

Comparison of patterns of hospital admissions in the last year of life between patients who die of lung cancer and patients who die of other respiratory diseases



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1. Background/rationale

This analysis was undertaken in an attempt to understand the differing trajectories of diseases of the respiratory system. Examining hospital admissions and length of stay in hospital of those in the last year of life, to better inform age of life care strategy, planning and care/service provision.

2. Methodology

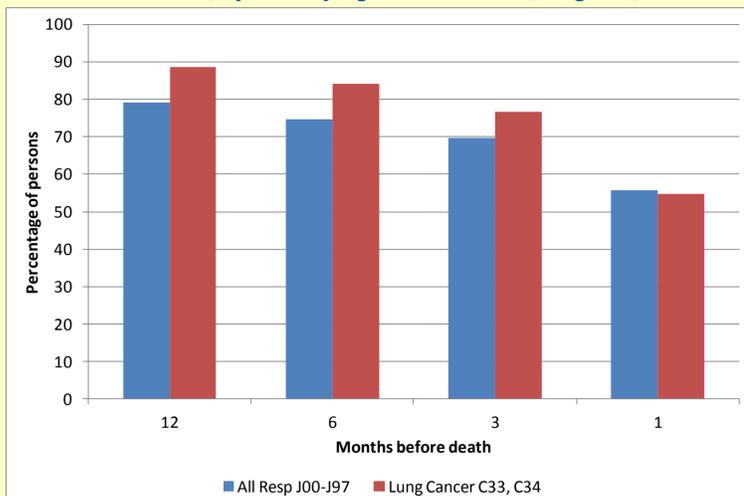
We extracted hospital admissions data from Hospital Episodes Statistics for patients who died of lung cancer (ICD10 codes C33–C34) or respiratory diseases (ICD10 codes J00–J99) in England between 2004 and 2008, and who had at least one admission (excluding elective day cases) recorded in the last 12, 6, 3 and 1 month/s of life. 'Respiratory diseases' included the sub-categories: 'pneumonia and acute respiratory infection'; 'asthma'; 'chronic lung diseases'; and 'others'. We then analysed the average number of admissions per person and the average number of bed days per admission during the last 12, 6, 3 and 1 month/s of life for both groups.

3. Results

3.1 Average number of admissions per person

The proportion of people who died having at least one admission in the last 12, 6 and 3 months of life was higher for lung cancer than for respiratory diseases ($p < 0.01$) (denominator: all Office for National Statistics deaths for specified disease type). In the last month of life, the proportion of people who died having at least 1 admission was higher for respiratory diseases than for lung cancer ($p < 0.01$).

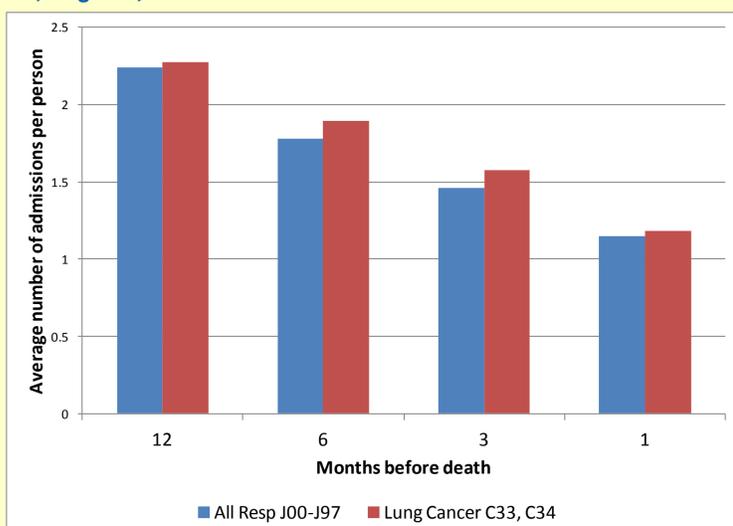
Figure 1: Percentage of persons with at least one admission in the last 12, 6, 3 and 1 month/s of life, by underlying cause of death, England, 2004–08



Source: Hospital Episode Statistics, Office for National Statistics

For individuals with at least one admission in the last 12, 6, 3 and 1 month/s of life, there was a higher average number of admissions for those with lung cancer than for those with respiratory diseases.

Figure 2: Average number of admissions for persons with at least one admission in the last 12, 6, 3 and 1 month/s of life, by underlying cause of death, England, 2004–08

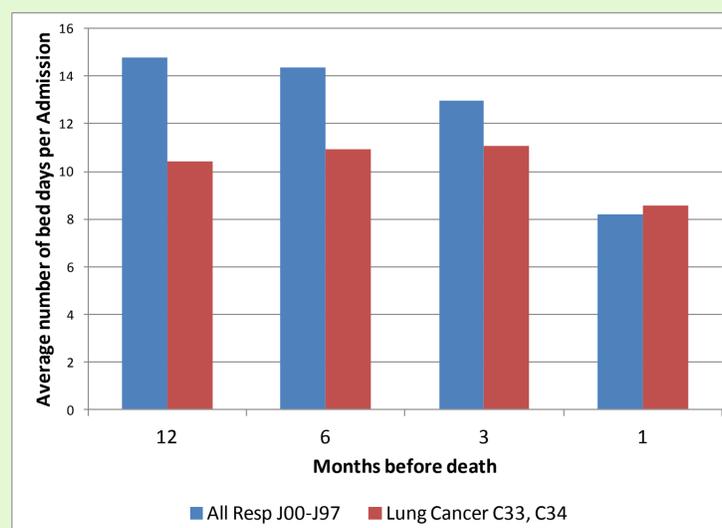


Source: Hospital Episode Statistics, Office for National Statistics

3.2 Bed days per admission

The average number of bed days per admission in the last 12, 6 and 3 months of life was higher for people who died from an underlying cause of respiratory disease than from lung cancer ($p < 0.01$). In the last month of life, it was higher for those dying of lung cancer ($p < 0.01$).

Figure 3: Average number of bed days per admission for persons with at least one admission in the last 12, 6, 3 and 1 month/s of life, by underlying cause of death, England, 2004–08



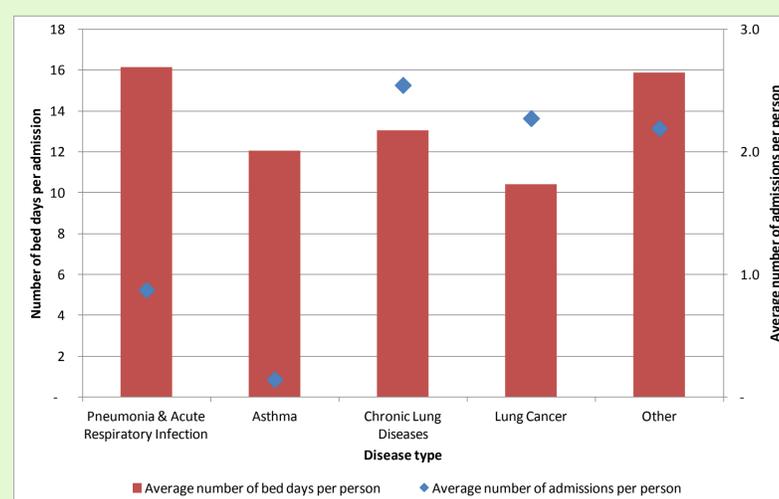
Source: Hospital Episode Statistics, Office for National Statistics

3.3 Breakdown by respiratory disease type

There was significant variation in both the average number of admissions per person and average number of bed days per admission by respiratory disease type:

- The average number of admissions per person in the last 12 months of life varied between 2.5 days for chronic lung disease and 0.1 days for asthma.
- The average number of bed days per admission in the last 12 months of life varied between 16 days for pneumonia and acute respiratory infection and 10 days for asthma.

Figure 4: Average number of bed days per admission for persons with at least one admission in the last 12 months of life, by respiratory disease type (underlying cause of death), England, 2004–08



Source: Hospital Episode Statistics, Office for National Statistics

4. Conclusions

There are significant differences in patterns of hospital admissions between people who die of lung cancer and people who die of other respiratory diseases.

The different trajectories of lung cancer and respiratory diseases are an important consideration in advanced care planning and end of life care service provision.

For more information and analysis, please see:

<http://www.endoflifecare-intelligence.org.uk>