Northumbria Whole System Review
22nd to 25th November 2016

Introduction

The Emergency Care Improvement Team would like to thank the leaders of the health system and network for inviting us to review progress in addressing urgent care issues in Northumbria. We appreciate the access we were given and the time staff gave to discussing issues with us. We were very impressed by the commitment of the staff we met to providing first class care to patients. Their commitment was very noticeable and in a number of cases their input to care was exceptional, epitomising all that is right about care in the NHS.

The following members of the Emergency Care Improvement Team (North Region) were involved in the review:
Jeremy Pease – Improvement Manager and site lead
Claire Old – Improvement Manager
Karen McCracken – Associate Improvement Manager
Jerry Penn-Ashman – Ambulance Advisor
Dr Kevin Reynard – Clinical Lead

We would like to assure all concerned, in particular the teams we met, that in our evaluation we have acted independently and trust that all concerned will view observations and recommendations in a constructive manner. This review presented the team with the opportunity to look in detail at a high performing system where pioneering work has been developing in managing all emergency care on a single site, supported by base units. This was a great opportunity for the team to learn about the actions taken and lessons learnt which we can share with more challenged systems.

During the course of the week, our team spent time in clinical areas, led various activities with teams, and engaged with clinicians and leaders in a variety of settings. We also reviewed the data and information supplied by the system. The observations and recommendations in this report are a result of these interactions and are based on the themes that emerged from them.

Local Context

The Emergency Care Improvement team were invited to review progress in Northumbria against a backdrop of identified problems and challenges with ambulance handover at the Emergency Department. It is a shared view within the team that ambulance handover issues are a symptom of wider challenges to efficient patient flow across the whole system. Whilst we did look closely at handover issues we also looked in detail at wider issues relating to flow and carried out a number of exercises to triangulate and confirm our observations.

Evidence Base – Developing good practice across the system

Improving flow, so that patients only receive acute care when, and for as long as it is clinically needed is the clear focus of the Northumbria Specialist Emergency Care Hospital

(NSECH) and this is being achieved in the main for all patients. The focus moving forward now needs to be on the whole system supporting this approach more robustly than at present.

It is important that the principles and philosophy evident in NSECH are disseminated throughout the system and the following research may help in providing the compelling evidence base to support change.

- For patients who are seen and discharged from an A&E, *the longer they have waited to be seen*, the higher the chance they will die during the following 7 days (Guttmann et al, 2013).

- The longer a patient spends in the Emergency Department (ED), the longer they stay in the hospital (Liew et al, 2003).

- Ten days in hospital leads to the equivalent of 10 years ageing in the muscles of people over 80 (Giles et al, 2004).

- Delays in transfer from ED to higher dependency units increase mortality and length of stay (Chalfin et al, 2007).

- Once a hospital is over 90% bed occupancy it reaches a tipping point in its resilience (Forster et al, 2003).

- Lowering levels of bed occupancy is associated with decreased in hospital mortality and improved performance on the 4-hour target (Boden et al, 2015).

Ambulance handover and front door services

Activity at the primary access point to emergency care has risen and continues to do so since the new hospital was opened. A planned figure of 220 attendances each day has been exceeded and now stands at between 280 and 300 each day. There is a pressing need to understand the increasing low acuity attendances at NSECH which were not in the original planning assumptions and to consider models of care which can stream this work away from ED, manage them in a lower acuity model of care within the ED or deliver an alternative dispersal route for patients prior to attendance.

It was noted by the team and accepted by the North East Ambulance Service (NEAS) that their conveyance rate to hospital was higher than other national ambulance providers and that agreed, consistent criteria were needed to encourage prehospital staff to use existing alternative routes for patients to access care and potentially developing additional services. There single portal for ambulance admission within the system at NSECH may discourage crews taking some lower acuity patients to the Urgent Care Centres.

A clinical challenge exercise at the front door for ambulance crews would identify the appropriateness of ED dispositions and support pre-hospital alternative pathway knowledge. This would be best undertaken by a team from NEAS and alternate service providers. The

process of challenging decision making will also highlight constraints within the current urgent care system and identify missing pathways for common lower acuity presentations. An option is to consider the development of a limited number of ambulatory assessment pathways at each of the urgent care centres at times when senior medical support is available. This could be incorporated into the current development work at NSECH around ambulatory care models.

Ongoing provision of clinical challenge at the front door can be through an employed nurse or paramedic who can also support the cohorting and care of patients at peak times. When activity is lower general departmental support can be provided. This has been found to work well in other units in England and there is estates capacity within the existing arrivals corridor to accommodate this.

To support any alternative pathways there also needs to be real time clinical challenge in the NEAS call triage and “hear and treat”, “see and treat” processes. NEAS crews need to improve their use of the Emergency Operations Centre clinical support, particularly whilst skill levels of ambulance staff are being improved. It would be a worthwhile exercise to look at the number of calls coming through the 111 service which result in an ambulance dispatch - which is high - and what the outcome for the patient is; admission or discharge through ED/AMU. The end disposition ranking for alternatives to NSECH needs to be reviewed based on such evidence.

The connectivity and consistency in approach between the two providers of 111 (NEAS and VOCARE) is also essential to ensure there is greater consistency in the call transfer for clinical review. It was noted that VOCARE have a significant resource and are currently redirecting upwards of 80% of the calls they receive away from ED to access care.

The current model for rapid assessment and treatment (RAT) within the ED at NSECH oes not have the capacity to cope with predictable variation in demand. It was noted that RAT capacity at NSECH has been increased recently in respect of both staffing and cubicles and this should provide significant support to ambulance turnaround. As this is a trial it is important that proper evaluation is undertaken and that the necessary physical space, decision maker and action taker capacity is secured.

It was reported to the team that both the CQC and an external review had identified resource deficiencies in NEAS which were affecting their ability to meet performance standards. This was not supported through an internal NEAS review carried out by Operational Research in Health (ORH) a well respected and widely used efficiency consultancy used across NHS ambulance services, certainly around resource for emergency work. It was noted that the work by ORH was carried out prior to the NSECH opening and it may be appropriate to request an update of the work following the recent changes.

We noted that there were high levels of clinical transfers both in and out of NSECH which is different to other systems and will use more resource but that equally there was wasted resource with many ambulances travelling in or out and between hospitals without patients

on board. There is a need to reduce this wastage through more careful journey planning and with the additional support coming on-line through ERS (private ambulance provider) to bring frail elderly patients into hospital earlier in the day, some joint planning and working should be possible around in coming and out-going patients. Equally it was evident and understood by those concerned that GP referred patients were regularly arriving at hospital late into the night having waited for a considerable time for transport. It is well recognised that referred patients who arrive late in the day have an increased length of stay compared to those arriving earlier. Whilst the ERS initiative will address some of this, earlier visiting by general practice and early transport booking is essential in addition to earlier transport provision.

In terms of the actual handover process in the ED it was noted that long handover delays are not a permanent feature but delays do occur and do follow a predictable pattern from early afternoon through to the evening with little relief. Some excellent practice was noted, particularly the "think chair first" initiative and the "full hospital protocol" to decongest the ED at 11am and 4pm prior to predictable surges in attendances. There was clear evidence that both these actions were part of normal business and were an integral part of the 'way things are done'. The challenge, particularly with the full hospital protocol is to be able to escalate and de-escalate quickly to avoid ambulance queuing at known peak times and to extend the principles of this to base hospitals to ensure capacity is always available for patients moving from NSECH.

Summary recommendations:

- **Establish a clear understanding of all low acuity activity presenting at NSECH and the alternative streaming options.**
- **Establish clinical challenge through NEAS EOC and at the front door to develop knowledge about alternative pathways for patients.**
- **Ensure connectivity and consistency of approach between pre hospital care providers – VOCARE and NEAS.**
- **Monitor and measure RAT to ensure correct resource provision.**
- **Plan ambulance journeys more efficiently.**
- **Continue to develop excellent practice around escalation (full hospital protocol) across the wider system.**
- **Implement a patient cohort facility to manage patients and release ambulance crews during periods of high patient arrivals.**
- **NEAS and CCG to engage around combined impact of increased cycle/transport times, increased transfers, handover delays and funding levels of ability of NEAS to respond to time critical patients.**

Patient flow within NSECH and the base hospitals

At NSECH bed management is in place 24/7 and the team is well resourced. There was a strong focus on 4-hour access and it was felt any wait nearing 12 hours would be abnormal and therefore quite unacceptable. This demonstrates an excellent cultural baseline.
Bed meetings are held across the day to discuss site issues, staffing and discharge however, there was little evidence of any real discussion around demand and capacity profiling within NSECH or the wider system. Whilst information on current status was available it would appear that this is became out of date very quickly. There is no dedicated IT based bed management/patient tracking system so much of the available information is held by individuals and based on a lot of groundwork. The health system may wish to investigate models of IT based flow/bed management, many of which provide excellent support to speedier patient movements.

In the short term, it is recommended that the bed team start to document the actions and decisions that are taken to manage capacity to establish an audit trail based on actual and predicted capacity and actual and predicted demand. This will, overtime, provide useful data for taking proactive actions on bed management issues and engaging with the wider system on managing capacity. This could be an additional feature within the situation report currently completed 4 times each day. The control room at NSECH needs to start to act as a 'hub' for the whole system where status at a glance boards detail demand and capacity in all hospitals, not just NSECH.

Full use of the discharge lounge is essential. The discharge lounge at NSECH is more a departure facility rather than a full discharge lounge (see comments on discharge lounges below). Nonetheless, daily, real time usage of the lounge at NSECH needs to be part of the bed meeting process and its use should be promoted. Initiatives such as 'breakfast in the lounge' may help in speeding ward movements.

Consistency of approach in bed management is essential and a simple documented model for bed management would help, particularly new members joining the team.

All ECIP team members commented on the strong bed based philosophy, which runs through the base units and discharge process. This is at odds with the fast turnover of patients at NSECH and is an issue which the whole system needs to address. The reported length of stay (LOS) at NSECH is 1.9 days, increasing to 19 days at base hospitals in Wansbeck and North Tyneside and 30 days in community units (Blyth). It is understandable that the less complex/lower acuity patients go home from NSECH but this does add pressure to the base units where the majority of patients are older and more frail and the input of medical staff is not as concentrated.

The Hospital to Home team (H2H) operates between 0830hrs and 1630hrs and act as the single point of access for wards to refer patients requiring discharge support from NSECH. There was little evidence of the team getting involved in discharge planning for patients who were planned to transfer from NSECH to base hospitals. Whilst therapy support to the H2H team was evident, it was noted that the latest referral to therapies was 1545hrs which could

impact by delaying discharges to the next day. Wards were very positive about the support of the H2H team in discharging patients which indicates a need to extend the operating hours of the team, including therapy input. Many systems have brought their therapy services to the front door of the ED, starting functional assessment and discharge planning at arrival to the hospital. As with the bed management team, the creation of an audit trail around delays in discharge and escalation actions would also be helpful.

We were told about the enhanced care model being developed as part of vanguard work and that this was aimed at improving the quality of care in base units. It was not clear through this process what the strategy was for bed usage, particularly for rehabilitation and intermediate care. Through the LOS review a number of patients were identified who were in rehabilitation beds but it was clear (and accepted by staff) that they had little or no rehabilitation potential. Equally, the opportunity to avoid an admission (and consequent transfer and transport issues) through the use of step up beds for patients at base units is not being exploited.

We also heard about the requirement to "maximise the community setting" for patients moving forward and the outputs from both the length of stay review and the 6As audit of case notes would support this premise. Maximising the community setting is not wholly a community/primary care responsibility, the opportunity to push patients from the acute setting must be taken and therefore there is a responsibility on all acute staff, particularly those in base hospitals and community units to work towards this. Perhaps the most important question they should ask for each patient is "what are we doing for this patient which cannot be done elsewhere". This needs to be asked at ward/board rounds and other patient flow meetings, particularly in the base units.

The actions to enable an answer to this question are highlighted in the results of the LOS review as follows:
All patients with a LOS of over 7 days were reviewed by a multi-disciplinary team and coded using the ECIST national criteria.
Of the 181 patients reviewed 112 (61%) were found to be fit but waiting for some input to enable them to go home.

	Fit	Not Fit
Wansbeck	49	38
North Tyneside	63	31
Total	112	69

The top 3 reasons for patients waiting were

1. Waiting for OT or Physiotherapy approval for discharge (n=15)
2. Waiting for family choice (n=12)
3. Waiting for community hospital or other bedded facility (n=10)

69 (39%) of patients were coded as unfit to move. 7 patients were on end of life pathways and had chosen to die in hospital. All patients coded as unfit had a clear care plan.

It was clear to the team that expected date of discharge (EDD) usage at ward level is variable. Some wards are piloting the red to green day project and EDD use was positive in these areas. It is recommended that the red to green day project is rolled out to all wards in base hospitals as soon as possible, whilst ensuring that the red to green philosophy is fully engaged by the multidisciplinary team.

Further to this, the high number of delays related to OT/Physiotherapy input indicates that the Trust may wish to consider the development of Internal Professional Standards. Internal Professional Standards identify the response which wards/patients can expect from supporting clinical services and this coupled with the use of red to green days has been found to reduce many internal waits.

The team also found that patients were not being declared fit to move because they had not reached or returned to baseline from a therapy perspective. The use of the term 'back to baseline' in this context is not helpful, as many frail elderly patients will never achieve their previous levels following acute illness. It should be recognised by the therapy professionals that in many cases it could be more detrimental to the patient to keep them in hospital once they are declared medically fit.

A number of staff felt that patients were moved too quickly to make room for others. It is recognised that a short LOS is good and does encourage a "home first" philosophy but many of the patients are being moved to base hospitals where the flow is much slower. In addition, some patients were clearly labelled with a destination i.e. residential care or nursing home, rather than there being a clear definition of what their functional needs are. The danger in labelling patients is that they are condemned to institutional care from a ward area without having the opportunity to assess their functional levels in their own environment. Part of the answer to this is the development of Discharge to Assess (D2A) service which enables patients to be discharged earlier from acute inpatient wards by co-ordinating care in alternative settings. Important features of this approach include trusted assessment between health and social care, in-house reablement and rehabilitation, and care co-ordinators to support patients and their families throughout the discharge process.

Planning for patient care was found to be sequential adding to the number of 'red' days experienced at ward level. Starting to plan a discharge from the point of admission, using EDD and clinical criteria for discharge (CDD) supported by red to green day initiatives drive parallel planning and can take days off a patients stay. As described above, this should be prioritised.

The lack of discharge lounges at base hospitals was raised as an issue. It is fair to say that there are mixed views on the effectiveness of discharge lounges, in some hospitals they work well in others they add a further hand off which adds delays to patient journeys. Whatever the case, the fundamental problem is how to enact earlier in day discharges –

ECIST recommends aiming for at least 35% of daily discharges leaving the ward by midday. Reducing sequential discharge planning through application of EDD, CDD, board rounds and red to green day principles will drive the discharge process but still does not move the patient before midday. Early booking of transport will help but the responsibility still lies at ward level to get the patient ready early in the day. Allocation of tasks at the morning nursing handover to one person to action discharges can be helpful as can the creation of small discharge areas on each ward from where care of the patient can be handed over directly to the transport team or patients relatives. Achievement of a 35% discharge rate from base hospitals by midday would contribute to resolving ambulance handover issues at NSECH.

Ten patients in the base hospitals were waiting for a community or bedded placement and twelve patients were delayed in moving to the same due to family involvement and choice. Effectively, on the day of the LOS review twenty-two patients were delayed, waiting for a community bed. Whilst some of these patients may have been labelled with a destination (see comments above) there will be a majority who do require this level of care but are being held back by one of two main reasons.

Firstly patient choice is being exercised – we were told about the 14-day rule for choosing a residential or nursing home but it appears that this is applied once the patient is fit. A move to clearly flag the need for choice of home as early as possible, as part of a more robust discharge pathway would enable the 14 day period to run in parallel with the clinical care pathway. CHC assessments should not take place in an acute setting.

Secondly, some patients will be waiting for the nursing home to accept them following assessment. We were told that some homes can take 2 to 3 days to carry out assessments on patients. A number of Trusts are now developing the role of 'trusted assessor' where a member or members of the discharge team develop a working relationship with the larger nursing/residential homes to understand their capability around patient care and agree the parameters of their assessment which they then apply to patients negating the need for homes to visit the hospital.

The 6 A's Audit

A 6 A's audit was carried out during the week where a number of clinical staff, including GPs, ED Consultants, Acute Physicians, Geriatricains and therapy professionals came together and reviewed a randomly selected number of admitted patient case notes. During the audit 20 sets of notes were reviewed in detail and 4/20 – 20% were potentially avoidable admissions. If half of this potential admission avoidance was achieved it would have a significant effect on patient experience, outcomes and on the Trusts ability to manage activity.
Some of the findings of the audit were used to triangulate issues raised in the LOS review as can be seen from the outputs below:

- 20% were potentially avoidable admissions.
- There was good access to all multi-disciplinary electronic case notes.
- There was good front-end senior decision making and clinical pathways at NSECH.

Areas for development

- An assess to admit philosophy was not evident.
- A 'Home First' philosophy was not evident.
- There was some evidence of internal waits.
- There was no evidence of discharge planning on admission.
- Expected date of discharge (EDD) are not used from the start of the pathway to drive discharge planning.
- End of life discussions are often not undertaken.
- Acute Kidney Injury (Type 1) may be avoidable admissions with intermediate care service input. (A patient had a 13-day LOS but the admission could have been avoided).
- There is a lack of re-ablement at North Tyneside at the weekend.
- There are delays in transfers between sites due to transport.
- There is no early supported discharge for fractured neck of femur patients.

Our overall conclusion from the LOS review was that in the base hospitals waiting had become normalised. The delays in the system were known, some at NSECH, but there was an unspoken agreement that little could be done about them. This was evidenced, in particular, at a meeting to review over 10-day length of stay patients in a base hospital when delays were identified but no actions to address them were developed.

Many of the patients reviewed would benefit from earlier discharge planning including the development of criteria led discharge and a much more robust approach to 'discharge to assess'. Given the financial constraints in both health and social care these have to be a serious consideration for the health system. Further details on Discharge to Assess process and how to develop these can be found on the ECIP website.

Summary recommendations

- **Establish demand and capacity profiling in the bed management team.**
- **Establish and audit trail for bed management actions.**
- **Ensure consistency of approach within the bed management team.**
- **Explore the procurement of an IT based patient tracking system.**
- **The control room at NSECH should become the 'hub' for bed management across the system.**
- **Address the strong 'bed based' philosophy within the system.**
- **Extend the working hours of the H2H team at NSECH, with consideration of early functional assessment for selected patients on arrival at hospital.**
- **Establish greater clarity around bed usage in base and community units – Rehabilitation/Intermediate Care etc. and develop clear criteria for these beds.**
- **Develop a 'push' from the acute setting to the community for patients through discharge to assess arrangements.**
- **Ensure consistent application of the SAFER care bundle on all wards including Red to Green day projects on all wards.**
- **Stop referring to patients as needing to return to baseline.**

- **Don't label patients with a destination; assess functional need.**
- **Drive early in day discharge across all base hospitals.**
- **Operate patient choice timescales in parallel with care planning.**
- **Develop Discharge to Assess (D2A) arrangements across the system.**
- **Develop the role of 'Trusted Assessor' within the system.**

Conclusions

The Northumbria system is a high performing system, pioneering new ways of working in Urgent and Emergency care. There is clear evidence that the system has developed care models and pathways which have direct benefits to patient care.

The system has been through a significant period of upheaval and change and is now settling into new practices which themselves are now highlighting further challenges. This is to be expected in large-scale change and it is encouraging to see that the culture within the system is to seek ongoing improvement. We have greatly appreciated the opportunity to review such a system. This help us in our support in other more fundamentally challenged systems.

The ECIP team were very impressed with both the facilities and the level of staff commitment across the system, to deliver high quality care and it is hoped that the recommendations made through this report help to further the significant progress already made.

Further information on ECIP support tools can be found at www.ecip.nhs.uk