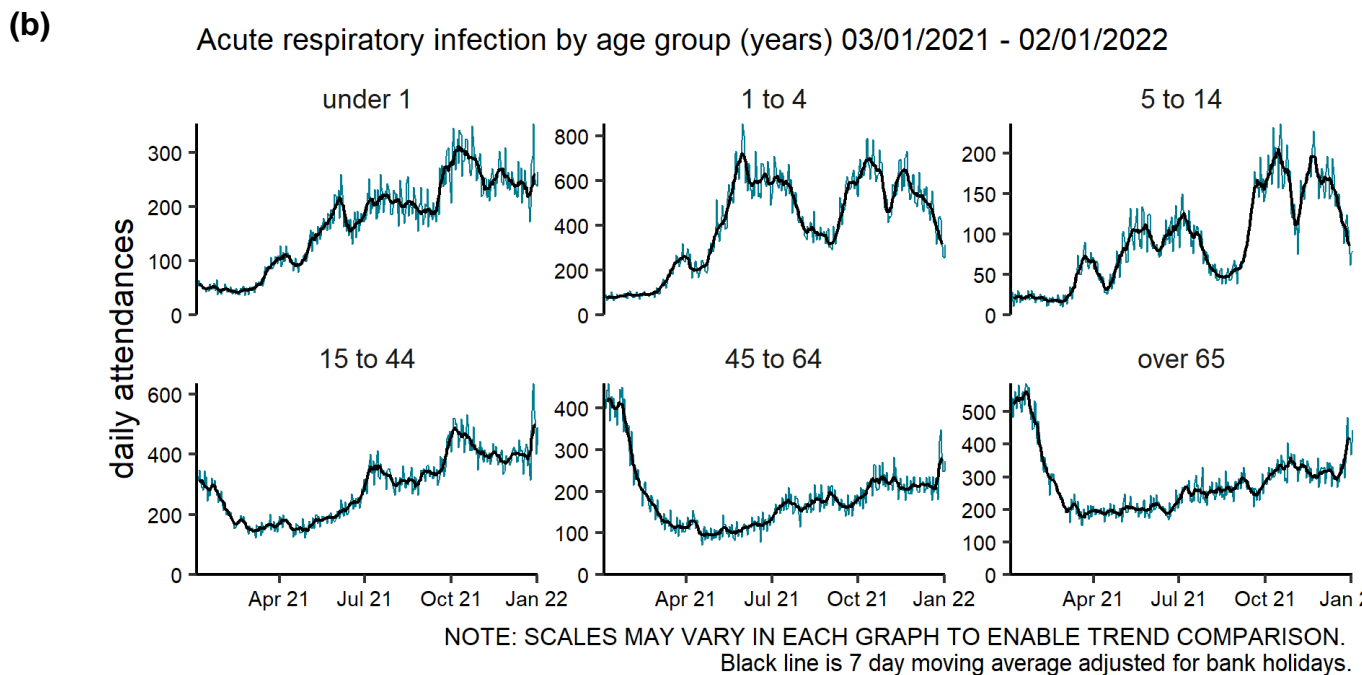
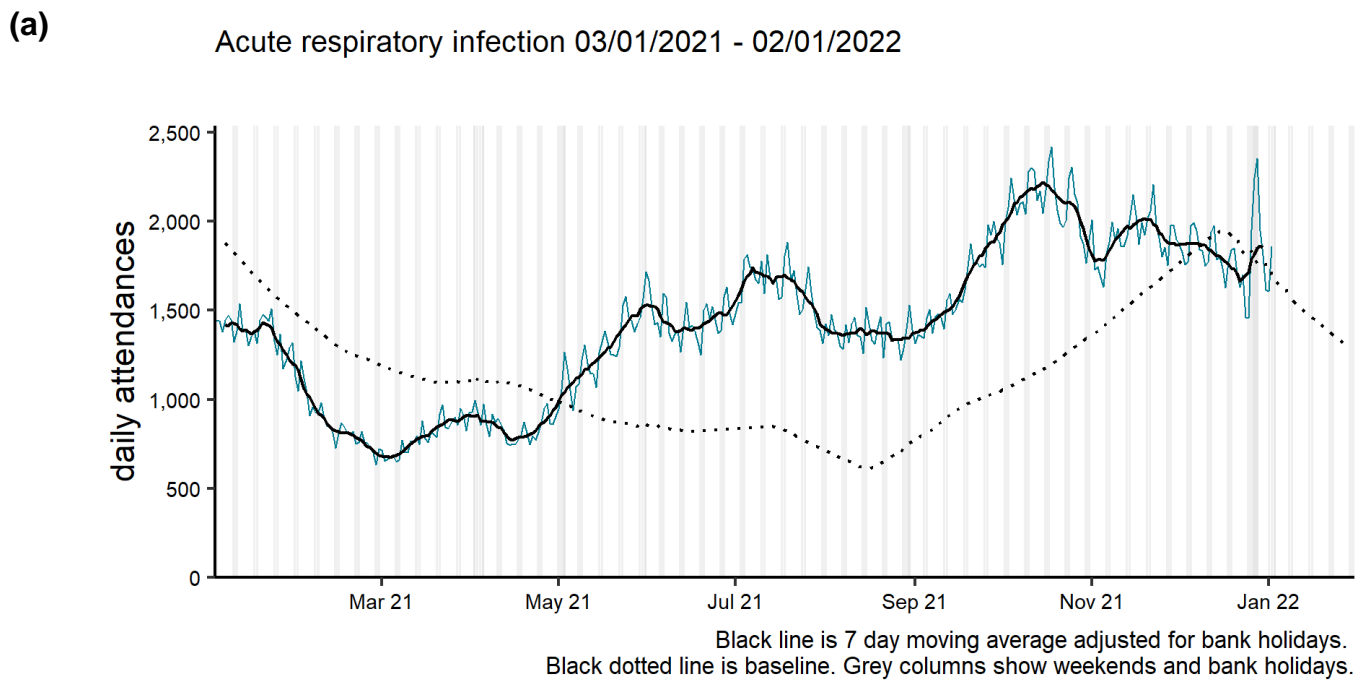


NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON.  
Black line is 7 day moving average adjusted for bank holidays.



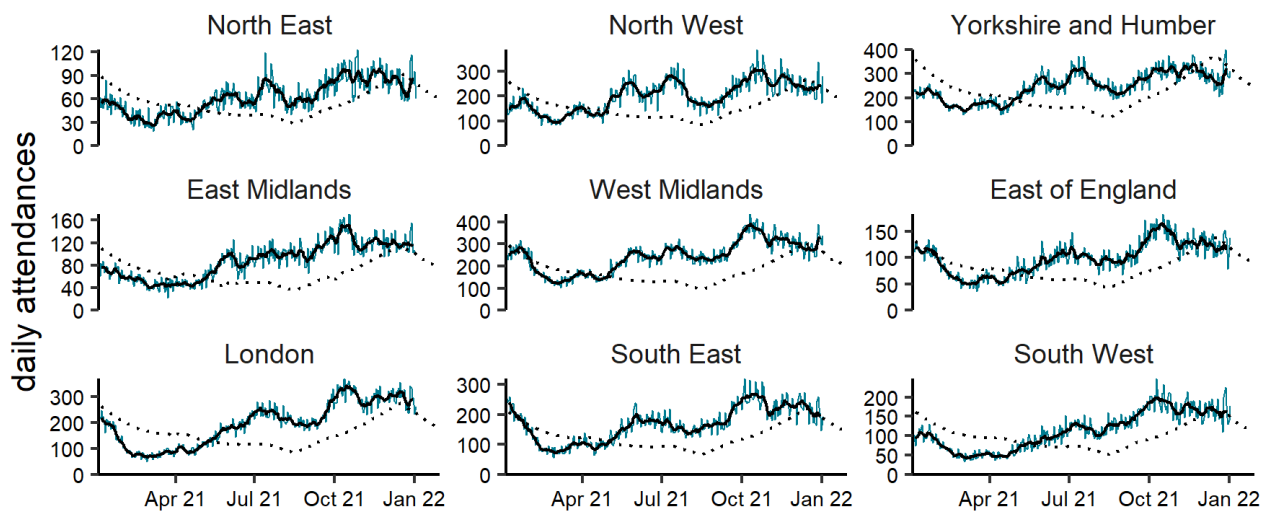
# Acute respiratory infections

**Figure 3: Daily number of acute respiratory infection ED attendances (and 7-day moving average adjusted for bank holidays), England (a) nationally, (b) by age and (c) by UKHSA Region.**



(c)

Acute respiratory infection by region 03/01/2021 - 02/01/2022



NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON.

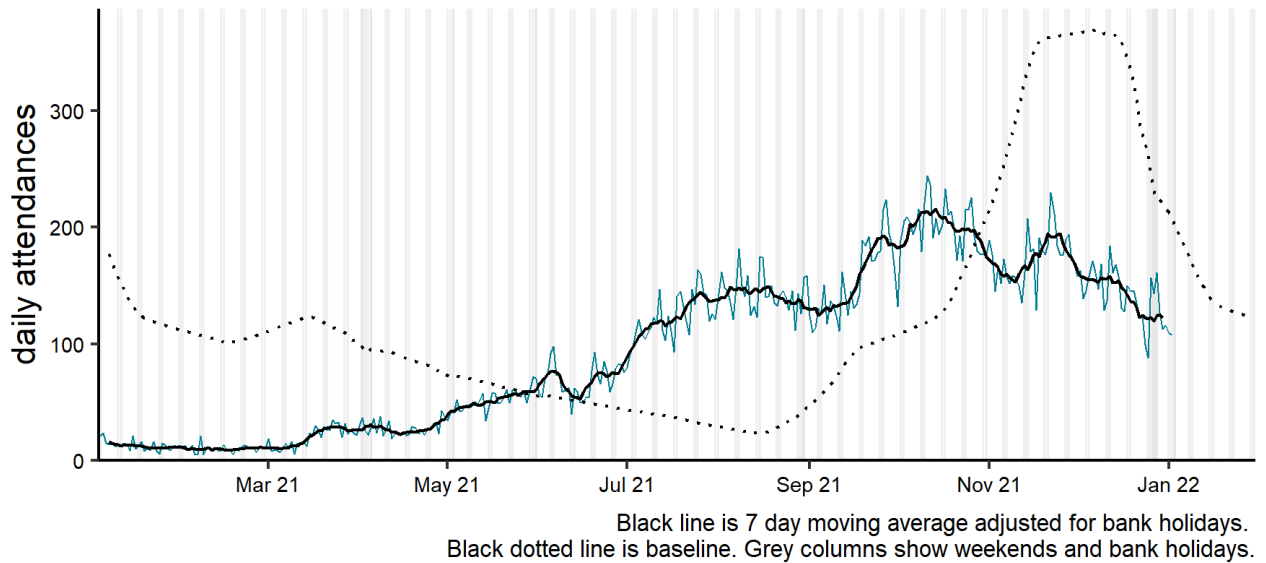
Black line is 7 day moving average adjusted for bank holidays.

Black dotted line is baseline.

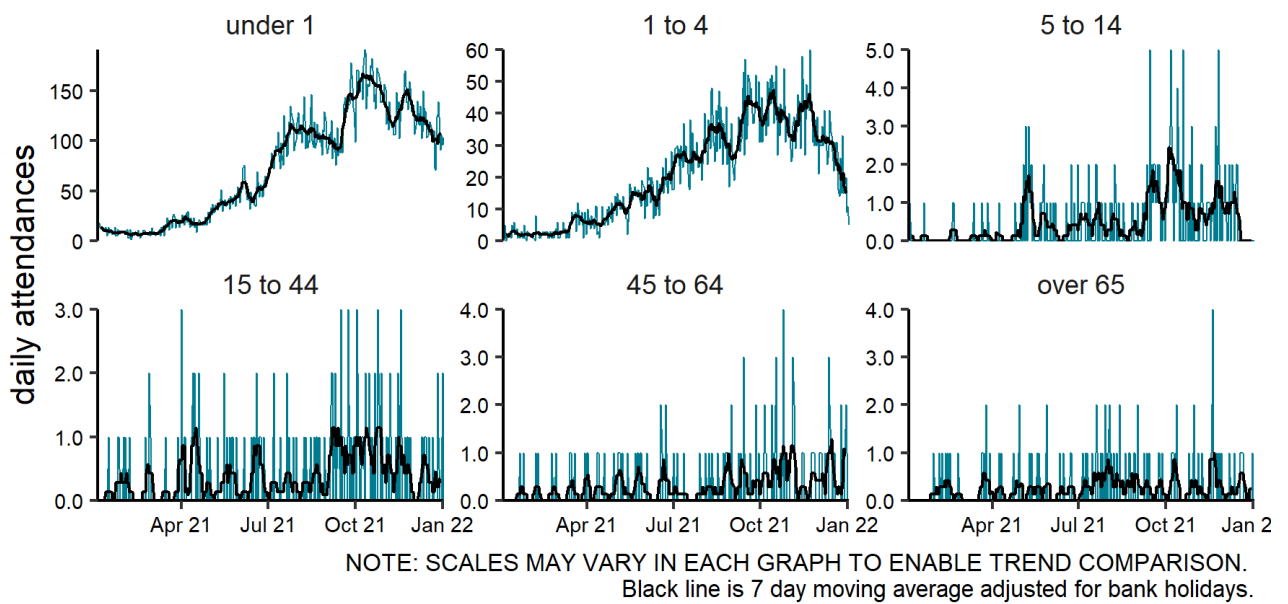
# Acute bronchiolitis/ bronchitis

**Figure 4: Daily number of acute bronchiolitis/bronchitis ED attendances (and 7-day moving average adjusted for bank holidays), England (a) nationally, (b) by age and (c) by UKHSA Region.**

**(a)** Acute bronchiolitis 03/01/2021 - 02/01/2022

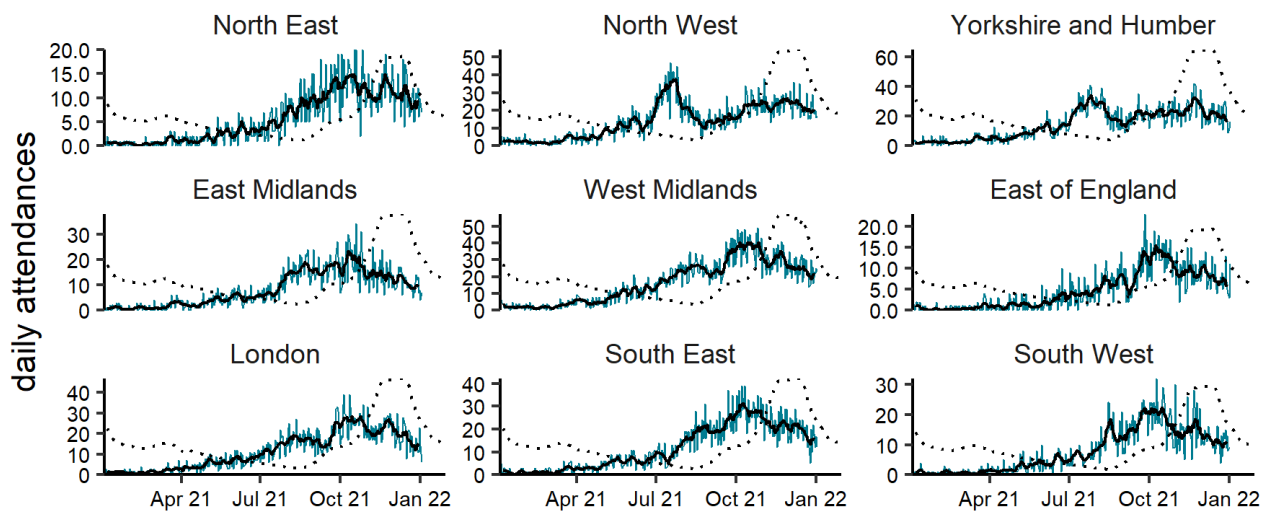


**(b)** Acute bronchiolitis by age group (years) 03/01/2021 - 02/01/2022



(c)

Acute bronchiolitis by region 03/01/2021 - 02/01/2022



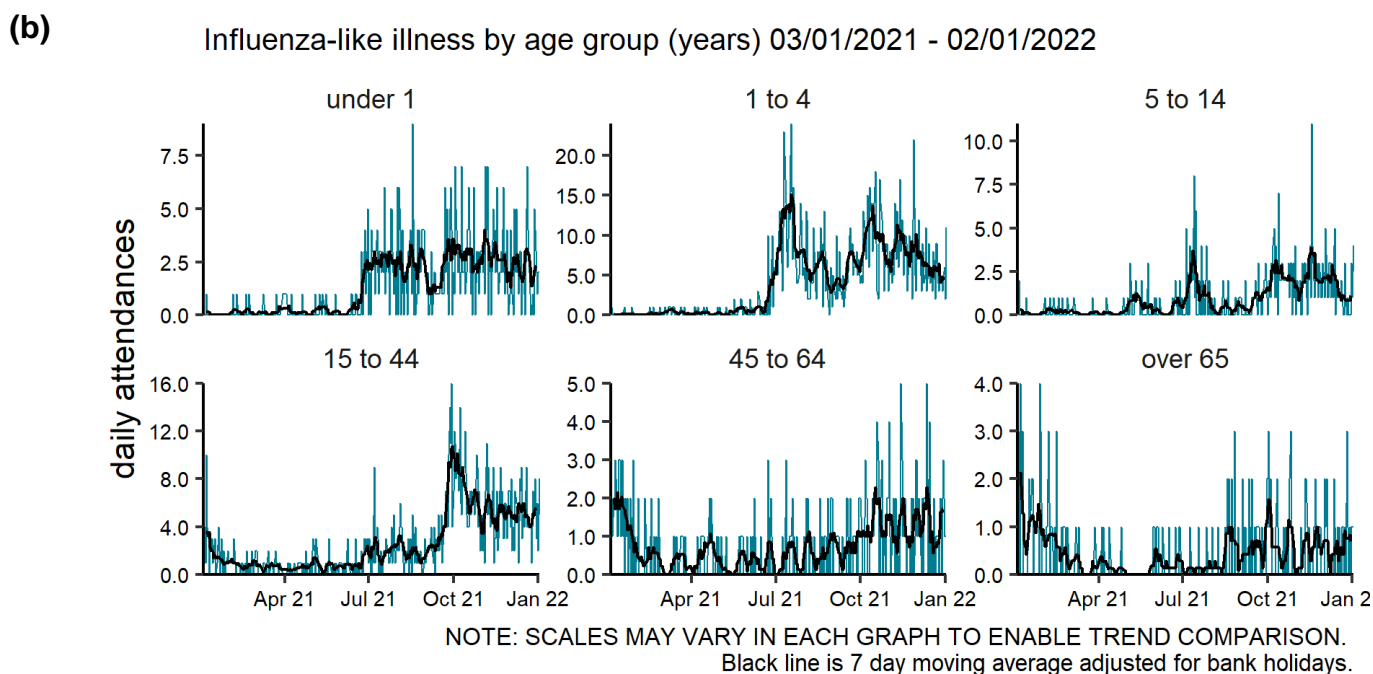
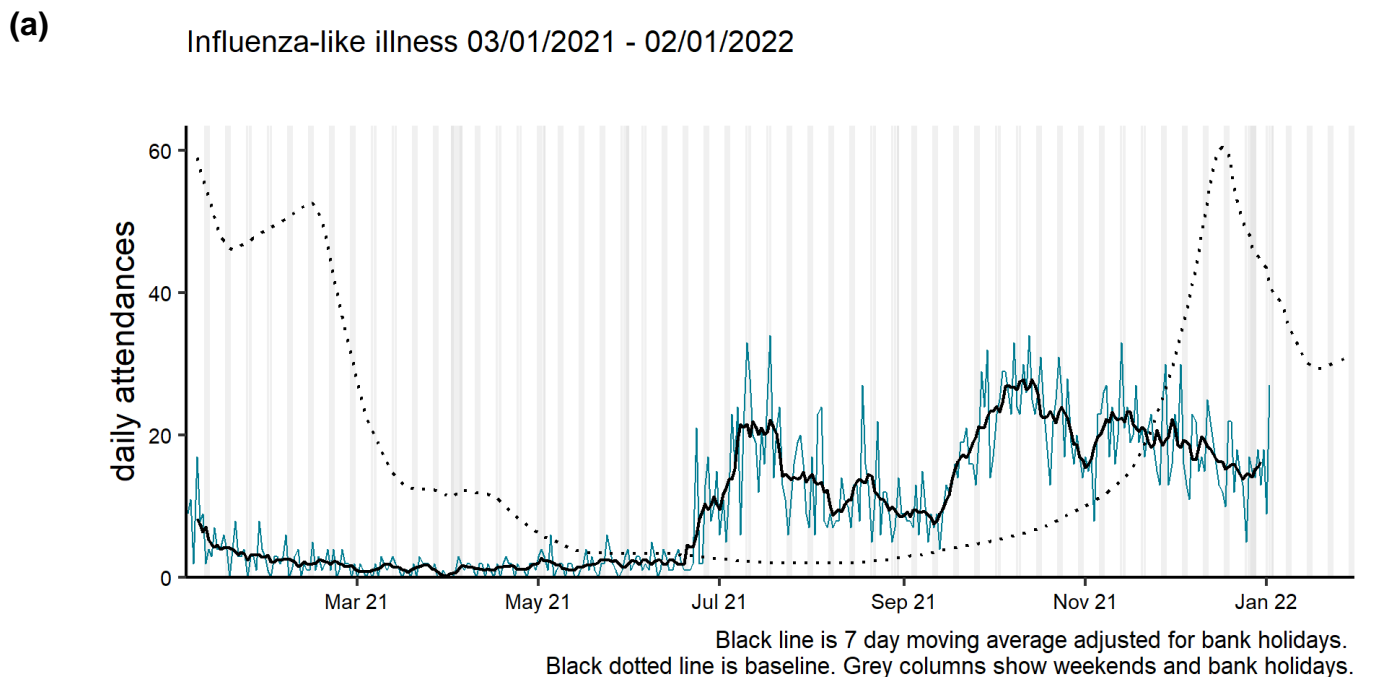
NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON.

Black line is 7 day moving average adjusted for bank holidays.

Black dotted line is baseline.

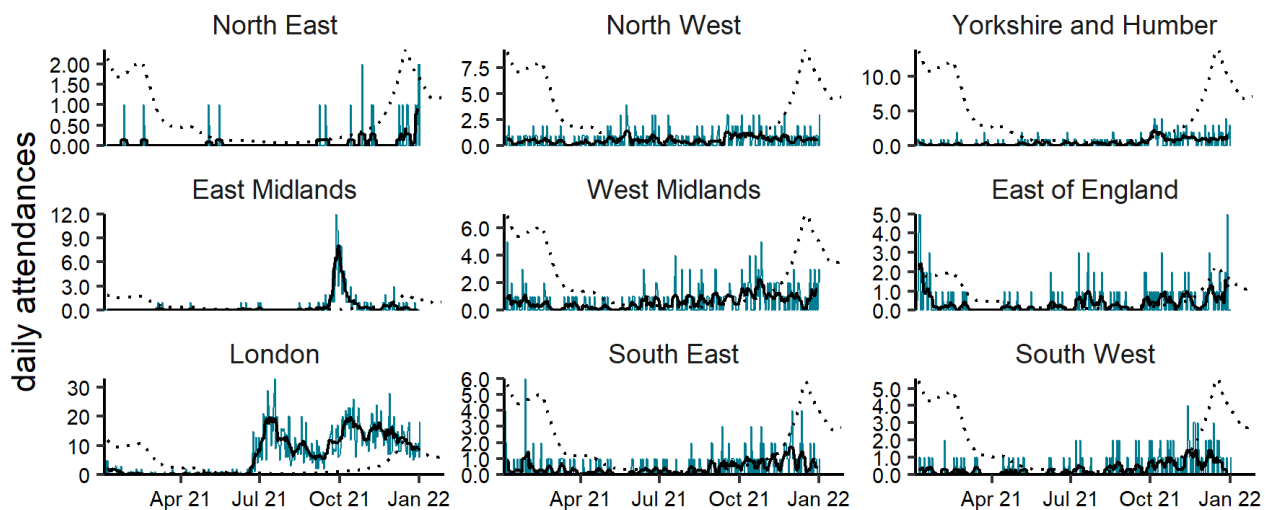
## Influenza-like illness

**Figure 5: Daily number of influenza-like illness ED attendances (and 7-day moving average adjusted for bank holidays), England (a) nationally, (b) by age and (c) by UKHSA Region.**



(c)

Influenza-like illness by region 03/01/2021 - 02/01/2022



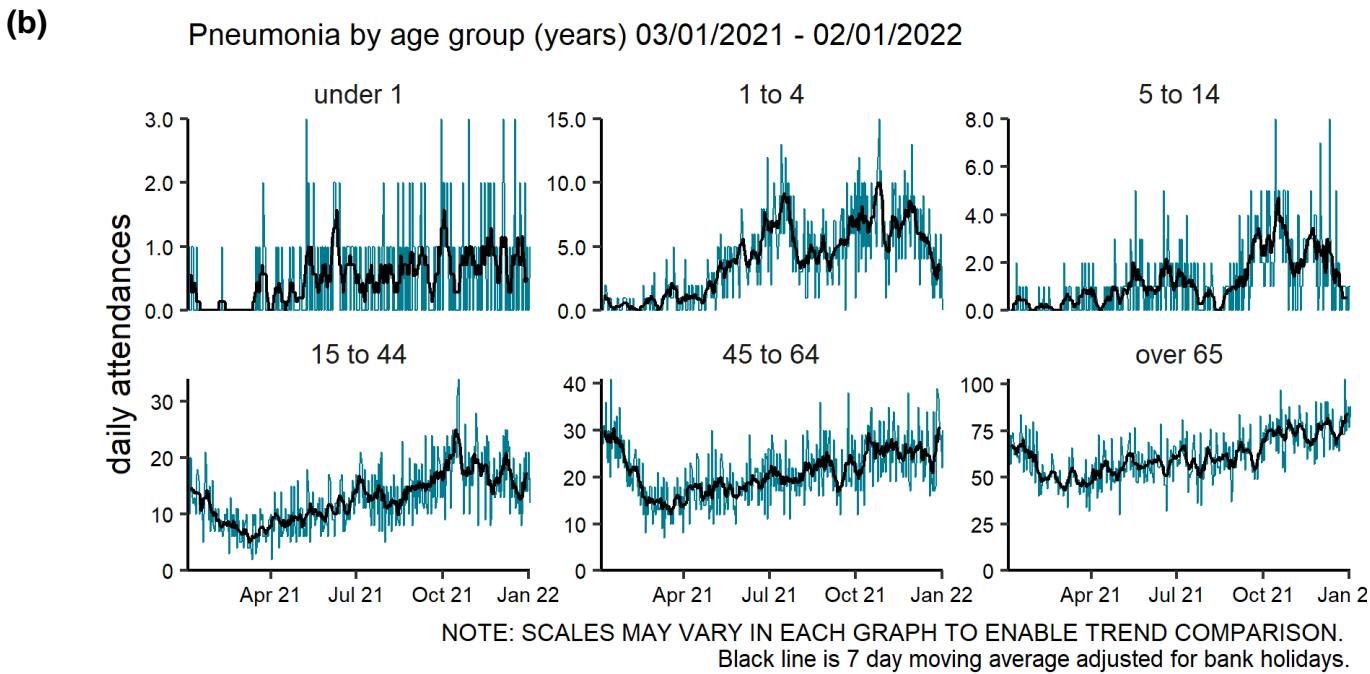
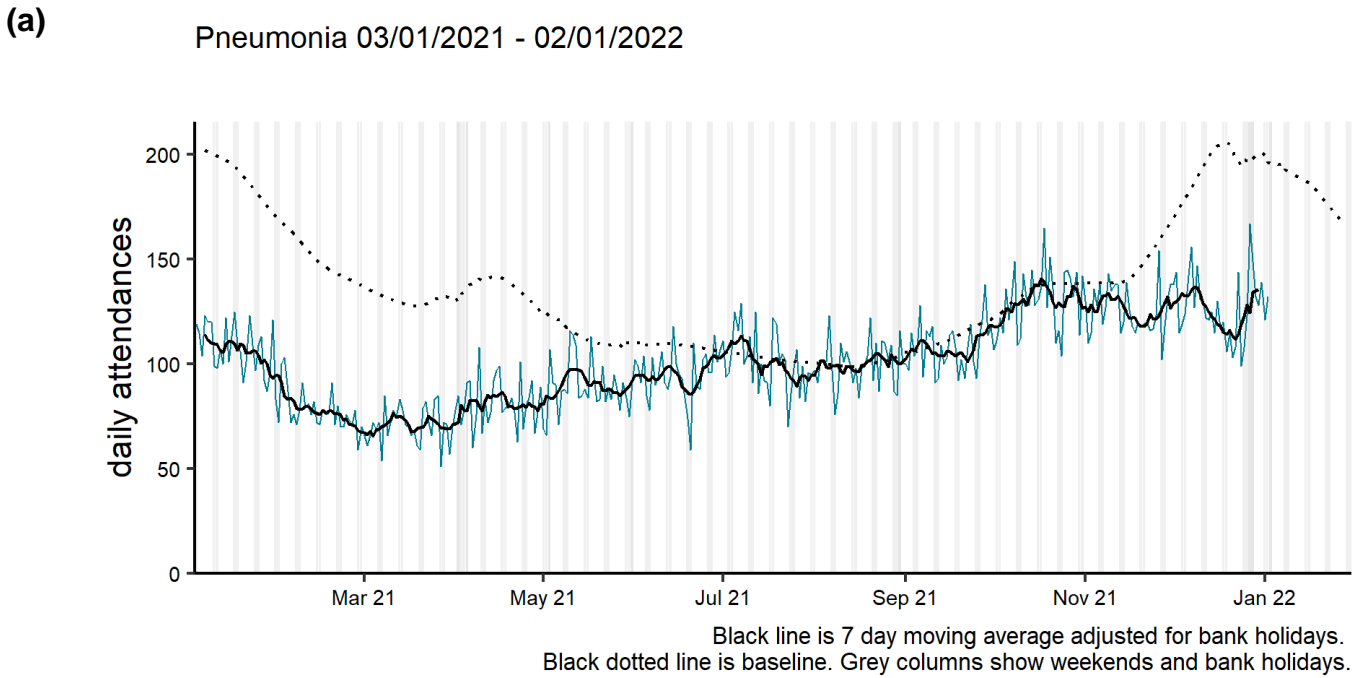
NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON.

Black line is 7 day moving average adjusted for bank holidays.

Black dotted line is baseline.

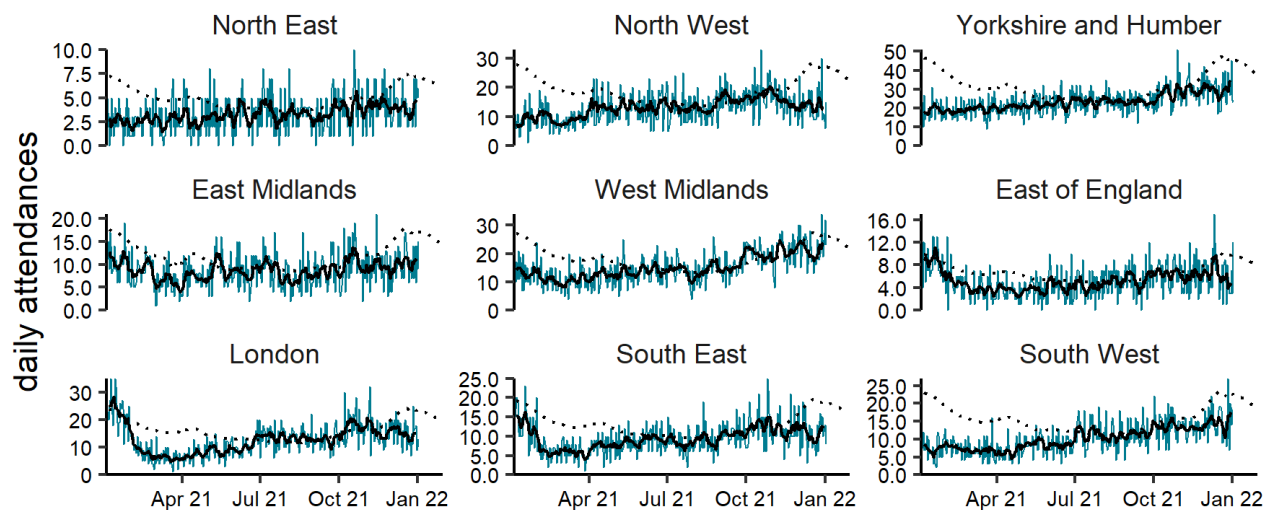
# Pneumonia

**Figure 6: Daily number of pneumonia ED attendances (and 7-day moving average adjusted for bank holidays), England (a) nationally, (b) by age and (c) by UKHSA Region.**



(c)

Pneumonia by region 03/01/2021 - 02/01/2022



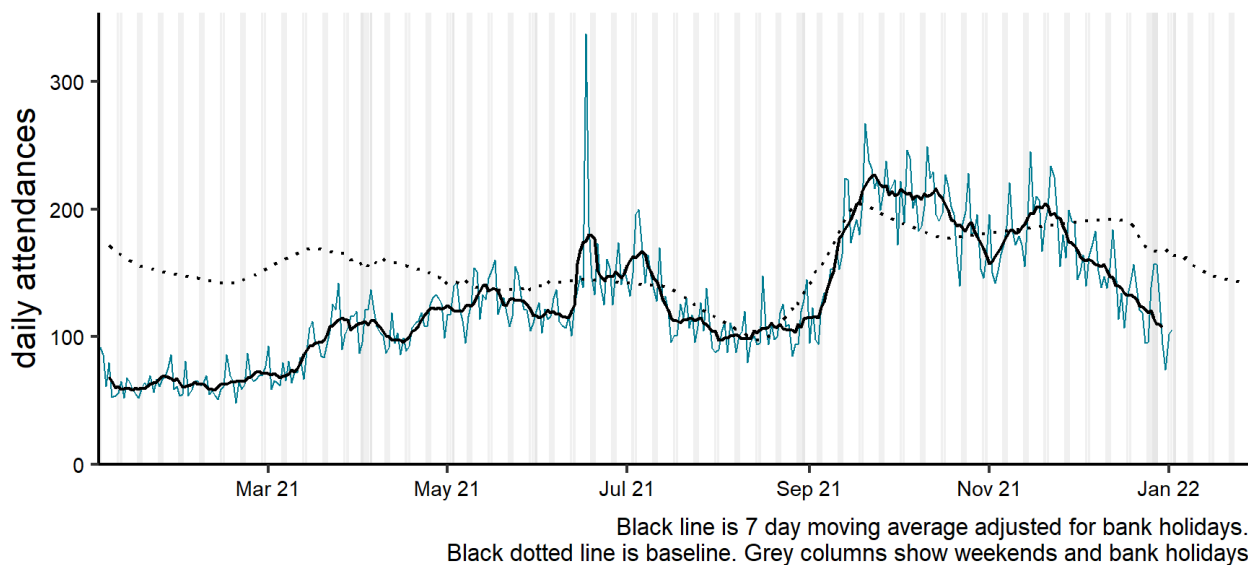
NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON.  
Black line is 7 day moving average adjusted for bank holidays.  
Black dotted line is baseline.



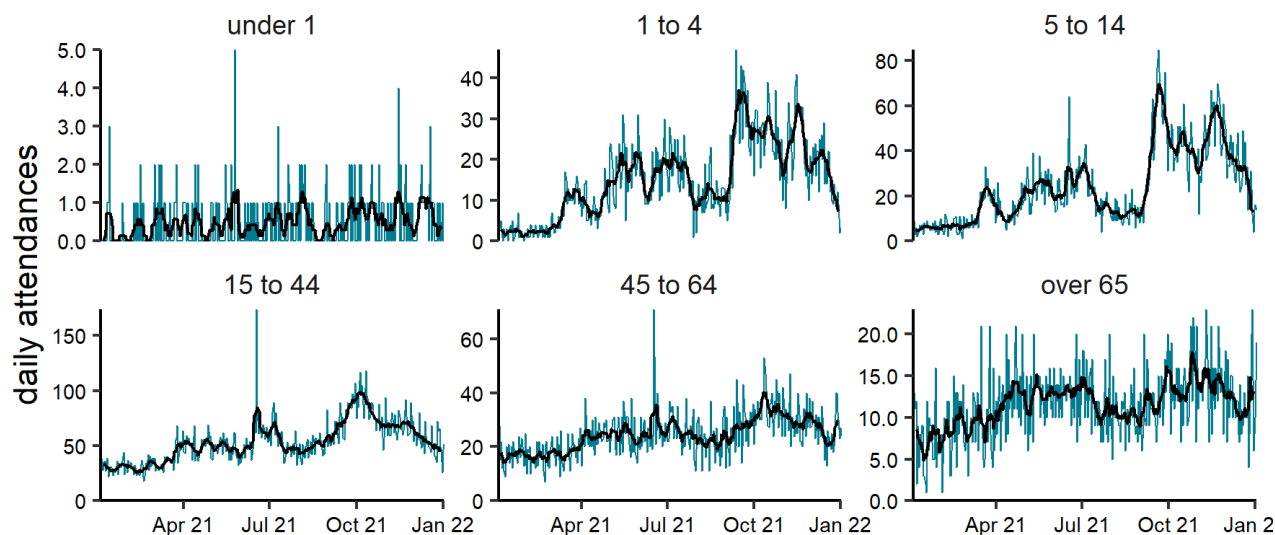
# Asthma

**Figure 7: Daily number of asthma ED attendances (and 7-day moving average adjusted for bank holidays), England (a) nationally, (b) by age and (c) by UKHSA Region.**

(a) Asthma 03/01/2021 - 02/01/2022



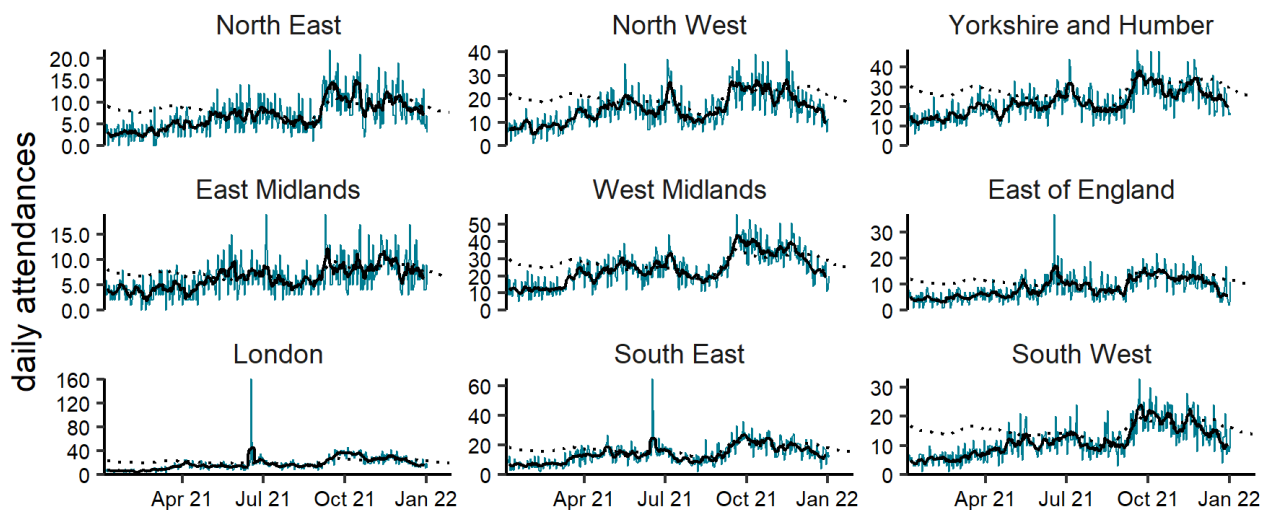
(b) Asthma by age group (years) 03/01/2021 - 02/01/2022



NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON.  
Black line is 7 day moving average adjusted for bank holidays.

(c)

Asthma by region 03/01/2021 - 02/01/2022



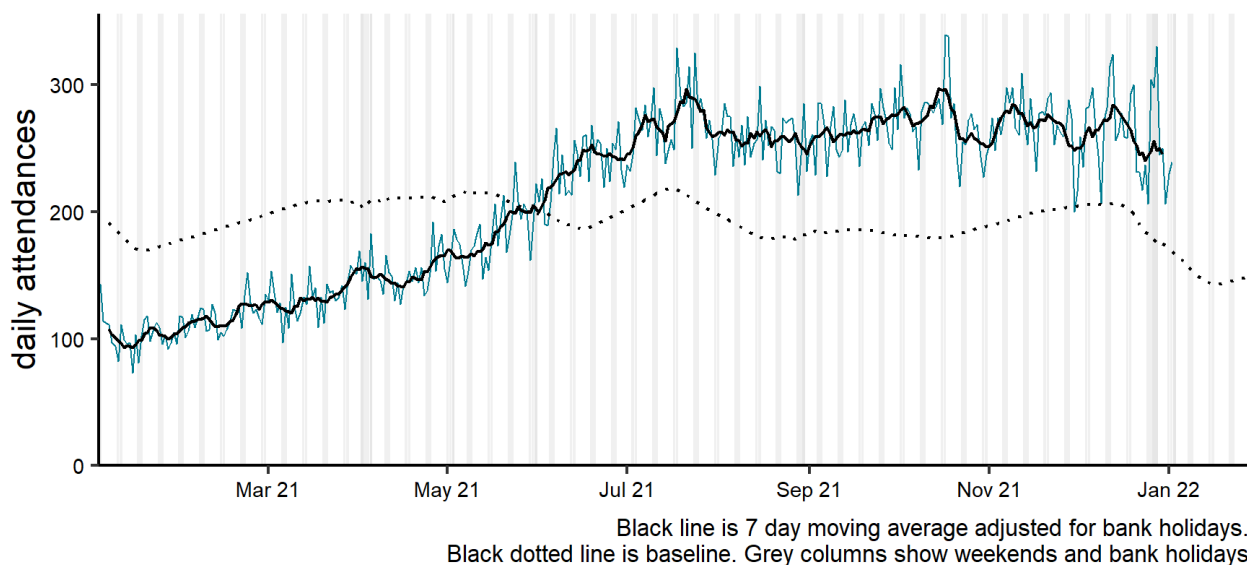
NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON.  
Black line is 7 day moving average adjusted for bank holidays.  
Black dotted line is baseline.

# Gastrointestinal conditions

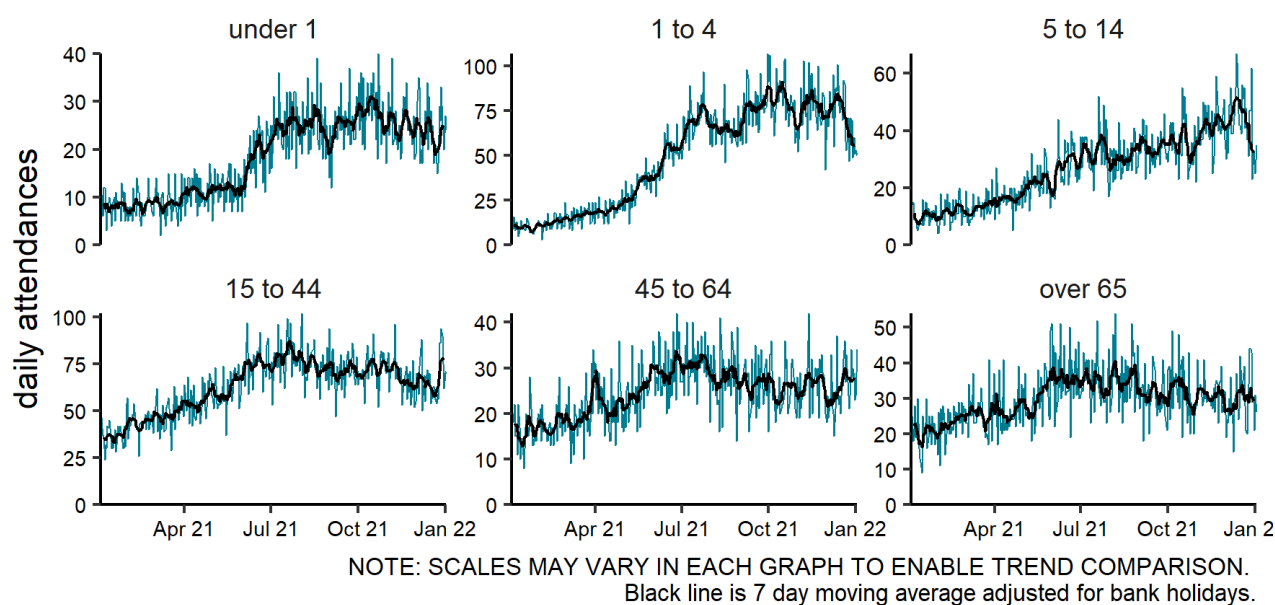
## Gastroenteritis

**Figure 8: Daily number of gastroenteritis ED attendances (and 7-day moving average adjusted for bank holidays), England (a) nationally, (b) by age and (c) by UKHSA Region.**

**(a)** Gastroenteritis 03/01/2021 - 02/01/2022

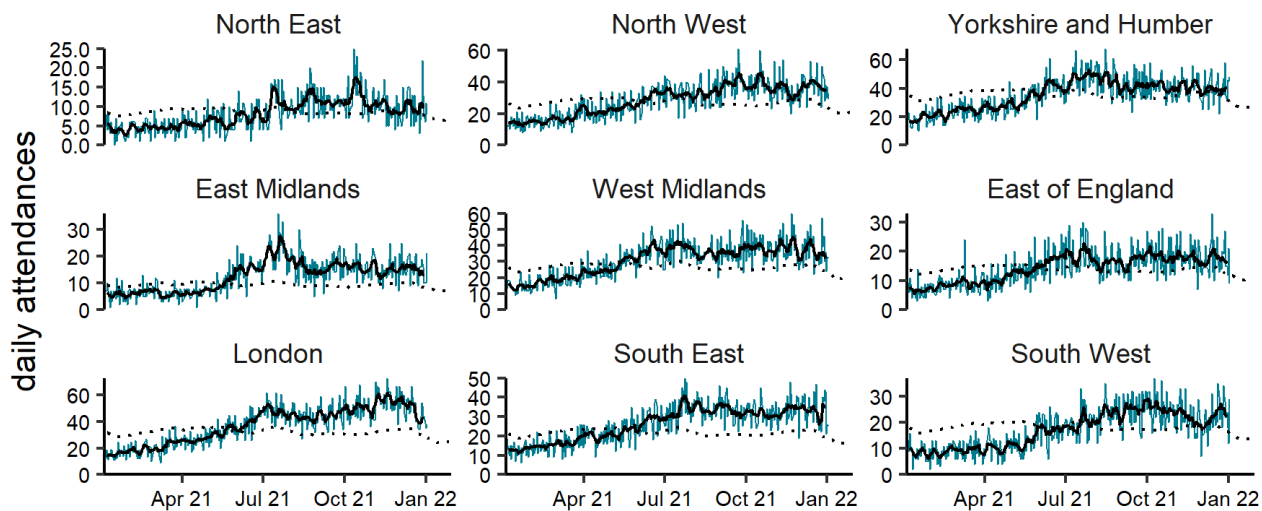


**(b)** Gastroenteritis by age group (years) 03/01/2021 - 02/01/2022



(c)

Gastroenteritis by region 03/01/2021 - 02/01/2022



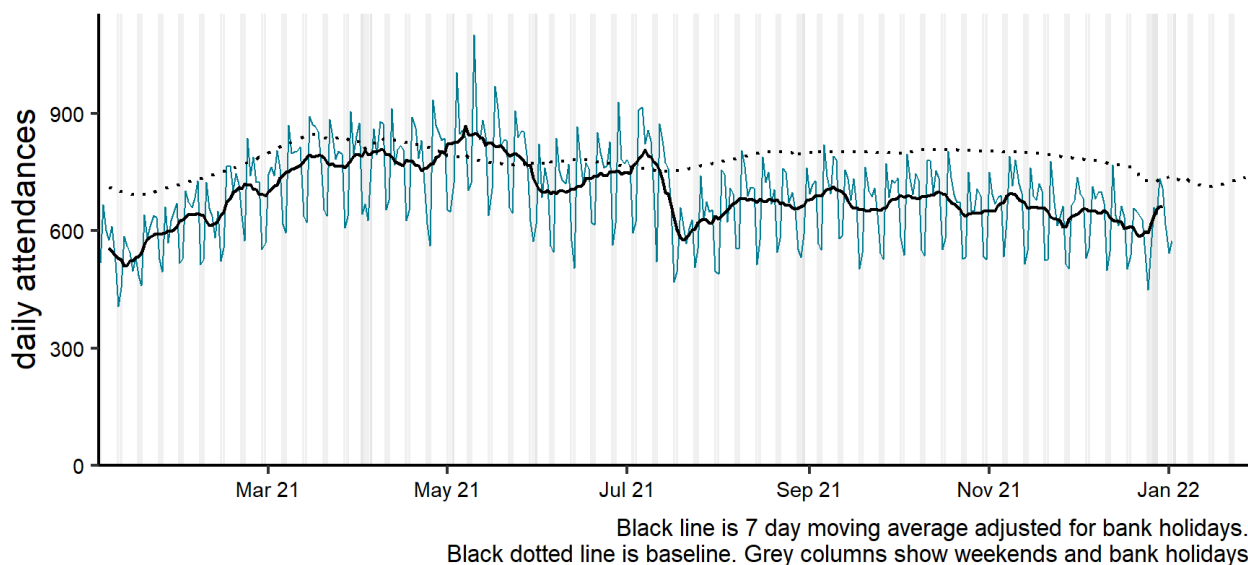
NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON.  
Black line is 7 day moving average adjusted for bank holidays.  
Black dotted line is baseline.

# Cardiac conditions

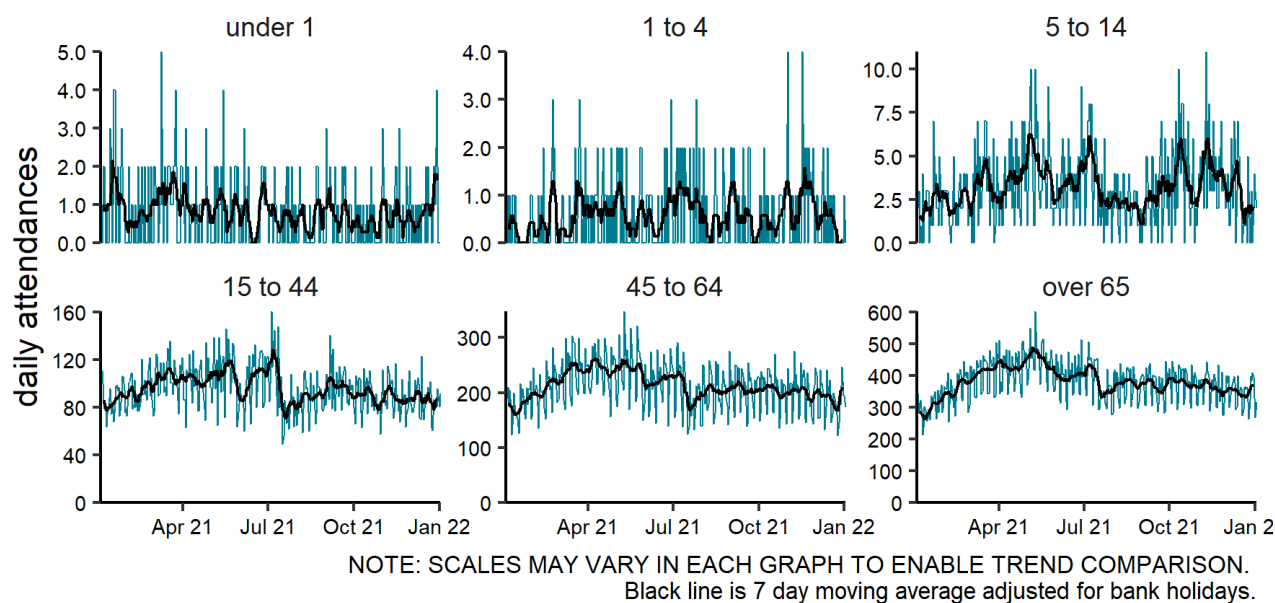
## Cardiac

**Figure 9: Daily number of cardiac ED attendances (and 7-day moving average adjusted for bank holidays), England (a) nationally, (b) by age and (c) by UKHSA Region.**

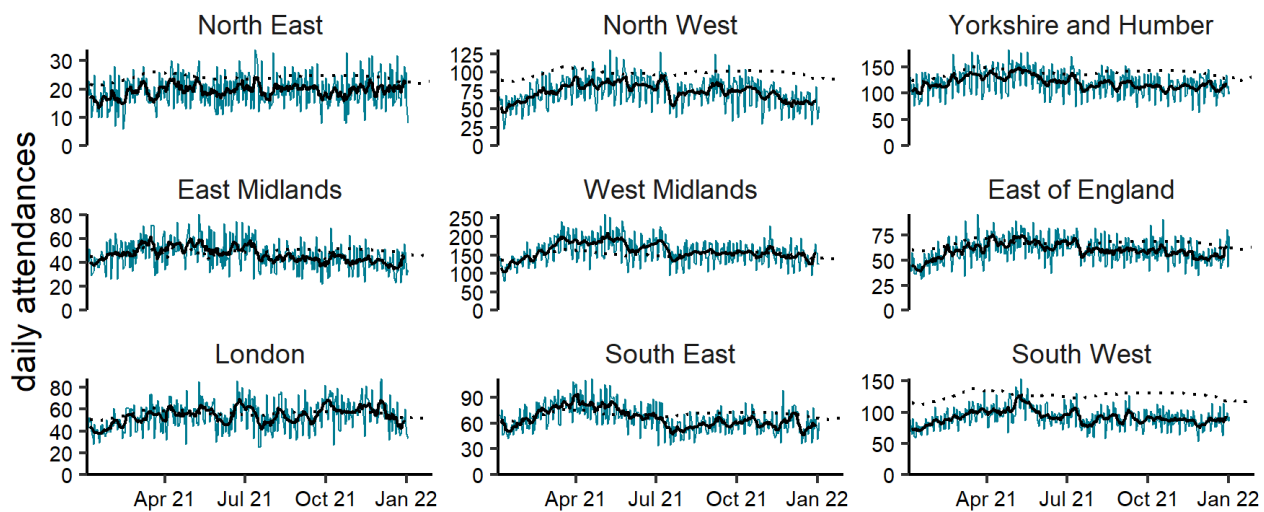
**(a)** Cardiac conditions 03/01/2021 - 02/01/2022



**(b)** Cardiac conditions by age group (years) 03/01/2021 - 02/01/2022



(c) Cardiac conditions by region 03/01/2021 - 02/01/2022

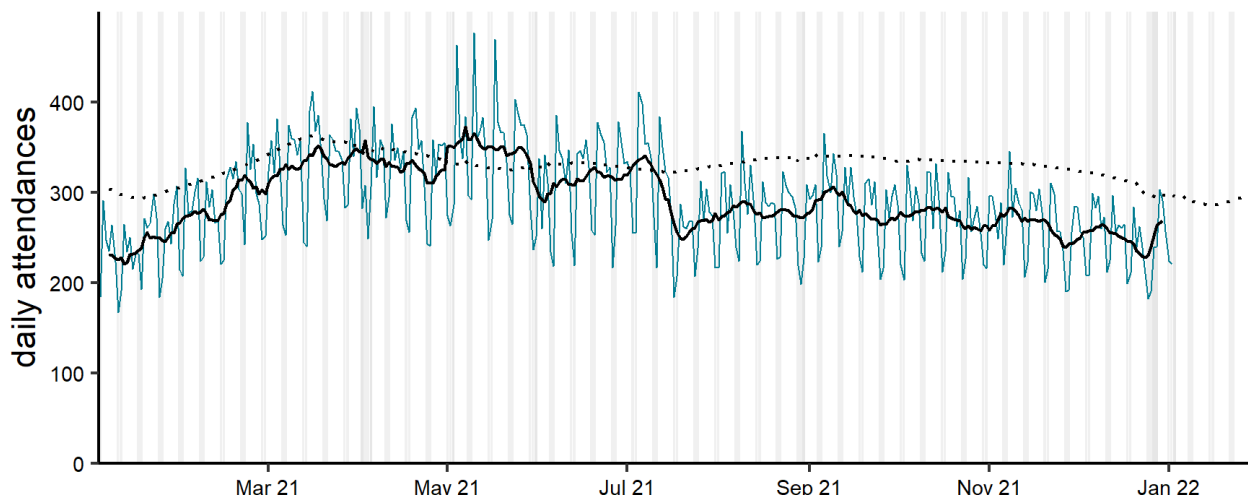


NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON.  
Black line is 7 day moving average adjusted for bank holidays.  
Black dotted line is baseline.

# Myocardial ischaemia

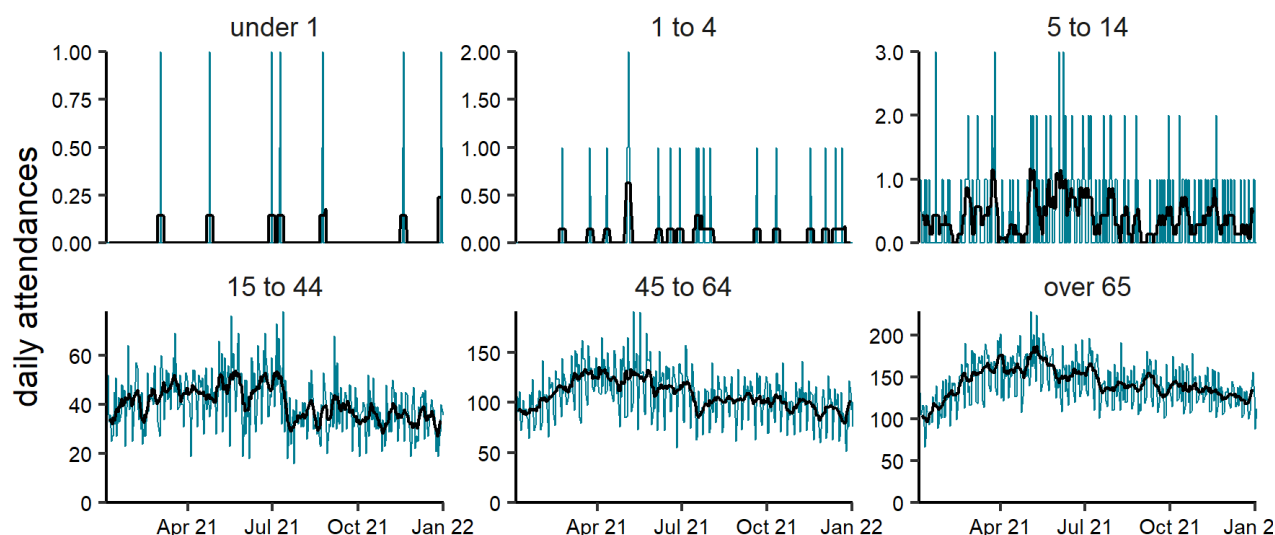
**Figure 10: Daily number of myocardial ischaemia ED attendances (and 7-day moving average adjusted for bank holidays), England (a) nationally, (b) by age and (c) by UKHSA Region.**

**(a)** Myocardial ischaemia 03/01/2021 - 02/01/2022



Black line is 7 day moving average adjusted for bank holidays.  
Black dotted line is baseline. Grey columns show weekends and bank holidays.

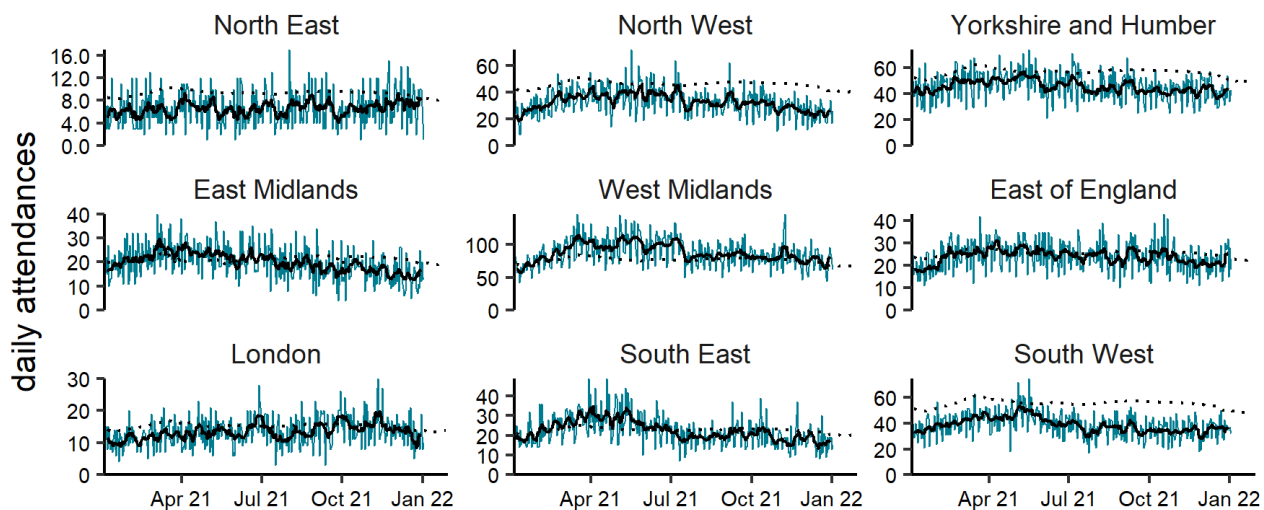
**(b)** Myocardial ischaemia by age group (years) 03/01/2021 - 02/01/2022



NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON.  
Black line is 7 day moving average adjusted for bank holidays.

(c)

Myocardial ischaemia by region 03/01/2021 - 02/01/2022



NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON.

Black line is 7 day moving average adjusted for bank holidays.

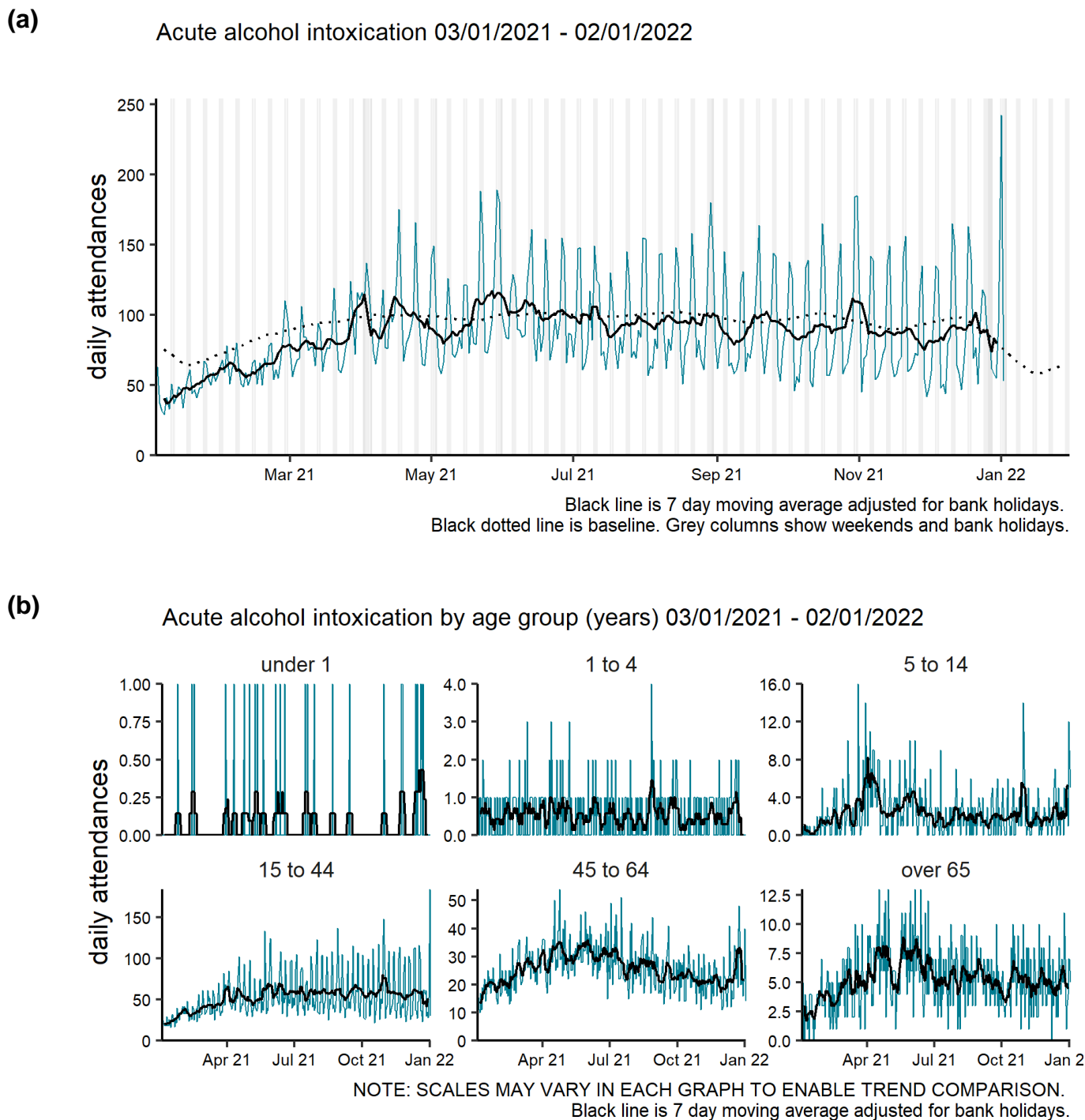
Black dotted line is baseline.



# Other conditions

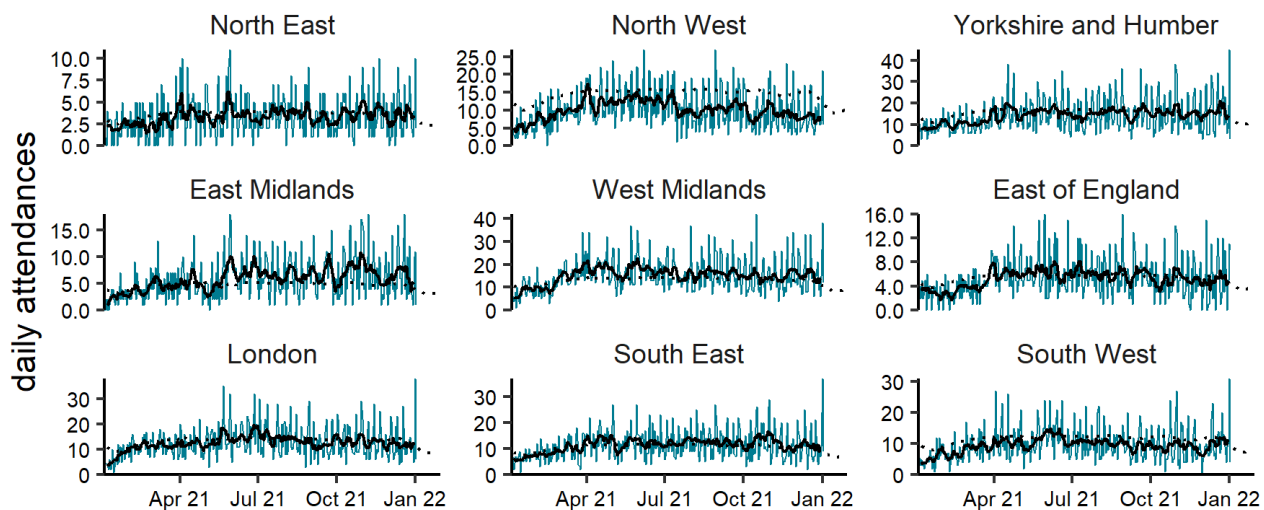
## Acute alcohol intoxication

**Figure 11: Daily number of acute alcohol intoxication ED attendances (and 7-day moving average adjusted for bank holidays), England (a) nationally, (b) by age and (c) by UKHSA Region.**



(c)

Acute alcohol intoxication by region 03/01/2021 - 02/01/2022



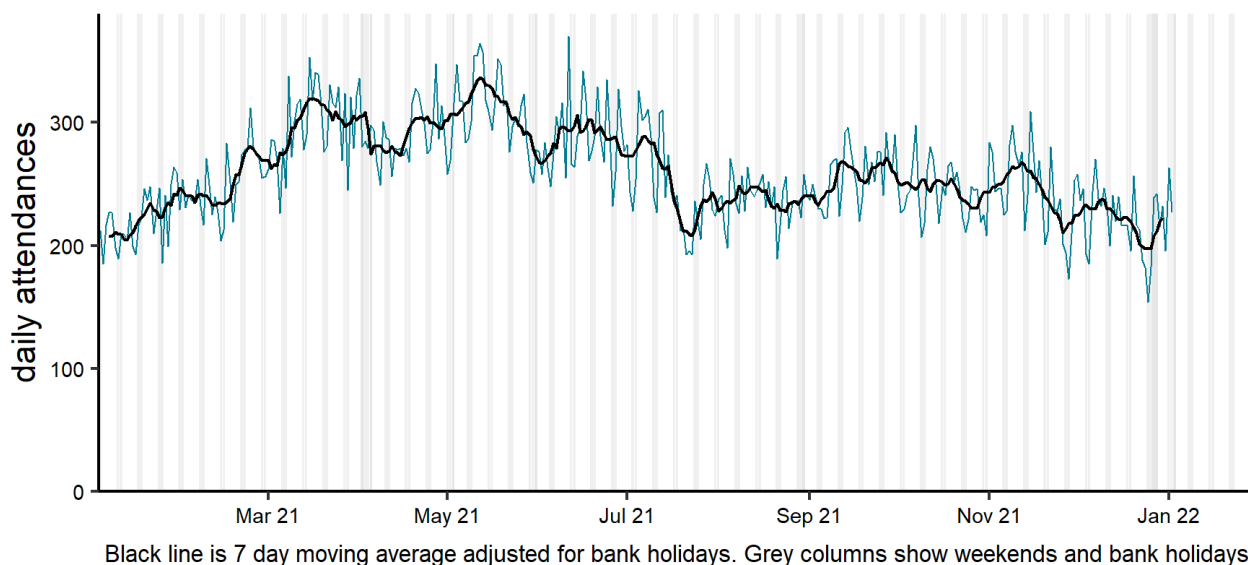
NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON.  
Black line is 7 day moving average adjusted for bank holidays.  
Black dotted line is baseline.

## Mental health

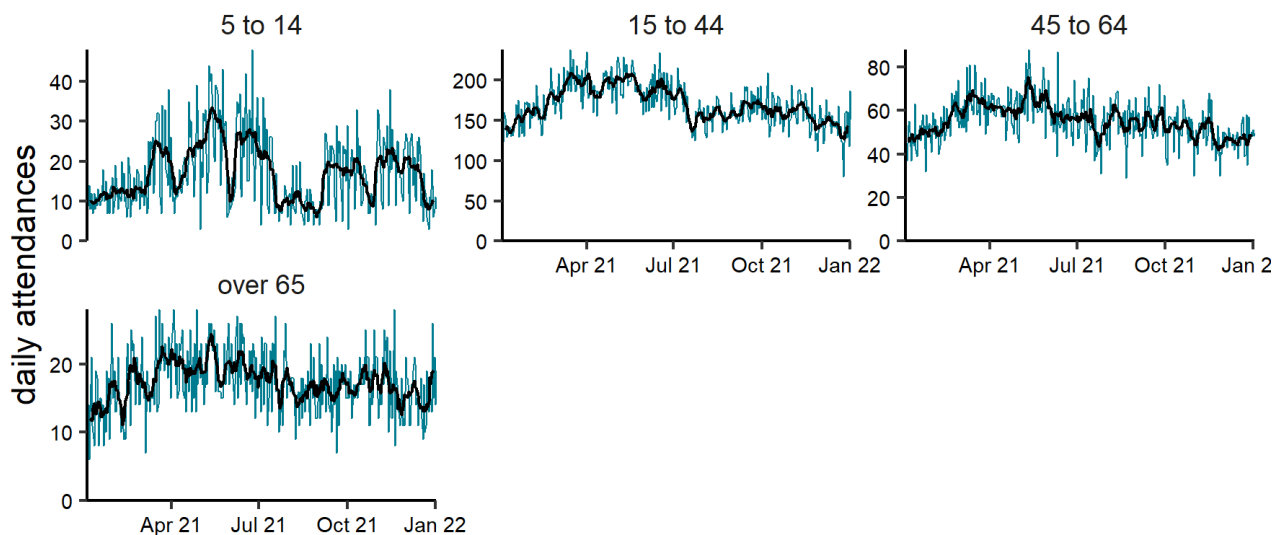
**Figure 12: Daily number of mental health<sup>3</sup> ED attendances (and 7-day moving average adjusted for bank holidays), England (a) nationally, (b) by age and (c) by UKHSA Region.**

<sup>3</sup> mental health attendances reported here are those with a primary diagnosis in the ECDS mental health diagnosis grouping. Attendances where the primary diagnosis relates to overdose, alcohol use or self harm are not included.

**(a)** Mental health 03/01/2021 - 02/01/2022

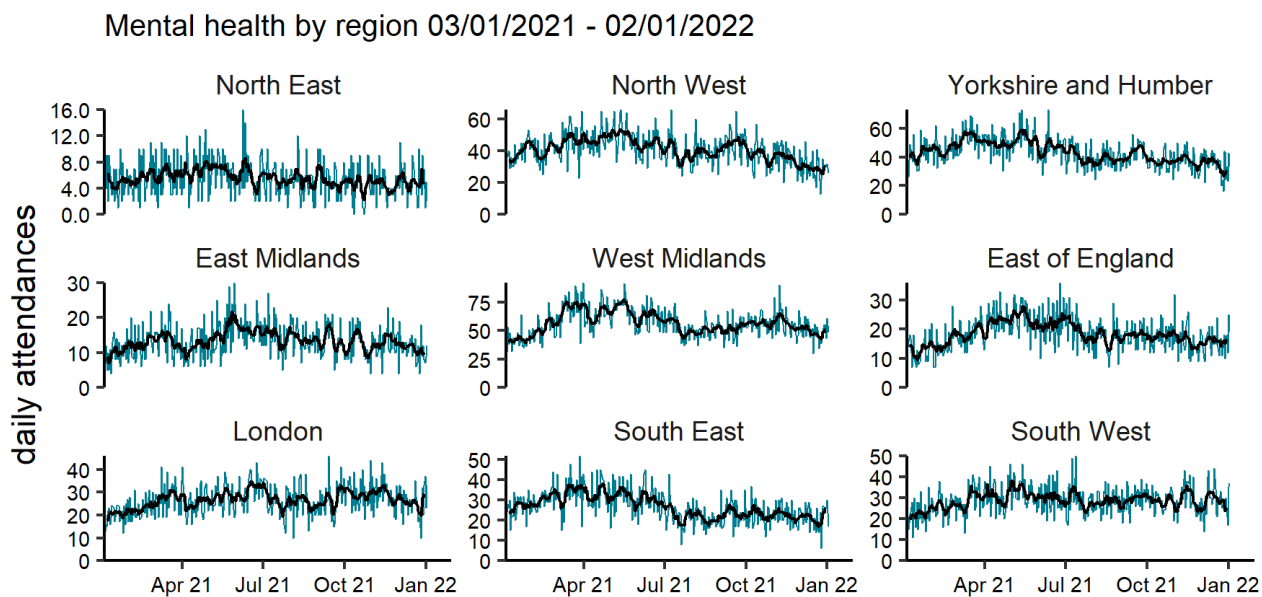


**(b)** Mental health by age group (years) 03/01/2021 - 02/01/2022



NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON.  
Black line is 7 day moving average adjusted for bank holidays.

(c)



NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON.  
Black line is 7 day moving average adjusted for bank holidays.

# Seasonal environmental conditions

During set periods of the year the Met Office operates both heat and cold weather watch systems, in association with UKHSA. Syndromic indicators are used to monitor the impact of both extreme hot and cold weather in England during these periods and will be included below (where an appropriate syndromic indicator is available).

Cold weather alert period: 1 November to 31 March

Heat-Health Alert period: 1 June to 15 September

Highest weather alert level during the current reporting week:

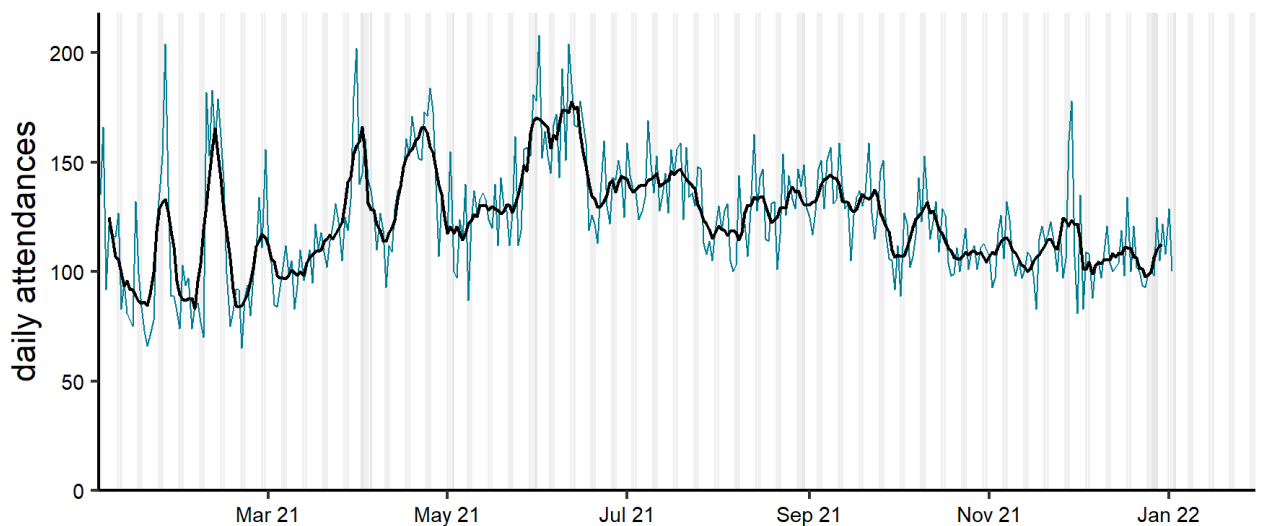
**Level 2 – Alert and readiness**

## Impact of cold

**Figure 13: Daily number of impact of cold<sup>4</sup> ED attendances (and 7-day moving average adjusted for bank holidays), England (a) nationally, (b) by age and (c) by UKHSA Region.**

<sup>4</sup> impact of cold attendances reported here are restricted to female attendances, with a primary diagnosis of fracture of the femur/wrist/forearm plus cold specific diagnoses of hypothermia, or cold injuries.

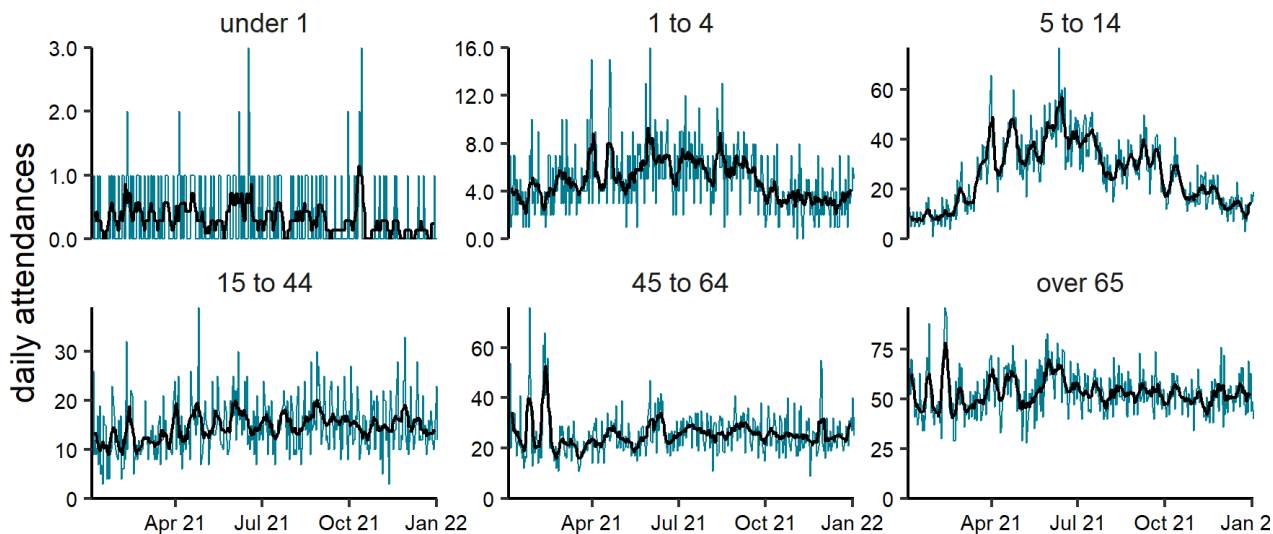
(a) Impact of cold 03/01/2021 - 02/01/2022



Black line is 7 day moving average adjusted for bank holidays. Grey columns show weekends and bank holidays.

(b)

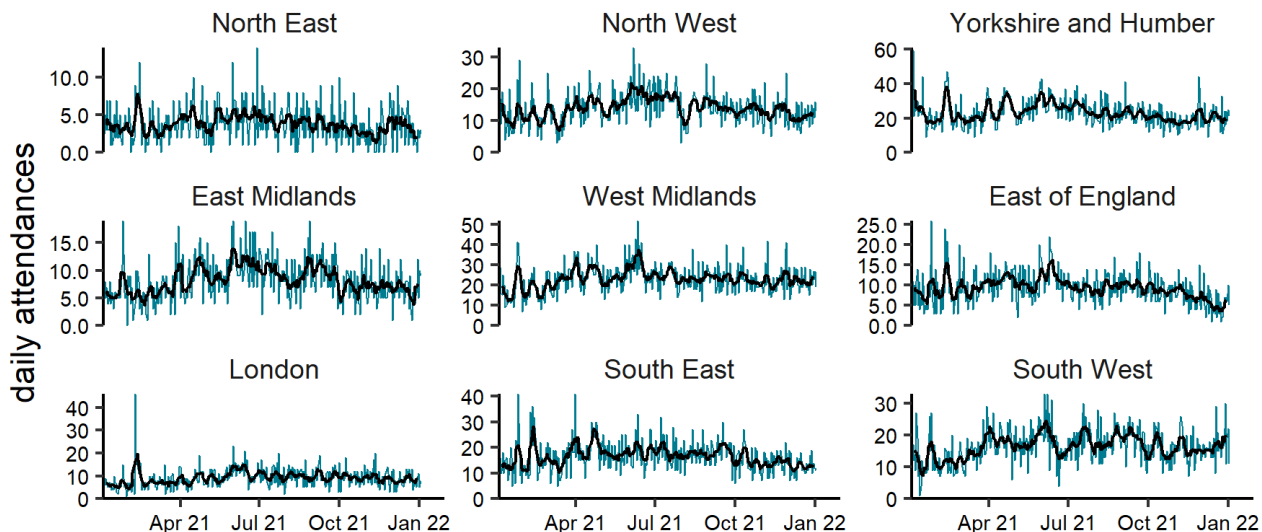
Impact of cold by age group (years) 03/01/2021 - 02/01/2022



NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON. Black line is 7 day moving average adjusted for bank holidays.

(c)

Impact of cold by region 03/01/2021 - 02/01/2022



NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON. Black line is 7 day moving average adjusted for bank holidays.

## Notes and caveats

The following additional caveats apply to the UKHSA emergency department syndromic surveillance system:

- the data presented are based on a national syndromic surveillance system:
  - should be used to monitor trends not to estimate numbers of ‘cases’
  - an automated daily transfer of anonymised ED data is received from NHS Digital, from the [Emergency Care Data Set](#) (ECDS)
  - not all EDs currently provide data on a daily basis, EDs are eligible for inclusion in this report only where:
    - data relates to attendances at a type 01 ED
    - data for 7 of the 7 most recent days was received
    - data for those days was received within 2 calendar days of the patient arrival
  - when an ED meets these criteria, all historical data from that ED is included
  - EDs included each week is likely to change, which will affect the historical data inclusion
  - national coverage each week is included in **Table 2**,
  - the number of EDs in each region area is described in **Table 3**
- individual EDs will not be identified in these bulletins
- some syndromic indicators are hierarchical:
  - acute respiratory infections includes:
    - COVID-19-like
    - acute bronchitis or bronchiolitis
    - other and non-specific acute respiratory infections
    - influenza-like illness
    - pneumonia
  - cardiac conditions includes:
    - myocardial ischaemia
    - other and non-specific cardiac conditions
- baselines:
  - were last remodelled April 2021
  - are constructed from historical data since April 2018
  - represent seasonally expected levels of activity
  - take account of any known substantial changes in data collection, population coverage or reporting practices:
    - the COVID-19 pandemic period is excluded, to show seasonally expected levels if COVID-19 had not occurred
  - may be remodelled to include the impacts seen during periods of the COVID-19 pandemic if/when appropriate due to introduction of large scale public health interventions which may affect ED attendance levels

## Acknowledgements

We are grateful to the clinicians in each ED and other staff within each Trust for their continued involvement in the EDSSS.

We thank the Royal College of Emergency Medicine, NHS Digital and NHS England for their support in the development of national EDSSS, using anonymised data collection from ECDS.



# About the UK Health Security Agency

The UK Health Security Agency is an executive agency, sponsored by the [Department of Health and Social Care](#).

[www.ukhsa.gov.uk](http://www.ukhsa.gov.uk)

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Version: ED-1

Prepared by: Real-time Syndromic Surveillance Team  
For queries relating to this document, please contact: [syndromic.surveillance@phe.gov.uk](mailto:syndromic.surveillance@phe.gov.uk)

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