

# Emergency Department and Patient Flow Current Awareness Bulletin

November 2018

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## **No more winter crisis? Forecasting daily bed requirements for emergency department admissions to hospital.**

**Author(s):** Wargon, Mathias; Brun-Ney, Dominique; Beaujouan, Laure; Casalino, Enrique

**Source:** European journal of emergency medicine : official journal of the European Society for Emergency Medicine; Aug 2018; vol. 25 (no. 4); p. 250-256

**Abstract:** **STUDY HYPOTHESIS** We hypothesized that age, calendar variables, and clinical influenza epidemics may have an impact on the number of daily through-emergency department (ED) hospitalizations. The aim of our study was to elaborate a pragmatic tool to predict the daily number of through-ED hospitalizations. **METHODS** We carried out a prospective-observational study including data from 18 ED located in the Paris metropolitan area. Daily through-ED hospitalizations numbers from 2007 to 2010 were modeled to forecast the year 2011 using a general linear model by age groups (<75-years; ≥75-years) using calendar variables and influenza epidemics as explanatory variables. Lower and higher limits forecast with the 95% confidence interval of each explanatory variable were calculated. **RESULTS** 2 741 974 ED visits and 518 857 through-ED hospitalizations were included. We found a negative trend (-2.7%) for hospitalization visits among patients less than 75 years of age and an increased trend (+6.2%) for patients of at least 75 years of age. Calendar variables were predictors for daily hospitalizations for both age groups. Influenza epidemic period was not a predictor for hospitalizations in patients less than 75 years of age; among patients of at least 75 years of age, significant value was found only in models excluding months. When forecasting hospitalizations, 70% for patients less than 75 years of age and 66.8% for patients of at least 75 years of age of daily predicted values were included in the forecast limits. **CONCLUSION** Daily number of emergency hospitalizations could be predicted on a regional basis using calendar variables with a low level of error. Forecasting through-ED hospitalizations requires to differentiate between elderly and younger patients, with a low impact of influenza epidemic periods in elders and absent in youngest patients.

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## **Best Practices in Improving Morning Inpatient Bed Access.**

**Author(s):** AHC MEDIA

**Source:** Hospital Case Management; Dec 2018; vol. 26 (no. 12); p. 153-164

**Abstract:** One hospital has developed a nine-step program involving case managers to improve patient flow and discharge efficiency.

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## **Theoretical bounds and approximation of the probability mass function of future hospital bed demand.**

**Author(s):** Davis, Samuel; Fard, Nasser

**Source:** Health care management science; Nov 2018

**Publication Date:** Nov 2018

**Publication Type(s):** Journal Article

**PubMedID:** 30397818

**Abstract:** Failing to match the supply of resources to the demand for resources in a hospital can cause non-clinical transfers, diversions, safety risks, and expensive under-utilized resource capacity. Forecasting bed demand helps achieve appropriate safety standards and cost management by proactively adjusting staffing levels and patient flow protocols. This paper defines the theoretical bounds on optimal bed demand prediction accuracy and develops a flexible statistical model to approximate the probability mass function of future bed demand. A case study validates the model using blinded data from a mid-sized Massachusetts community hospital. This approach expands upon similar work by forecasting multiple days in advance instead of a single day, providing a probability mass function of demand instead of a point estimate, using the exact surgery schedule instead of assuming a cyclic schedule, and using patient-level duration-varying length-of-stay distributions instead of assuming patient homogeneity and exponential length of stay distributions. The primary results of this work are an accurate and lengthy forecast, which provides managers better information and more time to optimize short-term staffing adaptations to stochastic bed demand, and a derivation of the minimum mean absolute error of an ideal forecast.

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### **A home monitoring service for patients with heart and lung disease reduces hospital visits**

Norfolk Community Health and Care Trust has reported a reduction in A&E admissions and bed days among a group of high-dependency patients following the introduction of a new remote-monitoring service for people living with heart and lung disease. The service allows users to check their vital signs at home and was designed to improve quality of life for patients and free up hospital beds and surgery time.

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### **Northwick Park pilots porter hailing app for A&E staff**

Northwick Park Hospital, which is part of London North West University Healthcare NHS Trust, is introducing Infinity Health's e-portering app to replace the existing practice of staff filling out a two-page request form. It is hoped this new system will cut down the time it takes staff to follow up porter requests.

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### **Discharge to assess: home in a day**

A case study examining a 2016 collaboration between health and social care teams within Pennine Acute Hospitals NHS Trust, to facilitate timely discharge from hospital. Discharge to Assess - Home in a Day (D2A) was launched as a pilot in October 2016. It was (and is) a collaboration between health and social care to facilitate timely discharges from Rochdale Infirmary and Fairfield Hospital in Bury. The D2A team consists of an occupational therapist, physiotherapist and support planner (adult social care). Length of stay has been halved on the Rochdale site along with reductions in delayed transfers of care

## **A staggering 68% of surgical beds saved, thanks to a series of improvements in ambulatory care**

Staff from the Acute Surgical Unit (ASU) at the Royal Lancaster Infirmary have made significant improvements to patient flow and care through the surgical department. More than 2,481 patients from July 2017- March 2018 were seen in the Surgical Emergency Ambulatory Care Unit (SEAC) at University Hospitals of Morecambe Bay NHS Foundation Trust (UHMBT). Only 788 (32%) of those patients required a hospital admission after assessment – freeing up beds on the wards for acutely unwell patients in need of care. Includes a detailed description of the six key changes they made.

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## **Improving patient flow in an emergency department.**

**Author(s):** Ameh, Victor; Nasir, Hamza; Ahmed, Sarah; Abbasi, Ayaz

**Source:** British Journal of Healthcare Management; Oct 2018; vol. 24 (no. 10); p. 486-490

**Abstract:** Background: The emergency department at Wrightington, Wigan and Leigh NHS Foundation Trust treats more than 90 000 patients every year. It is a sizable emergency department based in a large district general hospital. The department welcomes both adults and children and is also a designated major trauma unit. The case mix and demographics of these patients vary widely; however, a large proportion of these patients are elderly with multiple comorbidities. The smooth running of this emergency department depends on an unimpeded patient flow through the unit in a timely manner while ensuring that high quality care is provided. The 'initial senior assessment and treatment' model is designed to address some of the difficulties and challenges faced by the department. Methods: Two audits were undertaken four months apart in July and November 2015. In total, the first audit involved 200 adult patients, 100 of which were randomly allocated to the initial senior assessment and treatment and 100 to the non-initial senior assessment and treatment category. Patients were seen by a dedicated initial senior assessment and treatment team led by either an emergency department consultant, or an emergency department middle grade doctor. The parameters audited include: times to assessment, investigation, treatment and disposal. The second audit of 60 patients explored the staff perception to the process. In total, 20 were allocated to the initial senior assessment and treatment and 40 to the non-initial senior assessment and treatment. Results: The results of both audits showed a significant reduction in all the parameters investigated; however, there was a mixed staff perception to the process. Conclusion: The initial senior assessment and treatment process significantly improved the patients' journey.

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## **Early availability of laboratory results increases same day ward discharge rates.**

**Author(s):** Cornes, Michael P; Danks, Graham; Elgaddal, Sanna; Jawad, Mohammed; Tonks, Jayne; Ries, Elisabeth; Ford, Clare; Gama, Rousseau

**Source:** Clinical chemistry and laboratory medicine; Oct 2018; vol. 56 (no. 11); p. 1864-1869

**Abstract:** BACKGROUND Delayed discharge reduces hospital efficiency and inconveniences patients. Most hospitals discharge in the afternoon, whereas the most common admission time is mid-morning. Consequently, new patients wait for the beds of patients who are fit to be discharged. Earlier discharge may, therefore, improve patient flow. We investigated the impact of early phlebotomy with early availability of laboratory results on patient discharge rates and discharge time. METHODS Discharge rates, discharge time and sample turnaround time were assessed before (1 October 2014 to 31 December 2014) and after (1 October 2015 to 31 December 2015) introduction of earlier phlebotomy with availability of laboratory results prior to the ward rounds on two surgical wards. RESULTS Following the intervention, over 95% of results were available before 8:30 am in 2015 as compared to less than 1% in 2014. Specimen turnaround times were similar in both study periods. Even after adjustment for age, gender, admission type and length of admission, the same day discharge rate was higher in 2015 compared to 2014 (60% vs. 52%;  $p < 0.002$ ), but time of discharge was unchanged. CONCLUSIONS Early availability of blood results prior to ward rounds increased ward discharges but did not affect discharge time.

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### **Getting It Right In Emergency Care advice pack**

The Getting It Right In Emergency Care advice pack has been produced by the GIRFT programme in collaboration with the Emergency Care Intensive Support Team (ECIST.) The advice pack aims to encourage the implementation of existing good practice, but setting out examples of interventions that NHS trusts can adopt to improve patient flow and help to manage the pressures that occur in Emergency Care.

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### **Timely identification of patients with frailty at the 'front door' of acute hospitals.**

**Author(s):** Reid, Joy

**Source:** Nursing older people; Sep 2018

**Abstract:** Early identification of frailty at the front door of the acute hospital is vital to allow rapid comprehensive geriatric assessment and care pathway development in the most appropriate location. This article discusses the importance of developing robust processes to enable early identification and management of frailty in the acute hospital. It also highlights the benefits of developing a dynamic team of professionals at the front door of the acute hospital who are effectively trained to undertake comprehensive assessment. Effective care planning for older people with frailty requires meticulous coordination through collaboration across health and social care and this is demonstrated using an effective model which has been developed in a district general hospital in Scotland.

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### **Establishing an ambulatory care service using point-of-care testing diagnostics.**

**Author(s):** Weihser, Philip; Giles, Dominic

**Source:** British Journal of Hospital Medicine (17508460); Sep 2018; vol. 79 (no. 9); p. 520-523

**Abstract:** The use of ambulatory emergency care services in the NHS has been shown to reduce the emergency inpatient burden and enhance the overall patient experience, while

demonstrating a cost saving to the NHS. At the James Paget University Hospital point-of-care testing was used as an enabler within an evidence-based lean service redesign to successfully set up a novel unit. A 3-month pilot period, with limited operational times, showed a dramatic improvement in patient flow through the acute medicine pathway, with an equivalent of 59 bed days saved during the pilot period. Further expansion of the unit to a dedicated area with full 7-day opening allowed a continued improvement in performance. This resulted in a mean length of stay of 115 minutes (a 54% reduction from pre-baseline), and just 6.1% of an average of 18.1 daily attendances were converted to full admission. This demonstrated a clinical, operational and financial benefit, allowing improved clinical outcomes.

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### **Influences on emergency department length of stay for older people.**

**Author(s):** Street, Maryann; Mohebbi, Mohammadreza; Berry, Debra; Cross, Anthony; Considine, Julie

**Source:** European journal of emergency medicine : official journal of the European Society for Emergency Medicine; Aug 2018; vol. 25 (no. 4); p. 242-249

**Abstract:** OBJECTIVE The aim of this study was to examine the influences on emergency department (ED) length of stay (LOS) for older people and develop a predictive model for an ED LOS more than 4 h. METHODS This retrospective cohort study used organizational data linkage at the patient level from a major Australian health service. The study population was aged 65 years or older, attending an ED during the 2013/2014 financial year. We developed and internally validated a clinical prediction rule. Discriminatory performance of the model was evaluated by receiver operating characteristic (ROC) curve analysis. An integer-based risk score was developed using multivariate logistic regression. The risk score was evaluated using ROC analysis. RESULTS There were 33 926 ED attendances: 57.5% (n=19 517) had an ED LOS more than 4 h. The area under ROC for age, usual accommodation, triage category, arrival by ambulance, arrival overnight, imaging, laboratory investigations, overcrowding, time to be seen by doctor, ED visits with admission and access block relating to ED LOS more than 4 h was 0.796, indicating good performance. In the validation set, area under ROC was 0.80, P-value was 0.36 and prediction mean square error was 0.18, indicating good calibration. The risk score value attributed to each risk factor ranged from 2 to 68 points. The clinical prediction rule stratified patients into five levels of risk on the basis of the total risk score. CONCLUSION Objective identification of older people at intermediate and high risk of an ED LOS more than 4 h early in ED care enables targeted approaches to streamline the patient journey, decrease ED LOS and optimize emergency care for older people.

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### **Prioritising patient care: The different views of clinicians and managers**

**Author(s):** Skirbekk Helge; Hem, Marit Helene; Nortvedt Per

**Source:** Nursing Ethics; Sep 2018; vol. 25 (no. 6); p. 746

**Abstract:** Background: There is little research comparing clinicians' and managers' views on priority settings in the healthcare services. During research on two different qualitative research projects on healthcare prioritisations, we found a striking difference on how hospital

executive managers and clinical healthcare professionals talked about and understood prioritisations. Aim: The purpose of this study is to explore how healthcare professionals in mental healthcare and somatic medicine prioritise their care, to compare different ways of setting priorities among managers and clinicians and to explore how moral dilemmas are balanced and reconciled. Research design and participants: We conducted qualitative observations, interviews and focus groups with medical doctors, nurses and other clinical members of the interdisciplinary team in both somatic medical and mental health wards in hospitals in Norway. The interviews were recorded and transcribed verbatim. Ethical considerations: Basic ethical principles for research ethics were followed. The respondents signed an informed consent for participation. They were assured anonymity and confidentiality. The studies were approved by relevant ethics committees in line with the Helsinki Convention. Findings: Our findings showed a widening gap between the views of clinicians on one hand and managers on the other. Clinicians experienced a threat to their autonomy, to their professional ideals and to their desire to perform their job in a professional way. Prioritisations were a cause of constant concern and problematic decisions. Even though several managers understood and empathised with the clinicians, the ideals of patient flow and keeping budgets balanced were perceived as more important. Discussion: We discuss our findings in light of the moral challenges of patient-centred individual healthcare versus demands of distributive justice from healthcare management. Conclusion: The clinicians' ideals of autonomy and good medical and nursing care for the individual patients were perceived as endangered.

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### **Why do 'fast track' patients stay more than four hours in the emergency department? An investigation of factors that predict length of stay.**

**Author(s):** Gill, Stephen D.; Lane, Stephen E.; Sheridan, Michael; Ellis, Elizabeth; Smith, Darren; Stella, Julian

**Source:** Emergency Medicine Australasia; Oct 2018; vol. 30 (no. 5); p. 641-647

**Abstract:** Objective: Low-acuity 'fast track' patients represent a large portion of Australian EDs' workload and must be managed efficiently to meet the National Emergency Access Target. The current study determined the relative importance and estimated marginal effects of patient and system-related variables in predicting ED fast track patients who stayed longer than 4 h in the ED. Methods: Data for ED presentations between 1 July 2014 and 30 June 2015 were collected from a large regional Australian public hospital. Only 'fast track' patients were included in the analysis. A gradient boosting machine was used to predict which patients would have an ED length of stay greater or less than 4 h. The performance of the final model was tested using a validation data set that was withheld from the initial analysis. A total of 27 variables were analysed. Results: The model's performance was very good (area under receiver operating characteristic curve 0.89, where 1.0 is perfect prediction). The five most important variables for predicting length of stay were time-dependent and system-related (not patient-related); these were the amount of time taken from when the patient arrived at the ED to: (i) order imaging; (ii) order pathology; (iii) request admission to hospital; (iv) allocate a clinician to care for the patient; and (v) handover a patient between ED clinicians. Conclusions: We identified the most important variables for predicting length of stay greater than 4 h for fast track patients in our ED. Identifying factors that influence length of stay is a necessary step towards understanding ED patient flow and identifying improvement opportunities.

## **A home monitoring service reduces hospital visits**

Norfolk Community Health and Care Trust has reported a reduction in A&E admissions and bed days among a group of high-dependency patients following the introduction of a new remote-monitoring service for people living with heart and lung disease.

The service allows users to check their vital signs at home and was designed to improve quality of life for patients and free up hospital beds and surgery time.

The technology enables clinicians to monitor trends and intervene if readings move outside individual thresholds. It encourages patients to recognise changing symptoms and promotes self-management of their conditions.

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## **A Systematic Review of Criteria-Led Patient Discharge.**

**Author(s):** Lees-Deutsch, Liz; Robinson, Jane

**Source:** Journal of nursing care quality; Sep 2018

**Abstract:** BACKGROUND This article reports on a systematic review conducted to critique safety, quality, length of stay, and implementation factors regarding criteria-led discharge. PURPOSE Improving patient flow and timely bed capacity is a global issue. Criteria-led discharge enables accelerated patient discharge in accordance with patient selection. METHODS A systematic review was conducted to identify literature on criteria-led discharge from 2007 to 2017. The quality of articles was appraised using a tool for disparate studies. Two reviewers extracted relevant data independently. RESULTS Fifteen studies were identified that showed no increase in patient readmission or complication rates with criteria-led discharge, demonstrating patient safety. The quality of the patient discharge was unremarkable. None of the studies showed an increase in length of stay. CONCLUSIONS The safety, quality, and length of stay for patients discharged through criteria-led discharge are inextricably linked to the process adopted for its implementation.

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## **Establishing an ambulatory care service using point-of-care testing diagnostics.**

**Author(s):** Weihser, Philip; Giles, Dominic

**Source:** British journal of hospital medicine (London, England : 2005); Sep 2018; vol. 79 (no. 9); p. 520-523

**Abstract:** The use of ambulatory emergency care services in the NHS has been shown to reduce the emergency inpatient burden and enhance the overall patient experience, while demonstrating a cost saving to the NHS. At the James Paget University Hospital point-of-care testing was used as an enabler within an evidence-based lean service redesign to successfully set up a novel unit. A 3-month pilot period, with limited operational times, showed a dramatic improvement in patient flow through the acute medicine pathway, with an equivalent of 59 bed days saved during the pilot period. Further expansion of the unit to a dedicated area with full 7-day opening allowed a continued improvement in performance. This resulted in a mean length of stay of 115 minutes (a 54% reduction from pre-baseline),

and just 6.1% of an average of 18.1 daily attendances were converted to full admission. This demonstrated a clinical, operational and financial benefit, allowing improved clinical outcomes.

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## **LEAN SIX SIGMA TECHNIQUES TO IMPROVE OPHTHALMOLOGY CLINIC EFFICIENCY.**

**Author(s):** Ciulla, Thomas A; Tatikonda, Mohan V; ElMaraghi, Yehya A; Hussain, Rehan M; Hill, Amanda L; Clary, Julie M; Hattab, Eyas

**Source:** Retina (Philadelphia, Pa.); Sep 2018; vol. 38 (no. 9); p. 1688-1698

**Abstract:** PURPOSE Ophthalmologists serve an increasing volume of a growing elderly population undergoing increasingly complex outpatient medical care, including extensive diagnostic testing and treatment. The resulting prolonged patient visit times ("patient flow times") limit quality, patient and employee satisfaction, and represent waste. Lean Six Sigma process improvement was used in a vitreoretinal practice to decrease patient flow time, demonstrating that this approach can yield significant improvement in health care.

METHODS Process flow maps were created to determine the most common care pathways within clinic. Three months' visits from the electronic medical record system, which tracks patient task times at each process step in the office were collected. Care tasks and care pathways consuming the greatest time and variation were identified and modified. Follow-up analysis from 6 weeks' visits was conducted to assess improvement. RESULTS Nearly all patients took one of five paths through the office. Patient flow was redesigned to reduce waiting room time by having staff members immediately start patients into one of those five paths; staffing was adjusted to address high demand tasks, and scheduling was optimized around derived predictors of patient flow times. Follow-up analysis revealed a statistically significant decline in mean patient flow time by 18% and inpatient flow time SD by 4.6%. Patient and employee satisfaction scores improved. CONCLUSION Manufacturing industry techniques, such as Lean and Six Sigma, can be used to improve patient care, minimize waste, and enhance patient and staff satisfaction in outpatient clinics.

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## **The joint use of resilience engineering and lean production for work system design: A study in healthcare.**

**Author(s):** Rosso, Caroline Brum; Saurin, Tarcisio Abreu

**Source:** Applied ergonomics; Sep 2018; vol. 71 ; p. 45-56

**Abstract:** Although lean production (LP) has been increasingly adopted in healthcare systems, its benefits often fall short of expectations. This might be partially due to the failure of lean to account for the complexity of healthcare. This paper discusses the joint use of principles of LP and resilience engineering (RE), which is an approach for system design inspired by complexity science. Thus, a framework for supporting the design of socio-technical systems, which combines insights from LP and RE, was developed and tested in a system involving a patient flow from an emergency department to an intensive care unit. Based on this empirical study, as well as on extant theory, eight design propositions that support the framework application were developed. Both the framework and its corresponding propositions can contribute to the design of socio-technical systems that are at the same time safe and efficient.

## **Research reveals 690,000 A & E attendances could be avoided if people were supported to better manage their long term conditions**

New research published in the British Medical Quality and Safety journal looks at how well patients feel able to manage their long term conditions such as asthma, diabetes and depression. Those who felt most confident and able to manage their condition and keep themselves well had 38% fewer emergency admissions, and 32% fewer emergency attendances.

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## **Assessing bottlenecks in Emergency Department flow of patients with abdominal pain.**

**Author(s):** Van Der Linden, M Christien; Van Loon, Merel; Feenstra, Nienke S F; Van Der Linden, Naomi

**Source:** International emergency nursing; Sep 2018; vol. 40 ; p. 1-5

**Abstract:** INTRODUCTION Abdominal pain has a wide range of possible causes, which may lead to difficulties in diagnosing and lengthy Emergency Department (ED) stays. In this study, bottlenecks in ED processes of patients with abdominal pain were identified. METHODS Time-points of patients who presented to a Dutch ED with abdominal pain were observed and documented. The institutional review board approved the study. RESULTS In total, 3015 min of patient time were observed in 54 patients. Median length of stay (LOS) was 218 min for admitted patients, and 168 min for discharged patients. For 65 patients (27.4%), LOS exceeded 4 h. Delays were found during the diagnostic process, when multiple physicians were needed in order to make a decision, and during departure. CONCLUSIONS Our study concerning individual patients' time-points provides important insight into delays in the patient journey of patients with abdominal pain. Flow improvement can be achieved by focusing on these bottlenecks, for example by minimizing diagnostic delays and by simultaneous specialists' consultations for patients who need more than one physician. The optimization of ED flow for patients with abdominal pain depends on coordinated efforts between ED staff, medical specialists, radiology and laboratory staff, staff from inpatient units, and hospital supporting services.

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## **Emergency department throughput: an intervention.**

**Author(s):** Haq, Nowreen; Stewart-Corral, Rona; Hamrock, Eric; Perin, Jamie; Khaliq, Waseem

**Source:** Internal and emergency medicine; Sep 2018; vol. 13 (no. 6); p. 923-931

**Abstract:** Shortening emergency department (ED) boarding time and managing hospital bed capacity by expediting the inpatient discharge process have been challenging for hospitals nationwide. The objective of this study is to explore the effect of an innovative prospective intervention on hospital workflow, specifically on early inpatient discharges and the ED boarding time. The intervention consisted of a structured nursing "admission discharge transfer" (ADT) protocol receiving new admissions from the ED and helping out floor nursing with early discharges. ADT intervention was implemented in a 38-bed hospitalist run inpatient unit at an academic hospital. The study population consisted of 4486

patients (including inpatient and observation admissions) who were hospitalized to the medicine unit from March 2013-March 2014. Of these hospitalizations, 2259 patients received the ADT intervention. Patients' demographics, discharge and ED boarding data were collected for from March 4, 2013 to March 31, 2014 for both intervention and control groups (28 weeks each). Chi-square and unpaired t tests were utilized to compare population characteristics. Poisson regression analysis was conducted to estimate the association between intervention and hospital length of stay adjusted for differences in patient demographics. Mean age of the study population was 58.6 years, 23% were African Americans and 55% were women. A significant reduction in ED boarding time ( $p < 0.001$ ) and improvement in early (before 2 PM) hospital discharges ( $p = 0.01$ ) were noticed among patients in the intervention groups. There was a slight but significant reduction in hospital length of stay for observation patients in the intervention group; however, no such difference was noted for inpatient admissions. Our study showed that dedicating nursing resources towards ED-boarded patients and early inpatient discharges can significantly improve hospital workflow and reduce hospital length of stay.

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### **Non-urgent use of emergency departments: populations most likely to overestimate illness severity.**

**Author(s):** Andrews, Hans; Kass, Lawrence

**Source:** Internal and emergency medicine; Sep 2018; vol. 13 (no. 6); p. 893-900

**Abstract:** Patients' overestimation of their illness severity appears to contribute to the national epidemic of emergency department (ED) overcrowding. This study aims to elucidate which patient populations are more likely to have a higher estimation of illness severity (EIS). The investigator surveyed demographic factors of all non-urgent patients at an academic ED. The patients and physicians were asked to estimate the patients' illness severity using a 1-10 scale with anchors. The difference of these values was taken and compared across patient demographic subgroups using a 2-sample t-test. One hundred and seventeen patients were surveyed. The mean patient EIS was 5.22 (IQR 4), while the mean physician EIS was less severe at 7.57 (IQR 3), a difference of 2.35 ( $p < 0.0001$ ). Patient subgroups with the highest EIS compared to the physicians' EIS include those who were self-referred (difference of 2.65,  $p = 0.042$ ), with income  $\leq$  \$25,000 (difference of 2.96,  $p = 0.004$ ), with less than a college education (difference of 2.83,  $p = 0.018$ ), and with acute-on-chronic musculoskeletal pain (difference of 4.17,  $p = 0.001$ ). If we assume the physicians' EIS is closer to the true illness severity, patients with lower socioeconomic status, lower education status, who were self-referred, and who suffered from acute-on-chronic musculoskeletal pain are more likely to overestimate their illness severity and may contribute to non-urgent use of the ED. They may benefit from further education or resources for care to prevent ED misuse. The large difference of acute-on-chronic musculoskeletal pain may reflect a physician's bias to underestimate the severity of a patients' illness in this particular population.

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### **Accountability: A magic bullet for emergency care delays and healthcare access blocks.**

**Author(s):** Innes, Grant

**Source:** Healthcare management forum; Sep 2018; vol. 31 (no. 5); p. 172-177

**Abstract:**Emergency care delays are one link in a chain of access blocks that permeate our healthcare system. Community patients blocked in hospitals, in-patients blocked in emergency departments, emergent patients blocked in ambulances. The root cause is failure to define, expect, or manage accountability. The easy response to a heavy patient surge is to block access. This protects programs from care demands that would otherwise mandate innovation, and displaces problems to leaders who cannot solve them—a recipe for perpetual dysfunction. Accountability is the evolutionary stressor required to drive system change. The key is a framework defining accountability zones and program expectations. This article focuses on emergency access block, but the proposed solution is relevant across the system.

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### **Reducing emergency admissions: unlocking the potential of people to better manage their long-term conditions**

This briefing summarises research that explores the link between how well people feel able to manage their long-term conditions - such as asthma, diabetes and depression - and their use of health care. The findings show that avoidable health care use would fall and people's quality of life would improve, if they were better supported to manage their long-term conditions. The briefing points to solutions and calls for national policy-makers and the local NHS to take action now, including by prioritising support for self-management in the NHS long-term plan.

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### **Paying for efficiency: Incentivising same-day discharges in the English NHS**

In the latest CHE Research Paper 157, Gaughan et al evaluate a pay-for-efficiency scheme that encourages Since 2010, hospitals in the English NHS receive a higher price for patients treated as same-day discharge than for overnight stays, despite the former being less costly. hospitals to admit and discharge patients on the same calendar day where clinically appropriate

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### **Understanding better how emergency doctors work. Analysis of distribution of time and activities of emergency doctors: a systematic review and critical appraisal of time and motion studies.**

**Author(s):** Abdulwahid, Maysam Ali; Booth, Andrew; Turner, Janette; Mason, Suzanne M

**Source:** Emergency medicine journal : EMJ; Sep 2018

**Abstract:** BACKGROUND Optimising the efficiency and productivity of senior doctors is critical to ED function and delivery of safe patient care. Time and motion studies (TMS) can allow quantification of how these doctors spend their working time, identify inefficiencies in the current work processes and provide insights into improving working conditions, and enhancing productivity. Three questions were addressed: (1) How do senior emergency doctors spend their time in the ED? (2) How much of their time is spent on multitasking? (3) What is the number of tasks completed per hour? METHODS The literature was systematically searched for TMS of senior emergency doctors. We searched for articles

published in peer-reviewed journals in English language from 1998 to 2018 in the following databases: MEDLINE, EMBASE, Scopus, Web of Science and Cochrane. Studies were assessed for methodological quality using evidence-based quality criteria relevant for TMS including duration of observation, observer bias, Hawthorne effect and whether the task classification acknowledged any previous existing schemes. A narrative synthesis approach was followed. RESULTS Fourteen TMS were included. The studies were liable to several biases including observer and Hawthorne bias. Overall, the time spent on direct face-to-face contact with the patient accounted for at least around 25%-40% of the senior doctors' time. The remaining time was mostly spent on indirect clinical care such as communication (8%-44%), documentation (10%-28%) and administrative tasks (2%-20%). The proportion of time spent on multitasking ranged from 10% to 23%. When reported, the number of tasks performed per hour was generally high. CONCLUSION The review revealed that senior doctors spent a large percentage of their time on direct face-to-face contact with patients. The review findings provided a grounded understanding of how senior doctors spent their time in the ED and could be useful in implementing improvements to the emergency care system.

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### **Brief teaching sessions change behaviour in A&E.**

**Author(s):** Grant, Alexander; Stuttard, Matthew; Mitchell, Thomas

**Source:** The clinical teacher; Oct 2018

**Abstract:** BACKGROUND The Accident and Emergency Department (A&E) is a busy environment that requires time- and resource-efficient teaching. Managing cervical spine (c-spine) trauma is often an unfamiliar skill for new doctors starting work in A&E. This study investigated the efficacy of brief teaching interventions in changing clinician behaviour within A&E. The Accident and Emergency Department is a busy environment that requires time- and resource-efficient teaching METHODS: Data for 482 patients receiving c-spine computed tomography (CT) imaging in two Gloucestershire A&Es before and after multimodal departmental teaching were compared. Time taken to CT, indication for CT scan and presence of bony injury were manually recorded from patient management software. RESULTS Following the provision of teaching, the proportion of CT scans performed within 1 hour did not significantly change, from 31% before teaching to 37.6% after teaching ( $p = 0.133$ ); however, the mean number of c-spine CT scans performed per week rose from 14.50 to 23.25 ( $p = 0.0001$ ), and the mean number of CT scans performed per week within 1 hour rose from 4.50 to 8.75 ( $p \leq 0.001$ ). There was no reduction in the quality of these scans, with the proportion detecting bony injury remaining constant, and there was no increase in the proportion of scans not indicated by National Institute for Health and Care Excellence guidelines. CONCLUSIONS This study demonstrates that brief, low-resource teaching can be associated with a positive change in clinician behaviour. This intervention was straightforward to implement and is likely to be transferable to other guideline-driven investigations. Limitations include the patient cohort being proportionately older than that found in major trauma centres, and a lack of data on patients in whom CT scans were indicated but not performed.

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**Ice cream rounds: The adaptation, implementation, and evaluation of a peer-support wellness rounds in an emergency medicine resident training program.**

**Author(s):** Calder-Sprackman, Samantha; Kumar, Thara; Gerin-Lajoie, Caroline; Kilvert, Megan; Sampsel, Kari

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**Abstract:** Introduction/Innovation Concept: Emergency medicine (EM) requires physicians to deal with acutely ill patients in a fast-paced and dynamic environment, which creates a barrier to debriefing after critical events. These unique challenges can negatively impact wellness. We sought to adapt and implement a peer-support wellness program called 'Ice Cream Rounds' in an EM residency setting. Methods: A needs assessment survey was conducted among EM residents at The University of Ottawa to gauge interest and obtain resident input regarding program design. The structure of the sessions was adapted from similar initiatives in Canadian Pediatric Residency programs. Curriculum, Tool or Material: Confidential peer-support sessions were created and piloted. Residents preferred peer facilitators, rather than staff, so two residents obtained training the Faculty of Medicine's Wellness Program to lead sessions. Attendance at rounds was voluntary; however, overall attendance was recorded along with feedback from pilot sessions. Discussion topics included difficult patient encounters, poor patient outcomes, challenges in residency, and ethical issues. Post implementation feedback demonstrated that Ice Cream Rounds was a helpful forum for residents to discuss important issues with colleagues. Conclusions: This is the first Canadian EM training program to adapt, implement, and evaluate peer-support wellness rounds for debriefing, and this initiative can be easily adopted by any EM training program.