



Urgent and Emergency Care

A review for NHS South of England

The King's Fund

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Improving Urgent and Emergency Care Performance across NHS South of England

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Improving Urgent and Emergency Care Performance across NHS South of England

Introduction

The problem of growing demand for urgent care continues. There have been overall improvements in urgent and emergency care performance but there is wide variation in performance in NHS South of England in both organisations and local systems and signs of decline nationally. In response to this NHS South of England asked the King's Fund to:

- Identify and understand the learning from successful organisations and systems, look at what does not seem to be working so well and suggest how this can be used to improve and sustain performance in the future.
- Identify areas where further work is required.
- Provide an analysis of key patterns in demand and suggest a list of pathways where commissioners should be focussing.

This report brings together the key findings from: reviews of 35 individual organisations, and whole system reviews from the Emergency Care Intensive Support Team (ECIST); a literature review on urgent care; a review of a number of Clinical Commissioning Groups (CCGs) strategy documents and QIPP plans; interviews and seminars with stakeholders from different parts of the emergency care system; and two site visits in the South of England. We have been greatly assisted by advice and material from ECIST and the Primary Care Foundation.

Structure of the report

This report covers the main issues emerging from our research, with examples to support these. It also identifies a number of areas where attention is required, draws some broad conclusions about the way the system currently operates, suggests some areas for action and considers some of the issues that require further work.

The report is broken down into the following sections:

1. The six key messages emerging from our research
2. The context of rising demand for emergency care and variation between providers in the South
3. Hospital services
4. Ambulance services
5. Community services

6. Primary care services
7. Commissioning and areas for commissioner focus and the main risks in the system
8. System issues
9. Looking to the future
10. Conclusion

Appendix 1 summarises an emergency care system checklist that includes an outline of current approaches and processes that are known to improve emergency care performance based on the ECIST policies and where possible supported by research evidence.

Appendices 2 and 3 summarises additional data analysis.

1 Key messages

Based on our research we have a number of key messages:

The data do not explain the problem

Although not entirely unexpected, the variation in performance is not easily explainable in terms of the characteristics of the local health economy or providers. We found significant problems with data availability and quality and there are questions about whether the right data are being collected to allow the system to be effectively managed. There seems to be a number of less quantifiable features of systems that may better explain variations in performance, as set out below.

The need to adopt practices that are known to work

The interviews and analysis strongly suggests that the consistent and rigorous implementation of a number of systems and processes and the adoption of some evidence-based practices is much more likely to be associated with success. A checklist of the main systems and processes that would improve emergency care performance is attached at Appendix 1.

However, many organisations struggle to implement the approaches in the checklist and then sustain those that are implemented. The organisations that are failing to meet key performance targets are unlikely to have implemented all the recommended systems and processes. A key question, therefore, is why, when so much of this is known, does it appear to be so difficult to do and then to sustain? And how is it that some areas seem to manage this and others struggle? There are several emerging answers.

Strategic oversight

Our research suggests that some areas need to do more to provide clear strategic oversight and drive to tackle the main challenges to emergency care systems. Urgent Care Boards have been established in some areas to provide oversight, evaluation, standardisation and communication to all parts of the system, but Boards seem to be at different stages of development and vary in effectiveness.

Looking at the matching of capacity and demand is a key approach to removing some of the visible and hidden backlogs along the patient pathway. Accurate analysis of care processes as well as a clear understanding of demand, activity and capacity is essential to managing emergency care.

What seems to be clear is that there is no substitute for good management and leadership that understands the system and can make it work. This is true, not just at the top of the organisation but in the middle and front line. These can be weak points for some organisations and may partly explain why recommended practice is not acted upon or fails to become embedded.

Relationships in the system

All parts of the system need to be able to collaborate effectively to ensure that patients can flow through the system. Poor relationships are likely to result in reduced performance. Performance will inevitably be affected if there are adversarial or strained relationships,

attitudes that blame others, if there is internal resistance between departments, or if commissioners and providers attempt to exploit the payment system for their own purposes. It is not clear which way the causality runs – poor performance may lead to the development of poor relationships but the opposite may also be true.

Too much stress may have been put on incentives, governance, contracts and the machinery of management to the detriment of the effective operation of the urgent care system. A more shared leadership model seems to be needed.

Concerns about commissioning

The model for commissioning emergency care has some significant problems and needs to be rethought. The introduction of CCGs offers an opportunity for this, with providers given a stronger leadership and accountability for delivering outcomes and taking responsibility for determining the best methods for doing this. Commissioners' focus should be much more on outcomes, setting clear objectives and bringing the system together. We were told that commissioning emergency care needs to shift from an overly adversarial approach of micro-management to one where CCGs take more of an oversight, scrutiny and challenge role, supported by a vision for the system. There needs to be a much better understanding of the capacity of different parts of the system and how patients flow through each component. Commissioners need to bring providers together and tackle obstacles to the effective operation of the system. We agree with this view.

Issues about community services

There is a need for community services to be rethought and simplified, The evidence for what works is much more limited than it is for hospital care but what evidence there is seems to point to a need for more integrated services able to flex capacity and based around the hospital footprint or localities. Services need to have very close links to primary and social care and be active in 'pulling' medically fit patients out of the hospital. To enable this more attention needs to be paid to their management and the standard block contract needs to change and provide incentives to flex capacity and create better flow through the system.

There has often been a proliferation of small schemes. This has led to unhelpful complexity which uses up time and resources. Some schemes seem to be based on exploiting (probably unreliable) price differences between hospital and community settings that may have little relationship to the true cost. They have often been too small to make a major impact and the evaluation to be patchy. Schemes to fix parts of a complex system may have a limited impact on flow through the whole system. A focus on a single problem rather than the whole patient journey may also not be very appropriate for some service users.

Overall more thought is required about how the system as a whole operates together, the way that it is understood, the methodology that is used to change and redesign it and the measures and data that support this.

2 Context

The long-term increase in demand seen across England has continued and this pattern is also seen in the South of England. While there is evidence of the impact of ageing and increases in co-morbidities on emergency admissions, previous research in this area has found only weak patterns in the data to explain these trends. It is also the case that these changes are not explained fully by demographic and epidemiological factors.

Appendix 2 contains data for commissioners and providers and while there are some concerns about data quality the headlines are:

Providers in the South of England have experienced 8-9% growth in emergency admissions between June 2008 and June 2012. As has been the case for a number of years this is significantly in excess of the rate that can be explained by population changes. Between September 2011 and August 2012 there were an average of 250,000 A&E attendances and 100,000 emergency admissions. There are significant variations in performance between providers (September 11 – August 12:

- Emergency length of stay – 4.8 days average, range: 2.5-7
- 0-1 days stay: average 51%, range: 38-67%
- Readmission: average 13.8% range: 12-16%
- Proportion of patients with > 7 days stay: 18%, range: 7.4-25%
- A&E conversion rate: average 22%, range: 14-46%
- A&E patients arriving by ambulance: average 28%, range: 11-39%
- 95% in four hours: average: 93.5%, 67-97%
- Discharge to nursing homes and other important variable show similarly wide variation

There are similar variations on the commissioning side as can be seen in the data from the NHS Atlas of variation and SUS data.

- Emergency medical admissions per 1000 population: average 9, range: 6-12
- Emergency medical bed days per 1000, average 52, range 38-76
- Ambulatory care sensitive conditions, alcohol admissions, admissions of older people, death at home and a number of other categories also vary widely – see appendix 2

We found that little of the variation in activity or performance appears to be explained in terms of the characteristics of the local health economy or providers described by the routinely available data. Some areas that have features that might be expected to be associated with difficulties in managing urgent care have high performance, while others in more currently favourable circumstances still struggle (for example some areas with low levels of GPs have high performance in emergency care, while other areas with high levels of GPs have poor performance).

It is possible, however, that there are aspects of the local environment that we have not managed to capture. This is a result of some significant problems with data including:

- Data on GP availability, community services and non-statutory providers is sparse
- The measurement of hospital activity for multi-site providers is a problem as four hour performance is aggregated and what appears to be a headline figure indicating good performance may mask serious issues on one site
- The growth of walk-in centres, minor injury units, urgent care centres and a variety of other types of access points makes it difficult to be confident that we have a complete picture of the utilisation of different types of emergency care, and different organisations may also be recording this activity in different ways
- The absence of community data and the lack of a reliable source of information about non-consultant beds (now removed from central data collection for an unknown reason)
- There are also questions about the usefulness of some data definitions – for example delayed transfers of care.

We found it very difficult to obtain some key data and there were a number of examples where routine data was missing or produced erroneous results. This and our discussions with commissioners and providers seem to suggest that the data available is not very useful for the management of the urgent and emergency system. There also seem to be a number of less quantifiable features of systems that may also explain variations in performance.

Action points

- Improve both the quality and usefulness of the data used to manage the system, particularly in primary and community services

3 Hospital services

Our interviews and the analysis of the ECIST reports strongly suggest that the consistent and rigorous implementation of a number of processes and systems and the adoption of some evidence-based practices will greatly improve the functioning of the hospital and its ability to provide a good patient experience and meet key targets. We provide a checklist of these approaches in Appendix 1. However, many organisations appear to struggle to implement these practices and sustain them.

ECIST report that they have yet to find an organisation that has implemented all the recommended systems and processes and which is failing to meet its key performance targets. ECIST and our research found a number of examples of hospitals where practices that are known to work are not consistently adopted.

- Trusts should be adopting 'see and treat' and 'rapid assessment' triage models of care in the minor and major patient streams respectively. However, many operate a variety of hybrid models and even in trusts where models have adopted, at times of pressure they can be ignored, resulting in multiple models being used.
- We did not see any evidence that areas are adopting the College of Emergency Medicine guidance around full capacity protocols.¹ Trusts were often operating at over capacity.
- Despite one-stop board-ward rounds (preferably twice a day) being a key ECIST recommendation this is not the norm in many trusts.
- Implementation of Estimated Discharge Dates (EDDs) across trusts is often patchy. There were some examples of excellent implementation, but these were exceptions. In some instances considerable variation in the use of EDDs can be found within the same trust, and even between two wards in the same speciality.
- While hospitals may have set internal standards and operating procedures, these are not always adhered to.

A key question is why, when much of this good practice is known, does it appear to be so difficult to sustain? The first reason is that much of this is genuinely difficult – for example requiring job plans to be renegotiated. The challenge seems to be getting harder. Secondly, there are constraints such as shortages of key staff. Thirdly, even well designed systems need constant senior attention and need to be adjusted and redesigned by people with an understanding of how these processes work. These systems are very fragile and vulnerable to fluctuations in demand, changes in staffing or a hold-up in the discharge process. Very high occupancy rates compound this. The smaller the bed base of hospitals and the shorter the length of stay, the more vulnerable they are to these changes. Fourthly, the interaction between elective admissions and emergency admissions and the fact that hospitals still operate a five day week for most of their activities creates problems with the flow of patients through the hospital.

¹ The College of Emergency Medicine (2012). *Crowding in Emergency Departments*. Available at: secure.collemergencymed.ac.uk/code/document.asp?ID=6296 (accessed 1st November 2012)

There is some suggestion in our interviews that resistance to the implementation of a number of these approaches remains a central issue. In particular, the responsiveness of the rest of the hospital to issues in the emergency department or assessment units is vital. It seems likely that the cultural issues are as important as the technical and the executive and clinical leadership must exercise leadership and a determination to address these issues in order for sustained progress to be made.

Even when the hospital has its internal systems in order it may struggle because of aspects of the external environment and in particular the operation of other providers; these are explored in the following sections.

Demand and capacity in hospitals

Our research also found that the management of capacity and demand is a key problem area within hospitals; a few examples are cited below.

- A number of trusts visited by ECIST have serious issues with the layout and physical capacity of the emergency department. A lack of capacity in some trusts meant patients are sometimes placed in corridors to queue or to be observed, raising concerns around patient safety, privacy and dignity. Other trusts had geographically separate minor and major services; this means that at peak times it can be difficult to manage effective patient flow and ensure that staff with the right skill sets are in the right areas.
- Trusts often declared medical cover shortages including in consultant and middle grade doctors. There are also issues in paediatrics.
- Many of the ECIST reports highlighted the impact of reduced diagnostic services on emergency departments during weekends and also over lunchtimes. For example, in one trust pleuritic chest pain patients admitted over a weekend have to stay until a CT scan is available on Mondays. Seven day a week services would facilitate discharges and reduce bed days.

Due to high bed occupancy and emergency department overcrowding, trusts had a tendency to place patients in the first available empty bed. The consequence is that patients are often not seen by the right speciality teams, hospital stays are prolonged, and the patient experience risks being unsatisfactory, or worse. A risk factor for this and an indicator of potential problems is the proportion of patients moved from the emergency department in the last 30 minutes before the four hour target expires (as shown in table 4). Some hospitals seem to manage the four hour target well without this pattern; others seem to be using this as a technique to hit the target. In a few cases hospitals appear to struggle with the target for waiting as well as resorting to this last-minute approach. This suggests a degree of confusion, with attempts to move patients on failing at the last minute.

Table 1: Patients admitted 3.5 - 4 hours after arrival, by acute hospital trust 2012

NHS South of England acute hospital trust	Patients admitted 3.5 - 4 hours after arrival (%)
All	19
Northern Devon Healthcare NHS Trust	6
The Royal Bournemouth & Christchurch Hospitals NHS Foundation Trust	6
Great Western Hospitals NHS Foundation Trust	9
Dorset County Hospital NHS Foundation Trust	12
East Sussex Healthcare NHS Trust	13
East Kent Hospitals University NHS Foundation Trust	14
Heatherwood & Wexham Park Hospitals NHS Foundation Trust	14
Taunton & Somerset NHS Foundation Trust	14
Isle Of Wight Healthcare NHS Trust	15
Portsmouth Hospitals NHS Trust	15
Gloucestershire Hospitals NHS Foundation Trust	16
Royal Surrey County Hospital NHS Foundation Trust	16
North Bristol NHS Trust	17
Royal Devon & Exeter NHS Foundation Trust	17
Hampshire Hospitals NHS Foundation Trust	17
University Hospitals Bristol NHS Foundation Trust	18
South Devon Healthcare NHS Foundation Trust	18
Ashford & St Peter's Hospitals NHS Foundation Trust	19
Plymouth Hospitals NHS Trust	20
Weston Area Health NHS Trust	20
Medway NHS Foundation Trust	21
Poole Hospital NHS Foundation Trust	21
Royal Berkshire NHS Foundation Trust	21
Salisbury NHS Foundation Trust	22
Yeovil District Hospital NHS Foundation Trust	22
Western Sussex Hospitals NHS Trust	23
University Hospital Southampton NHS Foundation Trust	23
Dartford & Gravesham NHS Trust	23
Brighton & Sussex University Hospitals NHS Trust	25
Frimley Park Hospital NHS Foundation Trust	25
Royal Cornwall Hospitals NHS Trust	26
Buckinghamshire Healthcare NHS Trust	26
Surrey & Sussex Healthcare NHS Trust	27
Maidstone & Tunbridge Wells NHS Trust	27
Oxford University Hospitals NHS Trust	28
Royal United Hospital Bath NHS Trust	30

Unfortunately, while it is acknowledged that occupancy rates are too high and very often running at a level that is not consistent with a smooth operation of the hospital, adding further beds often leads to increases in admission and may provide only temporary relief. The use of elective beds to act as a buffer is not satisfactory for a number of obvious reasons. This problem does not appear to have a simple solution although increasing the seniority of decision-making at the front door might help protect the spare capacity. Note that the 85% occupancy figure often quoted is based on analysis for a specific mix of patients and needs to be calculated through simulation for each organisation.

Length of stay

Our data analysis also identified length of stay as an area that should be looked at further. There are wide variations in the proportion of patients with extended stays and significant room for improvement (as shown in Appendix 2 table 2). Looking at a different method using trim points for HRG and looking at all admissions, Dr Foster suggest that Brighton and East Sussex have very high rates of excess bed days. Some of the better performing trusts may have better access to community hospital beds but this is not universal and does not explain the level of variation.

Hospital readmissions

Readmissions may be a result of poor attempts to manage capacity through premature discharges. It is impossible to tell from the data available what is driving the differences between hospitals; however there does appear to be a group of providers where further understanding of the reasons behind these patterns might be beneficial.

Box 1: Readmissions and 95% performance

Higher readmission, 95% problems	Higher readmission, better 95% performance
Surrey and Sussex Oxford hospitals Ashford and St Peter's	East Kent hospitals Brighton and Sussex Royal Bournemouth

Emergency readmission rates range from 11.7% in the Isle of Wight to 16.3% in Surrey and Sussex. The average for the region is 13.8% (excluding Queen Victoria Hospital). For those trusts with a rate of readmission that is currently above average, reducing the readmission rate to the average rate would result in a reduction of over 5,200 admissions per year, and reducing the rate to 12.8% would reduce admissions by almost 13,700. Discharge planning, risk stratification of patients being discharged, support with medications and community and social care support are all well understood interventions in this area.

Action points

- Ensure demand and capacity (including workforce) are matched. There is a need to find ways to flex capacity without creating admission threshold changes.
- Implement the checklist in Appendix 1. In particular:
 - - Senior clinical presence/ decision maker as close to the front of the process as possible, including seven day working and extended hours
 - - Focus on flow and ability to discharge
 - - Work with primary care to reduce readmissions.

4 Ambulance services

Ambulance services are reporting significant increases in demand across all types of calls. A recent review by South Central Ambulance Service NHS Foundation Trust of ambulance demand over a 3-month period (Sept-Nov 2012, compared to Sept-Nov 2011) found that there was an increase in demand for ambulances, but the range between areas was quite significant (the lowest was 1.94% and highest was 11.6%). The review also found:

- There was uncertainty as to whether 111 is driving up ambulance call outs
- For most areas (but not all) the majority of the increase was in out of hours calls
- In all areas there were only small increases in calls from care homes
- There is a fair amount of variation between areas in the main health conditions accounting for the increase in calls , although psychiatric conditions accounted for 10%+ increase in four areas and falls accounted for 10%+ in three areas.

As with hospitals there is an emerging and well understood set of ideas about models that will work. A number of these require the ambulance service to rethink aspects of their role, skill mix and ways of operating. Ambulance services are often well-placed to act as the co-ordinator of the system and have the capability and incentives to develop a partial map of the system.

Our research found that commissioning ambulance services remains rather transactional, based on penalties and risks becoming fragmented. An approach to the measurement of performance that balances time with other aspects of performance is also required. Ambulance Commissioning for Quality and Innovation goals (CQUINs) need to be aligned to those of other providers.

Ambulance handover remains an issue in some areas. Ambulance handover was identified as poor and high risk in some trusts; this appeared to be due to hospital staff viewing patients waiting in ambulances, or in corridors with ambulance crews in attendance, as being relatively 'safe' and not their direct responsibility. This meant ambulance handover was not viewed as a priority and resulted in delays and clinical risk. Where ambulance handover issues had been addressed it was mainly due to strong relationships between managers in the acute hospital and the ambulance service.

There was a general consensus that the potential of ambulance services was under-used and could contribute a great deal more to managing demand pressures and the development of new care models. There are a number of good examples of ambulance services making a positive contribution:

- Services have been successful in managing the number of patients conveyed to hospital which has helped contain some of the demand
- Some ambulance services have developed demand management programmes which identify high volume callers including both individual-led programmes, and premises-led programmes (for example, care homes, and public places with high volume of calls). One interviewee described a patient who called 200 times in six months, at around the same time of day - a multi-disciplinary case conference was held, and it was agreed that the

patient would be proactively called to pre-empt her ringing 999 (or put through to the GP/out of hours service for enhanced triage if she called outside this time). Another interviewee described working with the local police to manage high call volumes on Saturday nights in a city centre

- The use of emergency care practitioners to support nursing homes
- Providing support to primary care for home visits
- Expanding 'hear and treat' and 'see and treat'.

Action points

- Consider items in the checklist in Appendix 1
- Identify and understand the reasons for the increases in demand; this may involve improving data capture and patient tracking after handover
- Ensure ambulance services are fully part of planning the system
- Develop methods to manage capacity and link to the directory of services
- Ensure access to care plans and care records
- Challenge ambulance services to extend the scope of what they can offer
- Move away from transactional and fragmented commissioning

5 Community services

While there seems to be some consensus about what constitutes an effective intervention in hospitals there is much less evidence in the area of community services and the success of different approaches seems to be much more context dependent. The key lessons here are about the need for larger teams with a close relationship to practices, social care and hospitals and their responsiveness and availability, particularly out of hours. It seems easier to make an impact by facilitating discharge than by trying to prevent admission at the point that admission is an option. More upstream intervention can make an impact but there are issues about how it is targeted.

While we heard of some excellent services there seem to be a number of issues about how these are commissioned and provided.

- The data do not allow spending on community services between PCTs to be accurately compared.
- Many schemes are relatively small scale and may not make a noticeable difference to hospitals or emergency departments. Where community approaches have been more successful they have tended to be large scale and integrated with other services. Torbay continues to provide the best example of a successful set of community-based

interventions that have reduced emergency admissions.² The central innovation was the effective integration of health and social care, though many other elements were involved over a considerable period of time. Accordingly the Torbay experience does not provide a simple model for immediate implementation. A similar conclusion could be drawn for all the interventions in this group. There are grounds for believing that schemes of this kind can be successful in reducing pressures on hospital services but it would be unwise to presume that any particular scheme of this kind would do so.

- The availability of extended or 24-hour community nursing services was cited by some interviewees as making a significant contribution to the more appropriate management of patients. The availability of these is limited and their ability to rapidly respond is variable. Speed of response is an issue. From interviews and site visits it emerged that some hospitals are starting to deliver preventative and re-enablement services in response to the inability of community services to either ramp up capacity quickly, or respond flexibly to the need to discharge medically fit patients. Some private sector providers are responding to this very effectively.
- Block contracts in community services are a particular issue which mean that it can be difficult to flex capacity. Poorly drafted contracts exacerbate this.
- The number of initiatives, schemes and projects, with differing target groups, hours of operation, and referral criteria, raises questions about potential complexity and also deliverability. There has however been progress in creating single points of access and directories of service which help with this problem.

“Community services have been at a standstill for 2 years we are now re-commissioning for community services”

Senior commissioning manager

More evidence is needed on the effectiveness of community interventions and some appear to have limited effect. There is inconsistency in terms of audit, monitoring and evaluation of projects and approaches. Our research flagged the following specific community approaches.

- There are often a number of walk-in centres and minor injury units within each health economy. The evidence suggests that walk-in centres are not effective in reducing emergency department attendances except where they are co-located and integrated with emergency departments.
- A number of schemes claim to make reductions in emergency department attendance or admissions. The basis for these projections is often unclear and in some cases questionable. A number of plans contain proposals that may have a small impact on the emergency department, especially those diverting more minor cases, and they may have

² Thistlethwaite P (2011). *Integrating health and social care in Torbay: improving care for Mrs Smith*. London: The King's Fund. Available at: <http://www.kingsfund.org.uk/publications/integrating-health-and-social-care-torbay>. Accessed 21 February 2013

a small or even adverse impact on costs by multiplying overhead costs and creating supply-induced demand.

- Evidence suggests there are limitations on what can be achieved using case identification approaches and some studies have found little or no effect.^{3,4,5} Only a small proportion of total demand arises from the patients at the top of the 'Kaiser Triangle' but if the coverage of such schemes is extended their benefit/cost ratio will inevitably decline.⁶
- The evaluation of NHS Direct and recent evidence from the evaluation of 111 does not support the idea that telephone services as they are currently designed will reduce emergency department use and indeed there is some evidence to the contrary.

Action points

- Consider the items in the checklist in Appendix 1
- Simplify services and create larger more flexible teams able to provide a 24-hour response
- Ensure an ability to flex capacity rapidly and plan ahead for discharges
- Ensure this is supported by contracting mechanisms
- In the longer term, consider models of provision that are more integrated with social care and primary care
- Evaluate new and existing models – in particular walk in centres, urgent care and minor injury units

6 Primary care

A very small change in the behaviour of GPs can have huge knock on effects on the rest of the system. A list of measures to support primary care in playing its part in the system is included in Appendix 1. More needs to be done to support primary care in managing demand, developing more anticipatory approaches, improving the management of nursing and residential home patients, creating improved continuity for high-risk patients and providing joined up out of hours services.

³ Roland M et al (2012). Case management for at-risk elderly patients in the English Integrated Care Pilots: observational study. *International Journal of Integrated Care*. Volume 12, 24 July 2012. Publisher: Igitur publishing. Available at: www.ijic.org/index.php/ijic/article/viewFile/850/1772 (accessed 5th December 2012)

⁴ Steventon A, Bardsley M, Billings J, Georgiou T, Lewis G (2011). *An evaluation of the impact of community based interventions on hospital use*. London: Nuffield Trust

⁵ RAND Europe/Ernst and Young (2012). *National Evaluation of the Department of Health's integrated care pilots*

⁶ Singh D, Ham C. (2006). *A review of UK and international frameworks*. University of Birmingham. HSMC & the NHS Institute for Innovation and Improvement. Available at: www.improvingchroniccare.org/downloads/review_of_international_frameworks_chris_hamm.pdf (accessed 16 February 2013)

There is a shortage of detailed information about quality or workload which leaves a significant gap in our understanding of the system. There is large variation in the number of GPs per 1000 weighted population and there is a weak link between this and admissions for ambulatory care sensitive conditions or other aspects of performance on non-elective care, but clearly these data only capture some of the impact of primary care. Some of the areas with very high rates of emergency department attendance do have low numbers of GPs per 1000 population but so do some of those at the other end of the distribution. The indicators of primary care quality in the NHS Atlas do not have any relationship to levels of admissions. Other data that might allow patterns of demand to be understood (for example, available appointments) were not obtainable.

Table 2. GP access and ambulatory sensitive admissions

PCT	GPs/1000 weighted population	A&E admissions/1000 population	Ambulatory sensitive admissions/1000 population
Isle of Wight	0.57	253.03	15.0
Portsmouth City Teaching	0.59	182.35	23.7
Eastern and Coastal Kent	0.60	275.14	32.9
Southampton City	0.62	257.01	28.4
Brighton and Hove City	0.62	350.30	32.1
Hastings and Rother	0.64	253.11	22.4
Medway	0.65	266.82	22.3
Dorset	0.68	204.32	18.3
Bristol	0.69	249.24	21.6
Cornwall and Isles of Scilly	0.69	295.08	18.2
North Somerset	0.69	303.00	21.7
West Kent	0.71	280.05	30.8
Plymouth Teaching	0.73	225.42	21.7
Somerset	0.74	349.37	19.4
East Sussex Downs and Weald	0.74	230.61	22.5
Gloucestershire	0.75	298.11	22.1
West Sussex	0.76	237.06	25.3
Hampshire	0.76	220.13	20.8
Berkshire East	0.76	255.43	22.4
Bournemouth and Poole	0.77	256.80	24.8
Berkshire West	0.79	153.39	16.4
South Gloucestershire	0.79	381.96	31.5
Swindon	0.80	232.91	22.5
Bath and North East Somerset	0.83	223.68	24.5
Wiltshire	0.84	241.94	19.7
Oxfordshire	0.86	158.65	18.9
Buckinghamshire	0.88	148.87	15.1
Surrey	0.88	298.74	29.2
Devon	0.94	337.66	16.2

We heard a lot about significant growth in workloads among GPs, combined with shortages of some key staff. Whilst this evidence is anecdotal, we have heard similar messages from GPs in other parts of England. A survey of over 2700 GPs in the South West conducted by the Local Medical Committee (LMC) seems to show a very significant majority reporting that they are experiencing increased demand, working more intensely and dealing with much more complex patients.⁷ This is congruent with patterns of demand elsewhere in the system. There needs to be a more explicit consideration of a primary care strategy to support urgent care. Interviewees questioned the extent to which a number of initiatives to shift work back to primary care were joined up with policy in urgent care, such as reducing outpatient referrals and attendances.

“GP out of hours has been a disaster – we’ve lost the game. We’ve lost the continuity of care in the community team out of hours”

Senior commissioning manager

“My concern is access to out of hours, routine appointments in primary care and access to other alternatives”

Senior ambulance manager

Several interviewees commented that they believed the public had lost confidence in GP out of hours services and as a result patients were defaulting to the emergency department. We have not been able to get a reliable time series data for out of hours – this is disappointing but represents a finding in itself. The data we were able to access shows that there is a large amount of variation between areas in the numbers of calls and the way that these are dealt with. A number of services are members of the Primary Care Foundation benchmarking group and there would be benefits from extending this and making more systematic use of the data for improvement.

In some areas the out of hours service has limited access to primary care held patient records, leading to an increased likelihood of referral to secondary care. Poor quality and limited out of hours community services have also increased the likelihood of referrals to secondary care.

The ECIST reviews and our research found limited evidence that out of hours services are becoming integrated with the emergency care system or that commissioners are changing out of hours service contracts to outcome-based contracts; a block contract limits the opportunities for joint working and integration with other services as well as the extent to which commissioning can performance-manage this service.

⁷ South West LMC (2013). *GP contract changes will increase pressure on over-stretched services, warn South West GPs*. Press release. 23rd January 2013. Available at: www.devonlmc.org/?sc=libext&id=16319&acc=6902954 (accessed 16 February 2013).

Action points

- Consider action on checklist items in Appendix 1, Productive General Practice⁸ and workflow redesign including using GP call back to manage demand
- Develop methods to inform GPs of admission of their patients and to ensure this is followed up
- The contracts for out of hours services and its relationship to other services should be reviewed, including the transmission of information about care plans
- Primary care can do more to improve long-term condition management, including supporting nursing homes, and smoothing the work generated by home visits. This may require changes in how primary care operates to develop more collective approaches to the provision of urgent care

⁸ For more information, see:

www.institute.nhs.uk/productive_general_practice/general/productive_general_practice_homepage.html

7 Commissioning

We were concerned about some aspects of the approach to commissioning and the extent to which commissioners have a strategic approach to emergency care. It appeared that in some cases commissioners did not have a clear view of the overall system or its capacity and constraints. Quite a few successes seemed to have been driven by providers, sometimes despite the commissioners, or in some cases working around them. The key message here is that the model of commissioning emergency care needs to be rethought, with providers given a stronger leadership and responsibility in determining delivery. Commissioning emergency care needs to shift from a sometimes adversarial approach of micro-managing performance to one where CCGs take an oversight and scrutiny role, supported by a system dashboard that highlights capacity and demand.

The frequent reorganisation of commissioning organisations and the resulting confusion, stasis and loss of experience and knowledge as people move posts seems to be behind some serious weaknesses in the whole cycle of commissioning. In some cases commissioning has become swamped in a highly transactional model with large numbers of meetings and a focus on detail and performance management tasks. As noted already, block contracts for community services are a significant issue. A number of the commissioners we spoke to were in the process of information gathering, undertaking baseline service reviews and evaluations of walk-in centres, despite acknowledging themselves that *“the problems have remained the same for years”* (senior commissioning manager). There is a need for a detailed understanding of the capacity of the system and how patients flow through it. Some areas have developed this but a number we spoke to had not.

“Ultimately commissioners can’t do much if we are in immediate problems, but they should be looking at the next year and so on, which they aren’t.”

Hospital chief executive

Urgent Care Boards have been established in some areas to provide oversight, evaluation, standardisation and communication to all parts of the system. These are at different stages of development and vary in effectiveness. Boards appear to be a useful mechanism as long as there is clarity of role, the right people sitting on them (those able to deliver change directly and with a detailed knowledge of the issues), top level sponsorship and methods to hold participants to account. Without this, they have the potential to become somewhat bureaucratic and lead to a proliferation of projects.

It should be noted that there was widespread support for the new GP commissioners. Although it is early days, hospital trusts found them to be enthusiastic, open to partnership working and willing to listen.

Areas for commissioner focus

As part of the terms of reference for this report we were asked to suggest which pathways commissioners should be focussing on. The list of the top emergency HRGs is shown in Appendix 3. However, all our interviewees thought that single disease pathways while

important were not the area likely to produce the most significant impact. It also became clear that the term pathway is being used in a number of quite different ways. Instead, commissioners and providers suggested that a more helpful approach would be to focus on:

- Sub-groups in the population with a high level of need
- Areas where there is significant variation which might indicate a need for action
- Addressing the main risks in the system.

Population sub-groups

The following areas have been suggested in interviews and identified from the document and data review.

- ***Patients with multiple co-morbidities*** – Many hospitals see no value in diverting people with minor injuries, as they are not the main issue in terms of managing capacity and demand. It is the ‘majors’-the patients with multiple co-morbidities-, who rapidly decompensate once admitted. These patients become increasingly difficult to transfer back into the community due to funding problems in community NHS and social care and a lack of senior medical support in the community. A number of systems have had success through targeting nursing and residential homes, including providing support, care planning, medicines reviews, geriatrician ward rounds, best practice end of life care, and a variety of other interventions.
- ***Elderly mental health*** – Establishing community responses to elderly mental health is also a priority for focus. Although there are crisis teams for known users of mental health services, these sometimes lack the ability to respond rapidly 24/7 and there is little alternative for unknown users (other than attending the emergency department).
- ***Paediatrics*** – Another key issue is the significant numbers of emergency department attendances by sick children. A recent study found an increase of 28% in the admission rate for children between 1999 and 2010 in England. The study showed much of the rise was caused by ‘common infections’ that require very short hospital stays. Admissions among children under 12 months increased by 52% and the rate increased by 25% in those aged between one and four years. The greatest increase was in children under five years of age.^{9,10} The region appears to have had 9% growth in general paediatric admissions in the last four years but this is quite unevenly distributed. Possible explanations include: changing behaviour of parents and guardians; a lack of out of hours GPs (or a perceived lack); poor quality paediatric primary care; NHS Direct recommending parents take their child to hospital; and doctors being more cautious. Successful approaches to reducing paediatric emergency admissions include access to advice and consultant opinions over an extended working day to reduce the need for admission.

⁹ Peter J Gill, Michael J Goldacre David Mant Carl Heneghan, Anne Thomson, Valerie Seagroatt, Anthony Harnden *Arch Dis Child archdischild-2012-302383* Published Online First: 11 February 2013 doi:10.1136/archdischild-2012-302383

¹⁰ *Child hospital stays 'keep rising'*. BBC News online. <http://www.bbc.co.uk/news/health-21415142> (accessed 16 February 2013)

- ***Extremely high frequency emergency department users / 999 callers*** – These are often vulnerable adults (including people who are homeless and people with mental health or alcohol-related health problems), or people with poorly controlled chronic disease (often with associated depression or anxiety). There are targeted interventions (often behavioural) that will work; however the cost effectiveness of these small-scale approaches requires further evaluation.

Variation

Some of the most striking examples of variation that require focus by commissioners are outlined below.

- As noted above there is very significant variation in the number of GPs per thousand weighted population.
- There is a large variation in the extent to which patients are discharged to a nursing home (data breakdown located in Appendix 2). Unsurprisingly a number of the hospitals with the highest rates of discharge to nursing homes are also much more likely to have patients staying in excess of seven days. They also tend (although the association is weak) to have more difficulties with the target for 95% waiting no more than four hours in an emergency department. There does not seem to be any relationship between these data and the availability of community beds.
- There is a threefold variation in the number of patients with ambulatory sensitive conditions that are admitted to acute hospitals across NHS South of England.
- Other variation includes readmission (see above), end of life care, alcohol and addiction.

Risks

Drawing on the previous sections of the report, the following issues have been identified as risks, or threats to destabilising the (already fragile) emergency care system or as being of particular concern in terms of safety or effectiveness.

- ***Complexity*** – As already discussed, we were frequently told about the complexity of many systems – particularly in community services. Commissioners and providers should attempt to simplify this rather than just incorporating this into a directory of services (see below). This problem is also found in other aspects of the system:
- ***111*** – There has been extensive trialling of different triage systems within 999, NHS Direct and out of hours services. However, these have generally been ineffective in diverting callers to other settings - in large part because other options are not generally available.¹¹ Once these are in place, central triage, whether located in NHS Direct or NHS 111, may become more effective. However, initial feedback suggests that during

¹¹ Mason. S., Snooks. H.(2010) Alternative services to deliver urgent care in the community. EMJ;27: 183-5

implementation 111 has caused an inappropriate increase in ambulance and GP out of hours calls. It is too early to tell what the long-term impact will be.

- **Ambulance demand** – As discussed, more needs to be done to understand the causes of increases in demand for ambulance services, and there are untapped opportunities for ambulance services to contribute more to the management of demand and development of new care models.
- **Social care** – Cuts in funding and differences in rates of pay that councils are willing to pay for carers and nursing home placements are already creating pressure in the emergency care system, and this is unlikely to change in the short term.
- **QIPP and CQUIN** – Plans to reduce beds in a fragile system carry inherent risks if a whole system view is not taken. There is a similar risk of contradictory CQUIN schemes between different providers.
- **Admission at close to four hours** – Hospitals may have good four hour performance at a headline level but a high proportion of admissions in the half hour before four hours may be an indicator of risk. Lower performance but a high proportion of patients dealt with quickly may paradoxically be of less concern.
- **Frequent patient moves** – This is often associated with problems managing beds or balancing capacity and demand.
- **The lack of rapid access to diagnostics** – This applies both in and out of hospital.
- **Shortages of key medical staff** – As discussed, there are shortages in key staff at both consultant and middle grade.
- **Paediatrics** – As noted above, there are issues around increasing demand for paediatric emergency care and the levels of paediatric coverage in some trusts is limited, with paediatric emergency care specialists only available during limited hours.
- **Proposed changes in the GP contract** – The impact of these is uncertain but a number of interviewees thought that there was a significant short-term risk.

Action points

- The model of commissioning urgent and emergency care should focus more on outcomes and challenging providers to develop solutions
- Commissioners need to have a clear understanding of the flows through their system and the dynamics of this
- Commissioners need to focus on: sub-groups in the population with a high level of need; areas where there is significant variation which might indicate a need for action; and the main risks in the system

8 System issues

Lack of internal professional standards across the emergency care systems

One of the main gaps identified is a lack of internal professional standards (IPS) and their uniform adoption. These standards should govern the maximum times for various stages of treatment along a system, from primary care, the emergency department and the services that support them. The health economies that make the most progress are generally those that set and enforce clear service standards and create opportunities for peer review and constructive clinical challenge around standards. A failure to consistently apply IPS can be typically regarded as a symptom of wider cultural issues, such as a lack of clinical engagement and a lack of focus on improving service quality.

Relationships

All parts of the system need to be able to collaborate effectively to ensure that patients can flow through the system; poor relationships are likely to result in reduced performance. It is not clear in which way the causality runs - poor performance may have led to the development of poor quality relationships, but the opposite may also be true. It does seem, however, that the cycle is self-replicating.

Another key finding is that the emergency care system seems to rely heavily on a few good leaders and the most significant progress is made by these effective managers and clinicians identifying issues and providing leadership to address them.

Our interviews and site visits have found a number of factors that can lead to poor relationships, as listed below.

- A lack of stability in terms of commissioning organisations and individuals within the organisations has inhibited the development of relationships with commissioners.
- Adversarial relationships, micromanagement by commissioners and a performance management system that sometimes seems to be about giving assurance to senior managers rather than solving the problems.
- Providers failing to deliver promises made and both sides attempting to exploit the payment system for their own purposes. Some of the examples of this we encountered reflect poorly on those involved. If some of this effort were directed to some of the real issues then patients would benefit and significant management time would be released
- Contracting mechanisms and CQUINs are not aligned between organisations in the same system.
- There is an overall lack of alignment of objectives across the system.

“Whenever we discuss emergency care with partners there are always at least seven organisations represented in the room. We don’t have a common aim or financial flow across all partners to achieve what we want to achieve. Organisations have different drivers and motives” Senior hospital manager

- There are problems resulting from some deep cuts in social services spending. For example, in one case a reduction in the rate paid to care home and home care providers has led to a reduction in capacity with significant knock-on effects for the hospital

There are sometimes poor relationships within individual hospitals, which can be a result of internal policies. For example, ECIST report that the internal policies of some trusts create strong incentives not to declare potential discharges; some trust policies state that wards are exempt from receiving new patients if they state they are full, rather than incentivising robust assessment and discharge of patients and encouraging a supportive relationship with the emergency department and other specialities.

Fragmentation and a lack of clear emergency care system management

Our research found fragmentation and a lack of clear system management and clinical governance across the emergency care system (both within individual hospitals and across the wider health community). In some areas this results in a lack of shared responsibility across the system. As explored above, we were told about significant gaps in the emergency care system in terms of the community out of hours response, and this is an area that needs focus.

Further examples that emerged from our research are listed below.

- Some emergency departments have felt isolated during high pressure periods, and felt that this pressure was not spread across the hospital or indeed the community.

Often each individual organisation or sector of the health system has their own escalation process when there are increases in demand and pressures. These escalation plans are rarely aligned across the system using standardised triggers and common terms for each level. A whole system escalation plan that is responsive to changes in provision across the patient system both in supply and demand would promote integrated working and enable effective management at pressure points.

- Minor injury units and walk-in centres are often located in community hospitals with opening times and diagnostic support that can vary on a daily basis. The 'see and treat' model is not consistently used in these units and within a county there can be up to five of these units, run by different organisations, with no shared urgent care governance arrangements and limited consultant input. This has implications for staff training, effective patient management and patient safety. With varied diagnostic support and no support for minor illness, the ambulance service does not actively use these facilities as an alternative to the emergency department.

Capacity, demand and performance analysis

Improving performance requires a whole system approach to patient flow, matching capacity and demand and removing some of the visible and hidden backlogs along the patient system.¹²

¹² Institute for Innovation and Improvement (2008). *Demand and Capacity – Basic Concepts*. Available at: www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/demand_and_capacity_-_basic_concepts.html (accessed 5th December 2012)

Many acute trusts are using data to monitor patient flow into, through and out of the hospital. This 'control room' approach has been effective in managing demand and capacity, and predicting future patterns of demand. However, there appears to be a lack of emergency care metrics at a local economy level. Some health economies have developed system wide 'dashboards', which aim to support oversight of the emergency care system and identification of problem areas and system blocks. However, having the 'right' data to diagnose issues within the system remains a challenge (identification of the 'right' data was outside of the scope of the research).

The current performance metrics were also criticised for not reflecting the whole system's responsibility for ensuring good patient flow and available capacity. Capacity, demand and performance management is hampered by problems with the quality of data or how it is reported.

"The crude performance metrics sit with the hospital and the measure of success seems to be where the performance sits. KPIs are related to activity (like conveyance), not change, and attempts to change are not followed up"
Senior hospital manager

Action points

- Relationships are crucial and require work in some systems
- More direct collective management of problems with the system and its fragmentation is required – this needs to be characterised by rapid action to deal with obvious problems
- There needs to be a shared understanding of the dynamics and capacity of the system and a shared understanding of purpose and success
- Work is required to improve data quality and the metrics used

9 Looking to the future

There are some longer-term issues that have been raised in this analysis that are worth considering.

Less complex, more integrated systems in the community

Taking the trends we discussed as part of this work there is an emerging consistent set of ideas about the sort of model that might be required in future. This seems to include:

- Access largely by 111 (web access was mentioned less often)
- Services based on localities and groups of practices with community services, mental health, and social care wrapped around these, with the community staff in larger and more flexible teams. These would need to be more responsive than at present
- Improved access to primary care through the use of these community teams
- Specialists providing input to these teams
- Single point of access for professionals for more complex services
- Risk stratification, shared access to records, anticipatory care planning for all those that need it and other elements of the chronic care model
- Enhanced discharge arrangements with community teams being able to pull patients out of hospital
- Effective relationships with nursing and residential homes
- More emphasis on patient self-care (although the evidence for this is limited)
- A number of other features of an integrated delivery system.

However, gaps in our knowledge about what works in community-based care will need to be filled with further experimentation and research.

The impact of these models on hospitals could be significant both in terms of income but also in terms of the nature of the patients who will require much more intensive support. These are both significant challenges and the method for transition to this new state has not been worked out and there are some substantial barriers and technical issues that need to be dealt with. Here too the solutions are incomplete.

Ambulance services

As explored above, there is the opportunity to extend the scope of the ambulance service. This might include using it to support primary care and nursing homes more actively; for example, by providing in hours home visits. Ambulance services are also well placed to act as the co-ordinators of the systems and capacity managers.

Senior expert opinion in hospital

In future rapid access to a senior opinion will need to be the norm. Many hospitals are now developing Acute Medical Unit (AMU) consultant job roles; specialists in assessment and early treatment; networkers across the hospital to conduct patients to the right speciality; and a source of advice to community based clinicians to prevent admission.

In some AMUs the acute consultants are increasingly used by GPs to provide advice on seriously ill patients, developing closer working with the community. For example, in one trust the AMU consultant on call takes GP referral calls directly, preventing 40% from being admitted. This has led to better communication with GPs and although it is time consuming

(and has resulted in GPs calling for advice more often), the acute consultants have found it useful to get to know the GPs and found that it prevents unnecessary admissions or patients being admitted for more targeted treatment. For example, anaemia patients staying at home under the care of the GP will have blood taken by the GP cross-matched and then the patient will come into the hospital for a transfusion when the treatment is lined up. The closer working with GPs has also promoted better risk sharing across the emergency care system, and has increased confidence that sick patients can be looked after in the community.

There has been some discussion about the need to develop acute medicine as a specialty or to find other ways to provide highly trained generalists (similar to the hospitalist in the USA) to help to deal with the growth in multi-morbidity and complex patients. This is a potentially important development but will require significant changes in training programmes.

Senior expert opinion in the community An option that is increasingly discussed is locating senior acute consultants and geriatricians in the community, with the view that many of the admissions or readmissions into the hospital could be prevented and the quality of the on-going management of complex frail patients improved. Work in Hampshire where geriatricians are available for consultation in the community has suggested this is an effective model for preventing hospital admission.

“What works is ‘see them soon and see them senior’, and yet complex patients are seen by GPs and paramedics in the community. We should try new approaches like having access to a senior acute clinician in the community, like a ‘man in a van model’ to see patients with deteriorating conditions and follow up patients who needed senior review after an episode of acute care”

Senior hospital clinician

Other workforce issues

There are signs of significant issues around the future of the workforce.

- Careers in the emergency department and acute medicine need to be made more attractive possibly through reflecting the challenging nature of the job in the level of pay, and providing greater opportunities for professionals to move into other specialties later in their careers (or management / teaching roles).
- There are also opportunities to develop non-medical roles. An example is the model of Advanced Clinical Practitioners (ACPs) in South Tees. These roles include over four years of training, are clinically autonomous, and have the same admission, referring and prescribing rights as doctors. There is a need to develop national standards for such roles to ensure levels of training and quality are maintained (otherwise there is a risk that areas will try to deliver the same roles with far less training). In order to hold on to professionals in these roles it is also important to continue to provide development opportunities (for example, through developing a Lead ACP role).
- There is an obvious need to develop a less fragmented skilled workforce to support community care. However, it is not clear that this is happening at sufficient scale or quickly enough.

Providers taking the lead

As discussed above, there seems to be an emerging view that providers, including GPs, should take more of a lead in developing the design of a new delivery system. Commissioners need to be clear about the standards they expect and may need to act as the convener but more of the responsibility for the system may need to be taken by providers.

10 Conclusion

There remains much to be done to improve the management of the urgent and emergency care system. A great deal of work has been done and significant progress has been made but achieving the goal of a system that is capable of working as a whole remains elusive.

In some cases there is a need to rethink how the system is managed, to move to a different model of commissioning and to pay much more attention to flow through the whole system. More attention needs to be paid to the capacity of different parts of the system, the speed at which these different parts work and how they interact to create a better flow through. We have also discussed the need to improve the data used to manage the system.

The need to rethink how community and other out of hospital services work is very obvious. Attention needs to be given to what happens to patients before they present, and the services available to them (or not) in the community.

There are substantial risks that are likely to intensify in the next few years and there will need to be some urgent action to mitigate these.

There are also areas of hospital performance where better management of internal systems and processes are required. However, they are part of a wider system and it is how this operates that is likely to determine their success or failure.

Overall, more thought is required about how the system as a whole operates together, the way that it is understood, the methodology that is used to change and redesign it and the measures and data that support this.

While the creation of CCGs offers a number of important advantages in terms of changing the nature of the conversation with providers and developing a new model of commissioning, in some cases they will need to work together so that acute providers do not have to operate a number of different systems and to avoid fragmentation. Overall, however, more thought is required about how the system as a whole operates together, the way that it is understood, the methodology that is used to change and redesign it and the measures and data that support this.

Appendix 1 Emergency Care Checklist

It is vital that health communities intelligently adapt what is known to work effectively and then ensure that this is actively managed and kept under review. The following approaches are based on current guidance from the Emergency Care Intensive Support Team and findings from our research.

Note that the evidence to support the ideas that follow is variable and many depend on the local context.

Urgent Care Boards

Establish a local Urgent Care Network (UCN) which incorporates strategic and operational leads across the emergency care system including consultants, GPs and ideally patient representatives. Develop robust terms of reference for the local UCN using the good practice set out in the DoH Emergency Care Network guidance.¹³

- Map out the range of existing groups/boards to ensure there is clarity with regard to both process and communications between the UCN and the local Trust Boards.
- Align commissioner and provider priorities and incorporate within a local strategy.
- Ensure all urgent care work streams report back to the UCN to support improved communication.
- Ensure all work streams are supported by programme management and leadership to enable whole system implementation.
- Develop a dashboard to monitor the overall impact of the programme and manage system resilience. The following example of a suite of whole system metrics may be helpful:
 - A primary care access metric at general practice level.
 - Ambulance turnaround times (30 minute arrival to clear) and category A and B response time delivery.
 - The four hour standard (underpinned by disposal profiles, showing the % of patients leaving the department after three hours forty five minutes has elapsed (for admitted patients, and two hours for non-admits)
 - Adult non-elective bed occupancy rate using an agreed non-expanded bed number consistently as the denominator.
 - Percentage of discharges from hospital before and after midday.
 - Community service based performance metrics (e.g. rate of delivery of a 4 hour standard for admission avoidance and a 12 hour standard for early supported discharge).
 - Average time from referral to assessment for mental health patients with no physical illness.
 - Social care response and performance metrics.

¹³ Emergency care networks checklist (2004) Department of Health
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4086939
(accessed 6th Jan 2012) This checklist shows how networks can improve patients' care by connecting all the members of a health community. It offers suggestions for membership and an example terms of reference, as well as early steps and specific actions for building effective local networks. It also contains links to support and resources.

- Outcome and patient experience metrics (mortality, effectiveness of pain control, patient reported outcome measures etc).

Communication and information

- There should be a clear vision aligned to an emergency care system strategy aimed at improving capacity, demand, patient experience and quality across system. There should be a narrative that focuses on the safety and quality benefits for patients, and the development of a culture that views the system flow as everyone's responsibility across the health and social care community.
- A broad campaign to implement and embed practices known to work (particularly in the hospital) should be considered, this should engage all members of staff in understanding their roles and actions required to improve emergency care performance, and patient flow. There are mobilising and organising techniques which are useful to win hearts and minds and gain commitment - further information on large scale sustainable change is available from the NHS Institute.¹⁴
- Identify champions to optimise delivery of the emergency care strategy and engage other staff in making a high performing emergency care system "everyone's business". Clinical Directors should view good patient flow and capacity and demand management as part of their responsibility for quality and safety.
- A real time directory of services with capacity information seems to be an important aspect of management.
- The idea of notification systems, GP dashboards and other methods to inform GPs and case managers that their patients are in hospital should be explored.

Root cause analysis of emergency care system failures

Root cause analysis of system failures (such as ambulance handover delays, closure of multiple wards from Norovirus etc.) should be owned and undertaken by individual organisations, but findings shared across the system. There should be a robust assessment of the root causes, with a genuine effort made to get to the real root causes, rather than trying to demonstrate system failure was unavoidable.

The system must ensure findings result in action and improvement – a process of senior review would demonstrate the importance that organisations place on root cause analysis and learning from it.

Commissioning

Unscheduled care commissioning intentions need to be clear, shared and communicated. The strategy and commissioning intentions need to be owned by local stakeholders and therefor developed with meaningful input from providers.

Commissioning decisions should be made around the approaches that are known to be effective in managing emergency care, these are outlined below. Commissioners should also ensure that the financial flows and contracts for services support patients moving through the system, and do not create dis-incentives and gaming.

¹⁴ NHS Institute information on large scale change:

http://www.institute.nhs.uk/general/general/leading_large_scale_change.html (accessed June 2012)

Encouraging CCGs to federate and have a single dialogue with providers would go some way to enabling positive relationships to be established.

Commissioning around outcomes and allowing the provider to determine the detail of how services should be provided seems to be a key factor in successful approaches. The model of commissioning emergency care needs to be rethought, with providers given a stronger leadership and responsibility role in determining delivery. Commissioning emergency care needs to shift from a sometimes adversarial approach of micro-managing to one where CCGs take an oversight and scrutiny role, supported by a system dashboard that highlights the system capacity and demand.

Internal professional standards

- Response standards should be agreed for the whole system, including community, ambulance and hospital services, and cover time to:
 - Assessment (including diagnostics, investigations and therapy services). Within this implement single assessment processes to reduce duplication.
 - Treatment.
 - Review.
 - Referral. Within this simplify referral processes, rather than using them as mechanisms to “hold back” work.
 - Discharge (refer to the section below on discharges).
- Use metrics to measure performance and consistency of delivering IPS.

Staff training

Ensure relevant staff are trained in practices known to be effective (RAT, See and Treat etc.) Primarily focus effort on training key staff and consider using a “train the trainer” approach to roll out new practices quickly.

GP practices

- Ensure there are appointments available for urgent cases and follow published guidance.^{15,16}
- Consider the use of GP telephone triage and GP call-back to manage demand, although studies around this approach are small scale the evidence is encouraging. Note that it also requires significant redesign of workflows – it is not a simple intervention
- Stagger home visits to reduce ‘batching’. Using the ambulance service, nurses or a physician of the day may be one solution.
- Raise patient awareness of alternative services available (other than the emergency department, note that there is limited evidence of the effectiveness of patient education around emergency department avoidance.
- Undertake training and education around end of life.
- Ensure advanced planning is implemented consistently.

¹⁵ Urgent care: a practical guide to transforming same-day care in general practice. Primary Care Foundation (2009) <http://www.primarycarefoundation.co.uk/report.html> (accessed 26th November 2012)

¹⁶ Introduction and User Guide - Urgent Care in General Practice Toolkit - A practical Toolkit to help GP Practices and GP Consortia improve patient experience and surgery workload. ECIST

- Ensure all patients who need advanced care plans and end of life plans have them in place and that all health professionals they are in contact with are aware of these plans.
- Extending primary care hours is an approach that has yet to be proven and should be monitored.
- Implement productive general practice and other approaches to increase the availability of same day appointments.
- Consider methods for improving continuity of care for complex patients.
- Ensure high quality input into nursing and residential homes, this may require some reallocation of responsibilities.

GP out of hours

- Out of hours service contracts should be outcome based to promote joint working and integration with other services.
- Ensure GP out-of-hour services have access to patient records and care plans.
- Promote a greater emphasis on using alternative systems and patients being able to access the appropriate service based on their need.
- Look to co-locate GP out of hours within the hospital.

Walk-in centres and minor injury centres

- There are growing concerns around the effectiveness of walk in centres and these centres should be evaluated rigorously.
- Ensure opening times are aligned to other parts of the emergency care system to reduce duplication.
- Where possible co-located and integrate with emergency departments.¹⁷
- Consistently use the See and Treat model.¹⁸
- Ensure clinical governance and management is integrated with the emergency care system.
- Ensure access to diagnostics.
- Ensure consultant advice is accessible.
- Work with the ambulance service to promote the centre as an alternative when appropriate.

Community services

As noted above the number of evidence based models and actions for community services are less well understood but appear to include the following:

- Critically examine pilots, projects and approaches. Ensure that initiatives are thoroughly evaluated and only roll out the most cost effective and promising.

¹⁷ Chalder. M., *et al* (8 March 2003) Impact of NHS walk-in centres on the workload of other local healthcare providers: time series analysis. *BMJ: Primary Care*. Vol 326
<http://www.bmj.com/content/326/7388/532.reprint?maxtoshow=&HITS=80&hits=80&RESULTFORMAT=&fulltext=%22walk%20in%20centres%22&searchid=1&FIRSTINDEX=10&sortspec=date&resourcetype=HWCIT>
 (accessed 26th November 2012)

¹⁸ Keep things moving – see and treat patients in order (2008) Quality Service and Improvement Tools. NHS Institute
http://www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/keep_things_moving_-_see_and_treat_patients_in_order.html (accessed 1st Nov 2012)

- Remove some of the complexity, overlaps and individual schemes to create services on a large enough scale to be able to make significant differences in terms of supporting patients with long term conditions
- Ensure community services can anticipate demand and are able to flex capacity to meet needs.
- Ensure there are simple referral criteria and streamlined assessments and documentation that enable patients to be transferred quickly.
- Consider basing community services around key hospital providers to enable strong relationships and integrated teams to be established.
- Use case management and risk stratification when appropriate.¹⁹
- Provide integrated health and social care crisis support teams.²⁰
- Provide IV support to patients in the community.

Nursing and care homes

There is evidence that nursing and care home residents receive low levels of clinical care and that making good these shortfalls significantly reduces the number of emergency attendances and admissions.²¹ It is estimated that between 8% and 40% of patients seen in the emergency department that come from care homes could have been cared for outside of the department.²² These patients are also at risk of rapidly decompensating once in the hospital, and where possible should be treated within nursing and care homes.

- Provide end of life education, training and support to nursing and care homes.
- Implement advanced care plans.²³
- Ensure regular case review and medicines management reviews.
- Increase the level of medical care and access to specialist advice (geriatricians and GPs) in nursing and care homes.^{24,25,26}
- Provide IV support.

Frail elderly

Although these represent a relatively small number of overall admissions this patient group has a very high propensity to be admitted and once in hospital often decompensate, have a

¹⁹ Purdy, S. *et al.* (2012) Interventions to reduce unplanned hospital admission: A series of systematic reviews. Final Report June 2012. University of Bristol, University of Cardiff, National Institute for Health Research

²⁰ Thistlethwaite, P. (2011) Integrating health and social care in Torbay: improving care for Mrs Smith. London: King's Fund

²¹ Steves, C.J., Schiff, R., Martin, F.C. (2009) Geriatricians and care homes: Perspectives from geriatric medicine departments and primary care trusts, *Clinical Medicine* 9:6 528-533

²² Carter, Skinner, Robinson. (1998) Patients from care homes who attend the emergency department: could they be managed differently *Emerg Med J* doi:10.1136/emered-2012-201630

²³ Caplan, G.A., *et al* (2006) Advance care planning and hospital in the nursing home. *Age and Ageing* 2006; 35: 581-585 <http://ageing.oxfordjournals.org/content/35/6/581.full.pdf+html> (accessed 26 November 2012)

²⁴ Steves, C.J., Schiff, R., Martin, F.C. (2009) Geriatricians and care homes: Perspectives from geriatric medicine departments and primary care trusts, *Clinical Medicine* 9:6 528-533

²⁵ Crilly, J., Chaboyer, W., Wallis, M. (2011) A structure and process evaluation of an Australian hospital admission avoidance programme for aged care facility residents, *Journal of Advanced Nursing* 68:2, 322-334.

²⁶ Evans, G. (2011) Factors influencing emergency hospital admissions from nursing and residential homes: positive results from a practice-based audit. *Journal of Evaluation in Clinical Practice*. 17:6. 1045-49.

long length of stay and are problematical to discharge, therefore generating a large number of bed days.

The successful discharge of frail older people following an emergency admission to hospital relies on effective joint working between NHS, social care partners and the independent sector. In organising discharge systems, a whole systems approach is important. This should aim to anticipate and promptly respond to potential bottlenecks or obstacles, smooth patient flow, and recognise the interdependency between partners.

It is important to commission and embed practice and processes with a proven record of enhancing patient flow within acute hospitals – a summary of these effective approaches is available from the Intensive Support Team.²⁷ These approaches should also ensure there is an active ‘pull’ from the community to ensure frail elderly patients who are medically fit to be discharged can return to the community.

Addictions and mental health

There is evidence from local studies that a small number of users of emergency services are ‘frequent attenders’ that often result in admission. Many of these frequent attenders suffer from drug and alcohol addictions or mental illness, or have social problems such as homelessness or unemployment.

- Develop and implement an alcohol strategy. Alcohol abuse has been found to account for 12% of emergency department attendances and 6.2% of hospital admissions.²⁸
- Establish rapid response services for people with mental illness.²⁹ This should include approached for both known and unknown users.
- Implement psychiatrist input out of hours; case management; assertive outreach services; and within hospital liaison services especially for mental illness and alcohol abuse to reduce attendances, admissions and costs.^{30,31}

Paediatrics

- Evaluate GP access, particularly between 3pm-8pm.
- Look at the GP skill mix and ensure paediatric primary care is available at a high standard.
- Review the appropriateness and availability of paediatric cover in hospital.

²⁷ Effective Approaches in Urgent and Emergency Care. Paper 3. Whole system priorities for the discharge of frail older people from hospital care. (2012) ECIST

²⁸ Pirmohamed. M., *et al* (2000) The burden of alcohol misuse on an inner-city general hospital. QJM (2000) 93 (5): 291-295. doi: 10.1093/qjmed/93.5.291. <http://qjmed.oxfordjournals.org/content/93/5/291.short> (accessed 2 Nov 2012)

²⁹ Glover. G., Arts. G., Babu. K.S. (2005) Crisis Resolution teams and inpatient mental health. Centre for Public Mental Health, University of Durham.

³⁰ Althaus. F., Parox. S., Hugli. O., Ghali. W.A., Daeppen. J-B. *et al* (2011) Effectiveness of interventions targeting frequent users of emergency departments: a systematic review, Annals of Emergency Medicine, 58:1, 41-52.

³¹ Tadros. G., Salama. R., Mustafa. N., Pannell. R., Balloo. S. (2011) The Rapid Assessment Interface and Discharge Liaison Team, City Hospital Birmingham: Evaluation Report December 2009 – September 2010.

Ambulatory emergency care directory

The Ambulatory Emergency Care Directory was published in 2007 by the NHS Institute, identifying 49 emergency conditions and clinical scenarios that have the potential to be managed on an ambulatory basis.³² Actively managing patients with ambulatory care sensitive conditions (through vaccination; better self-management; disease-management or case-management; or lifestyle interventions) prevents acute exacerbations and reduces the need for emergency hospital admission.

- Ambulatory care services should be provided as an unscheduled service with closer working between the emergency department consultants and acute physicians. Have a clear plan to roll out at least two emergency conditions to the service each year and mainstream them.
- Ensure senior clinical decision makers are available to decide on the need for admission.
- Ensure ambulatory emergency care is available for all patients who meet the criteria.
- Ensure access to timely investigations to support clinical decision making.
- Community clinics for diabetes, heart failure and respiratory patients can be very expensive and the approaches to these inconsistent. Linking these outreach clinics to ambulatory care models may be a good use of scarce resources.

Ambulance services

Analysis of ambulance demand is key to understanding where to focus attention in the emergency care system.

Although there are some known approaches to improving performance (outlined below), the ambulance services still remains a largely untapped resource of skills and experience, both clinical and managerial, that should be explored further.

- Access to care plans and advanced care plans was flagged as an important area.
- Establish emergency care practitioners.^{33,34,35}
- Ambulance handover should follow guidance available.³⁶
- Review contracts to ensure that transport is available in a timely manner for patients who are medically fit and require ambulance transport back into the community.
- Analyse ambulance call outs to identify causes and areas of increase. Target frequent callers – including GPs

³² Ambulatory Emergency Care Directory (2007)

www.institute.nhs.uk/option.com...194/.../products_id,181.html (accessed 5th December 2012)

³³ Mason. S., O'Keeffe. C., Coleman. P., Edlin. E., Nicholl. J. (2007) Effectiveness of emergency care practitioners working within existing emergency service models of care, EMJ. 24:239-43

³⁴ O'Hara. R., O'Keeffe. C., Mason. S., Coster. J.E., Hutchinson. A. (2012) Quality and Safety of care provided by emergency care practitioners, EMJ. 29:327-32

³⁵ *Ibid* O'Hara *et al* (2012)

³⁶ NHS South West - Ensuring timely handover of patient care - ambulance to hospital (2008)

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_089072 (accessed 30th Nov 2012)

The emergency department³⁷

- Implement Rapid Assessment and Treatment (RAT) for “majors” patients.³⁸ Early senior review is likely to increase the number of people able to be managed at home and to prevent adverse outcomes.³⁹
- Implement See and Treat for patients with minor injuries and illnesses.⁴⁰
- Reduce or eliminate triage.
- Emergency department crowding – Adopt the College of Emergency Medicine guidance around full capacity protocols.⁴¹
- Use appropriately trained nurses to admit patients in liaison with specialities.
- Review layout and physical capacity of the emergency department.
- Review services provided in the emergency department to ensure that inappropriate services (such as review services and follow up services) are removed to free up clinical time.
- Trusts need have a clinical staffing strategy to ensure the provision of the required competencies on an hour by hour basis. An appropriate mix of consultants, middle grades, advanced nurse practitioners, majors nurse practitioners, physician assistants and extended role HCAs need to be developed. This needs to be underpinned by robust job planning.

Patient streaming

- Create separate streams for minors and majors, with dedicated staff, processes and coordination. Create processes to ensure that the major’s stream is not halted by a full resuscitation room.
- The ED should avoid acting as the default arrival point for referrals that do not require resuscitation or stabilisation (e.g. most GP or clinic referred patients) – these patients should by-pass the emergency department and go directly to acute medical units or specialist beds.
- Ensure senior decision makers in high volume specialties are available to attend the emergency department within thirty minutes of referral.
- Ensure the emergency department has direct admission rights using agreed protocols.

³⁷ Effective Approaches in Urgent and Emergency Care. Paper One. Priorities within Acute Hospitals (2011) ECIST
(http://www.nhs.uk/fileadmin/Files/ECIST_Conference_October_2012/ECIST_papers/FINAL_ECIST_Paper_1_-_Priorities_within_Acute_Hospitals.pdf) (accessed 5th December 2012)

³⁸ Effective Approaches in Urgent and Emergency Care. Paper Two - Rapid Assessment and Treatment Models in Emergency Departments. (June 2012) ECIST
(http://www.nhs.uk/fileadmin/Files/ECIST_Conference_October_2012/ECIST_papers/FINAL_ECIST_Paper_2_-_Rapid_Assessment_and_Treatment_in_EDs_June_2012.pdf) (accessed 30th Nov 2012)

³⁹ Caring to the End? A review of the care of patients who died in hospital within four days of admission A report of the National Confidential Enquiry into Patient Outcome and Death (2009)
(http://www.ncepod.org.uk/2009report2/Downloads/DAH_report.pdf) (accessed 7th Jan 2013)

Emergency Admissions: A journey in the right direction? A report of the National Confidential Enquiry into Patient Outcome and Death (2007) (<http://www.ncepod.org.uk/2007ea.htm>) (accessed 7th Jan 2013)

⁴⁰ Keep things moving – see and treat patients in order. Quality Service and Improvement Tools. (2008) NHS Institute
(http://www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/keep_things_moving_-_see_and_treat_patients_in_order.html) (accessed 1st Nov 2012)

⁴¹ The College of Emergency Medicine - Crowding in Emergency Departments (August 2012)
(secure.collemergencymed.ac.uk/code/document.asp?ID=6296) (accessed 1st Nov 2012)

- Provide short stay capacity for patients with an anticipated length of stay of up to two midnights (assessment and short stay capacity is usually co-located in acute medical units). A review of what is achievable through short stays in unscheduled care has been published by the NHS institute.⁴²
- Further streams should be to specialist beds (for complex speciality patients requiring greater than seventy two hour stays), beds for patients with complex discharge needs (e.g. the frail elderly) and catastrophic illness (e.g. critical care and stroke patients).
- Ambulatory emergency care should be provided where appropriate.

Acute Assessment Unit (AMU)

There is an issue with a lack of standard terminology across the country (they can also be known as Clinical Decision Units / Observation Units / Acute Medical Units / or Surgical Assessment Unit), which can lead to confusion as to what is being described and what the core function of these units is. The ownership, role and responsibility of all such units should be clearly defined and agreed by the clinical leadership of the trust. The Royal College of Physicians has set out a clear set of standards for medical assessment units; these have been supplemented recently with guidance on workforce and job planning.⁴³

- When undertaking clinical duties on the AMU, the consultant should be free from any other specialty, ward or management commitments.
- Individual consultants' duties on the AMU should be for two or more consecutive days; any variation must be specifically designed to optimise continuity of care on the AMU.
- Appropriate diagnostic and support services should be provided seven days per week, to ensure that the full benefits of consultant delivered-care to patients are realised.
- During the period of consultant presence on AMU, all newly admitted patients should be seen within six to eight hours, with the provision for immediate review as required according to illness severity.
- A newly admitted patient must be seen by a consultant within 14 hours after arrival on AMU.
- All patients in the AMU should be reviewed twice each day by the AMU consultant or appropriate specialty team.
- Consultant presence on the AMU should start no later than 8am.
- Duration of an individual consultant's presence on the AMU should usually be between eight and 12 hours.
- Extended evening working until 10pm should be considered, depending on local patterns of patient referral and arrival.

The units should also ensure:

- It stays below 85-90% utilisation at all times so that it has capacity to care for the anticipated number of arrivals hour by hour.⁴⁴

⁴² Focus on Short Stay: NHS Institute (2007)

http://www.institute.nhs.uk/option.com_joomcart/Itemid,26/main_page,document_product_info/products_id,192.html (accessed Jan 7th 2013)

⁴³ <http://www.rcplondon.ac.uk/sites/default/files/documents/acute-care-toolkit-4.pdf> (accessed 7th Jan 2013)

⁴⁴ Planning for predictable flows of patients into unscheduled care systems beyond the Emergency Department: Meeting Demand and Delivering Quality. (February 2010) ECIST

- Consultant-led rolling ward rounds to avoid batching patients to be seen on “set piece” ward rounds.
- Clear systems for patients requiring specialist care, so they can be cared for in the most appropriate setting as quickly as possible.
- A targeted discharge standard of all patients to be discharged by 1pm, to be reviewed at an 8am board round (anything beyond that would be regarded as a breach and attract the same root cause analysis as an emergency department breach).
- Standardised clerking documentation.
- “Home for Lunch” schemes, whereby the hospital gives patients written commitment to get them home for lunch on their day of discharge, and therefore to plan to move the patient from their bed to the discharge lounge early in the day; family members and carers are also alerted.
- Regular patient experience monitoring supported by performance information as the patient experience of these busy, noisy units is often very poor and patients often stay there for inappropriately long periods.

The Surgical Assessment Unit at one trust had a clear patient cohort and it takes referrals from the emergency department and direct from GPs. The Unit is well supported, with a co-ordinator undertaking a nursing assessment and a junior doctor reviewing within 30 minutes. More senior support at middle grade or consultant level is easily accessible, with an operating list close by providing ready access if required. Access to diagnostics was good, with ring-fenced ultrasounds and reserved CT slots, duplex scanning and a set weekend consultant radiologist schedule. There are twice-daily board and safety rounds of each patient with a multi-disciplinary team present around the white board (scripted morning meeting at 9am focussing on actions required to discharge home, then a briefer handover meeting at 12pm). The estimated discharge dates are consultant-led and a discharge lounge available for “fit for discharge” patients.

Escalation beds

- Adding the capability to flex capacity has the risk of changing admission thresholds and the story of winter wards that prove impossible to close is well known. Solutions that allow capacity flex, without creating supplier-induced demand are required. The effective use of AMUs (that maintain approximately 15% free capacity) can mean specialities wards can operate at close to 100%.

Specialty Wards

- Ensure that a consultant sees all patients, and their care plans are confirmed, within two to three hours of admission to the ward (or a maximum of twelve hours if admitted out of hours), and sooner if the patient’s clinical need requires it.
- Twice daily one-stop board-ward rounds should be the standard. Develop ‘one stop ward rounds’, where tasks such as completing a ‘To Take Out’ form and filling request forms are completed before the round moves onto the next patient (avoid batching work to the end of the round).
- Ward managers need to be supernumerary to coordinate and drive care.
- Schedule main ward rounds for the mornings, and see potential discharges first, so that beds are freed as early as possible.

Step down facilities

Look into establishing step down beds for patients awaiting complex care packages, and private funded nursing home patients deciding on placements. This would improve the flow of the hospital. Using community services or contract home care nursing providers for rapidly creating home care support also seems to be effective

Readmissions

Discharge planning, risk stratification of patients being discharged, support with medications and community and social care support are all well understood interventions in this area.

There have been some successful approaches to hospital led discharge teams, who provide continuity of care to patients in the first few weeks after discharge and have prevented readmissions. Another approach is to have a dedicated number for possible readmissions and access to a clinic for patients to come to and be reviewed by a consultant.

Discharge planning

- Every patient having a consultant-led expected date of discharge (EDD) completed within 12 hours of admission (a number of trusts have found specifying a morning discharge helps improve bed availability earlier).
- Care plans must include an EDD and criteria for discharge. Empower the multi-disciplinary team to discharge when criteria are met (particularly at weekends), rather than waiting for senior medical confirmation.
- There should be daily, early morning board rounds by a senior clinical decision maker (normally a consultant) to ensure that the care plan is on track.
- Schedule short board rounds for the mornings, and see potential discharges first, so that beds are freed as early as possible and those patients who are deteriorating are picked up early by a senior doctor.
- Clinical criteria for discharge recorded in each patient's notes.
- Any non-clinical change to the EDD should be captured separately and reviewed.
- Identify patients at risk of prolonged stay at an early stage using simple tools like the Blaylock assessment.⁴⁵
- Manage planning for frail elderly people assertively to avoid in-hospital decompensation with associated prolonged stays.⁴⁶
- Ensure services required for discharge are accessible at weekends.
- Co-locate social services staff with the discharge planning team in the hospital. Another option which has been effective is twice weekly conference calls with a strong chair and with decision makers present.
- Simplify the documentation and forms surrounding patient transfers.

⁴⁵ Mistiaen. P., Duijnhouwer. E., Prins-Hoekstra. A., Ros. W., Blaylock. A. (1999) Predictive validity of the BRASS index in screening patients with post-discharge problems. Blaylock Risk Assessment Screening Score. J Adv Nurs 1999, 30(5):1050-1056

⁴⁶ Effective Approaches in Urgent and Emergency Care. Paper 3. Whole system priorities for the discharge of frail older people from hospital care. (2012) ECIST

System capacity and demand management

- Develop system wide predictive modelling based on demand and capacity utilising the national bed management tools.^{47,48,49} Often the bed bureau / bed management office within trusts is operated by staff retaining knowledge in their heads and being reactive, rather than operating easy to understand systems that are aimed at increasing capacity up-stream.
- Develop an agreed system wide escalation protocol that has input from all relevant stakeholders.
- Use a tool to predict the expected number of admissions – if anticipated admissions exceed expected bed availability, escalate early.
- Where there has been a spike in admissions systems to anticipate the following spike in demand for community and social care is required
- Undertake demand and capacity management within primary care.
- Within the acute trust each specialty and supporting department should plan to match capacity to demand. Staffing rotas should be designed to match demand profiles. In general, focus on early assessment by senior and experienced staff to plan care is likely to be the most important step to reduce the unnecessarily long acute hospital stays which some patients endure. Experience of hospitals which have worked hard to follow the principles of best practice is that length of stay does fall substantially. More importantly perhaps, patient satisfaction increases and complaints fall. Critical incidents become less frequent and the safety of the patients in hospital is improved.⁵⁰

⁴⁷ Faster access: Bed management demand and discharge predictors (2004) Department of Health
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4091598
(accessed 26 November 2012)

⁴⁸ Planning for predictable flows of patients into unscheduled care systems beyond the Emergency Department: Meeting Demand and Delivering Quality. (February 2010) ECIST

⁴⁹ Demand and Capacity – Basic Concepts (2008) Institute for Innovation and Improvement
http://www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/demand_and_capacity_-_basic_concepts.html (accessed 5th December 2012)

⁵⁰ Planning for predictable flows of patients into unscheduled care pathways beyond the Emergency Department: Meeting Demand and Delivering Quality. (February 2010) ECIST

Appendix 2 Additional data analysis

Data was provided from the South East Quality Observatory. Additional data is from the NHS Atlas, NHS Information Centre and Kings Fund analysis.

Table A.1: Changes in emergency admissions Jul 07 - Jul 12

NHS South of England acute hospital trust	Change in emergency admissions (%)
Ashford & St Peter's Hospitals NHS Foundation Trust	10
Brighton & Sussex University Hospitals NHS Trust	24
Buckinghamshire Healthcare NHS Trust	-39
Dartford & Gravesham NHS Trust	52
Dorset County Hospital NHS Foundation Trust	25
East Kent Hospitals University NHS Foundation Trust	16
East Sussex Healthcare NHS Trust	-4
Frimley Park Hospital NHS Foundation Trust	49
Gloucestershire Hospitals NHS Foundation Trust	23
Great Western Hospitals NHS Foundation Trust	34 (from April 2008)
Hampshire Hospitals NHS Foundation Trust	14
Heatherwood & Wexham Park Hospitals NHS Foundation Trust	13
Isle Of Wight Healthcare NHS Trust	56
Maidstone & Tunbridge Wells NHS Trust	25
Medway NHS Foundation Trust	16
North Bristol NHS Trust	-3
Northern Devon Healthcare NHS Trust	29
Oxford University Hospitals NHS Trust	28
Plymouth Hospitals NHS Trust	6
Poole Hospital NHS Foundation Trust	13
Portsmouth Hospitals NHS Trust	3
Queen Victoria Hospital NHS Foundation Trust	6
Royal Berkshire NHS Foundation Trust	35
Royal Cornwall Hospitals NHS Trust	32
Royal Devon & Exeter NHS Foundation Trust	16
Royal Surrey County Hospital NHS Foundation Trust	46
Royal United Hospital Bath NHS Trust	24
Salisbury NHS Foundation Trust	30 (from Jan 2008)
South Devon Healthcare NHS Foundation Trust	10
Surrey & Sussex Healthcare NHS Trust	16
Taunton & Somerset NHS Foundation Trust	32
The Royal Bournemouth & Christchurch Hospitals NHS FT	41
University Hospital Southampton NHS Foundation Trust	23
University Hospitals Bristol NHS Foundation Trust	49
Western Sussex Hospitals NHS Trust	16
Weston Area Health NHS Trust	-2
Yeovil District Hospital NHS Foundation Trust	18

Table A.2: Emergency activity in acute hospital trusts, Sept 11- Aug 12

NHS South of England acute hospital trust	FCE	LOS (emerg)	LOS 0-1 days (%)	Readmits (%)	>7 days stay (emerg) (%)
NHS South of England acute hospitals	1,220,308	4.8	51.2	13.8	17.9
Ashford & St Peter's Hospitals	23457	6.0	43.2	14.9	20.9
Brighton & Sussex Univ Hospitals	43816	4.9	50.2	15.6	18.8
Buckinghamshire Healthcare	28931	5.8	51.7	12.2	17.6
Dartford & Gravesham	27422	4.4	53.9	13.4	16.8
Dorset County Hospital	18276	4.2	50.5	13.5	16.1
East Kent Hospitals University	68155	4.0	54.6	15.7	15.0
East Sussex Healthcare	37124	6.4	44.5	13.8	23.3
Frimley Park Hospital	32058	4.4	52.5	14.7	15.6
Gloucestershire Hospitals	47661	5.2	43.3	13.4	21.0
Great Western Hospitals	31392	4.7	53.2	13.7	17.5
Hampshire Hospitals	36844	5.3	54.7	12.4	16.9
Heatherwood & Wexham Park	32134	4.4	56.0	14.3	15.7
Isle Of Wight Healthcare	13727	6.4	44.7	11.7	20.9
Maidstone & Tunbridge Wells	38782	4.8	51.8	13.6	17.7
Medway	32510	4.8	52.5	13.3	18.4
North Bristol	34116	7.0	44.1	14.5	24.9
Northern Devon Healthcare	16297	5.3	46.5	13.1	19.9
Oxford University Hospitals	59404	4.7	51.7	14.1	16.6
Plymouth Hospitals	43472	4.9	49.5	13.5	19.7
Poole Hospital	30926	4.1	54.5	13.6	15.6
Portsmouth Hospitals	55905	4.4	55.5	14.2	15.2
Royal Berkshire	31373	5.3	44.3	12.7	20.0
Royal Cornwall Hospitals	40483	3.9	54.0	13.2	14.6
Royal Devon & Exeter	33190	4.7	46.6	12.7	18.7
Royal Surrey County Hospital	21667	5.9	46.7	12.3	20.5
Royal United Hospital Bath	35079	5.1	49.2	13.8	20.9
Salisbury	20290	4.9	52.5	12.5	17.9
South Devon Healthcare	24091	3.4	51.5	13.1	12.6
Surrey & Sussex Healthcare	34419	4.8	52.4	16.3	18.4
Taunton & Somerset	30748	4.6	51.0	13.9	18.6
Bournemouth & Christchurch	31766	4.8	53.3	15.1	18.5
University Hospital Southampton	53460	4.9	55.0	14.5	18.4
University Hospitals Bristol	28982	2.5	65.6	12.3	7.4
Western Sussex Hospitals	49908	5.0	52.0	14.2	18.7
Weston Area Health	11949	6.6	38.1	12.3	24.7
Yeovil District Hospital	15785	5.3	45.1	12.9	20.5

Table A. 3: Other key acute hospital trust data Sept 11- Aug 12 Monthly average

NHS South of England acute hospital trust	A&E All Types	Conversion (%)	Amb arrival (%)	95% - 4 Hours	Min 95% in period
<i>NHS South of England Acute Hospitals</i>	297632	22	28.2	96.2	94.7
Ashford & St Peter's Hospitals	9103	31	29.5	91.1	85.5
Brighton & Sussex University Hospitals	13222	28	29.3	96.0	93.4
Buckinghamshire Healthcare	9027	29	22.0	95.6	92.5
Dartford & Gravesham	8380	30	25.9	94.6	90.4
Dorset County Hospital	3431	18	33.7	97.4	95.5
East Kent Hospitals University	16836	24	30.4	95.9	95.2
East Sussex Healthcare	12105	22	36.7	96.3	94.7
Frimley Park Hospital	8477	27	24.4	96.2	94.5
Gloucestershire Hospitals	10139	20	33.6	93.5	89.2
Great Western Hospitals	9640	30	19.1	96.9	95.4
Hampshire Hospitals	8840	23	22.3	95.8	94.3
Heatherwood & Wexham Park	9737	29	21.3	95.7	94.2
Isle Of Wight Healthcare	5805	23	27.4	96.3	94.4
Maidstone & Tunbridge Wells	10030	25	26.5	93.2	90.2
Medway	7641	23	32.2	94.2	87.6
North Bristol	7680	22	22.6	92.7	89.7
Northern Devon Healthcare	12700	46	14.7	98.6	97.3
Oxford University Hospitals	10731	16	33.9	93.8	87.6
Plymouth Hospitals	7430	16	34.6	94.5	90.7
Poole Hospital	4939	15	34.9	96.5	93.4
Portsmouth Hospitals	10959	18	30.2	93.6	88.0
Royal Berkshire	8557	24	26.8	94.9	91.2
Royal Cornwall Hospitals	6186	15	37.6	95.3	91.6
Royal Devon & Exeter	8276	24	27.4	94.4	91.4
Royal Surrey County Hospital	5910	28	26.2	95.1	90.3
Royal United Hospital Bath	5930	17	39.1	95.6	92.5
Salisbury	3639	17	27.4	97.8	95.4
South Devon Healthcare	6464	26	34.1	97.2	95.3
Surrey & Sussex Healthcare	6756	19	35.6	82.8	64.4
Taunton & Somerset	4652	14	32.6	97.2	94.6
The Royal Bournemouth & Christchurch Hosps	5760	16	10.9	97.3	95.0
University Hospital Southampton	9756	17	30.7	94.6	92.2
University Hospitals Bristol	9624	32	25.3	94.5	91.0
Western Sussex Hospitals	11119	21	30.5	96.5	92.9
Weston Area Health	4376	36	27.1	94.9	88.9
Yeovil District Hospital	3775	23	30.6	95.8	92.2

Table A. 3: Other key acute hospital trust data Sept 11 - continued

NHS South of England acute hospital trust	RTT Feb- Aug (%)	
	RTT Admitted	Non-Admitted
<i>NHS South of England Acute Hospitals</i>	92.5	96.7
Ashford & St Peter's Hospitals	94.9	98.1
Brighton & Sussex University Hospitals	90.4	96.2
Buckinghamshire Healthcare	93.2	98.4
Dartford & Gravesham	91.9	98.5
Dorset County Hospital	92.7	97.3
East Kent Hospitals University	91.9	97.0
East Sussex Healthcare	86.8	94.3
Frimley Park Hospital	93.8	97.8
Gloucestershire Hospitals	90.2	98.0
Great Western Hospitals	96.1	98.8
Hampshire Hospitals	93.3	98.0
Heatherwood & Wexham Park	85.6	96.9
Isle Of Wight Healthcare	93.2	96.8
Maidstone & Tunbridge Wells	91.7	98.2
Medway	91.5	97.2
North Bristol	90.0	97.5
Northern Devon Healthcare	95.4	99.6
Oxford University Hospitals	90.7	96.9
Plymouth Hospitals	92.3	96.3
Poole Hospital	94.5	97.2
Portsmouth Hospitals	91.8	96.0
Royal Berkshire	92.6	99.2
Royal Cornwall Hospitals	94.1	99.0
Royal Devon & Exeter	86.8	98.2
Royal Surrey County Hospital	91.2	98.5
Royal United Hospital Bath	92.5	97.0
Salisbury	93.1	98.0
South Devon Healthcare	91.9	97.3
Surrey & Sussex Healthcare	91.2	89.4
Taunton & Somerset	92.2	95.9
The Royal Bournemouth & Christchurch Hosps	95.0	99.0
University Hospital Southampton	91.0	95.3
University Hospitals Bristol	92.1	96.8
Western Sussex Hospitals	92.8	95.6
Weston Area Health	93.9	95.7
Yeovil District Hospital	92.4	96.7

Alcohol

The Atlas data suggest that Bristol, Plymouth, Portsmouth city, Torbay, Brighton and North Somerset have a high level of emergency department attendances related to alcohol.

Older people

A high admission rate for older people might indicate opportunities for improving demand management through more intensive case management, investment in nursing and residential homes, specialist teams for multidisciplinary case management etc. The average admission rate for the over 75's for the region is somewhat lower than for England. The highest rates of admission are in Brighton, Portsmouth and the finding from The King's Fund's earlier work that areas with higher concentrations of older people tend to have lower admission rates seems to apply. This may reflect different levels of investment but we are unable to determine this from the data we have.

The picture when looking at the over 65 group is slightly different. A number of PCT areas do seem to have a relatively high use of bed days for this group. In particular Bristol, South Gloucestershire, East Berkshire, Medway, Southampton, Portsmouth and Surrey have high bed use. The main driver of this appears to be a relatively high admission rate. These areas rank surprisingly poorly compared with other parts of the country.

GP access

There is very significant variation in the number of GPs per thousand weighted population. There is some link between this indicator and admissions for ambulatory care sensitive conditions or other aspects of performance on non-elective care but clearly these data only capture some of the impact of primary care. Some of the areas with very high rates of emergency department attendance do have low numbers of GPs per 1000 population but so do some of those at the other end of the distribution (see table below).

Ambulatory care sensitive admissions

There is a threefold variation in the number of patients with ambulatory sensitive conditions that are admitted to acute hospitals across the South.

There is no clear relationship between this type of admission and the number of GPs per head of weighted population or indicators of quality of primary care chronic disease management in the Atlas.

The length of stay for many patients in this category is relatively short.

Death in usual place of residence

A high rate of deaths in hospitals would indicate opportunities for improving end of life planning, support to nursing homes, the use of community DNAR and other advanced planning. The region is performing well on this indicator and with the exception of Southampton, Medway and Swindon PCT areas. The variation does not provide any explanation of differences in urgent care performance between areas. There is room for some further improvement but while this would improve the quality of care it seems the unlikely to explain differences in urgent care performance between areas. (see table below).

Out of hours

We attempted to access data on GP out of hours and received some material, some of which was incomplete and often in inconsistent formats. We also were sent material from the Primary Care Foundation's Benchmarking Club but while this was useful it does not have complete coverage and there are big gaps in the old South Central and SE Coast region. These data are shown in the tables below. What they show is:

- Very substantial variation in the number of calls per 1000 population
- Large variations in the numbers of calls that could be dealt with by telephone and in numbers referred to hospital

Social care

Data on social care is presented in table 8 and some of the problems of extended stays seen in some providers does seem to be associated with relatively low levels of spending and provision. However, local context is required as there are cases where low spending and provision may reflect a higher level of self payment in more affluent areas.

Overall commissioner and provider data

These are available on request in Excel format.

Table 6 *Death in usual place of residence (%)*

Bath and North East Somerset	49.5
Berkshire East	38.6
Berkshire West	41.0
Bournemouth and Poole	43.1
Brighton and Hove City	42.8
Bristol	43.8
Buckinghamshire	42.2
Cornwall and Isles of Scilly	46.1
Devon	45.1
Dorset	41.7
East Sussex Downs and Weald	46.6
Eastern and Coastal Kent	39.1
Gloucestershire	47.4
Hampshire	44.0
Hastings and Rother	40.4
Isle of Wight	43.9
Medway	37.6
North Somerset	48.6
Oxfordshire	42.9
Plymouth Teaching	45.6
Portsmouth City Teaching	43.7
Somerset	46.1
South Gloucestershire	41.1
Southampton City	37.0
Surrey	40.2
Swindon	36.3
Torbay	50.5
West Kent	39.6
West Sussex	44.0
Wiltshire	46.5

Table 7 *Percentage of emergency patients discharged to nursing homes*

<i>All South of England Acutes</i>	1.6
East Sussex Healthcare	3.8
Brighton & Sussex University Hospitals	3.5
Maidstone & Tunbridge Wells	2.9
Ashford & St Peter's Hospitals	2.8
East Kent Hospitals University	2.3
Dartford & Gravesham	2.3
Isle of Wight Healthcare	2.3
Weston Area Health	2.2
Salisbury	2.1
North Bristol	2.0
Buckinghamshire Healthcare	2.0
Surrey & Sussex Healthcare	2.0
Northern Devon Healthcare	1.9
Royal Surrey County Hospital	1.9
Royal Berkshire	1.8
Hampshire Hospitals	1.8
Royal United Hospital Bath	1.7
Plymouth Hospitals	1.6
Great Western Hospitals	1.4
Western Sussex Hospitals	1.4
Gloucestershire Hospitals	1.2
Frimley Park Hospital	1.1
University Hospital Southampton	1.1
Heatherwood & Wexham Park Hospitals	1.0
Medway	1.0
Oxford University Hospitals	1.0
Poole Hospital	1.0
Royal Bournemouth & Christchurch Hospitals	1.0
Royal Cornwall Hospitals	0.9
Taunton & Somerset	0.8
Portsmouth Hospitals	0.8
Dorset County Hospital	0.7
South Devon Healthcare	0.6
Yeovil District Hospital	0.6
University Hospitals Bristol	0.4
Royal Devon & Exeter	0.4

Table 8 Out of hours data (Source Primary Care Foundation)

PCT Name	% population over 65	Cases per 1000 of population
Berkshire East	13%	171
Berkshire West	14%	202
Buckinghamshire	17%	134.3
Hampshire	18%	155.6
Isle of Wight	24%	181.8
Oxfordshire	16%	189.3
Portsmouth City Teaching	13%	156.8
Southampton City	13%	95.6
Brighton and Hove City	14%	156.7
Eastern and Coastal Kent	19%	155.9
West Sussex	21%	162.9
Bath and North East Somerset	18%	112.4
Bournemouth and Poole	20%	179.1
Bristol	13%	131
Cornwall and Isles Of Scilly	22%	169.3
Devon	22%	163.7
Dorset	26%	138.5
Gloucestershire	19%	188.8
North Somerset	20%	168.7
Plymouth Teaching	16%	182.8
Somerset	21%	128.3
South Gloucestershire	17%	142.7
Swindon	14%	141.7
Torbay	24%	206.9
Wiltshire	18%	158.2

Table 9 OOH - How calls were dealt with (Primary Care Foundation data)

PCT	To hospital
Berkshire East	7.30%
Oxfordshire	9.70%
Portsmouth City Teaching	11.20%
Berkshire West	11.50%
Buckinghamshire	11.90%
Hampshire	12.70%
Isle of Wight	15.20%
Southampton City	20.10%
West Sussex	8.30%
West Kent	10.70%
Hastings and Rother	10.80%
Brighton and Hove City	11.10%
East Sussex Downs and Weald	12.30%
Eastern and Coastal Kent	12.30%
Plymouth Teaching	8.90%
Cornwall and Isles Of Scilly	9.00%
South Gloucestershire	9.00%
Wiltshire	9.40%
Somerset	9.50%
Torbay	9.60%
North Somerset	9.70%
Bournemouth and Poole	9.90%
Bristol	10.20%
Swindon	10.30%
Bath and North East Somerset	10.60%
Devon	11.00%
Gloucestershire	11.70%
Dorset	11.80%

Table 10 OOH activity

PCT Name	% Base	% home visits	% advice
Isle of Wight	18.70%	21.50%	59.80%
Brighton and Hove City	31.20%	9.50%	59.30%
Swindon	31.00%	10.90%	58.10%
Torbay	25.30%	17.30%	57.40%
Devon	26.90%	16.90%	56.30%
Wiltshire	32.30%	13.60%	54.10%
Southampton City	23.50%	22.50%	54.10%
Eastern and Coastal Kent	32.90%	13.10%	54.00%
South Gloucestershire	37.20%	9.80%	53.00%
Oxfordshire	37.70%	10.00%	52.30%
Plymouth Teaching	35.40%	12.80%	51.80%
Portsmouth City Teaching	30.20%	18.20%	51.60%
Bath and North East Somerset	32.50%	16.00%	51.50%
Bristol	37.70%	11.00%	51.30%
Somerset	28.40%	20.60%	51.00%
West Sussex	32.70%	18.00%	49.30%
Hampshire	36.50%	16.90%	46.60%
Cornwall and Isles Of Scilly	35.00%	19.20%	45.80%
Gloucestershire	39.40%	15.60%	45.10%
Berkshire East	44.60%	10.60%	44.80%
Buckinghamshire	42.80%	12.80%	44.40%
Dorset	31.40%	24.10%	44.40%
North Somerset	41.70%	14.60%	43.70%
Berkshire West	41.10%	15.70%	43.20%
Bournemouth and Poole	42.00%	16.70%	41.20%

Table 11 Social care

COUNCIL	Per capita cost for residential and nursing care and home help/care for all adult client groups	Weeks all adult client groups and older people were supported in residential and nursing care / 1000	per capital cost for residential and nursing care for older people during year ended 31 March 2012 (£000's)	Weeks older people (excluding those wholly supported by the NHS /1000	Per capita cost for nursing care for older people
Bath and Somerset UA	£0.29	0.45	£0.60	1.12	0.29
Bournemouth UA	£0.29	0.47	£0.62	1.35	0.12
Bracknell Forest UA	£0.27	0.31	£0.60	1.04	0.22
Brighton and Hove UA	£0.34	0.50	£0.81	1.44	0.30
Bristol UA	£0.30	0.42	£0.82	1.37	0.29
Buckinghamshire	£0.24	0.33	£0.45	0.76	0.19
Cornwall UA	£0.26	0.41	£0.33	0.71	0.10
Devon	£0.29	0.46	£0.61	1.02	0.10
Dorset	£0.29	0.31	£0.49	0.76	0.08
East Sussex	£0.35	0.54	£0.58	1.00	0.24
Gloucestershire	£0.31		£0.47	0.93	0.20
Hampshire	£0.29	0.52	£0.58	0.99	0.29
Isle of Wight UA	£0.32	0.51	£0.58	1.10	0.10
Kent	£0.32	0.54	£0.54	1.05	0.16
Medway Towns UA	£0.28	0.42	£0.64	1.13	0.25

COUNCIL	Per capita cost for residential and nursing care and home help/care for all adult client groups	Weeks all adult client groups and older people were supported in residential and nursing care / 1000	per capital cost for residential and nursing care for older people during year ended 31 March 2012 (£000's)	Weeks older people (excluding those wholly supported by the NHS /1000	Per capita cost for nursing care for older people
North Somerset UA	£0.29	0.48	£0.56	1.14	0.23
Oxfordshire	£0.21	0.29	£0.63	0.90	0.32
Plymouth UA	£0.23	0.37	£0.57	0.86	0.10
Poole UA	£0.29	0.40	£0.47	0.73	0.11
Portsmouth UA	£0.24	0.35	£0.57	0.97	0.18
Reading UA	£0.28	0.39	£0.73	1.02	0.31
Slough UA	£0.25	0.34	£0.63	1.04	0.33
Somerset	£0.30	0.49	£0.48	0.99	0.22
South Gloucestershire UA	£0.27	0.34	£0.59	0.86	0.15
Southampton UA	£0.24	0.41	£0.65	1.23	0.22
Surrey	£0.28	0.41	£0.51	0.83	0.17
Swindon UA	£0.29	0.44	£0.52	1.00	0.17
Torbay UA	£0.30	0.58	£0.51	1.29	0.07
West Berkshire UA	£0.28	0.38	£0.60	0.82	0.26
West Sussex	£0.22	0.38	£0.41	0.84	0.15
Wiltshire UA	£0.30	0.38	£0.55	0.91	0.21
Windsor and Maidenhead UA	£0.24	0.33	£0.44	0.87	0.27
Wokingham UA	£0.22	0.25	£0.54	0.72	0.24

Appendix 3 - Top 50 Emergency Admission HRGs

September 2011 to August 2012



Table 12

Rank	Code	Description	Spells
1	EB01Z	Non interventional acquired cardiac conditions	1808
2	DZ11A	Lobar, Atypical or Viral Pneumonia with Major CC	711
3	FZ47C	Non-Malignant General Abdominal Disorders with length of stay 1 day or less	688
4	N/A	Not Applicable / Invalid	684
5	AA26Z	Muscular, Balance, Cranial or Peripheral Nerve disorders; Epilepsy; Head Injury	545
6	FZ47B	Non-Malignant General Abdominal Disorders with length of stay 2 days or more without Major CC	484
7	AA22Z	Non-Transient Stroke or Cerebrovascular Accident, Nervous system infections or Encephalopathy	443
8	EB07I	Arrhythmia or Conduction Disorders without CC	419
9	PA19A	Viral Infections with length of stay 1 day or less	401
10	LA04D	Kidney or Urinary Tract Infections with length of stay 2 days or more with Major CC	376
11	PA11Z	Acute Upper Respiratory Tract Infection and Common Cold	374
12	PA21B	Infectious and Non-Infectious Gastroenteritis without CC	354
13	WA11X	Poisoning, toxic, environmental and unspecified effects with Intermediate CC	343
14	EB08I	Syncope or Collapse without CC	309
15	EA36A	Catheter 19 years and over	308
16	AA31Z	Headache or Migraine	300
17	DZ11B	Lobar, Atypical or Viral Pneumonia with CC	295
18	PA12Z	Asthma or Wheezing	286
19	MB08Z	Threatened or Spontaneous Miscarriage	281
20	PB02Z	Minor Neonatal Diagnoses	274

21	PA32B	Minor Injury without Intracranial Injury without CC	256
22	WA11Y	Poisoning, toxic, environmental and unspecified effects without CC	245
23	PA63A	Head, Neck and Ear Disorders with length of stay 0 days	242
24	WD22Z	Patients > 19 < 69 with mental health primary diagnosis	235
25	FZ20B	Appendectomy Procedures 19 years and over without Major CC	219
26	PA29Z	Abdominal Pain	208
27	CZ21V	Minor Head, Neck and Ear Disorders 19 years and over with CC	206
28	EA31Z	Percutaneous Coronary Intervention (0-2 Stents)	205
29	LA04G	Kidney or Urinary Tract Infections with length of stay 1 day or less	203
30	UZ01Z	Data invalid for grouping	201
31	PA15B	Acute Bronchiolitis without CC	199
32	HC12Z	Intradural Spine Minor 1	197
33	NZ08C	Ante-natal or Post-natal Investigation age between 16 and 40 years with length of stay 1 day or more	186
34	EB03I	Heart Failure or Shock without CC	184
35	EB03H	Heart Failure or Shock with CC	182
36	PA17B	Intermediate Infections without CC	181
37	LA04E	Kidney or Urinary Tract Infections with length of stay 2 days or more with Intermediate CC	179
38	PA03B	Febrile Convulsions 1 year and over	176
39	FZ45B	Non-Malignant Large Intestinal Disorders with length of stay 2 days or more without Major CC	172
40	DZ21J	Chronic Obstructive Pulmonary Disease or Bronchitis without NIV without Intubation with CC	163
41	PA50Z	Ingestion Poisoning or Allergies	158
42	PA26B	Other Gastrointestinal or Metabolic Disorders without CC	158
43	PA14E	Lower Respiratory Tract Disorders without Acute Bronchiolitis with length of stay 0 days	157
44	DZ19B	Other Respiratory Diagnoses with CC	156
45	AA25Z	Cerebral Degenerations or Miscellaneous Disorders of Nervous System	152
46	JD03A	Intermediate Skin disorders category 2 with Major CC	151
47	PA14D	Lower Respiratory Tract Disorders without Acute Bronchiolitis with length of stay 1 day or more without CC	146
48	PA34B	Musculoskeletal or Connective Tissue Disorders without CC	144
49	PA58Z	Examination, follow-up, special screening and other admissions with length of stay 0 days	144
50	LB40B	Urinary Tract Stone Disease without CC	142