Emergency general surgery: challenges and opportunities

Research report
Watson R, Crump H, Imison C, Currie C, Gaskins M

Notes
The Royal College of Surgeons of England commissioned the Nuffield Trust to examine the challenges facing emergency general surgery (EGS) and identify some of the possible opportunities for overcoming them. The authors found that the “most significant challenges faced by emergency general surgery include variation in outcomes, workforce, organisational and operational issues and underlying demographic and epidemiological trends. At the heart of these challenges are two inter-related issues. Firstly, the desire to reduce variation in outcomes for EGS (particularly high risk surgery) and second, the need to resolve the tension between increasing pressures to centralise EGS services while political and demographic pressures argue for sustaining local access.” The report suggests that the “quickest gains could be achieved through the systematic use of protocols and pathways” including evidence-based guidelines, protocols, checklists, and care bundles.
The report also suggests that the “most comprehensive means to address the challenges faced by EGS would be the development of managed clinical networks. We also recommend that all hospitals consider the potential for new roles in EGS. Finally, we have laid out options for future training models, which would be the longest-term solution to the challenges facing EGS.”

The adoption and use of digital health and care record systems: International success factors
Hillier K, Lisa-Nicole S, Mohla C, Franklin L, Millen D, Goriwoda R

This short (26-page) report stems from a collaboration between NHS England and US Department of Health and Human Services that sought to “investigate ‘what good looks like’ in terms of the successful adoption and optimization of digital care records for patients.” The report sets out what they term primary and secondary attributes of successful adoption. The primary attributes identified include:

- Ownership and inclusiveness needs to be felt by all staff, with support for patient care as the central focus of the deployment and genuine leadership commitment.
- A solid core standardised and reliable infrastructure is imperative (i.e. networks and databases) which is able to support clinical and reporting requirements.
- Establish and maintain a strong working relationship with the vendor/supplier.
- Interoperability with other systems is imperative.

Secondary attributes included:

- System workflow design should be a top priority and follow intuitive care pathways where possible.
- Training should be continuous.
- Local expertise and key roles need to be retained, achieving a stable and motivated workforce.
- Easy access and effective use of other health IT technology, including mobile technologies, should be an important part of digital strategy.


Journal articles

Essentials for improving service quality in cancer care
Berry LL, Mate KS
Healthcare [epub].

This commentary, drawing on site visits to cancer care centres and interviews with cancer patients, family members, clinicians, and health care leaders in the USA, proposes six “essentials” for improving service quality in cancer care. The six factors are:

1. Embrace team-based care
2. Offer concurrent palliative care
3. Prepare family members for caregiving
4. Facilitate continuous connection
5. Broaden the geographic reach of clinical excellence
6. Adopt payment-system reforms.

The extent of medication errors and adverse drug reactions throughout the patient journey in acute care in Australia
Roughead EE, Semple SJ, Rosenfeld E
International Journal of Evidence-Based Healthcare. 2016 [epub].

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<thead>
<tr>
<th>DOI</th>
<th><a href="http://dx.doi.org/10.1097/XEB.0000000000000075">http://dx.doi.org/10.1097/XEB.0000000000000075</a></th>
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<td>Notes</td>
<td>This study combined a review of evidence with evidence from previous reviews of medication safety in the acute care setting in Australia conducted in 2002 and 2008 in order to drive an estimate of the numbers of medication errors and adverse drug reactions that occur along a person's journey through their hospital stay in Australia. The authors report that the “Findings from the Australian literature across the two previous reviews of medication safety and the present review indicate the proportion of all hospital admissions that are medication-related is between 2 and 3%. Furthermore, • there may be an overall rate of two errors for every three patients at the time of admission to hospital. • prescription error rates of up to one error per patient occur in the hospital system. errors (excluding errors of timing) occur in around 9% of medication administrations in hospital. • at hospital discharge, errors in medication documentation in discharge summaries may occur at a rate of up to two errors per patient. These lead the authors to conclude that “Medication safety in the various stages of the patient journey through acute care in Australia continues to be a significant problem. However, the extent of medication-related problems in acute care needs to be interpreted within the context of increasingly complex health care. There are an estimated 230 000 medication-related hospital admissions occurring per year. This suggests an annual cost of medication-related admissions of AU$1.2 billion.”</td>
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For information on the Commission’s work on medication safety, see http://www.safetyandquality.gov.au/our-work/medication-safety/

Preventability and causes of readmissions in a national cohort of general medicine patients

International validity of the hospital score to predict 30-day potentially avoidable hospital readmissions
Donzé JD, Williams MV, Robinson EJ, Zimlichman E, Aujesky D, Vasilevsakis EE, et al

Readmissions, Observation, and the Hospital Readmissions Reduction Program
Zuckerman RB, Sheingold SH, Orav EJ, Ruhter J, Epstein AM
Quasi-experimental evaluation of the effectiveness of a large-scale readmission reduction program
Jenq GY, Doyle MM, Belton BM, Herrin J, Horwitz LI
JAMA Internal Medicine. 2016 [epub].

DOI
Auerbach et al [http://dx.doi.org/10.1001/jamainternmed.2015.7863]
Donzé et al [http://dx.doi.org/10.1001/jamainternmed.2015.8462]
Zuckerman et al [http://dx.doi.org/10.1056/NEJMsa1513024]
Jenq et al [http://dx.doi.org/10.1001/jamainternmed.2016.0833]

Notes
A series of items on the seemingly perennial topic of readmission. Auerbach and colleagues conducted an observation study covering 1000 general medicine patients readmitted within 30 days of discharge to 12 US academic medical centers by surveying surveyed patients and physicians, reviewed documentation, and performed 2-physician case review to determine preventability of and factors contributing to readmission. They found that “Approximately one-quarter of readmissions are potentially preventable when assessed using multiple perspectives. High-priority areas for improvement efforts include improved communication among health care teams and between health care professionals and patients, greater attention to patients’ readiness for discharge, enhanced disease monitoring, and better support for patient self-management.”

Donzé and colleagues sought to validate a scoring tool (the HOSPITAL score) that may allow hospitals to identify patients at risk of re-admission. This was a retrospective cohort study of 117,065 adult patients consecutively discharged alive from the medical department of 9 large hospitals across 4 different countries. The HOSPITAL score includes the following predictors at discharge: haemoglobin, discharge from an oncology service, sodium level, procedure during the index admission, index type of admission (urgent), number of admissions during the last 12 months, and length of stay. The conclusion here was that “The HOSPITAL score identified patients at high risk of 30-day potentially avoidable readmission with moderately high discrimination and excellent calibration when applied to a large international multicenter cohort of medical patients. This score has the potential to easily identify patients in need of more intensive transitional care interventions to prevent avoidable hospital readmissions.”

Zuckerman and colleagues examined the [US] Hospital Readmissions Reduction Program, which is included in the Affordable Care Act (ACA), that applies financial penalties to hospitals that have higher-than-expected readmission rates for a range of targeted conditions. The study examined changes in readmission rates and stays in observation units over time for targeted and non-targeted conditions and assessed whether hospitals that had greater increases in observation-service use had greater reductions in readmissions. The authors report that

- readmission rates for both targeted and non-targeted conditions began to fall faster in April 2010, after the passage of the legislation. Readmission rates continued to decline from October 2012 through May 2015, albeit at a slower rate.
- the passage of the ACA was associated with a more substantial decline in readmissions …for targeted than for non-targeted conditions.
- the rate of observation-service use for both types of conditions was increasing throughout the study periods.
- there was no significant association within hospitals between increases in observation-service use and reductions in readmissions during the implementation period.

Jenq and colleagues report on an intervention in a US an urban academic medical
centre that targeted high-risk discharge patients. The intervention consisted of personalised transitional care, including education, medication reconciliation, follow-up telephone calls, and linkage to community resources and was provided to more than 10,000 patients. The authors report that “The adjusted readmission rate decreased from 21.5% to 19.5% in the target population and from 21.1% to 21.0% in the control population, a relative reduction of 9.3%. The number needed to treat to avoid 1 readmission was 50”.

Si D, Runnegar N, Marquess J, Rajmokan M and Playford EG.
Med J Aust 2016; 204 (7): 276
DOI http://dx.doi.org/10.5694/mja15.00957

This item from the Centre for Healthcare Related Infection Surveillance and Prevention (CHRISP) adds important information to existing knowledge of the epidemiology of healthcare-acquired bloodstream infections (HA-BSIs). All episodes of BSI in adults (≥ 14 years old) in Queensland were subject to prospective surveillance by infection control practitioners using surveillance definitions adapted from the Centers for Disease Control and Prevention / National Healthcare Safety Network definitions. Surveillance results are reported for 23 medium to large hospitals accounting for 85% of public hospital activity in Queensland, between 2008 and 2012. Most of the 8092 HA-BSIs (79%) were associated with inpatient stay, however 21% were acquired during outpatient or same day admissions, including chemotherapy, haematology and haemodialysis settings. About one-third of HA-BSIs were intravascular catheter BSIs, mostly associated with central venous lines, but only 5% of these were attributable to ICUs. S. aureus was responsible for 18% of HA-BSIs. Twenty-four per cent of S. aureus BSIs (344 of 1429) were acquired in non-inpatient settings. The inpatient HA-BSI rate in Queensland public hospitals was 5.5–6.4 per 10 000 patient-days.

BMJ Quality and Safety
May 2016, Vol. 25, Issue 5
URL http://qualitysafety.bmj.com/content/25/5

A new issue of BMJ Quality and Safety has been published. Many of the papers in this issue have been referred to in previous editions of On the Radar (when they were released online). Articles in this issue of BMJ Quality and Safety include:

- Editorial: The Zen of quality improvement: the waves and the tide form a unity (Charles L Bosk)
- Editorial: Paperless handover: are we ready? (Arpana R Vidyarthi, Maitreya Coffey)
- Secular trends and evaluation of complex interventions: the rising tide phenomenon (Yen-Fu Chen, Karla Hemming, A J Stevens, R J Lilford)
- Sleep deprivation and starvation in hospitalised patients: how medical care can harm patients (Tim Xu, Elizabeth C Wick, Martin A Makary)
- Computerised prescribing for safer medication ordering: still a work in progress (G D Schiff, T-T T Hickman, L A Volk, D W Bates, A Wright)
- The problem with preventable deaths (Helen Hogan)
- Half-life of a printed handoff document (Glenn Rosenbluth, Ronald Jacobia, Dimiter Milev, Andrew D Auerbach)
• Failure mode and effects analysis: a comparison of two common risk prioritisation methods (Lisa M McElroy, Rebeca Khorzad, Anna P Nannicelli, Alexandra R Brown, Daniela P Ladner, Jane L Holl)

• Exploring the impact of consultants’ experience on hospital mortality by day of the week: a retrospective analysis of hospital episode statistics (Milagros Ruiz, Alex Bottle, Paul P Aylin)

• Implementation of HIV treatment as prevention strategy in 17 Canadian sites: immediate and sustained outcomes from a 35-month Quality Improvement Collaborative (Christina M Clarke, Tessa Cheng, Kathleen G Reims, Clemens M Steinbock, Meaghan Thumath, R S Milligan, R Barrios)

• Psychometric properties of the AHRQ Community Pharmacy Survey on Patient Safety Culture: a factor analysis (Ephrem A Aboneh, Kevin A Look, Jamie A Stone, Corey A Lester, Michelle A Chui)

• Role of emotional competence in residents’ simulated emergency care performance: a mixed-methods study (Leonore Bourgeon, Mourad Bensalah, Anthony Vacher, Jean-Claude Ardouin, Bruno Debien)

• Environmental factors and their association with emergency department hand hygiene compliance: an observational study (Eileen J Carter, Peter Wyer, James Giglio, Haomiao Jia, G Nelson, V E Kauari, E L Larson)

• Implementation of a quality improvement initiative to reduce daily chest radiographs in the intensive care unit (Eric Sy, Michael Luong, Michael Quon, Young Kim, Sadra Sharifi, Monica Norena, Hubert Wong, Najib Ayas, Jonathon Leipsic, Peter Dodek)

International Journal for Quality in Health Care
Vol. 28, No. 2
April 2016

URL http://intqhc.oxfordjournals.org/content/28/2?etoc

Notes
A new issue of the International Journal for Quality in Health Care has been published. Many of the papers in this issue have been referred to in previous editions of On the Radar (when they released online). Articles in this issue of the International Journal for Quality in Health Care include:

• Editorial: Work environment and quality improvement in healthcare (Usman Iqbal, Shabbir Syed-Abdul, Yu-Chuan (Jack) Li)

• Lean interventions in healthcare: do they actually work? A systematic literature review (John Moraros, Mark Lemstra, Chijioke Nwankwo)

• Applying the WHO conceptual framework for the International Classification for Patient Safety to a surgical population (L M McElroy, D M Woods, A F Yanes, A I Skaro, A Daud, T Curtis, E Wymore, J L Holl, M M Abecassis, D P Ladner)

• Development and evaluation of an automated fall risk assessment system (Ju Young Lee, Yinji Jin, Jinshi Piao, Sun-Mi Lee)


• Development and psychometric characteristics of the pediatric inpatient experience survey (PIES) (Sonja I Ziniel, Jean A Connor, Dionne Graham, Jennifer Koch Kupiec, Nina A Rauscher, Amanda S Growdon, Anne
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<tr>
<th>Editors</th>
<th>Berger, Kathy J Jenkins, Sion Kim Harris</th>
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<td>Notes</td>
<td>• <strong>Patients' informational needs</strong> while undergoing brachytherapy for cervical cancer (Deirdré Long, Hester Sophia Friedrich-Nel, G Joubert)</td>
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<td>Notes</td>
<td>• Observations on <strong>quality senior health business</strong>: success patterns and policy implications (Ya-Ting Yang, Yi-Hsin Elsa Hsu, Ya-Mei Chen, Shyi Su, Yao-Mao Chang, Usman Iqbal, Handa Yujiro, Neng-Pai Lin)</td>
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<td>Notes</td>
<td>• Types and patterns of <strong>safety concerns in home care</strong>: client and family caregiver perspectives (Catherine E Tong, Joanie Sims-Gould, Anne Martin-Matthews)</td>
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<td>Notes</td>
<td>• Does the patient's inherent rating tendency influence reported <strong>satisfaction scores</strong> and affect division ranking? (Patricia Francis, Thomas Agoritsas, Pierre Chopard, Thomas Perneger)</td>
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<td>Notes</td>
<td>• A randomized, controlled trial of team-based competition to increase learner participation in <strong>quality-improvement education</strong> (Charles D Scales Jr, Tannaz Moin, Arlene Fink, Sandra H Berry, Nasim Afsar-Manesh, Carol M Mangione, B Price Kerfoot)</td>
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<td>Notes</td>
<td>• Using mixed methods to evaluate <strong>perceived quality of care</strong> in southern Tanzania (Tara Tancred, Joanna Schellenberg, Tanya Marchant)</td>
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<td>Notes</td>
<td>• <strong>Patient complaints</strong> about hospital services: applying a complaint taxonomy to analyse and respond to complaints (Reema Harrison, Merrilyn Walton, Judith Healy, Jennifer Smith-Merry, Coletta Hobbs)</td>
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<td>Notes</td>
<td>• Incidence and impact of proxy response in <strong>measuring patient experience</strong>: secondary analysis of a large postal survey using propensity score matching (Chris Graham)</td>
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<td>Notes</td>
<td>• Nurse staffing and the work environment linked to <strong>readmissions</strong> among older adults following elective total hip and knee replacement (Karen B Lasater, Matthew D Mchugh)</td>
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<td>• Should quality goals be defined for <strong>multicenter laboratory testing</strong>? Lessons learned from a pilot survey on a national surveillance program for diabetes (Limin Wang, Nanxun Mo, Richard Pang, Qian Deng, Yong Liu, Yan Hu, Chaohui Hu, Linhong Wang)</td>
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**BMJ Quality and Safety** online first articles

| URL | [http://qualitysafety.bmj.com/content/early/recent](http://qualitysafety.bmj.com/content/early/recent) |

**Notes**

**BMJ Quality and Safety** has published a number of ‘online first’ articles, including:

• Editorial: Learning how to make **routinely available data** useful in guiding **regulatory oversight** of hospital care (Martin Bardsley)

• Intelligent Monitoring? Assessing the ability of the Care Quality Commission's **statistical surveillance tool** to predict quality and prioritise NHS hospital inspections (Alex Griffiths, Anne-Laure Beaussier, David Demeritt, Henry Rothstein)

• Editorial: Exclusions in the **denominators of process-based quality measures**: the missing link in understanding performance or ecological fallacy? (Perla J Marang-van de Mheen, Brahmajee K Nallamothu)

• A scoping review of **online repositories of quality improvement** projects, interventions and initiatives in healthcare (Jessica P Bytautas, Galina Gheihman, Mark J Dobrow)
International Journal for Quality in Health Care has published a number of ‘online first’ articles, including:

- Development and testing of the cancer multidisciplinary team meeting observational tool (MDT-MOT) (Jenny Harris, Cath Taylor, Nick Sevdalis, Rozh Jalil, and James S A Green)

Online resources

[UK] NICE Guidelines and Quality Standards
http://www.nice.org.uk
The UK’s National Institute for Health and Care Excellence (NICE) has published new (or updated) guidelines and quality standards. The latest updates are:

- NICE Quality Standard QS121 Antimicrobial stewardship
  https://www.nice.org.uk/guidance/qs121

For information on the Commission’s work on antimicrobial stewardship, see

Draft Guidelines for Safe Use of Subcutaneous Insulin Delivery across the Continuum of Care
http://www.ismp.org/sc?id=1707
The Institute for Safe Medication Practices has released these draft guidelines. The guidelines were developed following a summit on the Safe Use of Subcutaneous Insulin Delivery across the Continuum of Care for adults held in November 2015. The summit reviewed the evidence surrounding the current risk and come to consensus on practice guidelines designed to facilitate the safe use of subcutaneous insulin. The guidelines were established through expert group consensus, based on knowledge of current practice as well as a review of the literature and professional and regulatory standards. These draft statements are now available for public consideration and comment.

For information on the Commission’s work on medication safety, including the National Inpatient Medication Chart (subcutaneous insulin) see http://www.safetyandquality.gov.au/our-work/medication-safety/

[USA] Effective Health Care Program reports
http://effectivehealthcare.ahrq.gov/
The US Agency for Healthcare Research and Quality (AHRQ) has an Effective Health Care (EHC) Program. The EHC has released the following final reports and updates:

- Imaging for the Pretreatment Staging of Small Cell Lung Cancer
  https://www.effectivehealthcare.ahrq.gov/search-for-guides-reviews-and-reports/?pageaction=displayproduct&productID=2210

- Diabetes Medications for Adults with Type 2 Diabetes: An Update
  https://www.effectivehealthcare.ahrq.gov/search-for-guides-reviews-and-reports/?pageaction=displayproduct&productID=2215
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