



The Royal College of  
Emergency Medicine

# **RCEM Winter Flow Project**

**Final Report: June 2018**

Emergency  
Department



# Introduction

**In 2015, we launched the 'Winter Flow Project' in an effort to highlight the difficulties facing an NHS struggling with unprecedented financial difficulties and insufficient resources.**

The project looked at patient flow within Emergency Departments over the winter. It was a great success because of the generosity of its contributors, with over 50 NHS Trusts and Health Boards from across the UK submitting data over a six-month period. These data helped to provide a better understanding of system pressures and four-hour standard performance.

The findings enabled RCEM to broaden the debate around emergency medicine beyond the usual narrow focus on the four-hour standard and meant that providers, commissioners, the national press and governments in each of the four nations of the UK were better informed about the challenges faced by staff working on the NHS frontline.

The project has proven invaluable and is now in its third year. As was the case in previous years, each participating Provider has submitted weekly data on attendances, four-hour standard performance, delayed transfers of care and cancelled elective operations. This data together better reflect pressures, constraints and consequences for system performance.

However, in an effort to reflect on-going difficulties in recruiting sufficient numbers of permanent staff, the project this year has also asked participating providers how many locum and agency staff are working in their Emergency Departments.

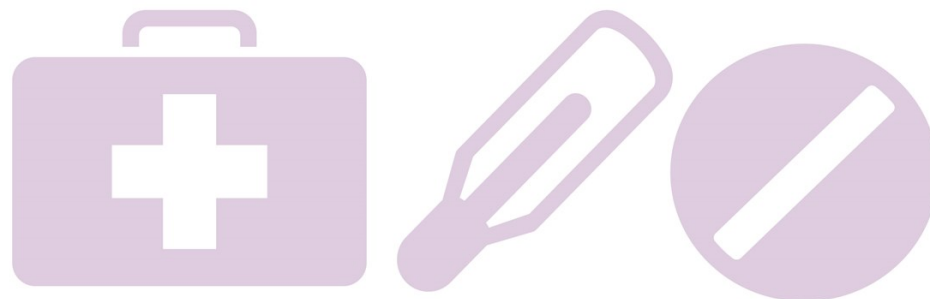
The data are aggregated to ensure the focus of consideration is the wider health care system rather than the performance of individual Trusts/Boards. Over 50 Providers have submitted this data on a weekly basis since the beginning of October.

Published on a Friday of the week following data collection, the summary data provide a current overview of 'winter pressures'. The College is grateful to the participants who represent Trusts/Boards of all sizes and geographical locations.

Unlike NHS England datasets, there is no suggestion that our project represents a complete or permanent scrutiny of the healthcare system. Our data include all four countries of the UK though the majority of participating sites lie within England. It is just a sample of Trusts/Boards, albeit a large and representative one.

The data has already been of immense value to the College and allows informed comment and analysis rather than just speculation.

The project has now reached its end point for 2018 (26 weeks) and it is therefore timely to present the data and our findings.



# Summary

## What happened this winter?

- There was a continued deterioration of 4hr Emergency Care system performance in the UK compared to previous years and was the worst on record overall. A total of 56 sites each contributed 13 consecutive 4-hour performance scores. The range of performance against the Four-Hour Standard was 49.13% to 99.47%, with an overall average of 81.21%.
- Hospital systems improved the proportion of patients with Delayed Transfers of Care (DToC) compared to the previous winter, but this remained inadequate to cope with demand. For 51 Providers the weekly DToC number increased from week one to a maximum over the 26 week period. In 32 Trusts the increase in acute bed stock was greater than the highest point of the DToC increase. This means that those trusts were able to make additional bed capacity available notwithstanding the strain of increasing DToC cases. The DToC rate was a surrogate marker of the increased numbers of patients who were medically optimised but unable to return to care in the community thus exacerbating crowding in the hospital and the ED.
- The total number of elective operations cancelled of 88,509 over the 26 week period was higher than the previous two years. The weekly number of cancellations in 2017-18 during the time period was 129% higher than 2015-16 (3410 /wk compared to 1491/wk). This is both bad news for those patients who are immediately affected and bad news for Providers whose income from elective work will have been restricted as a result.
- The number of locum staff employed on the front-line increased by around 22%. This shows the lengths that Providers are willing to go to in order to maintain patient safety, but this comes at a significant cost.

## Why did it happen?

- The RCEM believes that there has been under investment in key areas of the NHS & Social care that have impacted with increasing effect on urgent and emergency care systems in the UK. We estimate for example that there is a lack of at least 5000 acute beds in hospitals in England alone.
- Hospital systems are using a range of reactive levers including cancellation of elective care to try and manage the demand upon their systems. A number of other factors have also compromised the ability of flow and wider hospital system engagement to support Emergency Department function.
- The chronic staffing crisis affecting the NHS is also manifest in Emergency Departments and hospitals continued to use increased locum staff in order to help maintain safety.

## How can we improve?

- There is a clear need to have a primary focus on better planning that will optimise flow of patients who are acutely ill or injured from the Emergency Department and then require a hospital bed. Additional funding to address the care needs of patients who have been medically optimised and are fit to be discharged back into the community with appropriate social care support is also vital.
- Systems must have a range of proactive and reactive steps in place to ensure flow as well as wider engagement to maintain that flow. The RCEM makes a number of recommendations.
- There is now a clear ED workforce strategy in England that must be implemented well. Devolved nations must ensure a similar strategic focus to improve care delivery for patients.





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## Contributors

56 locations contributed to the project. The nation analysis of contributors is as follows:

| England | Scotland | Wales | Northern Ireland |
|---------|----------|-------|------------------|
| 48      | 1        | 3     | 4                |

As an indication of size, the bed capacity of the contributing sites ranged from 160 to 1,849.

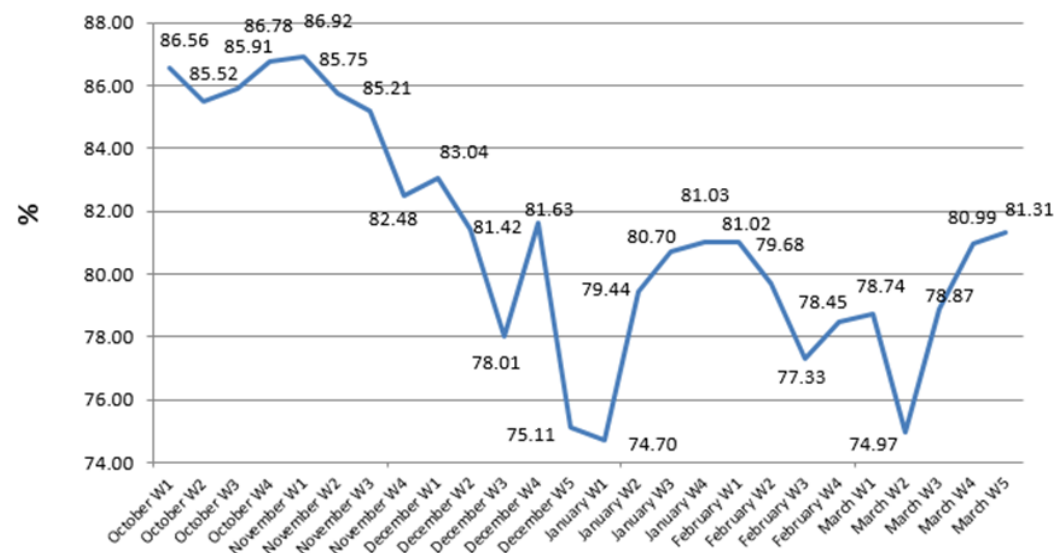
The five measures reported on a weekly basis were:

- 4-hour performance
- Acute Bed stock
- DToC instances
- Cancelled elective operations
- Locum numbers (qualified doctors and nurses)

## 4 Hour Performance Standard

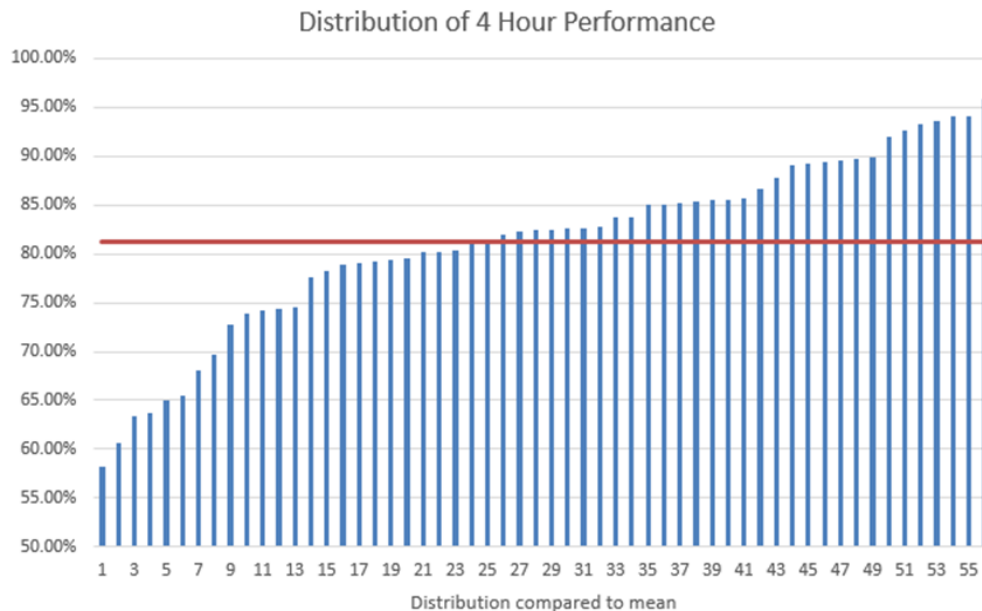
56 sites each contributed 26 consecutive 4-hour performance scores. The range of performance against the Four-Hour Standard was 49.13% to 99.47%, with an overall average of 81.21%. The overall weekly trend was as follows:

4 Hour Standard Performance - Simple Average Basis



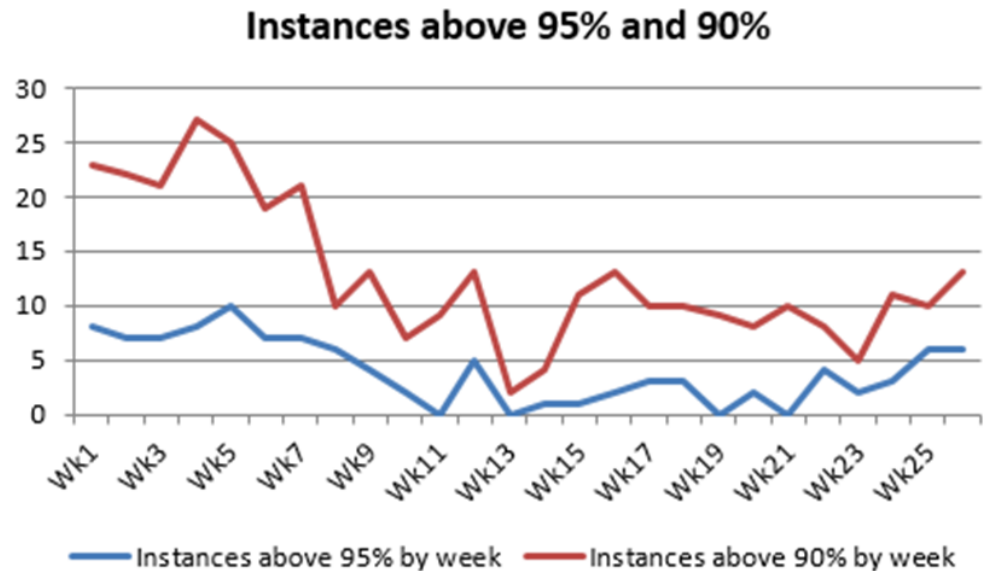
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One site achieved an average of 95% Four Hour Performance over the 26 week period. It recorded 17 weeks at over 95% and 9 at over 90%. The following chart plots the distribution of performance by ED compared to the mean.



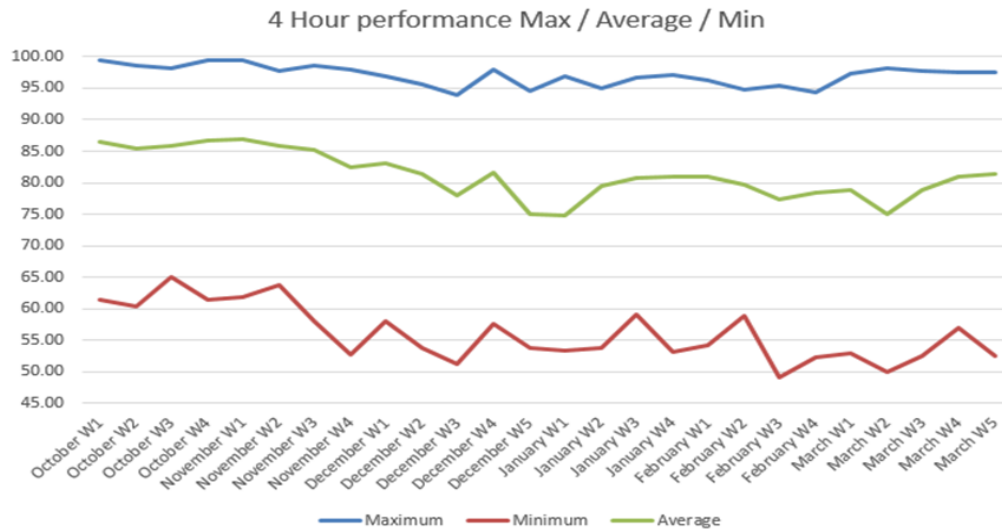
The above chart shows the number of locations achieving the 95% target compared to a 90% performance level on a weekly basis.

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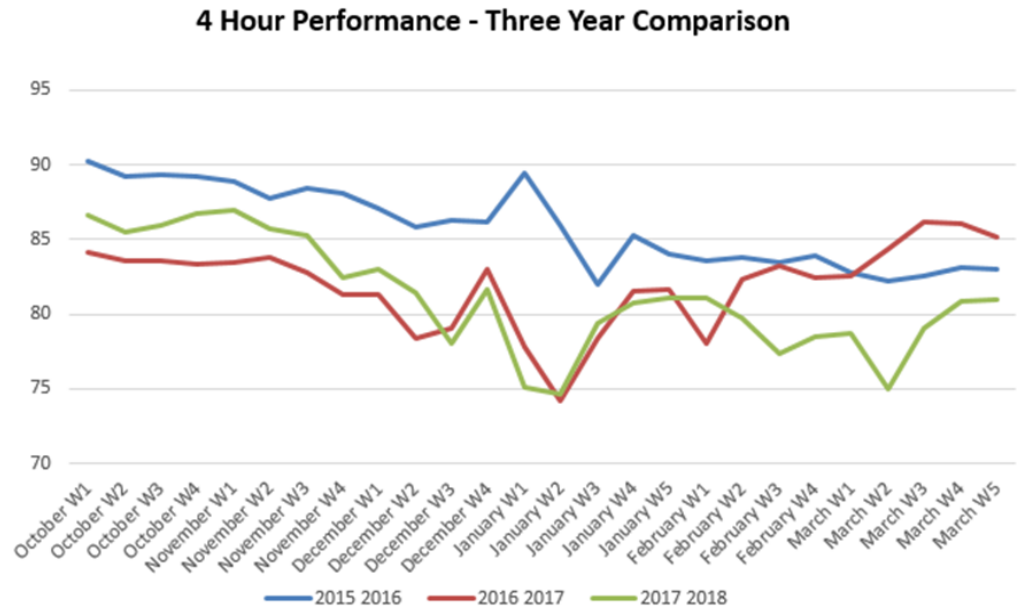


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Comparing the max, the minimum and average four-hour performance of the total population shows the following results:



The chart given below gives Four-Hour Standard performance over the three years the project has been running.

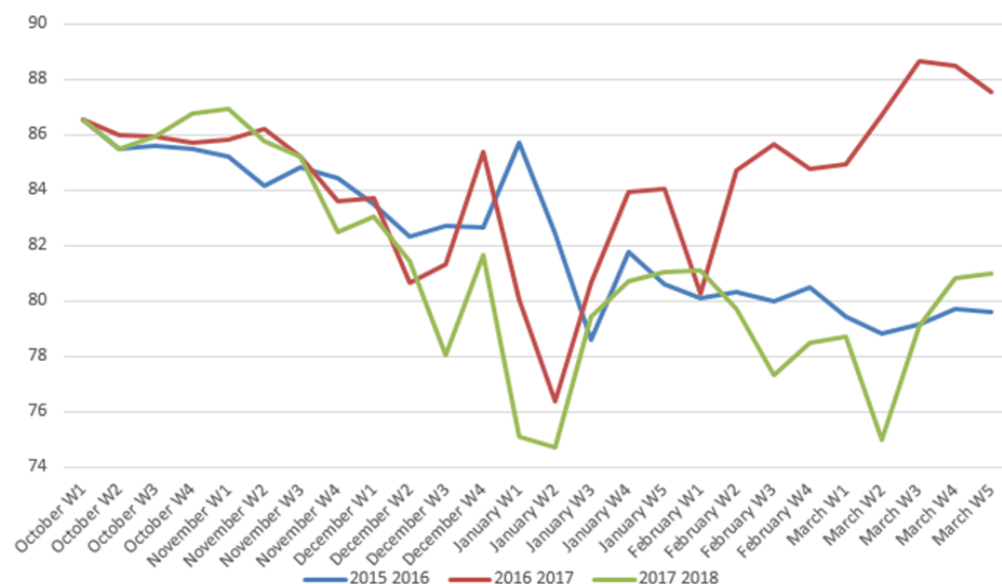




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These figures can also be expressed by adjusting the previous years' figures to a common start point. In this way the relative performance may be compared over the three years. This is shown below.

**4 Hour Performance - Three Year Relative Performance**



What the last two charts clearly show is that while performance recorded by Winter Flow from October to December 2017-18 was, if anything, slightly better than had been the case from October to December 2016-17, performance from January to March 2017-18 continued the downward trend we have seen for the last three years.

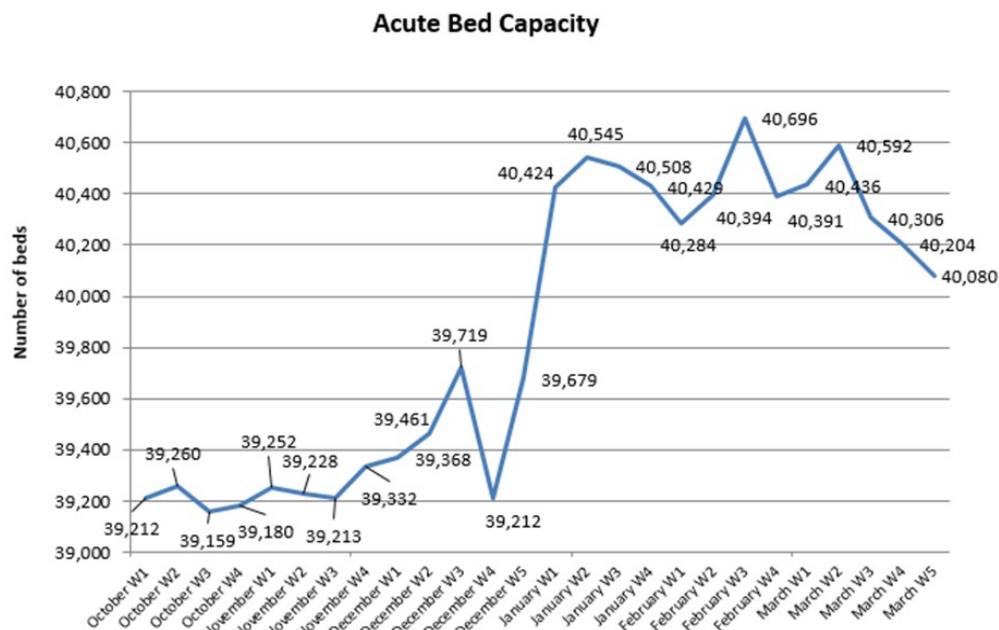
Nonetheless, over the six-month course of the project as a whole four-hour standard performance was broadly comparable with the data recorded in 2016-17.

| Average Score | Oct-Dec | Jan-March | Overall |
|---------------|---------|-----------|---------|
| 2015/16       | 88.15%  | 83.50%    | 85.83%  |
| 2016/17       | 81.95%  | 82.01%    | 81.98%  |
| 2017/18       | 83.41%  | 79.02%    | 81.21%  |

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## Acute Bed Stock

The overall profile of bed stock over the period was as follows:



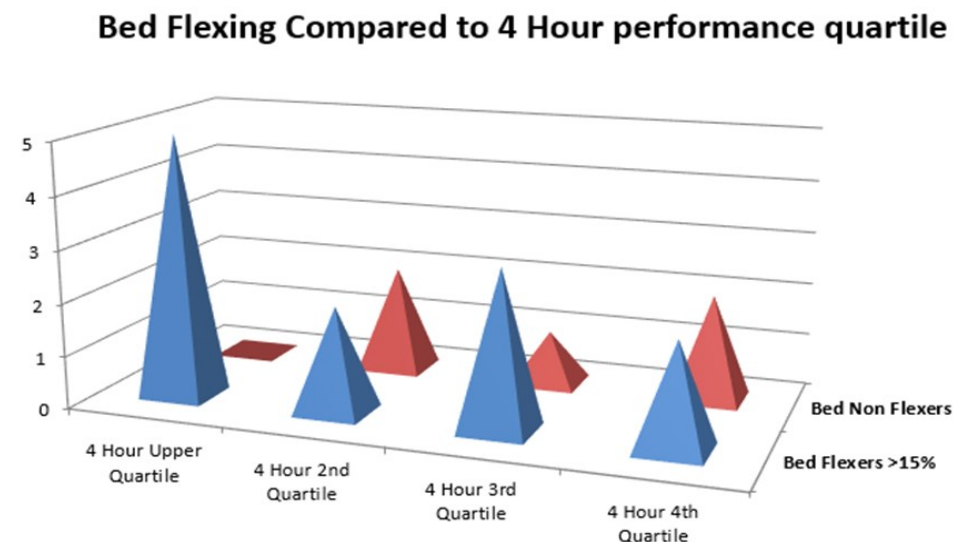
The y axis of the graph has been selected to carefully illustrate the weekly movement. However, this masks the fact that the maximum (week 20) is only 3.9% higher than the lowest point (week 3).

## Acute Bed Stock Flexing

The extent to which the individual participating sites flexed their bed stock (minimum to maximum) to meet demand is shown in the next table.

|                 | No flexing | 0 - 5% | 5 - 10% | 10 - 15% | 15%+ |
|-----------------|------------|--------|---------|----------|------|
| Number of sites | 5          | 12     | 20      | 7        | 12   |

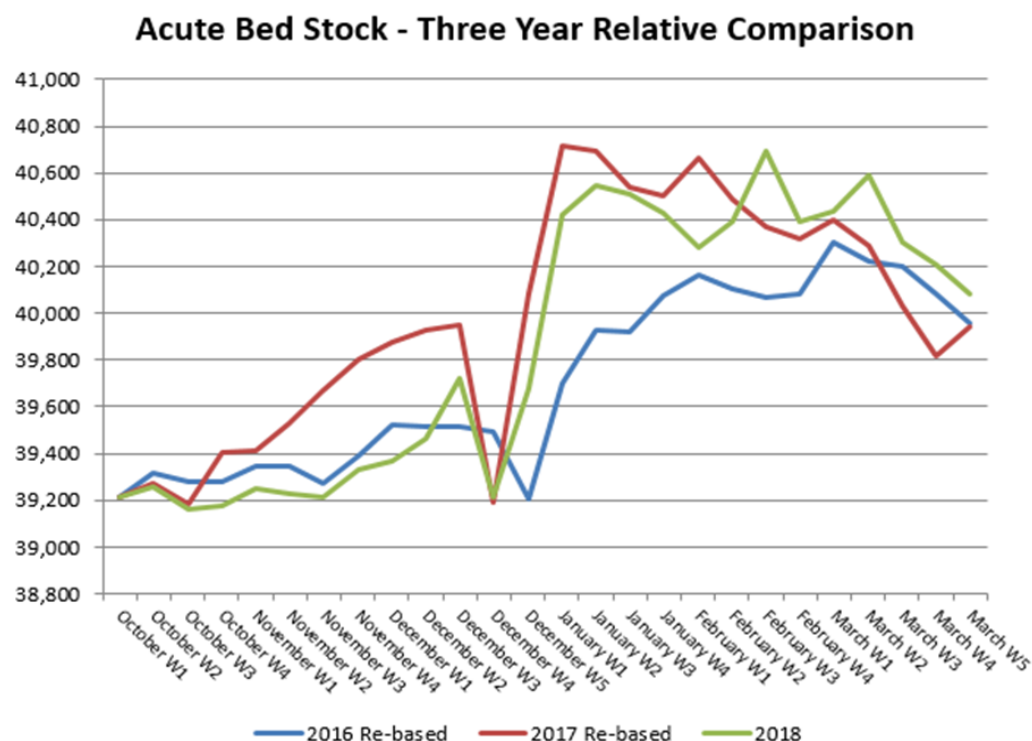
The following chart compares the largest bed-flexers (>15%) and the sites which have not flexed their bed capacity at all with their quartile performance in the four hour measure.



Although the populations of larger flexers and non-flexers are relatively small (12 and 5) the data collected this year illustrates that those sites which flex their beds to an extent greater than 15% performed better as a cohort than those that did not flex bed stock at all in four-hour standard performance.

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In order to compare the changes in acute bed stock over the three Winter Flow projects the results may be presented calculated from a common starting point as below:



To help interpret this chart it is worth concentrating on the second half of the winter period when performance against the four-hour standard notably declined against the previous year. This is best illustrated by looking at the total number of beds recorded each week from early January until the end of March (weeks 14 to 26). This is shown in the following table.

| Year    | Total Beds Week 14 to 26 |
|---------|--------------------------|
| 2015-16 | 520,807                  |
| 2016-17 | 524,772                  |
| 2017-18 | 525,289                  |

This illustrates that in relative terms the beds were flexed more than in the previous year. However, two things should be noted at this point. Firstly, although the Winter Flow Group recorded an increase from 2016-17 to 2017-18 of 0.1% this was in no way sufficient to meet demand. Figures from NHS England indicate that if we compare in Q4 in 2016-17 and 2017-18, admissions increased by more than 6%.<sup>1</sup>

Secondly, the very small increase in the number of acute beds recorded by the Winter Flow Project is not reflected in the wider NHS. NHS England overnight bed availability data shows that in Q3 and Q4 2017-18 both the total number of beds, and the number of acute beds were lower than was the case in 2016-17.<sup>2</sup>

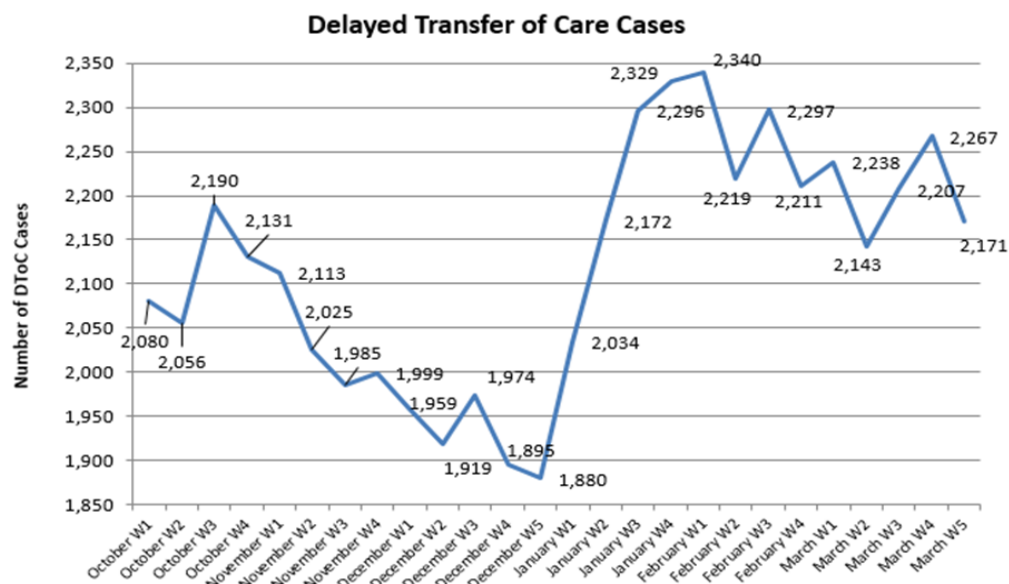
<sup>1</sup> [NHS England: A&E Attendances and Emergency Admissions 2018-19](#)

<sup>2</sup> [NHS England: Average Daily Available and Occupied Beds Timeseries](#)

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## Delayed Transfer of Care – DToC

The overall picture was as follows:

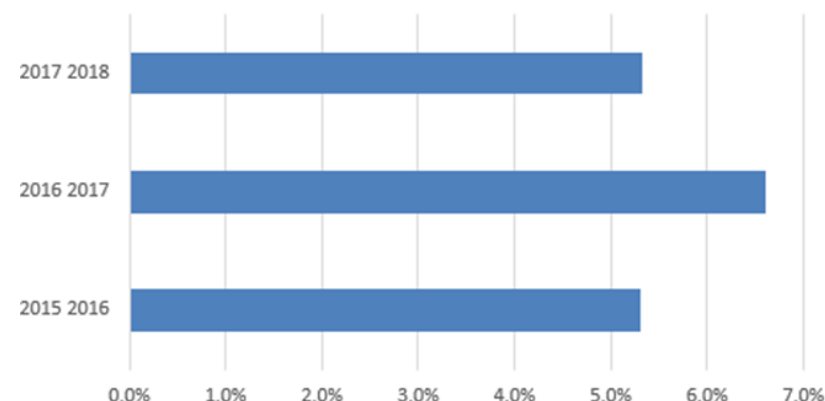


The following chart demonstrates that the proportion of bed stock tied up by DToC cases has fallen this year back to the level of 2015-16. The improvement from year two to year three is the equivalent of a total of 13,266 instances of bed weeks being tied up over the six-month period. The overall proportion of acute beds occupied by DToC patients has averaged 5.3%.

However, while this is good news for both patients and for patient flow this remains far higher than the 3.5% of bed stock mandated by the Secretary of State in July 2017<sup>3</sup>.

<sup>3</sup> [Reducing delays for people moving from hospital to social care](#)

DToC as % of Acute Bed Stock



## DToC and Overall Bed Capacity

For 51 Providers the weekly DToC number increased from week one to a maximum over the 26 week period. In 32 Trusts the increase in acute bed stock was greater than the highest point of the DToC increase.

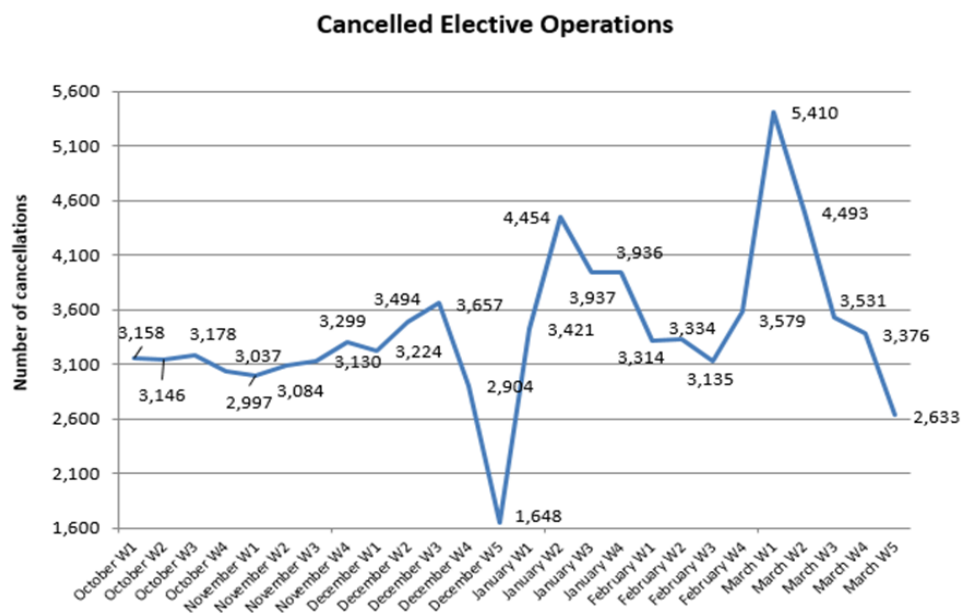
This means that those trusts were able to make additional bed capacity available notwithstanding the strain of increasing DToC cases.

However, 19 Providers were not able to increase the bed capacity to cover the spike in DToC cases and therefore, in certain weeks had no further capacity to accommodate the seasonal increase in admissions. This means that those providers experienced a net loss in bed capacity in certain weeks despite their efforts to create additional capacity to meet seasonal demand.

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## Cancelled Elective Operations

The overall picture was as follows:



This represents a total of 88,509 cancelled elective operations over the 26 week period.

It is well known that faced with hospitals that were effectively at full capacity, on 2nd January the National Emergency Pressures Panel (NEPP) ordered the cancellation of all 'non urgent in-patient elective care' until 31st January<sup>2</sup>. This accounts for much of the uplift in elective cancellations recorded by the Winter Flow Project after this point.

What is less well appreciated is that the number of elective cancellations has been significantly higher through the course of this year's project than in the previous year, or the year before that.

For the record the definition of an elective cancellation has remained the same for the three years of the Winter Flow Project's operation.

This is:

*'The number of cancelled elective operations should include both those that are cancelled in advance and those that are cancelled on the day they are due to take place – in patients and day cases – all irrespective of reason. It must only exclude those which are cancelled by patients'.*

In this way we endeavour to provide a patient facing indicator as well as a measure of cancellations in response to demand pressures on bed capacity. What this shows is the average number of cancellations per week has climbed by an average of around 1000 per week in each of the last two years.

| Year    | Average Weekly Cancellations |
|---------|------------------------------|
| 2015-16 | 1491                         |
| 2016-17 | 2398                         |
| 2017-18 | 3410                         |

What this also highlights is that while there has been some good news in terms of Emergency Department four-hour standard performance relative to last year (2016-17 overall average 81.98%, 2017-18 overall average 81.21%), much of this has been achieved by cancelling elective operations in large numbers. This is both bad news for those patients who are immediately affected and bad news for Providers whose income from elective work will have been restricted as a result.

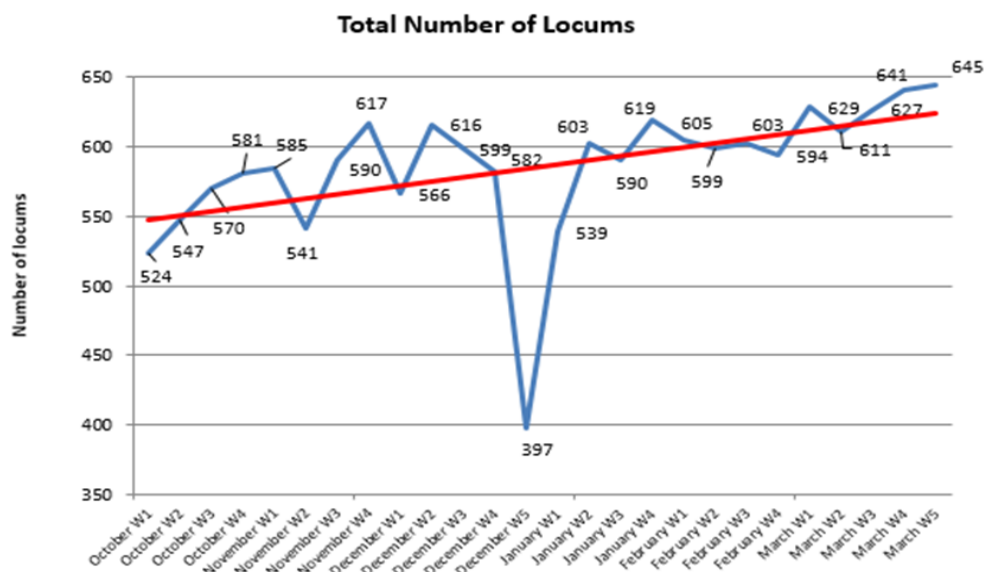
<sup>4</sup> [NHS National Emergency Pressures Panel](#)



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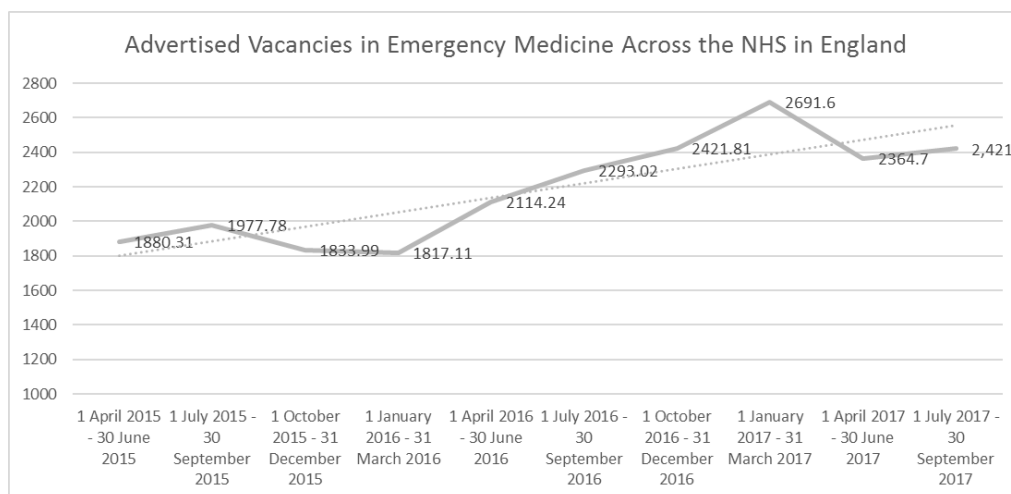
## Locums Engaged – Qualified Doctors and Nurses

The overall picture was as follows:



Over the course of this year's project the number of locum staff employed on the front line within project contributors has increased by around 22%. This shows the lengths that Providers are willing to go to in order to meet patient demand and speaks volumes for the acute staffing shortages currently affecting the specialty.

It is also worth noting that these figures are also borne out by wider available evidence. Data from NHS Digital indicates that in September 2017 the number of Emergency Medicine vacancies across the NHS in England reached 2,421 and has risen consistently for at least the last two years.<sup>5</sup>

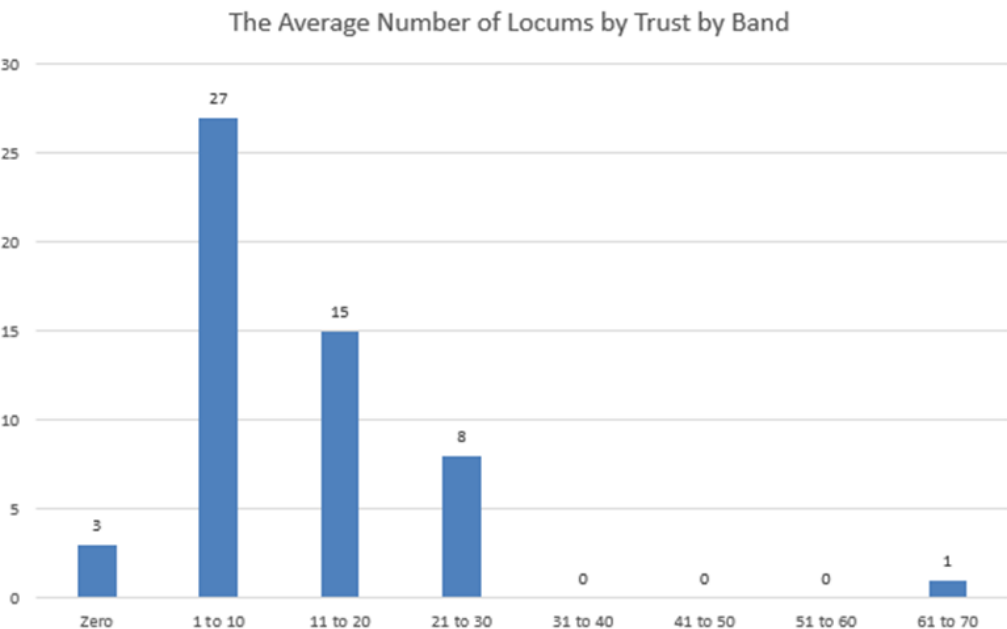


However, while the overall picture is one of pronounced shortage, it remains true that to some extent staffing is a flexible resource, and as such, Providers use locum staff either in response to fluctuations in patient demand, or indeed dependent on their own ability to pay those members of staff.

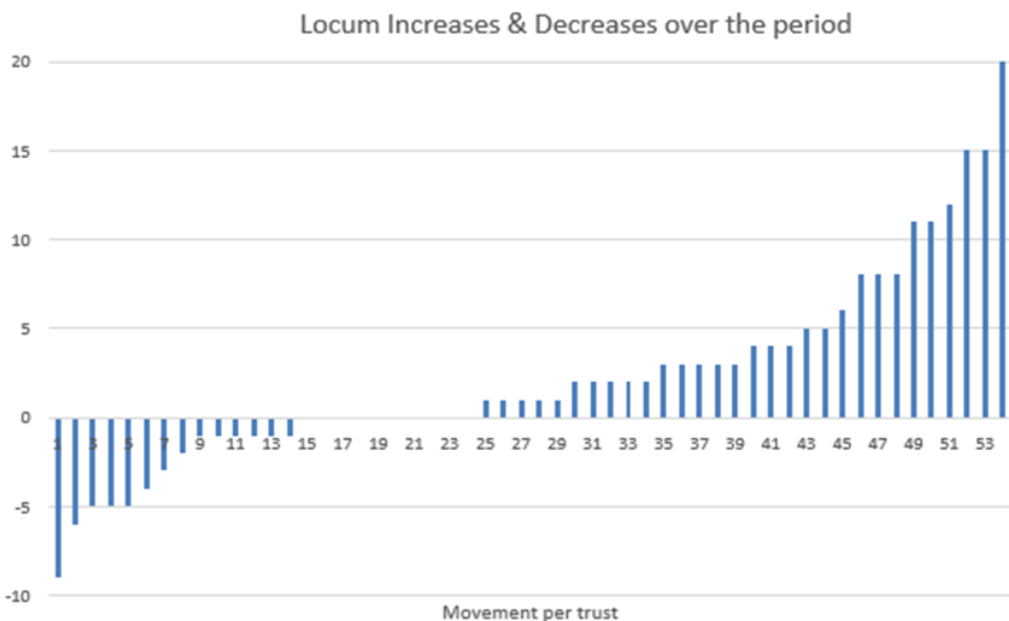
<sup>5</sup> NHS Digital [NHS Vacancy Statistics England, Feb 2015 - Sept 2017, Provisional Experimental Statistics](#)

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As such, within the Winter Flow group, this year's project saw considerable variations in the use of locum and agency staff as the charts below are intended to indicate.



The overall increase in locum resource was not a uniform increase across locations. In fact, our data shows a mixture of reductions, no movement and increases, this is indicative of effort to respond to patient demand where this is possible.



## Further Analysis

**In February 2018, NHS Improvement published its ‘Quarterly performance of the NHS provider sector: quarter 3 2017/18’. As the name suggests this gives an overview of NHS performance up to the end of December, and on the basis that four-hour standard performance at all ED facilities<sup>6</sup> had only declined to 89.5% from 89.6%, this report declared that ‘the year-on-year decline in performance experienced during this period over the previous four years has halted.’<sup>7</sup>**

Given that this year’s Winter Flow Project recorded average Type 1 four-hour standard performance of 81.21% compared with 81.98% the previous year, this might seem like a tempting conclusion. It would nonetheless be misguided.

While these figures might seem similar on a superficial level, a closer examination of the data indicates that the ability of Providers to see, treat, admit or discharge their patients has continued to deteriorate. Between January and March, the Winter Flow Project recorded average four-hour standard performance of 79.02%. This is the lowest quarterly score we have ever recorded. Moreover, it is 2.99 percentage points lower than in 2016-17 and 4.48 percentage points lower than was the case in 2015-16.

The reality is that faced with attendances and admissions that have continued to rise — figures from NHS England indicate that attendances at Type 1 emergency departments have risen by 1.10% compared with Quarter 3 & 4 2016-17 and admissions have risen by 6.10% in the same period<sup>8</sup> — NHS Providers have done a remarkable job despite the fact the resources provided to deliver the expected levels of service have been ‘demonstrably inadequate’.<sup>9</sup> In this

respect it is telling that in March,<sup>10</sup> when four-hour standard performance at Type 1 EDs was 76.4%, NHS England (while retaining their commitment to the four hour target) effectively abandoned the idea of returning to 95% performance until 2020.<sup>11</sup>

Our own evidence shows the lengths to which Providers have gone to try and support performance. Between January and March it appears that the Providers within the Winter Flow group responded to pressures by flexing their acute bed stock to a slightly greater extent than was the case last year, although this was far outstripped by increases in admissions. Unfortunately, the situation was still more adverse in the wider NHS. NHS England data for both Quarter 3 and Quarter 4 shows that, as was the case in previous years, NHS Providers have tried to accommodate an ever-larger number of needy patients with a ever diminishing bed base.<sup>12</sup> The predictable result has been bed occupancy at record levels and thousands of patients stranded on trolleys for more than 12 hours.<sup>13</sup>

However, a sustained effort to fill gaps in rotas by employing ever greater numbers of locum and agency staff show that Providers did not sit on their hands. It is also credit worthy that a determined drive to reduce the numbers of patients subject to Delayed Transfers of Care appears to have yielded results; albeit without reaching the 3.5% of bed stock mandated by the Secretary of State for Health and Social Care.<sup>14</sup>

All this being said, there is still no getting away from the fact that throughout the Winter Flow reporting period this year, performance has been supported by cancelling unprecedented numbers of elective operations. Between them, the contributing providers to this year’s

## Further Analysis

project recorded an average of 3410 cancelled elective operations per week. While this may have helped to improve bed availability in a time of crisis, it is surely neither desirable or sustainable to support the standards of treatment for one group of patients directly at the expense of another group of patients. Particularly so because by denying those patients their planned elective treatment, you make it more likely – not less – that those same patients will arrive in an ED in need of more urgent medical help.

Many, of the practical steps to improve this situation have been highlighted to us by our contributing Providers. They have told us that a lack of social care provision consistently obstructs their ability to move medically optimised patients out of hospital. Similarly, a profound shortage of trained staff, and wider financial constraints have made opening additional acute beds problematic.

The Royal College of Emergency Medicine welcomes Government discussions about additional resources for the NHS, whether this is in the form of a £4 billion NHS 70th anniversary present,<sup>15</sup> a hypothecated tax to fund the health service,<sup>16</sup> or a parliamentary commission to look into the long-term funding settlement of health and social care.<sup>17</sup> It is in the interests of both patients and staff that these discussions yield tangible results. The Secretary of State has reiterated his commitment to returning four-hour standard performance to 95%. Our hospitals need the means to turn these aspirations into reality.

<sup>6</sup> This include Type 1 emergency departments in addition to other departments like walk in centres see [NHS Data Dictionary](#)

<sup>7</sup> [NHS Improvement: Quarter 3 2017/18 performance report](#)

<sup>8</sup> [NHS England: A&E Attendances and Emergency Admissions 2018-19](#)

<sup>9</sup> [NHS Improvement report underlines why our members are at 'end of their tether', says NHS Confederation](#)

<sup>10</sup> [NHS England: Monthly A&E Timeseries March 18](#)

<sup>11</sup> [The Government's revised mandate to NHS England for 2017-18](#)

<sup>12</sup> [NHS England: Average Daily Available and Occupied Beds Timeseries](#)

<sup>13</sup> [NHS England: A&E Attendances and Emergency Admissions 2018-19](#)

<sup>14</sup> [Reducing delays for people moving from hospital to social care](#)

<sup>15</sup> [Times: Theresa May orders £4bn Brexit boost to save ailing NHS](#)

<sup>16</sup> [Guardian: May must consider tax rises to fund NHS and social care, say MPs](#)

<sup>17</sup> [Times: Jeremy Hunt calls for 10-year deal to fix 'crazy' NHS budget](#)

# Further Practical Steps to Improve the Situation on the Front Line

**While the College remains committed to the measures outlined in our Vision 2020 around beds, staffing, training places, social care resources and ED transformation, these are of necessity, quite high level, broad policy asks. Further to this, more specific recommendations can be made that allow learning the lessons of ED performance this winter and delivering with practical steps to improve care delivery.**

The College has the following recommendations to make that if appropriately escalated will result in optimising safety, delivering timely clinical care and result in sustainable system performance.

## **Optimising Patient Flow**

### **Proactive steps**

- Establishing how many beds are required across acute and community care, at hospital and regional level, to ensure consistent patient flow and safe bed occupancy levels, based on local population and predicted demand.
- Focus on discharge of patients who are fit and ready to leave or be transferred to community care but can't.
- Ambulatory Emergency Care (AEC) at 'the front door' in every hospital. Properly funded AEC schemes are proven to be safer for patients, more efficient, reduce pressure on the bed base and are cost effective for Emergency Departments.

### **Reactive steps**

- Better seasonal cancelling of elective care to cope with demand.
- Full capacity boarding with patients being moved to wards, where they can be appropriately monitored while they await a bed or the next stage of their care. This frees up emergency department staff to focus on the sickest patients, prevents overcrowding and reduces the potential risk of patient harm. In Wales this will help to mitigate cases of lengthy ambulance waits outside of the ED.



# Further Practical Steps to Improve the Situation on the Front Line

## Engagement and empowering the wider system

- Better application and consistency of in-hospital team approaches to maintain flow. For example, the ECIP approach in England of engaging systems with SAFER bundles and consistent access to senior decision makers has had significant success where it has been implemented well. Equivalent systems are in place or in development in the devolved nations.
- Strong proactive community and social care programmes – linked to targeted collaborative funding strategies – for patients who are fit to leave hospital, will help create better flow.
- Better engagement strategies for primary care services, including NHS 111, in and out of hours. In Scotland, stronger links between hospitals and Integration Joint Boards (IJBs) to enhance patient care for our ageing population.
- In Northern Ireland, better engagement with the transformation agenda to enhance patient care for our growing and ageing population.
- Across the UK, more social care capacity to meet the needs of our growing and ageing population.

## Implementing the workforce strategy

- In October 2017 RCEM agreed a comprehensive workforce strategy for emergency medicine in England with NHSE, NHSI HEE. In Scotland, the Health and Care (Staffing) Bill will place a legal requirement on NHS boards and care services to ensure appropriate numbers of suitably trained staff are in place. Further work is also required in Northern Ireland and Wales to expand the emergency medical workforce there. In Northern Ireland this should include immediately funding and implementing the recommendations in the 'Emergency Medicine Medical Workforce Planning Report (Northern Ireland) 2014-2022' and urgently reviewing the need to go beyond these in the context of delivering patient care for our growing and ageing population.
- This approach is a clear shared vision that we are working hard to implement. It will aim to reduce the locum spend significantly in the UK, grow our core clinical workforce significantly, reduce attrition amongst trainees and maximise the retention of valuable Emergency Department staff.

