

# NUFFIELD WINTER INSIGHT

## Briefing 1: Winter beds pressures

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### Key points

- As bed occupancy levels rise, it gets harder and harder to find beds for emergency patients who need to be admitted from A&E – affecting a hospital's ability to meet the standard that 95% of patients attending A&E should be treated, admitted or discharged within four hours.
- Pressure on beds in the NHS in England has become so acute that on any given day last winter, the equivalent of more than five extra hospitals' worth of beds had to be brought into service to accommodate all the patients who needed them.
- On the busiest day last winter, Tuesday 26 January 2016, the number of extra beds trusts had to make available reached its highest level, when 4,390 extra beds were opened – equivalent to bringing on stream seven entire extra hospitals.

The NHS is entering winter 2016/17 amid talk of a crisis affecting both health and social care. Continued financial austerity, in combination with rising demand for health care, looks set to put an already stretched service under severe pressure. The effects of the financial squeeze have been largely mitigated by a combination of the hard work and goodwill of staff, increased productivity and by trusts allowing deficits to accumulate in order to minimise the impact upon patients. But this approach cannot last forever, and over recent years performance on a range of headline measures has been slipping.

This is the first analysis in a new short series of briefings from the Nuffield Trust looking behind the numbers of the increased pressures the NHS experiences during the winter months. In this initial briefing, we look at bed occupancy rates across the NHS in England in winter.

### Introduction

The 25<sup>th</sup> of January this year – a Monday – was a particularly difficult day for the NHS in England. One in seven trusts reported that all their acute beds were full, and nearly four out of 10 had bed occupancy levels of over 98%. And this was after opening nearly 4,200 extra beds to accommodate extra patients.



On the following day, the number of extra beds trusts had to make available reached its highest level for the whole of last winter, when 4,390 extra beds were opened – equivalent to bringing on stream seven entire extra hospitals.

The rest of the week was very busy too. For some trusts there was no let-up. University Hospitals Birmingham, Bolton, Northampton General, the North Middlesex, the Isle of Wight NHS Trust, the Great Western in Swindon, Basildon and Thurrock, Epsom and St Helier and Kettering were all full every day that week with 100% of all their acute beds – including extra beds brought in temporarily – occupied.

The following Monday – the first day of February – 72% of all trusts recorded bed occupancy levels exceeding 95%.

While the week beginning on 25 January was a particularly challenging time for the NHS, right across the whole of last winter – from December to the end of February – around 95% of the nearly 100,000 available beds were occupied on average across the whole of the NHS in England.

Given that pressures on the service have not lessened in the last 12 months, trusts are likely to experience similarly high occupancy rates this winter.

### **Why do high bed occupancy rates matter?**

High levels of bed occupancy can be a real problem – for both patients and staff. As occupancy levels rise, it gets harder to find beds for emergency patients who need to be admitted from A&E. One of the key causes of the record number of patients stuck between the A&E department and a bed in hospital (so-called ‘trolley waits’) is the lack of available beds in the rest of the hospital.

High levels of bed use can also make patients’ experience of hospital unpleasant and disruptive (especially as patients tend to get moved around to accommodate others). This increases stress for staff and leads to problems maintaining cleanliness and controlling infection as it becomes increasingly difficult to isolate patients when there is an outbreak.

Our figures from last winter, like others before them, show just how quickly the NHS can respond to increased demand for hospital services, and how it can use its resources efficiently – improving the flow of patients, reducing how long patients spend in hospital and accommodating extra demand. But high occupancy rates can also be

a sign of poor flow – the record levels of delayed transfers of care are a strong indicator that the rising rates of bed occupancy the NHS is experiencing are a more ominous sign of an overloaded system.

Research has shown that as bed occupancy rises above levels of around 85% to 90%, the likelihood of patients suffering health care acquired infections also starts to rise. A review of studies examining the association between bed occupancy and infections cited by our recent annual statement on quality in the NHS also found evidence of a link between high bed occupancy and increased rates of infection.

In addition, a Department of Health study in 2007 showed a link between high occupancy and infection rates between 2001/02 and 2003/04. Two years later the link between bed occupancy and infection became much weaker. Why this happened is not fully explained but is attributed to a combination of policies and efforts to reduce infections, plus the fact that the number of hospitals with very high occupancy rates fell in 2004/05 and 2005/06. Nevertheless, the Department's report concludes with a warning that:

*These results are not... grounds for complacency in addressing issues such as high bed occupancy, the use of temporary staff and hospital cleanliness. There are various reasons which suggest that each of these add to the challenges of infection control and that, only by continuing concerted effort, will recent trends – and, in particular, the reduced tendency for challenging organisational circumstances to influence MRSA rates – be sustained.*

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**“The record levels of delayed transfers of care are a strong indicator that the rising rates of bed occupancy the NHS is experiencing are a more ominous sign of an overloaded system.”**

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## Our research

We analysed the trust-level bed availability and occupancy from the weekly situation reports (‘sit reps’) that NHS England published for last winter. These sit reps cover every weekday from Monday to Thursday during the period from 1 December to the last day of February every winter, with a combined figure for the period from Friday to Sunday each week.

The data provide three figures for each trust on each of these days throughout the winter:

- The number of *core beds* available each day: this is the number of beds each trust has available for its patients under normal circumstances, without having to bring extra beds into service.

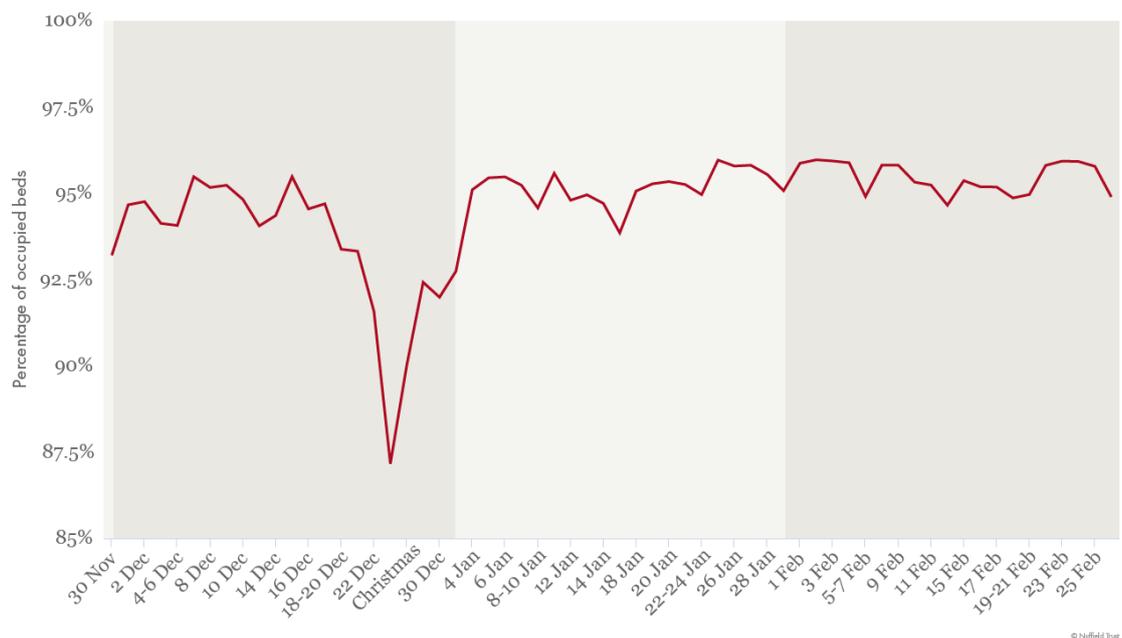
- The number of *escalation beds*: this is the number of additional beds each trust has had to bring into service to cope with the extra patients it needs to admit.
- The number of beds occupied by patients: this is a snapshot count taken between 8am and 9am of the number of core plus escalation beds occupied by patients.

From these data, we calculated the proportion of total occupied beds for individual trusts and for England as a whole.

## Findings

Figure 1 shows the occupancy rate for total beds (i.e. core and escalation beds) on every day last winter across all trusts in England during the 2015/16 winter period.

**Figure 1: Percentage of total beds occupied: England (30 November 2015 to 28 February 2016)**



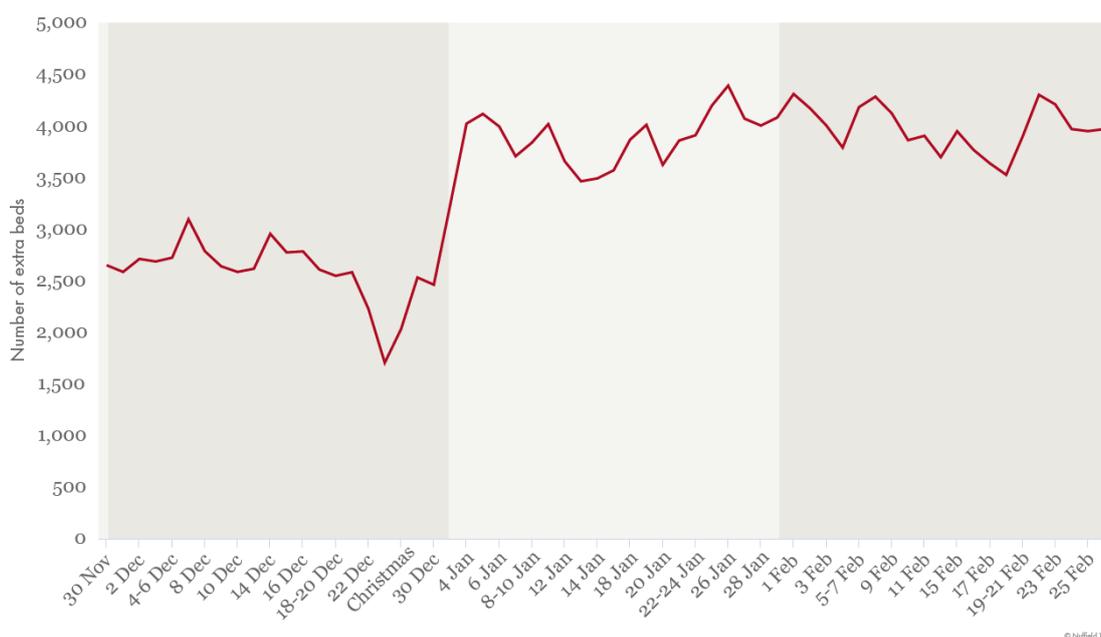
From these figures, we can see that:

- The occupancy rate for core and escalated (i.e. even with all the extra beds pressed into service) ran at around an average of 95% for almost all of the winter.
- The data from individual trusts shows that around a third (54) had rates of 100% on at least one day last winter.

Figure 2 shows *the absolute number of extra ('escalation') beds* the NHS had to open every day last winter, with the following findings:

- The *average* figure for the NHS in England each day was 3,466.
- Given that the average number of core beds in a trust in England is 634, this is equivalent to the NHS *having to open at least an extra five-and-a-half new hospitals* on any given day.
- The day with the *single highest number of extra beds last winter* was 26 January, when 4,390 extra beds had to be brought into service.
- Based on the average of 634 beds per trust, that figure is *equivalent to the NHS having to open at least seven extra hospitals that day*.

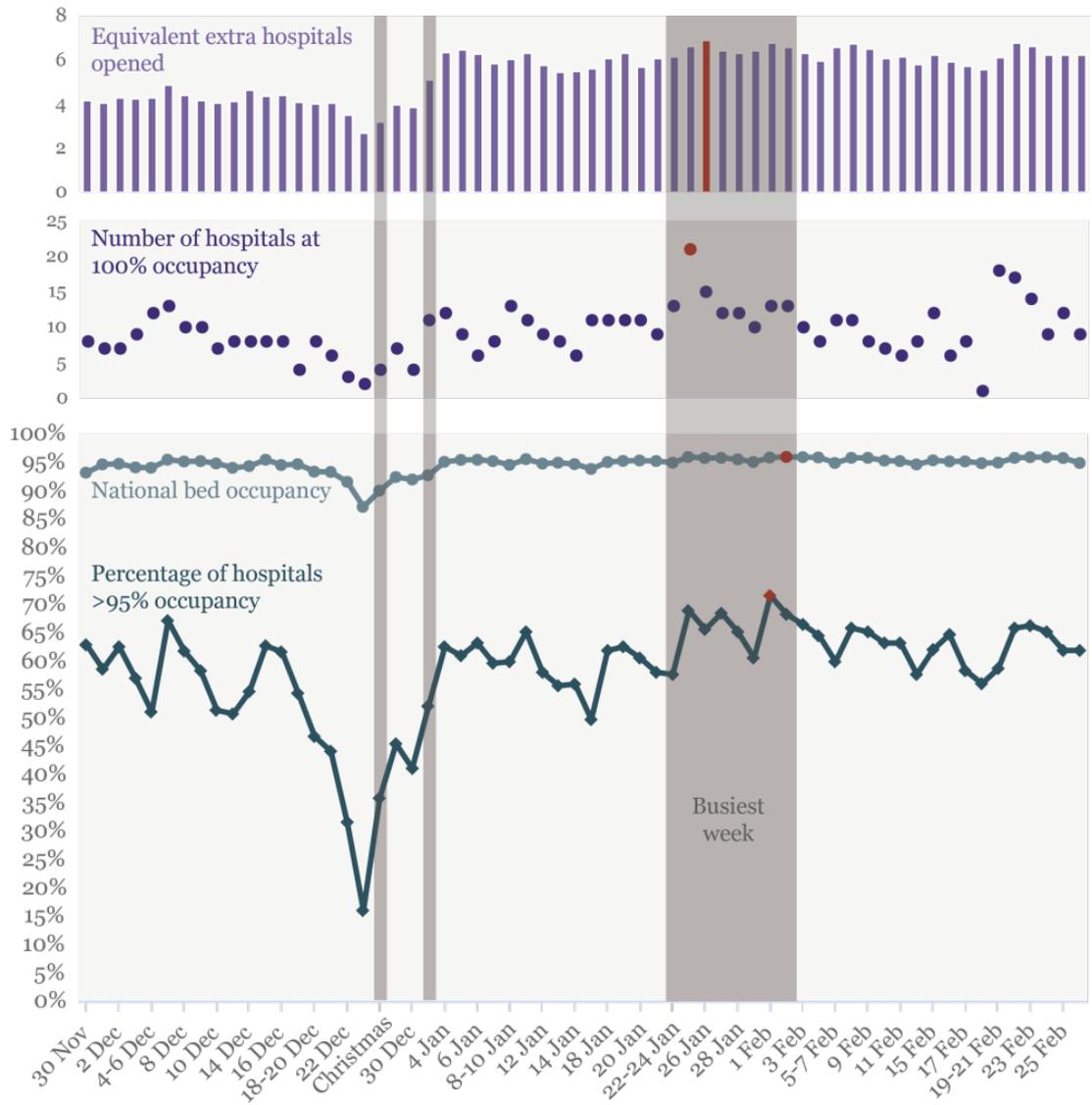
**Figure 2: Number of extra ('escalation') beds opened each day during the 2015/16 winter period in England**



**“The day with the *single highest number of extra beds last winter* was 26 January, when 4,390 extra beds had to be brought into service.”**

Figure 3 summarises bed occupancy data for last winter and highlights the busiest days for trusts.

**Figure 3: Daily bed occupancy: 2015/16 (winter)**



## Why do these findings matter?

As the NHS enters the winter season for 2016/17, and daily recording of bed occupancy and other vital signs starts again, pressure on hospital beds will be intense. The main impacts of the very high occupancy rates we highlight today are as follows:

- Firstly and most obviously, such high occupancy rates will make it extremely difficult for trusts to meet the standard that 95% of people attending A&E should be seen, treated or discharged within four hours. If virtually all the beds on a hospital's wards are already occupied, it will be next to impossible for trusts to admit patients as emergencies from A&E quickly. The most recent figure available for performance against this standard was only 89% for major A&E departments – given that the figure covered the month of October, trusts are likely to record worse performance as the winter months bite.
- Secondly, there are worrying implications for infection control. Strenuous efforts over the last 15 years – setting targets to reduce infections, cleanliness campaigns and helping high risk hospitals manage infection control – have had dramatic impacts on the number of cases of *c.difficile*, for example. But at the same time the trend in bed occupancy nationally has been increasing. The latest figure for the three months to October 2016 shows this has risen again, to 89.1%. Further increases could threaten the achievements on infection control.
- Finally, the problems of high bed occupancy rates and delayed discharge from hospital are inter-linked. While demand for beds inevitably rises, increasing numbers of delays in discharging patients already occupying a bed – now at a 10-year high – mean not only more intensive use of beds but also involve bringing even more into use on a temporary basis.

## What next?

Over the next few months we will track bed occupancy trends as winter unfolds, updating this briefing's charts.

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