Service Organisation & Design

ABSTRACTS
Missing Discharge Summaries Audit in the Medical Department
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Background/Purpose
The Quality Care Commission’s National Study – Managing Patients’ Medicine after Discharge from Hospital 2009 report stated that all patients should receive a copy of their discharge summary upon discharge from hospital. On average, the medical department had 100-150 (17-26%) missing discharge summaries per month. Without discharge summaries, miscommunication can occur between the hospital (NMUH) and GPs, affecting patient care. With patient readmission, this can impact on clinical decision-making and discharge planning. With regards to financial implications, the NMUH could be non-compliant with the commissioning service level agreement, thus potentially not paid for activities carried out. Our objective was to review why discharge summaries were not generated and find solutions to improve rates of discharge summary completion.

Materials and Methods
A retrospective audit was made from all medical non-elective adult hospital discharges from NMUH in August 2012. We reviewed patients’ admissions using patient notes, Patient Administration Systems (PAS) and Clinical Information Programme (CIP) to find out why certain discharges summaries were not generated. Afterwards, patient notes were reaudited in June 2013 to find out if these numbers improved.

Results
In August 2012, 135 adult patients did not have discharge summaries generated. Within the 120 patient notes found, 38 (32%) patients did have them completed. The reasons were categorised into IT software problems (31.7%), data entry problems (25.8%) and clinical problems (42.5%). IT software problems were identified as mismatch of discharge dates between PAS and CIP programmes, but discharge summaries were generated. Data entry problems meant that patients were categorised into the wrong specialty or wrong type of admission (e.g. day-case instead of inpatient). Whereas, clinical problems meant that discharge summaries were not generated due to self-discharges, death and inpatient transfer to a tertiary hospital that returned on the same day. After finding solutions to the problems, a re-audit was completed in June 2013. This found a decrease in the absolute number of discharge summaries not completed and a decrease in discharge summaries not generated due to clinical reasons (37.8%, 31/82 down from 42.5%, 51/120). The majority of administration errors were resolved (4.8%, 4/82 from 25.8%, 31/120). Unfortunately, IT errors remained.

Conclusion
Discharge summaries are often seen as less exciting tasks within inpatient care. However, information conveyed within them is important and completing them is essential to ensure communication between patient, hospital medical staff and primary care physicians are maintained accurately.
Sepsis Kills, Sepsis Skills: The Successful Introduction of a Pathway for Severe Sepsis

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Sarah Stanley
Caitriona Stapleton
Mary Emerson
Rupert Negus
Steve Shaw

Aim:
Sepsis kills more people than lung, bowel and breast cancer combined (Dellinger et al 2013)

Primary:
50% reduction in Serious Incidents related to severe sepsis

Secondary:
95% patients meeting criteria for severe sepsis to receive resuscitation bundle
95% of patients on pathway receive all Sepsis 6 interventions within 1 hour

Methods
PDSA tests of change cycles to achieve 95% pathway and 6/6 sepsis bundle compliance:
Severe sepsis pathway (currently version 43) / checklist sticker
Sepsis trolley / grab bags
Safety cross
Sepsis app
A patient safety facilitator collates data, plots run charts, investigates variances and feeds back to staff.
The Sepsis 6 interventions are: fluid challenge, oxygen, antibiotics; blood cultures and lactate, fluid balance.
The triggers used are based on our local hospital single parameter early warning system.

Results
1152 patient pathways from January 2010 to December 2013.
Initially 6/6 intervention compliance was poor (20% within 1hr).
First achieved our target 95% of patients on pathway achieving 6/6 interventions within 1 hour in August 2013.
Reduction in Serious Incidents related to severe sepsis year on year, with none for past 18 months (5 in 2010).
Absolute in-hospital mortality rate for patients triggering pathway fallen, 22% to 14%.
Reduction in Cardiac arrest calls for severe sepsis, none for past 2 years.
50% overall hospital length of stay reduction.

Conclusion
The initial poor compliance was possibly due to misinterpreting sepsis as an emergency and lack of ownership.
Initial negative feedback about pathway was that they are perceived to undermine and devalue practitioners.
It was not also easy to physically achieve six interventions within 1 hour. We have made this easier with Sepsis grab bags and a trolley in ED.
The sepsis board practice has been committed, motivated, passionate and strategic in delivering evidence-based care.
We have found developing teamwork and proficient negotiating skills unquestionably the most challenging experience of this work.
Refocusing a shared patient story, creating visions that are supported by a clinically led board and giving ownership and celebrating success within pilot areas have enabled collaborative teamwork.

References
7-day consultant acute physician working: Is it working to reduce patient waiting times?
Timothy James Cooksley
University Hospital of South Manchester
Lang Sommer
Zho Oong
Morris Kirsten
Tim Cooksley
Mark Holland

Aim
In August 2013 our Trust implemented a new model for acute medicine. In this model, 10 whole-time equivalent acute physicians run the medical take and acute medical unit (AMU). Acute physicians are present in the AMU from 7am to at least 9pm, 7-days per week. We also increased acute medicine input to the Emergency Department (ED). Prior to this we had a hybrid model with general medicine, where weekend working was mainly aimed at post-take ward rounds as opposed to continual shop-floor working. The aim of this study was to evaluate our performance under the new model, using the Society for Acute Medicine’s (SAM) clinical quality indicators (CQIs).

Method
Over 15 days in May/June 2013 we collected CQI data on 405 consecutive patient admissions to our AMU. We repeated this study exactly over the same time frame in 2014. In 2014 we excluded ambulatory care unit patients as this unit did not exist in 2013.

Results
In 2014 we saw 456 patients (12.5% increase).
The comparative data are shown in Tables 1 and 2.
101 (22%) patients were GP referrals and 353 (77%) patients were ED referrals.

Conclusion
As an acute consultant body our times to see patients have improved, although there clearly remains room for further improvement. There was a 12.5% increase in workload over the 12-month period, which we feel reflects the closure of a local ED.
Capacity and flow limits our ability to have GP referrals admitted directly to AMU.
We are using SAM CQIs iteratively to develop our service against and improve our performance.
Whilst we might have hoped for even greater success from 7-day working, it is the case that the performance of consultant acute physicians has improved despite an increased workload.
Consultant-led telephone triage service: Advice worth waiting for?
Udaya Reddy
Western Sussex hospitals
Udaya Reddy
Roger Duckitt

**Aim**
Telephone advice to help triage GP referrals is commonly used to identify alternative management pathways to hospital admission. In Western Sussex Foundation Trust, Worthing hospital uses a Consultant-led triage service, whereas at St Richard’s hospital a nurse-led call centre takes the bulk of GP referrals, with the on-call Consultant available for advice. Anecdotally, GPs noted referrals via the Consultant-led service took longer. We aim to assess the difference in the duration of triage phone-calls and admission avoidance rates between both sites.

**Method**
Retrospective data was collected on 6200 referrals from January 2012 to December 2012 from the ‘One-Call’ single access number electronic records. Patients were excluded if there was no conference call or if no outcome was recorded.

**Results**
At St Richard’s hospital, 62% of GP referrals were taken by a nurse (n=1729/2786), average waiting time was 2.7 minutes and mean time to end of call was 7.3 mins. At Worthing hospital, 56% of GP referrals were taken by a medical or geriatric Consultant (n=1948/3453), average waiting time was 3.8 minutes and the mean time to end of call was 7.9 mins.
Nurse led triage service had a 2% admission avoidance whereas the Consultant-led triage service led to 23% admission avoidance with a potential reduction in 1100 admissions/annum.

**Conclusion**
The marginally longer total call time seen with Consultant-led telephone triage was offset by the higher number of patients where admission was avoided. We aim to further assess the outcome of patients where an alternative to admission was used.
AIM
Requirements regarding Consultant presence on AMU have been defined in national publications. Consultants should be available at least 12 hours. Day to day continuity should be provided rather than a ‘consultant of the day model’. New rota patterns are required to facilitate this level of consultant delivered care.

METHODS
Our consultant work force has increased to 9 individuals (6 WTE’s). 7 colleagues have (mostly 40%) specialty commitments. Three posts are currently being recruited to. We run a 46 bed AMU and a 25 bed SSU. Two Consultants provide 14 hours AMU cover Mo-Fri (day and evening shifts) and 12 hours on weekends.
We have implemented a new rota model based on 12 consultants:
Ø The AMU week Mo-Fri is divided into blocks of 2 and 3 days at opposite ends of the week
Ø Groups of 6 consultants provide cover for each block of days
Ø Only 2 out of 6 consultants provide AMU day cover at any one time working a 1:3 pattern.
Ø SSU is covered by a rolling ‘physician of the week’ model.
Consultants not on duty for a block of AMU days or SSU are available for absence cover.
Specialty / clinic sessions and AMU duties are scheduled during strictly separate blocks of days.
Job plans precisely account for prospective cover and premium time sessions using a web based job planning tool. This allows for compensatory time off during the Mo-Fri week (based on a 10 PA job plan).

CONCLUSION
We have developed a novel Consultant cover model delivering key nationally recommended requirements and allowing:
Ø Day to day continuity and avoidance of clashes between AMU and specialty commitments
Ø Sustainable and workable absence cover
Ø Compensatory time off during the traditional working week through precise weighting of prospective cover in job plan calculations.

References:
Acute internal medicine and general internal medicine, RCP 2011
Acute care toolkit 4, Delivering a 12-hour, 7-day consultant presence on the acute medical unit, RCP 2012
Zircadian Ltd: www.zircadian.com
Doctor Satisfaction with the Physician Associate Role
Lorraine Williams
Non
Tamara Ritsema
Dr Natalie Powell

Aim
The role of the Physician Associate (PA) is rising in the UK and PAs have recently been welcomed as an umbrella organisation within the Royal College of Physicians. A relatively new profession in the UK, workforce recommendations are increasingly citing PAs as one means of supporting the medical workforce. Ten years since evaluations of US trained PAs working in the UK, and with more than 200 practicing PAs, have they been truly accepted by the medical profession?

Methods
We surveyed doctors across the UK who supervise PAs on the perceived benefits and challenges of the PA role from the doctor and patient perspective and the impact of the PA profession having voluntary rather than statutory regulation. 61 out of 150 replied (40.7%) representing 14 specialties and medical settings.

Results
Feedback from doctors was positive: 60% felt PAs had good communication skills, 63% felt PAs improved continuity and flexibility within the team. 48% felt having a PA improved patient experience. Significant limitations of PAs identified were those imposed by legal restrictions on practice such as prescribing and ordering radiology and poor understanding of the role by other staff members. Only 3% had concerns about the quality of PAs.

Conclusions
Doctors that currently supervise PAs in the UK are positive about the role that PAs can play and supportive of their development. With increasing demand for the PA role further pressure is needed on the Government to reconsider regulation of new health professionals to allow PAs to reach their full potential.
Effect of "GP phone line service" on GP admissions to AMU
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Vicky Price
Bryan Renton
Norman Main
Dominic Pickles
Peter Burnham

Background
We have established a new service entitled “GP phone line service” in the Acute Medical Unit (AMU) at the Royal Liverpool University Hospital. This service started on 7th December and is consultant-led. All GP admissions to the AMU now require a discussion between the AMU consultant and referring GP during working hours (9am to 5 pm). Wherever possible an alternative to acute admission is suggested and a decision is made in collaboration.

Aims
To assess impact of GP phone line service.

Methods
Data was collected from the start of the service from 07/12/13 to 20/06/14 covering a period of more than 6 months. We received total of 2022 GP referrals. 1686 (83%) patients were accepted to be assessed on AMU as admission and 336 (17%) patients were managed in an alternative setting of care. These settings were:
- Ambulatory Clinic – 5.5% (We have daily morning consultant led ambulatory clinic)
- GP given advice via telephone - 4.5% (No admission required)
- Speciality clinic – 1.5%
- Others – 5% (includes Intermediate care, Surgery, Community COPD team, Community IV team etc)

Benefits to AMU
1) Advanced planning about potential admissions – whether patient is likely to be admitted, requirement of side room, triage priority can be anticipated.
2) Decrease number of admissions to AMU, resulting in improvements in bed management.
3) Resource management: which grade of doctor would be better placed to see a particular patient?
4) Improved Continuity of care with consultants doing clinical sessions following their phone-line session.

Conclusion
The GP phone line service has resulted in decreased number of GP admissions to AMU. A substantial percentage of patients were diverted from admissions to morning ambulatory clinics. Admissions were also avoided by simple advice to GP over phone. It also improved quality of care and productivity on the unit.
**Full leg venous duplex scans versus proximal leg vein scans in the investigation of suspected DVT: Clinical and economic evaluation.**

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Kirsten Morris  
Thomas Stock  
Tim Cooksley  
Mark Holland

**Aim**
Based purely on economic grounds, NICE clinical guideline CG144 recommends serial above knee proximal vein ultrasound scans for the investigation of suspected deep vein thrombosis (DVT). NICE recommend that clinically high risk patients with a positive D-dimer have a repeat proximal scan after 6 to 8 days. In our centre we use full leg venous duplex scans performed by a skilled vascular technician. We do not repeat negative scans. The aim of this study is to compare the clinical outcomes and costs of the two scanning modalities.

**Methods**
We reviewed the scan results of all patients presenting to our ambulatory care ‘Suspected DVT Pathway’ between January 1st to May 31st 2014. Using existing data, we designed and applied a cost model to the scan results by estimating the number of repeat scans required according to NICE criteria.

**Results**
329 primary scan results were reviewed:
· 100 positive scans
· 173 negative scans
· 56 equivocal scans (normal above the knee but small calf veins not clearly visualised).

Using NICE criteria, we would need to repeat:
· 18 full leg scans (equivocal scans)
· 85 proximal scans (negative and equivocal).

Table 1 shows the cost difference between full leg and proximal scans. To be cost effective a full leg scan can be up to 119% of the cost of a proximal scan.

42 (42%) of the positive primary scans were below the knee.

Table 2 shows the additional diagnostic information from full leg scans.

**Conclusion**
This study shows the cost difference between full leg and proximal scans. If we were to include the cost of increased clinic resources and patient logistics for extra visits, full leg scans become more economical. High quality full leg venous duplex scans provide additional information over proximal scans. Full leg scans diagnose below knee DVTs.
How can we improve junior doctor engagement in service restructuring of the Acute Medical Unit (AMU) at a District General Hospital?

Amie Burbridge
Burton Foundation Hospital Trust

Aim
Staff engagement in the National Health Service can lead to; increased motivation and morale, better patient care and satisfaction, decreased patient mortality, decreased staff sickness and revenue growth\(^1\). Disengagement of the workforce during restructuring can have negative implications on project success\(^2\). South Warwickshire Foundation Trust (SWFT) has recently undertaken a project to restructure the AMU. The aim of this survey was to identify why junior doctors did not engage in this change process and provide recommendations to improve future engagement.

Method
A focus group of twenty junior doctors and informal discussions with key stakeholders, including the Chief Executive were undertaken to elicit views on restructuring and engagement.

Outcome
The following concerns were raised by junior doctors;
- Unaware of who was leading the change and the need for change.
- Minimal communication from management
- Poor doctor involvement in the planning process.
- Unaware who to approach with ideas and concern that they would be not be listened to.
- Lack of time and knowledge
- No training on management and leadership.
Stakeholders raised concerns about;
- High turnover of doctors
- Lack of doctor knowledge on the change process
- Time constraints
- Ineffective communication

Conclusion
A service restructuring did not include junior doctors in its planning and design. Lack of manager visibility, poor communication and managerial reluctance to involve doctors due to time constraints, frequency of job rotation and perceived lack of knowledge has led to disengagement. This has compromised the change process.
Junior doctors are an underutilised resource, perfectly placed to identify areas where change would be beneficial. To continue to ignore this input may lead to further disengagement and the loss of benefits of engagement on patient care.
Please see table one for recommendations for future restructuring. A selection of these are currently being piloted within SWFT.

References
Integrating Primary and Secondary care in Ambulatory Medicine: a New Model of Working
Katherine Eloise Mellor
Plymouth Hospitals NHS Trust
Annabel Carter
Ben Jameson
Anna Jones

Aim
The Ambulatory Care Unit (ACU) in Plymouth was set up in autumn 2012. This development reflected the growing recognition of the role these services play in managing increasing acute care demand in a time of economic austerity. Our service provides a unique collaboration between both primary and secondary acute care, with both general practitioner (GP) and acute physician input to the ACU. We aim to show a reduction in admissions for ambulatory sensitive conditions\(^1\) while maintaining high levels of patient satisfaction.

Method
Data were collected both prospectively within the ACU and reinforced using retrospective notes analysis and clinical coding data for patients attending ACU and the acute medical unit (AMU) within three separate periods following its development. These data were then compared to figures for length of stay (LOS) of acute medical referrals prior to the ACU.

Outcome
Overall the number of patients seen within the ACU has increased since its commencement. The 2013 data recorded an average of 14 patients per day within the time period examined. Data in 2014 observed 28 patients seen within the same time frame.
In 2012, within 6 weeks of its inception, there was a marked reduction in 0 day LOS from 32% of the acute medical take to 37%, equating to 27 patients per day. This improvement was sustained in subsequent analysis.
Initial analysis in 2012 observed that 20% of ACU patients were subsequently admitted to the AMU. This however dramatically improved down to 2.3% in 2013 and 1.7% in the 2014 dataset.
Patient satisfaction with the ACU is high, in excess of 95% throughout.

Conclusion
In order to address ever increasing pressures on urgent care provision we have developed an effective and efficient ambulatory service through collaboration between primary and secondary care.

Reference:
Is the "ABC of handover" (currently used in the UK Emergency Departments) useful and transferable to the acute medical handover?
Bethan Williams
Cheltenham General Hospital
Mya Dilly

Aim
The "ABC of handover" in the Emergency Department (ED) is a validated system and shown to be effective. Currently in our acute medical unit (AMU) there is no formal protocol to handover. The need for defined roles, delegation and knowledge of factors effecting patient flow is vital to a safe and efficient running of an AMU. The goal was to devise a proforma to highlight the key areas applicable to an AMU.

Method
Data collection; two month period (May and June 2014). Cycle A: survey pre proforma, data collected over three days, then protocol implemented, followed by post proforma over 3 days. Cycle B: The cycle was repeated four weeks later.
The survey was a seven point questionnaire asking staff to rate their experiences in a Likert scale format (see appendix 1).
A proforma based on the “ABC of handover” (modified to be specific to the AMU) was initiated at the start of the morning board round. This was introduced after a short presentation from the leads on the project (see appendix 2).
Data collated and analysed on Excel.

Outcomes
Responses varied between 5 and 31 in the pre and post proforma cycles. Satisfaction scores improved following implementation of the protocol in both cycles. The lowest satisfaction scores were between cycle A and B, when no proforma was being used. This may have been because the team had already used and liked the proforma.
Each question showed a 0.5 to 1.0 point increase on the Likert scale in favour of the post implementation (cycle A and B).

Conclusion
Data suggested staff satisfaction was better with the proforma. The medical team found it beneficial and feedback was positive. Shift patterns did not seem to hinder the usefulness of the tool. It required no training to use and was easily transferable from the ED to the AMU.

References
2. The ABC of Handover. St. Mary’s Hospital, Imperial College Healthcare NHS Trust. 2009
Medical Emergency Team (MET) for a District General Hospital (DGH)
Paula Chattington
Warrington Hospital
Tracy Mason
Jerome McCann

AIM
Our DGH had a raised SHMI and HSMR with several incidents of missed patient deterioration. The medical registrar numbers have been decreasing. We hoped to put a team in place to intervene early and improve care planning without unnecessarily taking the medical or anaesthetic registrar away from their current roles.

METHOD
We launched MET in January 2014 using the existing critical care outreach nurses and night nurse practitioners, who we trained up as the acute care team (ACT), as 1st MET responders with registrars providing 2nd tier response as required. There is a week day consultant ACT round. We also introduced national early warning score (NEWS) and trained ward nurses to call MET if NEWS went >7 or they were concerned. A ceiling of care form was introduced to help with care planning.

OUTCOMES
30% of MET calls required calling a 2nd tier responder. Calls last an average of 45 minutes, this has saved valuable registrar time. As hoped cardiac arrest calls have decreased by an average 4.6/month compared to a pre-MET reduction of 1/month. 59% or MET calls are at night with double at weekends when medical staffing levels are lower. The initial response time is good at 5 minutes. Very few patients required airway support or transfer to level 3 care justifying not having an anaesthetist on the MET. By end of the MET call 59% of patients had either a ceiling of care, a do not attempt resuscitation or an end of life care plan in place. SHMI and HSMR have reduced.

CONCLUSION
Despite initial reservations, particularly about competency requirements and support from medical team, the level of satisfaction is high. No serious incidents of missed opportunities to intervene have been reported since MET. A hybrid nurse and medical MET can work well in a DGH.
One year experience of a seven day working pattern in an Acute Medical Unit: Was it worth it?

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Dudley Group NHS Foundation Trust
Anirban Chakraborty
Randa Abasaeed-Elhag
Farhat Kamal
Saiqa Qari

Aims
Reports from the NHS medical Director\(^1\) and Dr Foster\(^2\) highlighted that the Emergency service provision during week-ends in the UK is suboptimal. The discrepancy between weekday and weekend mortality has been attributed in part to inadequate senior doctor cover at weekends\(^3\). Our Hospital was amongst one of the first to introduce 7 days a week, 13 hours a day consultant cover. We assessed the impact of the improved senior doctor cover at the week-end on length of stay (LOS) and mortality and hereby report on the impact of our initiative one year after its implementation.

Methods
A roster was designed to provide senior doctor cover on our Acute Medical Unit. Data pertaining to the number of admissions crude mortality and the average length of stay was recorded using our local information system (Oasis\(^\circledR\)). The improved seven days a week, 13 hours a day medical cover was commenced in January 2013. In addition to medical cover, there was increased therapy, social and nursing services.

Results
Between 1 January 2013 and 31 December 2013, there were 18417 attendances to our unit compared to 18432 the previous year. The overall LOS reduced by 7%. There was a 16% reduction in weekend mortality, whilst the weekday mortality improved by 11%. There was no significant change in the 7 day readmission rates.

Conclusion
Implementation of a 7 days working pattern for senior clinicians seems to have been successful in our hospital, having achieved an improvement in quality measures. However in order to optimise the benefits, it is essentials that most if not all acute medical and supporting services as well as primary care adopt a seven day working culture.

References
AIM
Ambulatory care services are popping up all over the country, and seem to be a key aspect of bridging the gap between primary and secondary care. Whilst we are all well tuned to prevent admissions and manage on day units, once our patients get through the doors, how good are we at expediting discharges of patients well enough to leave hospital but still requiring regular reviews, blood tests and antibiotics? This study aimed to identify how many adult in-patients could have been managed as out-patients.

METHOD
A one day snapshot of all adult in-patients at Lister hospital was taken; each patient was analysed by a team comprising 3 of the authors (all of whom have significant ambulatory care experience) to ascertain whether they were suitable for outpatient therapy.

RESULTS
398 in-patients were assessed, covering surgical, orthopaedic and medical wards. Of these, 17 patients were identified as being suitable for outpatient therapy (4.3%). All remained in hospital due to needing intravenous therapy, ranging from OD to QDS dosing. The majority of cases came from the outlying medical and surgical wards.

CONCLUSION
Although Lister does have an (contracted) out-reach service, there is still scope for more patients to be managed as outpatients, thus saving on bed days as well as improving patient experience, as in all these cases the patients were very keen to be discharged. Greater work needs to be done with the outlying wards to ensure ambulatory care services are understood and accessed when appropriate.
Outcome of GP requests by AMU
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Southend Hospital
David Law

Background
Patients admitted to AMU are regularly discharged with GP (general practice) to continue care in primary health setting. Outpatient investigations often requested which require GP to follow-up. Good continuity of care is outlined in Domain 3 of the GMC good medical practice. Good continuity is dependent on completion of primary care follow-up.

Aims and Objectives
Survey the completion of requests to GP’s on discharge from AMU.

Method
Record the action plans as described on discharge for one month (October 2013) and whether the given action plans to GPs were executed
Check whether GP actions were executed through hospital electronic record

Results
Total number of referrals to AMU: 1314
Total number of discharges from AMU: 478
Total number of GP actions given: 208
Total number of recordable GP actions: 64 (blood tests, referrals)
Some actions difficult to record (e.g. check symptoms)
Ambiguous action plans
E.g. “might need pain team referral”
Bad action plans
E.g. “Refer to cardiology (could not see RACPC on ICE)”, “Requires further investigation ?malignancy (unprovoked DVT)”

Total number of completed GP actions: 27
Unknown : Other Hospitals, Community Services

Conclusions
>50% of GP actions not completed, large number of ambiguous plans and poor advice

Recommendations
Clearer instructions for GP action (Set time, duration, follow-up plan) E.g. Repeat FBC in 1 weeks and refer to DAU for blood transfusion if Hb<8
Better communication between hospital (eg phone calls)
Review of how outpatient investigations and follow-up should be arranged?

References
Structured Versus Unstructured Care: The Value of the Acute Medical Unit
Roisin Coary
Department of Acute and Internal Medicine,
Declan Byrne
Bernard Silke

Background
Following an emergency medical admission, patients may be admitted to a structured (Acute Medical Assessment Unit - AMAU) or unstructured (Routine Medical Ward) environment. It might be reasonable to assume equivalent outcomes following this allocation.
Aim: To examine the outcome of emergency medical hospital admissions in relation to initial patient allocation to the AMAU or Ward environment.

Methods
All emergency admissions (66,933 episodes recorded in 36,271 patients) to St James’ Hospital, Dublin, Ireland over a 12-year period (2002-2013) were studied with 30-day in-hospital mortality as the outcome measure. Univariate Odds Ratios, by initial patient allocation, and fully adjusted Odds Ratios were calculated, using a validated multi-variable risk model.

Results
Patients, by design, were intended to be admitted initially to a 59-bedded AMAU, where acute care would be delivered by a cohort of experienced nurses. Capacity constraints dictated that only 45.4% of patients were admitted to the AMAU; the remainder being treated on medical wards (54.6%). All patients, irrespective of allocation, had the same admitting Consultant and Team overseeing their care. We computed the risk profile for each group, using a multi-variable validated model including Acute Illness Severity, Charlson Co-Morbidity Index, Sepsis Status, Chronic Disabling Score Indicator and Major Disease Primary Codings; this suggested no systematic difference in risk profiles between these groups. The univariate OR of an in-hospital death by day 30 for a patient initially allocated to the AMAU, compared with an initial Ward allocation, was 0.75 (95% CI : 0.69, 0.81 - p<0.001). The fully adjusted multi-variate estimate of the OR of an in-hospital death by day 30 for a patient initially allocated to the AMAU, compared with an initial Ward allocation, was 0.64 (95% CI : 0.59, 0.70 - p<0.001).
Conclusion: Patients, with equivalent mortality risk, allocated to structured or routine hospital care, appeared to have substantially different outcomes.
Aims:
To cope with the increasing demand for acute medical admissions the Acute Hospital At Home (AHAH) project was set up in Dorset County Hospital. Our initial aims were to:
- Reduce acute hospital admissions by providing care in the community, saving 4 hospital beds.
- Reduce Emergency Department presentations by patients with long term conditions by 1%.
- Reduce placement of patients to residential care from hospital by 50%.

Methods:
The project has 3 pillars:
- Hospital at home (10 funded beds)
- Roaming Night service
- Alternative Offer

With the Hospital at home service patients are cared for in their own homes. They have access to the full range of hospital services and are treated as “in-patients” in every way. Their observations are regularly recorded and monitored electronically. This model has been used for the management of patients with exacerbations of chronic illnesses(1,2), however we did not restrict our service to them and a variety of conditions were managed successfully.

The Roaming night service offers a qualified nursing advice and hands-on care overnight.

Upon discharge, if the patient has long-term care needs, the Alternative Offer service undertakes a comprehensive assessment over a two week period in their own home. This allows accurate identification of needs and implementation of necessary support to allow patients to retain their independence for as long as possible.

Outcomes:
Over the trial period our aims were achieved:
- An average of 231 bed days/month were saved
- 75 % reduction in residential placements from hospital
- 1% reduction in unplanned re-attendances to ED
- Excellent patient satisfaction
- Additional Pharmacy cost savings

As a result, the local CCG decided to expand the service to 15 beds and fund it recurrently.

Conclusion:
The AHAH project has been successful in providing high quality acute care in the community with excellent patient and staff satisfaction and financial savings.

The cost of inpatient treatment of patients presenting to Accident and Emergency with acute, alcohol-related thiamine deficiency: a UK perspective

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George Stanley

Aim
Wernicke's encephalopathy (WE) is an acute neuropsychiatric condition caused by depleted intracellular thiamine and is most commonly seen in chronic alcohol misusers. Inadequately treated patients are at risk of Korsakoff's syndrome (KS), a frequently irreversible neuropsychiatric condition requiring long-term institutionalised care.

NICE recommends a minimum five-day course of intravenous thiamine in at-risk patients unless WE can be excluded; however, patients may typically receive only a one- to two-day course before discharge. The purpose of this study is to estimate the long-term cost impact on the UK public sector of delayed discharge to allow completion of a five-day course of thiamine.

Methods
A Markov chain approach modelled the expected prognosis of patients over 35 years. Data informing model probabilities included a prospective cohort study, expert opinion using a structured elicitation process and standard NHS costing databases.

Outcome
Increasing inpatient treatment from two to five days reduces the probability of progression to KS and reduces the expected cost of care over the following 35 years by £87,000 per patient. Conversely, this increases the cost of the acute sector admission by approximately £900 per patient.

Conclusions
Increasing length of stay to optimise thiamine replacement will place additional strain on the acute sector; however, the potential cost savings to the public sector would justify investment in this service. Social services and the NHS should explore how they can work together to realise both the health benefits to patients and savings to the public purse.

References
The Delivery of Acute Medicine in Scotland: The Trainee Medical Workforce
Kevin Wu
University of Edinburgh
Lindsay Reid
Christine Armour
Ursula Pretsch
Mike Jones

AIM
The workforce is arguably the most valuable resource of the NHS, but it is also expensive and finite. The ‘supply’ of staff must match patient ‘demand’ in order to enable the delivery of healthcare in safe and efficient manner. This work aims to describe staffing levels of trainee doctors in Acute Medical Units (AMUs) across Scotland in the context of levels of patient demand.

METHODS
A literature review of recommended and theoretical optimal staffing levels was undertaken with regard to the effect on patient care, and standards and guidelines for the acute medical workforce[1][2][3][4]. AMUs across Scotland were surveyed to derive ‘supply’ data on staffing levels over 24 hours for weekdays and weekends. Patient ‘demand’ data, in the form of arrival rates and occupancy levels, were obtained from the Scottish Government. Graphical representations of workload and capacity were generated for 8 AMUs.

OUTCOMES/RESULTS
Supply/demand analysis for each unit in which workload is represented by patient-to-doctor ratios is summarised in Figure A. Workforce capacity can be defined as the medical staff available to review patients as they present to the AMU. This was charted over the 24 hour period to allow comparison between different times of the day/night and between weekdays/weekends. An example for one unit is shown in Figure B.

CONCLUSION
Demand analysis for workforce planning is possible using methods previously described. There is significant variation in staffing levels and rota constructions between Scottish AMUs. Due to the inter-unit multifactorial heterogeneity, benchmarking is challenging. Nevertheless, disparities between the weekday/weekend service and ‘in-hours’/‘out-of-hours’ are of relevance given the need to develop full 7/7 day working. Focused analysis of demand at individual unit level allows more accurate, effective, and economical workforce planning strategies. Further work relating staffing levels to clinical outcomes would be valuable in validating staffing level recommendations[5].

REFERENCES
With development of specialised clinics, referring pathways from primary care for patients with complex, non-specific, sub-acute symptoms are less available. At PRH, a new Rapid Access Medical Clinic (RAMC) has opened as part of AMU, allowing primary care and hospital teams to refer patients with general medical problems.

**Aims**

1) Identify new cancer diagnosis incidence in patients presenting with non-specific systemic symptoms to RAMC
2) Review referral-to-clinic waiting time and type of cancer
3) Comparison with UK National cancer data.

**Method**

Retrospective analysis of hospital records, imaging and histopathology of all patients seen in RAMC, 15th June 2013 - 15th July 2014. Data on demographics, presenting symptoms (non-specific and organ-specific), type of cancer, past medical history, risk factors, tests performed, and follow-up were collected.

**Results**

26 / 704 (3.69%) patients were diagnosed with either: a new cancer (24; 92% of cohort), or progressive symptoms in a known cancer (2; 8%).

No difference in incidence between male (12) and female (14). Mean age of patients with newly diagnosed cancer: 74 years.

25 patients (96%) referred from primary care and one (4%) from Emergency Department.

Mean waiting time from referral to clinic: 1.8 days.

Ten different types of cancer were diagnosed: 12 lung (44.4%), 4 bowel (14.8%), 2 ovarian (7.4%), 2 pancreatic (7.4%), 2 renal (7.4%), one prostate (3.7%), one adenoid cystic (3.7%), one craniopharyngioma (3.7%), and one liver (3.7%) cancer. Thirteen (48%) had widespread metastases on presentation, and nine (33.3%) had previous history of cancer. Six (23%) were incidental findings.

**Conclusions**

General medical clinics are important for assessment of patients with non-specific presentations, not meeting speciality referral criteria. In RAMC, 3.69% of patients were diagnosed with malignancy, compared to UK cancer incidence of 0.5%. This provides rapid access to targeted investigations – a valuable general medical resource in an increasingly specialist world.
The impact of an afternoon board round on conversion of identified discharges from an Acute Medical Unit

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Aim:
Prolonged hospital length of stay (LOS) can be detrimental to patients; indeed, it was shown that a one day increase in LOS increases the probability of infection by 1.37 percent [1]. Furthermore, each day spent in hospital beyond the average LOS increases the likelihood of re-admission [2]. Twice daily ward rounds as recommended by the Royal College of Physicians and the Society for Acute Medicine [3] are thought to be beneficial in expediting discharges and improving outcomes. We evaluated the conversion rate of patients identified as definite discharges and potential discharges before and after the implementation of a second senior doctor led board round on our AMU. The aim was to improve the physical discharge rate after the morning ward rounds.

Methods:
We implemented a change to the afternoon ward round process from an informal troubleshooting ward round to a formal complete board round. We conducted two prospective cohort service evaluations of the conversion rate of identified discharges on the AMU morning rounds before and after the implementation of changes to the afternoon ward round process. All patients identified in the morning ward round over ten consecutive weekdays were included in both phases of the project.

Outcomes:
255 “definite” and “potential” discharges were identified in the initial study compared to 251 in the re-evaluation. In the initial study, 61% of the identified discharges were converted into physical discharges; after the implementation of the new process this improved to 79%.

Conclusion:
The change of afternoon ward round process from a troubleshooting ward round to a complete board round appears to have had a positive effect in facilitating the conversion of identified discharges to physical discharges. A consistent implementation of senior decision maker delivered board round could lead improved patient flow.

Reference
The impact of placing senior physician at triage on emergency department patient throughput: systematic review of comparative studies
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Ammar Ayad Issa Al-Rifaie

**Study question** To determine if placing senior doctor at triage versus standard care in a hospital emergency department (ED) improves patient flow.

**Design Systematic review.**

**Data sources** Cochrane Library, MEDLINE, EMBASE, CINAHL, Web of Science, Clinical trials registry website In addition, Screening studies references and contacting the experts in the filed were used as well.

**Review methods** Databases were searched for comparative studies examining the role of senior doctor triage, published from January 1993 to April 2014. Articles with a primary aim to investigate the effect of senior doctor triage on emergency department quality indicators such as waiting time (WT), length of stay (LOS), Left without being seen (LWBS) were included. Only studies with a control group were included. The systematic literature search was followed by assessment of relevance and risk of bias of each individual study fulfilling the inclusion criteria using an adapted ACEM clinical policy review format. Data extraction was based on a form designed and piloted by the authors for dichotomous and continuous data.

**Results** Of 2031 articles identified, 13 relevant studies were retrieved; 11 were of the weak pre-post study design and the remaining 2 were RCTs. The majority of the studies revealed improvements in ED performance measures favoring senior physician triage. Pooled resulted from 2 RCTs showed a significant reduction of LOS (WMD -24.35, 95% CI -37.66 to -11.04). One RCT showed a significant reduction in WT associated with senior doctor triage [-26 minutes , 95% CI = -31.63 , -20.73]. LWBS was reduced in 2 RCT [RR = 0.79, 95% CI 0.66 to 0.94]. This was echoed by the majority of pre-post study designs.

**Conclusion** This review demonstrates that senior physician triage can be an effective measure to enhance ED flow.

References
Aim
Rational staffing of Acute Medical Units (AMU) should be “organised with optimal working arrangements to match patient demand” [1] but there is little known about time requirements for common processes performed by doctors [2].

Method
We undertook minute by minute observations of doctors during their management of acute medical admissions and recorded what tasks they were doing in two separate cohorts.

Results
In the first cohort in August 2013, we observed CMT trainees admitting patients seen already by staff in the Emergency Department and patients referred directly to an AMU. There was no significant difference in the times required for history taking (22 vs 21 minutes (n.s.)).
In the second cohort, we observed doctors admitting 40 patients in January 2014: 9 patients were seen by FY1s, 10 by CMTs, 12 by SPRs and 9 by consultants.
The time spent by different grades of doctors on each component of the clerking process is detailed in figure 1 and table 1. Significantly 31% of the time spent related to history and examination, 41% to documentation and 19% to communication with relatives. Due to multi-tasking, the overall average time for FY1s was 55 minutes, SHOs took 38 minutes, SpRs averaged 32 minutes and Consultants just 15 minutes. Patients with higher values of the Clinical Frailty Scale (CFS) required more time (28 minutes for CFS 2 vs 56 minutes for CFS 7).

Conclusion
We provide first building blocks for calculating rational staffing requirements of AMUs. Copying of documentation from GP letters and ED notes takes up a significant percent of working time and is potentially modifiable by using integrated electronic records. Using experienced frontline staff may reduce the time taken to admit patients but has to be balanced with the need of junior doctors to gain experience.

References
Why do we have a high turnover of nursing staff on our Acute Medical Unit, Is it related to high burn out? And how that can be improved?

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Aim:
This project was undertaken on a large Acute Medical Unit (AMU) in a busy inner city hospital as a result of a period of high nurse attrition which had impacted on nursing services. The project aimed to explore factors affecting job satisfaction of nursing staff on the unit and identify measures that might improve the working environment and thus staff retention. Staff perceptions on the impact of their work environment were reviewed.

Methodology:
A questionnaire based survey was completed by members of the nursing staff on the acute medical unit, collecting demographic data and reported satisfaction around aspects of their work environment. Results were compared with research findings (RN4cast 2012 &2013).

Results:
67% of nursing staff completed the survey. 62.3% of these were qualified and 37.7% were support staff. 43.7% were under 25yrs of age, indicating a less experienced workforce when compared to the (RN4cast 2012) report. 80% would recommend the unit as a good place to work. 83 % considered it as a place of good care for family/friends and 61.1% rated the work environment highly. However, 37.5% reported dissatisfaction in their job, with 32% considering leaving. Aspects of the job causing most dissatisfaction included: staffing levels, patient/nurse ratio, work flexibility, advancement opportunity, decision making involvement, and support with issues including bullying and managing workload.

Following the review of the survey results, several initiatives have been put in place including support for registered nurses through a focused preceptorship/new staff nurse support program and role progression support for Healthcare assistants. Staff are encouraged to participate in corporate focus groups and team building events. An employee of the month award and a three monthly AMU newsletter have been introduced.

Conclusion:
AMU attracts newly qualified nurses seeking to develop knowledge and skills. It is important for acute medicine to be promoted as a speciality to attract and retain staff. The findings of this small survey have helped to develop an action plan to address key issues causing the most dissatisfaction. The Initial feedback for the preceptorship/new staff nurse support programme has been positive and there has been a reduction in staff attrition.

References
Workload and Disposal of Patients from Ambulatory Care Unit (ACU): Justification to Clinical Commissioning Groups (CCG) for Funding of A Full Seven Day Service

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Aim
To review our local ACU to see if admission avoidance strategies, levels of activity and disposal of patients, justified extending an existing weekday service (and limited Saturday service) to a full seven day service. The evidence would need to prove that admissions are being avoided and activity sufficient to secure more funding from the CCGs.

Method
The service improvement project took place on the ACU at Queen Alexandra Hospital (QAH), Portsmouth. The activity of six consecutive days on the ACU was monitored and documented prospectively. We reviewed every patient contact and any other work completed on the ACU. Disposal of patients were categorised as: admission, discharged, speciality or ACU follow up.

Results
153 individual patient contacts occurred over six days on the ACU at QAH, some patients had multiple contacts during this time. In addition to medical and venous thromboembolic (VTE) disease assessments, other activities carried out included anticoagulation checks, reviews of investigations and telephone follow ups. The majority of referrals to ACU were from General Practitioners (65). Five patients were admitted, 63 were discharged from ACU, 25 had speciality follow up and 31 had ACU follow up. Over the six days, 41 admissions were avoided as deemed by two senior Acute Medicine Consultants.

Conclusion
Admission avoidance in our ACU is being achieved. The volume of work and disposal of patients has led to a successful bid to the CCGs and we obtained funding for a seven day ACU service.