A review of Acute Exacerbation of Chronic Obstructive Pulmonary Disease (AECOPD) admissions to a district general intensive care unit (ICU): Do we do better than 2011 RCP National audit results?(1)

Kay Protheroe

Service Organisation and Design

Aims

The RCP audit of hospitalised AECOPD showed significant delays in receiving NIV and higher than expected mortality in NIV treated patients.

We reviewed admissions with AECOPD to our ICU to compare BTS guidelines with our practice to see if ICU care improves guideline achievement.(123)

Methods

Retrospective data collection using electronic records on patients with an ICNARC diagnosis of AECOPD >45 yrs old admitted between 1st Jan 2010 and 31st Dec 2011.

Outcomes/Results

71 patients were identified.

70% of admissions presented out of hours. 87% from A+E and MAU, where there is no immediate access to NIV.

39% of patients were acidotic on admission to hospital, the majority had a pH<7.25 and 50% were on high flow oxygen (HFO).

Median time to respiratory support was 4 hours; for patients acidotic on admission this was 3 hours. 12% of severely acidotic patients weren’t admitted directly to ICU.

44% of those who received HFO subsequently required invasive mechanical ventilation (IMV). IMV requirements were higher in patients with consolidation (p=0.005).

Inpatient and 180 day mortalities were 20% and 25% respectively. Increased inpatient mortality was associated with any pH<7.25 compared to pH >7.25 (p=0.01), with a trend to increased mortality when consolidation was present (25% v 12.5%).

Conclusions

Our mortality is in keeping with previously reported ICU AECOPD results.(4). However we have evidence of HFO use, delays to respiratory support, consolidation and NIV use and late referral of critically ill patients. This may go some way to explain why national audit results are so concerning.

References


**Acute Medical Clinic and Admission Avoidance**

Lesley Gaw

Service Organisation and Design

**AIM**

The Acute Medical Clinic is an Acute Physician led service which provides a safe alternative to groups of patients who previously would have received care as an inpatient. This change in pathway has reduced the number of patients admitted to Medicine from the Medical Assessment Unit/Clinical Decisions Unit. It has also significantly reduced the number of medical bed breaches against the 4 hour A&E target.

**METHODS**

- Audit of medical bed breaches against the 4 hour A&E target for 24 months.
- Audit of clinic attendances and outcomes.
- Comparison of Medical Assessment Unit length of stay over 24 months.
- Increased number of discharges from the Medical Assessment Unit/Clinical Decisions Unit.

**OUTCOMES/RESULTS**

The Acute Medical Clinic is an Acute Physician Led Service. There are 2 sessions per week, there is availability for 12 patients per clinic. The Clinic commenced in August 2011, initially it proved difficult to fill the available slots however, after education and support from the Medical Assessment Unit Senior Team from February 2012 the clinics have been full.

This has had a direct impact in reducing the number of medical bed breaches by 40% on the previous year's figures. It has also had a positive impact on length of stay for patients on the Medical Assessment Unit this is due to the increased number of discharges which has improved flow throughout the Acute Medical pathway.

**CONCLUSION**

This clinic has contributed to admission avoidance for suitable medical patients. It is very popular with patients with positive feedback reported on patient questionnaires. Due to the success of the clinic we are looking to increase the clinics by 1 more per week and to cover 52 weeks per year.
An audit of the decision making process by doctors and is impact on admission avoidance on MAU

Jaydeep Mandal

Service Organisation and Design

Aim

Avoiding hospital admissions is a hot topic in the present economic climate. This audit aims to seek whether patients were triaged appropriately, according to established guidelines, for admission on the Medical Assessment Unit (MAU). The importance of doctors making a correct diagnosis will also be analysed, therefore seeing whether the decision making process by doctors have an impact on avoidable admissions.

Methodology

A retrospective, single center, audit was performed on a representative sample of 119 patients with specific discharged conditions. Each case note was reviewed individually, with each condition having individual variables as different guidelines were used for each condition.

Results

10% of the admissions in this sample could have been avoided. 83.3% of the avoidable admissions did not follow the established guidelines. 58.3% of the patients who could have avoided admission had a different admissions diagnosis compared to the final diagnosis, with lack of a differential diagnosis at admissions being the main reason for this. 50% of the Modified Early Warning Score (MEWS) was not documented and 14% of patients did not have a full clinical assessment and management plan initiated within 4 hours of their arrival on MAU.

Conclusion

The demand for more accurate documentation was highlighted as well as the requirement for interventions to reduce hospital admissions in the community and outpatients. By using appropriate tools and national guidelines, one can arrive at a correct diagnosis and differential diagnosis, which may lead to avoiding inappropriate hospital admissions.
An Specialist Alcohol Team can improve care, reduce bed days and save money in a vulnerable patient group.

Lorraine Albon
Service Organisation and Design

AIM:

The estimated annual NHS cost of alcohol related disease is £3 billion. Portsmouth has the highest rate of alcohol related hospital admissions in the South East. An Alcohol Specialist Nurse in the AMU developed internal pathways of care and sought PCT commissioning to reduce admissions and improve service delivery to this group.

METHODS:

PCT funded since 2010, the Alcohol Team now comprises an Alcohol Specialist Nurse Service (ASNS) with 4 specialist nurses plus an Alcohol Intervention Team (AIT) with 4 health trainers. The service has full clerical support.

Complying with national directives on alcohol screening, all adult medical admissions are evaluated for “at risk” behaviour using nationally validated tools. An electronic screening tool was developed using VitalPac hand held PDA’s with all AMU staff trained in its use. An automated referral is made to the alcohol service for those identified as at risk.

For those with alcohol dependence, the ASNS is available 7 days a week to all hospital staff and GPs within Portsmouth and Hampshire PCT. They provide recovery plans for those accepting input including prescribing and monitoring in and out patient detox regimes, organising individual and group support, initiating ongoing input from outside agencies and co-ordinating the community based recovery.

The AIT team visits those identified as at risk of alcohol related disease on VitalPac and provides information and support as appropriate.

OUTCOMES:

From October 2011-March 2012, an average of 1,970 patients were screened monthly, of whom 17.4% triggered a visit from the alcohol team.

On average, 231 patients monthly scored highly enough to trigger a visit from the AIT.

The ASNS team saw 90 new patients with 466 contacts monthly.
Independent auditing estimates cost savings of £1 million including 2000 bed days saved over 2 years.

The Alcohol Team was awarded ‘Hospital Team of the Year 2011’ as voted by the local community.

CONCLUSIONS:

The Specialist Alcohol team delivers high quality care, reduces admissions, saves money and is highly valued by the Local Community.
Are acute medical patients achieving the speciality response targets when being referred from emergency care? Prospective data from a live electronic solution (ehandover)

Aklak Choudhury

Service Organisation and Design

Aim

There have been calls to improve the response to emergency referrals by acute speciality teams. Challenging criteria have been set for Acute Medicine to ensure best quality care. We have been set a 30-minute time for first speciality response and a 24 hour time for speciality consultant response from arrival to hospital. No study has as yet quantified how well we are achieving these targets. We audited how close we were to achieving these targets.

Methods

All speciality referrals to Acute Medicine were entered prospectively by the medical team onto our electronic handover solution, eHandover. The system is used widely amongst clinicians as the tool to log all non-elective admissions in our trust. Five time-stamps were recorded: Time of Arrival to Emergency Department (ED), Time Referred to Speciality, Speciality Junior Review Time and Consultant Review Time. The analysis period was between 1st to 7th February at both Queen’s (QH) and King George (KGH).

Results:

A total of 541 (347 QH, 194 KGH) referrals to Acute Medicine were recorded during the 7 days (Table1). There were significant delays in ED referring patients, 41% referred within 2 hours at QH and 56% at KGH. Only 34% of patients at QH and 45% at KGH had a first speciality response within 30 minutes. The majority of speciality consultant reviews did occur within 24 hours but speciality consultant reviews within 12 hours were lower (40% QH) and (57% KGH) with many patients having consultant review the following day.

Conclusions:
Achieving speciality response times remains a major challenge, this is despite national and collegiate guidance. Improvement in processes, re-aligning of junior workforce to match demand times and extension of working hours for acute consultants are required to ensure these targets are met.
Are hospital admissions reduced by Acute Medical Consultants receiving all medical referrals?

Channa Vasanth Nadarajah

Service Organisation and Design

Background

Emergency hospital admissions account for 65% of all hospital bed occupancies, in England. This study assesses if Acute Medical Consultants receiving all medical referrals can effectively reduce medical admissions, as part of the NHS Innovations Commissioning for Quality and Innovation (CQUIN).

Method

A prospective study, assessing hospital medical admissions at Ipswich Hospital, from June 2011 – May 2012, whilst medical consultants received all medical referrals (during weekdays). Compared to June 2010 – May 2011, when referrals were taken by senior nurse practitioners.

Results

There was a 21.1% reduction in hospitals admissions, when hospital referrals were taken by medical consultants (Figure 1). Between June 2011 to May 2012 there were on average 477 referrals monthly, a mixture of A&E (40.7%), GP (54.7%) and other (4.6%) referrals. 170 (35.6%) of the referrals were initially declined admission, with GP referrals being most commonly declined (42.9%). 13.2% (n=22) of the referrals initially declined would be admitted within 30 days, with the same issues. The average monthly true hospital avoidance was 147 (31.3%) referrals (Figure 2).

Conclusion

This study has shown that Acute Medical Consultants’ receiving medical referrals has significantly reduced emergency hospital admissions. There was a true hospital avoidance of 148 referrals per month. Clinical acumen and experience of AMU consultants enabled them to offer appropriate advice and arrange outpatient/community investigations and treatments.
Ipswich Hospital has saved monthly approximately £94,000 on hospital avoidances alone, not including savings from avoided investigations and treatment. These savings help in addressing the £20 billion efficiency savings by 2014-2015, and can be reinvested into frontline care.
Are We Stressed?

Isiaq Adeyemi Morafa

Service Organisation and Design

Names: Dr Adeyemi Morafa, Dr Shoneen Abbas and Dr Tania Syed

Organisation Central Manchester Foundation trust

Aim:

As Acute Physicians, we often do not get the chance to express how we find the day to day job and the impact of such high intensity workload and demands.

We decided to gain a “snap shot” reflection of what Acute Physicians really think of working in Acute Medicine.

Methods

It is a questionnaire based survey distributed to Acute Medicine Consultants in hospitals in the Greater Manchester area. 28 responses were obtained from 9 hospitals.

Results

A third of the respondents were trained in Acute Medicine. More than half review up to 30 patients a day with about a quarter reviewing more. With regards to Acute Medicine being a stressful specialty, 85% of respondents felt it is, with the same proportion of the view that an Acute Physician would experience “burn-out”. A third rated their job as “average” with 2 respondents rating it “poor”. 85% of respondents agreed that the pressure of AMU impacts negatively on their ability to teach juniors. With working relationships, Managers were the weakest.

Conclusion

This is an “eye-opener” as to what we think about working in the specialty. Though a small survey, it would be interesting to know what reflects nationally. Job satisfaction, “burn out”
and education are issues needing priority and possibly feature more in our discussions. They also become more significant in light of progression towards a 7-day working week pattern.

Are we stressed? From these results, we probably are. We need to prevent it becoming a certainty.
Assessing Patient Frailty – A London-wide survey of Structured Patient Records

John Tshon Yit Soong

Service Organisation and Design

AIMS

Outcomes of frail elderly admitted to hospital are affected by complex factors such as functional and cognitive status. Recent meta-analysis of Comprehensive Geriatric Assessment (CGA) suggests it reduces hospital mortality and functional decline (1). Structured patient records standardise the quality of documentation, prompt assessments and aid decision making. Unitary records reduce task duplication, aid explicit planning of multidisciplinary care, and has facilitated CGA in the context of continuing health care for hospitalised patients. This survey reviews current admission record processes within NHS London and their efficacy in facilitating CGA.

METHODS

27/31 (87%) medical admission records (April – July 2012) of acute NHS Trust hospitals within the M25 were collected electronically, by post or in person. 11 domains of CGA were derived from BGS and RCP recommendations (2):

- Cognition
- Mood
- Illness Severity
- Falls Risk
- Functional Assessment
- Quality of Life
- Nutrition
- Continence
- Pressure Ulcer Risk
- Resuscitation Decision
- Standardised Frailty Score

RESULTS

- 7/27 hospitals (25.9%) did not have a structured record
- 6/20 (30%) of records were unitary documents
- Of hospitals with structured admission records, 18/20 (90%) and 8/20 (40%) had embedded standardised cognitive and functional assessments respectively.
- Comparison of Unitary vs non-unitary records show improved documentation for illness severity scores (P = 0.0175).
- Hospital admission records exhibit large variation in standardised data capture for CGA and quality of capture.

CONCLUSION
Acute NHS trusts in London do not routinely record all domains of GCA in medical admissions. There is variability between trusts. Though not all processes were captured (e.g. separate nursing records), GCA information should be widely accessible, ideally within a unitary document.


2. Carpenter I, Ram MB. Admission Record Content Structure Standards For Hospital Practice: Consultation Questionnaire Report. HIU, Royal College of Physicians. 2007.
Benefits of near patient ultrasound on the Acute Medical Unit: improving training to improve service delivery

Martin Dachsel
Service Organisation and Design

Aim

An increasing number of guidelines recommend the use of ultrasound as a near patient test to aid diagnosis and management\(^1\).\(^2\). A VScan® device was procured to develop a medical ultrasound teaching programme. We investigated the additional benefits of near side testing within the Acute Medical Unit (AMU).

Methodology

Analysis was made of the patient journey prior to and after the introduction of near patient ultrasound testing on the AMU. Evaluation of waiting time and length of stay was made and cost savings projected.

Results

Prior to using the Vscan®, the average wait for an ultrasound guided chest aspiration or drainage was 23.8 hours, with around 40 such requests made annually and 80% of patients requiring an additional night in hospital. Within 3 months of using the Vscan®, 16 chest drains were inserted on the AMU, with projected savings of at least £14,960 per year based on reduced bed days and procedural cost. In addition, other bedside tests have been performed including ascitic drainage, orientating Echocardiograms and renal scans allowing trainees the opportunity to develop their procedural skills.

Conclusion

Currently access to training in Acute Medical Ultrasound is limited, costly to trainees and the competencies required are often extrapolated from other specialties. This analysis suggests that as well as enhancing medical training it has additional service benefits for the AMU and the NHS as a whole. We support the need to develop a specific core competency set for Acute Medical Ultrasound to allow more trainees access to this specialty skill.

References:


Breaking the mould, consultant job planning fit for the 21st century

Lisa Carroll

Service Organisation and Design

Aim

The need for increased consultant presence in the AMU to deliver high quality care early in the patient pathway is widely recognised. A consultant physician without conflicting duties should be available to review patients at least 12 hours per day.

A recent UK survey revealed 43% of hospitals provide 9–12 hours cover on weekdays but only 3% provide this at weekends. The challenges of providing an extended Consultant presence are:

- Finance – expanding Consultant numbers
- Revised job planning – changing traditional working patterns to 12 hours per day 7 days per week

Methods

To improve our level of consultant cover we have significantly revised work patterns and job planning.

The Department has:

- 6.2 WTE Consultants
- 8 individuals

AMU has a 12 hour stay with a Physician of the day

SSU has a 48 hour stay with Physician of the week

AMU consultant cover is provided 08.00 – 17.00; 17.00- 22.00 Mo-Fri; 08.00 - 20.00 weekends / bank holidays with full prospective cover. A 10 PA job plan includes 4 PA’s out of hours and physician of the week duties with 4 PA’s compensatory time off. We use the web based Zircadian job planning tool for precise prospective cover calculations of individual PA’s. Leave is facilitated through a 'buddy system'.

Conclusion

A novel approach to Consultant job planning enables us to deliver the nationally recommended level of AMU consultant cover which is currently only being achieved by the minority of trusts across the UK.
References


4. Acute care toolkit 2 Appendix 2: Provision of consultant physician working on site for 12 hours per day 7 days per week).

Collecting data for improvement for a community acquired pneumonia bundle in AMU and ED.

Audrey Wong
Service Organisation and Design

Aim

To describe the characteristics of three methods for case acquisition to collect compliance information for a Community Acquired Pneumonia (CAP) bundle for an improvement project:

Methods

Sources of cases were: 1) proformas completed by admitting doctors in the Emergency Department (ED) and Acute Medicine Unit (AMU); 2) cases coded as pneumonia or a synonym; 3) as 1 and 2, with CXR report and clinical record retrospectively checked.

Results

In 4 months 235 patients had a coded primary diagnosis of CAP or synonym. 40% of these cases had CXR consistent with pneumonia.

98/155 patients with X-ray abnormality were sampled, of these 61 (75%) had a confirmed final CAP diagnosis after clinical review of notes.

In the same period, 43 CAP bundles were completed and collected and 72% had a radiological confirmation of CAP and 5 cases had other diagnoses (e.g. CCF, malignancy) which was probably reasonable to treat as CAP. The remainder had normal CXRs.

Conclusion
Only 60% of patients coded as primary diagnosis CAP had consolidation on CXR. The majority of patients, but not all, with completed CAP bundle had a CXR consistent with CAP or that was reasonable to interpret as CAP in the acute setting (83%).

Neither coding or completion of a proforma ensured a diagnosis of CAP. It is important to combine these with screening for radiological evidence and clinical validation.
Consultant Led Triage and an Emergency Medical Clinic: Evaluation of a Pilot Project

Mark Holland

Service Organisation and Design

INTRODUCTION

Early assessment of acutely unwell medical patients can improve clinical outcomes and facilitate patient flow. SAM’s quality indicators reflect the importance of early patient assessment. Our experience suggested that some patients reviewed by consultants in the traditional ‘post-take’ model could be diverted to a same day emergency clinic. To achieve this objective we felt that GP and A&E referrals should be channelled through a consultant acute physician. This study evaluates the success of these two processes.

Method

A consultant acute physician took GP and A&E referrals from 13.30 to 21.00 over four days. Where it was deemed safe and appropriate, mobile patients were triaged to our ambulatory area for review in the emergency clinic. The clinic was staffed by a registered nurse and a support worker.

Outcome/results

17 patients were referred by GPs, of whom 9 (53%) were seen in the emergency clinic. 34 patients were referred by A&E of whom 13 (38%) were seen in the emergency clinic. On average, patients waited 144 minutes from arriving at clinic to being discharged home. The emergency clinic reduced patient waiting times to be reviewed by a consultant from an average time of approximately 720 minutes.

Conclusion

This pilot has shown that a consultant acute physician can redirect A&E and GP referrals to an emergency clinic, reducing the time to be seen and treated. The data from this study has prompted us to extend the service to 10 hours per day from Monday to Friday.
Diagnostic Imaging for Suspected Pulmonary Embolism at Portsmouth Hospitals NHS Trust - Can we save money and improve our service?

Brown Thomas

Service Organisation and Design

Aim:

To evaluate the diagnostic imaging service for patients with suspected pulmonary embolism (PE) at a large District General Hospital with a view to identifying potential cost savings by reducing length of stay.

Methods:

We reviewed 55 consecutive acute admissions with suspected PE requiring diagnostic imaging. Time-frames were assessed and admission costs were calculated based on the length of stay using tariff bed-costs provided by the trust.

Results: (Table)

Patients awaiting diagnostic imaging in the community experienced on average a 4.5 day wait, exposing them to the risks of therapeutic anticoagulation over this period.

45% of patients who remained in hospital for diagnostic imaging were discharged within 24-hours of this being performed. Strongly suggesting delays in imaging prolonged length of stay. The average admission length was 2.5 days compared to 0.5 days for those managed in the community.

Had diagnostic imaging been available to this group on the day of admission, length of stay could potentially have been reduced by up to 48 hours.

Conclusion:

A service providing diagnostic imaging on the day of admission would expedite discharge in some cases of suspected PE. In our Trust this could provide an estimated cost saving of over £250,000. This cost saving will be used to fund an 'Evening CTPA Service' to ensure all patients, including those previously significantly delayed in the community, can be offered diagnostic imaging within 24 hours of admission. This will improve care and ultimately is likely to yield a cost saving for the Trust.
**Do Acute Physicians have an impact on discharge rates on the Acute Medical Unit?**

Akin Falayajo

Service Organisation and Design

**Introduction**

In our hospital AMU, the weekday morning post-take ward round is equally split between an acute physician (Team A) working a 1 in 3 rota and a specialist general physician (Team B) working a 1 in 20 rota. It is unclear whether there is any difference in the efficiency of the two ward rounds. Our hypothesis is that acute physicians are better at facilitating discharges in acute medical patients, resulting in a reduction in bed occupancy.

**Method**

A snapshot review of the AMU ward round for 4 weeks was done and two key outcomes a) mean percentage of discharge from each ward round b) length of stay (LOS) of the AMU patients were measured. A paired t test was performed to look for any difference in the outcomes.

**Result**

Out of a total of 159 discharges data was available on 152 discharges. Male: female 74 : 78. The average age was 57.5 years. Team A had 57.9% of discharges and Team B 42.1% (P 0.040 with 95% confidence interval of -11.97 to -0.53). There was no statistically significant difference in the LOS in both groups (Team A average 1.6 days and Team B average 1.7 days)

**Conclusion**

AMU entirely run by acute physicians would potentially improve patient flow and reduce bed occupancy and also free up the other specialty physicians to concentrate on their individual specialty.
Does an Acute Medicine Care Pathway in mental health wards improve outcomes? – Initial results of a pilot service.

Vivek Srivastava

Service Organisation and Design

AIM

Patients with severe mental illness (SMI) die over 20 years early\(^1\). Ensuring equity of access to care is a priority for the Department of Health\(^2\). We designed a care pathway along the principles of Acute Medicine\(^3\) where medical input was provided to the right person, in the right setting – first time.

Our objectives were to reduce (a) inappropriate admissions (b) length of hospital stay (c) time spent in A&E; (d) time on acute assessment unit (AAU).

METHODS

An Acute Medicine Care Pathway was introduced across the Maudsley Hospital (MH). Patients with medical concerns were evaluated by the psychiatry SHO and discussed with the King’s College Hospital (KCH) AAU team. The management plan and location of patient was agreed with the patient’s best interest in mind, and held under regular review.

Using electronic records we retrospectively analysed admissions data from the first three months of the pilot (December 2011- March 2012) and compared with those from September –December 2011.

RESULTS

30 MH inpatients were seen in the AAU before the pilot and 28 during. Median length of KCH hospital stay dropped from 2.5 days to 1 day during the pilot, even though all-patient length of stay was longer in winter months. Mean time spent in A&E or AAU was unchanged. There was a modest reduction in same day discharges, and a trend towards earlier admission.

CONCLUSION

Initial pilot work suggests that an Acute Medical Care Pathway can improve service level outcomes for patients with SMI.

REFERENCES


Does Delay In Completing Post-Take Ward Round Jobs Result in Delayed Patient Discharges?

Chakradhar Molugu

Service Organisation and Design

Aim

— To assess the percentage of post take ward round (PTWR) jobs being carried out on the day of request

— To delineate between jobs of nursing and medical staff and assess if the jobs are being carried out appropriately

— To use the data and estimate any delay in discharge as a result as jobs not being carried out

— Where possible, to find reasons for jobs not carried out

Methods

— All eligible patients selected from the short stay medical ward between 9th-19th January who were post-taked the previous day.

— Consultant post-take ward round reviewed; jobs identified and counted on an individual basis i.e. U&E and FBC = 2 x jobs

— Where jobs not done, profession responsible identified e.g. doctor, nurse.

— If jobs not done, the potential delay in discharge was estimated.

Results

— 32 patients selected

— 98 jobs created from 32 PTWR

— 72/98 (73%) jobs done.

— Therefore 27% jobs not done

— Because of delayed completion of jobs an estimated 25% (8/32) of patients had delayed discharges.
An estimated extra 16 inpatient days across 32 patients as a result of PTWR jobs not being carried out in a timely fashion.

If the estimated cost ~ £600 per bed day, a total of £9600 could have been saved by timely discharges of the above patients.

**Conclusion**

Change of plan should be documented in the notes daily.

There should be appropriate document / handover regarding jobs that needs completion.

Nurse’s to liaise proactively with Social, Occupational and Physiotherapy services.

Specialist nurse referral – to occur on the same day

Consultants’ on next ward round after PTWR need to comment on outstanding jobs
From PUSH to PULL – Intelligent Triage potentially reduces cost in the Acute Medical Unit

Christian Subbe

Service Organisation and Design

Aim

Testing the use of effective triage systems on admissions to Acute Medical Units (AMUs) that will reduce the heterogeneity in decision-making [1] and reduce the length of hospital stay (LOS).

Methods

We explored whether triage [2] supported by a “Navigator” using the Simple Clinical Score [3] (measure of risk of hospital death) and the Clinical Frailty Scale [4] (measure of functional capacity) allows triggering pathways in patients with very low risk of death and patients with intermediate but not high levels of frailty.

Records from 3084 consecutive patients admitted September 2010 to May 2011 (control phase) and 3680 patients admitted June 2011 to November 2012 (intervention phase) were compared. Health economics evaluation accounted for out-patient follow-up, radiological investigations etc.

Results

LOS was shorter for patients seen by the Navigator in 4 of 5 risk groups. There was no difference in LOS if comparing all hospitalized patients in control and intervention phase but reduction of LOS for patients with low (CFS 1-3), and intermediate frailty (CFS 4-6) with increases in the proportion of patients discharged within one day and earlier referrals to intermediate care services.

Cost of care was reduced by £482 in 519 patients with Very Low Risk (£250,158) and by £543 in 141 patients with Low Risk (£76,563). Given the direct salary cost of £25,484 the return for every pound invested was in excess of £12,-.

Conclusions

Implementation of an advanced triage system had a measurable impact on length of stay. The size of the team involved in running the AMU and the absence of short-stay beds were identified as factors limiting impact.
References


Supported by a SHINE grant from the Health Foundation
Geriatrician ‘In-reach’ into the Acute Medical Unit Reduces Length of Stay for Older Adults

Ziad Alio

Service Organisation and Design

Geriatrician ‘In-reach’ into the Acute Medical Unit Reduces Length of Stay for Older Adults

Department of Elderly Medicine, Salford Royal Foundation Trust

Aim:

Older people are major consumers of hospital-based acute care services. With an ageing population, there is an escalating demand. Current constraints on resources have necessitated a fresh approach to managing acutely ill older adults, while maintaining safe, high quality care.

National reports emphasise the importance of ‘the right person in the right setting, first time’ (Royal College of Physicians, 2007). This projected aimed to introduce early Geriatrician assessment on the Acute Medical Unit (AMU), and assess its impact.

Method:

Between two and four hours of daily geriatrician ‘in-reach’ was introduced to the AMU. This facilitated early senior Geriatrician review of complex older adults at the ‘front door’. This complemented earlier assessment by an acute medicine physician.

Length of stay and 30-day readmission rate for older people seen by the in-reach service in October and November 2011 was compared with those not seen by the service in the same time period, and with patients admitted to the Elderly Medicine department in October and November 2010.

Results:

A significant reduction in length of stay was demonstrated in patients seen by the in-reach service in 2011 compared with those not seen (10.35 days v 11.97 days) and compared with those admitted under Elderly Medicine in 2010 (10.35 days v 13.53 days) without a significant increase in readmission rate.

Conclusions

Geriatrician ‘in-reach’ on AMU has a positive impact on the care of older people by reducing length of stay without increasing readmission rate.
How can queue theory help with redesign of the take?

Paul Sullivan

Service Organisation and Design

Aim:

Improvement in patient flow is a goal for acute medicine. Queue theory is well established in several industries where it is used to predict system behaviour. We applied queue theory to the AMU admission process in a single Trust in order to predict ways to reduce time to clerking.

Methods:

We modelled effects of changes in rate of clerking and number of doctors clerking. We tested one of the assumptions of the model, that clerking rate is not affected by queue length: We surveyed junior doctors on take to see if they knew the current queue length, and we examined the relationship between rate of clerking and number of patients outstanding. We conducted a shadowing exercise to determine what tasks the JDs were doing during the take.

Results:

We confirmed that most junior doctors were unaware of the number waiting, and confirmed that the clerking rate was not related to queue length. The modelling results were unexpected, with small differences in parameters making large differences in time to clerking. We found that actual clerking was a small proportion of the workload, and that most time was spent typing into the EPR and responding to existing in-patients.

Conclusion:

Conclusion: Knowledge of queue theory allows specific local information to be gathered that can be used to improve flow. We believe that this project has given us the information to make changes to the JDs work and reduce waiting time.
How to plan the workforce on a busy inner city multi-cultural AMU

Adnan Gebril

Service Organisation and Design

Aim:

To evaluate current performance within our AMU and also to find out how to maximize the efficiency of the medical intake team and ensure that every patient is assessed by the most appropriate member of the team and a timely consultant review occurs.

Methodology:

Data were collected prospectively from the admission notes of 294 patients over 2 weeks.

The percentage of patients seen by each member of the oncall team was measured.

Early warning score was checked on the time of admission for every patient.

The average time that takes each member of the team to see a patient was calculated.

Outcome/ results:

The maximum waiting time was noted between 12:00 -14:00 and 17:00-22:00 hours.

On average it takes as twice as long for FY1 to see a stable patients compared with the rest of the oncall team.

See table 1.

<table>
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<th>Time</th>
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<th>CT/FY2/SHO</th>
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<th>SPR</th>
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<td>28 mins</td>
<td>28 mins</td>
<td>25 mins</td>
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<td>46 mins</td>
<td>40 mins</td>
<td>35 mins</td>
</tr>
</tbody>
</table>

Conclusion:

By using this methodology, we are able to plan our workforce to match our admission rate with staggered starting times across the day to cope with the work load at the peak admission period in a timely manner.

When restructuring of junior doctors’ working pattern, FY1 doctors should be considered as an educational super numeray which will give them time to build up their confidence and experience without compromising patient’s care.
Reference:

Improving Out of hours care and Night Handover: Using Focus group and Audit data

Rangaprasad Karadi

Service Organisation and Design

Background

Numerous studies, particularly the Dr Foster report(1) show that patients are at great risk of receiving substandard care out of hours, increased mortality rates are well documented. We aimed to identify how our night team’s time is utilised out of hours and highlight scope for improvement.

Aims:

1. To identify problems relating to Night handover and develop solutions.
2. To assess how the out of hours junior doctors time was utilised and scope for change.

Methods:

Focus groups were conducted to enable both the medical and surgical junior doctors to voice their concerns and discuss solutions. The Focus groups were made up of 5 F1s, 5 SHOs and 2 registrars. The three sessions lasted approximately 1.5 hours supervised by an MAU consultant assisted by the Night matron. The discussion was divided to obtain data from Pre-handover, Handover and Post-handover (based on evidence) to address aim 1.

The night SHOs were given data collection sheets to document the activities they performed and the time taken to complete the tasks over 6 nights; to address aim 2.

Results:

The focus group identified several problems related to the handover process and agreed on solutions for further development. (Table below shows key findings)

The activity data (Bar chart below) shows the majority of the SHOs time was utilised reviewing and admitting patients. There is, however, still scope to reduce the number of generic tasks.

Conclusion.

The focus groups were very useful and efficient in identifying problems and solutions relating to handover process. We will be further developing these solutions to improve the handover process and subsequently patient care; we would highly recommend this technique.

The activity data suggests there is still scope to improve utilisation of junior doctors’ skills base out of hours. There is a definite opportunity to further develop our services’ to reduce
the time performing generic skills, enabling more time for patient assessment and admission. This would further improve patient care and junior doctors’ development.

Reference.

(1) Dr Foster Health: Hospital Guide 2011. November 28 2011
Improving the Acute Medical Take at Northwick Park Hospital

Matthew Knight

Service Organisation and Design

AIM

During the medical-take patients were referred to the medical team by a variety of sources and accepted by multiple staff, who each collated handwritten lists and later transposed into one excel-document, making efficient management of the take challenging, with the risk of patients being missed on the post-take round.

We aimed to improve medical handover and ease of communication within the team (doctors and nurses) and AE and bed managers. Our Trust aim was that patients should be seen within 12 hours by a consultant (70% was listed as one of our CQUINS targets). To achieve this, data was needed about admissions to enable better workforce planning.

METHODS

We consulted with staff, hired a computer programming company to develop an intranet based, password protected database accessible from all computers that would keep a record and clearly display all patients on the medical take and their progress from admission to post take ward round and then length of time that they had waited. This data could be used for audit.

OUTCOME

10 months of data have been analysed. This shows that patients arriving in the afternoon and early evening are likely to wait longest to see a consultant (see table and chart). From August 2011 to May 2012 68% of patients were seen within 12 hours by a consultant.

CONCLUSION

This system cost under £10,000, has been popular and has facilitated improved communication and patient safety. The data is now being analysed to improve workforce planning and enhance care.
Mapping Quality Standards for Acute Medical Units with a Traffic Light Matrix

Karl Bonnici

Service Organisation and Design

Mapping Quality Standards for Acute Medical Units with a Traffic Light Matrix

Aim:

The Society for Acute Medicine's (SAM) Quality Standards document provides a comprehensive blueprint for an acute medicine service. The aim of this study was to develop and test a simple tool by which to benchmark individual units.

Methods:

We used SAM's Quality Standards document\textsuperscript{1,6} as the basic template for our mapping tool. In addition, we added pertinent items from the Royal College of Physicians' Acute Medicine Task Force\textsuperscript{2} document, and relevant NCEPOD reports\textsuperscript{3,4}. Using an Excel spreadsheet, we interviewed multidisciplinary team members in each acute medical unit and adopted a traffic light system to define if each standard as: was achieved (green), in development or partially achieved (amber), or not achieved (red). The mapping was undertaken in three units in the North West of England, anonymised as “A”, “B”, and “C”. In total we identified 235 standards.

Outcomes and Results:

The table summarises the number of green, amber and red standards for each unit. 86 standards were achieved by all three units whilst only 2 standards were not met by any unit.

Conclusion:

This mapping process was easy to undertake and the data generated was simple to interpret. Each unit found the data useful in benchmarking their current service provision, and defining areas for future development. 233 of the 235 standards are at least partially met in at least one unit, telling us that achieving all the standards might be possible in all units. The mapping also provided a way to prioritise the units’ audit programme.

Medical HDU – What is the Impact?
The Medical HDU has been operating for more than two years.

It has no fixed admission criteria, is run by a Physician and consists of a nine bedded unit with the ability to provide Level 2 care i.e. Acute NIV and inotropic support.

The aim of this audit was to test whether the unit is working as intended and in particular how many patients required Level 2 care.

Methods

A patient database was created for the unit from the 1st on January 2012 and data was collected for two months (119 patients in total)

Data on all new admissions were recorded daily by the covering Medical Registrar on a number of variables such as diagnosis, admission ward, co-morbidities, Level of care as well as discharge destination and length of stay.

Results

The two graphs attached illustrate some of the key findings.

Conclusions

More than two thirds of patients had Level 1 (mainly cardiac monitoring) and Level 0 (mainly use of the side rooms due to bed availability) care.

Almost a third of patients are sent home directly.

This suggests that HDU is in fact not being used for its intended purpose.

There may be two causes: Firstly, medical wards are struggling to cope with monitoring of more complex patients and instead deferring responsibility to HDU; secondly, the lack of strict criteria for admission.

Further analysis is recommended to test these two potential causes.
Outcomes from a pure Medical HDU at a London Teaching Hospital

Riaz Hosein

Service Organisation and Design

Aims

Charing Cross Hospital, London, has a dedicated Medical HDU. We wished to determine the outcome of general medical patients being managed by an acute medical team on HDU.

Methods

Data on admissions were recorded over 2 months, including comorbidities.

Results

119 patients were admitted: 22% on Tuesdays, 9% on Sundays. 52% were aged 61 – 80 years; 17% were ≥ 81 years. 82% remained for active escalation and resuscitation.

Admissions sources were: A&E (56%); MAU (14%); general medical wards (9%); intensive care (8%). The remaining were admitted from surgery, oncology, outpatients or another hospital.

Admission diagnoses were: respiratory (34%); cardiovascular (27%); sepsis (21%); metabolic/electrolyte derangement (7%); GI bleed (5%); neurological (6%). 17% required NIV; 6% required inotropes.

61% had ≥ 2 comorbidities (figure 1).

The median (IQR) length of stay was 2 (1, 4) days.

Discharge destinations were: medical ward (45%); ITU (8%); oncology (4%); surgery (2%); home (24%); placement (4%); other (8%); death (5%).

17% of those with ≥ 2 comorbidities either died or went to ITU. Of those with < 2 comorbidities, none died and 6% went to ITU.
Conclusions

Of an elderly population with multiple comorbidities, this medical HDU has a 5% death rate, with use of single organ support in 22%. This may be due to early identification of those who would benefit from HDU. Those with ≥ 2 comorbidities have the worst outcomes.

We propose that acute medical units could benefit from dedicated medical HDU.
Predictability of an early readmission by day 7 or 28 - St James's Hospital 2002-2011.

Rachel Kidney

Service Organisation and Design

Predictability of an early readmission by day 7 or 28 - St James's Hospital 2002-2011.

R Kidney, E Sexton, D O’Riordan, B Silke

Acute Medical Assessment Unit

St James's Hospital, St James's St, Dublin 8.

Aims:

Unplanned emergency medical readmissions are being targetted by health authorities because of quality of care concerns and economic burden. The hospital service patterns vs clinical outcomes report of the RCP\textsuperscript{1} indicated 7 and 28 day readmission rates of 8.9\% and 12.9\% respectively for 158 units\textsuperscript{1}. The predictability of early readmissions would appear to be an essential prerequisite for any reduction strategy; we have examined predictors of an early (<7 day or 28 day) medical readmission, from a 10 yr database of all admissions.

Methods:

St James's AMAU has a database of 61798 patient episodes, with full demographic, biochemical and hospital mortality data available. We studied all readmissions to day 7 or day 28. Candidate factors (n=41) were entered into a logistic regression model of possible readmission predictors including illness severity, co-morbidity\textsuperscript{2}, sepsis, anaemia and biochemical or ICD9/10 codes.

Results:

61578 episodes with 26744 episodes were included, with 7 and 28 day readmission rates of 3.8\% and 9.4\% respectively over the 10 years studied. Multiple logistic regression (stepwise) identified 13 variables as readmission predictors including airways disease, anaemia, liver disease, illness severity, stroke, heart failure, syncope, myocardial ischaemia, headache, alcohol abuse, seizures, dementia and hyponatraemia; however, the predictability of 7 and 28 days readmission was low with AUROC’s of 0.60 and 0.62 respectively.
Conclusion:

The readmission rates for 7 and 28 day readmission at SJH are significantly lower than those of the hospital service pattern report; risk factors for a readmission are diffuse and not confined to a specific subgroup on whom focused efforts could be directed.
Redesigning services: An investigation into the potential role for the ambulatory management of acute pulmonary embolism at Stafford General Hospital

Rajiv Chandegra

Service Organisation and Design

AIM: Acute pulmonary embolism accounted for 20,908 cases in England alone, with a median length of stay of six days (2010-11)\(^1\). Despite studies suggesting the efficacy of safe ambulatory care\(^2\), inpatient admission remains the custom, adding to the economic burden due to delays in the conventional pathway. This study aims to investigate the potential role of starting an ambulatory service at Stafford General Hospital, by retrospectively selecting patients based on the Pulmonary Embolism Severity Index (PESI)\(^3\) and the Royal Infirmary of Edinburgh system (RIE)\(^4\).

METHODS: Consecutive randomisation used to select confirmed PE patients (on imaging) in the period September 2010-11. Exclusion included equivocal diagnosis on imaging. PESI and RIE prognostic tools were used to assess eligibility for ambulatory care when retrospectively applied at time of initial presentation and first medical entry after diagnostic imaging.

RESULTS: 26 patients included in the study; total median length of stay was 6.0 days. The RIE criteria found 2 patients potentially eligible for discharge at time of presentation and 8 patients after diagnostic imaging. The PESI criteria found 11 patients eligible for discharge at time of presentation and 16 patients after diagnostic imaging.

CONCLUSION: The study suggests the huge potential for developing ambulatory care services, and presents the case for re-designing the way acute pulmonary embolism is managed at Stafford. It would result in better patient satisfaction, reduce hospital-related complications and provide much needed economic gain for the Trust. In collaboration with national bodies, such a whole-system change can be successfully implemented.

References


Revolutionising medicines reconciliation: A technical solution

Lynn Bruce

Service Organisation and Design

AIM

The 36-bedded MAU/CDU at ELHT has 70-90 admissions/day. From March 2008 the MAU Pharmacy Team (comprising 3 pharmacists and 3 pharmacy technicians) has provided cover for 11 hours/day, 365 days/year. Medicines reconciliation (MR) is one of the team's key functions. NICE PSG1 published in December 2007 specifies a 24-hour target for MR, and we realised that we needed to improve our efficiency in order to achieve MR within this timeframe.

METHODS

In 2008 the Trust had commenced a pilot with an 'electronic bed-board' to improve patient tracking. We approached the software company to develop a module to track patients requiring MR, and also to enable communication about our patients with pharmacy teams working on destination wards.

OUTCOMES/RESULTS

The MR module was developed and came into full use in April 2009. Each patient on the bed-board has an electronic pharmacy icon attached: green on admission, blue indicates medication history checked (pharmacy technician function), white indicates chart has been reconciled (pharmacist function), red indicates that MR has not taken place within 24 hours. A notes field captures relevant information about the patient's medications to prompt appropriate pharmaceutical follow-up e.g. Has blister-pack; IVAB-gentamicin: monitor. All entries are automatically timed allowing performance to be audited.

CONCLUSION

The MR module is now the key tool enabling swift communication between the MAU Pharmacy Team members and also ward pharmacy teams, identifying patients still requiring MR and those requiring further pharmaceutical follow-up. Our efficiency at achieving MR within the 24-hour timeframe has been enhanced, thus improving the safety of our patients.

REFERENCE

SERVICE IMPROVEMENT IN AMBULATORY EMERGENCY CARE USING ‘PLAN, DO, STUDY, ACT’ (PDSA) MODEL

Rangaprasad Karadi

Service Organisation and Design

**Background:** The ever-increasing number of acute medical admissions with simultaneous reduction in bed base creates immense stress in our acute medical services across NHS. Ambulatory Emergency care (AEC) plays a vital role in diverting a proportion of such acute admissions with safe and effective care at home, saving hospital beds. NHS Institute’s Ambulatory Emergency Care Directory identifies at least 49 clinical conditions suitable for management using this principle(1).

**Aims:**

1. To increase the proportion of acute medical patients managed in the Ambulatory emergency care unit.
2. To ascertain any success (i.e. increase in patient number) achieved is a result of ‘true’ diversion of acute medical flow.

**Methods:**

‘Plan, Do, Study and Act’ model is a useful technique to trial improvement ideas on a small scale before wider implementation. The main advantages include a continuous learning cycle and reduced risk due to small scale of the change.

We implemented following measures in series:

1. Dedicated doctor.
2. Dedicated nurse (Band 5)

**Results:**

The results are indicated in the form of the Statistical process control chart that plots the number of patients admitted to AEC unit from April 2011 to July 2012 and highlights impact of various improvement measures.

In summary,

1. Significant and sustained increase (36%) in proportion of patients, average 110 (pre-change) vs. 150 (post-change) following implementation of dedicated nurse and new pathways.
2. Discharge rate remained similar (82% vs. 89%) before and after change.

3. Source of referral (GP 2/3rd and A&E 1/3rd) and proportion of different conditions have remained consistent.

**Conclusion:**

A steady and sustained increase in number of patients seen in AEC as a result of implementation of dedicated nurse (predominantly) and developing new pathways. The change was considered ‘true’ diversion of acute medical flow as the proportion of GP: A&E referral’s and the proportion of different conditions remained constant before and after change.

Our next challenge is to extend our service to cover out of hour’s and continued development of new pathways.

**Reference:**

Setting Standards - A problem solving approach to optimising safe patient throughput in acute medicine

Maria McAuliffe

Service Organisation and Design

Aim

Our Lady of Lourdes hospital, Drogheda, Ireland set up an Acute Medical Assessment Unit (AMAU) in order to comply with the Acute Medicine Programme (AMP 2010). The aim of the AMP is to eliminate trolley waits, reduce average length of stay and bed days used, and have no increase in readmissions. The AMAU aim was also to increase quality, improve service, reduce risk, adhere to austerity measures and to meet patient's growing expectations. With this in mind, the nurses role is instrumental in ensuring that patient safety is a priority when setting the standards for safe assessment of acutely ill medical patients.

Methods

It was decided that a 'rapid assessment' would be initiated by nurses on arrival to AMAU. The National Early Warning Score (nEWS) was launched within this timeframe and was used to prioritise the patients. The assessment document was adapted from an MAU to an AMAU assessment tool using ‘A,B,C,D,E’ model. Training was provided to nursing staff in safe assessment of acutely medically unwell patients including relevant investigations which were requested on arrival. Named nurses were then allocated.

Outcomes/results

The results were measured using data collected by times - arrived in department, seen by nurses, senior doctors, disposition and discharge. A patient satisfaction survey was introduced and early feedback is positive. The patients results were available to the medical teams in a timely way ensuring that the six hour target to discharge was adhered to within the agreed standard. Unwell patients were identified early and referred to a senior clinician for appropriate action.

Conclusion

The process was patient driven by condition and met with the standards set by the AMP. Good working relationships with the diagnostic services and other departments were established and maintained. The service was patient friendly and has to date received no complaints! (over 1 year).
"Still waiting for TTOs"

Shirley Kuo

Service Organisation and Design

Aim

The management of patient flow is a major issue for hospitals. It is perceived that waiting for TTOs is the main rate-limiting step to patients being discharged. We examined the timeframes on TTO writing, pharmacy dispensing and patient discharge at Chelsea and Westminster Hospital.

Method

A snap shot audit was done on Monday 28 May 2012 for all prescriptions received in pharmacy. A second audit for TTOs written for the Acute Assessment Unit (AAU) between August 2011 and March 2012 is being analysed. Times when TTOs were written, dispensed and ready for collection, and times patients were discharged were taken from the local Electronic Prescribing System and pharmacy prescriptions tracker.

Outcome/Results

A total of 65 TTOs were dispensed by pharmacy on audit day. Majority were written on the day of discharge; only 18% were written prior to day of discharge. The writing of TTOs clustered at 11am-4pm; patient discharge clustered at 12-1pm and 2-6pm. 85.7% of TTOs were dispensed and ready within 2 hours of prescription being written. The average time taken from writing TTOs to the patient’s discharge was 2.49 hours; this was 4.73 hours on AAU. The average time for pharmacy to dispense TTOs was 1.23 hours; AAU TTOs are prioritised so dispensing times are expected to be shorter than the hospital average.

Conclusion

The perception that dispensing of TTOs is responsible for delays in patient discharge is not true. This has major implications for the hospital in terms of targeting non-pharmacy issues that may delay discharges.

Streamlining the use of inpatient biochemistry and haematology and sustaining the change.
Aim

Pathology requests account for a significant proportion of a hospital budget. It has been shown at our hospital that intervention from a senior doctor provides up to 30% reduction in ward requests, however this was not sustainable. We aimed to introduce a sustainable reduction.

Methods

All medical junior doctors received education sessions regarding pathology requests. Interventions were then carried out on 4 wards for a 2 week period. Table 1 shows the interventions.

The number of biochemistry and haematology tests requested for the 2 weeks before and 2 weeks after the interventions were collected. Results for the subsequent weeks were also collected.

Results

Wards 2, 3 and 4 all showed a reduction in pathology test requesting compared with the previous 2 weeks. Ward 1 showed an increase in tests overall. Figure 1 demonstrates the results for the 4 wards.

Conclusion

Reducing inpatient biochemistry and haematology is important as it provides clinical benefits such as faster results from the laboratory, patient satisfaction as there is less phlebotomy and financial benefits. Intervening in a hospital to produce a sustainable reduction in pathology requesting is challenging. We concluded that using a senior ward doctor (the registrar) to
sign off requests was most likely to provide a long term reduction in requesting that is sustainable. We plan to implement this within the medical division of our hospital.
The Acute Echo Clinic

Sarbjit Clare

Service Organisation and Design

As an Acute Physician with Echocardiography accreditation (BSE), echo in the acute setting is invaluable in diagnosis and patient management. These skills and knowledge have been extended in the concept of an “Acute Echo Clinic” which has been commended by demonstrating benefits to patients, flows and service provision.

An audit in November 2009 demonstrated 21 patients remained in hospital solely for an echocardiogram. Inpatient stay ranged from 4 to 10 days with a median wait for an echo of 4 days. The Acute Echo clinic aimed to solve this.

Aims

1. Expedite discharge
2. Avoid admission
3. Decrease LOS
4. One stop clinic within 5 working days
5. Sieve to cardiology
6. Decrease inappropriate IP/OP cardiology referrals
7. Decrease pressure on the echo department
8. Training of an Acute Med SpR

Methods

- Business proposal to executive team to purchase USS and Echo machine- successful
- One stop clinic within MAU, open to Acute Take - started in May 2010
- Prospective Audit and Patient Experience Questionnaire

Results

- Over 10 months 112 referrals (10% DNA)
- All patients seen within 5 working days
- Normal scans 32/90 (35%)
- Referrals from -83% Acute Physicians, 14% General Physicians, 3% Emergency Physicians
- Reason for Referral See Fig 1
- 50% of scan revealed an abnormality See Fig 2
- 20/58 (35%) patients needed specialist input (16 pts Cardiology, 3 pts Respiratory, 1 pt Gynaecology)

Conclusions

1. Data revealed decreased LOS, increased confidence to discharge by physicians with the safety of a prompt clinic and diagnostic
2. The key to success of the clinic was an echo followed by clinical review by the clinician. Patients reported the one stop clinic as “satisfying”.
3. Cardiology team have reported the clinic provides appropriate referrals with a decrease on demand on the echo department both inpatients and outpatient.
4. The Acute Med SpR has one to one training from a BSE accredited Consultant.
5. Acute Physicians with such skills need to provide such clinics to aid prompt discharge
The Benefits of an Integrated Assessment Approach within Acute Medicine

Anneka Curdlying

Service Organisation and Design

Aim:

A one year pilot of an Integrated Assessment Team (IAT) on the Acute Medical Unit and A&E. The service will provide multi-disciplinary assessment and discharge planning, over extended hours and 7 days, to improve patient care and make cost savings for the Trust (DOH, 2010).

Method:

Referrals are gained via a therapy led ‘triage’ system, promoting rapid identification of patients with therapeutic or complex social support needs (DOH, 2004).

To analyse service outcomes the following data is collated: reason for admission, admission to assessment interval, intervention and management plan. Patient outcomes, including length of stay, are retrospectively quantified using trust wide patient data information systems (Maxims/ Hiss).

Outcomes:

For those patients assessed, intervention and discharge planning has commenced within 24 hours of admission.

The largest patient group assessed by the IAT (29%) were those admitted with ‘falls’: in a 90 patient sample, pre-IAT and post-IAT, average length of stay was reduced by 3.8 days (42%).

In a 7 month period, out of a total of 1684 patients assessed, 603 (36%) have been diverted from hospital admission (Hill, 2010).

Conclusion:

Timely access to individualised therapy and proactive and effective discharge planning has reduced length of stay (DOH, 2004). In the falls sample, this equates to an approximate cost saving to the Trust of £20,640 (Allen K, 2010). This, along with reduction in unnecessary admissions releases capacity in the system.

The team has promoted positive patient experience through a more seamless patient pathway and improved continuity of care (Institute Healthcare Improvement, 2005).

References:
• Allen K. 'The billion dollar question': embedding prevention in older people’s services - 10 ‘high impact’ changes.(2010) Health Services Management Centre, University of Birmingham.
The implementation of a community-based intravenous medication service, allied to a Dublin teaching hospital, has proven to be a safe, effective and cost-effective initiative.

John Cullen

Service Organisation and Design

Ali Khan R¹, Cullen JP¹.

¹Acute Medical Unit (AMU), Tallaght Hospital, Dublin, Ireland.

**Aim:** Since 10/11/08, Tallaght Hospital, in partnership with the Community Intervention Team (C.I.T.) Dublin-South, has provided a community-based service for domiciliary administration of intravenous (IV) medications, therefore facilitating early supported discharge (ESD) or admission avoidance (AA). The aim was to evaluate the Tallaght Hospital / C.I.T. IV service in terms of patient safety, readmission rates, adverse events, bed-days saved, patient satisfaction and cost-effectiveness.

**Methodology:** We conducted a prospective evaluation of the community IV service, between 10/11/08 and 30/06/12, using the above end-points.

**Results:** Up to 30/06/12, 455 patients were referred to this service, 232 (51%) male, 223 female. Mean age was 53.5 years (range 16-95). ESD was facilitated in 310 patients (68%) and AA in 145 patients (32%). 38 different clinical conditions were treated at home, but the most frequent diagnoses were: pneumonia/lower respiratory infection (n =126, 28%), cellulitis (n=94, 21%) and urosepsis (n=55, 12%). Most of the IV medications administered were IV antibiotics (n=386 patients) and IV steroid (n=48). Domiciliary IV treatment for these patients saved a minimum of 2327 bed-days for Tallaght Hospital. Average length-of-stay in the service was 5.1 days (range 1-14 days). There were only 18 readmissions to hospital (3.9%) during home treatment. There were no unexpected deaths. There were no serious adverse incidents. No complaints were received. Patient satisfaction was high (96% scoring the service at 10/10). The mean cost to Tallaght Hospital for treating these patients at home was €166 per patient. Home treatment of these patients saved €2,190,000 for Tallaght Hospital compared to equivalent inpatient treatment.

**Conclusion:** Our community IV service is a safe, effective, inexpensive modality for ESD/AA in patients with a wide variety of clinical conditions, with significant acute hospital bed-days savings and cost-savings for Tallaght Hospital.
The rising cost of alcohol - an epidemiological analysis

Vincent Connolly

Service Organisation and Design

Aim – Understanding alcohol related activity is essential to support service development, this study aimed to calculate the volume and epidemiology of alcohol related admissions to the AMU.

Method – Alcohol-Attributable Fractions (AAF) were calculated using NWPHO methodology (1). The AAF describes the relationship between the prevalence of alcohol consumption and the relative risk for each alcohol related condition, enabling the calculation of the proportion of cases associated with alcohol consumption. Calculations were made using all hospital admissions to the AMU in Middlesbrough. Admissions were categorised as more than 50% attributable to alcohol and wholly attributable to alcohol. Crude admission rates were calculated for AMU and the whole hospital for comparative purposes.

Results – The growth in AMU admissions from year 2006/7 to 2011/12 was as follows: for patient spells >50% attributable to alcohol, males 14.29% to 16.95%, females 7.88% to 9.55%, all hospital admissions 2.77% to 4.22%; for patient spells wholly attributable to alcohol, males 11.29% to 13.56%, females 5.59% to 6.89%, all hospital admissions 1.79% to 2.61%. All fractionally attributable spells increased from 23.94% to 37.07%. Age-sex analysis for 2011/12 males prevalence highest from ages 20-60 years, females peaked at 40-50 years.

Conclusion – The AMU has a key role in managing alcohol related admissions providing focus and expertise to cope with the increasing volume and variety of activity. AMUs must have access to resources for managing the varied alcohol related admissions. This information is important for planning services, supporting the development of alcohol liaison, detox and social services on AMUs.
The Swindon Ambulatory Care Model

Ijaz Ahmed

Service Organisation and Design

AIM

We aimed to change the way we managed the acute take by establishing a new Ambulatory Care Unit - a six-month pilot. We wanted to reduce medical admissions and length of stay for all ambulatory care conditions, and to improve patient flow through the Emergency Department.

METHODS

We created an entire unit with a waiting area, 3 consultation rooms, 12 beds and instant access cardiac diagnostics (echocardiography and ETT). We staffed this 9 hours per weekday with a dedicated Consultant Acute Physician presence, nursing staff, 2 junior doctors and 1 physician assistant. We used the Directory of Ambulatory Emergency Care to identify all suitable patients, and streamed patients to this unit instead of onto the acute medical take, if they were deemed suitable by the GP admissions coordinator. We also worked closely with the Emergency Department Physicians to identify any suitable patients.

RESULTS

In a time of rising admissions we have reduced admissions by 9% and reduced length of stay for ambulatory care conditions by 1 day. ED breaches and ambulance waits have significantly improved. Mixed sex breaches have been virtually eradicated. The successful pilot has now become a permanent feature at the Great Western Hospital.

CONCLUSION

We believe we have improved patient flow and experience by implementing a service redesign, which could be transferable to any organisation. The hospital has better managed the peak demand over winter pressure, by preventing admissions whilst maintaining standards.
To design and introduce an electronic database to a District General Hospital allowing on calls to run in an effective and more efficient process

Elizabeth Edwards

Service Organisation and Design

Aim:

At Eastbourne DGH, until recently, the on call and post-take lists were paper based. There was no mechanism for identifying the number of patients waiting. Human error and illegible handwriting has resulted in patients being missed or lost on post-take ward rounds.

Our objective was to design and implement an electronic on call database that provided an overview of patients being clerked and waiting. We aimed to reduce the probability of patients being missed from the take list; also enabling junior doctors to highlight patients requiring senior review.

Methods:

We looked prospectively over a three week period at several parameters: the number of patients missed and not clerked; the number of patients clerked, but missed on the post-take round; how many times the writing on lists was illegible; the number of missed senior reviews and the number of paper sheets used. The new electronic database was introduced and re-audited for three weeks.

Outcomes/Results:

On introduction of the electronic database the number of pages used was dramatically reduced by 81%. Before the intervention in 111 cases the handwriting was found to be illegible, this was eradicated. After the intervention all patients were clerked and none were missed on the post-take ward round.

Conclusion:

The electronic database is now in full use and has directly improved patient care. It has reduced the paper and NHS resources required, thus is environmentally friendly. Junior doctors have confidence in the database and feel more confident that patients will not be lost.
Unknown Knowns – ’A Risky Business’– Where did the DAMAs go?

Abimbola Akintola

Service Organisation and Design

Aim

Patients who Discharge Against Medical Advice (DAMA) suffer worse health outcomes and comprise a high mortality risk group[i]. Our aim was to reduce the potential risks associated with this high-risk group and implement a quality improvement plan.

Methods

This was a retrospective study of medical DAMA patients between January 1st 2011 and December 31st 2011. The lead investigator reviewed the charts from Medical Records (31 in total) and completed a pre-designed questionnaire for each individual chart.

Outcomes/Results

There was a DAMA rate of 0.79% which is in keeping with other similar studies which show a DAMA rate of between 1-2%. [ii][iii] DAMA readmission rate was 51.6% in comparison with an overall hospital readmission rate of 5.9%. The quality of the documentation was variable as there was no DAMA protocol in place. 48% of DAMA patients had no follow-up plan and 71% had no discharge summary. Our study showed that 100% of DAMA patients were at risk of adverse health outcomes; however the DAMA form in use did not include the duty of care of the attending doctor to inform the patient of the associated risk. We therefore designed a new DAMA form to improve the documentation and minimize potential risk.

Conclusion

Hospitals need to have more robust protocols for Discharge Against Medical Advice patients. Thorough documentation is a vital step in minimizing clinical risk in an already high-risk group of patients. It is important to provide as much additional care as possible through discharge instructions and follow-up.


You are what you wear – a patients’ perspective on doctors’ attire

Charlotte Levene

Service Organisation and Design

Aims

In 2007(1), West Middlesex University Hospital implemented a new initiative of providing its doctors with a uniform. A study was carried out to investigate how patients perceive their doctors’ attire – be it uniform or their own clothes.

Methods

Patients on the Acute Medical Unit who were able to cooperate with the study were invited to complete a questionnaire comparing many aspects of the uniform and ‘own clothing’. This included a panel of photographs of male and female models wearing the uniform or various clothing, faces were deliberately excluded to eliminate bias (2). Data was analysed using the Student T – test in Microsoft Excel.

Results

75 patients were recruited. 62% had no preference between uniform and ‘own clothes’. Patients scored significantly different aspects as identified with each set of clothes (fig 1, P<0.05) (uniform – identification, infection control, team; own clothes – smarter, personality), and between each photograph (fig 2). No significant difference was found between doctors’ own clothes and the uniform, with respect to professionalism and confidence conveyed by the doctor. Patients felt that they trusted the smartly dressed female and she would listen to their concerns and opinions more. The semi-formal male was also considered trustworthy and caring.

Conclusion

Patients expressed no preference between uniform and own clothes but in fact they did judge the photographs on what the models were wearing. However, in many cases patients said that an identification badge, a polite introduction and good bedside manner were much more important factors.

Background: Acute exacerbations of chronic obstructive pulmonary disease (AECOPD) are thought to be associated with increased mortality in elderly patients. Low retinol-binding protein-4 (RBP4) is associated with a high risk of respiratory infections in the general population. Therefore, we hypothesized that low RBP4 levels are associated with an increased risk of AECOPD and can be used as a biomarker for AECOPD in elderly patients. Methods: Enzyme-linked immunosorbent assays were used to assess RBP4 levels in elderly with AECOPD within the first 24 hours after intensive care unit admission. F