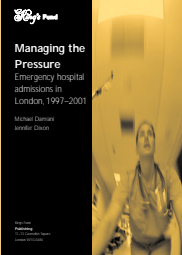
	Report SUMMARY	Authors MICHAEL DAMIANI JENNIFER DIXON	Key Topics LONDON WINTER PRESSURES	Date SEPTEMBER 2002
Report orders MANAGING THE PRESSURE: EMERGENCY HOSPITAL ADMISSIONS IN LONDON, 1997–2001 £6.99 40pp 2002 ISBN 1 85717 268X King's Fund Bookshop 020 7307 2591 www.kingsfundbookshop.org.uk		Summary orders Free Order code: SUM/6 King's Fund Bookshop 020 7307 2591 or download at www.kingsfund.org.uk		

MANAGING THE PRESSURE

Emergency hospital admissions in London, 1997–2001

The volume of admission for respiratory disease peaks at almost the same time every year ... The timing of the greatest pressures on the NHS from emergency admissions is therefore predictable.

Managing the Pressure report, 2002

Pressure on acute NHS trusts from emergency admissions reaches a peak each winter. Despite this, what is causing the pressure is incompletely understood. *Managing the Pressure* examines emergency hospital admissions in London over a four-year period. Based on research funded by the former London Regional Office of the NHS Executive, it shows that:

- Winter pressures arising from emergency admissions occur at almost exactly the same time each year. The timing of emergency admissions is predictable, but the volume is not.
- Respiratory diseases are the main cause of the peak in demand, in particular chronic obstructive airways disease in older people.
- It is possible to locate the areas where patients admitted as emergencies for respiratory disease live, and therefore target efforts to reduce the risk of admission.

Background

Pressures on acute NHS trusts in winter arise from the demands for health care (for example, due to increased illness), the available supply of resources (for example, the number of staff and beds available), and how demand and supply are managed. The research undertaken for *Managing the Pressure* focused on the demands for emergency care. Specific objectives included to:

- identify the level and trends in emergency admissions over time
- identify the weeks in which emergency admissions were at their highest, by acute trust
- identify the main clinical conditions causing the emergency admissions, particularly in winter
- identify which types of patients were most likely to be admitted as an emergency
- identify in which locations in London emergency demands were highest
- make suggestions as to how emergency demands might be better managed.

The analysis drew on health service and other data routinely collected across London, examining the period 1997/98 to 2000/01.

Key findings

Overall trends in admissions

Contrary to expectation, the total number of emergency admissions in the region fell in each consecutive year, from 465,470 in 1997/98, to 445,747 in 2000/01 – a decrease of four per cent. The ten most common reasons for emergency admissions by ICD-10 subchapter are listed in *Box 1*.

Respiratory conditions (acute and chronic) were the single main cause of emergency admissions during the four-year study period.

The latest World Health Organisation scheme for the international classification of diseases (ICD-10) is organised into 19 broad disease groups, each of which is further divided into 'subchapters'.



1

TEN MOST COMMON ICD-10 SUBCHAPTERS LEADING TO AN EMERGENCY ADMISSION, LONDON, 1997/98 TO 2000/01

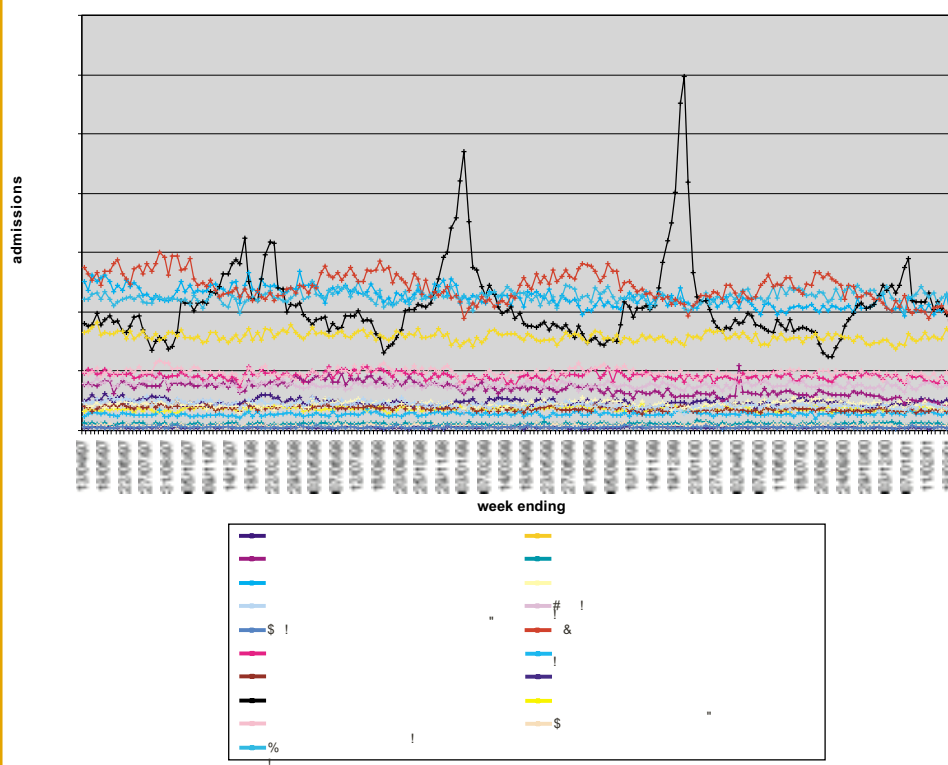
ICD-10 subchapter	% of all emergency admissions
Chronic lower respiratory diseases	4.86%
Influenza and pneumonia	2.45%
Other acute lower respiratory infections	2.38%
Ischaemic heart disease	4.83%
Other forms of heart disease	4.18%
Symptoms and signs inv. the circulatory/respiratory system	3.79%
Symptoms and signs inv. the digestive system and abdomen	3.76%
General symptoms and signs	3.46%
Pregnancy with abortive outcome	2.90%
Injuries to the head	2.64%

Seasonality

The biggest seasonal variation in emergency admissions was due to diseases of the respiratory system, with a peak each year in early January (see Box 2). The peak was highest in the winter of 1999/2000; lowest in the winter of 2000/01. The analysis was repeated using data for England, and exactly the same pattern was found with respect to the relative height and timing of the peaks in emergency admissions.

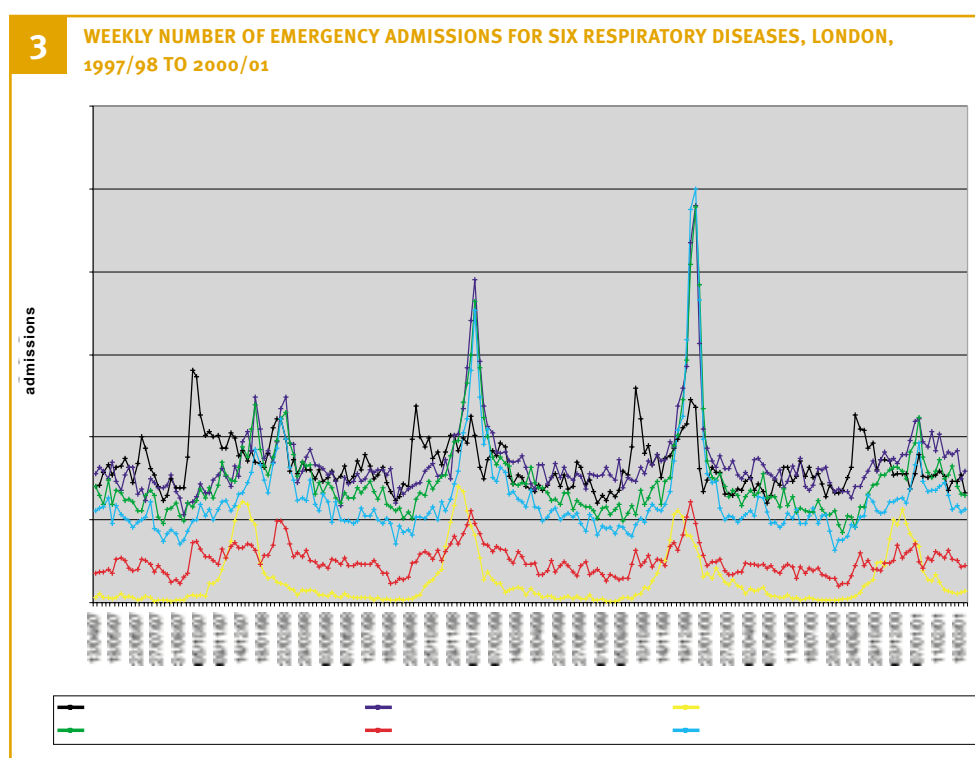
2

WEEKLY NUMBER OF EMERGENCY ADMISSIONS BY ICD-10 CHAPTER, LONDON, 1997/98 TO 2000/01



These findings suggest that the timing of ‘winter pressures’ arising from demand is predictable, and that management of respiratory diseases, particularly over the late December early January period, will be crucial if NHS acute trusts are to be able to manage the pressures arising from emergency admissions. The volume of admissions for respiratory conditions is not predictable, although it closely relates to rates of GP consultations for influenza and influenza-like illness (data not shown).

Six specific clinical conditions are the cause of the peak in admissions shown (see *Box 3*): chronic obstructive airways disease (COAD); pneumonia; other acute lower respiratory tract infections; asthma; bronchiolitis; and other upper respiratory tract infections.



‘Winter pressures’ arising from emergency admissions are most likely to be due to patients with chronic respiratory disease, probably with ‘acute on chronic’ disease.

Pressure on hospital resources

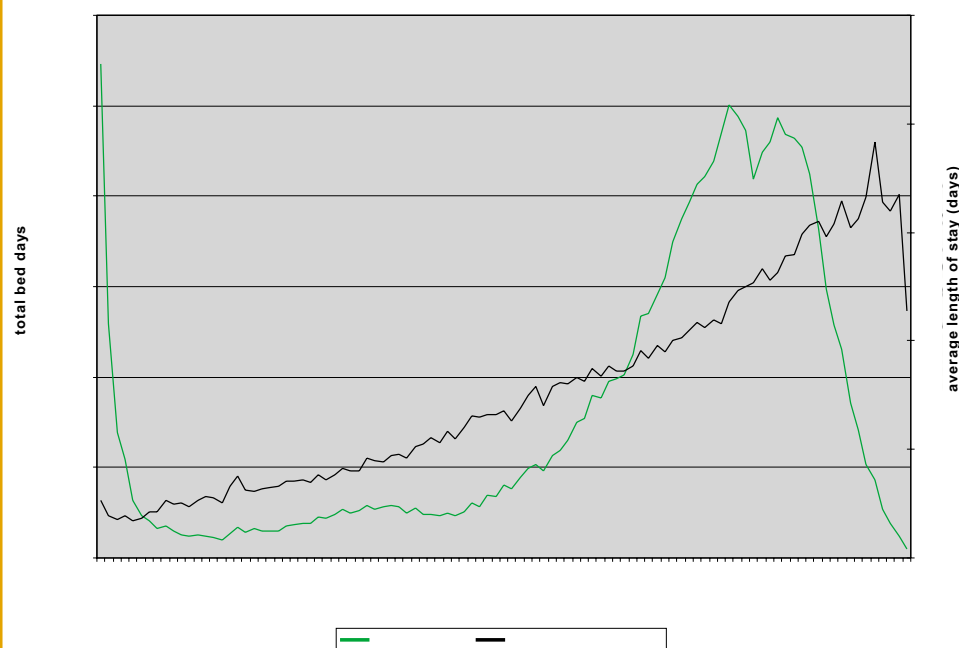
Box 4 shows the average length of stay of patients admitted with respiratory disease as an emergency, and the number of bed days utilised, by age.

Young children occupied a high number of bed days (due to the high volume of admissions), but the average length of stay was low – not more than two or three days. For those aged about 60 and over, there were a high number of admissions, and also a very high number of bed days used by these patients, because the average length of stay steadily rose with age (reaching a peak of 17 days at the age of 95). Emergency admissions for older patients

were thus likely to require more hospital resources during admission than younger, and to contribute more to 'winter pressure'.

4

AVERAGE LENGTH OF STAY AND TOTAL BED DAYS FOR RESPIRATORY DISEASE BY AGE



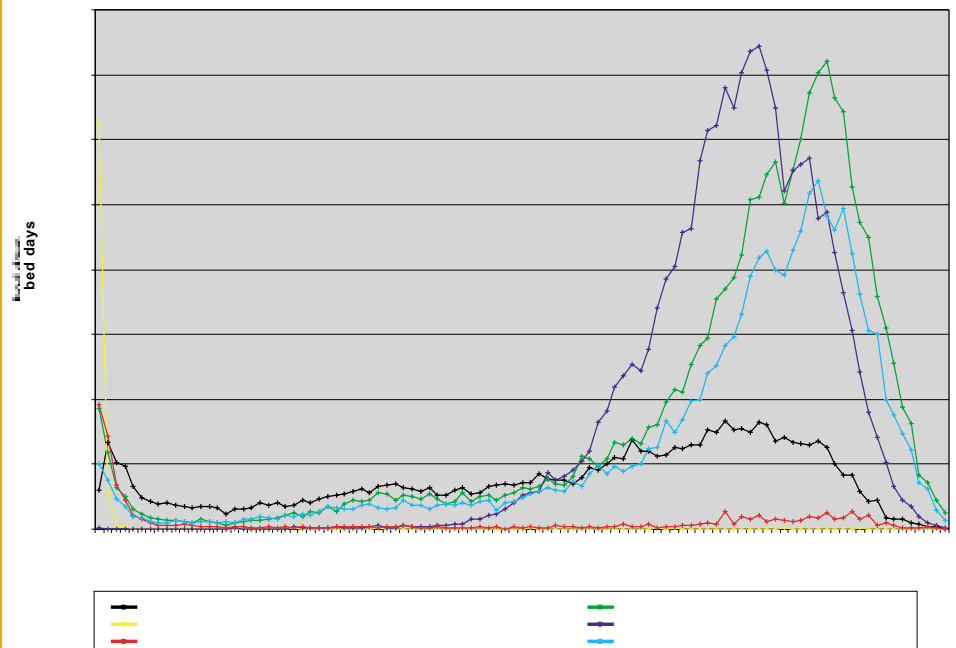
Three conditions in older people were the cause of most bed days used: chronic obstructive airways disease, pneumonia and 'other acute lower respiratory infections' (see Box 5). It may be that the last two of these conditions are in fact the same illness, but just coded slightly differently on Hospital Episode Statistics (HES) data. It may also be that cases admitted with these two conditions also have chronic obstructive airways disease – having 'acute on chronic' respiratory disease. Emergency admissions for these three conditions peaked during the most pressurised period in the NHS – early January. Patients with chronic obstructive airways disease are identifiable in the community and can be managed in primary care to reduce the risk of admission. For example, guidelines on the management of this disease are available from the British Thoracic Society.

The British Thoracic Society
17 Doughty Street
London
WC1N 2PL
Tel: 020 7831 8778
[www.brit-thoracic.org.uk/guide/
download_guide.html](http://www.brit-thoracic.org.uk/guide/download_guide.html)

i

5

NUMBER OF BED DAYS BY AGE FOR SIX MAIN EMERGENCY RESPIRATORY CONDITIONS, LONDON, 1997/98 TO 2000/01



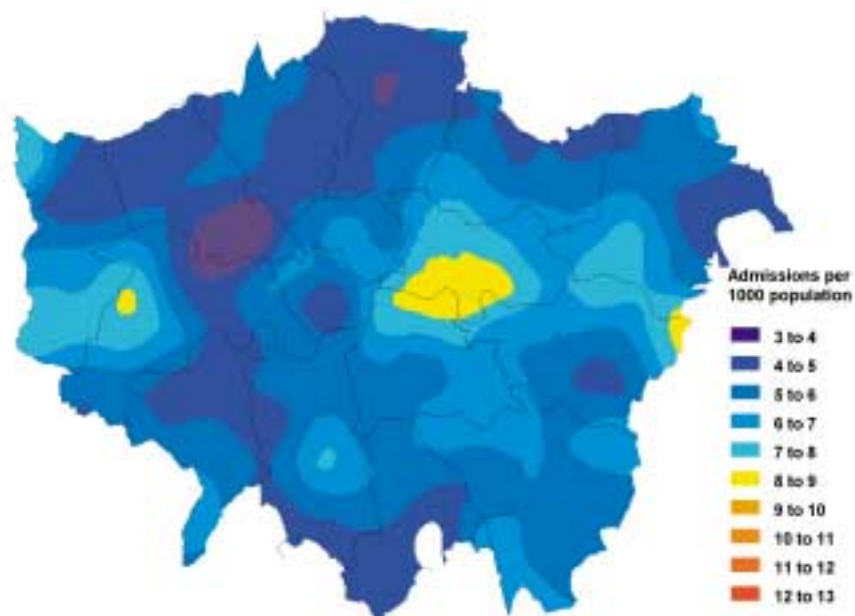
Which locations?

To identify where in London ‘winter pressures’ from emergency admissions for respiratory disease were most likely to be highest, the report identified the location of residence of all patients admitted as an emergency with a respiratory condition. Age-sex standardised emergency admission rates were mapped geographically according to the residence of the patient (by electoral ward). Winter rates (November to February) were compared to summer rates (June to September). The results are shown in *Box 6* and *Box 7*.

These maps show, as expected, that there are higher rates of emergency admission for respiratory disease in winter throughout the city, and that there were particular ‘hotspots’ – for example, in east London. There may be many reasons for the higher rates of emergency admission in east London, for example, poorer quality primary care available, greater proportion of residents from black and ethnic groups and socio-economically deprived groups, and older people living alone.

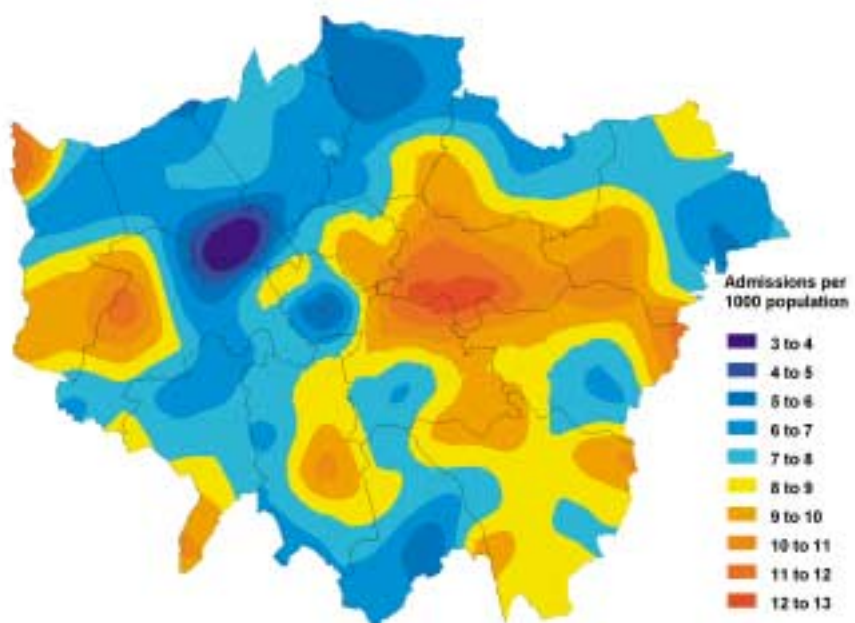
6

AGE-SEX STANDARDISED ADMISSION RATES – EMERGENCY ADMISSIONS FOR RESPIRATORY DISEASES IN SUMMER, LONDON, 1997/98 TO 2000/01





7

AGE-SEX STANDARDISED ADMISSION RATES – EMERGENCY ADMISSIONS FOR RESPIRATORY DISEASES IN WINTER, LONDON, 1997/98 TO 2000/01



Key recommendations

Patients with chronic obstructive airways disease are identifiable in advance of winter, and the disease can be managed in primary care to reduce the risk of admission. To improve future management of ‘winter pressures’ resulting from emergency admissions, the King’s Fund recommends NHS health care professionals and managers in London should:

-  Focus on the management of older patients with chronic respiratory disease.
-  Support primary care staff to identify older patients most at risk of an emergency admission for respiratory disease during the winter months.
-  Design robust, proactive packages of care aimed at reducing emergency admissions among older patients, involving other services where appropriate.
-  Ensure the highest levels of immunisations for influenza in older people in the East End of London.
-  Ensure good levels of public information about and access to primary care, community health services, NHS Direct and social services during the winter bank holidays.
-  Work with staff in selected acute hospitals and general practices to understand the dynamics of demand and supply of care in the December to January period.
-  Analyse supply of resources as well as demands for care, and strengthen the management of both.
-  Evaluate the outcome of any new interventions on initialisation, using HES data or data collected on computer systems in primary care.

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11–13 CAVENDISH SQUARE
LONDON W1G 0AN
INFORMATION 020 7307 2568
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