

# **CHKS Health Insight report**

## **Weekend emergency admissions – an unmet need**

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September 2016

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# Introduction

**Clinical conditions don't wait for weekdays ... so are some patients being adversely affected by unnecessary waits over the weekend to access care? A CHKS analysis of English hospital emergency admissions data suggests they could be.**

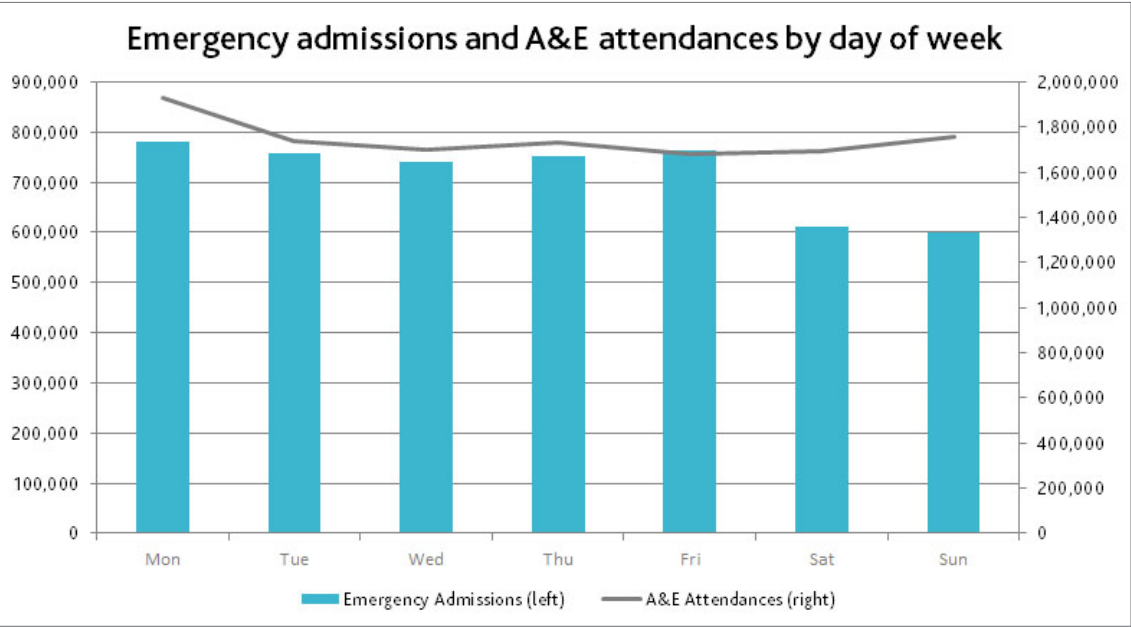
The analysis highlights an unmet need for patients requiring hospital admission at the weekend showing that some patients wait too long for treatment, including for major conditions like heart attack and stroke. This in turn could have potentially detrimental effects on their health outcomes.





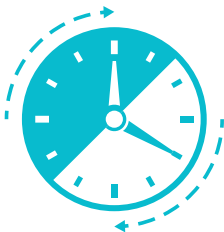
# Key findings from the analysis

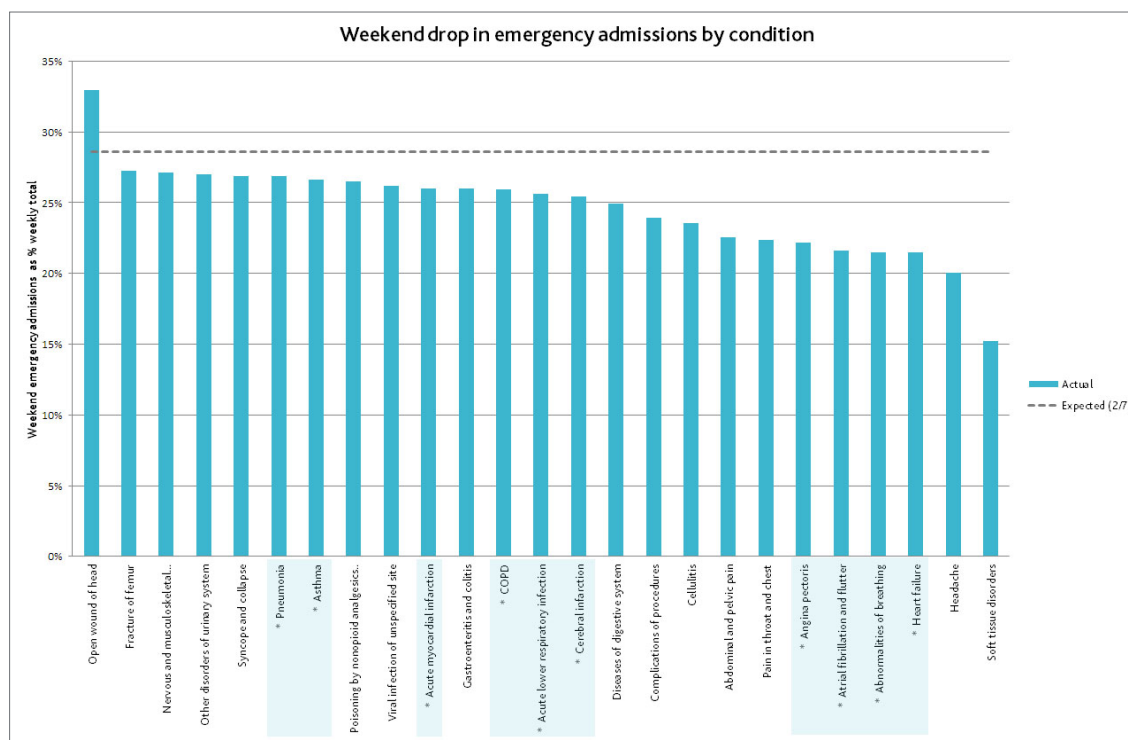
There is a 20% drop in hospital emergency admissions at the weekend, but no corresponding drop in A&E attendances (Figure 1).



**Figure 1: Emergency admissions and A&E attendances by day of week**  
Data source: HES, English acute trusts, 12 months to July 2014

This drop is seen for all major diagnosis groups, including myocardial infarction, stroke, COPD and asthma. Conditions with a clear indication for urgent admission e.g. fracture of femur appear to drop the least while those where symptoms are self-limiting and minor e.g. soft tissue disorders drop the most. Admissions for open wound of head are an exception and are most likely associated with weekend alcohol consumption. The top 25 conditions by volume are shown on the next page (Figure 2).





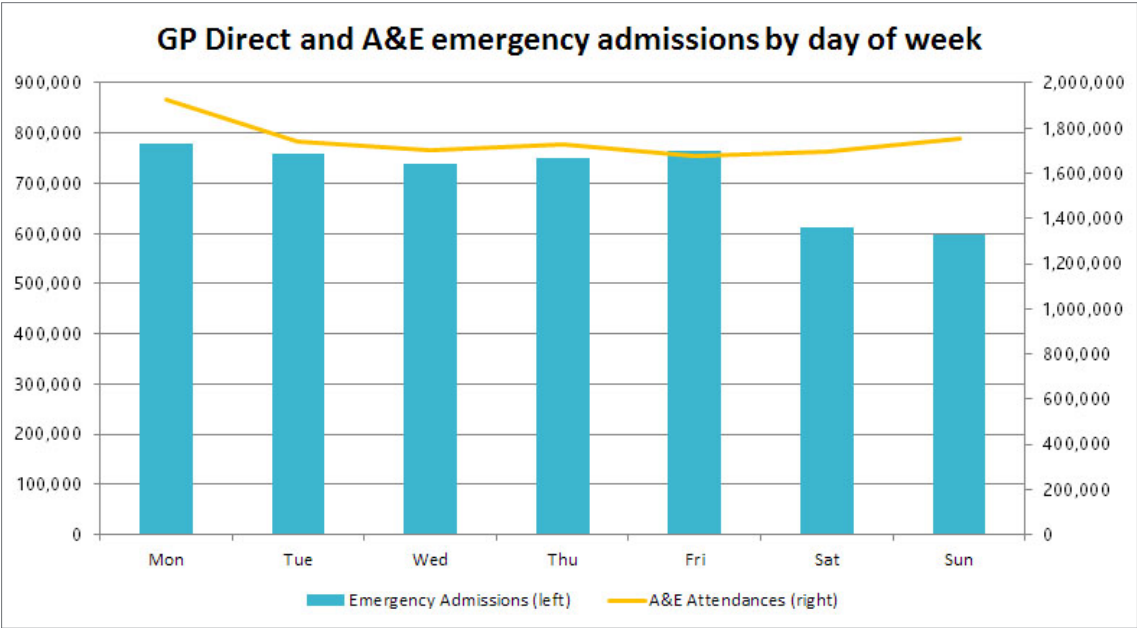
**Figure 2: Weekend drop in emergency admissions by condition**  
Data source: HES, English acute trusts, 12 months to July 2014

Clearly some people with more minor conditions will seek help elsewhere or delay a visit to GPs, for instance for colds, minor abrasions etc. However, it is clear this is also occurring with more serious conditions which require emergency hospital admission and treatment. In these cases timely clinical input is vital in diagnosing and quickly treating patients to improve their chances and speed of recovery. Our modelling suggests that some urgent patients, including those who have had a heart attack or stroke, could potentially be waiting for admission. For example, non-uniform pattern of admissions suggests over 1,500 heart attack patients are delayed over the weekend each year (see below). A similar number - 1,630 of stroke cases are also delayed each year (Table 1).

Emergency admissions with Acute Myocardial Infarction				
Day	Actual admissions	Expected admissions if equal spread	Difference (weekday)	Difference (weekend)
Monday	9,069	8,457	612	
Tuesday	8,720	8,457	263	
Wednesday	8,623	8,457	166	
Thursday	8,501	8,457	44	
Friday	8,886	8,457	429	
Saturday	7,725	8,457		-732
Sunday	7,675	8,457		-782
<b>TOTAL (12 months)</b>	<b>59,199</b>	<b>59,199</b>	<b>1,514</b>	<b>-1,514</b>

**Table 1: Emergency admissions with Acute Myocardial Infarction**  
Data source: HES, English acute trusts, 12months to July 2014

The two main sources of admission are through A&E and GP direct admissions. While there is no significant drop in patients admitted via A&E, there is a marked decrease in GP direct admissions during the weekend (Figure 3) with the number of admissions falling from 2.7 per thousand population per year to 1.1 - a reduction of 59%. We know that there is a greatly reduced level of appointments available in GP practices during the weekends, and while some areas now have limited weekend access, this is much lower than the level of appointments available in the week.



**Figure 3: GP Direct and A&E Emergency admissions by day of week.**  
Data source: HES, English acute trusts, 12 months to July 2014





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# Discussion

The analysis highlights a drop in hospital emergency admissions over the weekend, even for conditions that have the potential to deteriorate or can show marked reduction in outcomes if left untreated. The decrease is unexpected as the incidence of a medical or surgical condition is not likely to follow a cyclical weekly pattern. Nor is this drop accounted for by any decrease in demand: A&E attendances do not drop as appreciably at the weekend.

This is most likely to be due to reduced access to primary care at the weekends, with limited coverage of out of hours GP provision. The rise in GP admissions on Fridays suggests some degree of forward planning by in-hours GPs, in anticipation that primary care access, admissions, or both are more difficult over the weekend. A recent analysis of the national GP patient survey highlighted that a proportion of patients who were unable to obtain a convenient GP appointment either decided to contact their surgery at another time or did not see or speak to anyone.<sup>1</sup>

This suggests that many patients prefer to contact their surgery on Monday to see their routine GP rather than seeking the immediate care they need over the weekend. Some, hopefully most, then get admitted the following week for treatment of their underlying condition. This is confirmed by the significant increase in GP direct and A&E emergency hospital admissions on Mondays.

Causal factors aside, the main concern that this raises is whether a significant patient cohort is missing out on hospital care over the weekend and the potential consequences of this drop in weekend admissions for patients with stroke, myocardial infarction and respiratory conditions. For example, the pre-hospital phase is seen to be the most critical in reducing mortality in myocardial infarction and requires concerted efforts in reducing patient delays <sup>2</sup>.

Recent research has also suggested that the lower volumes of emergency hospital admissions at the weekend is likely to mean that patients who are admitted at the weekend are, on average, sicker than patients admitted during the week, and that this could contribute to the higher hospital mortality rates on weekends.<sup>3</sup> What is not entirely clear is what the likely outcomes are for those patients who are not admitted to a hospital on the weekend or never even present to an A&E or a GP for one reason or another.

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1. Access to general practice and visits to accident and emergency departments in England; Thomas E Cowling, Matthew J Harris, Hilary C Watt, Daniel C Gibbons and Azeem Majeed; British Journal of General Practice, July 2014

2. Reducing patient delay with symptoms of acute coronary syndrome: a research protocol for a systematic review of previous interventions to investigate which behaviour change techniques are associated with effective interventions <http://openheart.bmj.com/content/1/1/e000079.full>

3. Higher mortality rates amongst emergency patients admitted to hospital at weekends reflect a lower probability of admission <http://hsr.sagepub.com/content/early/2016/05/05/1355819616649630.full.pdf+html>



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# The way forward

Improving primary care access could prove to be a step in the right direction if successfully implemented. However, the out of hours and weekend access will have to have universal coverage to make it meaningful for all patient groups, especially the elderly and vulnerable patients. It is clear that such appointments at the weekend need to focus on frail, vulnerable patients and ensure that such patients feel equally able to access the care they need and understand the risks of waiting and the options available to them at the weekend<sup>4</sup>.

The recent arguments and counter-arguments about weekend mortality rates at the hospitals sends confusing messages to the public and has the potential to further deter patients from seeking help at the weekend. Yet patients with heart attack and stroke, and even those with less severe symptoms, must feel able to access immediate treatment to prevent their conditions from worsening. Patient education on using the appropriate clinical services on the weekend to avoid any harm caused by delays must be reinforced. With conditions such as stroke and heart attack, it could just be a mild attack which makes a patient feel unwell, but they may lack the information and ability to recognise the seriousness of the underlying condition and the risks that delaying treatment presents to their future health and recovery.

Commissioners and providers should undertake local analysis to review trends in emergency hospital admissions, examine referral patterns by surgeries and out of hours GPs and determine the gap in weekend hospital admissions, its underlying causes and its likely impact. Identifying the at-risk population through risk-stratification and reaching out to them would help prevent delayed presentations and improve health outcomes.

**For more information** on how we can help you analyse admissions and referral trends and understand what is happening in your area, please email us at [info@chks.co.uk](mailto:info@chks.co.uk) or call us on 0333 241 2432.

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4. Increased mortality associated with weekend hospital admission: a case for expanded seven day services? <http://www.bmj.com/content/351/bmj.h4596/rr-52>



## About the authors

- Chris Raspin leads research at CHKS and conducts the analysis for our national Top Hospitals Award programme. He previously worked in the Audit Commission developing audits, undertaking research and writing its health data briefings.
- Dr Suraj Bassi is a healthcare management consultant and a clinician by background. He is currently working as a clinical advisor for CHKS.
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# About CHKS

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