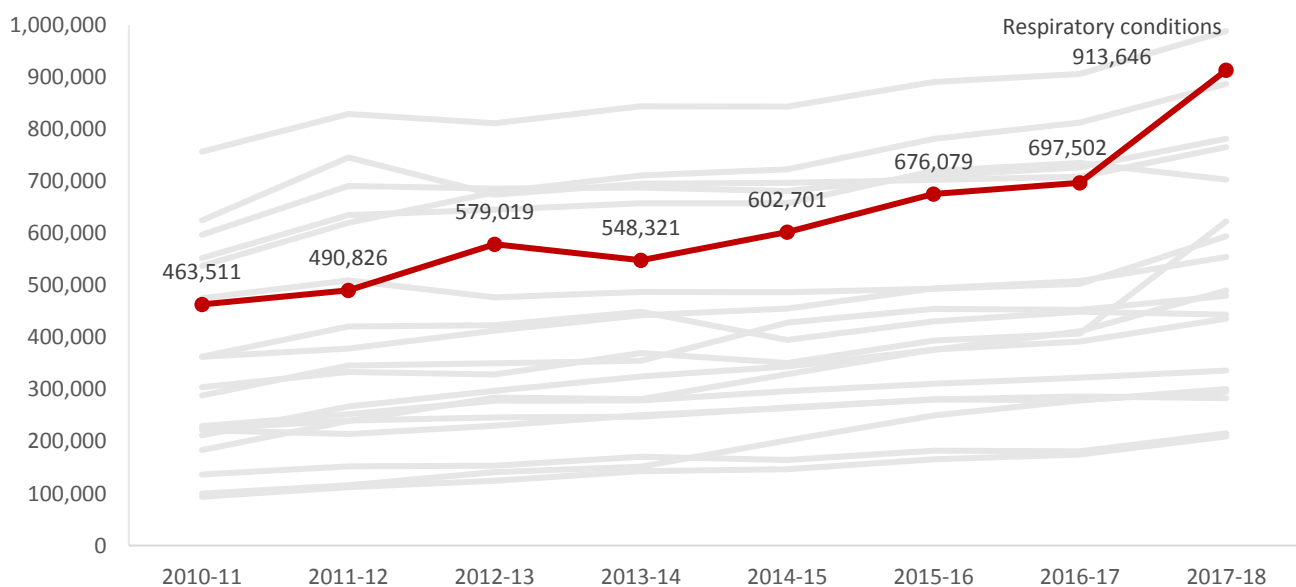


## The cold facts: the impact of lung disease on A&E attendance and hospital admissions (British Thoracic Society data review - Dec 2018)

### → Attendances at A&E departments in England 2010/11 – 2017/18

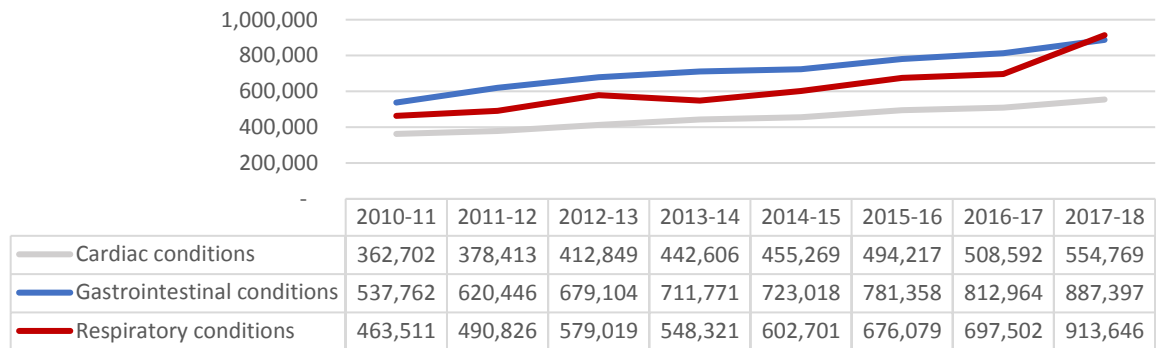
- The analysis presented in this section uses data from NHS Digital's [Hospital Accident and Emergency Activity](#) statistics. The statistics report Accident and Emergency (A&E) activity across one year from 1 April to 31 March. Each 'A&E attendance' documents a single visit by an individual to A&E. Consequently, an individual may have more than one attendance in a period.
- Between 2016-17 to 2017-18, the number of A&E attendances for respiratory conditions increased by 31%, amounting to an additional 216,144 attendances.
- Respiratory conditions are now the third most common primary diagnosis in A&E, following diagnosis not classifiable and dislocation/fracture/joint injury/amputation.
- When comparing the Top 20 most common primary diagnoses from A&E attendances in 2017-18, it is evident that in the past 5 years respiratory conditions have had a particularly steep increase (67% since 2013-14), alongside infectious disease (98%), nothing abnormal detected (68%), urological conditions (51%), and ENT conditions (55%).

**Chart 1: A&E attendances by common primary diagnoses<sup>1</sup>**



<sup>1</sup> Data source: NHS Digital - Hospital Accident & Emergency Activity: Number of A&E Attendances, A&E Primary Diagnosis '2 character description field'. Included in this chart are respiratory conditions, psychiatric conditions, poisoning (inc overdose), central nervous system conditions (exc stroke), muscle/tendon injury, infectious disease, local infection, ENT conditions, head injury, ophthalmological conditions, urological conditions (inc cystitis), cardiac conditions, contusion/abrasion, nothing abnormal detected, soft tissue inflammation, laceration, sprain/ligament injury, gastrointestinal conditions, dislocation/fracture/joint injury/amputation. Diagnosis not classifiable has been excluded.

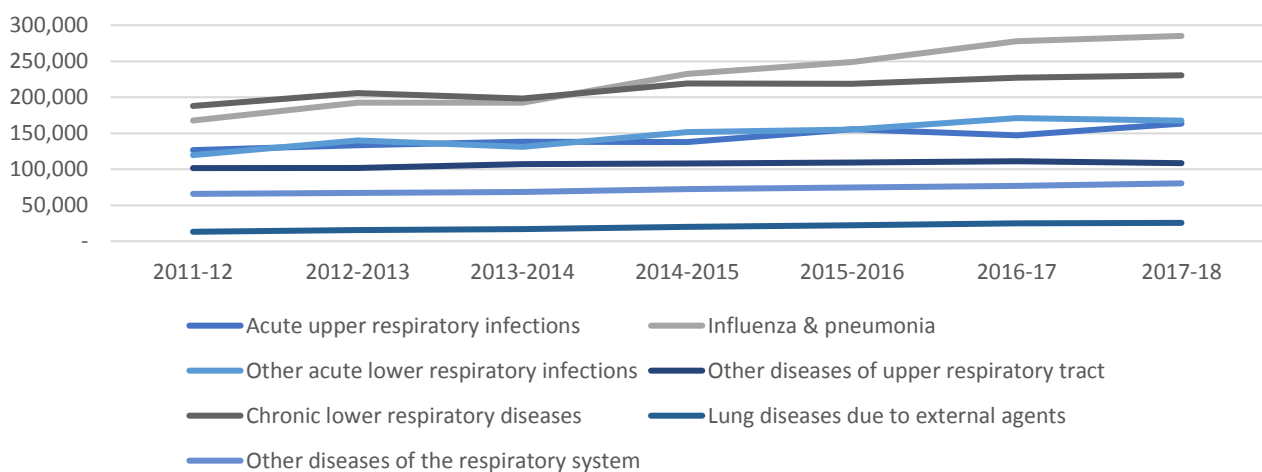
**Chart 2: A&E attendances – Primary diagnosis of cardiac conditions, gastrointestinal conditions and respiratory conditions<sup>2</sup>**



### → Primary diagnosis for overall hospital admissions in England

- The analysis presented in this section uses data from NHS Digital's Hospital Admitted Patient Care Activity statistics. The statistics report admitted patient care activity across one year from 1 April to 31 March. 'Hospital admissions' refers to the first episode of admitted patient treatment and includes patients admitted via all methods (i.e. emergency, waiting list, planned and other admission methods)
- Hospital admissions with a primary diagnosis associated to diseases of the respiratory system (codes J00-J99) have steadily increased since 2011-12. In particular, between 2011-12 and 2017-18, the number of admissions for influenza and pneumonia have increased by 70%.

**Chart 3: Hospital admissions for respiratory diseases<sup>3</sup>**

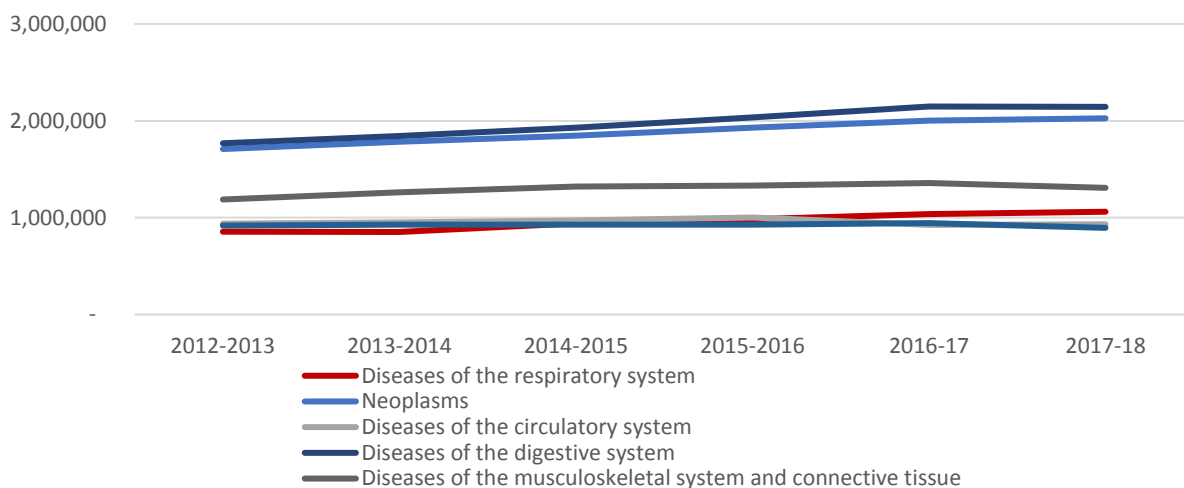


<sup>2</sup> Data source: NHS Digital - Hospital Accident & Emergency Activity: Number of A&E Attendances, A&E Primary Diagnosis '2 character description field'.

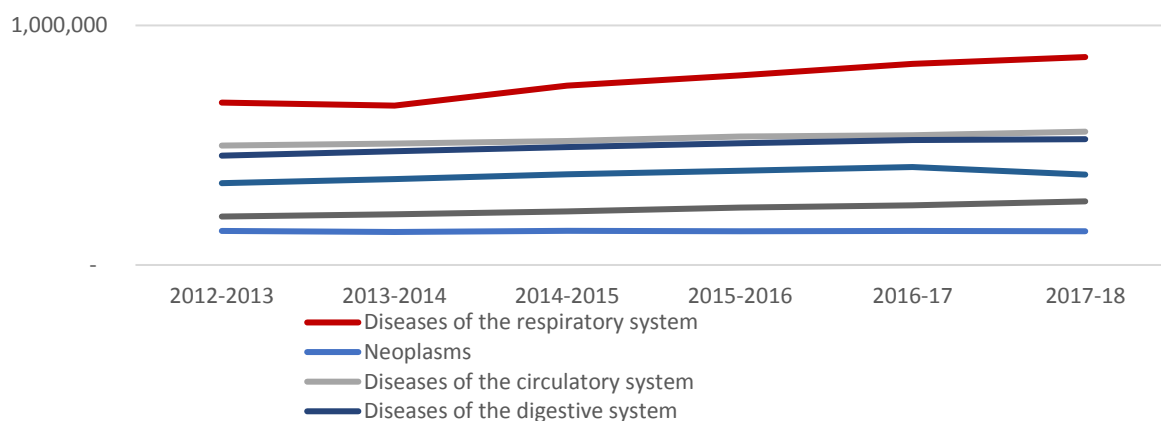
<sup>3</sup> Data source: NHS Digital - Hospital Episode Statistics for England: Admitted Patient Care statistics. Primary diagnosis summary codes used: Acute upper respiratory infections (J00-J06), Influenza & pneumonia (J10-J18), Other acute lower respiratory infections (J20-J22), Other diseases of upper respiratory tract (J30-J39), Chronic lower respiratory diseases (J40-J47), Lung diseases due to external agents (J60-J70) and Other diseases of the respiratory system (J80-J99).

- The number of hospital admissions with a primary diagnosis related to respiratory diseases is only slightly higher than diseases of the circulatory system and genitourinary system. However the proportion of respiratory diseases that are emergency admissions is significantly higher than the other disease areas. ‘Emergency admissions’ refers to a count of episodes with an admission method indicating it was an emergency – this includes admissions via A&E, GPs and other sources. In 2017-18, 82% of hospital admissions for respiratory diseases were emergency admissions.

**Chart 4: Hospital admissions by primary diagnosis - summary of conditions <sup>4</sup>**



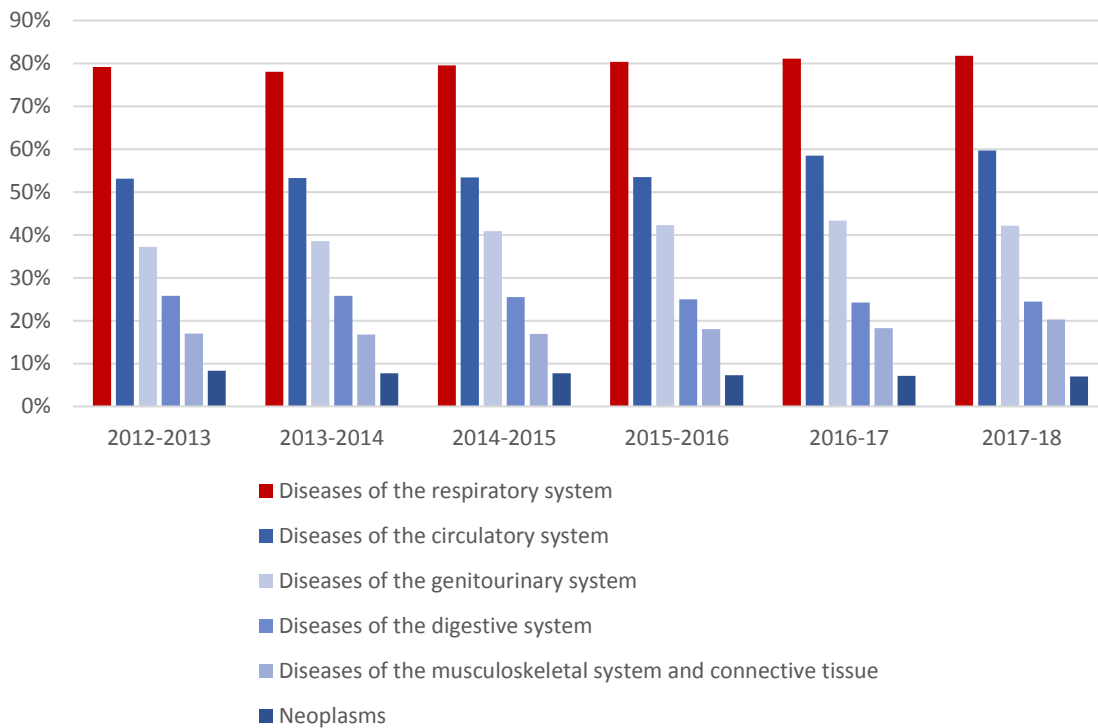
**Chart 5: Emergency admissions via A&E departments, GPs and other sources by primary diagnosis - summary <sup>5</sup>**



<sup>4</sup> Data source: NHS Digital - Hospital Episode Statistics for England: Admitted Patient Care statistics. To obtain these numbers we summed the following primary diagnosis summary codes - Diseases of the digestive system (K00-K93), Neoplasms (C00-D48), Diseases of the musculoskeletal system and connective tissue (M00-M99), Diseases of the respiratory system (J00-J99), Diseases of the circulatory system (I00-I99), Diseases of the genitourinary system (N00-N99).

<sup>5</sup> Data source: NHS Digital - Hospital Episode Statistics for England: Admitted Patient Care statistics. To obtain these numbers we summed the following primary diagnosis summary codes - Diseases of the digestive system (K00-K93), Neoplasms (C00-D48), Diseases of the musculoskeletal system and connective tissue (M00-M99), Diseases of the respiratory system (J00-J99), Diseases of the circulatory system (I00-I99), Diseases of the genitourinary system (N00-N99).

**Chart 6: Proportion of yearly hospital admissions that are emergency admissions (via A&E/all sources) analysed within major disease areas <sup>6</sup>**



## → Seasonal variation of respiratory A&E admissions in England

- The seasonal variation for respiratory disease A&E admissions (i.e. emergency admissions via A&E attendances) is far more acute than many other disease areas:
  - In 2016–17, respiratory hospital admissions resulting from A&E attendances peaked in December 2016 at 32,492 – far above the average of 10,652 for the 20 most common disease areas.<sup>7</sup>
  - Respiratory hospital admissions via A&E attendances almost doubled between August and December 2016<sup>8</sup>

<sup>6</sup> Data source: NHS Digital - Hospital Episode Statistics for England: Admitted Patient Care statistics. Primary diagnosis summary codes used: Diseases of the digestive system (K00-K93), Neoplasms (C00-D48), Diseases of the musculoskeletal system and connective tissue (M00-M99), Diseases of the respiratory system (J00-J99), Diseases of the circulatory system (I00-I99), Diseases of the genitourinary system (N00-N99).

<sup>7</sup> British Lung Foundation (2017) Out in the cold: Lung disease, the hidden driver of NHS winter pressure, p. 7. These figures are a count of unplanned accident and emergency department attendances resulting in admissions and a primary diagnosis of respiratory condition in each month for the financial years between 2010–11 and 2016–17. Original data source: NHS Digital - Hospital Episode Statistics.

Chart 7: Average fluctuation in monthly A&E admissions over financial years 2010 to 2017<sup>8</sup>

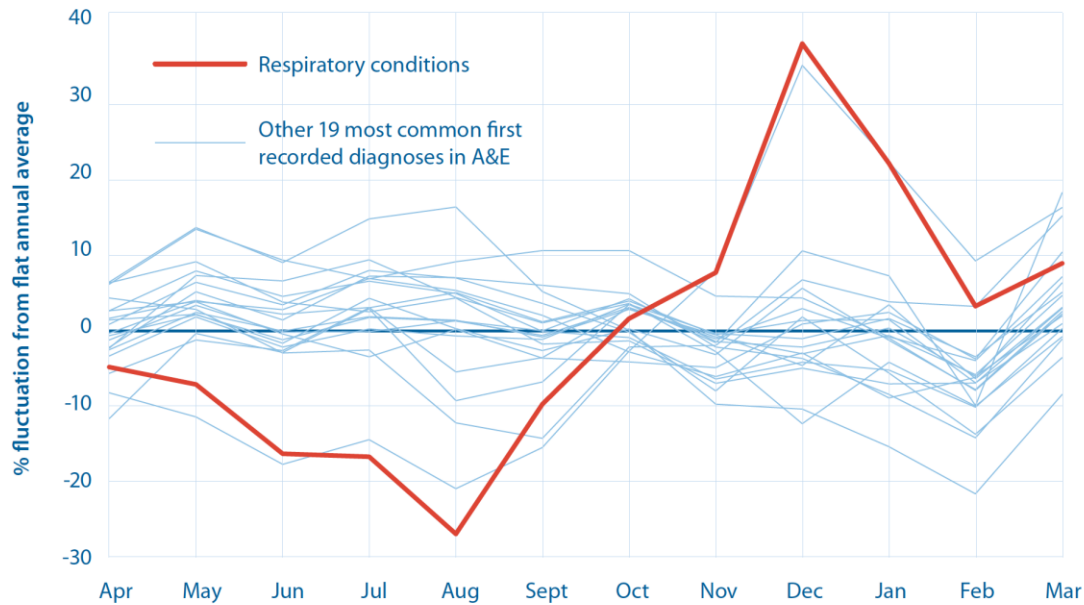
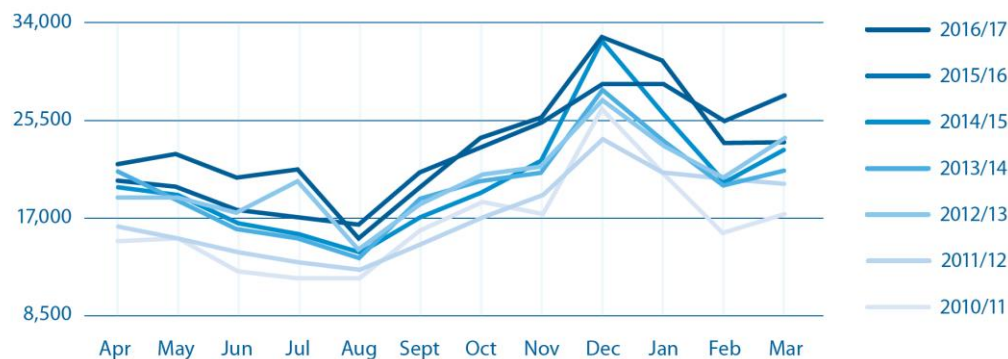


Chart 8: Seasonal variation of A&E admissions for respiratory disease<sup>9</sup>



- Respiratory disease places a significant burden on hospitals and increases mortality rates. The Office for National Statistics found that respiratory disease has the greatest seasonal variation of mortality. In 2016–17, 61.9% more people died from a respiratory condition in the winter compared with the non-winter months.<sup>10</sup>

<sup>8</sup> These figures are based on the average monthly unplanned accident and emergency attendances, resulting in admission, over the financial years 2010–11 to 2016–17. The figures expressed are proportional rise or fall in admissions in each month, for each diagnosis, compared to a flat average if all admissions of that diagnosis were consistent throughout the year. The 20 most common first recorded diagnoses in A&E in 2016–17 were: Diagnosis not classifiable; Dislocation/fracture/joint injury/amputation; Gastrointestinal conditions; Soft tissue inflammation; Sprain/ligament injury; Laceration; Respiratory conditions; Cardiac conditions; Contusion/abrasion; Ophthalmological conditions; Head injury; Nothing abnormal detected; ENT conditions; Urological conditions (inc cystitis); Local infection; Central nervous system conditions (exc stroke); Muscle/tendon injury; Infectious disease; Poisoning (inc overdose); Gynaecological conditions. Original data source: NHS Digital - Hospital Episode Statistics. Acquired through Parliamentary Questions.

<sup>9</sup> British Lung Foundation (2017) Out in the cold: Lung disease, the hidden driver of NHS winter pressure, p. 7. These figures are a count of unplanned accident and emergency department attendances resulting in admissions and a primary diagnosis of respiratory condition in each month for the financial years between 2010–11 and 2016–17. Original data source: NHS Digital - Hospital Episode Statistics.

<sup>10</sup> British Lung Foundation (2017) Out in the cold: Lung disease, the hidden driver of NHS winter pressure. Original data source: ONS - Excess winter mortality in England and Wales: 2016 to 2017 and 2015 to 2016.