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**QUALITY &
SAFETY** in
HEALTHCARE

26-28 April 2017
ExCel London

Conference Proceedings

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This Conference Proceedings contains work submitted to us via our Call for Posters for this year's International Forum taking place in London, UK, on 26-28 April 2017.

The work volunteered by abstract authors for inclusion in this booklet is a reflection and a celebration of what the global quality improvement community has achieved over the past few years. You can find many projects from teams in countries such as UK, Singapore, Sweden, Australia, Nigeria, Brazil and more.

Thank you to all those who have shared their work and have made it available in this digital format.

We hope you enjoy this selection of abstracts and will join the International Forum improvement community to share your experiences, challenges, improvement successes and failures at our future events.

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Reducing prescribing errors through better feedback. A collaborative study across North West London hospitals

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Background

In 2013 we developed the Prescribing Improvement Model (PIM), which aimed to improve patient safety by improving identification of prescribers and reducing prescribing errors in the hospital setting. The 'change theory' was that provision of feedback on prescribing errors would facilitate learning, reflection and changes to practice, and thus increase the safety of prescribing. Following successful local introduction and evaluation, we wanted to roll out the PIM interventions across North West London and to explore the extent to which the model could be used in other organisations. UK studies show that prescribing errors occur in 1-15% of inpatient medication orders. A common theme of the causes of prescribing error is that doctors get little feedback on errors they make, and are often unaware of having made them. One of the reasons for limited feedback in hospitals using paper-based prescribing is that prescribers can often not be identified from handwritten signatures.

Method

PIM was based on a three-part intervention: 1. To increase proportion of inpatient medication orders for which the prescriber has specified their name, in order to facilitate identification of prescribers; 2. To provide training to pharmacists to improve quality, consistency and frequency of feedback; 3. To facilitate shared learning from common and/or serious errors among pharmacists and doctors across North West London. 13 hospitals from 7 trusts took part. Prescribers were provided with name stamps and briefed about PIM. Pharmacists were provided with training on feedback techniques. A 'good prescribing tip of the fortnight' was sent to prescribers and pharmacists via email. The process measure was the proportion of inpatient medication orders for which the prescriber was identifiable. Outcome measures were prevalence of erroneous medication orders (established via pharmacists' data collection) and prescribers' and pharmacists' attitudes to feedback (quantitative questionnaire).

Outcome

Findings suggest wide variation among hospitals in prescriber identification with some hospitals demonstrating significant improvements; there was no change overall. We identified a significant improvement in attitudes around feedback ($p < 0.001$; unpaired t-test) and a small but statistically significant reduction in prescribing errors (pre-intervention 11%, post-intervention 9%; $p = 0.003$; chi-squared test), with wide variation among hospitals. In one hospital, prescriber identification worsened post-intervention, due to a number of local factors. Removing this hospital from the calculation of overall effect on prescriber identification, the overall percentage of identifiable medication orders increased from 21% to 26% ($p < 0.001$; chi-squared test). It was noted that two hospitals that had statistically significant improvements; in both cases the drug chart was redesigned as part of the intervention.

Conclusion

Following the introduction of a three-part intervention to improve feedback to prescribers on prescribing errors across thirteen hospitals, we identified an overall improvement in attitudes around feedback and a small but statistically significant reduction in prescribing error rates. We recommend that feedback should be part of a multifactorial approach to reduce prescribing errors. We believe working relationships between pharmacists and prescribers have also strengthened and we have raised awareness of the importance of providing meaningful feedback.

Using Electronic Discharge Information to improve patient safety in anticoagulant prescribing

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Background

This project was in a large teaching hospital with some 50,000 annual admissions looking at the prescribing of the direct oral anticoagulants (DOAC) for treatment of venous thromboembolism. There was concern around safe prescribing of these drugs around loading and maintenance dose, duration of therapy and appropriate follow up after 3-6 months treatment as dictated by NICE.

Method

Radiological reporting was used to identify all thrombotic events then positive events were cross checked with the patient management system to see if they met the criteria to be termed hospital acquired thrombosis. This being any blood clot either diagnosed during an inpatient stay but not present on admission or within 90 days of hospital discharge. The prescribing information for all thrombotic events was then reviewed, using the electronic discharge system, to ensure the dosing was correct and appropriate follow up had been organised. The project started at the beginning of 2016 and within the first nine months 70 patients were identified who either had errors in their anti-coagulation prescribing or not been followed up as national guidance stated. As there are three main areas within the hospital where most DVT and PE diagnoses are made being the DVT clinic, ambulatory care and the acute GP service, these were the areas targeted when the project started.

Outcome

We have picked up these errors as detailed above and prevented many prescribing errors and possible patient harm. With the advent of duty of candor this is increasingly important. We have also ensured that NICE guidance around patient follow up is now being complied with and ensuring appropriate long term decisions are made.

Conclusion

Using electronic discharge and review of all new anti-coagulation prescribing for thrombosis has reduced errors, improved patient care and safety and ensured follow up of this patients has been carried out in an appropriate manner.

Hardwiring Safety at Toronto Rehab, University Health Network

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Background

Toronto Rehab (TR), University Health Network (UHN) is a five site rehabilitation, complex continuing care hospital and long-term care hospital, with 557 inpatient beds, in Toronto, Ontario, Canada. TR assists adults overcoming challenges of disabling injury, illness or age related health conditions to live active, healthier and more independent lives.

Method

Embracing safety as a core value, anticipating failure, having reliable processes and respect are key aspects of a culture of safety. In health care settings where these components exist, team members feel empowered to voice concerns. UHN is on a journey to become a high reliability organization. In 2015, TR implemented daily safety huddles to improve patient and staff safety. Huddles assist in creating a safety culture by giving staff and physicians a forum to share real-time safety concerns, raise opportunities for improvement and to identify good catches. This enables TR staff and physicians to live safety as a core value. The huddle process involves morning huddles on each unit led by managers, followed by huddles between managers and directors and lastly between directors and the Senior Vice President and executive lead of TR. By 11 am each day, executive level support is available for safety issues should escalation be required.

Outcome

Using electronic discharge and review of all new anti-coagulation prescribing for thrombosis has reduced errors, improved patient care and safety and ensured follow up of this patients has been carried out in an appropriate manner.

Conclusion

Huddles encourage reporting of safety concerns. All staff are engaged, making safety a priority and collaborating to create a safer environment for both patients and staff.

An important lesson is early engagement of leaders. Leaders lay the foundation for a just culture, for staff to speak openly about safety and to encourage staff to take the time for huddles. Data analyzed from issues tracked over the past year reveals that more focus is needed on communication, facilities issues and unit awareness of practice issues related to falls. Quality improvement plans are currently being developed to address these areas.

Digitizing quality data collection: Creating an open source Quality Data Management System in Anesthesia & OT department - Al Baraha Hospital - Dubai - UAE

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Background

Al Baraha Hospital is a 250-bed JCI accredited general medical/surgical hospital in Dubai, the United Arab Emirates. Anaesthesia department in Al Baraha Hospital consists of: four Major operation theatres, Post Anaesthesia Care Unit (PACU) and reception area. The department provide 24/7 service as nurses work on 8 hrs shifts, while doctors are on 24 hrs duty rota. Quality and Excellence (Q & E) Department in Al Baraha Hospital is the department responsible for quality improvement and statistical analysis. Anaesthesia department, each month, should report a total of 7 KPIs (Key performance indicators), 6 pages of statistics and 3 lists. The Target was to digitize the quality related data collection aiming to improve both the outcome (information accuracy) and process efficiency using the current IT infrastructure used by average computer users.

Method

As the department contains 6 (Windows 7) operated PCs, and with nurses basic knowledge about Google/Gmail/Google Chrome, the best approach was to design a Google form contains all the information needed in the requested documents. On submit, the form will deliver the data into a background Google Spreadsheets. The KPIs and statistics will be designed in separate pages on the background Google Spreadsheets, using selected Functions and queries to both calculate different fields in statistics pages and to update nominator/dominator of a KPI.

Outcome

Although the project still in progress, we noticed the following immediate effects: 1. In the manual workflow: only few staff had been involved in data collection. Using the new system, the whole nursing team get involved. In our point of view, this is a great alliance with total quality management concepts; 2. In the manual workflow: the time need to collect 100 patient data was around 56 hrs (the last 7 night shifts in each month), using the new system this time had been cut down to 8.3 Hrs (500 mins: 5 mins to fill the form of each patient); 3. Using the new designed system: no time to be spent on data analysis as the results will be produced spontaneously.

Conclusion

1. Digital transformation could be accomplished using inexpensive methods with few or no downtime, yet it have a transformative power in short period of time.
2. User engagement is crucial, as during pilot trial the highly dedicated nursing team updated the system with data acquired during the whole August, rather than the last 10 days.

ABM University Health Board Gynaecological laparoscopic surgery risk registry (GLSRR) for patient safety and healthcare improvement

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Background

A digital Gynaecological laparoscopic surgery risk registry (GLSRR) was set up in the department of obstetrics and gynaecology. ABMU HB is an NHS organization serving a population of about half a million people through its four hospitals - Singleton, Morriston, Neath Port Talbot and Princess of Wales Hospitals. A total of about 500 – 600 procedures of varying complexity are performed annually. Nearly 250,000 women have laparoscopic surgery in the UK annually. The risk of major life threatening complications including major bowel and vascular damage is rare and can be as low as 1/1000. In 2012 we had two low risk women having serious vascular complications within 3 months. This triggered an external review of the service organized through Royal College of Obstetricians and Gynaecologists. The review concluded with criticism about lack of robust data based evidence as a tool of risk management.

Method

Although all procedures were coded for activity, there was no system in place for recording risk related information. We were doing high quality gynaecological laparoscopic surgery but were not able to produce good quality evidence. It is known that continuous improvement in surgical practices based on high quality feedback is crucial to staying safe and improving outcomes. Collection of risk related data in registries based on quality indicators is recognized as one of the most effective tools of outcome feedback to practitioners to achieve improvements in healthcare. It was proposed to set up a digital gynaecological laparoscopic surgery risk registry integrated within the digital theatre patient management system (TOMS). When the surgeon is writing operation note after performing the surgery, a pop up window opens up with tick boxes and drop down menus relating to evidence based risk factors. It takes altogether about 30 seconds to complete.

Outcome

Strategy for change: The choice of parameters was evidence based and format of the frame was planned in collaboration with clinical colleagues. The integration into digital theatre management system (TOMS) was undertaken. Following strategy proved useful to success: 1. "Risk registry model" chosen as the ideal instrument to bring about improvement in surgical outcomes; 2. Clear lines of responsibility for project management and dedicated time; 3. Regular updates to clinical team during design progress including open forums; 4. Support from management and informatics; 5. Voluntary uptake of change by colleagues; 6. Regular feedback with three monthly and annual audit presentation – open positive and negative feedback.

Measurements of improvement: The change was introduced across the health board. The standard of uptake expected is 100% of procedures to be recorded. The uptake was initially variable but within 1 year the compliance was on an average 85% (range 65-92%) and is improving.

Conclusion

Effects of change: With increasing uptake and regular feedbacks an increased will to get involved was apparent. There was generally an increased awareness and openness regarding the surgical techniques used as well as the equipment. Workshops were organised to demonstrate recommended alternative safer techniques and increase adoption. The transparency, availability of risk factor data and regular feedback to surgeons has given an impetus to a drive to constantly improve our laparoscopic surgery outcomes. Lessons learnt: 1. Setting up of a Risk registry is a suitable tool for clinical governance and risk management; 2. Regular feedback to surgeons including any variance and outliers has the potential of constantly improving quality of outcomes; 3. The data collected in the risk registry gives a constant source of research; 4. The implementation and uptake is a change management exercise, which needs to be an open, transparent and inclusive process; 5. Voluntary uptake works better.

The Performance Measures of Primary Health Care Quality: Experiences of Morocco Primary Health Centers during the 'Quality Contest' in 2010-2014 (41 Centers Audited)

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Background

A recent analysis of the Moroccan health system has identified five dysfunctions (Moroccan Strategy, 2012). These dysfunctions include: 1. Lack of access to health care for the population, especially those in remote rural areas; 2. The very large deficit in human resources; 3. Lack of funding; 4. A crisis of confidence of the population towards their health systems; 5. Deficit in governance. Thus, the aim of the reforms is to prepare it to better meet the increased demand for care (Belghiti, 2008).

The purpose of this article is to discuss the concept of performance measurement in primary health care through a framework called "Quality Contest (QC)." QC is used as a management tool and was implemented from 2007 to improve the quality of the Moroccan health care. The QC encompasses self-assessment, audit, feedback, and the development of improvement plan.

Method

Our introductory question of the subject of search (research) is: Does the implementation of a quality approach (CQ) have an influence on performances of health centers? To answer this question, we opted for an abstract frame that is based on the systematic approach, which has double objective: 1. Dispense to the sick of the quality care and 2. Contribute to the control (master's degree) of the costs and the planning of health care. The abstract frame (executive) was subdivided into dimension based on a system of measure and credible, relevant, objective, and transparent report (relationship).

The audit peer listed 42 primary health care centers between 2010 and 2014 in four editions. The framework is a self-assessment guide which is made up of 42 items divided into 6 Domains. It was filled by the team of primary health center and a scoring guide for auditors including the expectation horizons.

Outcome

This approach is one recommended in this process (CQ). Performance is evaluated according to the dimensions of the conceptual framework based on the stages of the Deming Cycle (Plan, Do, check, and improve). The overall average performance is 42 % with a minimum score of 17% and a maximum score of 88%. However, the poor performance is noted for the various dimensions: Customer Satisfaction (D1) 39%, Safety and Responsiveness (D4) 39%, and Partnership/Community Participation (D6) 39%. The performance according to the steps of the Deming wheel notes a decrease: step plan 61%, step Do 50%, step check 34%, and step improve 14%.

Conclusion

In conclusion, the performance measure in health care remains very difficult and the lack of valid framework complicates this action. The staffs, who work in the primary health care center, suffer from an important lack for the tools to improve the health care quality. The quality contest is a process approach that does not give importance to the results and the effects. The improvement of the primary health care is necessary to pass by the performance measure and search for appropriate evaluation tools.

Sustainable and Safe Nonsterile Glove Use and Safe use Contact Precautions for Phlebotomists

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Background

My Five Moments for Hand Hygiene were developed with the aim of reducing the risk of healthcare associated infections (HAIs). Phlebotomist wears gloves to reduce the risk of HAI to the patient and to themselves. Yet, while the phlebotomist prepares to perform a procedure they may have touched different surfaces before having direct contact with the patient under Contact Precautions (CP) without knowing the contamination risk. These surfaces include bed rails, tourniquet, patient linen, kidney dishes and the instrument tray.

Our study aims to measure the current practice of nonsterile glove use and My Five Moments for Hand Hygiene by phlebotomist whilst patients are under CP, the cost of irrational glove use and the development of sustainable glove use that provides best practice for patient-centered care and staff safety.

Method

This two phase pre- and post-intervention was performed at an Australian major teaching hospital in Sydney between March 2016 to January 2017. Eight phlebotomists were selected randomly and were observed performing 16 common phlebotomy procedures pre- and post-intervention on patients under standard and contact precautions.

Outcome

Pre intervention: 32 phlebotomies were observed over 4 hours on 5 wards. In the pre intervention period compliance with Hand Hygiene Australia's Phlebotomy Guidelines (HHAPG) for blood collection and hand hygiene was 19% (3/16). We identified 62% (5/8) compliance with the critical moment immediately prior to a procedure during Standard Precaution and 25% (2/8) during Contact Precautions.

Post intervention: Compliance with simplified practice guidelines was 88% (7/8) during Standard Precautions and 100% (8/8) during Contact Precautions. Compliance with the critical moment immediately before a procedure was 100 % (8/8) during Standard Precaution and Contact Precautions.

Conclusion

We have highlighted that glove use by phlebotomists is not linked to the healthcare workers' expected exposure to blood or body fluids. Rather, gloves were used to provide a sense of security. We suggest that a simplified standard approach is adopted to address inappropriate glove use and reduce the risk of cross contamination and to improve hand hygiene compliance.

A bundle of interventions to improve patient safety relevant topics in operating rooms

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Background

Patient safety is a hot topic and there are numerous initiatives ongoing, in order to improve patient safety relevant processes. But how can we evaluate these processes which should help to increase the safety of patients and employees with respect to effectiveness and sustainability? Focussing on operating rooms (OR) we developed a bundle of instruments. First, surveys were performed to assess individual perception of employees when using the Surgical Safety Checklist (SSC), secondly, in a certain period of time we collected all used SSCs in order to control SSC-compliance with respect of completion rates and finally we performed "real-time" audits in each of our ORs.

Method

Bundle 1: A validated survey for online assessment of frequency of use, as well as subjective and objective knowledge was used.

Bundle 2: To assess the SSC compliance rate within each department, unannounced audits have been introduced. We tried to identify responders and non-responders of the SSC for further improvement cycles. Two days were determined and announced via email and all SSCs were collected and compared to performed operations.

Bundle 3: All relevant patient safety guidelines and checklists of the University Hospital Graz were screened. Subsequently, questions were extracted from these documents, which were used in a checklist for "real-time" audits by local observers.

Outcome

Bundle 1: In 2015, 99.4% (2014: 91.3%) healthcare professionals stated that they used the SSC and 88.3% (2014: 80.6%) thereof specified having used the SSC in 91 – 100% of all operations.

Bundle 2: Unannounced audits showed that SSCs were used in 93.1% of operations. Among the SSCs used, 42.8% had been partially completed.

Bundle 3: One a 4-point Likert scale (1=very good compliance, 2=good compliance, 3=rather good and 4=none compliant) 18 ORs were audited real-time by two independent observers. Patient identification was performed very good and resulted in 1.1 ± 0.1 (mean \pm SD), the Sign-in resulted in 1.5 ± 1.0 , the Team-Time-Out was performed good (2.1 ± 2.0) and the Sign-out performed even worse (2.4 ± 2.5).

Conclusion

Barriers with respect to low compliance are diverse and can most commonly be triggered by engaged leadership as well as by a checklist that fits into routine procedures. Personnel's conception of the SSC influences its use, even though we observed highly perceived usefulness of the SSC, increased subjective and objective knowledge but less compliance.

In conclusion, we found that the combined approach of assessing compliance by collecting SSCs and real-time audits as well as using surveys appeared to be a useful instrument to investigate the implementation and sustainability of safety tools such as the SSC. The main key in increasing SSC use is a combined strategy of repetitive training and assessment on the part of the involved healthcare professionals [2].

Patient safety-a core competency for all professionals

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Background

There is a huge gap between the need of a safer health care and the content of the Swedish University curriculum for professional careers concerning knowledge of patient safety. A unique inter-professional project has engaged six professional organisations in Swedish health care: The Swedish Society of Nursing, The Swedish Society of Medicine, The Swedish Association of Occupational Therapists, The Swedish Association of Clinical Dieticians, The Swedish Dental Association and The Swedish Association of Physiotherapists. The aim was to stress the importance and describe how to integrate one of the main core competency- Patient safety, for professionals and patients engaged in Quality Improvement and Patient Safety and students in all kinds of health care education.

Method

Based on consensus discussions from an interprofessional workshop guidelines was written together by two authors, a nurse and a medical doctor. The guidelines describe experiences and the state of the art in patient safety and resilient care, making proposals to learning outcomes and provide advice for implementation.

Outcome

Sustainable and Safe Nonsterile Glove Use and Safe use Contact Precautions for Phlebotomists

Conclusion

In order to provide a better and safer health care healthcare professionals needs six key core competencies: person-centered care, teamwork, evidence-based care, quality improvement, patient safety and informatics. They are all interrelated. Patient safety is a core competence that's necessary for tomorrow's health care professionals.

Putting postnatal patients first

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Background

This Postnatal Quality Improvement Project (QIP) was executed within the Whipps Cross University Hospital maternity department. The team comprised; Midwife Improvement Champion, Senior Registrar in Obstetrics and Gynaecology, Consultant Obstetrician, Trust Improvement Consultant, Consultant Paediatrician, Senior Maternity Management and the staff on the postnatal ward. The project was aimed at improving the delivery of care for postnatal women and their families.

The specific problems that the project aimed to address were: 1. Women experience gaps in the support they receive; 2. Women do not always receive sufficient information; 3. Delays in discharge and consequently in flow of patients within maternity; 4. The environment does not support either information sharing or a pleasant experience

Method

Problems were identified through staff focus groups, patient surveys (94 surveys and structured interviews carried out), patient journeys (three in-depth patient diaries) and ward spot checks. A root cause analysis was performed on the data gathered and presented back to staff and patients to ensure it captured all the issues. This was carried out through a workshop led by QIP team members with 50 attendees.

After agreeing the problems at the workshop, it was possible to develop the solution approach. Solutions were condensed into five categories:

1. Create and implement consistent pathways for discharge
2. Clarify roles and responsibilities within the discharge pathways to ensure efficient use of staff
3. Provide consistent and clear patient information
4. Design bespoke communication tools to aid discharge
5. Create a welcoming and efficient environment including a maternity lounge

Outcome

The final project launch was on the 12th April 2016. Both internal staff and external maternity groups were invited to attend together with patients and celebrate the work. The launch took place within the newly designed and decorated maternity lounge on the postnatal ward. Two separate evaluative techniques were used: 1. Staff feedback in an anonymous book at the launch; 2. Repeat patient satisfaction surveys and structured interviews (39 in total).

Impact:

79% of women felt that support from staff with care of their baby was very good or good compared to 54% pre-QIP. 94% of women stated they understood the implications of any complications compared to 26% pre-QIP. 68% women stated they felt informed about postnatal contraception compared to 21% pre-QIP.

Staff felt the reduction in duplication of work gave them more time to actually care for patients and patients praised the level of care they received in the post-QIP survey.

Conclusion

Key messages:

1. Don't be scared of taking on a big project
2. Be systematic and use a QIP tool
3. Cohesive team
4. Promote the importance of change
5. Involve the patient group

Key project impact and changes:

1. Maternity lounge for women and visitors
2. Postnatal discharge book
3. Animated discharge video
4. Family area near ward for visitors
5. Daily discharge talks
6. Targeted discharge pathway

Non-ST Elevation Myocardial Infarction - A New Pathway to Quality

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Background

A retrospective review of all Non-STEMI Acute Coronary Syndrome (ACS) patients admitted between January 2013 and June 2014 leading to the pilot of an acute chest pain unit.

Primary percutaneous intervention and its resulting care pathways have significantly improved mortality for ST elevation myocardial infarction (STEMI) (1). A similar pathway does not exist for Non-STEMI ACS patients, despite high-risk Non-STEMI patients having similar, if not higher 6-month mortality in comparison to STEMI (2). A risk stratification tool can be utilised to predict mortality and to allow cardiologists to prioritise time to angiogram in this group.

The Global Registry of Acute Coronary Events (GRACE) score estimates the risk of recurrent myocardial infarction and death at both thirty days and six months. The National Institute for Health and Care Excellence (NICE) recommends angiography within 96 hours of admission for those at intermediate risk or higher according to GRACE score.

Method

A retrospective review of 438 Non-STEMI ACS patients who were admitted to RSCH during study period. Our main findings:

- a) The GRACE score was documented in 5% of patients. Discussion with peers demonstrated a lack of understanding of its use risk in prioritising patients for angiogram.
- b) 60% of intermediate/ high risk patients underwent angiography within the 96 hour target.
- c) The median length of stay was 4 days, however post angiogram this was only 1 day. This suggests that if time to angiogram were reduced so could length of stay.

We agreed to pilot an acute chest pain unit for one month in which appropriate patients were identified by the Emergency Department and referred directly to the unit where they were seen immediately by cardiologists and risk stratified. Specific angiogram slots were also reserved for these patients. The overall aim was to reduce time to angiogram and length of stay.

Outcome

A further retrospective analysis was carried out of non-STEMI ACS patients who underwent angiography between 11th November and 10th December 2014 during the pilot period. Our main findings:

- a) The GRACE score was not documented by cardiology registrars. This was discussed; it emerged that cardiologists were familiar with adverse prognostic indicators and could prioritise effectively without documenting this score.
- b) 100% of intermediate/ high-risk patients underwent angiography within the 96-hour target.
- c) The median length of stay was halved to 2 days.

Conclusion

The GRACE score was not widely documented by doctors in our study. It appears that cardiologists have enough experience to prioritise patients appropriately, however, if initial assessment is to be carried out by non-cardiologists then better education about its importance is required.

Rapid assessment by cardiologists and the provision of dedicated angiogram slots ensured that 100% of appropriate patients met the 96-hour NICE target and halved the length of stay from 4 to 2 days.

References:

- 1) Myocardial Ischaemia National Audit Project. How the NHS cares for patients with heart attack. London: MINAP, 2010.
- 2) Allen LA, O'Donnell CJ, Camargo CA Jr, Giugliano RP, Lloyd-Jones DM. Comparison of long-term mortality across the spectrum of acute coronary syndromes. Am Heart J 2006;151:1065-71.

Weekend Handover: An Immediate and Cost Neutral Solution for Patient Safety

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Background

A project to improve handover of patient specific information and tasks to the weekend on-call team at Charing Cross Hospital, Imperial College NHS Trust, London.

Good handover is essential to patient-safety; failure to deliver this process poses significant risk to patients (1). A study demonstrated that only 33% of data transferred verbally is retained, improving to 92% with note-taking and reaching 100% with a computer generated pro forma (2). Existing face-to-face weekend handover meetings drew poor attendance with written handover information instead pinned to a board in the doctor's office. This method did not facilitate clarification of handover details nor guarantee confirmed receipt of important information, thus compromising safety.

Method

Doctors on the on-call rota were surveyed to gather feedback on the existing handover process and suggestions for improvement. 68% of respondents felt that the current system had the potential to compromise patient safety. Only 56% knew which bleeps to collect when on call and only 15% knew the bleep numbers for other teams.

With such risk to patient safety highlighted, it was evident that an immediate and affordable intervention was required.

A 'handover' folder was created on a secure shared drive available to all staff. This contained proformas for specific weekends. Each team filled out a specific proforma categorising jobs into grade (SHO/ SPR) and importance (routine/ urgent). This was designed to supplement face-to-face handover and ensure safe and accountable transfer of information.

Bleeps were distributed to all teams ensuring they were contactable. A slide-pack outlining which doctors covered which wards and individual doctor's responsibilities was also included.

Outcome

A repeat survey was performed at an eight-month interval to gather feedback on the new process and potential improvements.

Of the 22 respondents:

- 100% felt that the new system has the potential to improve patient safety.
- 85% felt it facilitates effective handover.
- 93% found it simple to update and easy to access.
- 79% felt it was efficient.
- 90% of doctors knew which bleep to collect when on-call.
- 56% knew the bleep numbers of other teams and how to access them.

Conclusion

We have provided a simple, cost-neutral and immediate process that has the potential to improve communication, handover and patient safety. It is acceptable to doctors and is now used amongst all speciality medical teams within the hospital.

References:

- 1) National Patient Safety Agency (2004) Seven steps to patient safety. London: National Patient Safety Agency.
- 2) Bhabra G, Mackeith S, Monteiro P, Pothier DD. An experimental comparison of handover methods. Ann R Coll Surg Engl 2007;89:298–300.

The Yellow Wristband Project: Raising Awareness of Neutropenic Sepsis

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Background

Reducing time to administration of intravenous (IV) antibiotics in cases of suspected neutropenic sepsis in haematology patients admitted to The Royal Sussex County Hospital, Brighton and Sussex University Hospital NHS Trust, UK. Neutropenic sepsis is associated with significant and increasing mortality. Rates are reported between 2-21% (1) with number of deaths more than doubling between 2001 and 2011 (2). The National Institute for Clinical and Healthcare Excellence (NICE) recommend immediate broad-spectrum IV antibiotic treatment for this medical emergency and trust guidelines therefore advise a door-to-needle time of less than 1 hour for administration.

Method

A retrospective review of all cases of suspected neutropenic sepsis over a 3-month period was conducted (n=23). We aimed to identify the percentage of patients that received IV antibiotics within one hour and whether this differed depending on whether patients were admitted via the Emergency Department (ED), the haematology day-unit or ward, or were current inpatients on a non- haematology ward.

The door-to-needle time of less than one hour was achieved in 16/23 (70%) of cases. Where this target was not met, we compared this with route of admission and calculated the average door-to-needle time. The longest delay was of 15 hours and 25 minutes for a patient on an outlying ward.

Regarding this case, doctors were not contacted at the time of presentation. On discussion with nursing staff involved they stated that they were not aware of the need for prompt referral and treatment in cases of neutropenic sepsis.

Outcome

These findings were presented at a chemotherapy multidisciplinary group meeting. It was clear that we needed to improve the overall door-to-needle time to 100% but that we also needed to address the variation of care standards by patient location. We proposed the introduction of a yellow wristband to highlight patients at risk of neutropenic sepsis. Patients would be provided with yellow wristbands in an outpatient setting at the time of counselling on neutropenic sepsis. Wristbands would be made available in ED and wards and education on this policy provided for clinical staff.

A three-month pilot was agreed with a plan to review with clinical staff and patients after this point. Following this pilot, we will review overall door-to-needle time and examine variation in care provided by location. We will hold focus groups with patients to gauge acceptability and specific improvements and with nurses to ascertain whether the profile of neutropenic sepsis has been increased.

Conclusion

We have identified that we are only achieving an acceptable door-to-needle time in 70% of our cases but more strikingly that there is significant variation in the care we are providing to our patients by location within our hospital.

We propose a simple and affordable educational tool to increase awareness of this important emergency for both patients and members of the multidisciplinary team.

This work was initially only amongst haematology patients on chemotherapy but has received wide interest from patients and staff and is therefore being considered as an educational tool for all patients with sepsis within the trust.

References:

1. Barnes RA. Infection in cancer and transplantation. *Medicine*. 2013; 41 (11): 624-7
2. Clarke RT. Neutropenic sepsis: management and complications. *Clinical Medicine*. 2013;13(2): 185-7

The EPIQ workshop: simulation-based quality improvement learning for clinical teams

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Background

Health care providers and administrators are often overwhelmed by the number and complexity of quality improvement (QI) interventions, tools and methodologies. The Evidence-based Practice for Improving Quality (EPIQ) training workshop has been a key component of 4 multicentre clinical studies in Canada since 2002, all demonstrating improvements in morbidities in Canadian neonatal intensive care units. Following these successes, the EPIQ workshop was re-engineered to demystify QI planning for health care teams, so they can design, execute, and share QI projects.

Method

Early EPIQ course agendas were deconstructed and reassembled into 10 logical steps. Literature searches (PubMed and Omnifile) identified evidence-based tools. A social constructivist educational design gave each step a brief, a simulated exercise, and time to reflect and share. The result was a collaborative, team-based, interprofessional learning workshop that addressed real-life issues – so participants were able to learn from one another, and from more experienced or knowledgeable peers and facilitators.

The dissemination model followed the “Utstein principle” (of the International Liaison Committee on Resuscitation): a successful educational program needs (a) good clinical science, (b) effective educational science, and (c) efficient dissemination science. By the end of a workshop, participating teams can address a real-life QI issue by outlining the principles of QI, following 10 practical steps, and completing aim and plan-do-study-act documents.

Outcome

This simulation-based workshop, designed from first principles, is relevant to post- and undergraduate learners and has been well received by health providers in Canada, Africa and Asia. Participants mostly agreed or strongly agreed that the workshop had useful content and that the delivery was effective. The workshop is being adapted for a postgraduate medical curriculum at the University of Alberta. Pilot studies are under way in urban and rural Ethiopia.

Conclusion

The EPIQ workshop trains QI methods to health care providers and administrators irrespective of experience or health care system. Course participants in India, Canada and Ethiopia have perceived the workshop as both useful and effective, reinforcing the generalizability of the methodology. The EPIQ workshop will expand the reach of QI training to both post- and undergraduate learners.

The Effect of Using Braden Scale in Early Detection of Pressure Ulcer among Vulnerable Patients at El Manial University Hospital

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Background

This study was implemented at El Manial University Hospital, which is a governmental non-profit organization that provides free health care. Units where bedridden patients are common were included. Pressure ulcers are serious problem that occur frequently in acute and long-term facilities, which can lead to serious complications such as sepsis or even death. Adding to clinical deterioration of the patients' condition, treatment of pressure ulcer is costly and exhausts supplies, equipment, special beds, nutritional support, laboratory investigation and longer length of stay.

Method

A quasi-experimental design used to measure the effect of the educational sessions on the nurses knowledge and performance to care for the pressure ulcer. Descriptive statistics used to describe the sample (nurses and patients). Teaching sessions were held for nurses about pressure ulcers management using the Braden scale for predicting pressure ulcers risk by examining six criteria: sensory perception, moisture, activity, mobility, nutrition, friction and shear. Patients were interviewed and assessed by the trained nurses using Braden scale for free of ulcers on admission. Patients were reassessed several times till discharge. If ulcers developed, it was early detected and treated. The researchers examined nurses' knowledge and skills before and after the teaching sessions and after one month followed by post-test after another month. Patients were reassessed every 72 hours till discharge for minimum 1 week to maximum of 4 weeks.

Outcome

Thirty nurses were trained to use the Braden scale to early detect the patients who are vulnerable to pressure ulcers and provide the appropriate management. Non-probability convenience sampling technique used to recruit 30 nurses and 100 patients.

Results indicated that there were statistically significant increase in nurses' knowledge ($p < 0.05$) from pretest (34.4 ± 9.02) to post test (42 ± 8.9) to one month after posttest (45.75 ± 8.36) and the other 1-month posttest (50.35 ± 7.94). Nurses' performance for pressure ulcer care was improved throughout the time ($p < 0.05$), 26.46 ± 2.43 , 32.8 ± 1.35 , 34.15 ± 1.28 , and 35.13 ± 1.3 respectively. 29% of the patients developed pressure ulcers and the incidence was 15% for stage I and 14% for stage II. Using Braden scale indicated that the higher the score the less probability to develop pressure ulcer ($p < 0.05$).

Conclusion

Using Braden scale is recommended for practice in governmental hospitals through regular in-service education and obligatory orientation of newly hired staff nurses. Investigating pressure ulcers that are caused as a result of shortage of staff performance or negligence of patients' needs is needed.

This assessment will provide evidence based practice to improve the quality of care for the pressure ulcers patients by tailoring the care and ensure patient safety by preventing unnecessary complications

Scaling-up ESCAPE-pain: an integrated rehabilitation programme for chronic joint pain

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Background

Between 10-25% of over-60s live with the symptoms of knee and/or hip osteoarthritis (OA) and as more people live longer, are less active and become more obesity, levels will only increase. Current management is sub-optimal and the chronicity and high co-morbidities associated with OA result in enormous costs, estimated at 1-2.5% of the gross domestic product of industrialised nations. The Health Innovation Network (south London's Academic Health Science Network) is working across south London and nationally with NHS and non-NHS organisations to rollout an integrated rehabilitation programme called ESCAPE-pain to improve the management of OA in NHS, public health and community settings.

Method

This is an ongoing project, which started in 2014. A small project team was established and a multifactorial approach was developed to facilitate the scaling-up (including a website, resource pack, implementation toolkit, infographics and short films, knowledge sharing events, and on-going one-to-one advice and support). Scale-up has been an interactive and iterative process with providers to refine the approach. Sites collect and return clinical outcome data so that clinical effectiveness can be monitored during roll-out and sites self-report on fidelity to the ESCAPE-pain programme.

Outcome

To date, the programme is being delivered in 31 sites with spread and adoption being greatest in London and southeast England, which aligns to the geographical focus of the Health Innovation Network. As ESCAPE-pain has been rolled out into real-world settings clinical effectiveness has been sustained and >2500 patients have benefited. However, progress has been slower than anticipated and has been hampered by the pressure on providers to deliver short-term cost-savings (e.g. by reducing patient contacts) rather than implementing an intervention that could delivery savings in the long-term.

Conclusion

Scaling-up the implementation of interventions is a slow process that requires sustained, dedicated resources. It has been an ongoing process of knowledge exchange between providers and the Health Innovation Network to articulate the intervention and its implementation in a way that makes sense in real world settings. This has helped to package information in a way that allows providers to see the benefits of the intervention and how to integrate it into existing pathways more directly.

Improving patient safety through increased therapeutic activity and person centered care for people with dementia

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Background

A Quality Improvement project was implemented on our Older Persons Organic Mental Health assessment and treatment ward for female patients. We aimed to reduce violence and aggression by patients, patient falls, medications prescribed and staff sickness absence; whilst enhancing team working and person centered care.

As part of the project, we focused on involving each patient in at least 20 minutes a day of person-centered activity and transforming our dining room into a traditional tea room and a small lounge into a hair and beauty Salon. These new facilities are used to enhance the other activities available for patient participation.

Method

A minimum of 20 minutes of therapeutic activity was introduced to all patients on the ward per shift. Data was collected before and after the changes to measure outcomes.

Ideas for a quality improvement project were collected from staff, patients and carers prior to the project commencing. A fellowship was applied for and successful. Four workshops were held with the ward team throughout the planning and implementation for ideas and reviewing where we going. Various quality improvements were identified including handovers, a ward magazine, and special days for patients and carers, staff this is me and training needs identified. The project was launched officially with a special open day. A team coach provided support to staff throughout and anonymous questionnaires used to collect information. Team members took on additional roles to their normal duties to assist with the implementation. A steering group was formed in the team to push ideas and receive feedback.

Outcome

By increasing the levels of activities to each patient we found Falls, violence and aggression (both towards staff, patients from other patients) and the use of benzodiazepines and night sedation fell. Staff sickness absence was reduced and staff satisfaction increased. The patient experience was overall increased and the ward has received an increased positive feedback from patients, carers and visitors to the ward.

We learnt that managing traditional care duties and balancing these with ensuring therapeutic activities took place was hard. We also learnt that as you improved one area it showed up other areas we had not recognised, requiring further improvement. Our ward is a large team and finding new ways to communicate effectively was a challenge which was required to be overcome.

Conclusion

A large quality improvement project in a large team is difficult and requires structured planning. Being aware you will find holes in your working which you did not expect needs to be allowed for. Communication is vitally important and finding ways to communicate changes to staff, patients, carers and outside teams is essential. Keeping staff motivated, having away days, supervision and fully involving all members of the team is vital. Remembering people take different times to adjust to change and allowing people to grieve for old ways of working is just as important. The overall benefits are plain we increased patient, carers and staff satisfaction. A reduction in risks as previously listed and more continuity of care by decreasing staff absence. Increasing patient's activity and being person centred to a patient with dementia is essential for their wellbeing and overall health.

Emergency Oxygen Audit

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Background

The British Thoracic Society advises the prescription of O₂ as a drug and the use of target SaO₂ to prevent the dangers associated with hypoxia and hyperoxaemia.

We audited supplementary O₂ administration in Letterkenny University Hospital (LUH), Ireland and compared results with a BTS national audit dataset. We aimed to:

1. Assess whether oxygen prescription in Letterkenny University Hospital, is in accordance with the British Thoracic Society guidelines last published in 2008.
2. Evaluate if prescription is being written to an appropriate target range.
3. Evaluate if the monitoring of oxygen saturations is appropriate to keep in target range.

Oxygen is frequently not prescribed or incorrectly prescribed in emergency settings. This is potentially harmful for patients, putting them at risk of hypercapnia and hypoxia. We aimed to prove this to facilitate intervention in our institution for the first time.

Method

We included adult inpatients on medical wards receiving oxygen therapy on the 30th October 2015. There were 25 (17.6%) patients using oxygen of 142 patients. Of these 25, none had a prescription for oxygen. 56% (14/25) were using oxygen with a written order and 44% were using oxygen with no prescription or written order. This is compared to UK national figures where 52.7% were using oxygen with a prescription, 4.8% with a written order and 42.5% with no prescription or written order. The most common indication for oxygen therapy was COPD (11/25, 44%) followed by pneumonia, pleural effusion and pulmonary oedema. In 2/25 no indication for oxygen use was found. 13/25 patients had a target range included in the written order for oxygen, the correct range had been given for 10, however in 3 cases there was an incorrect range given. In the cases where a range had been given, 76.9% (10/13) had saturations within the given range and 23.1% (3/13) had saturations >2% higher than the range.

Outcome

We communicated the results to all medical teams at educational grand round meetings. We presented the findings at our regional and national research symposium day. We liaised with the pharmacy department and designed a new drug Kardex which has clearer guidelines and more emphasis on the correct oxygen prescription for all inpatients. We conducted an education meeting relaying results of audits to doctors working in the hospital and emphasized the importance of oxygen prescription. We presented the findings at our regional research symposium and presented our findings at the national Royal College of Physicians Ireland Winter research meeting. The kardex we designed with the pharmacy department is in the process of being printed and released for pilot use all over all of the wards at LUH.

Conclusion

The impact on patients who have chronic respiratory conditions will be positive in that doctors will consider their oxygen prescription in a more individualised manner in our institution as a result of our work. The new design of the drug kardex and education surrounding the subject will be synergistic in the effect for change. We learnt that oxygen is not considered as a drug which needs to be prescribed and it is often overlooked when admitting a patient. We also learnt that care needs to be individualised to each patient when it comes to oxygen administration.

I would encourage colleagues to look at their policies for use of oxygen in their inpatient cohort in their institutions. It is imperative to consider this on admission and each review of the patient.

To determine the positive and negative predictive value of EBAS-Dep tool administered by an active elder-care agency in Singapore

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Background

Aged Psychiatry Community Assessment & Treatment Service (APCATS) is a community-oriented psychogeriatric outreach service in the Institute of Mental Health (Singapore). It has 2 service arms – Clinical Service (CS) and Regional Elder-Care Agency Partnership (REAP). In REAP, the team trains elder-care agencies (ECA) to screen elderly in the community for depression using EBAS-Dep (Even Briefer Assessment Scale for Depression) and dementia using AMT (Abbreviated Mental Test), and provides right-siting of care for clients who are screened positive for either of the tests.

In the central region of Singapore, around 340 elderly with no psychiatric history are screened for depression every year using EBAS-Dep. However, there had not been any audits or research published on the negative and positive predictive value of EBAS-Dep in Singapore to determine the effectiveness of the tool at picking up elderly with depression.

Method

In an active ECA, each client, screened positive for depression using EBAS-Dep within a period of 1 month, received a post-screening assessment by a nurse or allied health from the APCATS team to determine if they have depression. The post-screening assessment includes using MADRS (Montgomery-Asberg Depression Rating Scale) and taking history from the clients according to the DSM IV-TR criteria of Major Depressive Disorder. The findings of each post-screening assessment were presented to a psychiatrist who would determine if the client has probable depression. The results of the EBAS-Dep and post-screening assessment were tabulated in a 2x2 table to calculate the negative (NPV) and positive predictive value (PPV).

Outcome

A sample size of 25 and 34 clients who were screened negative and positive by ECA partners respectively were selected. The PPV of EBAS-Dep is 47%, and NPV is 100%.

EBAS-Dep is a screening tool which can be easily administered by community partners. It has high NPV but low PPV. This can have significant implications on the strategies on secondary prevention for depression in elderly in Singapore. It is a good tool at ruling out elderly who do not have depression but not a good tool at picking up elderly who are truly depressed. If this tool is used to determine whether the client should have be referred to a specialist or a general practitioner (GP) for depression, the primary or tertiary care will be receiving many unnecessary referrals of cases which are false positive.

Conclusion

EBAS-Dep has been validated locally. Both literature and this study had shown that this tool has good sensitivity and specificity. The reason for the low PPV is likely related to low prevalence of depression in the cases picked up by ECA.

To reduce the false positive rate, however 2 measures can be implemented:-

Firstly, advise ECA to screen clients who are at risk of having depression instead of every client in their service. Secondly, a second level of screening (such as using MADRS) is recommended to improve the likelihood of a true positive case before referral of the clients to the outpatient clinic.

Secondary prevention (detecting disease and right-siting of care early) is one of the crucial ways to reduce the disease burden of depression in elderly. The challenge is to find a screening process which is cost effective and has high NPV & PPV.

Assessing the effectiveness of a resuscitation course for on-call doctors of a psychiatric hospital in Singapore

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Background

The Institute of Mental Health is the only tertiary psychiatric hospital in Singapore. It has 50 wards in 9 blocks (2000 beds) within her 25 hectares. Two on-call doctors are responsible for responding to code blue activations together with designated nursing teams for the whole campus.

Findings from code blue drills revealed that there was a significant gap in the expected competency of on-call doctors in various aspects of resuscitation, despite them having valid Advanced Cardiac Life Support (ACLS) certification.

An in-house hands-on, resuscitation skills workshop targeted at the identified gaps in competency was organised. The workshop had been conducted 9 times since July 2015. The evaluation of the effectiveness of this resuscitation workshop is presented in this poster.

Method

All doctors attending the workshop have to complete a pre- and post-course evaluation form which evaluates their confidence level. The evaluation form has questions which assess their confidence level in 14 aspects of resuscitation such as laryngeal mask airway insertion and intubation. Half of them will also participate in the code blue drills in the wards, during which their competencies will be evaluated (intubation, giving intravenous drugs and operating the defibrillator) using a competency checklist.

Outcome

The doctors' confidence level had increased significantly in all 14 aspects of resuscitation that were reviewed during the course; all these showed an increase of 30 to 50%. There was also significant improvement in their competency level in resuscitation during code blue drills.

Conclusion

This resuscitation course is specifically targeted for doctors working in this psychiatric hospital. Results from evaluation forms and competency checklists show statistically and clinically significant improvements in the doctors' confidence levels and competencies in managing code blue. A mixed method study will be conducted to further examine the effectiveness of this course

Reducing Cardiac Arrests in an Acute Medical Unit

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Background

Our acute medical unit was chosen as it had one of the highest cardiac arrest rates in our organisation. The baseline cardiac arrest rate was 4.5/1000 Oct 2014-Dec 2015.

Method

Our main hypothesis was that standardisation of care processes in clinical observations, recognition of deterioration and response to deterioration would improve process measures and reduce unwanted variation. We were mindful throughout the project of the QI principle, "Make it easy to do the right thing." Defining the most effective processes required multiple tests and the full involvement of multidisciplinary team.

In addition, we attempted to address some of the psychological aspects of quality improvement through resilience engineering. We introduced "Save of the Month", which is a concept of multi-disciplinary learning from what went well.

The project took place over 2 years, and resulted in improved reliability of clinical observations, recognition of deterioration and response to deterioration.

Outcome

The cardiac arrest rate was reduced from 4.5/1000 during the baseline period (Oct 2014 to end-Dec 2015), to 1.4/1000 in 2016 (Figure 2), a reduction of approximately 69%.

Conclusion

A whole systems multidisciplinary approach, focusing on reducing unwanted variation in processes of care and improving team working through introducing simple interventions, can lead to a reduction in cardiac arrest rate.

Learning from what went well can facilitate improvements in the reliability of key processes. Identifying local issues (hypoxia in this case), and then applying simple interventions can result in large improvements. Testing and refining ideas generated by multidisciplinary teams involved in performing the processes, rather than top-down interventions, can help to achieve reliable, effective care.

Our experience in this study was that frontline clinical staff already have the solutions to some of the challenges in delivering reliable healthcare. If their ideas are supported and appreciated, and data on their performance is used for improvement rather than judgement, then engagement increases massively and improvements in clinical outcomes can be huge.

Reducing Swab Retention Never Events in Maternity

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Background

This project was undertaken in a large tertiary referral Obstetric unit in Oxford where > 8,000 births occur annually. There had been two never events in 2015 where swabs were left in situ of a woman post birth. This can lead to infection, depression, lack of bonding and multiple use of antibiotics. The problem appeared to lie in the clear handover of swabs from delivery suite to theatres and from theatres onward. An audit of 100 sets of notes was performed to identify any procedure issues in the previous six months and baseline data collected for ten week prior to the first test of change.

Method

The swab policy was reviewed and amended to include a section on handover of women transferred to theatre from delivery suite. A yellow striped bag was introduced into each birthing pack for the swabs and red strings to be transferred to theatre in. Staff had to "save swabs, say swabs, sign swabs". A core team of staff were involved in the process mapping of the problem. The swab bags were introduced on the 1st February 2016. Delivery suite coordinators and senior theatre nurses were first briefed; they then disseminated the new policy to all staff during handovers and audit meetings. Posters were displayed, newsletter articles written and topic of the month boards updated. Staff received the change positively. The second test of change was implemented on the 5th December 2016 where women had a "VP" sticker applied to their hand when transferred from theatre to observation area with a known vaginal pack in situ.

Outcome

Maternity is now over 600 days free from incidence.

Test of Change 1 - Improve handover of swabs from Delivery Suite to Theatres

Written and verbal handover of swabs from delivery suite to theatres has improved dramatically.

Verbal: 27% - 81%

Written: 4% - 75%

Staff adhering to all 3 aspects of the swab policy upon transfer: 0 - 96%

Test of Change 2 - Improve handover of a known vaginal pack from Delivery Suite to Observation Area

A Vaginal Pack sticker is now used in 99% of cases where a vaginal pack is necessary post birth. Women interviewed feel reassured with the intervention and knew why the sticker was on their hand.

The women benefit by no adverse events taking place in relation to swab retention for the last 18 months.

Conclusion

This project has raised awareness of the importance of the swab count, handover of care and damaging effects for women if a swab is left in situ. To date there has been marked improvement with a reduction in the number of never events of swab retention but further work is needed to sustain the improvements. Maintaining momentum with staff rotation and staff shortages has been a challenge.

A core team of champions is critical to never lose the message; it's not being afraid to keep saying the same thing over again.

Development of an integrated care model for chronic diseases: the experience of the Local Health Unit Rome 1, Lazio Region, Italy

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Background

Provision of high-quality, affordable health care services for patients with chronic diseases is a difficult challenge. In Lazio Region (5 million inhabitants, where Rome is located) an innovative model was established by law in 2104 (DCA 376/2014). In LHU Rome 1 organizational changes are ongoing and include the "Case della salute", places where specialists and GPs should co-work sharing protocols, guidelines and data. There is a need to evaluate the impact of this innovative model in comparison to previous care.

Method

This work was done in the Local Health Unit (LHU) Rome 1, located in Rome (capital of Italy), responsible for health care services for about one million resident population. The focus was on resident population with diabetes (about 30.000 individuals) and Chronic Obstructive Pulmonary Disease (COPD) (about 24.000 individuals). All activities are coordinated by Health Districts and performed on the basis of a multidisciplinary team (GPs, nurses, pneumologists/diabetologists). Nurses are mainly involved in educational activity for patients. Most GPs use a dedicated software to obtain a real-time monitoring of their care processes and outcomes.

Outcome

In a pilot phase (from 1/1/2013 to 30/6/2014) the impact of the integrated model was tested with a before-after study. In four Districts of the LHU Rome 1 75 general practitioners were involved. A total of 1283 COPD patients were identified through regional HIS as prevalent cases. GPs validated the case definition and classified each patient according to clinical severity levels. Comparing the "before" with the "after" period we found: increased prescription rates of appropriate inhaled therapy according to Guidelines (LABA/ICS from 42% to 52% in District XIX), increased use of spirometry (from 11,9% to 16,9%) and pneumological visit (from 8,5% to 15,1%), decrease in hospitalization rates, more evident comparing second semester 2012 vs first semester 2014 (from 15,5% to 13,5%). The regression analysis clearly showed monthly changes in all measurements although statistical significance was not achieved. GPs and nurses satisfaction was "good" for most items.

Conclusion

Cooperation between health professionals, sharing protocols and guidelines, greater role of GPs in comparison to the past period were the strengths. Nurses and care managers were the key point in the involvement of patients and family members in our study. Main limitation is the electronic database to be shared between all the "actors" of the model, not yet available at regional level. A critical point is the potential dishomogeneity in organization and implementation procedures across different areas in the Region.

AHRQ Patient Safety Indicators: Strengths and Limitations as Measures of Clinical Quality and Safety

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Background

US Agency for Health Care Research and Quality (AHRQ) patient safety indicators (PSIs), calculated using diagnosis and procedure codes embedded in hospital bills, are widely used to measure and publicly report safety of healthcare delivered by acute-care hospitals. Diagnosis and procedure coding accuracy is limited, and there is little evidence that hospital-level AHRQ PSI rates correlate with quality or safety of care measured by other means.

For our large academic medical center, we strove to (1) assure that coding accurately reflects care and outcomes; (2) determine the correlation of AHRQ PSI occurrences with actionable quality and safety issues; (3) illuminate changes in AHRQ PSI analysis logic to improve their quality and safety measurement performance.

Method

Since April 2012 we have reviewed 100% of non-obstetric AHRQ PSI numerator cases (n = 1284), focused on coding accuracy and quality of care (considered optimal if all available prevention strategies were in place, and if the complication was promptly recognized and expertly treated). Nurse-reviewers received special training in AHRQ PSI analysis logic and ICD-9 and ICD-10 coding rules, and were experienced in case review for quality.

Outcome

Coding was accurate for 1123 (87%) of cases. Inaccuracies in denominator inclusion/exclusion coding (64%) are more common than inaccuracies in numerator coding (36%). Coding accuracy rate is stable at 88% (quarterly coding accuracy rate range 83% - 92%). Quality of care was optimal in 93% of accurately-coded cases.

Conclusion

Our constant attention to coding accuracy assures that AHRQ PSIs accurately reflect hospital care and outcomes. AHRQ PSIs offer limited opportunity for organizational learning; for most AHRQ PSI complications, prevention is assiduous, complication detection and mitigation are timely and thorough.

Our systematic case review experience suggests changes in AHRQ PSI analysis logic to increase the specificity of AHRQ PSIs to detect significant safety events.

Peer support initiatives to address low birth-weight in a disadvantaged urban area: exploring and responding to local priorities

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Background

The project "Low Birth-Weight in Newham: Definitions, Antecedents and Prevention" is led by a partnership of researchers, commissioners, practitioners and community representatives. We aim to understand low birth-weight from different stakeholders' perspectives, co-design improvement actions with community involvement, and contribute evidence to guide policy and practice. In 2014-16, 9.8% of babies in Newham had low birth-weight, the second highest proportion in England (average 7.4%). Prevention of low birth weight and its adverse long-term health consequences is one priority for health and social care commissioning in this London borough which has high levels of deprivation. Problems identified from former studies and stakeholder consultations included the absence of specific pre-pregnancy care, and pressure on resources to deliver and monitor infant feeding support in hospital and community settings.

Method

We analysed hospital data on 6,263 births, calculated the proportion of low birth-weight babies using different measurement standards and mapped low birth-weight hotspots and community assets. We interviewed 21 ethnically and socially diverse parents of low birth-weight babies and 8 groups of professionals including midwives, health visitors and infant feeding coordinators. In a stakeholder prioritisation workshop, highest-scored proposals included pre-pregnancy health education, breastfeeding drop-in clinics and peer support. We responded with two streams of action: a pre-pregnancy buddy pilot with volunteers using Healthy Conversation Skills to support women planning a pregnancy; and case studies on local infant feeding initiatives, such as drop-in breastfeeding support groups, using a stakeholder questionnaire about messages disseminated and ways in which these are discussed with women. Project partners are using findings to develop an improvement model incorporating peer support.

Outcome

A GP practice's mobile text to women of reproductive age generated a significant response from women planning a pregnancy indicating their interest in buddy support for improving preconception health. Recruitment for the pilot is being extended through alternative channels to reduce inequalities and match buddies to women's locality and characteristics. Healthy Conversations are expected to build on women's capacity to make small, sustainable changes to improve their pre-pregnancy health. Infant feeding case studies have identified local "best practice" initiatives for showcasing in a video for public dissemination. Researchers working with a seconded midwife and health visitor have found inconsistent messages given to parents by professionals, including some contradicting guidelines about avoiding babies' rapid "catch-up" growth. Evidence-based practice is being strengthened through cross-sector collaboration and Patient and Public Involvement in ongoing service improvements.

Conclusion

1. Stakeholders' early involvement in co-designing health improvement initiatives can facilitate consensus-building to identify and address local priorities.
2. Volunteer buddy and peer group support can enhance effective health communication in culturally and socially diverse contexts.
3. Strategies to prevent low birth-weight and its adverse consequences can usefully incorporate partnership approaches with peer support for improving:
 - women's pre-pregnancy care
 - evidence-based infant feeding with messages agreed among professionals across the system

Improving Quality in an Academic Health System: the University of California Center for Health Quality and Innovation Experience

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Background

Problem: Academic health systems often do not have appropriate system alignment to ensure better health outcomes, better population health and lower healthcare costs.

University of California (UC) Health, comprised of the 6 UC health systems (UC Los Angeles, UC Irvine, UC San Diego, UC San Francisco, UC Davis, UC Riverside) and affiliate hospitals, 6 UC Schools of Medicine, and multiple healthcare professional schools--currently serves about 15 million patients, which represents nearly 40% of the state's total population. UC is a public institution, dedicated to serving healthcare needs for all patients in California.

In 2010, the CEOs at the 5 UC Medical Centers and the senior vice president of UC Health at the UC Office of the President, funded and launched the UC Center for Health Quality and Innovation (CHQI) to drive system-wide healthcare value by ensuring better health outcomes, better population health and lowering healthcare costs.

Method

The UC Center for Health Quality and Innovation (CHQI) initiated more than 50 grants between 2011 and 2015 to develop, implement, and spread innovative evidence-based programs at UC Health. CHQI also supports clinical collaborations across UC Health's 6 health systems to share best practices, implement performance improvement initiatives, and develop system-wide standards of practice policies, procedures and processes; internal and external partnerships and new system-wide offerings

Individual projects used primarily observational and quasi-experimental designs. Collaboratives used qualitative efforts and are considered successful if there are measureable improvements.

Findings were then aggregated at the system level to evaluate those benefits based on common metrics, including: outcomes, cost savings, revenues, external award funding, and peer-reviewed publications.

Outcome

Projects funded by CHQI have produced multiple types of benefits to the UC Health systems, particularly clinical quality improvements, such as decreased lengths of stay (LOS), complication rates and readmissions; as well as reduced infection rates, reduced preventable events (PE, delirium, falls etc.), decreased blood utilization, specialty clinic decompression, improved access (eConsults), substantial lowering of Computed Tomography (CT) dosage, and a more effective risk algorithm for pressure ulcer risk.

Conservatively, we estimate that CHQI-funded projects at the UC health systems have added over \$31 million in annual benefits throughout UC Health, from annual cost-savings of \$17.9 million, and annual enhanced revenues of \$34.6 million. Additionally, these projects received subsequent external award funding of \$13.5 million, and have resulted in more than 50 peer-reviewed publications.

Conclusion

CHQI's efforts have yielded numerous gains in outcomes, cost savings, revenue enhancements, new and innovative product development, new patient volume, patient and stakeholder engagement, and partnership creation.

Centralized coordination and support, as well as leadership commitment and endorsement is important to 1) foster and monitor progress of initiatives during their growth phase, and 2) to nurture system-wide advancement of clinical and quality excellence and innovative practices.

Key barriers include variation in alignment of clinical priorities across health systems, lack of common infrastructure between individual UC health systems, need for early integration with existing health system initiatives to enhance sustainability, identifying appropriate project champions, and need for engagement with multiple stakeholders, such as non-clinical entities and outside vendors/stakeholders.

Hospitals and Patients Working in Unity (HOW R U?): volunteer-peer telephone-support of older discharged patients

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Background

Older people presenting to an emergency department (ED) are at increased risk of feeling socially isolated, lonely or depressed, which are all associated with negative health outcomes and increased health services use. Peer support reduces depressive symptoms and health service use, however the effects are unknown in older ED patients following discharge home.

Method

A prospective mixed-methods study of discharged patients aged ≥ 70 years with social isolation, loneliness or depressive symptoms from The Alfred and Cabrini Hospitals. Supportive telephone calls were delivered weekly by a volunteer-peer over 3 months. The primary outcomes were feasibility of all processes, intervention acceptability to patients, and retention in the program. Secondary outcomes were changes in loneliness level, mood and health-related quality of life post-intervention.

Outcome

Of the 39 patients recruited (median age =84 years, 64% female), 34 completed the HOW R U? peer support intervention. HOW R U? was well received by patients, and volunteers reported great satisfaction with their new role. At 3 months, 68% and 53% of recently discharged older patients experiencing statistically significant reductions in depressive symptoms and feelings of loneliness, respectively.

Conclusion

HOW R U? is feasible and acceptable to both patients and volunteers. Pilot results demonstrate improvement in symptoms of loneliness and depression. Qualitative and quantitative findings will now inform the design and conduct of a future randomised controlled trial and program evaluation.

Improving acting on results in the ophthalmology department of Leicester Royal Infirmary

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Background

The project was carried out at University Hospitals of Leicester's Ophthalmology department based at the Leicester Royal Infirmary. We are a group of third year medical students, conducting this project under the supervision of senior medical staff. After a routine appointment, patients are often referred to have further tests. The tests relevant to our project were CT and MRI. The problems we encountered were:

1. Patients attending follow-up appointments without tests results available
2. Patients with normal test results attending follow-up appointments
3. Patients with abnormal test results are not followed up

Method

1. Sat in clinics in all sub-specialities, including eye casualty
2. Interviewed all relevant staff in ophthalmology and radiology (including clinical, clerical and management)
3. Collected data on effective appointment use
4. Created a visual pathway from request to reporting of a test
5. Learnt the process of request to reporting for CT/MRI
6. Continually consulted the department on the proposed changes, collecting opinions and feedback, which was made easier as they were receptive to change

Outcome

We came up with the following recommendations:

1. Patient database: To centralise patient demographics, diagnosis and tests into an accessible and easily updatable database
2. Patient card: The card includes the date of the next appointment and tests the patient needs to have before that appointment. Providing patients with a phone number allows them to chase their appointments.
3. Amend the current 'Patient Outcome Form': Made the current form more user-friendly and added a section where clinicians could indicate if patients are suitable for virtual clinics.
4. Implementation of virtual clinics: Virtual clinics allow tracking patient results without them attending the clinic

Conclusion

Our recommendations have not been implemented yet. We hope that our changes will lead to an improvement in acting upon results, however we know from literature and our own experience this will need further reviewing and development. We expect that as a result of our interventions, unnecessary appointments will be avoided therefore saving patients' and clinicians' time. This would increase the efficiency of clinics. Successful implementation of our recommendations will also act as a template for other departments to follow, allowing better patient experience and improving the efficiency hospital-wide.

Data driven quality improvement in primary care (DQIP2) Towards collaborative management of risky polypharmacy in primary care

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Background

The Data Driven Quality Improvement in Primary Care study (DQIP2) is part of the Scottish Improvement Science Collaborating Centre (SISCC), bringing together a research and development team from NHS Tayside, University of Dundee and the third sector, to deliver a step change in improving existing systems to that manage high-risk polypharmacy across NHS Tayside and beyond.

Preventable drug related harm accounts for 4% of emergency hospital admissions. The DQIP1 trial showed that an informatics tool that identifies and facilitates review of patients at high risk of harm can reduce risky prescribing of antiplatelets and non-steroidal anti-inflammatory drugs by GPs and related emergency admissions. Pharmacist support in conducting medication reviews is one way of enabling sustainable implementation of the DQIP approach at scale, but requires careful planning and support from general practice staff as well as service users.

Method

The objective of this part of the programme was to test the acceptability and utility of a participatory approach to stimulate and facilitate the design of practice specific systems for the multidisciplinary management of patients with risky polypharmacy. To initiate the collaborative process, we held a structured meeting with relevant professionals (6 GPs, 3 pharmacists and 3 practice managers from six practices in one Scottish health board) as well as 9 patient participants.

The collaborative approach was structured in three phases:

1. Collaborative enquiry (past & present)-moderated discussion about what are the factors that currently affect risky polypharmacy and drug related harm.
2. Imagining the future- road map exercise to consider how the new DQIP2 process of change might work in practice.
3. Action proposals (Making it happen)-moderated discussion to formulate specific action plan to identify barriers and facilitators to implementing DQIP2 in primary care practice.

Outcome

The acceptability and perceived utility of the structured meeting was evaluated via a structured survey, de-briefing statements and follow up phone interviews to reflect on the value and key characteristics of this collaborative approach.

Overall, the proposed approach was highly valued and all participants found the meeting comprehensive, feasible and acceptable. However, healthcare practitioners also described pragmatic factors that might hinder efficiency and utility, highlighting the need for dedicated time for professionals to work together within their practice group to develop the agreed action plans and increase the overall effectiveness in stimulating the adoption of the intervention within primary care.

Conclusion

This approach will be optimised and rolled out as of August 2017 accounting for the identified difficulties of finding a format that suits a variety of audiences and the specific aims of the project.

Preliminary data will assess the extent to which the approach has stimulated desired changes in practice, any barriers or facilitators encountered and the reductions in high-risk polypharmacy.

This is a preliminary study to test a strategy designed to overcome anticipated barriers to effective interprofessional collaboration which is anticipated to lead to improved systems for identifying and managing high-risk polypharmacy in primary care and substantially reduce preventable drug related adverse event.

Management of Children with Feverish Illness in Basingstoke Emergency Department

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Background

This patient safety project took place in the emergency department (ED) of Basingstoke and North Hampshire Hospital, UK, which is a busy district general hospital. Febrile illness is the second most common medical reason for children attending ED. Fever in a child can pose a diagnostic challenge for the ED practitioner, as it can be difficult to differentiate between self-limiting viral infections and serious bacterial infections. The 2013 National Institute for Health and Care Excellence (NICE) feverish illness in children guideline uses a traffic light system to help identify children who may need further investigation, and provides advice regarding what further action to take depending on the child's level of risk. Our aim was to improve the management of children under 5 years presenting to Basingstoke ED with feverish illness in accordance with the NICE guideline standards.

Method

We performed a retrospective analysis of 40 notes of children under 5 years presenting to Basingstoke ED between March and May 2015, where fever was the presenting complaint. Data was inputted into the NICE feverish illness clinical audit tool and the results analysed. A teaching session on the traffic light system was arranged during the induction of new junior doctors starting in the ED department and a hand-out with laminated cards summarising the traffic light system were distributed to each doctor. A further teaching session on the traffic light system was arranged mid-way through doctors' ED placement. The traffic light system was placed on the ED paediatric notice board along with copies of the NICE discharge advice template. We measured the effect of the interventions by performing a second retrospective analysis of 40 notes of children under 5 years presenting with fever between August and December 2015.

Outcome

Following our intervention, the results showed an improvement in the documentation of capillary refill time and in the management of children with amber features. All children with life-threatening or red features were managed according to NICE standards and all children with a fever without an apparent source were appropriately not given antibiotics. One child with suspected meningococcal disease was appropriately given a cephalosporin urgently in accordance with the guideline.

Conclusion

The changes resulted in an overall improvement in the management of feverish illness in children in Basingstoke Hospital ED in accordance with NICE standards, subsequently improving patient safety and care. The changes also resulted in a potential service improvement through a reduction in unnecessary paediatric referrals. One problem we encountered was documentation of the use of the traffic light system, which is a standard in the NICE guideline. We would encourage the use of national standards for improving patient safety and found the NICE clinical audit tool invaluable for analysing our data.

Evaluating the implementability of Antibiotic Surgical Prophylaxis Guidelines: A work in progress

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Background

The National Centre for Antimicrobial Stewardship (NCAS) is a One Health research collaborative funded by the Australian National Health and Medical Research Council (NHMRC). One of NCASs' aims is to improve the policies and practice of surgical antimicrobial prophylaxis.

Surgical antimicrobial prophylaxis (SAP) is the most common indication for antimicrobial use in acute hospitals, however, 40% of these prescriptions are non-concordant with the Australian Therapeutic Guidelines (ATG).

The underlying reasons for this high rate of non-concordance have not been well delineated.

To date, the Australian Therapeutic Guidelines: Antibiotic Surgical Prophylaxis have yet to be appraised for implementability. Guideline appraisal may identify facilitators and barriers to current poor rates of guideline implementation which then reflects the current state of non-concordant SAP prescribing.

Method

Purposive sampling will identify key Australian stakeholders who will be invited to appraise 'Therapeutic Guidelines: Antibiotic Surgical Prophylaxis'. (1) This group will comprise of specialists from surgery, anaesthesia, infection control and infectious diseases and antimicrobial stewardship.

Guidelines appraised via the use of an internationally recognized and validated instrument; the Guideline Implementability Appraisal (GLIA) (2) instrument.

The GLIA instrument will provide both quantitative and qualitative data. Quantitative data will be collated to generate standard statistics from the GLIA instrument results.

GLIA scores will identify enablers and barriers to guideline implementation.

Overall GLIA scores will be calculated as defined per its respective manual to ensure consistency with other research utilizing these instruments.

GLIA includes final open ended questions for further comments. These will be analysed qualitatively, utilizing content and thematic analysis methods.

Outcome

The guideline appraisals have yet to be completed. It is anticipated that the guideline appraisal will identify enablers and barriers to guideline implementation. These findings will be fed back to stakeholders to optimize guideline development and implementation. Enhanced guideline implementation may improve SAP prescribing and ultimately improve patient health outcomes, whilst minimizing the burden of antimicrobial resistance.

Conclusion

Identification of enablers and barriers to guideline implementation will endeavour to inform future research and AMS strategies for the optimization of SAP guideline development and implementation and as a result optimal SAP prescribing, patient outcomes and reduce the burden of antimicrobial resistance.

Guideline appraisal may inform future guideline appraisals of additional guidelines relating to antimicrobial use in Australia. The adoption of guideline appraisal instruments may inform future use during the development and implementation stages of new antimicrobial guidelines to facilitate guideline uptake and concordance.

Development of a national audit tool for surgical antimicrobial prophylaxis prescribing

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Background

The National Centre for Antimicrobial Stewardship (NCAS) is a One Health research collaborative funded by the Australian National Health and Medical Research Council (NHMRC). One of NCAS' aims is to improve the policies and practice of surgical antimicrobial prophylaxis (SAP).

The Hospital National Antimicrobial Prescribing Survey (Hospital NAPS) identified SAP as the most common indication for antimicrobial use in acute hospitals. However, 40.2% of these prescriptions are non-concordant with the Australian Therapeutic Guidelines (TG). The Australian Therapeutic Guidelines are expert consensus guidelines which include recommendations for antimicrobial prescriptions, including the perioperative setting.

In response to the findings from the NAPS, a dedicated surgical prophylaxis audit tool was developed to evaluate antimicrobial usage and patient outcomes in a broad-range of surgical procedures.

Method

The survey was developed following literature review and engagement of stakeholders.

The period-prevalence, cohort design allows a sufficient denominator of patients for the hospital to look for prescribing patterns in either specific or general surgical cohorts. Flexibility for the audit to be conducted either prospectively or retrospectively enhances its usability.

A paper pilot tool was trialled at 11 Australian hospitals (May 2015), including public and private sectors. Surveyors included infectious diseases physicians, pharmacists and infection control practitioners.

SNAPS supports assessment of SAP appropriateness according to the Australian Therapeutic: Antibiotic Surgical Prophylaxis guidelines or a hospital's locally developed guidelines. It examines the peri- and post-operative prescribing practices, dosing, timing and duration of SAP and patient outcomes including length of stay, readmissions and surgical site and Clostridium difficile infections.

Outcome

In terms of impact; the pilot tool enabled identification of current SAP prescribing practices. The pilot study included a total of 592 antimicrobial prescriptions, documented for 668 procedures. 180 procedures had no antimicrobials prescribed. Overall, 27% of pre-operative and 55% of post-operative prescriptions were deemed to be inappropriate. The most common reason for inappropriateness was the use of prophylaxis when not indicated (11% pre-operative, 46% post-operative inappropriate prescriptions).

Following feedback from end-users, the electronic SNAPS went live (April 2016) and the first Australia-wide survey will be completed in October 2016. Data from SNAPS has prompted the formation of a Joint Working Party with the Royal Australasian College of Surgeons and the ACSQHC for optimization of SAP prescribing.

Participating hospitals can compare their own data via longitudinal analysis and with benchmarking for inter-hospital comparisons.

Conclusion

A substantial proportion of SAP prescriptions were inappropriate including the over-prescription of antimicrobials which has implications for the emergence of antimicrobial resistance. Delineation of these issues informs ongoing research into the drivers and barriers for behaviour changes and development of strategies to improve antimicrobial stewardship processes.

SNAPS will endeavour to identify areas of inappropriate SAP prescribing, which can then guide future AMS interventions.

Ultimately, SNAPS aims to encourage reflection leading to improved practice and quality and safety of patient care.

Ongoing research through NCAS includes the engagement of key stakeholders and consumers to define the barriers and enablers to refine decision making approaches and education strategies to improve appropriate antimicrobial use and inform practice and policy.

Elderly patients with malnutrition during hospitalization at discharge

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Background

Slagelse Hospital, Region Zealand, Denmark is one of the 21 acute hospitals in DK. The improvement work was located in the department with geriatric, orthopaedic geriatric care with 23 beds, hospitalized approximately 8 days. Despite focusing on diet registration, nutritional audits showed 1) 49% were able to cover 75% of their nutritional needs during hospitalization 2) 40% experienced weight loss during hospitalization 3) The sharing of knowledge about nutritional status and plan with primary sector was random.

Method

Workflow analysis, interview with patients and shadow method showed many causes known and unknown. The causes were divided in themes to make them appear more specific. Hereafter we developed goals. Small working groups were formed and started to work with small intervention using driver program and PDSA to improve workflow.

Outcome

Positive experience during meals (peace and quiet, eating in the living room, knowing what to eat and drink – menu card)
Getting the right help during the meal (reduced ability to eat, staff present)
The right meal when the patient faces nausea, fatigue, reduced appetite, dysphagia
Knowledge of what to offer, getting snack between the meals
Identification, monitoring diet registrations (development of nutrition registration with energy and protein across 6 meals, all staff able to register and count)
Improved effort from hospitalization to discharge (at discharge a nutritional plan, knowledge sharing regarding nutritional status with primary sector)
Nutritional wall showing today's meal as well as a guiding card for drink and meal for patient and relatives.

Conclusion

During hospitalization patients still are in risk of malnutrition, but it became clear how we could improve our practice. 3 goals appear: Patient experience, Collaboration across sections and Organizational improvements. Main Message: When problem requires interventions over longer time it is necessary to collaborate across sections and to collaborate with the patient and relatives.

Prevention of Catheter- associated Urinary Tract Infection in a Community Hospital in Singapore

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Background

Ang Mo Kio-Thye Hua Kwan Hospital (AMK-THKH) is a 360-bedded community hospital in Singapore, which provides inpatient rehabilitation, subacute, dementia and palliative care. A quality improvement team was formed in March 2015 to work on reducing catheter-associated urinary tract infection (CAUTI) in the hospital. Analysis of CAUTI cases between January-March 2015 revealed that retention of urine is the most common indication for catheterisation. All the cases had an indwelling catheter (IDC) on admission and many of them developed CAUTI with the same IDC they came in with. The median CAUTI rate in AMK-THKH was 5.4 per 1000 catheter days in 2014. We aim to reduce CAUTI rate by 30% in 3 years.

Method

The following gaps were identified using "Ask 5, Take 5" methodology:

- i) Inefficient CAUTI data collection,
- ii) Lapses in IDC care,
- iii) No IDC removal protocol.

A 62 bedded wing that had the most CAUTI in 2014 was selected as the pilot site.

The following changes were tested in October 2015:

- i) Improved CAUTI data collection method-
The Nursing Officer would do a visual count of the number of patients on IDC when she does her night rounds. This allows more efficient calculation of catheter days.
- ii) IDC reminder system-
Charts reminding clinicians to review removal of catheter and practise proper IDC care was put up at the patient's bedside.
- iii) Nurse-led protocol to empower nurses to remove catheters in simple cases
- iv) Using S hook to keep urine bag below bladder level during ambulation therapy

Further PDSAs were done with modification of the IDC reminder charts and IDC protocol. The interventions were gradually spread to other units in the hospital.

Outcome

To date, we have spread 80% of the change interventions to all the units of the hospital. CAUTI rate has reduced and maintained at less than 3.71 (30% reduction) for 5 months. Catheter utilization has also reduced. Catheter care has improved based on audit results.

Conclusion

Moving forward, we will be reviewing the interventions to ensure they stay relevant and effective. We aim to spread good practice to all units in the hospital and empower ward champions to take ownership of the CAUTI preventive efforts. Constant engagement with the ground and a multi-disciplinary effort is important to sustain results.

A review and redevelopment of regulatory process for Mental Health Approved Centres in Ireland

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Background

Mental Health Commission (MHC), (Ireland) is an independent body that was set up in 2002.

Our main functions are to promote, encourage and foster high standards and good practices in the delivery of mental health services.

One of the key functions of the Commission is the registration and regulation of in-patient facilities known under the Act as approved centres.

MHC needed a more robust, rigorous and transparent regulatory process and be a more responsive regulatory.

Method

After one year following the introduction of the new processes an external evaluation* was conducted to determine if the Mental Health Commission regulatory processes, and related Judgement Support Framework (JSF), were effective in meeting the Key Principles for Effective Regulation (Walshe and Shortell 2004) and to identify any opportunities for improvement in the Mental Health Commission regulatory processes, and related Judgement Support Framework.

A wide range of external stakeholders, who are subject to the regulatory process, were represented in the evaluation and there was participation by a wide variety of people.

This review was undertaken utilising methodologies to maximise stakeholder participation, through the use of focus groups and surveys.

Data was collated and grouped into relevant themes of the Principles of Effective Regulation (Walshe and Shortell, 2004).

*The MHC acknowledges Health Care Informed Ireland.

Outcome

Overall, the feedback regarding the revised regulatory processes and Judgement Support Framework was overwhelmingly positive.

Initial indications are that the JSF and revised regulatory processes are addressing the principles of effective regulation.

Participants strongly agreed that the introduction of the new processes had brought about a more robust and rigorous regulatory process than in previous years.

The Approved Centres noted that the new process brought about improved openness and transparency, with a better understanding among Approved Centres of what was expected of them.

Survey respondents agreed (81%) that the JSF requirements benefited the residents/patients and that it was sufficiently robust to improve the quality and the safety of the services provided to residents/patients.

Conclusion

Recognising the challenges to services and addressing the areas that was identified for further guidance.

Incorporate stakeholder feedback to influence changes.

Approved Centres are embracing the idea of enforcement, as it indicates that they are utilising the framework to improve, rather than simply avoiding enforcement.

Use of "Barrier Identification and Mitigation Tool" (BIM) to improve adherence to ventilator-associated pneumonia bundle at the ICU

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Background

This study was done at the Intensive Care Unit (ICU) of a 250 bed public hospital in Tucumán, Argentina. It is a 12 bed unit that mainly treats trauma patients. The team was integrated by the unit's chief, two medical coordinators, two residents, the chief nurse, two specialists in quality management and a kinesiologist. The focus group was the whole staff of the ICU. The team had the perception that there was a low rate of adherence to clinical practice guidelines (CPG) for prevention of ventilator associated pneumonia (VAP bundle) at the ICU.

Method

We used the "BIM: barrier identification and mitigation tool" developed by Johns Hopkins Hospital. This tool consists in walking, asking and observing the process in order to detect all possible barriers to the implementation of CPG. After they have been identified, the team must prioritize them through a matrix of decision and develop action plans to mitigate these barriers. It has to be implemented by a multidisciplinary team. So we organized different activities in order to implement the BIM tool: the quality management team observed staff rounds at the ICU for two months in order to check if the VAP bundle was implemented. They observed bed elevation, checked that oral hygiene with chlorhexidine was done three times a day and listened if the ICU team decided to stop patients from sedatives or decided weaning trials. Also, the team gathered together to talk about barriers to implementation of the bundle with a predetermined form, and planned actions to mitigate them.

Outcome

After starting the program we could verify that implementation of the VAP bundle had opportunities of improvement: oral hygiene was done only 18% of the times and bed elevation was accomplished in 65% of the patients. The other two components of the bundle, vacation from sedatives and weaning trials were implemented in 82% and 73% of the patients during observation time. After implementation of BIM, several barriers were detected to the implementation of the VAP bundle and 15 actions were planned for the first nine in the priority list. Most of the actions planned have been accomplished already and now we will start measuring if they have been successful in improving the VAP bundle compliance and VAP rates at the ICU

Conclusion

This is the first time this team has participated in a quality initiative. They have learned the use of quality tools by performing them. They are really enthusiastic about the project and many changes have already taken place: daily visits to patients have been restarted, communication during the visits is much more effective and a lot more attention is being paid to the implementation of the bundle and other safety issues. One of the inconveniences was poor registry method for oral hygiene. This could probable bias the measurements for this bundle activity. Also it was a time consuming tool. We hope that this work will improve patient infection rates especially VAP. Also by promoting a safety culture at the unit we are confident that we will improve our global patient safety issues.

Using a clinical microsystems framework to increase efficiency of the TIA service at Salford Royal NHS Foundation Trust

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Background

This quality improvement (QI) project was carried out in the Greater Manchester Comprehensive Stroke Centre at Salford Royal NHS Foundation Trust (SRFT). It was focused on patients attending the high risk transient ischaemic attack (TIA) clinic with suspected high risk TIA. The core QI team consisted of a QI Lead, Consultant Neurologist, Advanced Nurse Practitioner, Stroke Secretary and Medical Student. A retrospective audit of patients attending the high risk TIA clinic from March-May 2014 revealed only 8% (2/24) had completion of TIA investigations and 0% (0/13) had carotid imaging within 24 hours of first presentation to a healthcare professional. Early intervention after a TIA is known to reduce the risk of stroke. The aim of this project was to reduce the time taken for patients to receive specialist assessment and investigations following first presentation to a healthcare professional.

Method

The TIA service was enrolled onto a 'clinical microsystems' QI programme. Clinical microsystems is a QI framework which coaches frontline clinical teams to collaboratively lead, plan and implement their own service improvement strategies. Weekly one hour structured meetings were held by the QI team over 6 months and facilitated by a trained QI lead. The high risk TIA pathway was process mapped in discrete steps from a patient's first symptoms to completion of TIA investigations, and graphically displayed. Specific sources of delay were identified and root cause analysis carried out to identify reasons for delays and generate solutions. A more efficient pathway was then mapped. Improvements included merging the daily high risk and weekly low risk TIA clinics into a single daily clinic. Carotid imaging appointment times were altered to run concurrently with afternoon clinic. A daily designated TIA doctor was also introduced to take overall responsibility for triaging new referrals.

Outcome

The redesigned TIA pathway was permanently implemented in September 2015. A retrospective re-audit of high risk TIA patients attending the clinic from Nov-Dec 2015 revealed significant improvements to the efficiency of the pathway; 38% (6/16) of patients had completion of TIA investigations and 56% (5/9) had carotid imaging within 24 hours of first presentation to a healthcare professional ($p < 0.05$, Chi-squared test, $n = 16-24$, $9-13$, respectively). The median time between a patient's first presentation to a healthcare professional and carotid imaging was reduced by 71% (2.2 days) ($p < 0.01$, $n = 9-13$, Mann-Whitney-U test). These changes have decreased the time taken for high risk TIA patients to receive specialist assessment and investigations. This earlier intervention is expected to decrease the risk of patients having a stroke. The QI team have also increased their capability to analyse clinical pathways and implement service improvements independently.

Conclusion

A clinical microsystems QI framework was successfully used to increase efficiency of the high risk TIA pathway at SRFT and reduce the time taken for patients to have specialist treatment and investigations following first presentation to a healthcare professional. Direct involvement of frontline clinic staff in the QI process has motivated team members to better understand how to map pathways and take responsibility for implementing improvements. By directly involving the staff delivering the care, improvements may be more likely to be sustained and empower staff to lead other service improvement projects.

National Integrated Patient Safety Action Plan – Large Scale Collaboration for Improvement in Canada

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Background

Established by Health Canada in 2003, the Canadian Patient Safety Institute (CPSI) works with governments, health organizations, leaders, healthcare providers and patients to inspire extraordinary improvement in patient safety and quality.

As the national authority on patient safety in Canada, in 2014, CPSI enhanced efforts to partner with key stakeholders, including patients and families, to collectively accelerate the pace, spread, and scale of patient safety improvement in Canada. The National Patient Safety Consortium is comprised of 50 organizations from across Canada that have come together around a shared purpose – to drive a shared action plan for safer healthcare.

Method

Following extensive consultation, CPSI developed a 2013-18 business plan with 4 strategic goals, the overarching being a national patient safety strategy. Bringing together key partners in Canadian healthcare to focus on some of the biggest patient safety challenges and align work around common goals, will enable the synergy needed to accelerate the pace of improvement. Beginning with the National Patient Safety Consortium in January 2014, 5 invitational meetings identified specific actions to make meaningful progress. Through consensus of 290 individuals, the overarching theme became “now is the time for action” with national, provincial, and professional organizations and patient groups agreeing to take joint leadership. The Integrated Patient Safety Action Plan is built on shared leadership, unprecedented collaboration of more than 100 organizations, and meaningfully partnering with patients. A collaborative governance model was established and the Consortium meets annually.

Outcome

As of December 2016, 67% of the actions were completed or in progress, contributing to 56% overall progress. There have been several important outputs from the Action Plan that have impacted patient safety across Canada. A few examples include:

1. Never Events for Hospital Care in Canada (September 2015)
2. Am I Safe? This report identifies the need for important patient safety conversations among home care clients, families and care providers
3. 5 Questions to Ask About Your Medications

The Evaluation Framework for the Consortium and Action Plan is underway and has four evaluation domains: 1) How do we collaborate?; 2) What has been done?; 3) How well is it working?; and 4) Is it making a difference?

Conclusion

Given the breadth of participation and the scope, this large-scale transformational change initiative is an effort in collective impact. Although the evaluation is underway, the processes have been iterative and continually responsive to learnings and feedback:

1. Importance of a shared purpose and guiding principles as a “true north”
2. Ongoing and targeted communication to increase spread
3. Continue to refine, choosing actions with greatest impact and letting go of some
4. Involve more frontline providers in the work

Built with unprecedented collaboration and shared leadership, the Integrated Patient Safety Action Plan will accelerate safer care for Canadians. The goal is transformational change. Participating organizations bring diverse mandates, cultures and priorities, but a willingness to align around some common goals. If successful, the work of the Consortium will not only make healthcare safer for Canadians, it will change the way the health system approaches patient safety.

A Journey to improve the triage skills of A&E nurses

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Background

Khoo Teck Puat Hospital (KTPH) is a 550- bed hospital that serves the population living in the north of Singapore. Her A&E Department attends to a daily average of 380 patients. Initial triage of patients except those requiring resuscitation are conducted by registered nurses. In mid-2015, the emergency physicians and senior nurses in the department noticed a deterioration in the standard of the initial triage conducted by her registered nurses as well as an inconsistency in the quality of this triage.

Method

Discussions were held with the senior medical and nursing leaders of the department. Four emergency physicians, the nurse in-charge of training and a nursing officer were approached ; all agreed to participate in this project. We obtained the materials of the triage courses from other institutions (a number of our nurses had attended those courses) and compared them to the course material used previously by the department.

After studying them, we decided on what we considered were relevant and adapted them taking into account our patient population. We chose to adopt an interactive style of training which included quizzes and role-playing as our participants are adult learners with albeit different degrees of experience. We made efforts to include as many photos, drawings and videos in the training slides. We solicited the assistance of the A&E clinical staff – doctors and nurses of all grades – to obtain photos and videos of conditions that we wanted to teach.

Outcome

The nurses are more confident and no ill patients have been missed at initial triage. There is now a 'buzz' to want to improve the standard of triage.

The quality of triage has improved. There is also consistency in the expectations and standard of triage conducted. The clinical acumen of the nurses have improved.

Conclusion

Patient care improves whenever the capability of care providers increases.

PATIENT PARTICIPATION - when the patient are involved the safety of the patient are improved

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Background

The Geriatric department at Slagelse Hospital, Region Zealand, Denmark, has 20 beds and 755 yearly discharges. The average length of stay is 7,9 days (2015). The staff involved includes doctors, nurses and healthcare assistants. The patient group consists of older, fragile patients with infections, delirium, falls and dementia symptoms. Insufficient involvement and lack of information of planned examinations may lead to concern for the patient and the relatives. External survey 2014 and 2015 showed that the department had significant potential for improvement in this area. The insufficient involvement and lack of information can affect the patients in many ways e.g. uncertainty, inability to refuse an examination and lack of preparation such as fasting. That may affect length of stay, experience, and quality of life for the patient. Only 16.7% of the patients had obtained written patient instructions about the examinations at baseline.

Method

New boards (45x60 cm) were provided, 1 nearby each patient's bed. On these boards the staff notes the date for an examination. It is marked on the board when patient examination information has been provided. When the patient and the relatives arrive at the department, they are informed about the board and its function.

Progress Study-Act at weekly board meetings, including systematic use of patient feedback.
Celebrating successful results.

Both intervention and implementation have been developed in an iterative process involving staff and using the principles of the Model for Improvement. Small scales testing of ideas were repeated while using continuous feedback from the multidisciplinary team at a weekly board meeting with repeating measurements to monitor processes and outcomes. The patients are asked (interview) if they feel involved and informed about the examination. Their comments are very motivating for continuous improvement among the staff.

Outcome

Process and outcome measures are monitored weekly at unit level. Measures are displayed in run charts added annotations to understand and analyse variation. The rule of a SHIFT (seven or more data points on the same side of the median) used to detect signals of change.

In mid-October 2016, the results show that 68% (74/109) of the boards are used as intended and 90% (27/30) of the patients feel involved and informed. The goal for both endpoints to be reached within 2016 is 95%.

The improvement resulted in a standardized workflow that ensures information and sufficient involvement in planned examinations. For the patients, it means that they feel secure, and they are prepared for examination.

When the board is completed, the patient and the relatives feel involved. The staff knows when the patient has an examination, and whether consent has been given.

Conclusion

Important things we did:

1. Perform workflow analysis as soon as possible in order to find the root cause and prioritize and accelerate improvement work;
2. Team thinking improved the quality of care;
3. During the implementation, we put focus on the project every day;
4. Patient feedback was a very strong driver.

If we were starting again we would ensure delegation of a team-leader substitute. We would ensure that the boards were provided in the beginning of the project.

Involve the patient and the relatives from the beginning of the project. Invite them to talk about their ideas for improvement. The patient's feedback and ideas are important. When the patient are involved the safety of the patient are improved, besides effectiveness of healthcare.

Leading Quality Improvement in Social Work

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Background

In South Eastern Health & Social Care Trust, Northern Ireland, recognition that improvement science and methodology could be applied to not only clinical practice but also in community and social care settings prompted the design and delivery of a regional quality improvement programme specifically for social workers in 2016. The aim was to develop and equip social work practitioners with skills in quality improvement methodology to allow them to bring about improvements in practice and benefit service users.

Method

The programme was based on learning from IHI and delivered from January to September 2016 to twenty-two social workers with local, national and international speakers, including service users. Participants were required to attend eight monthly teaching days, complete eight IHI online modules, contribute to a regional online discussion forum and undertake an improvement initiative with coaching from an experienced mentor, which was presented and learning shared at a final event.

Outcome

All twenty two social workers successfully completed the programme, gaining accreditation from the Northern Ireland Social Care Council. Twelve improvement initiatives were undertaken with positive outcomes, 50% of which had direct positive service user impact. Measurements during and following the programme showed significant increase in participants comfort in using improvement methodology, with all indicating 100% comfort in five key skill areas. Positive evaluation of the programme has resulted in it being commissioned again for 2017 with seven participants directly supporting this year's programme as mentors.

Conclusion

The programme has been successful in bringing quality improvement methodology to number of social workers across Northern Ireland who now are challenged to spread their learning and improvements to bring change within their own Trusts. The establishment of monthly mentor workshops will support consolidation of their learning and a newly established Regional Network for Quality Improvement in Social Work will endeavour to keep champions of quality improvement connected and support them to spread their learning regionally.

The safety of initiating oral anticoagulation therapy in non-valvular atrial fibrillation for adult patients

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Background

The introduction of direct oral anticoagulants (DOACs) as an alternative therapy for stroke prevention in non-valvular AF (nvAF) has signaled a shift from the use of vitamin-K-antagonists (VKAs). Despite their growing popularity, little is known regarding DOAC safety in "at risk" groups and there has been limited research into how guidelines regarding safe initiation are implemented in clinical practice. Chelsea and Westminster Hospital is a 430-bed teaching hospital in London.

Method

We carried out a retrospective cohort study on adult patients initiated on oral anticoagulation (apixaban, dabigatran, edoxaban, rivaroxaban and warfarin) for nvAF in Chelsea and Westminster Hospital from January - December 2015.

Our results found that 142 patients were initiated on DOACs and 13 on warfarin.

Audit results were as follows:

1. 19% of patients had a CHA2DS2-VASc documented.
2. 3% of patients had a HAS-BLED documented.
3. 96% of patients had a baseline renal function test, defined as serum creatinine and eGFR, performed prior to initiation of DOAC therapy.
4. 85% of patients newly initiated on DOAC therapy, who had a baseline renal function test, were prescribed the appropriate dose according to renal function stage.
5. 85% of patients had documentation on the discharge summary that counselling had been received.

Outcome

Audit results were disseminated to medical, nursing and pharmacy teams. An action plan has been put in place to increase compliance with audit standards. The action plan includes:

1. Education to medical, nursing and pharmacy staff on DOACs
2. Introduction of a DOAC prescribing checklist for appropriate initiation and safety measures
3. Inclusion of stroke and bleeding risk assessment in medical documentation to assist clinicians with decision-making on treatment options
4. Development of a bespoke, unique DOAC pocket guide and summary guidance covering indications, dosing, relevant bloods tests, bleeding risk factors, contraindications, drug interactions, adverse effects, switching between anticoagulant therapies and counselling information
5. Development of DOAC counselling guidance with relevant information for patients e.g. dosing, missed doses, serious side effects.

Conclusion

Anticoagulation practice is evolving and it is important to keep at the forefront of changes. In our study compliance was encouraging on safe initiation of oral anticoagulation therapy for nvAF, however further improvements are required. A multidisciplinary and integrated approach is key to enhancing robust anticoagulation measures and education on the evolving anticoagulation agents with medicines optimisation and enhancement of patient safety measures.

Improvement of patient safety education for nurses: Introduction of Kaizen Seminar for training of system thinking

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Background

Our 994-bed hospital is a general medical centre in an acute setting attached to a school of medicine. In 2010 and 2012, nurses were involved in two severe adverse events. Head nurses desired to make changes to improve safety in the workplace. Subsequently, we discussed this issue and considered the lack of systems thinking as one of the problems. Analyzing incident reports in spite of having a high 'reporting culture', we found most nurses could not explore root causes; in their reports, they identified their skills as the main causes rather than background factors, such as working conditions, education, environment, or equipment. Furthermore, they had a tendency to posit simple countermeasures; we frequently found the words 'intensive confirmation', 'completely coaching', or 'be more careful' in the text analysed by quantitative text analysis (QTA). Interviews with head nurses also revealed that they wanted to master analysis and improvement methods.

Method

We started an intervention with mid-level nurses who would be future leaders. For acquiring systems thinking, we designed the new program based on Kaizen (Continuous Quality Improvement). Furthermore, we employed seminars and workshop-style teaching rather than traditional-classroom style lectures. In each lesson, the core activity was dialog with sharing and feedback between all members. The authors took the role of facilitators. Students were required to complete assignments designed to use associated time-series-events charts, human activity theory, and cause and effect diagrams for visualizing background factors before the next lesson. For evaluation, we used QTA to measure the number of students participating and the extent to which students changed their thinking and were encouraged. We also measured the extent to which they could use their knowledge and skills learned in the course using a questionnaire, one year after graduation.

Outcome

The number of students participating did not decrease in comparison to a previous course. Analyzing the text from reflection sheets retrieved during each lesson, QTA revealed that both in 2013 and 2014, the words coded in the category of 'Change in thinking' appeared significantly more frequently in the first lesson and those coded as 'Feelings of anxiety, difficulty, and burden' appeared in the third, fourth, and fifth lessons of learning to use associated time-series-events charts, human activity theory, and cause and effect diagrams. On the other hand, a significantly high level of words related to 'Positive attitude' were apparent in the last lesson, and words coded as 'Feelings of learning, understanding, awakening, and developing' continued to appear with high frequency through all lessons. The results of the questionnaire survey indicated that 47% and 89% of 2013 and 2014 graduates, respectively, answered that they could use the Kaizen method in their own wards.

Conclusion

Although we found the intervention had a certain level of effect on students' development, further improvement and enhancement of a support system will be needed. The interactive seminar-style education was useful to develop and evaluate the capability of nurses. Introducing and providing coaching for Kaizen is one of the most effective ways to foster systems thinking from the basis of patient safety.

Different Pathways in Head and Neck Cancers - A Need for Change

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Background

The specialties of Otolaryngology and Oral and Maxillofacial Surgery manage around 1200 new cases of head and neck cancer each year in Scotland. Queen Elizabeth University Hospital is a new specialist hub serving the population of Greater Glasgow and surrounding areas, known to have a comparatively high incidence of head and neck cancer.

Method

There was a perceived diagnostic delay in ENT patients receiving their cancer diagnosis and starting treatment. All new cancers at South Glasgow MDT, between June 2014 and January 2016 were looked at. Case note review was performed and intervals between referral, outpatient clinic (OPC), cross-sectional imaging and treatment recorded.

Equitable distribution of radiology resources is important to attempt to reduce patient waiting times during the work up for these patients before definitive treatment decisions can be made. Bringing to light the disparity between radiology provision may encourage more resources to be given to the poorer performing service.

Outcome

Streamlining the patient journey requires collaboration and collective effort of the multidisciplinary team; and communication of data that illustrates both successes and failures of the system we work in. Members of the management team must be engaged and all parties permitted in putting forward their perspective views. The barriers of course can be unavailability of necessary funding and inadequate resources. Making the case for the need to improve the current service is not simple, since these delays have come to light, a short life working management group has been established to hopefully address these issues. A dedicated 'Neck Lump' outpatient clinic is proposed and work is ongoing for this concept to become a reality.

Conclusion

In order to drive future change, we must listen to our patients' and carers' views and measure their experiences. Striving to reduce the time leading up to diagnosis and subsequent initial treatment we hope to make an impact in overall morbidity and mortality. Collaboration between specialties is central to acquiring the data, which can make a powerful case for systematic reorganization when discussing with all stakeholders.

From Mortality Case Notes Reviews to Improvement

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Background

The Improvement Academy (IA) consists of a team of improvement scientists, patient safety experts and clinicians. We are committed to working with front-line services, patients and the public to deliver real and lasting change for the Yorkshire & Humber region which covers ten percent of England. Nationally it is recognised that there are major limitations to hospital mortality statistics and how these can be interpreted. Case notes review remains the principal way of retrospectively assessing quality of care in our healthcare system. Therefore, a standardised process of mortality case note review is needed to learn from both the good and poor aspects of care processes.

Method

Since January 2014, the IA has been working with acute and mental health trusts on a systematic mortality review programme that can drive improvement in the quality and safety of healthcare. The IA provides training and support to trusts in using a standardised, evidence-based methodology of case notes review called Structured Judgement Review (SJR). This methodology allows trained reviewers to identify and describe the quality of care received and in doing so create a score of that quality. This provides qualitative and quantitative data about what goes well and not so well in care systems. Over 750 clinical staff in the region has been trained across specialities and roles. We organise full day training sessions with an average of 30 participants each. The information gathered from the thematic analysis allows units or organisations to ask 'why' questions about things that happen, to enable learning and action.

Outcome

Regionally, prior to 2014, mortality reviews varied widely. Generally, these were sporadically done. Some trusts had mortality and morbidity meetings but these commonly did not involve a robust methodology for reviewing the patient's care journey. Now, 12 acute and 3 mental health trusts in the region use a standardised mortality review methodology. Our training days are attended by participants from a range of roles including consultants, specialist nurses and patient safety leads. Our programme has led to changes in care systems. Examples of improvement work include respiratory outreach team set up, timely recognition and management of the dying patient, and improved sepsis recognition and management. There is also better collaborative work with primary care and ambulance services on issues like blood pressure management, timely antibiotics administration for septic patients and reduction of inappropriate admissions.

Conclusion

This pioneering programme was entirely shaped bottom-up by the clinicians in the Y&H region with the support of the Improvement Academy. SJR allows the review of the individual patient's journey, something that was not achievable with hospital indices analysis in the past. The Improvement Academy's SJR has now been recommended as a key case notes review methodology in the Department of Health's National Mortality Framework guidance.

Be the Change

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Background

Ashford and St Peter's Hospitals NHS Foundation Trust (ASPH), is a medium sized District General Hospital in the UK, employing around 3 500 staff. We have developed an approach to Quality Improvement (QI) that develops capacity and capability for individuals and teams to make improvements and encourages experimentation and innovation. At a time when we are required to deliver large scale transformational change, to secure a sustainable future, while continuing to deliver high quality care, we find that front-line, operational teams struggle to find the time and the will for QI. Our challenge, as a central team, was to find a way to support and encourage organic improvement activities and grow a social movement of improvers from within our workforce. The traditional top-down model is simply no longer robust, or far reaching enough to meet the ever increasing demands of delivering high quality healthcare within a financially challenged system.

Method

'Be the Change' is a social movement campaign that has transformed the way staff are empowered and supported in making changes at ASPH, by using distributed leadership. The idea was conceived by Junior Doctors in 2014, based on social movement theory and inspired by National NHS Change Day. Ideas for change were collected on postcards, these were sorted and pairs of 'change-champions' were assigned to the various projects. 'Be the Change' has now spread to support improvement activities throughout the Trust. In 2015, we launched our QI Microsite - www.bethechange.com - and a mobile app. has also been launched to spread the word and help more people adopt this simple approach to QI. An online 'portal' is available for the on-going submission of ideas and training is available through the new ASPH QI Academy, including access to the IHI Open School.

Outcome

At ASPH we are aiming to create a culture of "curiosity and creativity" that is fair, open and supportive and where "everyone is an improver". Our CEO, Suzanne Rankin, said recently " we are embracing QI, not only because it is the right thing to do, but because it will help us to achieve a culture where we all feel empowered and confident in looking for improvements for the benefit of our patients". Although there are no hard measures for our intervention, over 30 projects have been submitted over each of the last 2 years with each demonstrating benefits of their own. The initial phase of the programme saw 100 members of staff engaged in QI projects and training. Since the conception of 'Be the Change', there have been significant improvements in staff engagement and in the last National Staff Survey report, ASPH was above average in all 4 questions relating to improvement.

Conclusion

Supporting QI is synonymous with developing a progressive organisation and we know that in order for us to achieve our goals, we need our teams to be empowered to be creative, innovative and always looking for ways to improve services and the care we provide. 'Be the Change' focusses on this empowerment of staff to make improvements for their patients, it provides the tools and support needed and also seeks to create a culture for improvement. We strongly believe that improvement is all about people, we invest time and energy with staff at all levels, to create the capability and capacity required for improvement. Engagement with middle-managers continues to be a challenge as these groups are often the most operationally challenged.

Key Messages:

Keep it simple - QI does not have to be complicated
Get started - don't be afraid to fail
Start small - small tests of change will give confidence for spread
Give it time - it's all about people, behaviour and culture change takes time

Past harm to future safety and everything in between: spreading our learning

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Background

The Measurement and Monitoring of Safety Framework was published by the Health Foundation in 2013. Funded by the Health Foundation 4 regional improvement bodies tested the framework in varied settings across the UK to understand its applicability in practice.

Method

The framework was tested in Acute, Mental Health, Ambulance Services and District Hospitals at levels from Ward to Board. Patient representatives were involved in a number of the project teams.

Outcome

Test site teams have been able to evidence improvements in quality and safety. The Regional Improvement Bodies have been able to continue to test the framework in new and diverse settings.

Conclusion

The framework is proving to be an exciting concept for looking at safety through a different lens and we continue to develop our understanding of the varied ways in which this can be applied.

Implementation of National Systemic Anticancer Therapy (SACT) dose-banding tables at two London NHS Trusts

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Background

Chemotherapy is the single biggest spend within NHS England. Cost of systemic anticancer therapies (SACT) is growing rapidly, with annual increases of 8%.

Body surface area (BSA) dosing is used for SACT but is associated with inter-individual variability. Dose-banding has been explored to optimise SACT preparation.

National Health Service (NHS) organisations have been incentivised to implement national dose-banding for SACT, where patients will receive optimised doses.

We describe how two London hospitals; one larger multisite cancer centre and the other, a small cancer unit have approached implementation of this national initiative.

Objective: To reach 90% of prescribed SACT doses matching national dose-bands by end of March 2017

Method

Clinical and governance approvals were sought. Ethics approval was not required. Local targets were assigned after baseline measurements.

Site 1: All dose-bands were updated on the electronic prescribing system (EPS) by July 2016. SACT most commonly used were prioritised to rapidly achieve compliance. Data entry for all 17 drugs followed a "big-bang" approach followed by gradual transition to banded doses.

Site 2: Existing stockholding of dose-banded SACT reviewed. EPS dose-banding tables updated at phased intervals as stock decreased. Data entry and manual transition of drugs took place in monthly batches throughout the implementation period.

Outcome

Quarterly percentage compliance was monitored and collated on a national template. Site 1 EPS system and approach was less resource intensive. It is estimated that a total of 12 hours over 6 working days was spent on the implementation. Site 2 EPS system and approach was more resource intensive. It is estimated that 0.25wte was spent on the implementation and 0.1wte on transitioning drugs.

Table 1: Compliance with national dose-banding tables across two London hospitals

	Site 1 Target %	Site 1 Actual %
Baseline		23
Q1		25
Q2	25	66
Q3	40	97
Q4	70	99.7
	Site 2 Target %	Site 2 Actual %
Baseline		0
Q1		0
Q2	5	7
Q3	30	45
Q4	75	86

Conclusion

Implementation of this national initiative was influenced by local context at each site. One site had minimal stockholding therefore invested in updating the EPS system early and then monitored progress. Large quantities of existing stocks shaped the second site's approach as the aseptic unit lacked the capacity to transition multiple high volume dose-banded drugs in parallel. Regardless of approach, a similar improvement over time was accomplished. Experienced pharmacists led the implementation at both sites.

Common barrier to implementation was time constraints. System-wide benefits of standardising doses may allow meaningful comparisons of cancer outcomes across England and enable the NHS to secure national procurement contracts. Local benefits include improved cancer patients' experience by reducing waiting times, improved finances through greater use of outsourcing and decreased medicines wastage, and enabling care closer to home.

Involvement of patients and relatives in an oncological peer board

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Background

At Aalborg University Hospital, we have organized an Advisory Board to improve the quality in care as well as involving the patients' perspective in the clinical performance and the organization of the Oncology Ward.

Method

We posted an invitation for participating in the Advisory Board at the Oncology Ward, for current and former patients and relatives. We recruited the members through interviews.

Outcome

Having an Advisory Board gives a Unique possibility to improve clinical practise based on the patients and relatives needs and wishes. The feedback is constructive and we get patients involvement on the topics possible like communication, information and how the Health professionals perform.

Conclusion

Every Department ought to have an Advisory Board consisting of patients and relatives as well as the involved Health professionals to improve clinical practice. In that way you always include the perspective of the users.

CLEAR Dementia Care: Understanding Behaviour and Reducing Distress

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Background

The Northern Health and Social Care Trust (NHSCT) multidisciplinary Dementia Home Support Team (DHST) includes clinical psychology, social worker, nurses, occupational therapy, support workers and administrative staff. The team works with people living with dementia and their carers. People with dementia living in Care Homes can present with Behavioural and Psychological Symptoms of Dementia (BPSD) that Care Home staff find challenging and difficult to understand. These behaviours are often a sign of the stress and distress the person experiences as they try to cope with the daily challenges of living with their condition. Failure to understand the behaviour and address the unmet need can result in unnecessary breakdown in placement, unnecessary admission to hospital and increased distress for the person with dementia.

Method

CLEAR Dementia Care © (Duffy, 2016) was developed over 18 months with ongoing review and modification based on feedback from care staff and DHST staff. The aim is to help carers to understand behaviour from the perspective of the person and their environment, and identify any unmet need(s).

Care staff experienced difficulty in accurately recording and understanding behavior. The Behaviour Record Charts developed are easy to use and do not require training. Written information provided details what the behaviour is, why it might be occurring and how care staff should respond. Ownership and joint accountability is introduced as all staff sign to confirm that they have read the agreed recommendations. A written formulation includes a brief life history which helps care staff to see the whole person beyond the label of their dementia and positively impacts on interaction.

A training programme has been developed and delivered to staff.

Outcome

1. There is increased engagement and accountability with Care Home staff. They can accurately record behaviour which has resulted in more timely and effective engagement with recommendations.
2. There is a significant reduction in distress, measured by the Challenging Behaviour Scale (CBS, Moniz-Cook et al., 2001) and Behaviour Record Charts.
3. Excellent clinical efficiency: the length of a clinical episode and the number of face to face contacts reduced have both reduced by over 50%.
4. Waiting times have reduced to 9 days for routine referrals and 4 days for urgent referrals.
5. Positive qualitative data from service users and care home staff, for example, "I got my dad back".
6. The training programme has been very highly evaluated. Participants report increased knowledge about dementia, how to effectively communicate with a person with dementia and greater understanding of behaviour.
7. Training has facilitated a stepped care approach.

Conclusion

CLEAR dementia care is a clinically efficient and effective way of working with people who present with Behavioural and Psychological Symptoms of Dementia (BPSD). A training programme has enabled the implementation of stepped care to increase efficiency and reduce waiting times. Simple assessment tools have been developed. This has resulted in greater understanding of BPSD, more accurate recording of behaviour, which in turn, facilitates a timely formulation and successful intervention plan. The long term success of any intervention depends on successful engagement and collaboration with everyone involved in offering support. The processes and paperwork developed in CLEAR Dementia Care © facilitate engagement and collaboration. CLEAR Dementia Care © helps carers to see the whole person with dementia. When carers understand the perspective of the person, they can find ways to reduce distress. The outcome is better care and enhanced quality of life for the person with dementia.

Distractions in the Operating Room: A closer look using the glitch method

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Background

The care for a surgical patient is a technically challenging process. It is a step wise approach that begins with patient selection, preoperative assessment and involves the coordination of multiple resources and expertise from various healthcare workers. One method that uses direct observation to identify and categorize undesirable events in the operating room is the glitch method. The glitch method measures process fidelity and is applicable across a wide range of specialties, techniques and settings. It involves two observers, one with human factors (HFs) and one with a surgical background, observing entire operative procedures and noting any deviations from the expected or planned course.

In this study we use the glitch method to enumerate and evaluate a specific category of glitches – distractions – in relation to phase of surgical operation.

Method

Design: Prospective cohort study with direct observation.

Setting: Operating theatres on five sites in three National Health Service Trusts.

Participants: Staff taking part in elective and emergency surgical procedures in orthopaedics, trauma, vascular and plastic surgery; including anaesthetists, surgeons, nurses and operating department practitioners.

Outcome measures: Frequency and temporal pattern of glitches according to three phases of surgical procedure: 1) Pre-Incision phase, 2) Operative phase, 3) Post-closure phase.

Outcome

A total of 429 operations were observed and 5742 glitches were observed, 23.4% (1342) of which were distractions.

Among the three phases, most glitches occurred in the operative phase at a rate of 2.1 glitches/hour followed by the pre-incision phase (1.5 glitches/hour) and post-closure phase (0.6 glitches/hour).

Among all procedures in which glitches occurred, the range of duration of the pre-incision, operative, and post-closure phases were 0-73 minutes (median of 14 minutes), 7-747 minutes (median of 81 minutes), and 0-136 minutes (median of 11 minutes), respectively.

Across all surgical specialties, distractions were the most common type of glitch.

Conclusion

The glitch method allows for collection of a rich dataset suitable for analysing the changes following interventions to improve process safety, and appears reliable and sensitive.

The highest rate of distractions takes place during the operative phase and the rate of distractions in the pre-incision phase is over twice as high as that of the post-closure phase.

Further analysis of the types of distractions and the specialty-specific distraction rates will provide for targeted interventions in order to improve the safety and reliability of the operating theatre environment.

FAST (Flexible HAndover Structured Tool) Faster and Focused

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Background

An effective process for transmitting patient critical information is essential for patient safety and for improving communication among healthcare staff. Previous studies have discussed handover tools such as SBAR (Situation, Background, Assessment, Recommendation) or SOFI (Short Observational Framework for Inspection). Yet, these formats lack flexibility, and require special training. In addition, nurses and physicians have different procedures for handing over information.

The objectives of this study were to establish a universal, structured tool for handover, for both physicians and nurses, based on parameters that were defined as "important" and "appropriate" by the medical team, and to implement this tool in various hospital departments, with flexibility for each ward.

Method

A questionnaire, based on established procedures and on the literature, was developed to assess attitudes towards the most important information for effective handover between shifts (Cronbach's alpha 0.78). It was distributed to 150 senior physicians and nurses in 62 departments. Among senior medical staff, 12 physicians and 66 nurses responded (52% response rate). Based on the responses, a handover form suitable for all hospital departments was designed and implemented.

Outcome

Important information for all staff included: Patient demographics (full name and age); Health information (diagnosis or patient complaint, changes in hemodynamic status, new medical treatment or equipment required); and Social Information (suspicion of violence, mental or behavioral changes, and guardianship). Additional information relevant to each unit included treatment provided, laboratory or imaging required, and change in scheduled surgery in surgical departments. ICU required information on background illnesses, Pediatrics required information on diet and food provided and Obstetrics required the number of days after cesarean section. Based on the model described, a flexible tool was developed that enables handover of both common and unique information. In addition, it includes general logistic information that must be transmitted to the next shift, such as planned disruptions in service or operations, staff training, etc.

Conclusion

Development of a simple, clear, comprehensive, universal, yet flexible tool designed for all medical staff for transmitting critical information between shifts was challenging. Physicians and nurses found it useful and it was widely implemented. Ongoing research is needed to examine the efficiency of this tool, and whether the enthusiasm that accompanied its initial use is maintained.

A Patient Information Board for accurate, safe and timely care delivery

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Background

This patient information board was designed with the aim to provide clear, easy to understand information with regards to enable timely, safe and accurate delivery of care to patients in Yishun Community Hospital(YCH). YCH is the latest Community Hospital that was operational since Dec 2015. We cater to and provide care to the residents in Northern part of Singapore. We work closely with Khoo Teck Puat Hospital which is the Acute Hospital under the same group, Alexandra Health System(AHS)

Method

This board was an improved version of the board that was in use in Khoo Teck Puat Hospital(KTPH) We use pictorial for ease of understanding, the tags are made of magnet which is more durable, all the tags are divided into 4 categories: mobility related, diet related, precautions (e.g Nil By Mouth, Vision Impairment etc.), staff feedback were gathered during the design phase, a prototype board was made and it was tested out in KTPH Ward environment. After gathering feedbacks from staff and users (Therapists, Dieticians), amendments were made based on feedback received. The whole design process took about 6 months to complete.

Outcome

This new version of Patient Information Board helped the hospital to save \$18k per year. User compliance was achieved as well as the tags are stored together with the board, users can make changes instantly without having to walk to another place where the tags were stored thus ensuring timely updates and safe care to patients.

Conclusion

Cost saving was the greatest impact arising from this change. Getting the various stakeholders to comply to updating the board on their own instead of waiting for nurse to update was a Challenge in the initial phase but perseverance paid off.

Joint specialist clinic: Improving Care and experience for patients with Interstitial Lung Disease in a District General Hospital

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Background

This was a service improvement project to enhance the pathway of investigation and management of patients with interstitial lung disease (ILD), with the development of a local specialist clinic and closer working with tertiary hospital unit. The project was conducted at the Thoracic department, Royal Bournemouth Hospital (RBH), which is district general hospital with a catchment population of around 400,000.

ILDs describe a range of lung conditions, the commonest of which is idiopathic pulmonary fibrosis (IPF). Other ILDs have a multitude of causes requiring specialist assessments. Guidelines recommend formal MDT diagnosis and new treatments for IPF can only be prescribed by specialist centres. With increasing number of cases, Specialist centres are unable to manage all patients and many patients do not wish to travel. The aim of this project was to develop closer working with the tertiary centre, speeding up the investigation pathway and reducing number of patients required to travel.

Method

The old pathway for investigation was reviewed. A lead consultant at RBH worked with local radiologists, the tertiary centre MDT and specialist nurses to form a hub and spoke model. Local training needs were identified and a new pathway was developed to include a local ILD MDT and lead consultant took complex cases to the tertiary MDT. Two respiratory nurses were trained to support patients with ILD, in addition to their general respiratory knowledge. The local specialist ILD clinic was established which was run jointly by respiratory and rheumatology consultants to assess, confirm diagnosis and treatment plan. Departmental education and feedback of service supplemented the change quarterly. The project took one year.

Outcome

Immediately the pathway improved access to specialist opinion and reduction in travel to tertiary centre. A patient survey ascertained understanding and satisfaction at our specialist clinic. 100% of the patients understood the different roles of consultants at the clinic and found the consultation rightly paced. They understood their test results and diagnosis. 86% of the patients were offered treatment at this clinic and believed they received enough information.

Conclusion

Patient satisfaction and improved outcome (change of diagnosis and treatment) were the major changes seen. Less patients needed to attend tertiary specialist clinics and the tertiary centre could concentrate on seeing patients suitable for treatments or more complex cases. Regular attendance at Southampton MDTs and correspondence with experts made this process easy. Working with tertiary team has been good for education and better communication. Tackling each part of the project one piece at a time has made it manageable. Changing a clinic into a joint clinic depends on the availability of consultants and flexibility of job plans.

T&O post-operative instructions: are they fit for purpose?

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Background

Derriford Hospital is a Major Trauma Centre covering the SW of England. Orthopaedic Department is a high volume unit playing an important role in management of all trauma patients originating from this area.

In this context an accurate and clear documentation is expected to follow every trauma case.

The post-op instructions are the best way to plan our patients post-op recovery and also to communicate this plan to all the healthcare providers involved in patient care. Failure to do so will lead to a suboptimal care.

A constant lack of important information was noticed in our trauma patient's post-operative instructions which led to increased workload of ward doctors and on call teams to provide answers regarding different aspects of patient's recovery which should have been already available in the post-operative note.

This was a time consuming process which ultimately led to delays in recovery and discharge.

Method

187 post-op notes (February 2016) were screened against a set of mandatory parameters: event consultant, pain management, infection control, VTE prophylaxis, WB status/loading, activity level, ROM, rehab plan, incision management, disposal/follow-up plans, fracture clinic appointment.

Overall a poor quality of post-op instructions was noticed with major gaps in recording: event Consultant and corresponding fracture clinic follow up, pain management (19%), infection control (30%) and rehabilitation plan to discharge (29%).

The results were discussed in multiple orthopaedic meeting at all levels.

Intervention proposal:

1. A new operative note format containing a mnemonic for post-op instructions: OIL PIT TINDR WARS (observation, investigation, laboratory, pain, infection, thromboembolism, tubes, incision, nutrition, drains, retained swabs, weight bearing status, activity level, range of movement, splintage).
2. An agreed list of terms for rehab prescription.

Outcome

188 trauma post-operative notes (June 2016) were screened against the same set of mandatory parameters.

The results were compared with the previous data.

Improvement was achieved in multiple areas of previous concern: pain management (15% improvement), infection control (21%), WB status/loading (14%), activity level (6%), ROM (12%), incision management (12%).

Minimal improvement made in recording VTE prophylaxis (from 65.2% to 65.4%), disposal/follow up plan (from 81% to 83%) and fracture clinic appointment (from 12% to 14%).

Rehabilitation plan to discharge remains unpopular with a slight decline in interest (0.61%).

Consultant responsible with surgery remains an enigma in: 18/187 cases (1st cycle) and 20/188 cases (2nd cycle).

Conclusion

Despite the fact that an overall improvement in the quality of post-op instructions was noticed, there are areas which need to be further addressed: recording event consultant and the appropriate fracture clinic appointment, VTE prophylaxis and loading level in upper limb.

If there is no pre-existing format for post-op instructions is more likely to miss aspects of recovery when recording operative notes.

My plan is to implement a common post-op format for all trauma patients, containing all the relevant information in special boxes for surgeons to populate.

Important changes take time, multiple interventions are sometimes needed to achieve homogenous results. Improvements, even if only in small steps, will make a significant difference in patient outcome.

Choosing Antibiotics Wisely - A quality Improvement Programme on the Neonatal Unit

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Background

Microbial resistance to antibiotics is a serious global health problem compounded by antibiotic misuse and scarce investment into new research. Neonatal units are vulnerable to defensive practice and antibiotic misuse due to its highly emotive setting and greater risk perception. Inappropriate prescription in early life has lifelong effect on microbiome, innate immunity and disease. Studies confirm no difference in proven sepsis between high and low prescribing units but growing evidence of adverse neonatal outcomes related to longer antibiotic exposure. A radical change in mindset and robust antibiotic stewardship is required.

The QI project was initiated at Singleton Hospital, Swansea to reduce antibiotic usage rate (AUR) by 20% by 2016. The 3-monthly median baseline AUR was 347/1000 patient days, 268 for culture negative patients. The median antibiotic days/patient at discharge was 3 days. Antibiotics were stopped within 36-48 hours in 32.5% of culture negative episodes.

Method

In 2016, Singleton Hospital was the only UK centre to participate in an international collaborative with the Vermont Oxford Network (VON) and the Centre for Disease Control (CDC) to reduce antibiotics use.

A multidisciplinary team of professionals and parents collaborated through webinars, electronic learning portals and local seminars to share good practices and manage change, through sequentially introduced Plan-Do-Study-Act (PDSA) cycles. The PDSA cycles focussed on improving staff and family awareness, reduce antibiotic initiation and avoid unnecessary prolongation.

- a) increasing staff and parent awareness through posters, leaflets & audits
- b) antibiotic stickers to prompt review and discontinuation of antibiotics at 36- 48 hours in well babies with negative cultures.
- b) withholding antibiotic initiation in low-risk preterm infants >30 weeks gestation with enhanced clinical monitoring

Data was collected, analysed and results disseminated on a monthly basis.

Outcome

The median AUR (corrected for fluctuations) fell from a baseline of 347/1000 to 198/1000 patient days ($\downarrow 43\%$, $p < 0.001$). This reduction was also seen consistently across all antibiotic classes and in culture negative episodes. The mean antibiotic exposure at discharge reduced from 5.53 to 2.32 days per patient ($\downarrow 58\%$), median from 3 to 2 days ($p < 0.0001$). The proportion of culture negative episodes where antibiotics were stopped within 36-48 hours increased consistently from a baseline of 32.5% to 91%. Babies discharged without any antibiotic exposure during inpatient stay rose from 21.9% to 41.3% in the last quarter of 2016. Surveys confirmed high level of staff and parent awareness and support. The variation in antibiotic usage also reduced significantly. The improvement has been sustained for over 12 months and during this period the unit recorded the lowest mortality and necrotising enterocolitis rates for many years.

Conclusion

We achieved a magnitude of change more than twice our initial SMART aim. The QI coincided with unprecedented staffing crisis in Wales requiring many senior clinicians to undertake resident duties. While this added strain to the system, it ensured greater supervision, clinical judgment and patient safety. Deviation in practice, identified at the beginning of new junior doctor rotational placements, have been addressed in subsequent induction programmes.

Other interested groups must invest in developing a motivated multidisciplinary team, a strong clinical leadership and partnership with allied specialties and patients. The core principles will require adaptation to suit specific population. The initial challenges involve mitigating risks of deviating from norm, managing pockets of scepticism and supporting clinicians out of their comfort zone. These are best managed by small positive changes, enhanced patient monitoring to avoid adverse events & frequent dissemination of outcomes.

Relationship of MET call duration to time of day and prior medical review

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Background

Maroondah Hospital is a member of Eastern Health, a large metropolitan health service in eastern Melbourne, Australia. Eastern Health has over 850 acute hospital beds and provides healthcare services to a population of nearly a million people. MET calls place substantial strain on limited hospital resources, particularly if prolonged and occurring after hours. Factors that result in variability in duration of MET calls are not readily known but if recognised may provide opportunities for intervention to reduce impact. The primary objective for this study was to determine if there was a difference in duration of MET calls between routine and outside working hours 6:00 pm to 8:00 am. The secondary objective was to determine the frequency of medical reviews of patients with unstable observations prior to MET calls, and whether such reviews impacted on the duration of a subsequent MET call.

Method

We undertook a review of MET calls at Maroondah Hospital during July and August 2015. Electronic medical records were analysed to obtain patient demographics and details of inpatient course. MET calls occurring during routine and outside working hours were analysed. Patients with unstable physiological observations in the 4 hours prior to a MET call were also included in a subgroup analysis. These were further divided into groups depending on whether they had a medical review.

Outcome

A Total of 201 MET call episodes occurred in the time period of which 186 episodes were included in the study. 15 were excluded from analysis due to inadequate data or those which were converted to a Code Blue immediately after the MET call was called. The average duration of MET Calls was 22.87 (± 14.9) min and 23.45 (± 14.5) min for during working hours and after hours respectively. This was not statistically significant. 7 Patients during working hours and 14 after hours were transferred to ICU after their MET call (statistically significant $p=0.04$). Sub-group Analysis: Seventy MET calls events were preceded by documented unstable physiological observations and were included for subgroup analysis (Graph 1). Of these only 33 (47%) patients had a medical review in the 4 hours time period prior to the MET call. The mean duration of MET calls in patients with pre-MET medical reviews was 19.48 (± 12.3) and 24.08 (± 15.0) minutes no pre-MET medical review respectively, ($p=0.17$).

Conclusion

Although this study did not demonstrate a significant difference in number or duration of MET calls outside normal working hours there were proportionately greater numbers of ICU transfers. A trend towards longer duration of MET calls was seen in patients not receiving recommended medical reviews for abnormal observations in the 4 hour period to a MET call. Further research is required to identify other factors that prolong MET calls.

Improving Patient Safety & Care: Implementation of Patient Results e-Acknowledgement Module

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Background

The Singapore General Hospital (SGH) is Singapore's largest acute tertiary hospital and performs more than 10 million laboratory investigations and 500,000 radiological procedures annually.

Previously, the primary method of informing clinicians of their patients' results was via the sending of hard copies to the various departments. This was a highly tedious and manual process, involving much logistical work in trying to ensure that the hardcopies reach the clinicians for their acknowledgement and follow up.

The inherent acknowledgement function of Sunrise Clinical Manager (SCM) limits acknowledgement rights to only the Primary Provider of the patient. This was unrealistic in our local context, where a team-based management of patients is the standard practice.

Thus, a multidisciplinary workgroup was formed to look into the development of an electronic Patient Results e-Acknowledgement Module (Module).

Method

A multidisciplinary workgroup, comprising key representatives from Divisions of Ambulatory and Clinical Support Services (ACSS), Surgery, Medicine, Nursing, Pathology, Department of Diagnostic Radiology (DDR) and IHIS, was formed in March 2013 to gather user requirements and drive the development of the Module.

The Module primarily receives information interfaced from ancillary systems in the ordering and reporting process. To ensure that results appear in appropriate clinicians' personalised worklists, enhancements were made to various ancillary systems to mandate the fields containing clinician information.

After conducting User Acceptance Tests (UATs) with over 60 clinicians, and briefings for all clinical departments on its usage, the Module was launched on 17 October 2013.

The team continues to monitor acknowledgement rates, provide troubleshooting support and gather feedback from users to explore possible enhancements to the Module in the future.

Outcome

The Module allows for the monitoring and tracking of the results acknowledgement rate, which stands at 86% as at February 2017. It eliminated the need to push-print hardcopy reports to various locations from 31 March 2014. Results are now only printed when necessary; thereby reducing wastage and eradicating the need for secure storage space and secure disposal services.

The single, comprehensive database also allows administrators to identify unacknowledged results and direct monthly reminders to the relevant departments. This management of patients' results would be challenging had the hospital not shifted from its previous reporting process.

As part of our efforts to create a seamless and integrated experience for patients, majority of the SingHealth institutions have adopted the module by end 2016 and transformed ourselves as one unified service.

Conclusion

The main challenge lies in ensuring that all results are tagged to the right clinicians and worklists. Results would be sent to the wrong clinician if their names were erroneously entered, especially if information was not properly or legibly indicated on requests raised via hardcopy forms. Fortunately, the occurrence of results being tagged to the wrong clinicians diminished as users grew in awareness of the downstream impact.

Clinicians had to adjust their practice to review and acknowledge results electronically. With strong support from management, the Module gained traction among users and the results acknowledgement rate increased over time.

The Module in SCM achieves a closed-loop results reporting system and enhances patient safety in the process. It has helped the organisation to move away from hard copy results toward a safer and more standardised method of results management.

Decoding effective communication to eliminate hospital transmission of Middle East Respiratory Syndrome Coronavirus during outbreak

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Background

Middle East Respiratory Syndrome (MERS) is an illness caused by Middle East Respiratory Syndrome Coronavirus (MERS-CoV). MERS cause severe human infection manifested by severe acute respiratory illness. About 3 to 4 out of every 10 patients reported with MERS have died.

The first case of MERS -CoV was identified in Saudi Arabia in September 2012. Since that time, WHO has been notified of 1806 laboratory-confirmed cases of infections, of which 643 deaths in 27 countries. Saudi Arabia has recorded the highest number of cases -1442 with 610 deaths.

King Fahad Medical City, a 1,200-bed tertiary care hospital in Riyadh, experienced a MERS-CoV hospital outbreak in April 2014, which started from one staff exposure to an index patient in Emergency room and involved later a number of 23 HCWs. One of the key elements in prevention and control of MERS-CoV hospital outbreak is strengthening effective communication between Infection Control, hospital leadership and medical staff.

Method

This is an improvement project based on the lessons learnt from the previous MERS-CoV hospital outbreak in 2014. The project used FOCUS-PDCA quality improvement tool and was conducted from January 2015 to December 2016. Our goal was to build and implement effective communication strategies in order to achieve "Zero" hospital transmission of MERS-CoVs at King Fahad Medical City (KFMC).

The following strategies were addressed: culture changes, situational awareness, risk communication, debriefing, appropriate assertion, shared responsibilities, teamwork, critical thinking, improvement in quality of delivered messages, use of multiple communication channels, problem solving.

The main indicator used to measure the effectiveness of communication was the number of MERS-CoV cases acquired by hospital transmission among patients and medical staff. A number of proxy indicators were selected to reflect the progress of work in building and implementing effective communication.

Outcome

The results showed the following changes in the outcome indicators:

1. The incidence of MERS-CoV cases acquired by hospital transmission among patients at KFMC decreased from 22 cases in 2014 to 2 cases in 2015 and Zero cases in 2016
2. The incidence of MERS-CoV cases acquired by hospital transmission among KFMC staff decreased from 23 cases in 2014 to Zero cases in 2015 and 2016

The following changes were observed in the proxy indicators:

1. The number of KFMC afferent community members who received seasonal influenza vaccine increased by 68% in 2016 compared to 2015
2. The number of KFMC staff who received seasonal influenza vaccine increased by 130% in 2016 compared to 2015
3. The overall KFMC staff compliance with hand hygiene increased from 76% in 2015 to 81% in 2016
4. The percent of MERS-CoV patients who were transferred to the referral MERS-CoV hospital increased from 9% in 2014 to 86% in 2015 and 100% in 2016.

Conclusion

The hospital transmission of MERS-CoV should not be underestimated. Infection Control Administration should have the initiative and act together with stakeholders in a multidisciplinary team to eliminate the hospital transmission of MERS-CoV and prevent the occurrence of a hospital outbreak. The quality improvement project, which used FOCUS-PDCA quality tool to building and implementing effective communication, was successful in elimination of hospital transmission of MERS-CoV and ensured a safe healthcare environment for staff and patients. In order to keep the result sustainable we recommend to continue with the same strategies of prevention and to closely monitor the implementation process with measurement of outcome and process indicators. Sharing the experience with other healthcare providers that may encounter similar problems can be of real benefit.

Sensitive and Reliable design of experiment approach for early detection and decreasing incidence of complications of oral mucositis in hematological pediatric patients

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Background

During walk the talk with patients to see, hear and feel what they do, I found unplanned and unrecorded progress in oral mucositis from primary signs and symptoms till being on pain controlled anesthesia "PCA" within first days from patient complaint after hospital admission and starting cancer treatment and that related to many factors that cause quickly onset of oral complications.

So I started to investigate the related causes to that problem through nursing staff, dentists, physicians and also parents.

Method

I started with traditional research methods through one month by using:

1. Parents questionnaire included main items to assess their knowledge and weakness of process.
2. Who grading assessment survey and comparisons between nursing assessment and dentist assessment by WHO grading assessment.
3. Nursing interview to assess and identify related causes and sub-causes for rapid complications development of oral mucositis.
4. Using design of experiment approach for suspected the most factor that negatively affect on prognosis and outcome.

Outcome

Through:

1. Designing sensitive and reliable standardized assessment tool used by nursing and physician to avoid discrimination between their assessments that negatively affect the patients.
2. Develop and involve parents and patient in treatment and develop body of knowledge that has positive impact on desired outcomes.
3. Decreasing incidence of oral mucositis complications that has negative impact on disease progression.
4. Involve Dentist not after accident occurs but from first line steps of treatment and follow up.
5. Using least medical treatment as low as possible.

Conclusion

1. Being sensitive, reliable, proactive and problem oriented will not save costs but also will save and relaxes your patients, staff and parents and give your treatment the highest impact you desire.

changing cultures of parents and staff from using the old of intervention or knowledge to be creative, sensitive and thinking proactive by default it is not easy but not impossible and need more implementations.

2. Identified the main cause will make your efforts and works smarter and will get the great positive impacts on your outcomes.

"First Do No Harm" Preventing Unnecessary Blood Tests in the Last Days of Life, a quality improvement project

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Background

This project was carried out at ward 5A, Queen Elizabeth University Hospital (QEUH), Glasgow, an endocrinology ward, with general medical patients. The project was supported by Dr Finlay, Palliative care consultant, with involvement from Endocrinology consultants.

The project aimed to prevent unnecessary blood tests in the last days of life, to decrease patients' and doctors' distress and prevent unnecessary use of lab resources.

In a 3 month period prior to beginning the project 13 patients died on ward 5A. Of these 13, 5 had blood tests the day they died and 5 the day before.

A questionnaire was sent to FY1 doctors at QEUH. Questions included how often they were asked to perform blood tests they felt were inappropriate, in what situations and how this made them feel.

Method

The intervention was a pre made sticker placed into relevant patients' notes by consultants, following a team discussion, stating "no further blood tests are required as it would not change their management". The palliative care team may discuss the sticker with the consultant.

All staff on the ward, including the palliative care team, consultants, junior doctors and nursing sister were overwhelmingly positive. 95% of responding FY1s felt the sticker would be useful.

The sticker underwent a 3-month trial of the sticker on ward 5A to assess whether the number of patients with blood tests taken the day on or before death was reduced.

Outcome

The qualitative research showed 80% of FY1s surveyed had taken blood from an actively dying patient, 60% more than once. Timings were equally spread between normal working hours and out of hours cover.

The research provided specific examples: "I have taken blood tests from a patient who died 2 minutes after I left the room. The patient had been deteriorating for several days and it was not unexpected." Often doctors had questioned the tests: "I asked why we were doing it and that I thought the patient was for palliative, however it was insisted that we do blood tests 'just to see' what was going on".

The responses showed the negative impact on doctors, who often felt "guilty and cruel" about the tests.

The project's impact will be better evaluated following the end of the current 3 month trial. The anticipated benefit is increased recognition of patients entering the final days of life and decreased distress to patients and doctors.

Conclusion

The main challenge of this project is ensuring the use of the stickers by consultants when they are busy. Another problem is due to the small sample size of patients who died in the period and the variability in patients' journeys, requiring cautious evaluation of quantitative data.

A high proportion of patients have unnecessary blood tests taken in the final days of life. This has a detrimental effect on the doctors performing them.

This project could reduce patients' distress and improve the experience of junior doctors. The situations discussed in this project are not unique to the location and can be applied to the wider healthcare system.

Quality of Multidisciplinary Team Records of Patient Health

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Background

Patient's medical records have gained huge importance in society, because they are sources of clinical researches, epidemiological studies, legal documentation, assessment of quality of care and they prevent the loss of profit.

Therefore, Albert Einstein Hospital is involved and participating actively in quality improvement processes of clinical records, highlighting non-conformities found in medical records.

What are the non-conformities?

They happen when many forms are filled in incorrectly, incompletely and illegibly. Others forms are forgotten or lost during the patient's hospitalization.

Method

1. Specific checklist (Physiotherapy Team)
2. Audit in inpatient units, twice a year
3. Sample of statistic calculation
4. Reports to the Physiotherapy Coordinators and Teams.
5. Training to fill in medical records properly

Outcome

1. Increasing compliance percentage of medical records
2. Decrease of errors in filling in medical records
3. Development of a sense of responsibility for medical records

Conclusion

Disclosure of non-conformities and target training were both extremely important in the development of a sense responsibility for medical records.

Therefore, we conclude that the systematic analysis of records is essential in the continuous improvement of processes in health management. Moreover this model also served as a training strategy for continuing education.

Achieving Transfusion Reduction in Elective Primary Joint Replacement

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Background

Sir Charles Gairdner Hospital is a 600 bed teaching hospital in Perth, Western Australia. It is a referral centre for the State, recruiting patients from the metropolitan area and from hundreds of kilometres away. Patient Blood Management (PBM) is a multidisciplinary approach to transfusion reduction. With over 300 elective primary joints performed annually, transfusion rates up to 50% and liberal transfusion guidelines, this cohort was selected to pilot transfusion reduction strategies.

Method

Transfusion reduction was achieved by implementing a number of key strategies

1. In surgical procedures where significant blood loss is expected, early identification and treatment of sub-optimal Hb and iron stores with oral or intravenous iron, facilitates the patients post-operative Hb recovery.
2. Transfusion prescription guidelines were updated to exclude a defined Hb value alone as the trigger for transfusion.
3. A single unit red blood cell transfusion guideline for stable non-bleeding patients was implementing.

Outcome

Despite being a referral centre for patients with complex medical needs, transfusion is now uncommon. Transfusion rates post PBM implementation have decreased significantly. Since January 2014, transfusion rates by quarter:

Total knee replacement: 0-5%. Total hip replacement: 0-20%

Single unit transfusions increased from 45% to 78% with a corresponding 43% reduction in the number of red cell units transfused on the Orthopaedic ward.

Conclusion

While the aim of PBM is to provide equitable care for all patients, challenges encountered were related to providing treatment to patients outside the metropolitan areas. Collaboration between other healthcare providers and General Practitioners led to the development of 3 off site referral centres to treat patients that can live up to 500 km away. Early GP involvement and networking provides opportunities for primary health to support tertiary health and should not be overlooked.

The effect of these strategies has been transferred to all patient populations hospital wide. In 2015, there were 3010 (26%) fewer red blood cell units transfused, when compared with 2012 (pre PBM).

Practice change must be collaborative, requires teamwork and executive support. The PBM program has not only led to safe and appropriate transfusion practice, but has reduced pressure on the State blood supply.

Small changes, sustained benefits. Building radiology capacity with an 'insourcing' model for the emrad NHS consortium

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Background

The emrad radiology consortium is an NHS consortium in the East Midlands (UK), comprising seven separate NHS Trusts, covering 8% of NHS England's acute imaging. emrad is an Acute Care Collaboration Vanguard, as part of the New Care Models scheme within the NHS Five Year Forward View model. The consortium is exploring exploitation of a technical and governance system to maximise clinical benefit and value against investment. The work described below was delivered within one Trust. Diagnostic imaging within the NHS in the UK, is in difficulty. Demand significantly outstrips capacity. Excess demand is managed by 'outsourcing' scanned unreported images to private companies in the UK; with a 51% increased outsourcing spend since 2014. Some work is offered on-site but this has low uptake. Many radiologists are retiring or prefer flexible/part-time working. Collectively this leads to patient delays; 230,000 patients in England wait more than a month for results (RCR 2016).

Method

Our intervention hypothesis was; that by creating a technical, governance and operational service to support radiologists reading and reporting images remotely, the intervention would:

1. result in lower Trust costs than outsourcing;
2. be financially more attractive to the radiologist than outsourcing
3. demonstrate a return sufficient to render the service self-sustaining
4. keep activity under an NHS umbrella, improving transparency and probity for all parties; and
5. be logistically attractive to users.

Over a three month period, we:

1. Built a new remote clinical governance structure, providing assurances for all parties
2. Built an operational process to support remote working, including identification and capture, approval, quality assurance and workflow discrepancy monitoring
3. Created a new payment vehicle and NHS-compliant contracts
4. engaged with six consultant radiologists to pilot this for a three month period
5. Established feedback processes for all parties

Outcome

Over a three month period, the pilot demonstrated:

1. An increase of 240% additional activity vs traditional Waiting-List-Initiative offerings
2. Generation of a WTE additional consultant activity, in the 'spare time' of six consultants
3. Saving of 25% against 'outsourcing' cost
4. No impact on routine clinical reporting activity
5. High levels of satisfaction reported by radiologists, including numerous knock-on benefits to e.g. on-call provision, second opinion provision, MDT preparation.

We encountered a few initial technical problems which were resolved relatively easily. We also encountered some resistance to change due to the limited size of our pilot and suboptimal initial handling of local communications by our team, which were resolved over time.

The pilot has been analysed and has been incorporated into business-as-usual. Further pilots in other Trusts now in progress follow the same model.

Conclusion

A relatively small change to end-user conditions (working remotely instead of on-site), a small change in remuneration (fee-per-item) and a strong support system, creates sustained service benefit (additional capacity), value for money (reduced spend) and enhanced satisfaction for involved clinicians- encouraging continued participation and uptake. Ultimately increased capacity in this area, reduces patient wait time and enhances timely patient management.

Impact of barcode Medication Administration System (BCMA) on Nurses' Administration Activities Time for Oncology patients

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Background

Bar code medication administration system (BCMA) is designed to ensure that the "five rights": the right patient, the right drug, the right dose, the right route, and the right time, are verified during the medication administration process. This technology is effective to reduce medication administration errors (MAEs).

An important aspect to consider is the impact that BCMA devices have on the time nurses need to administer medication. Studies to the date either observed no changes or a decrease in the amount of time nurses spent performing medication administration activities.

In the Haematology and Oncology Day unit of Príncipe de Asturias Hospital, most of the antineoplastic and adjuvant medications are time-consuming and administered by intravenous route. Therefore, BCMA implementation would be of particular relevance, improving the cost-effective balance.

The goal of the study is to investigate the impact of BCMA implementation in time spent on medication-related tasks.

Method

This was an observational before-and-after intervention study using two groups: oncology patients (intervention group) and onco haematology patients (control group). Medication administration activities conducted by nurses in the Hospital's Day Unit and time spent associated with and without BCMA, were observed.

Time spent in medication administration was measured by calibrated chronometers. In addition, patients' total length of stay in the Day unit was measured from the moment they got an intravenous catheter to when it was removed at the end of treatment. Estimated and observed administration time for the full treatment were also compared. Trained observers (four pharmacists students, six pharmacists and one nurse) conducted observation sessions. Observations of working times were carried out during the complete nursing shift (from 8:00 to 19:30 hrs.). Each observation period had duration of 1 month according to results from power analysis.

Outcome

2912 medication administration events were observed in 715 patients. After BCMA implementation, there were no significant differences in the total working time for administration of the BCMA group (mean before: 165.8 min, SD: 100.4, mean after: 160.2 min, SD: 100.3), however there was a decrease on average length of stay for treatment in both groups.

Significant differences were observed in the intervention group in the total length of stay (relative to the standard according to the protocol), while in the control group there was an increase in the number of cases with longer time of administration. Both intervention and control groups showed an increased in the mean time spent on administering adjuvant medications (intervention group: 1 min; control group: 2 min) and for antineoplastic medications decreased (2 min), without significant differences between the groups.

Conclusion

The results shown that the implementation of BCMA do not increase the amount of time nurses spends on administration medication activities. The key learning points are:

1. The use of new technologies could help nurses to increase the time spent on DIRECT PATIENT CARE activities. When the project started one of the barriers for change stated by nurses was the potential increase in time spent using BCMA.
2. CHANGES in care activities should be objectively measured to provide enough information to support their implementation potential in the future.
3. The need for a MULTIDISCIPLINARY TEAM should be highlighted, with special mention to nurses who have an important role in the success of the implementation and maintenance of the BCMA.
4. Future studies could explore how improving PATIENT SAFETY CULTURE before BCMA implementation may influence in final results.

Prosper: Promoting Safer Provision of Care for Elderly Residents in Care Homes

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Background

More than 18,000 care homes in England provide support for over 386,000 people. Many of these people have complex healthcare needs, with multiple long-term conditions, disability and frailty. Care home teams work hard to support residents but generally there is a high turnover of staff and limited investment in developing skills. Systematic approaches to improving quality, which are becoming more commonplace in the NHS and other sectors, are virtually unknown in care homes. The PROSPER programme was a groundbreaking initiative to test whether quality improvement methods could be implemented in the care home context. PROSPER was a collaboration between care homes, Essex County Council, the health sector, UCLPartners and Anglia Ruskin Health Partnership. Funded by The Health Foundation, the programme focused on using quality improvement methods to reduce preventable harm from three of the most common safety issues in care homes: falls, urinary tract infections and pressure ulcers.

Method

Quality improvement approaches such as Plan-Do-Study-Act (PDSA) cycles, run charts and culture assessment tools are becoming increasingly popular in the NHS, but are less often used in the care home sector. From July 2014, Essex County Council and local care homes began testing whether using these quality improvement techniques could improve resident safety. A total of 118 homes in four separate cohorts signed-up to take part in the PROSPER programme and 90 homes remained part of the programme as of May 2016 (76%). The programme, provided care homes with training in quality improvement methods, a toolkit of resources, tools to help monitor change in resident outcomes, opportunities to share learning with other homes, creation of champions amongst care staff, study days and support visits from Council improvement facilitators. Homes received six-months of targeted support then remained part of a community of practice, receiving newsletters, invitations to meetings and ad-hoc support.

Outcome

There is evidence that PROSPER has impacted on care home culture, with two thirds of homes reporting changes in staff culture, with;

1. more proactive focus on improvement for the benefit of residents rather than compliance
2. staff discuss improvement activities
3. frontline staff feel empowered and encouraged to make change
4. managers describe improvement as a team effort rather than something for which they alone are responsible
5. homes using data to support improvement

Two-thirds of care homes reported changing some of their care processes as a result of PROSPER including

1. routine use of tools to track safety incidents such as the Safety Cross and Monthly Mapping online tool
2. developing 'PROSPER champions' (frontline staff who take responsibility for supporting others with improvement ideas)

Impacts on resident outcomes: analysis of data demonstrated a significant reduction in the rates of falls by 5% and Pressure Ulcers by 20%.

Conclusion

The PROSPER programme was a qualified success, generating new learning about transferring improvement approaches from the health to the care sector. The programme showed quality improvement approaches could be implemented in a care home context, with careful adaptation and skilled and regular facilitation and support.

Learning from the programme included;

1. Substantive new ideas and resources was as important as training and support in quality improvement methods
2. Simple introductory training about quality improvement was useful when included examples and language relevant to care homes and focused on practical application rather than theory
3. Simple tools helped homes to use data effectively such as the Safety Cross and graphs showing monthly incident rates.
4. There is benefit from having a wider support team to input ideas which includes Care homes, Health and Social Care working in partnership as equals.

To Improve Service Users Recording in Rowan Day Centre through the use of a Person Centred One Page Profile

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Background

The project was implemented in the Rowan Day Centre within South Eastern Trust Northern Ireland. This facility provides respite, social engagement and rehabilitation for individuals aged 18-65 years with complex physical needs. Person centred care is core to the Day Centre ethos but it lacked consistency and a structured recording framework. Each service user has two active files and retrieval of information was time consuming, particularly for new staff. Recording was primarily focussed on the health and safety element of care and service users were not provided with the opportunity to discuss what matters to them as individuals. The project aimed to improve recording through use of a person centred One Page Profile.

Method

Consultation with staff through team meetings and completion of questionnaires.
Facilitation of staff training and service user information session.
Development of core improvement team and identification of champions.
Collection of data on existing One Page Profile templates.
Applied PDSA cycles.
Completion and sharing of staff One Page Profiles.
Co-production of One Page Profile with service users.
Creation of service user visual process measure.
Evaluation and feedback to staff.
Evaluation of process from service users.

Outcome

In January 2016 there was no template for recording person centred information and by October 2016 98% of service users had a completed One Page Profile. Staff questionnaires indicated an increased understanding of the principles of person centred care and knowledge of the service user as an individual:

"Now when we open the service users file we see the person inside"

Agency staff have noted benefits of retrieving service user information in a quick and concise manner.

Feedback from service users was collated at different stages :

"I loved seeing the hopes of my friends"

"It's a good way for new staff to get to know me".

Conclusion

The project proved to be a positive team building exercise and has afforded staff an opportunity to utilise skills and attributes which were not usually expected in their role. It has motivated staff to strive for improvement and created an enthusiasm within the workplace. Service users enjoyed their participation and it strengthened relationships with staff. We encountered problems due to staff shortages and changes in staff members and the infrequent attendance of some service users.

Main Message :

The importance of measurement and displaying results .

The importance of teamwork in the improvement journey.

The benefits of co-production with service users and a shared power approach to change.

Enabling and empowering staff to make changes in established systems.

Engaging staff at the planning stage.

Improving Bisphosphonate Infusion Monitoring at Haematology Medical Day Unit

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Background

The British Committee for Standards in Haematology (BCSH) recommends all patients with multiple myeloma should be considered for treatment with bisphosphonate infusions to reduce the risk of vertebral fractures and bone pain.

In clinical practice, there are many drugs which require close monitoring to avoid adverse effects, these studies have used various methods to ensure accurate monitoring to improve patient's safety.

According to the British National Formulary (BNF), it is necessary to correct disturbances of calcium metabolism before starting bisphosphonate infusion. Patients with significantly low 25-OHD are at risk of developing bisphosphonate-induced hypocalcaemia. Low vitamin D levels should be corrected by vitamin D supplements such as cholecalciferol or an active form of vitamin D (alfacalcidol). BNF advise to monitor serum electrolytes, calcium, phosphate and magnesium, and consider a dental check-up before initiating bisphosphonate due to the risk of osteonecrosis of the jaw.

Method

Interventions were modified over multiple Plan-Do-Study-Act (PDSA) improvement cycles to improve bisphosphonate infusion monitoring and patient safety. We conducted a total of three PDSA cycles. Each PDSA cycle was conducted with an interval of four weeks. Checklists were collected and entered into a database after each PDSA cycle intervention to help us identify areas that needed improvement. A weekly meeting was held (on Monday morning) to discuss any issues or benefits since interventions between each cycle.

Teaching sessions were carried out to improve nursing staff understanding of bisphosphonate infusion and stressed the importance of checking 25-OHD and bone profile. We emphasised the importance of reminding patients 6-monthly dental checks due to the risk of osteonecrosis of the jaw.

All recorded checklists were scanned to the electronic patient records system. This allowed easy access to the documentation and information regarding patients bisphosphonate treatment.

Outcome

There was an overall improvement in ensuring safety checks were done prior to administration of bisphosphonate infusion compared to baseline measurements. At baseline, 36% (n=9) of patients had a dental check within the last 6 months; after PDSA cycle 3, there was an improvement of up to 69% (n=11). All patients had renal function and bone profile checked prior to infusion from throughout the study. It was all recorded in the blood results section of the checklist with no missing data. We found that 32% (n=8) of patients had never had 25-OHD at baseline. After PDSA cycle 3, all patients had 25-OHD checked at some point.

Conclusion

Our project aimed to avoid preventable bisphosphonate induced adverse effects, to improve safety of prescribing and administering bisphosphonate infusion, and to increase patients' awareness of needing regular dental checks. Since the intervention, there have been no further bisphosphonate-related adverse events. The collation of data relevant to bisphosphonate infusion prescription on the checklist has led to more informed prescribing and administration of medication. After intervention, we were more confident that patients had been advised to book check-ups and instruction was being given by nursing staff. Furthermore, this change has also gained interest from another unit within the Trust and they are reviewing their bisphosphonate infusion monitoring process and would like to incorporate these ideas into their monitoring process.

This method could be adapted to other similar situations to ensure all safety precautions are applied.

Prevalence, barriers and facilitators of antimicrobial stewardship programmes in Saudi Hospitals

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Background

This study is part of a PhD degree at the department of Pharmacy, Pharmacology and Postgraduate medicine at the University of Hertfordshire. Data for the study was collected from three hospitals within Saudi Arabia (A local hospital, a regional hospital and a central hospital).

Saudi Arabia is among the top purchasers of antibiotics in the world, and the increasing emergence of AR is likely to put the country on a fast track to the post-antibiotic era. The implementation of effective ASPs, especially in hospitals, can potentially reduce the spread of resistance and promote the rational use of antibiotics.

The aim of this pilot study was to explore characteristics of ASPs in Saudi hospitals and identify the challenges and potential strategies for effective implementation of ASPs.

Method

This study interviewed healthcare workers in Saudi hospitals with the aim to explore the prevalence, barriers and facilitators for ASP adoption in Saudi hospitals.

The interview schedule was developed following a review of the literature and discussion among the researcher and supervisory team, as well as consultation with experts in antimicrobial stewardship programmes.

The team conducting this study included the PhD student and two supervisors/reviewers.

Eighteen healthcare workers (1 Infectious diseases consultant, 4 Clinical microbiologists, 4 Infection control practitioners, 4 hospital administrators and 5 pharmacists), were interviewed for this study.

Outcome

The outcomes of this study may help highlight and understand the challenges for adopting and implementing effective ASPs, which will aid in developing national guidelines for antimicrobials use and resistance surveillance, and help establish ASPs a regulatory requirement within Saudi hospitals. The results of this study will also help feed into the larger national survey exploring the prevalence and implementation of ASP across the Kingdom of Saudi Arabia.

Conclusion

Lack of antimicrobial policies and guidelines, weak IT infrastructure and knowledge and skills of healthcare workers were frequently reported as barriers to successful implementation of ASPs in Saudi hospitals.

The outcomes of this study identified the reasons for the current lack of antimicrobial stewardship programmes in Saudi hospitals and explored factors that compromise their adoption and implementation. It is hoped that these objectives will support the future appropriate use of antimicrobials and reduce antimicrobial resistance, thereby maximising patient care and reducing morbidity, mortality, length of hospital stay, and therefore the overall cost of health care.

Teamwork and cooperation is very important between healthcare workers in healthcare settings, lack of this can affect the treatment process and patients outcomes. Also cooperation from healthcare workers with researchers is important to develop and improve health services and patients outcomes.

My partner: show and lead me the way

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Background

St Vincent's Hospital Network Sydney (SVHNS) is committed to the provision of patient centred care which is strongly linked to the organisation's mission and values around compassionate care. SVHNS believes that increased consumer engagement leads to robust relationships and services supporting patients, their families and the community. However, consumer participation is not being integrated into all aspects of organisational practice and staff have a limited understanding about the interface between consumer participation and improvement in safety and quality of healthcare

Method

A driver diagram was applied to plan improvement areas. The primary driver was the development of an online resource for staff and consumers within the cancer services of SVHNS that explains the best practice consumer engagement framework. The secondary driver was the development of a training package for consumers and staff that incorporated on-line tools around leadership, values and strengths clarification, and learning, communication and leadership styles. Workshops on patient safety and project management were provided to consumers and during these workshops, on-lines tools were trialled and evaluated by the consumer representatives assigned within the cancer services of St Vincent's Health Network Sydney, and their reflections were captured. A multi-faceted evaluation to assess the impact, benefits and the service improvements will be undertaken 6 months post launch of the on-line resource.

Outcome

Based on the questionnaire results and focus-group discussions, online tools lead to better understanding of the consumer representative's diverse roles at St Vincent's Hospital as; a partner, an expert, advisor, advocate and someone who provides personal engagement.

The online consumer engagement resource provides direction and support to St Vincent's staff in planning and implementing consumer engagement initiatives

Conclusion

The online consumer engagement orientation resource ensures that consumer representatives are well equipped to act as the voice for patients across diverse communities. It supports staff to be able to effectively engage with consumers from diverse backgrounds. Having such a resource that fosters consumer engagement leads to better treatment outcomes and support for people with cancer and their families and friends.

Nothing endures but change: Understanding the nexus between safety climate and patient safety outcomes

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Background

This study was conducted in a medium-sized (200-300 beds) subacute hospital in metropolitan Melbourne, Australia. Clinicians working across four aged care and rehabilitation wards were invited to complete a safety climate survey. There is a growing body of evidence linking adverse events and medical errors with poor patient safety climate. This study aimed to explore the perceptions of safety climate in a subacute hospital and examine associations with patient safety outcomes.

Method

Safety climate was measured using the Safety Attitudes Questionnaire (SAQ), which consists of 36 core items. Additional open-ended questions were also included to explore clinician perceptions of issues surrounding the implementation of patient safety programs.

Outcome

A total of 138 clinicians completed the SAQ (response rate 44%). On average, 62% of staff held positive attitudes towards job satisfaction, followed by teamwork climate (59%). Scores for the SAQ domain for this sample were higher compared with international benchmarking data. Perceptions of safety climate varied across all wards. Staff working on aged care wards recorded a statistically significant higher median score in the job satisfaction domain compared to those working on rehabilitation wards ($p=0.013$). Nurses also recorded a statistically significant higher median score in the safety climate domain compared to allied health professionals ($p=0.013$). Negative binomial regression analyses indicated that there was no association between the SAQ domains and falls or pressure injuries across all wards. Key themes identified by clinicians regarding patient safety were managing complex patients, patient-to-staff ratios and communication between staff.

Conclusion

Perceptions of safety climate varied across wards in a subacute hospital in metropolitan Melbourne, Australia, suggesting that wards may have their own safety 'sub-culture' that is distinct to the overall hospital safety culture. This highlights the need to tailor and target quality improvement initiatives at the ward level. This study has also demonstrated the value of investing in patient safety climate, particularly as a strategy to enhance patient safety outcomes. Fostering teamwork, addressing working conditions and providing strategies to manage stress among health professionals are key elements to improving the culture of safety in wards and hospitals in order to enhance patient safety.

Regulatory conceptualisation and assessment of improvement capability

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Background

Regulation continues to be a policy used to improve healthcare quality. However, regulation is criticised as a top down, ineffective and reactive way of improving quality. Partly in response to these criticisms, health care regulatory agencies are increasingly concerned not just with assessing the current performance of the organisations they regulate, but with assessing and influencing their underlying improvement capability and prospective performance trajectory. However, little is known about regulatory perspectives of improvement capability. This research study examines how improvement capability is conceptualised and assessed in practice by six organisational regulatory agencies in the UK.

Method

A comparative qualitative study was conducted focusing on hospital-based care, accounting for the majority of UK health care expenditure. Six UK agencies were selected and all participated. Data sources included 90 regulatory policy documents, 48 interviews from a cross-section of staff and 30 assessment reports (five per agency) from 2013–2015.

Qualitative analysis of the data sources was conducted using an a priori framework of eight dimensions of improvement capability identified from the literature. The framework was inductively developed from a literature review of 70 instruments used for improvement capability assessment. The framework consists of the following eight dimensions of improvement capability: organisational culture; leadership commitment; employee commitment; service user focus; stakeholder and supplier focus; process improvement and learning; strategy and governance; and data and performance.

Outcome

The analysis revealed that the dimensions of process improvement and learning and strategy and governance were most frequently found. Other dimensions were found less frequently, with service-user focus being the least frequent, and this skewed pattern was consistent across agencies. Three themes emerged from the empirical data. First, it is problematic to define and operationalise improvement capability. Policy documents and interviews stressed the importance of developing improvement capability, but did not articulate consistently what was meant by improvement capability. Second, the assessment instrument relied on out-of-date and infrequently measured data. Third, there was variable understanding of improvement capability, causing variation and assessment bias through self-confessed knowledge gaps. Effects of changes.

Conclusion

It may be that dimensions which are relatively easy to 'measure' (such as strategy and governance documents) dominate assessment processes rather than less tangible dimensions. Alternatively, it may indicate gaps in regulatory agencies' assessment instruments, knowledge of improvement capability, or practical difficulties in operationalising regulatory intentions to reliably assess improvement capability.

The study highlights the need for regulatory agencies to further conceptualise improvement capability to inform assessment. This will strengthen agencies' assessment, diagnosis and prediction of performance trajectories and support the development of tailored regulatory interventions.

Powerful Tool for Leading Change: measuring the Quantity and Quality of Patient Process

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Background

The idea of optimal child and family interventions have developed drastically during the past decades. Keeping public services and the expertise staff up with these ideas of patient oriented efficiency comes with a big challenge throughout the world. In Finland, in the city of Espoo, we have addressed this challenge by using the measuring of both the quality and quantity of clinical patient processes as a tool for leading change.

Method

We have been systematically collecting data on e.g. the length of services and queues, the amount of appointments and the status of the patients wellbeing (evaluated separately by the patients and the staff) since 2014. The data consists now of the service processes of 6 500 patients in child mental health, speech and occupational therapy and family counselling services. The measuring structure and insights, themselves, were used as tools for leading change.

Outcome

The measuring structure itself was used to guide the clinicians to adjust towards goal oriented blocks of work and to ask the patients evaluations frequently. We succeeded in changing the ambiguous and diverse patient processes into structured and more standardized processes to better serve the patients' needs. And we succeeded in changing the culture from 'knowing for the patient' towards 'asking the patient' and having dialog with the patient of their goals and hopes for our services. Further, the results of patients' evaluations on how the services had helped them, were used as an important tool in overcoming the staff-resistance against e.g. offering short interventions. In addition, we are now able, with the data, to pinpoint the key areas and client segments for future improvements.

Conclusion

The main message of this poster is, that in addition to all the benefits of leading change with measured information, the measuring system, itself, can be used as a powerful tool for leading change among expertise staff. This can be done by setting the measuring system into the wanted goal structure of services and including measures that force the wanted insights.

Measuring Ward Rounds

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Background

General Hospital on South Coast of England. General Medicine Ward Rounds. What are Quality, Safety, Efficiency and Productivity on Ward Rounds? What parameters can be used as Quality Indicators.

Method

Developed a Considerative Checklist process in 2009 to improve reliability of clinical review on ward rounds. Multiple PDSA cycles. Checklist now incorporated into daily ward round notes. Data has been collected on every ward round led by Dr Caldwell since 2009

Outcome

Routine Rounds		Post Take Rounds	
587	Rounds	361	Rounds
9396	Patient Reviews	3851	Patient Reviews
13	Minutes per patient	16	Minutes per patient
Nurse present during review was 45% now 19%		Nurse present during review was 66% now 4%	

Time per patient in 2016 for Routine Reviews was 16 minutes and for Admitting Reviews 24 minutes i.e. longer than in 2009 when it was 12 minutes for Routine and 16 minutes for Admitting .

Conclusion

Recommended Process Measures:

- Is the process written down, short and easy to understand?
- Quiet undisturbed room with ready access to clinical information?
- Structured pre-round briefing
- Is the consultation with patient held in privacy?
- Is there checking for Reliability and Safety?
- Is there a standard format for keeping a record in the notes?
- Is there a debrief after the round?

Quantitative Measures:

- Numbers of patients to be seen, how many new, how many review cases
- Types and numbers of staff on the round
- Duration from start of Briefing to end of Debrief
- Proportion of time spent in direct consultation with the patients
- Nurse present with the patient during the clinical review

Potential Measures:

- We believe these measures could be useful with adequate staff and expertise
- Teamwork and satisfaction measures
- Shared mental models
- Patient's understanding
- Patient's confidence in the team
- Content and quality of the clinical notes
- Spot audits on e.g. not needed cannulas, Foley catheters

The All Wales Patient Reported Outcome Measures (PROMs), Patient Reported Experience Measures (PREMs) & Effectiveness Programme

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Background

Patient Reported Outcome Measures (PROMs) and Patient Reported Experience Measures (PREMs) are questionnaires that patients complete to give us a better understanding of how they feel about the outcomes and experiences of the care they receive.

Method

We are developing a national platform to capture PROMs and PREMs for patients treated in secondary care. Where possible we will collect PROMs and PREMs pre-treatment and invite all patients to submit post-treatment questionnaires. The generic survey includes the EQ-5D-5L, and collected data includes ethnicity, BMI, smoking history and alcohol intake. Where appropriate, disease specific tools will be included. PREMs will also be collected to inform continuous service improvement. Surveys will be translated into Welsh and responses linked to clinical data.

As well as providing large data sets for clinical decision making, individual responses will be available for clinicians to use in patient consultations as a shared decision making tool. Staff groups will be involved throughout the programme to ensure appropriate condition specific tools are selected. Staff workshops have been arranged, and information sheets developed to disseminate programme aims and facilitate implementation.

Outcome

Reports will detail changes in patient health following treatment. Data will aid clinical decision making, ensuring equity of provision and informing commissioning decisions. It will be suitable for use in research and various service improvement strategies.

Few data are currently available, however long term collection will evidence changes in health status following interventions. The table below illustrates baseline health scores of patients in the initial stages. Health gains will be computed by comparing patient-provided postprocedural scores with baseline scores.

Conclusion

Use of patient reported data supports co-production, allowing patients to be more involved in their own care. Collated responses will provide evidence to ensure health interventions are cost efficient and confer patient benefit whilst driving service improvement and planning.

PROMs collection allows patients to become more involved in their care and can help us measure how well we meet their needs in improving health and QoL. Linked data will provide evidence on effectiveness of care to facilitate informed decision making, supporting prudent healthcare principles.

Safety Culture Assessment in a Private Hospital

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Background

The Sirio-Libanês hospital is a private, philanthropic institution, characterized as tertiary level. In 2016 the hospital had 464 beds, 11050 day patients, 1203 surgical patients and 2446 surgical procedures per month. There are 5.833 employees in the hospital. The implementation of quality and safety processes was established in 2007 with the certification by the JCI. After that, the first measurement of safety culture was held in 2015 with the objective of identifying the professionals' perception of safety and identify points of improvement. Safety culture is a major vector that drives behavioral changes and expectations that promote safety in institutional processes. The periodic measurement of the degree of institutional safety culture maturity enables understanding of the perceptions of employees related to patient safety, as well as the identification of strengths and areas with greater fragility, helping to monitoring changes.

Method

Descriptive and cross-sectional study carried out in 2015, applied to institution's employees. We used the questionnaire "Hospital Research - AHRQ on Patient Safety Culture", validated for the Portuguese language. The questionnaire includes 44 fields that measure different aspects of the patient's culture. The measured dimensions are: population profile, number of notifications per year, general patient safety grade, teamwork in the units, actions and expectations in relation to leadership, support from senior management, Continuous improvement, perception and safety degree, feedback, error reporting, open communication, hospital teamwork, employees, shift change and transfers and non-punitive actions. The instrument was available electronically for 30 days with volunteer fill. In the data analysis, scores above 75 were considered strengthened dimensions and scores below 50 fragile dimensions.

Outcome

In 2015, 21.5% of employees responded and 61% had working time in the institution between 1 and 5 years. The overall safety was rated as excellent/very good in 68%. The strengthened dimensions were: support from senior management on safety issues and continuous improvement process. Dimensions with weakness were: feedback, open communication, employees, shift change and transfers and non-punitive action. 65% of the participants said they have not made any notification in the year. In 2016, after one year of implementation of improvements, a new survey was conducted with collaborators where 22.5% responded. Overall safety rate was excellent/very good in 76%. The strengthened dimensions were: support from senior management on security issues, continuous improvement process and overall grade of patient safety. Dimension with weakness was open communication. 60% of the participants said they have not made any notification in the year.

Conclusion

The actions implemented after the first survey had a positive impact on the dimensions considered fragile, and feedback from shift change and punitive action were above the fragility range. Only open communication was still fragile in the category despite an increase of 12% compared to the first survey.

Decreasing contamination rate of blood culture in emergency medicine department to less than 3% within 6 months

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Background

This quality improvement project was conducted in the emergency medicine department (ED), National University Hospital (NUH) in Singapore. NUH is a tertiary medical center where annual attendance to emergency department approximately 120,000.

The project team comprised of emergency medicine consultants and resident, microbiology consultants and resident, emergency medicine staff nurse, phlebotomists and operation staffs. It was a collaboration between the emergency medicine and laboratory medicine departments. It involved all patients attended emergency department who have blood cultures performed.

Method

The quality improvement interventions include training of doctors in the Emergency Medicine department of proper aseptic blood culture taking using standardized blood culture kit. Standardized blood culture taking kits are purchased for use in the ED. These kits contain sterile gloves, 70% alcohol sticks, swabs, and drapes. Blood culture kits are placed in the ED where blood taking material are kept for use by the doctors.

The project went through two timelines:

1. Intervention phase of first six months where all junior doctors undergone training session which includes short lecture including multiple choice question and demonstrate competency by doing one blood culture under supervision using standard checklist.
2. Maintenance phase includes all new doctors joining emergency department to undergo online module and then do one blood culture under supervision to show their competency using standardized checklist.

In addition, there was monthly audit and spot check on shop floor.

Outcome

Baseline blood culture contamination rate of 2014 was 4.5% and from January 2015 until September 2015 was 3.9%, 253 contaminants out of 6552 blood culture done.

The blood culture contamination rate during intervention period October 2015 to March 2016 was 1.5%, 36 contaminants out of 2470. There was a reduction of 2.4% (3.9 to 1.5%) of blood culture contamination rate during the intervention period.

This been maintained on April-December 2016. The overall contamination rate from October 2015- December 2016 is 1.7%.

This represent significant reduction of contamination below international standard of 3%.

Conclusion

Quality improvement intervention of training juniors and new doctors of proper blood culture taking using sterile technique improved the contamination rate significantly and maintained the rate below 3% which will have its effect on reducing the total in-patient cost, length of stay and unnecessary use of antibiotic.

Deprescription Alert Form for Reducing Numbers of Prescribed Medicines

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Background

Increasing use of prescription medications may be associated with adverse drug reactions, poor adherence, drug interactions, delirium, falls, cognitive impairment, frailty, and death. As many as 50% of patients receive potentially inappropriate medications, and an inpatient hospital stay may increase this risk. In Australia, it is estimated that approximately one in five prescriptions issued for older patients is inappropriate.

Evidence suggests clinicians find it difficult to cease medications due to apprehension and lack of knowledge of which are most appropriate to deprescribe, as well as concerns over withdrawal effects. Several interventions trialled previously to identify and reduce inappropriate prescriptions have required significant time and resource investment.

Method

This project took place across two acute general medical wards and involved ward doctors and pharmacists.

Drugs classes listed as priority for deprescription were highlighted in a recent study which evaluated opinions of geriatric and family medicine experts on potential risks and benefits of continuation, prevalence of overuse, and challenges in ceasing the drug.

The highest priority drug classes identified were benzodiazepines, antipsychotics, statins, proton-pump inhibitors, antidepressants and opioids. These were included along with an 'others' section for pharmacists to list other potentially inappropriately prescribed medications and recommend cessation or dose reduction.

Patients over 65 years receiving 10 or more medications were enrolled by the ward pharmacist, who filled a DAF on admission. The completed DAF was placed in the bedside folder with the medication chart to draw the attention of the medical team to consider deprescription during admission.

Outcome

Over 2 months, 40 patients were recruited to this study with an average age of 78.9 years.

Pharmacists identified 77 pre-defined 'high priority' medications and a total of 108 potentially inappropriate medications on the DAFs.

Despite only 12.5% of DAFs being completed by medical staff there was a significant reduction in the number of total and high priority medications. At the time of discharge, patients were taking on average 11.5 medications, compared to 13 on admission. Similarly, high priority medications were reduced from an average of 3.6 to 3.2.

Conclusion

DAFs can be successfully used to reduce the number of total as well as high priority medications in general medical inpatients receiving hyper polypharmacy.

The DAF aims to raise awareness and offer the prescriber greater confidence and decision support. This should promote thoughtful prescribing and safer medical care by reducing inappropriate prescriptions and adverse effects. In doing so, it could also decrease healthcare costs.

Regular educational sessions on the importance of deprescribing, in recognising high priority medications and the process involved including participation of patients, may further optimise its success and patient outcomes.

Further research should combine the implementation of a deprescription alert with practitioner education.

Longer term and larger sample data collection is required to demonstrate the true impact of deprescribing alerts.

Patient--Centred Discharge Summary form- Improving understanding of hospitalisation

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Background

Hospitalisation is often a confusing experience for patients and carers with unfamiliar people, procedures and processes compounding illness and treatments. Patients' understanding of their admission, management and follow up instructions is generally poor. This is further impaired by the use of technical jargon by health professionals and an overestimation of patients' health literacy leading to unsatisfactory communication and transfer of information. □ Hospital discharge summaries are targeted to other medical professionals and include content at a level inappropriate for most patients. Patients' understanding of their diagnosis and management is fundamental to adherence to medical advice. Studies have demonstrated that patients recall of clinical information is not optimal and often most are unaware of important details relating to their hospitalisation due to lack of understanding.

Method

A patient-discharge form was developed and implemented for General Medicine patients at Maroondah Hospital, member of Eastern Health. The form was completed on discharge by the medical registrar who spent 1-2 minutes with the patient. The doctor would explain the diagnosis, treatment and follow-up in words the patient or carer could comprehend. The three domains of the form include: (1) diagnosis, (2) in-hospital treatment and (3) post-discharge instructions. Study participants were patients admitted to the Unit and divided into a control and an intervention cohort based upon the ward they were in. The intervention cohort received a patient-centred discharge summary form. Participants from both cohorts received a phone call between day 3 and day 5 by an independent clinician not involved with their care and unaware of whether they had received a form. The clinician assessed the patient's understanding of the hospitalisation using a standardised questionnaire.

Outcome

A total of 140 patients were contacted by the investigator. 60 patients (43%) had not received a form whilst 80 patients (57%) stated they had received a form on discharge from hospital.

Domain 1: Of those who received the form, 85% stated they had adequate understanding of their diagnosis, compared with 75% who had not received the form ($p=0.1413$).

Domain 2: Of those who received the form, 98% stated that they understood their in hospital management, compared with 58% of those who did not receive the form ($p=0.0001$).

Domain 3: Of those who received the form, 92% stated that they understood their discharge plan, compared with 62% of those who did not receive the form ($p=0.0001$).

Patient Experience: Of those who received the form, 91% stated the form improved their understanding of care and 89% stated they were better able to remember information provided.

Conclusion

The patient-centred discharge summary form improves patients' understanding of admission diagnosis, management and post discharge instructions. It provides an important medium for better communication with patients and improvement of the patient experience. It has potential to reduce healthcare costs and improve patient wellbeing by improving adherence to treatment and ensuring appropriate follow up.

Eastern Health General Medicine has rolled out this form across all General Medicine units for all patients, including those returning to residential care facilities.

Anxiety as predictor for failure of NPPV on a non ICU ward

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Background

NPPV is a common treatment in patients with COPD respiratory failure. At first, these patients were admitted on Intensive Care Units(ICU). It had become more and more common practice to use NPPV on non-ICUs. Several studies investigated the effectivity and feasibility of NPPV on non-ICUs. Many risk factors for failure of the treatment have been described. The results of these studies have been used to make a guideline for NPPV on non-ICUs in the Netherlands. Despite the knowledge of these patients at risk, still 14-40% of the patients initially treated with NPPV need intubation or die. Anxiety is a common problem in patients with COPD. To the best of our knowledge, only one study investigated the experiences of patients with NPPV. The authors concluded many patients with NPPV experience loss of control, anxiety and even panic, but associations between these experiences and NPPV outcomes were not investigated. Until now, the influence of anxiety on the outcome of NPPV is unclear.

Method

This is the interim analysis of a prospective cohort study. All 79 patients admitted at the pulmonology department with exacerbation COPD who started NPPV were included. All proven predictive variables were measured. In addition, we collected data about anxiety with the Hospital Anxiety and Depression Scale - Anxiety subscale(HADS-A). This scale was scored by the patient within 24 hours after the start of NPPV.

Outcome

Twenty-two variables were included in the first model for logistic regression. After backward stepping method (factors with $p < 0.1$ were considered significant) 3 variables resulted in the final model. These 3 variables are: Serum albumin($\exp(\beta)$ 0.847, $p=0.065$), HADS-A ($\exp(\beta)$ 1.115, $p=0.033$) and pCO_2 ($\exp(\beta)$ 1.329, $p=0.026$).

Conclusion

In this interim analysis, anxiety seems to be a risk factor for failure of NPPV in patients with exacerbation COPD admitted on a non-intensive care ward. Furthermore, albumin could also influence success rate of NPPV in these patients.

The 'Sugar saga' - Practices and Measurements

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Background

Hypoglycaemia is the most common metabolic problem in neonates. Symptomatic hypoglycaemia is a medical emergency that may result in brain injury and adverse neurodevelopmental outcomes if mismanaged. Worryingly, multiple aspects of diagnosis and management of neonatal hypoglycaemia remain controversial, exacerbated by a lack of consensus on definition of a safe blood glucose concentration in the newborn. For simplicity, our trust guideline uses the World Health Organisation definition of hypoglycaemia - blood sugar $< 2.6\text{mmol/l}$. The aims were:

1. To assess adherence to the local guideline for prevention/clinical management of neonatal hypoglycaemia within a UK District General Hospital setting
2. To compare blood gas and HemoCue blood glucose measurement
3. To determine whether method used alters the subsequent management

Method

A prospective audit of hypoglycaemic babies born in a District General Hospital between April and June 2015. Cases were identified by midwives, and Badgernet admission summaries. Data was extracted from the case notes using a pre-designed case report form and analysed with the statistical software package SPSS version 20. Based on trust guidelines, babies were placed in 3 groups depending on blood glucose level: group 1 $2-2.5\text{mmol/l}$, group 2 $1.6-1.9\text{mmol/l}$ and group 3 $< 1.6\text{mmol/l}$.

Outcome

There was guideline deviation in management of babies detected as hypoglycaemic on the HemoCue glucose meters with a preference to using blood gas readings, if higher, instead. The neonatal unit team (NNU) was informed if a baby had a blood glucose level between $2-2.5\text{mmol/L}$ 83.33% of the time. All babies with a blood glucose level between $1.6-1.9\text{mmol/L}$ were reviewed by the NNU team and a blood gas performed. 75% of babies with a blood glucose level equal to / less than 1.5mmol/L or symptomatic were admitted to NNU within 15 minutes. SMA Gold Prem 1 was at times used in term babies with hypoglycaemia. Occasionally, there were slight delays in commencing intravenous 10% Glucose infusions in babies with persistent hypoglycaemia.

In contrast to this clinical practice, the Spearman's rho revealed a statistically significant relationship between HemoCue blood glucose and blood gas readings in the hypoglycemic neonates in our study ($rs[10] = 0.807$, $p < 0.005$).

Conclusion

Trust guidance was not consistently followed. Low blood sugars on the HemoCue were deemed unreliable by most clinicians, leading to delayed intervention. However, our data demonstrates this not to be the case. Following this audit a decision was made to replace all the HemoCue blood glucose meters across the whole trust with more sensitive blood glucose meters (NOVA STATSTRIP™) and a re-audit is currently underway to assess the impact on clinical practice.

Limitations/Assumptions

1. Small sample size therefore decision made to use non-parametric tests. Assumptions made that a monotonic relationship existed between the variables and they were interval/ratio variables.
2. Peer-review and feedback of this audit at the International Quality and Safety in Healthcare Conference will help shape the re-audit and make it more scientifically robust.

Improving the Written Medical Handover – The Royal Cornwall Hospital (RCHT)

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Background

The handover of large numbers of medical patients, during on call periods when staffing levels are reduced, is a challenge for all acute medical services. At the Royal Cornwall Hospital, a large district general hospital, we identified that foundation doctors were reviewing medical inpatients during weekend on call periods with limited written handover information.

Method

We chose to address this problem by developing an intervention, a weekend handover sticker, and piloting it, using Plan Do Study Act (PDSA cycles). We used the review of documentation to measure improvement and feedback from users to assess the processes involved. Use of the weekend handover form improved the written communication between weekday and weekend teams.

Outcome

The number of weekend plans documented in the notes increased from 15% to 84 % and the provision of a patient summary within the last 7 days increased from 26% to 94%. The feedback from users confirmed it was a useful intervention and 100% (15/15) of doctors and nurses responded positively to the question 'Do you think the weekend sticker should be introduced and used at the weekend for all medical patients?'.

Conclusion

In conclusion, we were able to demonstrate a significant improvement in the documentation surround the written medical handover, using the weekend handover sticker. The feedback was hugely positive in favour of using the sticker on a permanent basis. However, feedback also identified concerns regarding additional workload for weekday ward staff and this has led to ongoing work to try and ensure that the weekend handover form continues to be used effectively to maintain an improved level of written handover information for on call staff. Whilst we have not included a direct measure of patient care, we hope that by improving the quality of written handover information we are acting to ensure patient information is shared effectively, with likely positive impact on patient care.

Eradicating Peripheral Intravenous Cannula (PIVC) Infections at Belmont Hospital

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Background

PIVC infections are the most common and preventable Healthcare Associated (HCA) infections. In 2012 there were 92 PIVC associated bloodstream infections documented across Hunter New England Local Health District with recorded 30 day mortality of 16%, nine of these infections were identified at Belmont Hospital. In 2015 two critical incidents prompted the Education Team and Infection Prevention and Control (IPC&C) Nurse to look at current practice on insertion and management of PIVCs. An audit of PIVC insertion and ongoing care was completed. We identified several issues in the care and management of PIVC that had been observed on many of the wards that we thought were actually of more concern than the insertion technique. Many of these practices are being performed against policy and were placing patient safety at risk increasing mortality and morbidity

Method

A multifactorial education program was developed including:

1. Anonymous questionnaire: provided baseline of current practice and culture.
2. Inservice: highlighting adverse events from poor care, addressing "the why" and discussion of correct policy "putting everyone on the same page".
3. Dunny Dots: emphasising expectations of care, management and documentation.
4. Workshops: to upskill staff and promote ownership of care.
5. Yearly competencies: for all inserters and identification of "champions".
6. Stewardship of resources: IV lines, antimicrobial swabs and dressings.
7. New PIVC care plan: developed in collaboration with nursing & medical staff.

Outcome

A review at the end of the project showed a sustained improvement in the care and documentation of PIVCs. Ongoing audit results have indicated that current levels of documentation and practice can be maintained over a prolonged period. This can be shown through the audit results since the project commenced in July 2015.

Since the implementation of this project a cultural shift has been noted and PIVC insertion and management has significantly improved. This was demonstrated by the early identification and management of the 1 PIVC related bacteraemia over the 2 year period. Vigilant nursing staff quickly identified, managed and escalated care utilising the septic pathway, resulting in a positive outcome for the patient involved.

Conclusion

Keys to success:

1. Acknowledgement of the problem: Looking at all aspects of care and management not just insertion.
2. Whole-of-hospital approach: Initial education was intensive, focused and occurred simultaneously throughout the hospital. Staff "speaking the same language" resulted in embedding of practices.
3. Clear vision: Cultural change and eradication of PIVC infections. Excellence: every patient every time.
4. Empowerment of Nursing and Medical staff by engaging and involving them in all aspects was a leading factor in the success of this project.

This project demonstrates that working together, collaboration, combined with intensive, deliberate and uniformed dissemination of information across the whole hospital can result in significant culture change improving patient outcomes.

'10 minute meeting'. Quality improvement Initiative for Cardiac Arrests and Medical Emergencies: Human Factors in practice.

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Background

Brighton and Sussex University Hospital is a major trauma and tertiary referral center for the Southeast coast of Sussex, UK. This innovative change was initiated by a team of Critical Care Outreach Nurses with support from medical and anaesthetic consultants.

Focusing on human factors between medical, anaesthetic, resuscitation officers and nursing staff across all grades when caring for a patient in cardiac arrest or medical emergency, this initiative has improved care given to this 'low volume, high risk' patient group.

In our Trust we have 60-70 medical emergencies per month and 25 cardiac arrests on average.

Cardiac arrest and medical emergency team first meet across a sick patient. We have a 4 million: 1 chance of working together again, resulting in staff who were unaware of each other's names, what grade, what skills are present or what role to take. This increases anxiety, stress levels, poor communication within the group resulting in patient safety being put at risk

Method

To make teamwork easier we initiated a 10 minute meeting each morning to find out who is on the team, introduce ourselves, what are our skill sets, support required, confirm roles, allocate tasks, allocate leadership, escalation of concerns, handover and debrief.

Engagement with Lead medical consultant, anaesthetic trainee tutor, Lead intensivist, resuscitation lead and critical care outreach service was gained through an innovation forum held at the Trust.

The meetings started once we had 'buy in' from the lead medical consultant the meetings started everyday at 9am.

Our Trust consists of two hospitals. We started in the larger hospital first for one month, then rolled it out to both hospitals where it has been consistently running for two and a half years.

Outcome

Patients are at their most vulnerable when they are critically unwell. Combined with this with being on a general ward and critically unwell must be terrifying. Patients expect to be treated by an emergency team who are competent, professional, rehearsed and calm. Before the meeting the emergency team lacked confidence, lacked clear leadership and were stressed. The team are now cohesive and work well. It has been difficult to measure the outcome of the intervention.

From the introduction of the meetings we have started 'hot debriefs' after every cardiac arrest, changed the bleep system with in anaesthetics to ensure that the juniors are more supported at airway calls, sped up blood processing times for emergencies and tried to address knowledge gaps within the team.

Leadership has improved. Before it was unclear on who should be the lead in an emergency - now the role is clear and the medical registrar feels empowered to undertake the role.

Conclusion

The change was initiated in October 2014, won the Kent Sussex and Surrey, Patient Safety Award 2016 and had been successfully implemented in three different Trusts in the UK this year. From feedback across all Trusts have been positive, it is proving difficult to find measures to assess the effect of the meetings to patient safety.

Resuscitation guidance 2015 has suggested that pre briefings should occur with the cardiac arrest team, yet I am unable to find any Trust which does this or has sustained the pre briefings.

As a team of outreach nurses and the acute medical consultants, we have embedded this change into our daily routine.

Implemented in October 2014 we have had meetings 7 days a week across two sites. We plan to start the meetings at night.

Think of the difference this meeting would make if this meeting were nationwide to team dynamics, training and patient safety.

Updating Correctly the Electronic Medication Record

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Background

The Danish health service applies an electronic patient journal including a medication record (MR). The MR is used by practitioners, hospitals and home care. This cross unit coverage requires continuous updating of the MR and the medical doctors are solely responsible for the timeliness of the record.

A correctly updated MR is a strong tool to provide patients SAFETY.

The aim of the present project was to improve the timeliness of MR data in the pediatric outpatient department by analysing the working procedures and its recordings.

Method

The Model for Improvement:

Data analysis of all not updated MRs in the pediatric outpatient department over 8 weeks (weeks 18-25 in 2016)

Establishing the "primary driver" of the project
and formulating suggestions of improvement:

Change of culture

Management focus

Staff teaching

Individual education

Checklist

Improvement blackboard

Weekly data presentation

Outcome

The percentage of updated MRs in the pediatric outpatient department increased in the study period of 20 weeks by 70%.

Conclusion

The education of the staffs IT skills, the continuous control and presentation of the implementation rate, including analysis and feedback to both staff and leaders, is important to achieve a high percentage of updated MRs.

Improving Population Health Through a Primary Care Home Model: Examples from Oregon

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Background

We studied the implementation of the Patient Centered Primary Care Home (PCPCH) program in Oregon. We sought to 1) understand organizational conditions and process improvement activities of “exemplary” PCPCH clinics; 2) estimate the impact of PCPCH program on utilization and expenditure patterns of clinics’ clientele; and 3) assess the general consistency and usefulness of PCPCH scoring in evaluating PCPCH performance. Our work built upon previous evaluations in Oregon and elsewhere of medical homes. The goal of the program overall is to improve population health through the creation of medical homes. Designation as a PCPCH is based on assessment of a primary care clinic against an Oregon-designed model consisting of 6 core attributes and multiple related measurable/observable standards.

Method

The study used two primary methods. The first method involved interviews and focus groups with 20 selected exemplary PCPCH clinics from amongst the 600+ recognized PCPCHs. Exemplary clinics were selected based upon representativeness, diversity, attestation scores, ownership, and willingness to participate. In depth qualitative analysis with multiple reviewers and reconciliation of coding was conducted on 70+ transcripts. The second method employed a difference-in-difference design to identify cost and utilization differences between PCPCH and non-PCPCH primary care clinic users through the first three years of the program using Oregon’s All Payer All Claims (APAC) database. For the cost and use analyses, approximately 1.1M primary care users were identified through the APAC data solely attributable to PCPCH participating and non-PCPCH primary care clinics.

Outcome

Oregon’s PCPCH program is successfully meeting the goals of the Triple Aim. The program has fostered health systems transformation by: a) Encouraging clinics to shift organizational culture to embrace team-based care and continuous improvement, use data to drive actions, and adopt a “patient centered” lens using tools such as care coordination and shared decision-making. b) Helping clinics shift to population-based strategies to improve the health of patients who share a diagnosis or demographic characteristics.

Regarding costs and utilization, the PCPCH program has: a) Reduced total service expenditures per person by 4.2% (approximately \$13.50 per person per month). Effects increased significantly the longer clinics were designated as a PCPCH. b) Resulted in \$13 in savings in services (e.g. specialty care, emergency department and inpatient care), for every \$1 increase in primary care expenditures related to the PCPCH program. c) Saved an estimated \$240M over its first three years.

Conclusion

The PCPCH program has achieved noteworthy progress toward the Triple Aim. PCPCH clinics have accomplished significant transformation, resulting in greater effectiveness and efficiency, both within primary care and the larger health care system. These successes have required iterations of experimentation and adaptation. Clinic leaders must be willing to examine all aspects of clinic process and culture during this evolution. Total savings should increase as more clinics become recognized and mature in the program. The relevance of PCPCH recognition reveals that the cumulative effect of the six PCPCH attributes has more impact on cost and utilization measures than their independent effects. These findings are relevant for other jurisdictions considering adoption of a medical home model for primary care, from a policy perspective and for practice, and consideration of the population health implications reinforces the importance of the medical home in pursuit of the Triple Aim.

Improving Pharmacist's Intervention Effectiveness at a Public General Hospital

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Background

The study was conducted at a 266-bed, public general hospital located in the city of Diadema, São Paulo, Brazil. The hospital has an emphasis on surgical care. There is strong data showing that pharmaceutical care lead to improvement in health outcomes and cost-effective therapy. The pharmacy profession has improved to include the provision of cognitive services in addition to the traditional role of medication dispensing. At our hospital, pharmacists were still distant from patients and multidisciplinary team day-to-day tasks. In a series of discussions with multidisciplinary teams, we assessed how pharmacists could help improve care in our hospital. The discussions involved medical coordinators, nurses and the hospital's quality team. We identified that some pharmacist interventions had little acceptance from other members of the clinical team and therefore little effectiveness.

Method

The intervention consisted of the introduction of a clinical pharmacist in 3 units of the hospital as a pilot project. The design of pharmacist interventions from the register on clinical records to the scope of the interventions were a team construction. The project interventions are as follows:

1. Creation of new clinical record forms;
2. Definition of new routines for pharmacists' interaction with doctors and responsibilities for acceptance or denial of suggested interventions;
3. Discussion with medical coordinators of the main drug interactions on their units, the options available at the hospital to minimize these interactions and the interactions that could be considered acceptable in some clinical scenarios;
4. Discussion of the areas of care/clinical protocols in which pharmacists could help to improve outcomes and safety and
5. Creation of indicators to measure the effectiveness of pharmacists' interventions.

Outcome

The number of pharmacist interventions and their acceptance were measured. Data were collected from March to September 2016 and structured by category of intervention. During this period, there were 2764 pharmacist interventions that were mainly related to drug interactions (1444), drug-nutrient interactions (512), thromboembolism prophylaxis (396), prescription errors (191) and renal-dose drug adjustment (181). Of the 2764 interventions proposed to the clinical team, 2263 were accepted or justified (83.1%). The overall acceptance increased from 75.5% at the beginning of the project in March to 91.1% in September.

Conclusion

The project led to the integration of the pharmacist with the other members of the clinical team and to improvement in the safety of the care delivered to patients in our hospital. Some areas, such as drug interactions and renal-dose drug adjustments, had poor results before the project. Frequent team meetings with medical unit coordinators were very important for the success of the project.

Analysis of day-of-surgery cancellations due to poor clinical conditions at a public general hospital

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Background

The study was conducted in a public general hospital located in the city of Diadema, São Paulo, Brazil. It has 266 beds and has an emphasis on surgical care. The hospital performs approximately 6,000 surgeries per year. We are currently conducting a project to reduce surgery cancellations on the day of surgery. Poor clinical conditions are the third cause of surgery cancellations at our hospital, which is consistent with other studies in the literature. We did not have a clear understanding of the conditions that were mainly responsible for these cancellations. The study was conducted to analyse the main causes for surgery suspension on the day of surgery due to poor clinical conditions at our hospital. Despite other studies in the literature, these reasons can vary in different socioeconomic and health-system settings. Our hospital is located in a poor area on the periphery of the city and is part of the public health system.

Method

We reviewed all clinical records from patients who cancelled their surgeries due to poor clinical conditions from January 2015 to July 2016. The reasons for cancellation were then categorized.

Outcome

During the study, we had a total of 11,502 surgeries and 1,687 surgical suspensions, 288 of which were due to poor clinical conditions. The reasons for surgical suspensions related to poor clinical conditions were as follows: 124 airway infections, 61 cases of uncontrolled hypertension, 31 altered laboratory tests, 23 fevers on the day of surgery, 13 other infections, 12 skin lesions, 8 cases of reduced awareness, 4 cases of ingestion of illegal substances, 4 cases of vomiting, 3 seizures, 3 cases of difficult airways and 2 latex allergies.

Conclusion

By identifying the reasons for surgical suspensions related to poor clinical conditions, we can design a better preoperative program and improve our preoperative patient guidance. The methodology was sufficient to answer the study question. If we focus our actions on hypertension control and patient information on airway infections, especially on surgeries in children, we can reduce day-of-surgery suspensions related to poor clinical conditions by 64%. The authors hope that these findings can help other institutions to develop strategies to reduce day-of-surgery cancellations due to poor clinical conditions in the Brazilian public healthcare setting.

Identifying the role of team performance in patient safety culture

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Background

This project was conducted at a medical department in one of the general hospitals in Kuwait. The main goal of the project was to improve patient safety culture (PSC) through effective communication. Teamwork and effective communication are considered as key elements of PSC and patient safety outcomes. Intervention studies to improve PSC were limited and showed that multi-faceted strategies are needed, including leadership support and training programmes. However, these studies did not show the greatest value from the different components of these strategies. Our previous study showed that implementing the SBAR technique as a communication tool in the department had a limited positive impact on patient safety culture. This study aims to identify the relationship between team performance dysfunctions and PSC components before and one year after implementing the SBAR technique.

Method

A quality improvement project, "SPECTRUM", which stands for Safety of the Patients through Effective Communication To Receive optimum Management, was launched in the department to introduce the SBAR tool for professional communication. The patient safety culture was measured, using the hospital survey on patient safety questionnaire developed by the Agency for Healthcare Research and Quality. Team performance was measured, using "The five dysfunctions of a team" scale, developed by Patrick Lencioni. Higher score indicates lower dysfunction and better team performance. Unpaired analysis was used to measure the PSC and team performance before and one year after implementing the SBAR technique. The association between the five dysfunctions of team performance and the twelve components of PSC was assessed by Pearson's correlation. A p-value <0.05 was considered as significant.

Outcome

Significant relationships were found between the components of PSC and the dysfunctions of team performance. The strongest associations were observed with "absence of trust", "fear of conflict", and "lack of commitment". Absence of trust had a negative effect on all PSC components, except staffing, where the strongest relationship was evident with "teamwork within units", ($r=0.63$, $p<0.001$). Fear of conflict had a negative effect on all PSC components, except "staffing", and the strongest relationship was with "teamwork across units", ($r=0.65$, $p<0.001$). Lack of commitment had a negative effect on all PSC components, where the highest relationship was with "management support for patient safety" ($r=0.64$, $p<0.001$). "Handoffs and transition" was negatively affected by "fear of conflict", ($r=0.60$, $p<0.001$); "lack of commitment", ($r=0.47$, $p<0.001$); "absence of trust", ($r=0.43$, $p<0.001$); "inattention to results", ($r=0.35$, $p<0.01$); and "avoidance of accountability", ($r=0.25$, $p<0.05$).

Conclusion

The findings of this study highlight the critical role of team performance on patient safety culture in acute healthcare setting. Intervention strategies to improve patient safety culture should include training high performance team, particularly on conflict management, building trust, and improving commitment toward the organization.

Improving Medical Assessment and Documentation of Inpatient Falls

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Background

Inpatient falls are the most common patient safety incident in acute trusts. Deficiencies were identified in the documentation of the medical assessment and management of inpatient falls, which were carried out by foundation doctors. Relevant NICE guidelines, recommendations from the National Patient Safety Agency and local trust policies were consulted to determine what should be achieved when an older person falls.

This study was carried out in a 240 bed acute hospital. Patients who fell during their inpatient stay in a general medical or surgical ward were the target population. The team consisted of two foundation doctors, in collaboration with a local multidisciplinary Falls Safety Group.

Method

Medical records of 33 inpatient falls were randomly selected and assessed between December 2015 and March 2016. Areas reviewed included use of proforma, history, examination, investigations, timings and review of fall risk factors.

It was hypothesised that a combination of foundation doctor education and improved accessibility and frequency of use of a medical assessment of inpatient falls proforma would improve assessment, documentation and review of patient risk factors. We aimed to improve proforma use to 90%, assessment and documentation of head injury and fracture to 100% and review of patient risk factors to 75%.

Working with a multidisciplinary Falls Safety Group, the proforma format, content and accessibility on the trust intranet was improved. It was incorporated into an updated falls policy and foundation induction guide. Education was delivered at departmental teaching and foundation induction. In June 2016, 8 inpatient falls were selected and analysed as before.

Outcome

Use of proforma increased (42.4%-77.8%) and documentation of assessment of injury improved (head injury 93.9%-100%, cervical spine 57.6%-66.7%). Documentation of timings, mechanism of fall, use of anticoagulation and ECG consideration also increased. Review of risk factors was unchanged at 22%. Other areas to improve included documentation of time frame of assessment and cause of fall.

Conclusion

Improved accessibility and increased use of a guideline-based proforma, supported by targeted education, improves documentation, assessment and acute management post-fall. This ensures that patient safety post-fall is of utmost importance, with risks in the patient history and the environment identified and duly managed using a collaborative multidisciplinary approach. However, further intervention is required to reach and maintain targets.

Multidisciplinary support is emphasised. By collaboration with the Falls Safety Group, we have been able to amend the proforma and incorporate it into an updated trust falls policy, the foundation doctor induction guide and the ward environment.

"What effect has surgical incidents on operating theatre staff? A systematic review"

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Background

The operating theatre is a high risk environment for surgical incidents, which can have a devastating effect on both patients and health professionals. Previous research has recognised health professionals as secondary victims of medical errors; they have been emotionally and psychologically distressed by a surgical incident or complication. We conducted a systematic review to understand the impact of surgical incidents on operating staff, and coping methods they used after such incidents occurred.

Method

This review followed the PRISMA-P reporting guidelines and was registered with the PROSPERO database (number: 42016042175). Eligible studies were primary research or reviews that focused on the effect of surgical incidents on operating theatre staff in either the primary, secondary or tertiary care settings. We conducted the search in June 2016: MEDLINE Jan 1950-Present, EMBASE Jan 1974-Present, CINALH 1982-Present, and PsycINFO 1967-Present. A customised data extraction form was used to capture pertinent information from included studies and Critical Appraisal Skills Programme (CASP) tool used to appraise their quality.

Outcome

This review identified five key themes, including the emotional impact on health professionals, organisation culture and support, individual coping strategies, learning from surgical complications and recommended changes to practice.

Our review highlighted how health professionals used different coping strategies in the aftermath of a surgical incident. Some surgeons discussed the event with their peers (senior surgeons were more likely than junior), while others chose to reflect on the incident privately.

Most studies recommended establishing a mechanism by which deaths, serious incidents and never events were reviewed at an organisational level. This mechanism needed to be blame free to facilitate open discussions and encourage a culture of shared learning

Conclusion

It is evident from this review that health professionals suffered emotional distress after a surgical incident. Senior surgeons were more likely to discuss errors with their peers, which in turn helped them regain their self-confidence and promote positive thinking. Future research is needed to explore whether the impact of surgical complications is different amongst wider operating theatre team.

Improvements to the Australian Defence Force Healthcare Complaints and Clinical Incident Management System

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Background

The Australian Defence Force (ADF) Health Services Contract has been in place since 2012. This contract is in place to provide a suite of on and off base health services to members of the ADF in the Garrison Health System.

Joint Health Command (JHC) is a relatively young (six years old) health service. There is continual development and implementation of initiatives as we mature and establish our clinical governance systems

JHC administers the contract through a single prime contractor, Medibank Health Solutions (MHS). One of the key Clinical Governance mechanisms has been a Healthcare Complaint and Clinical Incident (HCCI) management system to ensure oversight and management of contracted health services

Improvements have been made to improve the timely management of HCCIs and ensure quality approach to any corrective actions implemented

A joint approach from the Clinical Governance teams of JHC and MHS and key stakeholders who participate in the regular CCIM forums

Method

1. Development of agreed Terms of Reference (ToR) for the regular forums held to review, analyse investigate and close HCCI reported
2. A shift to using qualitative terminology when a HCCI was closed. Now use "nil further action required" or "opportunity for improvement" vs "unsubstantiated" and "substantiated"
3. Healthcare complaint forms amended to ensure third party consent agreed from Defence members at the time of submitting their complaint to reduce time taken to manage the issue
4. Establishing clear escalation pathways if delays in managing a HCCI were encountered.

Outcome

Outcomes include:

Improved privacy information and consent for members when submitting healthcare complaints

Improved governance of the complex process for managing HCCI for on base and off base health services

Improved escalation pathways impacting the timeliness of managing HCCI

ToR published to reduce variability and process compliance

Removal of performance management issues into dedicated management stream

20% Reduction in complaints since 2014

Greater visibility of local area issues and improved national consistency in HCCI reporting

Conclusion

This was a collaborative quality improvement project that focused on learning and improving processes. Barriers related to the complexity of the HCCI management model. Consultation occurred with key stakeholders who coordinate health service delivery to ADF members across Australia including on and off-base health services. Effective communication and coordination was a major challenge.

Our key message is to continually improve and evolve through collaboration and innovation, despite barriers that exist.

Improving Effectiveness of Preventive Care Services for Infants in Tertiary Care Hospital in India

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Background

Our work is based in Sitaram Bhartia Institute of Science and Research, a 70 bedded non profit hospital located in Delhi, India. Our outpatient team comprising 7 pediatricians and 2 nurses tending to nearly 1500 children a month, identified care practice guidelines for early detection and management of clinical disorders. To enable adherence to revised practices, pertinent tests and assessments were established and a "child health educator" especially recruited for care delivery. Our baseline data reflected that medical tests for thyroid function and G6PD deficiency screen done in the first 15 days of life were undertaken by around 70-90% of parents while anaemia and development screens conducted towards end of infancy were lagging significantly at < 50% and 0% compliance respectively. Concerned about their poor utilization and likely harm from delayed detection, we aimed to improve effectiveness of screening practices by at least 25% over an year.

Method

Perceiving harm from underutilized tests in March 2016 and corroborating it using detailed data by June, we approached the issue by hearing parent stories conducted detailed interviews and shadowed patient movement in hospital along month of July. Parallel to this, informal team brainstorming sessions outside of work environment highlighted staff problems and prompted innovative solutions at multiple levels across various care providers.

August- November witnessed implementation of 1 change idea at a time.

Parent education on benefits were undertaken by educators who were strengthened to 2 for continuous coverage. Pediatrician led trainings upgraded skills of the educators and enhanced team work. Billings for multiple assessments were clubbed into one while nursing staff assisted in rescheduling and relocating tests in proximity to doctor consults. With changes in place by December, we are presently reviewing progress and challenges in fortnightly team meets starting January.

Outcome

It may be premature to comment on impact of above changes due to their recent implementation. However our data over last few months appears promising hinting at a rise in development assessment upto 50 % alongside doubling of anemia tests (improvement from 15 % to 30 %) besides sustained compliance across [0-15days] for thyroid dysfunction and G6PD deficiency. Likewise, clinical detection rate for anemia and developmental delays have also risen by 8% and 17 % respectively. Thus our efforts are progressing towards helping more children avail early management of latent clinical disorders.

Conclusion

Our methodology along the journey helped create better connect with patient needs and has been a positive influence in designing services around them. Staff brainstorming sessions outside of work supported bonding, enhanced team performance and confidence in frontliners, whose suggestions were appreciated in a common forum.

As we are innovating towards effectiveness - there is parental apprehension towards child health educator - a role unprecedented in local practice especially in a doctor centric mindset society. Further payment for preventive care services in a seemingly well child vs therapeutic intervention in sick child especially in a "developing" nation is approached with scepticism. One important learning has been that changes challenging societal norms warrant patience and it's pertinent to highlight and celebrate every gain even if small, as they form foundation for progress forward.

Improving reliability of emergency care in a nonprofit hospital in Delhi

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Background

Sitaram Bhartia Institute is 75 bed non profit multispeciality hospital in New Delhi, India. we have an average of 1200-1500 OPD and Emergency patient visits a month in the department of internal medicine. We noticed that many patients attending the emergency services returned to the OPD with the same complaints within 72 hours. A review of our data revealed that many patients were not being adequately advised investigations or observation before discharge or were not being advised admission as required.

Method

We shared these findings with our team and based on their feedback we first developed a new clinical health record to capture all relevant parameters. We then selected, tested and adapted a validated triage tool which standardized patient assessment in a sequential format. Extended observation of patients in other designated areas was introduced. Laboratory and radiological investigations were tagged and fast-tracked .

1. Review of health records of adult patients seeking emergency consultation
1/2/16 -15/2/16
 2. Clinical Health Record designed and evolved -20/2/16 -30/3/16
 3. Adult Emergency Triage Tool adapted and implemented 20/3/16 – 15/6/16
 4. Option for extended observation introduced 21/6/16
 5. Tagging and fast-tracking of lab and radiological investigations:28/6/16
- Daily huddles and weekly review meetings were done where the team was encouraged to discuss the changes made and to give their feedback regarding all changes.

Outcome

These efforts have led to progressive improvement in patient care parameters wherein rates of inadequate investigations has come down from 22% to less than 2% as have the rates of inadequate observation and admission advice which have come down to less than 2%.

Conclusion

The success achieved so far is because changes were driven by feedback from frontline workers and an open line of communication was maintained between all stakeholders.
The challenge ahead is to transfer the supervision of the project to frontline workers so that the success achieved so far becomes embedded in the system.

Smart Bin - Safer, Reliable and Accurate

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Background

Singapore General Hospital (SGH) Outpatient Pharmacy at Bowyer Block fills around 6000 prescriptions comprising more than 20,000 drug items per month. With this high item load, the potential risk of medication errors, especially wrong drug picked, can be significant. Medication errors have the potential to cause harm to patients.

The Smart Bin system was conceptualized to eliminate wrong drug picking errors and enhance patient safety. We collaborated with internal and external partners to implement this system, which offers a novel approach to handling high item loads safely.

Method

We conducted an extensive and targeted review of the drug picking workflow; observation of the actual drug picking process was done and feedback was gathered from pharmacy staff. Subsequently, we brainstormed for root causes for incidence of wrong drug picking errors and solutions to address the root causes with the aim of eliminating wrong drug picking errors. The Smart Bin system was designed to incorporate these solutions and was implemented in phases with the project timeline plotted in a Gantt chart.

The Smart Bin system uses light-emitting diode (LED)-guided pick coupled with locked bin concept. This system eliminates wrong drug picking errors arising from staff picking by memory or inadvertently from adjacent bin; and to track user ID to allow accountability and traceability. The selected bin's LED lights up and unlocks when staff scans either the patient drug label QR code for drug picking or the manufacturer's barcode on the drug carton for drug loading or returns.

Outcome

Data analysis from Aug 2015 to Mar 2016 showed that the number of medication near misses due to wrong drug picked was 4.8 per 10,000 items picked. After implementing the Smart Bin system, the number decreased to 0.3 per 10,000 items picked.

Cross-sectional satisfaction survey administered among pharmacy staff showed that 82.8% of pharmacy staff agreed that the Smart Bin system was effective in reducing medication near misses due to wrong drug picked.

With higher picking accuracy (99.997%), medication near misses due to wrong drug picked from bin was reduced by 93.8%.

Assured of correct medication prepared, pharmacy staff are able to spend more quality contact time with patients, translating to better optimisation of drug therapy and improved patient outcomes. With LED-guided pick, less time is needed to locate the correct drug bin, hence improving productivity. Accurate drug picks translates to cost avoidance from service recovery due to medication errors, reducing healthcare cost.

Conclusion

This Smart Bin system is highly suitable for pharmacies with space or budgetary constraints for setup of costlier and bulkier robotic picking system. To ensure that proper procedures are followed, we also used the Failure Mode and Effects Analysis to develop standard operating procedures for the Smart Bin system, addressing risks associated with human behaviour. We successfully incorporated the new system into our daily operations with sustained results since March 2016.

Using innovative technology to improve drug picking, this system has translated to better and quality service to our patients, in line with our hospital safety goal of "Target Zero Harm".

RAISE (Raising Awareness at Induction in common Sources of Error) An Education Initiative to Improve Patient Safety

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Background

As a group of Senior House Officers in the West Midlands we noted that new Foundation doctors felt underprepared to start work. There was a lack of awareness of common sources of errors, as highlighted by the National Patient Safety Agency (NPSA). Being unaware of sources of error can lead to increased morbidity and mortality for patients. We demonstrate a near peer education programme to raise awareness of these key patient safety messages.

Method

We developed a near-peer teaching programme based on six key patient safety areas as set out by the NPSA and common in clinical practice. Three key points were developed for each topic. The topics included anticoagulation, anaemia and transfusion, diabetes and insulin, nasogastric tubes, palliative care, sepsis.

These were incorporated into a two hour presentation delivered during induction focusing on the key points, which were also consolidated by clinical cases. A pre and post questionnaire and feedback survey was used to assess the programme. We introduced the programme in a staged approach, gradually increasing the number of sites year on year. To disseminate the intervention across the region we held a cascade training day, to train new teachers. The new teachers were supported by a faculty mentor.

Outcome

RAISE in 2016 has been delivered to 289 foundation doctors in eight trusts throughout the West Midlands. Knowledge improved by up to 51% after the intervention. Self reported confidence in these key areas improved by an average 1.6 points, on a 1-5 likert scale. Feedback from the session found that 99% found it relevant, 97% found the session beneficial and 97% would recommend RAISE to new FY1s.

Conclusion

FY1 doctors are anxious and unprepared for certain key clinical tasks of ward work. This can lead to errors and poor care for patients. Targeted education at induction by near peers can significantly improve confidence and knowledge among junior doctors and therefore improve patient care.

Medication Reconciliation in Hospitals - Experiences of Physicians and Nurses

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Background

Incomplete information on drug use represents a potential patient safety risk at hospital admission. Several professions are involved in drug treatment and it is particularly challenging to ascertain current therapy of a patient by shift of care level. Medication reconciliation is a method that can reduce this problem. Ålesund Hospital is one of 4 hospitals in the Møre og Romsdal Health Trust in Central Norway. The Health Trust has about 6600 employees and serves approximately 265 000 inhabitants. In our Health Trust we have a multidisciplinary approach to medication reconciliation. The aim of this study was to gain understanding on what experiences physicians and nurses have in medication reconciliation. Knowledge about this is valuable in order to develop proper routines for medication reconciliation.

Method

Semi-structured interviews with five physicians and four nurses with practical experience of medication reconciliation were performed in January 2013. The panel included personnel from both emergency and medical wards. All interviews were audio-recorded and transcribed verbatim. Data were analyzed using systematic text condensation.

Outcome

The physicians and nurses considered medication reconciliation to be important. They experienced, however, several challenges due to unreliable sources of information and inadequate routines. Both groups expressed a need for clarification of their individual responsibilities.

Today there is a greater focus on enhancing the skills of physicians and nurses in order to standardize the procedures and increase the quality. Furthermore, the responsibilities have been clarified in Standard Operation Procedures and checklists used in daily routines. The problem with unreliable sources of information is a national challenge. Since 2016 the majority of all prescriptions in Norway are e-prescriptions and information about these is available for healthcare professionals across levels of care. However, there are limitations in this system and the patient himself continues to be the most important source of information about his medication use.

Conclusion

We consider the multidisciplinary approach to be very valuable, but challenging. It is crucial to engage both nurses, physicians and hospital managers in addition to pharmacists in order to implement a safe process for medication reconciliation. The physicians are important due to their overall responsibility for medication and their professional standing in the hospital environment. The nursing profession actively needs to take responsibility in this process. In order to achieve this we think it is necessary to emphasize the importance of correct medication in relation to patient care. For quality improvement to succeed involvement and support from hospital management is essential.

Saskatchewan Patients and Families leading change through Open Family Presence

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Background

The Saskatchewan Patient and Family-Centred Care (PFCC) Guiding Coalition (GC) is a partnership of eighteen health regions and agencies working together to advance PFCC and Patient Oriented Research across our province of a million people. Membership includes PFCC staff leads, senior leaders and patient and family advisors (PFA) from each organization. The Saskatchewan Health Quality Council (HQC), an organization responsible for accelerating improvement in the quality of healthcare, provides leadership and secretariat support to the coalition. Saskatchewan patients and families had differing experiences with regards to whether family members were allowed to be with patient to the degree they wished. System restrictions varied from open visiting hours to set visiting hours with mandated rest periods and limitations on visiting during shift handover. PFCC GC PFAs strongly advocated to health system senior leaders and governors for a province-wide Open Family Presence (OFP) policy.

Method

The PFCC GC reviewed existing national and international policies and drafted a provincial policy. This policy was shared and approved by all 13 health region Chief Executive Officers in August of 2015. A provincial health system target was set to "adopt and initiate the provincial open family presence policy by March 31, 2016". Implementation included supportive staff education and patient and family/public awareness. Signage, website updates, audits and coaching to resolve barriers and challenges were all offered. PFCC GC members in each region conducted audits of policy implementation. Staff were randomly selected to assess their awareness of the policy and barriers/challenges to implementation. Patient and families were randomly selected to measure their awareness of the policy and to inquire if, during their stay in the facility, they were able to have family with them to the degree they wished.

Outcome

All 13 health regions adopted the policy and began implementation by March 31st, 2016. Implementation was not without challenges. The supportive/strengths-based approach used to engage and partner with staff for implementation was crucial to overcoming barriers such as infection control policies that conflicted with OFP and cross-cultural issues that needed to be resolved. Early provincial audit results have shown 99% of patients and clients reported that they were able to have family with them to the degree they wished. In acute care, 93% of staff/clinicians were aware of the policy and 91% said that the policy is being consistently followed. The impact of our intervention spanned across the entire nation as the Canadian Foundation for Healthcare Improvement and many of its partners across Canada have sought Saskatchewan's advice on how to pursue provincial adoption of Open Family Presence policy in their jurisdictions.

Conclusion

Open Family Presence (OFP) policy is a critical first step in ensuring that patients and families are partners in care. The power of the patient story was imperative to getting OFP policy set as a health system-wide improvement priority spanning 13 Regional Health Authorities. The PFCC Guiding Coalition's role in Saskatchewan health system organizational structure ensures that the patient voice is consistently heard at the highest leadership levels and gives opportunity for patients/families to provide leadership in priority setting. The publicly funded provincial health system of Saskatchewan, Canada, which serves over 1 million people was successful in coming together to 'think and act' as one based on the direction of our patients and families. Supportive staff education and audits to identify barriers and challenges, along with resources and coaching were vital for policy implementation success. Further info at: hqc.sk.ca/improve-health-care-quality/patient-and-family-centred-care/.

Management of Status Bleepicus

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Background

The present study aimed to improve induction training of new Foundation Year One (FY1) doctors in Stoke Mandeville & Wycombe General Hospitals in Buckinghamshire Healthcare NHS Trust, UK. The study authors were all employed as FY1 doctors in the Trust in 2015/16 and were struck by the challenge of managing busy on-call shifts as new medical school graduates. To equip future FY1 doctors with the necessary skills to manage the clinical workload, we developed a 'Bleep Roulette' on-call simulation session and an 'On-call Proforma' which aimed to prioritise patients based on their National Early Warning (NEWS) score.

Method

The 'Bleep Roulette' training seminar was delivered to all new FY1 doctors ($n = 40$) in Buckinghamshire Healthcare NHS Trust in July 2016. The 2 hour seminar was led by four outgoing FY1 doctors and consisted of 18 simulated phone-calls between nursing staff and doctors regarding issues of varying clinical urgency. New FY1 doctors were trained to obtain key information over the phone to allow them to prioritise their three simulated clinical scenarios. To improve organisational skills, an 'On-Call Proforma' was developed which used the established Situation Background Assessment Recommendation (SBAR) handover structure to prompt FY1 doctors to request key information (e.g. NEWS scores) when answering bleeps. The proforma was launched at Stoke Mandeville and Wycombe General Hospitals in August 2016 and its efficacy assessed by survey of new FY1 doctors ($n=19$) in October 2016.

Outcome

95% of outgoing FY1 doctors ($n = 19$) felt that having a proforma would improve organisation of their on-calls and only 63% had a systematic method for triaging bleeps. Prior to induction training, 85% of new FY1 doctors ($n = 19$) lacked confidence in organising their on-calls and only a quarter had a strategy for prioritising their bleeps. After four months of on-calls, 72% of the same cohort reported that the 'On-Call Proforma' was helpful and 78% felt it improved patient safety.

Conclusion

Use of an "On-call Proforma" improves FY1 doctors' confidence and optimises patient safety by improving communication between healthcare teams.

A local project influencing national change: a multidisciplinary approach to improving coding accuracy in heart failure

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Background

Initially, this project concerned NHS Forth Valley in Scotland, before spread to NHS Greater Glasgow and Clyde (NHS GGC), then nationally throughout Scotland via the Scottish Heart Failure Hub, and Information Services Division (ISD) Scotland, the national data collection team. Discharge coding after heart failure (HF) admission was inaccurate, failing to capture HF aetiology and ejection fraction (EF). This detail is key in efficient targeted service planning and is represented in coding terms by a 5 digit code, which was only seen in 1.0% of cases. Clinical terms describing heart failure often do not comment specifically on EF, making it hard for coders to accurately determine this. Generic guidance to aid this process was often poorly understood by the coding team and seldom used.

Method

We wanted to work with coding staff to see how we could improve 5 digit specified code use. Rapid PDSA cycles were used to test our interventions: a guidance sheet translating clinical language to a 5 digit code, face-to-face meetings with coding staff including clinical case presentations, and dissemination of analysed interval data which was collected with coding staff. Meetings with coding team fostered a good working relationship, and they were encouraged to discuss hard-to-code cases with the medical team. This was repeated across a second health board. We liaised with Information Services Division (ISD) Scotland, who collect national coding data, and the Scottish Heart Failure Hub (SHFH).

Outcome

We achieved statistically significant & sustained improvement in use of accurate 5 digit specified codes during 6 month data collection and on follow-up at 12 months (93.1% at 12 months vs 1.0% pre-intervention, $p < 0.0005$). Patients are more likely to receive an accurate code enabling service planning and recording eligibility for disease modifying medication. Discharge codes can now be employed to reliably track service improvement interventions in NHS Forth Valley. These results have inspired use of the most recent guidance sheet in NHS GGC, and it is available to all Scottish Health Boards through the SHFH. Each health board now has a dedicated HF coding champion (generally a cardiology consultant or HF nurse specialist) who receives their board's quarterly HF coding data from ISD, liaises with coders, and is well-placed for further QI work tailored to local needs.

Conclusion

This simple project proposes a straightforward model for improving accuracy of HF coding which could be adapted for other conditions. Continuous intervention and dialogue between involved teams including sharing of successes was effective in achieving our goal and acted as a motivator for continued improvement. The HF coding champions are ideally placed to foster an ongoing link between the medical and coding teams, and can continue to disseminate up-to-date data to share successes and drive improvement in local coding. Tailored QI interventions with feedback from those using the material under development leads to its increased utilisation and benefit. Traditionally non-clinical teams value recognition of their input to the patient pathway alongside a closer working relationship with the clinical team

Standardising Multidisciplinary board round: beyond EDD for better patient and staff experience

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Background

Gwanwyn ward is based in St Woolos Hospital Newport South Wales. It has 26 beds, and is providing medical and rehabilitation input for elderly patients. Most patients require comprehensive geriatric assessment and the vast majority of them have complex care needs.

Traditionally Multi Disciplinary Team meetings are organised on weekly basis in the ward MDT room. The quality of the meeting was quite poor resulting in delayed discharge planning.

Method

Using quality improvement initiative, we aimed primarily to increase our discharge rate by 50% over 3 months. The proposed intervention aimed to replace the traditional MDT meeting by introducing a standardized board round covering all aspect of care including discharge planning to ensure:

1. Input from every MDT member.
2. Better time management
3. Confirmation of patient fitness for discharge
4. Inclusion of patients/ carers perspectives
5. An agreed estimated discharge date
6. Confirmation of discharge destination

A standardized electronic documentation is updated and communicated to the patient's flow team in timely manner.

A checklist was produced using the standards of patient safety at glance (PSAG) to facilitate this process.

A novel aspect of the board round was to introduce a regular team debrief to discuss issues related to patient's safety.

Outcome

Primary outcome:

The discharge rate improved from 1-2 patients/week to an average of 5/week.

Secondary outcomes:

Reduction of hospital acquired complications (0 C difficile since May 2016).

Improved staff satisfaction.

Improved board round timing (reduced to 1hour from 2h)

Patients/ family perspectives were included in the MDT discussion which has improved patients/carers satisfactions.

Conclusion

Using quality improvement initiative, we aimed primarily to increase our discharge rate by 50% over 3 months.

The proposed intervention aimed to replace the traditional MDT meeting by introducing a standardized board round covering all aspect of care including discharge planning to ensure:

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A novel aspect of the board round was to introduce a regular team debrief to discuss issues related to patient's safety.

Towards a Never Event: A Quality Improvement journey to Fresh Stillbirths Reduction in Eleven Imo State Healthcare Facilities

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Background

Problem Statement

Globally, 2.6 million stillbirths occur annually - about 98% occur in Low and Middle income countries, 75% of which are in Sub Saharan Africa; Nigeria has the second highest stillbirth rate and numbers in the world. Stillbirth rate in southeast Nigeria is 6 for every 1000 pregnancies. However, contrary to this DHS (2013) findings, Okeudo et al in a study conducted in a teaching hospital in Imo state pegged institutional stillbirth rate at 180 for every 1000 pregnancies.

Background

Eleven healthcare facilities (six private, five Faith-based) enrolled in the MNHQI project in Imo state were carefully assessed to ascertain drivers of fresh stillbirths. It was observed that institutional factors (staff capacity, quality of ANC services) and external factors (cultural beliefs, proliferation of unskilled TBAs) were the key drivers of fresh stillbirths. Facility QI teams embarked on a journey to reduce fresh stillbirths from the prevailing 57 for every 1000 live births.

Method

Our main strategy was use of the Model for Improvement: Collaborative Learning Networks. Facilities QI teams teamed-up to accelerate generation of change ideas and sharing of best practices. A baseline assessment was conducted in each facility. To do this, all deliveries resulting in fresh stillbirths were reviewed. Data mined from these cases showed gaps in antenatal and intrapartum care delivery, which then formed the basis of topical discussions among relevant stakeholders at the facilities.

Following a root cause analysis, three interventions which would positively impact the incidence rate in a short period were identified, namely: adherence to a structured ANC health talk curriculum, consistent correct use of partographs during labour and mortality/near miss reviews. The role of partographs is essential and to ensure its correct use, a checklist was designed for this purpose. Change ideas around the intervention areas were tested using PDSA cycles.

Outcome

In the short term at these facilities, adherence to antenatal education curriculum, auditing for correct use of Partographs and review of deaths and near misses have greatly improved. Though the intervention is still ongoing, we have noticed a consistent decline in fresh stillbirth rates. This can be attributed to change ideas being implemented, feedbacks during biweekly QI meetings and periodic learning sessions which encourages a continuous exchange of ideas. We have also seen more facilities become more open to redesigning ANC and other services to be increasingly patient and family-centered. Antenatal health education, health seeking behaviours and intrapartum care at these facilities have greatly improved. Also, a culture of using data to drive corrective actions has become the norm in some facilities.

Conclusion

Anticipated change in these kind of projects is usually multifaceted. Stakeholder engagements with data and identification of champions for the project have been invaluable in achieving results. We have learnt that proper buy-in from management of healthcare facilities leads to ownership of improvement processes which engenders sustainability. Where feasible, it is also important to engage relevant stakeholders at the Ministry of Health from the onset to eliminate undue resistance especially when scaling up is being considered. Also, change ideas are best implemented when tailored to meet the category of healthcare workers being targeted especially where such practices never existed.

Caring for Our Carers

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Background

The Western suburbs of Sydney is one of the most culturally diverse and fastest growing areas in NSW. Blacktown Hospital has been one of the largest capital works projects in NSW and undertook the design process in a co-design collaboration between NSW Health Infrastructure, The Blacktown Expansion Project, Jacobs Architects, clinicians, consumers and carers. Prior to the new Clinical Services building the existing hospital had over 400 carers a year staying overnight with patients and this equated to over 3,000 nights of stay. They were sleeping next to patient's beds on chairs to support patients who were confused or anxious or who couldn't communicate well in English. These carers would often be exhausted by the time the patient was discharged and the carer continued looking after the patient at home.

Method

Using co-design methodology with Blacktown Hospital Project Team, Health Infrastructure, Consumers and Carers and Architects, 40 single rooms were designed with a Carer Zone. This creates a sitting area during the day and a bedroom for carers overnight. It has a curtain for privacy and access to the ensuite bathroom. Prior to the opening of the Clinical Services Building, procedure and resources were developed for staff patients and carers and an education program implemented for staff. Carer Zones were operationalised in April 2016 and ongoing evaluation by carers, patients and staff was commenced. This assessed experience and access to the Carer Zones as well as the impact on patients and staff of having carers present during the night. Incident Management data was analysed for the Stroke and Rehabilitation Ward to compare falls data of the old Stroke and Rehab Ward to the new ward with Carer Zones.

Outcome

Carers identify improved experience, comfort and improved communication with staff. The Carer Zones have addressed the issues raised by carers during the co-design process. Staff report better opportunity to practice patient centred care, improved communication, improved discharge planning, decreased fall risk, and decreased use of Special Nurses for one on one support of confused patients. Unexpected benefits of a 600% increase in carer education resources being used in the Dementia Aged Care Wards. Incident Management data has shown a decrease of 40% in falls on the Stroke and Rehab Ward. The Nursing Unit Manager identifies the following reasons for the decrease, carers staying overnight, a "see and be seen" design of the wards and Falls Huddles including staff, patient and carer. When falls data is taken only between midnight and 8am there is a reduction of 68% in falls from the old ward to the ward with Carer Zones.

Conclusion

Specifically designed Carer Zones at Blacktown Hospital are a NSW Health first and have shown that building design impacts on patient and carer experience and safety. Development of electronic patient records to be able to identify and register a carer who stays overnight with a patient would be very advantageous to effective administrative governance. The impact on patient falls is very positive and a research project is in the planning stages. The initiative highlights the value of taking co-design approach, particularly in the context of a capital works project. Engaging patients and carers in the design of hospital facilities and systems, when undertaken in a genuine, meaningful and ongoing way can deliver innovative, patient focussed outcomes that significantly improve the experience of patients, staff and carers.

Bridging the Gap of quality care delivery in critically ill obstetric patients in Lagos Island Maternity Hospital

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Background

Lagos Island Maternity Hospital is a foremost 215 -bed maternity unit in Lagos, renowned for the large number of obstetric emergencies it takes on daily. This derives from every available bed space, complementary robust neonatal services, reliable access to blood and blood products and its suitability for multidisciplinary care of referred complicated cases. In 2015, the institutional MMR was 2031/100,000 live births and most deaths were preventable. Unbooked cases, accounted for 42.72% of our yearly over 3000 deliveries, accounted for 90 % of our maternal deaths. 25% of these cases were brought in moribund conditions. Severe PreEclampsia/Eclampsia remains its leading cause of maternal mortality accounting for 30% of maternal death. A review then of quality of care provided revealed gaps in operating system as it did not offer the expected intensive care services for these critically ill patients. An innovative critical care system, LIMCCU, was thus born.

Method

LIMCCU, [Lagos Island Maternity Critical care services] was conceptualized as a system of managing critically ill patients

We created critical care bay, called LIMCCU, to closely monitor critical cases in December 2015. Procurement of some critical care equipment in January 2016.

We proceeded to engage with Institute for African women's health, UK to develop guidelines and protocols for the management of common obstetric complications and a system of classifying patients by severity in February 2016.

In March 2016, staff training on best practices in order to enhance capacity and optimize staff shortages by task-shifting happened.

And in April 2016, a fully functioning critical care unit (LIMCCU) was in place.

Outcome

LIMH now has a functional CCU providing Level 2 care. Despite the recorded 140% increase in number of referred cases of eclampsia, the static number of personnel and the increase in severity of cases referred, the case fatality rate did not get worse (5.8%). The capacity to manage hypertensive disorders in pregnancy, haemorrhage and other emergencies has undoubtedly improved. In the management of other high risk pregnancies like Sickle Cell Haemoglobinopathy in pregnancy, mortality has dropped by almost 90% due to closer monitoring and assured implementation of the treatment guidelines for them. Other anticipated benefits include the resurgence of interest by government and NGOS to offer more support in terms of personnel and more equipment to move us to level 3 care to save more lives. Also, Government plans to open two more CCUs in two General hospitals having seen our impact, to reduce the torrents of referrals to LIMH, and reduce the agony of clients' transfer.

Conclusion

Innovation within available resources is possible and vital to improvement. Though LIMCCU does not meet the gold standard, optimization of available resources, and improved adherence to well researched guidelines have not only improved outcomes but also triggered interest nationally and internationally in shoring up our capacity but also expanding the frontiers of CCU care to other deserving areas. By building capacity of other cadres of health workers and task-shifting, we are able to record better outcomes. The image of the armada of eclampsia referred to us at the onset of the CCU intervention lingers as critically ill cases were sent down in the false hope of obtaining succor ' ICU'. Our treatment skills were, however, further honed but also limitations recognized. Conducting a baseline for staff knowledge of management of common obstetric complications should have been done to objectively track knowledge gained. Having a strong data management system is the foundation for QI.

Measuring quality and safety of care for patients with psychosis

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Background

Large patient safety studies have excluded inpatients of psychiatric wards so far. Process measures of care for psychotic patients were found to fall well below standard (Crawford et al. 2014). Adverse events reflect quality of care for patients with psychosis in an additional way but research into these measures is scarce. We propose a novel approach by combining these measures to assess quality of care.

Method

A retrospective audit of medical records in a sample of 299 discharges of patients with psychosis who were admitted to a closed, open or early psychosis ward of a psychiatric hospital. Adverse events were assessed by a manual based on the Medical Practice Study (Hermann et al.). Process measures were yielded during screening for adverse events.

Outcome

A total of 299 admissions in 237 unique patients were screened. We yielded 235 adverse events during a total of 11403 admission days. Sixty-one percent of all admissions were free from reported adverse events. Most frequently identified events were adverse drug reactions, patient elopements and assaults. Process measures showed that the majority (55%) of patients smoked while only 1% received an intervention to attempt cessation.

Conclusion

Measuring quality of care by indicators and adverse events provides complementary input, which could be used internally in order to improve the quality of psychiatric care. Effectiveness of interventions to improve requires more research.

Zero transmission of MRSA in the neonatal unit: A Quality Improvement Project

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Background

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Methicillin Resistant Staphylococcus Aureus (MRSA) is a major cause of Healthcare Associated Infections (HAI) and can be a significant cause for mortality and morbidity in the neonatal population.

Reduction of MRSA transmission is a major Infection Control (IC) goal – a marker for Quality Improvement in IC.

There were recurrent MRSA outbreaks within the department from 2012 despite several measures taken like universal screening of all new staff and all new admissions. The longest outbreak was from february 2015. A retrospective audit on the incidence of HAIs over a 4yr period (2012-2015) revealed that the incidence of MRSA colonisation was 0.8% with 25% of them developing MRSA bacteraemia which was the major load of HAIs.

We aimed to eliminate transmission of MRSA in the neonatal unit over a nine month period commencing July 2016 and ending March 2017.

Method

The team identified all root causes responsible using the Fish Bone diagram and then two sets of multi-voting was conducted using the Pareto Principle and the following areas were identified as the root causes.

- a) Attitude of staff and visitors
- b) Lack of awareness of benefits of Infection Control (IC) practices
- c) Not conversant infection control policies
- d) Different standards of practice among staff

Two areas for intervention were prioritised using the tree diagram and prioritisation matrix

- 1) Improving IC practices and Hand Hygiene Compliance among staff and visitors
 - a. Raising awareness by sharing weekly audit data among all staff
 - b. Education and orientation of new staff and visitors
 - c. Use of signages and posters
- 2) Improve procedural compliance standardise the procedures for interventions using Aseptic Non-Touch technique
 - a. Individualise equipments for patients
 - b. Standardise procedure for interventions in the unit by using step by step photographic and video aids

Outcome

Our aim was to eliminate transmission of hospital acquired MRSA (HA-MRSA) in the neonatal unit. A positive case is referred as a case who becomes positive for MRSA on screening swabs after initial negative swabs (admission swab).

The previous MRSA outbreak was closed in June 2016. Since commencing our project, there has been no new case of MRSA transmission in the neonatal unit even though there were 2 cases of MRSA positive on screening swabs but no HA - MRSA acquisition.

The project has improved and raised awareness of the hand hygiene and infection control practices. We now have a departmental dashboard highlighting our audit results. It also enabled us to standardise our procedures including infection control practices.

There were no case of MRSA since June 2016 till date making it the longest period of zero positivity. This is a quality improvement indicator for Infection Control and helps to improve the morbidity and mortality of patients and improve staff morale.

Conclusion

The quality improvement project on eliminating transmission of MRSA within the neonatal unit was successful in eliminating HA-MRSA within the unit over a period of 9months. This is a significant achievement since an outbreak of MRSA from Feb 2015 - June 2016. The maximum "MRSA-free period" since 2012 was 3 months.

This project enabled us to improve our awareness and help to change the attitude to infection control practices and hand hygiene compliance among staff and visitors overcoming some religious and cultural prejudices.

Standardising the procedures for junior residents and nurses has streamlined our training of new staff and made it more seamless.

Raising awareness among all staff and visitors specially other specialties was one of the biggest hurdles specially in trying to encourage staff not to share equipment and cleaning shared equipment between each patient.

Eliminating MRSA colonisation and targeting zero harm is not impossible and definitely achievable.

Putting feet first – are diabetic feet reviewed as standard?

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Background

Diabetic foot disease is the leading cause of amputation in the UK, producing substantial patient morbidity and mortality and a great economic burden. Despite this, recent data indicates that the number of amputations secondary to diabetic foot disease are increasing in spite of advances in patient care and education. The centre of research performs the highest number of lower limb amputations in diabetic patients in Wales with this number increasing annually for the last 5 years.

Identifying “at risk” feet at opportune moments is one of the principal messages portrayed by the most recent NICE guidance and Diabetes UK. One such crucial time is admission to hospital with current guidance that all diabetic patients should have their feet reviewed within 24 hours of admission.

A prospective audit was performed over a 2 week period in June 2016.

Method

All patients with diabetes admitted into SAU's notes were reviewed 24 hours after admission noting whether a foot risk assessment had taken place. During this period 27% of patients had a foot risk assessment within 24 hours of admission. Through a number of small group discussions with ward staff it was identified that many staff were not aware of this target. Working with podiatry services an inpatient admission foot screening proforma was designed using the base of other successful tools used in daily clinical practice throughout Wales. The tool assigns a risk score to signs of disease or deformity. The score then stratifies to a simple flow chart guiding the user on what action to perform and which members of the multidisciplinary team to involve within the patients care. We asked a representative proportion of staff spread across medical and surgical wards within the hospital to complete a questionnaire to ascertain their opinion of the proforma.

Outcome

We received a positive response with 96% of staff rating the tool easy to use and 93% clear where and how to refer. Comments from this and discussion of the proforma within a sisters meeting were used to streamline the form before its dissemination. The form is to be included within the updated version of the inpatient nursing admission pack after successful review by senior nurse management in November 2016. Through re auditing the screening of diabetic feet within our SAU we hope to find a greater percentage of patients are being assessed at admission. Through identifying “at risk” feet on admission and signposting patients to the appropriate care we aim to prevent amputation through early intervention.

Conclusion

With better signposting we aim to streamline the inpatient pathway, increasing the number of appropriate referrals to our inpatient podiatry team implementing the principles of prudent healthcare. Through discussions with staff within our initial implementation phase there was resistance to introduction of more paperwork to already busy work schedules. This resistance was reduced once the scale of the issue and its proposed benefits were conveyed. Involving the multidisciplinary team earlier in the process may have helped allay initial concerns. We aim to show that through simple changes significant improvements in patient care can be achieved. Through assessing patients on every admission we hope that this will convey the message that foot care is an integral part of diabetic care.

Avoiding harm of neonates: Everyone's concern

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Background

The neonatal hypoglycaemia working group was formed as part of the NHS Improvement, Patient Safety "attain" programme to reduce admissions of term babies to the neonatal unit. During the period 2011 - 2014 there were 13,136 term neonatal admissions in England for hypoglycaemia as the principle reason for admission. These admissions represent a significant amount of potentially avoidable harm to babies and unnecessary separation of the mother baby dyad. Untreated neonatal hypoglycaemia is a cause of long term harm, in most cases this can be avoided by early identification of risk and optimal preventive management. The immense personal impact on the child and the family when harm occurs as a result of hypoglycaemia is immeasurable. The financial cost has been reported as a total of £162 166 677 with individual claims inclusive of costs ranging from £2 465 000 - £12 640 000, with the average being £6 300 000 (Hawdon JM, Beer J, Sharp D et al 2016).

Method

The group were required to understand the contributory factors of term neonatal hypoglycaemia admissions, resulting in unnecessary separation of the mother and baby as well as severe harm. Information was obtained from patient safety reports; neonatal hospital admission data and litigation claims. Priorities were identified to develop a programme of work within a timescale of eighteen months. These priorities included: data analysis, commissioning of a national scope of practice, a thematic review of litigation claims due to neonatal hypoglycaemia, education and training of all staff, the development of a framework for practice for the identification and management of hypoglycaemia and contribute to the wider NHS Improvement, Patient Safety, "attain" programme through collaboration, publishing and presenting of work to ensure maximum dissemination. Patient stories were incorporated in all parts of the programme.

Outcome

All of the priorities have been achieved. A patient Safety alert and resource pack has been issued to all maternity and neonatal units in England. This includes the "attain" audit proforma to enable multi-disciplinary reviews of neonatal admissions and used as part of the CQUIN data. The framework for practice recommendations will be transferable to all maternity and neonatal settings. The website will continue to be part of NHS Improvement's page. It is suggested that dissemination of the programme's work through these resources and publications will improve identification of at risk babies, with appropriate prevention and management of hypoglycaemia, to reduce the potential and actual harm of babies suffering hypoglycaemia.

Conclusion

A reduction in neonatal term admissions resulting in reduced harm, unnecessary separation of mother and baby and reduced negligence claim pay outs is anticipated as a result of this programme. The project did not receive any resourcing which at times was challenging however despite this, the project has had significant acclaim and achieved all of the objectives. Working collaboratively, with the unfailing support and commitment of multi-discipline group members, improves experiences, resulting in safer care and less harm.

Building quality improvement capacity & capability through an improvement movement in an acute hospital setting

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Background

The Trust had been actively involved in local and national Quality Improvement (QI) programmes, resulting in an increase in local expertise; however it had yet to attain the desired level of QI self-sufficiency, coordination or standardisation.

A Gloucestershire approach to QI that could be replicated and embedded into the organisational culture was required.

In The King's Fund report 'Improving quality in the English NHS – A strategy for action,' the authors commented "Building in house capacity entails adopting a modern, scientifically grounded method for quality improvement, investing in the education and training of all leaders and staff in this method and acquiring skills to support its use 'from the ward to the board'."

QI education had been attempted previously; however feedback from staff was that they lacked the support to put theory into practice. A structure which encouraged the transition from training to implementation using an adult learning style was required.

Method

The Gloucestershire Safety & Quality Improvement Academy (GSQIA) was created to build and embed local QI capacity and capability.

An education pathway was created, with a Bronze level - introduction to QI and a 7 month structured Silver level – QI in Action, which supports staff working on QI projects.

As training alone would not attain the Trust vision to embed QI into everyday working, an 'Improvement Movement' was needed.

An Academy 'brand' was developed and incorporated into all aspects of its work, including a website and Twitter account.

Intrinsic motivators for participation and achievement were introduced including a QI folder, certificates, awards, events and badges.

The Faculty was established in June 2015, followed by a period of development and marketing of the brand. In October 2015 pilot training programmes were launched. Self-assessment and feedback data were collected and the training adapted. The first Silver – Improvement Practitioners graduated in May 2016.

Outcome

- 1) 464 staff trained in Bronze – Introduction to QI.
- 2) 13 staff graduated as Silver Improvement Practitioners.
- 3) 33 Academy supported improvement initiatives in progress.
- 4) Bronze courses scored a median of 4.42 on a feedback scale of 1-5 and Silver a median of 4.50 (where 4= Good and 5 = Excellent)
- 5) Participant self-assessment of knowledge before & after the courses has shown an increase from 3 to 7 for the Bronze and 4.6 to 7.5 for the Silver course, (where 0=no knowledge & 10= expert)

As the reputation of the Academy has grown, there have been enquiries from Trusts wishing to learn about the Academy approach. A Faculty member is now QI lead for the Foundation programme and requests have been received to train staff, from Junior Doctors to the Board.

Conclusion

Whilst the Bronze training has generated additional capacity & capability and started the desired improvement movement, it is the Silver programme that has started to generate quality improvements.

Whilst it was recognised that internal mechanisms to support improvements needed to be strengthened, the success of the academy has meant that this has not kept pace with the increase in capacity. The identification of a software product to manage improvement opportunities and the status of ongoing improvement initiatives also remains to be found.

There is an expectation and a need for staff to participate in Quality Improvement initiatives; however they need the skills, time and the support. Introducing the Academy enabled a mechanism to be developed that could increase the capacity and capability of staff, whilst combining education, support and a QI brand, has initiated the desired improvement movement.

Doctor, when can I go home? Optimizing the length of stay for children after scoliosis surgery

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Background

The improvement project was conducted at the paediatric ward at VU University Medical Center, a 713-bed University Hospital in the Netherlands. In 2015, the paediatric ward had 2.662 admissions with an average Length Of Stay (LOS) of 3,9 days. Paediatric LOS in 2015 was higher at VUmc compared to other hospitals in the Netherlands. Furthermore, there was an increasing number of undesirable paediatric patient transfers to other hospitals and a shortage of resources for academic medical care.

Therefore, an improvement project was initiated. Goal of this project was: each patient at the right place, at the right time, at the optimum duration. Expected results were: better patient flow, decrease of LOS.

The focus in this project was on scoliosis patients only, selected from:

1. literature review on LOS;
2. data analysis on hospital days to determine the extent of the problem and identify the patient groups attributing most to the problem.

The project ran from May 2015 to September 2016.

Method

A Multidisciplinary Improvement Team (MIT) was formed, made out of patients' parents, doctors and nurses of different specialties and other stakeholders.

To assess the problem the MIT used a lean management approach:

1. joining patients during hospital visits to gain insight into patient's journey;
2. research of patient files to identify common problems;
3. value stream analysis (common view of current state);
4. drawing future state map (shared view of target condition).

From this, three main issues emerged:

1. preoperative stage: information management between care providers;
2. postoperative pain;
3. postoperative care coordination.

To work on these issues, three subgroups used a lean A3-problem solving methodology, consisting of root cause identification, target setting, action planning, improvement measurement, meetings with involved care providers to discuss results and carry out follow-up actions. To continue and sustain improvement, there was one final meeting of the whole MIT.

Outcome

To measure change multiple key performance indicators were used. Important improvements were:

1. % of patients operated within 9 months increased from 23% before the project to 78% after the project.
2. % of patients admitted to Pediatric Intensive Care Unit decreased from 85 to 58%, which represents a cost reduction of >53.000 Euros and more resources for academic intensive medical care.
3. % of patients reporting severe pain within 72 hours after surgery dropped from 41 to 30%, which contributes to early mobilization after surgery and thus to reducing LOS.
4. LOS decreased from 8,4 to 7,7 days. Further reduction is expected as the pain protocol compliance and early mobilization improve.

Next to this, there is room for more improvement, such as reducing the patient's anxiety about postoperative mobilization and optimizing the electronic patient record to support the new standards. These and other issues are currently being addressed.

Conclusion

It is important to choose the right patient group. Success factors in this case are sense of urgency for improvement, room for production growth, and support of senior (medical) staff. But most valuable proved to be having patients' parents present. Their opinions of what adds value, was highly motivating for the rest of the improvement team and formed an extra incentive to deliver results. Their presence was no hindrances to openly discuss opportunities for improvement. We therefore recommend involving patients in your improvement team.

The impact of walking the patient's journey with the complete team was also essential for the project's success. What seemed to be an efficiency problem (LOS) turned out to be a combination of various quality aspects (e.g. pain, mobilization). This project proves that improving quality, cost and value can go hand in hand.

Challenge now is to further improve and sustain improvements. Follow-up actions have been initiated to work on this

Managing Ethical Issues in Quality Improvement or Clinical Audit Projects

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Background

Healthcare organisations are strongly encouraging their staff to undertake quality improvement projects (QIPs) to improve patient care and/or to fulfil training requirements. However, our observation is that organisations are not establishing structures to oversee QIPs carried out by staff and are not using mechanisms to check if QIPs actually do produce sustained improvements that benefit patients or patient care. Healthcare organisations are unable to ensure that any ethical issues embedded in the QIPs undertaken by staff are recognised and handled appropriately.

Any activity that poses a burden or a risk of psychological or physical harm to a patient should have ethical oversight, including a QI project or a clinical audit. In addition, a poorly designed QI project or clinical audit is itself an ethical issue: The project is unlikely to achieve valid and reliable assessment; may not produce improvements in the quality or safety of patient care; and wastes time and money.

Method

We carried out a review of published literature on the subject of ethics and quality improvement and clinical audit to identify:

1. why healthcare organisations should have oversight mechanisms for QI and clinical audit projects in relation to risks to patients, patient care or the organisation
2. how QIPs or clinical audits are distinguished from research projects
3. possible ethical issues in QI or clinical audit projects
4. possible ethical issues in structured programmes of QI or clinical audit projects
5. strategies, structures, processes and support for managing ethical issues in QI or clinical audit projects and programmes in healthcare organisations
6. how research projects on the QI process should be handled

We analysed and synthesised the literature to identify approaches to the five issues we raised.

Outcome

We derived guidance on the issues identified for the literature search. The guidance is intended for NHS organisations in England and includes:

1. why it is important to provide for ethical oversight of QIPs and clinical audits
2. tools to distinguish QIPs and research projects
3. processes to identify and manage ethical issues in QIPs and clinical audits
4. processes to identify and manage ethical issues in planned programmes of QIPs or clinical audits
5. organisational structures and systems needed to oversee ethics in QIPs or clinical audits
6. how to handle research projects on QI.

Simple checklists for screening proposals for QIPs and clinical audits and for reviewing the findings of these projects were developed.

The guidance has been published by the Healthcare Quality Improvement Partnership (HQIP).

The guide, *Managing Ethical Issues in Quality Improvement or Clinical Audit Projects*, is available at <http://www.hqip.org.uk/resources/ethics-for-clinical-audit-and-qi/>

Conclusion

Corporate oversight of QI and clinical audit projects is essential. A corporate structure should ensure that QI and clinical audit projects are carried out in every service. A corporate process should require screening of proposals for QI and clinical audit projects to verify the appropriateness of the following: the objectives to be achieved; measurement and change methodologies; intended benefits and potential risks, particularly to patients; and the value of the activity to patient care. A process should also screen the results of a project to ensure that needed improvements in the quality or safety of patient care are actually achieved and sustained.

A research-led rapid appraisal of specialling in an acute hospital setting

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Background

A 'rapid appraisal' was conducted by UCL researchers on an ongoing development to improve the use of 'nurse specials' at UCLH NHS Foundation Trust. The researchers were 'embedded' at UCLH, facilitating the measurement and evaluation of service development projects such as this.

Nurse specials are temporary nursing assistant and registered general nurses used to provide 1:1 care and close or enhanced therapeutic observation of patients in acute hospital settings.

Method

A rapid appraisal is an approach to research that is used to collect data in a short timeframe. Information is collected from multiple sources and triangulated to validate the findings. The data collection techniques used for this study were: interviews, observations and multiple database comparison methods.

The research questions that were:

1. what are staff members perceptions of specialling and the role of nurse specials?
2. what are the processes involved in decision making around specialling?
3. How are the costs of specialling measured using existing service data?

Outcome

As a result of the rapid appraisal various recommendations were made and a number of changes were implemented.

This included improved methods for collecting audit data.

Further training for nurse specials in order to improve the quality of care provided.

Small scale control trials of the training programme.

Discussions about the need for further future research.

Conclusion

The rapid appraisal highlighted the benefits of analytic and methodological expertise in health service development projects. These skills are not always typically available to hospital staff engaged in service development work.

'Embedded' researchers can provide such expertise to a number of projects such as this one, facilitating robust analysis for development projects and building capacity by upskilling clinical staff in key measurement and evaluation techniques.

Stakeholders' And Patients' Involvement In The Implementation Of New Clinical Practice Guidelines

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Background

The work was carried out in the Niger Delta Area of Nigeria as part of a larger project focused on the implementation of new clinical practice guidelines to improve the quality of antenatal care. Four health care facilities spread across the three levels of health care provision were involved in the study. Extant literature suggests that implementing evidence based guidelines is complex with widespread challenges. Local evidence in Nigeria revealed sub-optimal implementation and utilisation of the new guidelines in healthcare organisations. Yet, the need to involve stakeholders, service users and patients in the implementation process has not gained considerable attention in the literature and in practice. This present work explores local policies and practices that influenced the successful implementation of the Focused Antenatal Care (FANC) model guidelines for improving the quality of antenatal care in two health facilities- a comprehensive and community health care facility.

Method

The introduction of the FANC model in the state in 2011 brought a change to practice. It was a shift from the traditional model of antenatal care which encouraged more antenatal care visits with interventions and practices which are not evidence based. Following the adoption of the FANC model as the new strategy for antenatal care, health care providers and administrators were informed and trained on the new model. During the implementation phase, the need to engage with the external context and stakeholders became apparent. Using a comparative case study research methodology, a multi-method qualitative approach was used to obtain data from staff, policy makers and pregnant women to decipher the change that led to the successful implementation and utilisation of the model in each health care facility. Thematic framework analysis and descriptive statistical analysis were applied to the data.

Outcome

Due to the challenge of traditional birth homes, faith based organisations and socio-cultural practices, staff of the health care facilities approached policy makers, community and religious leaders. They sought their support in order to facilitate the acceptance of the new clinical practice guidelines in their communities. Pregnant women's resistant to the recommended reduction in the number of antenatal care visits was addressed. Their voices were heard. The FANC model was adapted as the implementation progresses. The number of visits was adjusted. As a result of the collaboration between stakeholders, service users and staff more pregnant women attended antenatal care clinics (200% and 100% increase respectively in the two facilities). Remarkably, the content of care provided to pregnant women was in tandem with the FANC model guidelines. More women expressed the intention to deliver with skilled birth attendants. This would promote reduction in maternal mortality.

Conclusion

This work demonstrates the importance of stakeholders, service users and patients' involvement in implementation and improvement efforts in local health care settings. This further showed that service users were not passive in improvement and implementation work. They are active change agents to co-shape implementation effectiveness and continuous improvement. Significantly, it adds to our understanding of implementation and quality improvement in Nigeria. A major challenge to the improvement work was pregnant woman's belief in traditional practices for antenatal care and birth. This is one of the major causes of maternal mortality in Nigeria. Overall, this work adds to our understanding of the influence of organisational external contextual factors in quality improvement initiatives and implementation of new clinical practice guidelines.

Effective Strategies to Improve Antibiotic prescribing in Nigeria

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Background

Antibiotic resistance knows no boundaries. Several studies from developing countries have reported high and inappropriate use of antibiotics. Without an urgent, coordinated action by stakeholders, the world is headed for a post-antibiotic era, where common infections which have been treatable for decades can once again kill (WHO, 2014).

From the literature reviewed on antibiotics prescribing and use in hospital settings in Nigeria, there has been inappropriate prescribing of antibiotics documented.

It aims to assess antibiotic prescribing patterns, to understand the reasons behind current prescribing practices; and to make recommendations and develop an intervention that will help improve antibiotic prescribing.

The study is set in Bayelsa state of Nigeria using secondary and tertiary care hospitals

Method

A mixed methods approach is being used. The quantitative study is a retrospective survey with patient's case notes over a fixed time period using data collections forms. The qualitative aspect will be a prospective survey of prescribers' and other stakeholder's views on antibiotics prescribing. This will make use of semi-structured interviews.

Outcome

The results presented here are for the initial survey of prescribing patterns. A total of 1059 antibiotics were prescribed from 809 cases retrieved. About 31 different antibiotic drugs were prescribed; the five commonly prescribed antibiotics in decreasing frequency were; metronidazole (18.31%), amoxicillin (16.61%), amoxicillin/clavulanic acid (15.67%), cefuroxime (11.9%) and ciprofloxacin (11.14%). Top three classes of antibiotics prescribed were penicillin (53.45%), nitroimidazoles (19.86%), and cephalosporins (16.80%). More than half of all the antibiotics prescribed were for children (52.3%). Prescribing was mostly done by brand names (58.36%). It was found out that about 72.2% of the antibiotics were prescribed empirically. Relevant investigations were carried out in only 14.5% of all antibiotics prescribed and complete compliance to the treatment guidelines were recorded in 28.7% of antibiotic prescriptions.

Conclusion

There is inappropriate prescribing of antibiotics in the study area evidenced by high rate of empirical prescribing, poor compliance to treatment guidelines and poor use of laboratory sensitivity tests as guides. The reasons behind such prescribing practices would be further studied and effective interventions will be suggested to improve the prescribing patterns in a bid to reduce antibiotic resistance rates.

A Stab in the Dark - Improving Intercostal Catheter Insertion at the Canberra Hospital

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Background

An intercostal catheter (ICC), or chest drain, is a sterile tube inserted between the lung and the inside of the chest wall to drain air, fluid, or blood from the pleural cavity. ICC insertion can be associated with considerable morbidity and mortality.

The Canberra Hospital provides tertiary services for the Australian Capital Territory and southern New South Wales. In 2013 our clinical review process identified a cluster of patients who experienced adverse outcomes associated with ICC insertion. Review of the cases revealed significant heterogeneity in practice and a lack of local guidelines and competency processes.

A Respiratory Advanced Trainee, supported by the Respiratory Department and the Healthcare Improvement Division, examined intercostal catheter insertions in adult patients presenting to our hospital over a 12-month period.

Method

A retrospective chart audit examined ICC insertion at our facility in the 12 months to March 2016. Of the 257 cases, 40 were randomly selected from key departments. After exclusions, 31 cases were examined using a 10-point tool based on interstate and international guidelines.

Adherence to accepted guidelines was low. Nearly 40% of patients experienced periprocedural complications.

The findings were presented to Clinical Governance in August 2016. A timed working group was formed and reached a consensus that:

1. Non emergent ICC insertions should involve ultrasound guidance and a procedural safety bundle
2. Competency assessment should involve an online module and supervised insertions with an interventional radiologist
3. After-hours insertions should be performed by the on-call interventional radiologist

This was discussed with key stakeholders in late 2016. At present, radiology have accepted our strategy and are due to outline how they will accommodate the changes.

Outcome

As part of the change, non-emergent ICC insertions will be performed in radiology under ultrasound guidance with an accompanying procedural safety bundle. There will also be competency assessment for proceduralists involving an online theoretical component and supervised insertions with an interventional radiologist.

Our final results are not yet available, but we are already seeing a more evidence based approach to how ICCs are being inserted. Re-audit will commence in the middle of this year. We expect that the planned changes will improve our service delivery, reduce complications and improve patient safety.

Conclusion

Previous attempts to develop ICC insertion policies and protocols have struggled to gain traction, and organizational inertia was a major challenge. Whilst there was broad acceptance that change was needed it was difficult to agree on the implementation strategy.

It was also difficult to dispel entrenched attitudes, in particular, regarding point of care ultrasound. We've been able to overcome this by including members from multiple disciplines in our working group and allowing them to disseminate information in their craft groups.

Whilst we are still awaiting formal commencement of implementation and subsequent data monitoring we have already seen a cultural shift with more evidence based ICC insertion. By demonstrating an unequivocal need for improvement we were able to change attitudes and engage senior staff even before there was agreement on an implementation strategy. This has also allowed us to identify department specific issues and change ingrained practices.

Implementation and Scaling-up of Reforms in Tunisian Health Sector

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Background

In Tunisia; as well in most Low and Middle Income Countries (LMICs), many health reform projects tend to be effective at the local level but fail to be supported and scaled-up and decline over time. The situation is even worse in the case of health reforms supported and financed by international institutions. The aim of this study was to identify factors that have contributed to the successes and challenges of implementing, scaling-up, and sustaining four health reform projects (family planning; primary health care; hospitals management and vaccination).

Method

Based on the theory of change, we used a synthetic qualitative research strategy with a multiple case study and four levels of analysis (contextual, organizational, individual and intervention). Three strategies were used to collect the data: (i) Interviews, (ii) observations and (iii) review of the grey literature and field notes. In total, 40 interviews have been recorded, followed by a 10 -days observation period for each project studied. The interviews were transcribed and coded using the QDA-Miner software (4.1.27 version) and were the subject of a thematic analysis according to the conceptual framework of the study. Implementation process was measured according to three dimensions (fidelity, costs, achievement of goals), scaling-up was measured according to the purpose of the process (expanding coverage or increase in impacts), and sustainability was measured at organizational level by four dimensions (Memory, adaptation, values and rules).

Outcome

The study observed different levels of implementation, scaling-up and sustainability and highlighted the nature and the level of influence of different factors. The primary health care reform was successfully implemented, scaled-up at the national level but with a low level of sustainability. The hospital management reform was partially implemented, extended at the national level with a low level of sustainability. The national family planning strategy was successfully implemented, scaled-up at the national level with a medium level of sustainability. The vaccination program has been weakly implemented, partially scale-up with a low level of sustainability. The study uncovered successes (political will, motivation of stakeholders, mode of financing, skills support teams, legal context, visibility, etc.) and challenges (political environment, changing context, bureaucracy, low operational management, insufficient resources, low institutional capacity, etc.).

Conclusion

The study highlights the importance of context and adaptability in implementing and scaling up health reforms. It showed that health reforms can be effective at the local level and scaled-up (expanding coverage) but decline over time (long-term effects observed). The study suggests a new approach to change health reforms management, that integrates sustainability issues at the design, implementation and while scaling-up of health reform projects in countries with limited resources. The study proposes an integrating framework which addresses those three concurrent processes. The ultimate goal of this research will be to test empirically this new approach and produce tools that will help to better guide health reforms in low and middle-income countries.

Quality Improvement in Healthcare Using Social Network Analysis

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Background

Social network analysis (SNA) is a strategy for revealing networks through mapping communication between people in strategically important groups within an organisation to identify the types of relationships that produce learning. To deliver high quality evidence-based care requires best practise to spread to frontline teams. Although SNA has been applied within many sectors and shown to improve efficiency, there is a lack of evidence in using SNA of healthcare professionals within a healthcare setting as part of an intervention to change practice or policy (level-1 evidence).

This paper comprises of two sections, a literature search to capture level-1 and level-2 evidence (SNA of healthcare workers). Secondly, a quality improvement project which uses the networks within an operating theatre to support the implementation of Department of Health guidelines on preventing surgical site infections (SSI) and analyses the network features that can inform future planners.

Method

In 2012 a SNA map was created from interviews of theatre staff and used to target key relationships to support the adoption of policy. In 2014 staff identified by their peers as 'influential' were interviewed for their retrospective views on what and who drove the quality improvements. The network data before and after the implementation was evaluated to capture network features that may have optimised learning.

This paper answered eight questions:

- Does SNA of a policy implementation provide insights into the role of network features that could inform future implementation?
- Does SNA reveal changes in network developing during/after implementation?
- Was the policy successfully implemented?
- Did the policy improve service?
- What motivates a champion?
- Who would the team choose to work with on a new project and does this relate to the network influence?
- Does current research show a growing trend in SNA evidence?
- Have researchers successfully applied SNA-based interventions?

Outcome

Section 1: Chambers et al systematic review found 51 level-2 and one level-1 evidence between 1950 - 30th December 2011, the level-1 evidence had design limitations. Chambers search strategy was used to search Medline, EMBASE, PsycINFO; HMIC; Cochrane; CINAHL; Business Source Premier and SSCI: CPCI-SSH databases between 30th December 2011 - 7th April 2017. The search found 12,653 eligible papers, 101 level-2 and one level-1 paper, the latter did not include response bias nor reported how SNA affected organisational outcomes.

Section 2: The interviews identified key individuals who drove the quality improvements and motivated the wider team. These same people were identified as important to include in future quality improvement projects. There was top-down and bottom-up working, policy fully standardised and SSI rates 30 days post operation reduced 34% ($p=0.049$). Network maps for perceived influence before and after implementation were compared for influence inwards and outwards.

Conclusion

The results of this study demonstrate that the networks within the operating theatre are important for influencing change and they can be used to improve policy uptake and drive quality improvements from the bottom-up. The networks within operating theatres are important for policy-makers who want to improve policy dissemination and service outcomes. The NHS is under pressure to deliver more with less to make efficiency gains and this approach offers a quick, straightforward and robust way to understand the networks within NHS organisations and impact frontline staff to improve policy implementation. It is recommended that future implementation and policy design include SNA. This research found an increasing number of level-2 publications but a lack of level-1 evidence; future research should seek to evaluate the use of SNA in changing policy within healthcare.

Compliance to Commitment - Reaping the Benefits of Medical Revalidation

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Background

Revalidation is the process by which the UK's General Medical Council (GMC) confirms the continuation of a doctor's licence to practise.

Compliance with the legislated Revalidation requirements comes at significant cost to businesses - not only relating to the implementation and resourcing of supporting systems but also effort and time spent by doctors and appraisers, governance and Quality Management. There is therefore a strong incentive to make processes as efficient as possible and add value by realising potential benefits beyond compliance.

Method

International SOS shows how it has integrated Revalidation with existing Clinical Governance Framework by comparing their internal standards, policies and processes with quality criteria set out in Revalidation Core Standards and enhancing existing system where gaps identified, and by supporting their global Quality Management Function with improvement initiatives directly resulting from opportunities identified during appraisal and Revalidation processes.

Further benefits have been realised by applying the most beneficial aspects of GMC appraisal to improve annual performance reviews for all healthcare professionals, exploring what else the data produced by appraisal and 360 processes can tell us about QMS effectiveness and promoting benefits of Revalidation internally and externally to peers, clients and professionals to improve our reputation, share best practice and realise commercial benefits.

Outcome

Implementation of Revalidation has forced review of effectiveness and revealed opportunities to further improve and standardise processes in diverse environments globally. International SOS made improvements to training, recruitment, safeguarding and managing incidents and concerns.

The systems put in place to assure appraisal quality also provide new insights into various aspects of clinical governance not previously visible. Individual doctors' lack of engagement or difficulty in providing sufficient supporting information for their appraisal often points to other underlying issues. In some cases they indicated weaknesses in local systems which could be addressed. In such instances lessons learned were then also shared more widely. International SOS has increased its credibility and status amongst peers and is recognised as being at the forefront of Revalidation and having demonstrated ability to provide leadership for multinational medical professionals.

Conclusion

Revalidation as an integral part of the clinical governance system contributes significantly to continuous improvement. It makes a business more attractive as employer to doctors and other Healthcare Professionals. Employees don't have to carry entire burden of risk - resilient systems support them.

Revalidation can be a route to understanding and managing risks for individuals and systems not previously apparent.

Revalidation can improve the ability to fulfil "duty of care" – of clients, service users and employees: integrated systems help protect clients from challenges that they are negligent; protects employees; protects the business.

Revalidation as external verification makes a business more attractive to clients. Message: a business that recognises legislation as a standard that can help drive quality, is an improving, learning organisation that uses resources effectively and efficiently.

Not 'stop obs' but 'different obs' in the last days of life

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Background

Our busy teaching hospital in central London has around 1000 inpatient deaths annually. We pride ourselves on providing clinician to clinician support from a dedicated end of life care (EOLC) team. This is supplemented by a dedicated protocol, education and guidelines.

Our performance in the national EOLC audit 2016 was generally above-average but highlighted variability in symptom control of nausea and vomiting, noisy breathing and pain.

Additionally, although rated as 'good' (and 'outstanding' in caring domain) for EOLC by the Care Quality Commission (CQC), lack of a consistent pain assessment tool was highlighted. Pain is a common symptom experienced by people at the end of life - something which patients fear and clinicians find difficult to assess.

Local patient audit and observed practices also identified that individualised care plans were not consistently shaped around the Five Priorities for Care.

Method

In response to this we obtained permission to use and adapt a symptom control chart developed at another Trust. Local adaptation was led by a working group including the clinical lead in medicine, acute admissions matron and the EOLC team. The chart supports proactive measurement and documentation of symptoms and guides escalation of symptoms of concern. The team also developed a guide for nursing staff to facilitate documentation of a care plan in line with the Five Priorities for Care of the Dying Person.

We surveyed baseline staff confidence in assessing, managing and escalating symptoms in patients at the end of life as well as in creating a suitable care plan.

We then introduced the chart and care planning guide alongside an education programme for the existing and 25 new members of staff on the busy Acute Admissions Ward. The EOLC team continued to work alongside the ward team.

After a pilot period we have re-surveyed staff confidence and response to both documents.

Outcome

The baseline and post implementation questionnaire covered a wide range of nursing and medical seniority.

At baseline, 45% (n=18) of respondents agreed or strongly agreed they were familiar with the Five Priorities for Care, and 43% (n=17) felt able to develop a care plan based on these priorities. Post introduction of the chart 81% (n=35) agreed or strongly agreed they were familiar with the Five Priorities for Care and 58% (n=25) felt able to develop a care plan from this.

Staff were more confident at assessing and managing symptoms after the introduction of the symptom control chart. Staff were also more confident at when to escalate those with refractory symptoms.

Staff found the chart user friendly, and found that it facilitated communication between members of the multidisciplinary team.

86% (n=36) felt that the symptom control chart improved symptom assessment of dying patients. 86% (n=36) felt that the chart contributed to improvements in the overall care of the dying.

Conclusion

The preliminary results suggest that the symptom control chart has helped staff to assess, manage and escalate symptoms at the end of life and aid with the documentation of this process. Similarity to systems embedded in frontline care facilitates integration.

The nursing care planning guide appears to boost staff knowledge of and confidence in using the Five Priorities for Care to shape individualised care plans.

We hypothesise both will influence the overall culture and delivery of care to those at the end of life.

We will internally report our findings, refine the intervention in conjunction with pilot users and agree an implementation plan across the Trust.

Increasing medication reviews in elderly patients - a challenge in primary care

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Background

As life expectancy and management of chronic disease improves, elderly patients are routinely prescribed multiple medications. Regular review is critical to safely manage polypharmacy, but is not always achieved. We investigated whether over 75s on multiple medications received medication reviews in a GP practice, in line with National Service Framework guidelines, and if not, what could be done to improve this. The practice had recently identified cases where elderly patients had not received regular medication reviews, and may have suffered adverse effects. We aimed to increase the number of medication reviews that elderly patients received in primary care, and reduce unnecessary medication-related adverse effects.

Method

We audited a sample of elderly patients on 2 or more medications in a GP practice and assessed provision of medication reviews in a 1-year period, and whether those on 4 or more medications had received a review in a 6-month period. We found that 68.4% of elderly patients on multiple medications had received a review in the previous year, with a intended standard of 100%. We identified causative factors, and discussed these up at improvement meetings. We designed the following interventions: Intervention A) Monthly telephone review clinic for high risk patients. Intervention B) Employment of a community pharmacist to triage high risk patients. Intervention C) Education meeting describing best practice and guidelines around prescribing in the elderly. Intervention D) Notice in GP offices reminding clinicians to undertake opportunistic reviews. Intervention E) Practice meeting for clinicians to share best practice in configuring coding system for more accurate record-keeping

Outcome

Our final results are not available, but we are re-auditing using the same methodology as our initial audit to assess improvement. Anecdotally, we have heard that medication reviews have increased, and we anticipate this may be proved in our analysis. We also know from educational meetings with clinicians that we have increased awareness of current best practice surrounding medication reviews. We anticipate that an increase in the number of medication reviews undertaken in elderly patients is likely to reduce the number of medication-related adverse effects.

Conclusion

We learnt that the best strategies for improvement were identified by observing clinical practice in action, and discussions with key stakeholders. We also found that medication reviews provided an opportunity for patients to lead their care. We encouraged clinicians to brainstorm solutions, and to help develop strategies to change. We also learnt that these sessions do need an experienced and skilled facilitator to lead discussions. If we were to repeat this project, we would hope to investigate any link between improved medication reviews and medication-related adverse effects. Our key message is to involve clinicians and patients at all stages of the improvement process. We also identified that prescribing in the elderly needs constant monitoring, and our work shows how that might be improved in primary care internationally.

The Story in a Bottle: Patient-Focused Recovery

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Background

Singapore is preparing for its silver tsunami. In recognition of this, the Ministry of Health has identified the care of hip fracture patients as a key clinical outcome measure for our hospitals. Hip fractures are the commonest serious injury among the elderly (who often have many medical co-morbidities), and are a large healthcare burden in terms of bed occupancy, cost, and subsequent morbidity.

Khoo Teck Puat Hospital (KTPH) is a tertiary care public hospital. In 2014, KTPH founded Singapore's first Hip Fracture Unit (HFU) – involving specialists from Geriatrics, Orthopaedics, Anaesthesia, and Allied Health personnel. HFU patients are >60 years old, and have sustained a hip fracture from low-impact trauma. Prior to establishing the HFU, these at-risk patients received fragmented care, resulting in poor pain management. Nearly 100% of them received regular opioids as their analgesic mainstay. They had a significant lag time to mobilisation, averaging >12 days stay in an acute ward.

Method

In 2014, a task force was formed to help optimise the care of hip fracture patients. The HFU was set up, with 10 beds in a Geriatric ward allocated to the Unit. A comprehensive Clinical Care Pathway was created to streamline workflows, enabling early admission, early assessment by a multidisciplinary team, early analgesic optimisation, early surgery, early mobilisation and discharge.

The Pathway includes pain management guidelines. Key personnel are kept apprised of new admissions via mobile communications, allowing early Acute Pain team review, early peripheral nerve catheter insertion, and regular titration of analgesia. We are the first Unit in the world to include routine Anaesthesia and Acute Pain team reviews within 24 hours of admission.

In 2015, the pilot Unit showed encouraging outcomes. Thus, it was expanded to comprise the entire ward, if required. Today, there are regular audits of pain management and outcomes, and this data is presented monthly at department meetings.

Outcome

All patients admitted to the HFU are now reviewed within 24 hours by specialists from all 3 departments, thus allowing early optimisation of analgesia. >99% of eligible patients now receive preoperative peripheral nerve catheter insertion, and 100% of post-surgical patients are reviewed by the Acute Pain team for at least 2-3 days postoperatively, resulting in improved peri-operative pain scores.

Thus, our patients' mean time to mobilisation is 2.3 (± 1.9) days, compared to >5 days in other published studies, and mean length of stay in an acute bed has shortened from 12.2 (pre-HFU) to 9.0 days. We have also achieved very low rates of complications related to poor pain management and prolonged immobility, such as pressure ulcers (0.6%, vs. 5.1% in other studies), delirium (6%, vs. 30-50% in other studies), pneumonia (0.9%, vs. 3.0% pre-HFU). Unplanned ICU admissions have fallen from 9.5% (pre-HFU) to 1.5%, and 30-day mortality has also reduced from 3.3% (pre-HFU) to 0.6% currently.

Conclusion

Implementing these extensive changes required changing the mindsets of the various stakeholders. For the Anaesthesia department and its Acute Pain team, this involved a change in departmental culture – care for patients does not end after discharge from the post-operative recovery area, and it is our duty as physicians to ensure that postoperative analgesia continues to be optimised for these vulnerable patients. There was some initial resistance, but the unmistakably improved outcomes reflected in the audit data, along with reinforcement and education, helped changed attitudes.

Overall, the quality of care received by hip fracture patients has vastly improved since the HFU was founded. With a streamlined, multi-disciplinary approach, even patients with complex medical conditions can achieve good healthcare outcomes. Ensuring adequate and appropriate analgesia is an essential part of the management of these patients – after all, *divinum sedare dolorem*; it is divine to relieve pain.

A strategy to improve safety in placement and management of pleural drains

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Background

A quality improvement project was performed at Kingston Hospital NHS Foundation Trust. This was a trust – wide project to improve the care for all patients requiring chest drain insertion and management in 2014. As part of the national British Thoracic Society (BTS) audit we found that there was poor adherence to the national guidelines with a higher rate of complications compared to the national average. Patients were identified using the coding system and retrospective analysis of the clinical notes. We found that only 69% of pleural drains were inserted under ultrasound guidance (national average was 85%). 38% of pleural drains were placed out of hours (15% nationally). Verbal or written consent was documented on only 56% of cases. Drains were also complicated by a pain in 44% of cases. Patients with drains in situ were nursed on wards that were experienced on chest drains in 63% of cases and only 50% of cases has observations documented within 60 minutes of insertion of the drain.

Method

In order to improve the quality and safety of chest drain management we wrote trust –specific chest drain management guidelines. This included a formal policy on how to deal with emergency procedures out of hours. This was implemented in the trust by a series of teaching sessions. The teaching sessions were delivered to all departments and grades of doctors and were based on cases within the trust that had been highlighted at morbidity meetings. The change was to provide accessible guidelines to the whole trust and to have open discussions around difficult cases. The trust wide implementation and education meant that all clinicians involved in implementation of the guidelines had more confidence around placing and managing drains. We also introduced an electronic checklist and documentation proforma to ensure that safety checks were followed and reminded users to complete consent and document complications.

Outcome

The improvement was re-measured by a repeat audit. We identified patients through the electronic notes and compared the results to the previous audit. The results showed a vast improvement. Number of procedures done within hours: 91.0%; procedures done under ultrasound: 95.0%; documentation written consent: 86%; documentation verbal consent: 14%; nursed on ward with experience of chest drains: 72%; complications (pain): 27%. We also polled the general medical department after teaching and they felt more confident in managing drains after the teaching programme. The effect of the changes was to provide better outcomes for patients requiring pleural procedure. The electronic checklist will retain the quality and safety of care for patients who need a drain.

Conclusion

Identification of the problem leading to poor adherence to guidelines can lead to greater confidence and better outcomes for patients. We used the patients' experience to measure how the guidelines were being implemented. Consider local policies in order to ensure implementation of national safety guidelines.

Pain Scoring in the Paediatric Emergency Department

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Background

Our work was carried out in the Paediatric Emergency Department (PED) of a large, Central London teaching hospital and involved both paediatric and emergency department teams and involved the children and parents attending our department.

Method

The first intervention was a leaflet given to parents and children in the waiting room, encouraging and empowering them to assess their child's pain and ask for analgesia – it was designed to engage children with colourful pictures and space to write. However, we found that these weren't returned, parents didn't use them and perhaps because then everyone assumed someone else was recording the pain score, rates of recording pain scores actually declined.

We then identified "Pain Champions" including nurses and doctors in the ED to educate and encourage staff, created a triage checklist for nurses, and visual prompts in the department for doctors and nurses to assess, reassess and document pain scores.

We subsequently developed a concise educational tool for junior doctors on pain in children and embedded this within a paediatric educational package/certificate for junior doctors to feel more confident and competent in managing pain in the PED.

Outcome

We have been doing monthly audits on pain scores in our documentation and developed a run chart that we share at speciality group and local team meetings. Over time, we are starting to see our interventions result in gradual improvements. We are starting to achieve initial pain score documentation rates of 80% (36% at the initial audit) and reassessment of pain in up to 75% of cases with children presenting with injuries to the ED. However, we want to improve this further and so have further work to do to promote further change.

Conclusion

We encountered many challenges in trying to implement change, principally changing culture. We also found that some interventions had unintended effects which actually hampered rather than promoted improvement.

The main lesson we have learnt is that multiple interventions (or several PDSA cycles) may be required in order to bring about a change culture. Fully engaging with all the stakeholders is essential to sustaining change, in our case having a paediatric nurse pain champion in the department. We realised the importance of not being afraid to try new interventions and discontinue them and move on if they don't work. Finally, being able to visualise the changes with the use run charts has been incredibly useful for measuring, demonstrating and sustaining improvement.

We have already seen a significant improvement in the assessment of pain in Paediatric ED, but we want to continue this further and embed this positive change within the department.

In-Hospital Early Mobilisation Measurement and Improvements After Cardiac Surgery

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Background

This study was done in a tertiary teaching (STZ) hospital in the Netherlands. After heart surgery patients often only exercise with a physiotherapist nearby, being afraid to suffer from an injury without direct assistance. The major reason for this evasive behaviour is a lack of knowledge on early mobilisation and a lack of motivation for early exercise. Unfortunately, patients confined to bed lose 5% of muscle strength a day and are more often readmitted to the hospital.

Our mobilisation program starts from day 1 after surgery with training from a dedicated physiotherapist. In this practice, non-cooperative patients limit their optimal recovery process and is frustrating for staff. Next, progress of early mobilisation is not routinely and systematically assessed, making interventions during admission difficult. Therefore, this improvement project focuses on information dissemination to patients and objective assessment of patient mobilisation.

Method

All 79 patients (fall 2016) required scheduled cardiac bypass surgery (CABG). The research team consists of a physiotherapist, a nurse, a technical physician and a heart surgeon. Physiotherapists registered patients functional progress using the ACSM Functional score and a 6-point score based on daily activities and mobilisation targets. An A1-format poster was developed on importance of exercise after surgery and attached to the toilet door of each patient room. Afterwards, we compared difference in both score developments and before and after poster implementation.

Outcome

We are the first centre to demonstrate the usability of the ACSM functional score in early recovery after heart surgery. Also, our 6-point scale was able to discriminate patient recovery on a daily basis, from being confined to bed. These changes stimulated both patients and caregivers into active early mobilisation. 94% of the patients found that the poster clearly demonstrated exercises and 75% found the poster to stimulate motivation for early mobilisation. No patients found the poster to be "pushy". We anticipate that these changes improve willingness to exercise, shorten hospital stay and reduce re-admissions to the hospital.

Conclusion

Little is known about early mobilisation efficacy and patient willingness after general cardiac surgery.

We provide an improvement program that can be useful for other centres to implement by measuring early mobilisation after heart surgery.

Our patients are now equally informed despite social status giving equal chances for their own recovery. Both patients and caregivers are stimulated using a dedicated early mobilisation poster (A1 format) and functional scores to monitor progression of recovery.

Integrating Pharmacists Into Primary Care and Prevention Efforts

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Background

Piscataquis County/Dexter, ME associated with low health scores (Robert Woods Johnson County Health Rankings), the opiate crisis, and high risk of falls from poly-pharmacy. Primary care practices under pressure due to understaffing of primary care providers. Previous pharmacist consulting by the author had demonstrated a ROI of 1:24 in complex, chronically sick patients, and formed the basis to further address these issues using grant funds, provided by the Community Pharmacy Foundation. Nationwide, the cost of medication misadventures has been most recently valued at over \$300 billion annually, two-thirds of which is accounted for by non-adherence: medication cost, low health literacy and confusion are root causes. Approximately one-third is healthcare driven.

Method

A demonstration model was set up in response to two stakeholders' requests: 1) Set-up of a collaborative practice agreement under new Maine regulations between a pharmacist (the author) and the primary care providers of an independently owned practice to wean down or off opiates in 30 chronic pain patients. New laws and regulations in Maine had just taken effect, and all needed to be in compliance. 2) Set-up of a public health event to screen area residents for fall risk. All eight pharmacies in the project focus area participated, and an AHRQ screening tool to assess risk from medications was performed. Medication reconciliation also was performed. Each of the pharmacists was trained and followed up clinical issues from the review with the prescriber. A letter identifying medications contributing to fall risk was sent with the patient for their next provider visit, so they could be engaged in the conversation.

Outcome

For opiate weaning, a reduction of 43% measured in Morphine Sulfate Equivalents (MSE's) was accomplished in 30 chronic pain clinic patients in the primary care practice. All were in compliance with new opiate legislated limits. For falls prevention, \$279,103 worth of preventable adverse drug events was identified and followed up by pharmacists with providers in 25 people. Only 2 of 24 experienced one fall each during the winter in which multiple falls (40+) had been experienced the previous year. ROI calculated was 1:28 (includes pharmacy student assistance), 1:14 for pharmacist only. All clients who had pharmacist intervention during the course of the grant demonstration project remained in their homes by grant project close. (This project was partially funded by the Community Pharmacy Foundation for one year, 4/16 to 4/17. Institutionalization costs avoided are \$1,600/month to CMS (2012 dollars) and up to \$100K/year for consumers.

Conclusion

Our main challenges arose from compliance with regulatory and reimbursement requirements: otherwise events rolled out well and were very well received and recognized at consumer and professional levels. Ongoing reimbursement to ensure sustainability is the outstanding challenge, but with diligent effort can be navigated. Medication management where more than one chronic disease is present becomes complex, and breakdown has dire consequences. Conversely, when pharmacists function appropriately, this empowers patients and their healthcare support alike. Pharmacists, when positioned strategically as collaborative providers entail significant and valuable outcomes.

Quantitative tool pilot study, based on Roy's theory of adaptation, focused on visitation and adaptation in a CVU/ICU

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Background

To quantifiably determine what type of visitation promotes adaptation in the adult ICU patient in a community hospital in the United States.

Method

A 25 question survey tool was created, based from Roy's Adaptation Model, using the likert scale and administered to 34 volunteers in an ICU/CVU in a community hospital in Pennsylvania using SurveyMonkey.com and an iPad.

This tool was created using Roy's Adaptation Model as a theoretical foundation with the focal stimuli being the participant's admission into the studied ICU/CVU. The tool was validated for congruence in measuring adaptation with Roy's Adaptation Theory by an executive board member of Roy's Adaptation Association.

Outcome

After the data was cleaned, 31 of the 34 participants were used for data analysis. With 74.8% being male and 25.8% female and 71% of respondents being over 50 years of age. Of the twenty questions asked about visitation and adaptation, thirteen questions asked about a positive effect on adaptation. Of those thirteen, eleven had $\geq 50\%$ agreement, saying it did improve their adaptation. With at least 95% confidence these researchers can say there is an association between the age of visitors and adaptation in thirteen cross tabulations. One specific example is between Q13 vs. Q22, "Do you feel allowing visitors under the age of 12, to visit YOU during your stay in the ICU has helped you deal with your reason for being in the ICU? vs. While in the ICU, do you feel that having visitors helps with YOUR spirituality?". The chi-square test indicated significant association yielding a p-value of 0.000 ($X^2(4, n=25)=26.56, p=0.000, \phi=1.03$).

Conclusion

The initial conclusion of this research is a successful piloting of the created tool to measure adaptation. Secondly, the frequencies obtained from the tool indicate visitation does impact adaptation as defined by Roy's Adaptation model and the findings suggest in general visitation of all ages directly impact all 4 nodes of adaptation as defined by Roy. Furthermore, multiple correlations were found allowing adaptation to ICU admissions when allowing visitors under the age of 12. This evidence suggests that allowing all the ability to visit at any time of night or day best promotes adaptation in the adult ICU patient in a community hospital.

In a side finding, a negative correlation was found between those who view visitors as not helpful possibly showed inability adapt to the focal stimuli (admission status in CVU/ICU).

Improving Patient Satisfaction across 36 facilities in Lagos State with the Use of Quality Improvement Methods

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Background

Health Strategy and Delivery Foundation (HSDF) is an institution that seeks to address essential health system challenges in Nigeria. HSDF focuses on four pillars of health systems: Public Health Advisory, Performance Management, Health System and Service Delivery and Innovation in order to drive transformative and sustainable impact. Despite the resources and investments made in the health sector over the last years, Nigeria continues to poor outcomes. Patients' perception of the quality of care and bad experiences while receiving care have been closely linked to poor health seeking behavior in Nigeria. The Healthcare Quality Initiative (HCQI) collaborative seeks to use quality improvement (QI) strategies to improve patient satisfaction score by 30% in facilities.

Having acknowledged the gap in healthcare services and satisfaction level, a patient satisfaction survey (PSS) was carried out in 36 Lagos state facilities in April 2016.

Method

A cross-sectional study was conducted using appropriate sampling techniques and sample size, 879 women were interviewed by independent vendors and questionnaires made up 11 sections (closed and open ended) were administered on targeted immunization and postnatal days across different facility types (General, PHCs and Privates). The survey covered major areas on care provided, staff communication and general assessments. The survey was piloted in two facilities and then rolled out in two phases to other facilities. The data was analyzed and findings from the survey which identified certain factors such as waiting time, communication with staffs, clinical services provided, hospital environment and infrastructure as major challenges affecting patients' satisfaction within the 36 facilities were disseminated to stakeholders (facility staff, Chief Medical Directors, Ministry of Health, Health Service Commission, and the Primary Health Care Board).

Outcome

Patients' satisfaction was measured using a 3 point Likert scale, ranking responses as "Satisfied" "Moderately Satisfied" and "Dissatisfied". Patients with score 70% and above were categorized as "satisfied" while those below 70% were classified as "dissatisfied". Although overall satisfaction with services was 90%, respondents were least satisfied with communication with nurses, labor and delivery and in-patient experiences.

To improve these areas, facilities have generated change ideas such as customer service training, periodic patient satisfaction surveys, patient inclusion in QI meetings as a means of obtaining feedback.

Also, protocols for pain management in labor was revised, emotional support during labor was advocated for.

To improve inpatient experience, catering services within the hospitals was reviewed, mosquito nets were made available in wards, clean water source was ensured and frequent changes of wards bedspread was put in place.

Conclusion

The use of data from the findings stirred the facilities staff and state stakeholders to develop new policies and strategies in order to address patients complaints and improve patients experiences at the facilities.

A post-intervention survey will be conducted in June 2017 in order to measure the impact of the tested changed ideas towards improving patients satisfaction. A staff satisfaction survey will also be carried out to assess the link of the healthcare worker satisfaction to patient satisfaction and the outcome of quality of services rendered. We hope that areas not captured in patients' satisfaction survey will be identified during this process.

Although successes have been recorded in terms of facilities working on change ideas, some facilities are yet to begin implementation of these ideas in order to improve patient satisfaction.

Streamlining the Inpatient Echocardiography Request Process in a West London Hospital

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Background

The Cardiology department at this busy hospital in West London is responsible for organising over 2,000 requests per month for cardiac investigations. This encompasses over 400 inpatient beds and a busy outpatient service. Recently the echocardiography service has been overburdened with inpatient requests leading to several issues.

One area for improvement highlighted within the department was the use of the paper based request forms, which were felt to be inefficient, enable poor requests to be made and contribute to the overburdening of the echocardiogram service.

Method

105 inpatient echocardiography requests were prospectively reviewed over 1 month against national guidance. They were also analysed to investigate the quality of the request being submitted.

The results of this were then used to develop an electronic echocardiogram requesting system with the aim to reduce time delay in tests being conducted and improve the quality of requests made. The development of the requesting system involved IT, clinical and administrative staff to incorporate various requirements from different system users.

Outcome

After implementing the new requesting system, several changes were seen. There was an improvement in the overall quality of inpatient requests. A greater number included a clinical question and were requested with an appropriate indication. However, the re audit and further reassessment has shown that overall wait times for echocardiograms had increased.

Conclusion

By working with multiple stakeholders and professional groups we have been able to successfully implement a change that should improve the quality and safety of the care provided to patients. Electronic requesting has also enabled the department to overcome disadvantages associated with paper-based requesting methods. There is now a continuously updated live list showing patients awaiting scan and details of a request are available to the individual conducting the scan allowing for refinement of the investigation.

Ultimately, multidisciplinary teamwork can increase the success rate when implementing changes within the healthcare setting and may help overcome resistance to change associated with excluded members of the team.

Thermal Education and Management Programme: T.E.M.P.

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Background

In 2014 only 52.3% of admissions to Neonatal Units in Northern Ireland had a normal admission temperature (36.5-37.5C). The consequences of newborn hypothermia can be severe, including hypoxia, metabolic acidosis, hypoglycaemia, coagulopathy, and Persistent Pulmonary Hypertension of the Newborn. The Thermal Education and Management Programme (T.E.M.P.) is a Quality Improvement initiative developed on behalf of the Neonatal Network for Northern Ireland (NNNI). The overall aim is to promote excellence in newborn thermal care, initially targeting infants admitted directly to each of the region's seven neonatal units, focusing on thermal care from birth to admission.

Method

Phase one encompasses all inborn, first admissions to NICU, excluding therapeutic hypothermia and postnatal ward admissions.

Project aims are: 100% of admissions to have a temperature recorded within the first hour and to increase the percentage of normothermic admissions by 5% per year to a target of 90%.

Interventions employed to achieve these aims include: establishment of a core team; literature review and guideline development; engagement of key stakeholders; identification of local "champions"; development of an educational pack; and regular, ongoing educational updates.

Various PDSA cycles have been completed including: standardising temperature taking equipment and methods, woollen hats worn on all newborns, increasing temperatures in delivery rooms and theatres, and ensuring use of pre-warmed towels or plastic bags.

The primary outcome measure is the temperature on admission to NICU. These are obtained utilizing a customized data report within the "Badgernet" system.

Outcome

There was a 6.6% improvement in the mean number of babies admitted to Northern Ireland's neonatal units with normal temperatures (36.5-37.5C) from 55.1% in 2015 to 61.7% in 2016. This represents a true reduction in the numbers of cold babies, as hyperthermic admission numbers were static. Monthly network averages for normothermic admissions in 2017 have ranged between 69% and 73% in the months of January-March.

Process measure audits are ongoing in various units throughout the region regarding temperatures being recorded in delivery suite, and hats being applied. These should contribute to the ongoing improvements in the numbers of normothermic admission temperatures to NICU. It is anticipated that this will ultimately improve morbidity, mortality and long-term outcomes for babies.

Conclusion

T.E.M.P. is an ongoing quality improvement project which is increasing the numbers of infants admitted to NICUs in Northern Ireland with a normothermic admission temperature. The intended impact of promoting excellence in newborn thermal care is reduced morbidity associated with hypothermia in the first hours of life, and potentially reduced duration of patient stay. This should result in improved outcomes for babies and families and reduced costs for healthcare. The project traverses two clinical areas and success remains dependent on midwifery, obstetric and neonatal staff collaboration to achieve the common aim. Early engagement of stakeholders has been crucial and regular communication remains key in maintaining multidisciplinary commitment to the project.

Sudanese Childhood Diabetes Association (SCDA)

Effective role in Treating and controlling Children Diabetes in the Sudan

Zainab Ali
Sudanese Childhood Diabetes Association (SCDA)

Background

According to the research (Epidemiology of Childhood Type1 Diabetes in Sudan, 1987-1990) 507 cases were registered. In 2009-2012 over 2400 children with diabetes were registered with SCDA . Only two States in Sudan have Pediatric diabetes care clinics in 2009. By 2012, SCDA is a voluntary association aimed to educate diabetic children, their families, schools, doctors and society about how to deal with diabetes emergencies and prevent the complications via regularly visits to the diabetic children, their schools, homes and organize seminars at medical universities and hospitals. The team consist of doctors (SHO, Registrars and Consultants), Clinical Nurses, Social Workers, Health Educators, Psychologists and dieticians working together as a team to design the best program in treating and managing Children Diabetes to maintain a healthy quality of life and establish paediatrics diabetes clinics to provide specialized care for diabetic children.

Method

Working together as a team, we succeeded in designing the best Program:

1. to maintain a healthy Quality of Life , and in establishing Paediatrics Diabetes Clinics , to provide the necessary and sufficient specialised Care, for Diabetic Children .
2. to prevent the Complications, by
 - a) Attending Regular Clinics talking to the Health Educators , Psychologists and Social Workers
 - b) Carrying out Home Educational Sessions for School Teachers and Students, about DM, Emergencies and Complications
 - c) Carrying out Home Visits to certain Diabetic Children
 - d) Engaging Diabetic Children and their Families in Diabetes Camps inside and outside the Sudan.

Outcome

A Study was conducted among 20 Parents Of Children, with Diabetes Type 1 DM, registered with the SCDA Project. Parents were randomly selected and asked to fill the Questionnaire with the information concerning their Children's Health before and after joining the SCDA Project.

Measurements were based on:

1. HbA1c Levels before and after joining the SCDA Program
2. No . of Hospital Admissions due to Diabetic Complications before and after joining the SCDA Program.

100% of Diabetic Children registered with SCDA, are receiving all Health, Education and Social Care.

Number of Diabetic Children Never Admitted to Hospital or Admitted One Time due to Diabetic Complications decreased from 80% before joining SCDA to 60% after joining SCDA.

30% of Diabetic Children registered with SCDA achieved their HbA1c, within the Normal Range.

Conclusion

DM is not only managed by Insulin; but it needs, as well:

- a) Regular Follow up, and Control Measures, to prevent Complications and enjoy a Healthy Living ,
- b) It needs more than a Medication , to persuade a Child, to understand that, his Whole Life will change, and he can no longer enjoy sweets with his friends; and everything must be carefully monitored and calculated,
- c) Sometimes, it is even more difficult, to convince the Parents themselves, about the Nature of DM, and it's Life Long Conditions,
- d) Explaining the Nature and Preventative Actions, to the Teachers and Colleagues of the Diabetic Children, can save their lives.
- e) we need to establish more Diabetic Clinics in different states.

SCDA must continue , and Testing should be done, to ensure that we provide the Best Care for our kids.

Reduction of harm in the Dental Office: a trailblazer Patient Safety Dental Project in Brazil

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Background

Dental office is classically known as a safe place to receive care and this is a very mistaken impression in global society. Harm can happen regardless of the complexity involved in care. In the world literature, adverse events in Dentistry are usually described as relate of cases with no studies providing data on their occurrence and prevention, such as medicine and other health areas. We believe that in Amil Dental the scenario is not different : patients are suffering preventable adverse events in Dental Offices, every day, in silence. It's urgent to create a path for Dentistry

Method

The study design (still in progress) is an experimental pilot based on IHI tools, which have been shown tremendous results in global projects around the world. Monthly, the results are analysed through specific graphics and its charts. The study does not have final results yet, but preliminary ones are exciting and promising. Start small, PDSA cycles in small scale to test, implement and spread changes.

Outcome

This pilot study corroborated the team's prediction about the existence of adverse events in Amil. We reduced adverse events in Amil Dental System so far, which means not only the decreasing of patient's suffering but also a model that leads to continuous improvement with better outcomes such as patient satisfaction and cost-cutting. The partial results are very exciting and encourages the team to continue to investing in this field.

Conclusion

Harm can happen regardless of the complexity involved in care. More focus and energy must be driven to Dental systems all over the world, in order to produce reliable data, prevent and mitigate harm to finally deliver a better and safe care to patients.

Using the Canadian Paediatric Trigger Tool to inform real time quality improvement

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Background

I-EQUIP is the Interprofessional Education for Quality Improvement Program, which brings together students and healthcare professionals to develop, implement, and sustain improvements in the Canadian healthcare system through quality improvement (QI) initiatives. Niagara Health (NH) is a multi-site hospital system in Ontario, Canada that utilizes a voluntary incident reporting system. Research has demonstrated numerous barriers to voluntary reporting, including fear of punishment and insufficient time, and suggests that trigger tools are more effective at capturing adverse events. The St. Catharines site (SCS) of NH has a Children's Health Unit, so this raises valid concern in providing a misleading incidence rate of paediatric adverse events.

The research team selected the Canadian Paediatric Trigger Tool (CPTT) for this QI project, being the first validated trigger tool available to detect adverse events in hospitalized children and youth in acute care.

Method

The research team used the CPTT to complete a retrospective chart review on 120 paediatric admissions from the Children's Health Unit to find a significant paediatric adverse event and develop a QI intervention in response to the findings. The research team then developed a modified version of the CPTT to suit the needs of the Children's Health Unit, and trained a core team of nurses and physicians to utilize the tool during a review of 20 charts per month and to disseminate findings during staff huddle meetings. This involved the development of an electronic database and comprehensive modified CPTT training manual. The aim of this research is to improve safety culture with the modified CPTT, through increased staff awareness of prevalent adverse events, initiation of QI initiatives on a monthly basis, and promotion of a culture of safety maturity.

Outcome

The team conducted a pre-intervention quantitative and qualitative assessment of safety culture using the Manchester Patient Safety Culture Assessment Tool, and will compare these results to a post-intervention assessment once the modified CPTT has been implemented on the Children's Health Unit for ten months. The quantitative data demonstrated that there is room for improvement of safety maturity, which is valuable information for the healthcare team. In response, the lead physician and clinical manager are implementing strategies to advance safety maturity. The qualitative data supported previous literature on barriers to incident reporting, with staff members disclosing that the voluntary incident reporting system takes too long and is not user friendly. This data has validated the need for the modified CPTT to improve incident detection. It is anticipated that improving safety maturity and adverse event detection will advance paediatric care.

Conclusion

This QI project has contributed to the limited amount of literature available on trigger tools, and highlighted the value of the CPTT in an acute care setting. However, the intention of the chart review was to develop a QI intervention to target the most significant adverse event. Out of 120 paediatric admissions, 6 were deemed to have a preventable adverse event – 5 of them triggered through 'unplanned readmission'. This points to a common situation in healthcare in which there is a potential for improvement of communication channels between healthcare facilities. It was felt that this was not suitable for a small-scale QI project. While the team was not able to uncover a targetable adverse event, this was a valuable learning experience in demonstrating that QI endeavours are not linear processes. The team remains optimistic that implementing the modified CPTT will allow for identification and targeted reduction of many significant and targetable adverse events.

Working Model of a Closed Intensive Care Unit at a Rural Tertiary Care Teaching Hospital in India

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Background

The staff members of Critical Care Department and Quality Improvement Group(QIG) of Shree Krishna Hospital(SKH), a rural tertiary care teaching hospital in Gujarat, India were involved in this project. SKH has 615 beds with 5 ICUs, Cancer and Cardiac centre(s). Till July 2015 patients in medical ICU(manned by intensivist and residents) were managed by consultants who had conducted the initial assessment leading to non-uniform, sometimes conflicting care across units, non-uniform and escalating cost, variable length of stay(LOS), ownership/leadership issues, and no quality assurance programme (QAP) for the ICUs. The issues were discussed by Patient Care Council and further with clinical Heads and nurses. This study involves closing of Medical ICU to physicians other than intensivists of the critical care team with the objectives of improving the quality of care by ensuring uniformity of care for all patients. Data pertaining to 9094 patients (April 2014 to February 2017) is presented.

Method

In 2015, an intensivist-led Critical Care Department was established and the medical ICUs were closed operationally to be managed by a dedicated critical care team for patient care. Intensivists were now available 24X7. An ICU manual was written down. A quality assurance programme was drawn up to monitor various parameters which were based on structure (bed strength, availability of intensivists, equipment), process (quality indicators) and outcome (morbidity and mortality rates, especially the infection control indicators). These were monitored by an active Critical Care Committee. Admission and discharge criteria were strictly adhered to. An annual training calendar was drawn up. There was an emphasis on reporting of events. Patient and staff satisfaction were assessed. A fellowship recognised by the Indian Society of Critical Care Medicine was also offered. The data collected includes all patients admitted in the ICU from April 2014 to February 2017.

Outcome

The ICU utilization improved from 51% to 92% in the study period. Re-admission to ICU came down from 2% to 0.3% and the re-intubation rate came down from 0.32% to 0.1%. The average length of stay came down from 4.5 in 2014-15 to 3.5 in 2016-2017. A 97% adherence to antibiotic policy was observed, while it was a challenge to implement the policy prior to 2015. Improved nursing care was witnessed through lower rates for decubitus ulcers (down to 0.5 from 4) and patient falls (down to 0 from 0.12). Significantly improved infection control indicators - hospital acquired infection rate down from 8.58 to 4.6, ventilator associated pneumonia down from 12.0 to 5.0, UTI (catheter related) down to 1.3 from 1.6, central line associated bloodstream infection down to 0 from 1.7.

ICUs are being recognised for quality and cost-effective care compared to other ICUs in the region which is witnessed by the occupancy rates.

Conclusion

Significantly better performance in key critical care indicators was observed after closing the ICUs in 2015. In the community of this region, the Intensive Care Units of Shree Krishna Hospital are trusted for cost-effective and rational care for all categories of patients. The challenge lies in taking admitting physicians on board, while respecting hierarchies of a teaching hospital, and presenting a team led by intensivists to patients and families. We believe that for resource-constrained settings, it is imperative that resources are utilized judiciously without compromising the quality of care. Having a critical care service in which a focused team (rather than consultants from various departments) manage patients, ensures uniformity and quality of care, with reduced length of stay and costs and enhanced patient satisfaction. When teaching hospitals adapt such changes, they educate students and provide role models to the health care services in the country at large.

Getting the patients' voices of pain and pain management

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Background

Postoperative pain remains undermanaged in orthopedic surgery. To identify areas of improvement for future structural changes in pain management - patients' experiences of pain and pain management when undergoing elective lumbar spine surgery needed to be identified.

Method

This study had a qualitative design with focus group interviews (FGI). The setting was The Department of Orthopedic Spine Surgery at a university hospital in Sweden. The study consisted of two focus group interviews with patients (n=12) who had had undergone lumbar spine surgery 4 days to 5 weeks prior to the FGI. The interviews were semi-structured, and the analysis was performed using qualitative content analysis.

Outcome

The main result of this study revealed that patients' experiences of pain influenced their attitudes and strategies of pain management. Three categories emerged from the focus group interviews; 1. Patients' strategies to handle pain while waiting. 2. Different strategies towards freedom of pain after surgery, including three subcategories: Being in charge helps control the pain, Being informed is a pain killer, and Fear of adverse events promotes action. 3. Organizational influence of patients' pain experiences, including two subcategories: The first encounter with the ward sets the scene and Continuity and commitment among staff relieves pain. The anticipated benefits of these results is to use them in future structural changes in the department in order to draw closer to a person-centred care.

Conclusion

The process of change has not yet been implemented. Interviews this staff members of different professions has been performed and are currently being analyzed. Subsequently the results of these studies will be part of the Foundation of structural change towards person-centred care in postoperative pain management at the orthopedic department of spine surgery.

The Scottish Improvement Leader Programme

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Background

The Scottish Improvement Leader (ScIL) programme is part of Scotland's innovative approach to increase lead level QI capacity & capability across public services. It develops key individuals to design, develop & lead improvement initiatives, generate support for change & provide expert support & advice. It's led, developed & delivered by a multidisciplinary team of experienced Faculty and sponsored by a partnership of Scottish Government, Healthcare Improvement Scotland & NHS Education Scotland. Improvement has been applied in health care in Scotland since 2007 with areas of sustainable change as a result. Our challenge is to build on that learning to spread & embed a QI approach across Scotland's public services to improve outcomes for Scottish people. A three-level workforce model was applied to identify the capacity & capability required, &. Within the NHS it is estimated there are 1450 people required at lead level, and across public services numbers are at least five times that

Method

The target audience for ScIL is staff working in Public Sector organisations across Scotland. It includes emphasis on the people element of change & how to lead & influence for improvement interlinked with the core concepts of Improvement Science. Key content themes:

1. The context of improvement science
2. Systems thinking
3. Building Knowledge
4. Understanding variation and measurement for improvement
5. Leading and influencing for improvement
6. Planning for improvement

ScIL is a highly participative programme that uses a blended learning approach. Participants apply learning to a workplace project over a 10-month programme which includes residential workshops, project surgeries, WebEx sessions, mentoring, peer support & an annual celebration networking event. There is also self-study with core reading materials provided. Participants are brought together from across Scotland's public services to encourage cross-learning, which is frequently cited as a key benefit of the programme

Outcome

A 'Planning for Impact' approach based on using the four levels of Kirkpatrick's model is used to evaluate ScIL & the data is used to continuously improve the programme to meet stakeholder needs.

Over 150 people have completed ScIL and a further 130 people will take part this year. By completing a project, participants demonstrate skills acquired, & the impact the work has had, focusing on the people who benefit.

The most recent 6 month-post programme evaluation shows:

1. 100% respondents are confident in applying improvement thinking and tools at SCIL level
2. 95% respondents using their skill
3. 58% changed job/role
4. 73% career progression
5. Facilitated learning of over 470 others in last 6 months

There is wide ranging impact from ScIL work -including many Healthcare focussed improvements and broader initiatives e.g. outcomes for looked after children, playground experience and raising attainment

"My new mum and dad are the best thing that has ever happened to me". Ben, aged 8.

Conclusion

The Scottish Improvement Leader (ScIL) programme is a key part of Scotland's innovative approach to increase lead level QI capacity and capability across public service. The success of the programme has generated interest from people outwith Scotland and ScIL Leaders are excited to be building international connections by offering two places per cohort to participants from outside Scotland.

ScIL participants tell us:

"This is one of the best courses I have ever been on. Would encourage those who are really interested in increasing their knowledge and skill of improvement to apply to do this course. The skills I have learned are easily transferrable into any of the improvements we are making in our service and I have the knowledge and confidence now to drive forward."

"The project surgeries were invaluable - real example of 'all teach, all learn' in action and so encouraging and supportive"

How to improve daily clinical work, get doctors on board and sustain the results

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Background

To get doctors involved in quality work has been a challenge for years. The quality and safety work has hitherto been undertaken by other cadres of health staff in our hospitals. This has been a great barrier to make quality improvement sustainable.

Method

The Region of Southern Denmark has since 2014 engaged with Virginia Mason Institute, Seattle, USA to adopt their improvement model. Two main features in this model is systematic use of LEAN tools on selected quality problems, AND leadership training of all leaders and managers.

Outcome

Till now 327 leaders have undergone a 6 months' leadership training, of which 118 are medical doctors.

Conclusion

The scenario has changed: medical doctors with leadership or managerial functions have realised that leadership skills are needed for them to become good clinical leaders. They now readily join the leadership training and even apply for quality improvement jobs that formerly went to other cadres of health staff.

The Patient's Team

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Background

Since 2012 Aalborg University Hospital has been focusing on horizontal clinical management of integrated patient flows in health care. The aim has been to ensure better continuity of patient care services, increased patient safety and enhancement of the professional quality of treatment. A reorganization of the clinical structure was initiated in 2012 together with a strong focus on teamwork to support the patient flows at the hospital. In 2015 further improvements to ensure efficient and coherent patient flows were brought forward by management with emphasis on the concept of the "Patient's Team" – a dynamic form of organization and work among a group of professionals or a multidisciplinary team.

Method

The four dimensions of The Patient's Team:

1. One doctor is responsible for the patient
2. Involvement of patient and relatives
3. Teamwork
4. Transitions

The Patient's Team is partially based on experiences from 10 previous in 2016 and 18 ongoing projects. Trailing research of the organizational aspects of these initiatives has been conducted since the end of 2012 and is still ongoing.

Outcome

The neonatal hypoglycaemia working group was formed as part of the NHS Improvement, Patient Safety "attain" programme to reduce admissions of term babies to the neonatal unit. During the period 2011 - 2014 there were 13,136 term neonatal admissions in England for hypoglycaemia as the principal reason for admission. These admissions represent a significant amount of potentially avoidable harm to babies and unnecessary separation of the mother baby dyad. Untreated neonatal hypoglycaemia is a cause of long term harm, in most cases this can be avoided by early identification of risk and optimal preventive management. The immense personal impact on the child and the family when harm occurs as a result of hypoglycaemia is immeasurable. The financial cost has been reported as a total of £162 166 677 with individual claims inclusive of costs ranging from £2 465 000 - £12 640 000, with the average being £6 300 000 (Hawdon JM, Beer J, Sharp D et al 2016).

Conclusion

The Patient's Team give value for both patients and employees. It optimizes processes in the treatment and gives a greater degree of involvement.

The hospital plan to implement "The Patient's Team" in every department at Aalborg University Hospital in 2017.

Breaking the Modern Ice Age: Maintaining Normothermia is Not an Easy Task

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Background

Hip Fracture Care is one of the five key conditions that Integrated Care Pathways require development. Singapore has increasing population of elderly (ages >60). A unique tripartite (Geriatric, Orthopaedics and Anaesthesia) multidisciplinary Hip Fracture Unit (HFU) was set up to improve the quality of care to these patients, by establishing agreed standards of care, continuous multiple quality improvement projects, regular surveillance and feedback to address the different needs of these fragile complex population.

Hip fractures in elderly constitute a major part of orthopaedic trauma admissions. Maintaining intraoperative normothermia (core body temperature of >36 Celsius) for all patients who undergo hip fracture fixation has proved challenging. Perioperative hypothermia is known to significantly contribute to mortality and morbidity, increasing incidence of delirium, myocardial events, pneumonia, and postoperative surgical infections.

Method

Utilisation of standard PDSA methodology such as brainstorming, Ishikawa diagram and root cause analysis was our strategies. Our aim is standard perioperative temperature monitoring and maintenance of normothermia for all hip fracture patients. Departmental feedback and presentation, educational demonstration, interactive teaching session was spearheaded. A detailed documentation plays a key role for the attainment of this initiative. Monthly run chart analysis showed lack of documentation, lack of monitoring and lack of effective warming techniques. Major issues like availability and utilisation of equipment, knowledge and practice of optimal warming techniques and factors like surgical, patient, human and environmental were identified. The idea of "shared responsibility" amongst multidisciplinary staff was inculcated. This multi professional ownership in addressing root cause problem and proper dissemination of goals and strategies were our game plan.

Outcome

Temperature monitoring and maintenance of normothermia became a key performance indicator (KPI) and standard of care for all patients undergoing any major operation and not solely hip fracture patients. Improved documentation, follow up with post operative complications (pneumonia, delirium, cardiac events, pain and functional status, unplanned critical care admissions) was eminent. Dramatic decline of incidence of hypothermia, increased compliance with monitoring and use of warming strategies, active involvement of all multidisciplinary staff involved in patient care paved way for culture change and improved overall patient outcome. The number of hypothermic cases has decreased dramatically by 17.6% and staggering 69.6% for the year 2015 and 2016 respectively. Hypothermic hip fracture cases has declined 53.8% from 2015 to 2016. Monthly review showed that as 2016 progressed, solitary to almost nil cases of hypothermic hip cases were documented.

Conclusion

A well educated multidisciplinary shared responsibility approach was the catalyst that this initiative was a success. Inclusion of temperature monitoring and control to the preoperative standard of care was the key component not only to hip fracture patients but to all patient undergoing major operations. Family and first hand carers were also involved ensuring the preoperative comfort of the patient. Thus, good quality care=good patient outcome.

Improving processes for reporting of short break activity as part of statutory functions

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Background

The Health and Social Care Board requires quarterly breakdown reports per Trust (statutory functions obligation) of types of adult short break allocation received by service users across 7 categories. Regulation and Quality Improvement Authority's 2014 review aimed to assess the development of future short break provision in Northern Ireland. A key priority concerned manual information arrangements and the need to install a good quality system. In this context, in Adult Disability Services there needed to be a shift from paper-based recording to electronic. The aim was to design a database to capture 100% of recurrent short breaks - enabling accessible information for Lisburn LD Team's quarterly returns by 01.04.16.

Method

To establish the baseline across Adult Disability Services a staff survey was conducted to ascertain staff attitudes around collection and reporting of Short break activity. A mapping exercise was also undertaken to understand what activity was being collected and any current process for collection and reporting of same. Project leads met Community Services Managers to review current documentation / processes. Following 'The Model For Improvement' and linking back to the aim of the project and findings from the baseline exercise, a Database of short breaks (Short Break Register) was created in December 2016. The Register was further developed to capture recurrent short break allocation and these improvements were tested and reviewed as part of a PDSA process. The pilot team engaged with team leaders and social workers during the design and validation process which supported transition during the change phase.

Outcome

A robust process has been implemented to capture recurrent short break activity allocated to our service users. The Register helps to reflect Trust performance more accurately in terms of providing validated recurrent short break service allocation. The launch of the Register has resulted in improved information management and administrative process in terms of accessibility to profile of client need and therefore enhanced accountability. Historically, there was a significant reliance on manual counting of recurrent short break activity also service users' sensitive information was a key consideration during the pilot. Service user information is now held securely within the Register and confidence in the reporting process has grown since its implementation. There has also been a significant reduction in staff time completing quarterly returns to the HSCB.

Conclusion

A standardised administrative process (the Short Break Register) was put in place to facilitate the extraction of short break activity to inform quarterly returns to the HSCB as part of the Trust's statutory functions. During the project staff engagement supported transition during the change phase. However, there were delays in the validation process which significantly impacted on the expected timeframe concerning the roll out of the Register. Opportunity, appropriate support and access to quality improvement training can help to empower anyone to apply their knowledge and experience to result in positive change.

The Scottish Quality and Safety Fellowship

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Background

The Scottish Quality & Safety Fellowship (SQS Fellowship) is an international programme which forms part of Scotland's Quality Improvement infrastructure building activities. The Fellowship is led by a Clinical Lead. NHS Education for Scotland (NES) manages & delivers the Fellowship in partnership with Healthcare Improvement Scotland (HIS) & NHSScotland. The target audience for the SQS Fellowship are clinicians who:

1. undertake clinical practice with a direct influence on improving the delivery of safe patient care
2. may not deliver hands-on care but do have a role in improving patient care or safety.

Senior leaders from the Scottish Government, NES, HIS and NHSScotland Boards established the Fellowship in 2008. Its initial aim was to support the delivery of the Scottish Patient Safety Programme (SPSP) by developing clinical leaders with the advanced knowledge, technical ability and essential leadership skills to deliver improved health and healthcare for the people of Scotland

Method

The Fellowship is an interactive, participative programme for clinicians that develops knowledge and skills in:

1. Leadership for improvement
2. Measurement for improvement
3. Team engagement
4. Influencing organisational culture
5. Understanding human factors influence on patient safety

Participants apply learning to a workplace project over a 10-month programme which includes residential workshops, project surgeries, WebEx sessions, mentoring, a group field trip to the International Quality & Safety Forum, a national networking event and funding for individual study trips to facilitate learning from global experts both within and outside healthcare.

By completing a project, participants demonstrate skills acquired, and the impact the work has had, focusing on the people who benefit

Outcome

A 'Planning for Impact' approach based on Kirkpatrick's model is used for evaluation & data is used to continuously improve programmes to meet stakeholder needs. The Fellowship evaluates extremely well & demand for places is high nationally and internationally.

98% of participants over the last 3 cohorts feel confident in applying the improvement thinking, tools and techniques required of a SQS Fellow & 96% feel they are using these skills.

Fellows demonstrate how outcomes for patients could be improved using learning from their Fellowship projects. Themes from the latest cohort to complete the Fellowship included:

1. empowering staff with innovative, practical tools, hand in hand with smart use of technology to improve quality & outcomes for patients & reduce visits to clinics
2. excellent staff engagement & how it supports high quality customer care
3. key insights from safety critical environments & how they might support the desire to move from reducing harm to achieving zero harm .

Conclusion

The SQS Fellowship is established as a core programme for clinicians & since 2008, Fellows have broadened their contribution to Quality and Safety Improvement activities reflecting the wider national ambitions described in Scotland's 2020 Vision².

The Fellowship has grown from four Fellows nine years ago in its first year to becoming an internationally renowned training programme.

Almost 190 Fellows have participated in the Fellowship to enhance their individual capacity for leadership in Improvement.

Participants from the Fellowship Programme told us:

'The Fellowship itself was an excellent and at times challenging learning opportunity. It has fundamentally changed my practice and gave me the confidence and skills to lead improvements in my organisation.'

'After completing the SQS fellowship I feel I am now doing my dream job.'

'Outstanding experience'

'I would not have started some of the big Projects that I have without the Fellowship program.'

Teach-back, a tool for improved patient safety, equity, and person centered care

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Background

Good communication is one of the most important prerequisites for good health care, but also one of the hardest to achieve. Research has shown that between 40-80 percent of medical information provided by healthcare practitioners is forgotten immediately and almost half of the information that is remembered is incorrect. Cultural, language and communication barriers can lead to mutual misunderstandings between patients and their health care providers. An improvement of the patient-provider communication and relation provides an opportunity to improve both patient safety, health literacy and equity in health care. In order to accomplish a communication that builds on the provider's responsibility and that works both ways, the Centre for Equity in Health Care, at the Region Västra Götaland in Sweden developed Teach-back-R (revised).

Method

Teach-back is a simple technique that makes a huge difference. When professionals ask patients to repeat given information, to insure that the patient understood all important parts, teachback improves glycemic control, inhaler technique, and decreases readmission to hospitals. But it is not just about patients' capacity. Teach-back-R (revised) encourages professionals to evaluate their own communication skills, rather than to evaluate patients' abilities. Using Teach-back-R, the professional also summarizes information from the patient, thereby giving the patient the opportunity to complete and explain given information. These differences from the original Teach-back method help patients to become more active in consultations. To invite patients to be an equal part in a mutual conversation challenges a tradition of physician-dominated dialogues, provides an opportunity to engage patients as active participants, and strengthens their position in relation to their caregivers.

Outcome

Since we started to introduce our version of Teach-back to the Western Region of Sweden it has been implemented as a tool in most parts of health care. Teach-back-R has been recommended in the regional patient safety plan 2016, as a tool when the Swedish "patient law" was implemented, by the Swedish network for health enhancing hospitals, as a tool to improve health literacy, by the regional network for patient centered care, and as a tool to improve equity in health care. Ongoing studies explore the effects of Teach-back in the Swedish context as well as the effect of Teach-back-R on patients' sense of participation. Teach-back-R started out as a little project and entered health-care in Sweden nationwide, as a practical tool for how to translate ideas on a new patient-provider relationship into clinical practice. A participant in the Swedish national patient safety conference concluded: "So useful! So easy! So obvious when you explain it. We just have to introduce it!"

Conclusion

Teach-back-R is a method with a focus, not only on health care providers' obligations but on patients' rights to understand and benefit from information about their health and health care. To shift focus in healthcare towards a person centered way of working improves health and health care, with the patients (as persons) at the heart of their health care. Teach-back-R provides a simple tool, easy to use, to make the first step in that direction. After a workshop, held on the Swedish national patient safety conference in September 2016, participants gave feed-back like: "A new way of thinking which is actually just natural", "It is not the patient who cannot understand but me who explained badly", "This method has to be introduced everywhere!"

A multidimensional project to improve theatres' safety culture

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Background

The hospital is a tertiary centre and teaching hospital in the United Kingdom and has over 900 beds. It serves a local population of 450,000 and provides specialist services to almost 2 million people. There are over 30 operating theatres and 5 orthopaedic operating theatres. There is an increasingly recognised association between improved safety culture and better patient outcomes and staff engagement. We aimed to measure the changes in safety culture associated with the introduction of evidence-based interventions (theatre list briefings and debriefings, the WHO Surgical Safety Checklist, human factors training and in situ simulation).

Method

We measured the safety culture in the orthopaedic theatres in 2009 to provide a baseline prior. The safety culture tool used was the Safety Attitude Questionnaire – operating room version (SAQ-OR). After the baseline measurement, a multidimensional project was commenced with the introduction of theatre list briefings and debriefings along with the WHO Safer Surgical Checklist. Subsequently person-level human factors training was given to theatre staff (2011-13) as part of in situ simulation programme conducted in the theatres (2013-2014). The results from the SAQ-OR were fed back to staff working in the orthopaedic theatres after the analysis was complete.

The SAQ-OR was subsequently used across all 30+ theatres in the hospital in 2013 and 2014.

Outcome

There was a continued improvement in the teamwork climate, safety climate and working conditions domains of the SAQ-OR from 2009-2014 associated with the introduction of the theatre list briefings and debriefings, the WHO Surgical Safety Checklist, human factors training and in situ simulation. This was associated with a reduction in the median length of stay for primary total hip replacements from 7 to 5 days and for primary total knee replacements of 7 to 4 days.

Across the 30+ theatres, there was an improvement in the safety climate and team working climate in all of the theatre groups, apart from 2 theatre groups where issues that were known about explained the decrease in these domain scores. These results were used to support softer intelligence of the areas of concern and provided the focus for non-judgemental conversations about how to improve.

Conclusion

The measurement of safety culture demonstrates the impact that the successful implementation of a multidimensional strategy of team-based interventions has on improving the workplace climate. These interventions are associated with a decreased length of stay for patients receiving major joint replacements in orthopaedic theatres. Without measuring safety culture it is difficult to assess the impact that these interventions have and whether they have been introduced effectively. Safety culture measurement is a valuable tool that helps teams understand how they function and identifies areas for future improvement. A key theme to emerge from the work is that teams would like greater feedback about patient outcomes, patient experience and team functioning.

The development of newer tools is providing better comprehension of team dynamics and leading to greater subsequent engagement of clinical teams in improving aspects of the safety culture.

Assessing Knowledge and Compliance of Patients' Identification at King Faisal Specialist Hospital & Research Centre - Riyadh (KFSH&RC-R)

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Background

Patient identification and matching of a patient to an intended treatment are activities that are performed routinely in care settings. Failure to correctly identify patients and to match that information to an intended clinical intervention continues to result in wrong person, wrong site procedures and in errors of medication, transfusion and diagnostic testing. Errors are due to factors of wristband; patient; individual &/or group providers. The study aims to assess knowledge of staff to facts about patient identification based on IPG1 of the Joint Commission International Accreditation Standards for Hospitals and the patient identification guidelines of the WHO. Also we aimed to assess practice compliance with patient identification standards practiced as per Patient Identification Internal Policy and Procedure Index Number MCO-MC-ADM-07-033; Effective date (17 December 2013).

Method

Survey Tool: to test knowledge of 363 from 6510 Direct Healthcare Providers (HCP) & 354 from 4440 Non Health Care Providers (Non HCP) Baseline & Control Populations.
Observational Audits: to test practice compliance of HCP. Total 178 in 13 Clinics. Functioning per area was minimum of 5 & maximum of 31. CL 95% & CI (5): statistically.

Outcome

1. The Survey Reflected :
 - a) HCPs & Non HCP knowledge about the two patient identifiers is acceptable.
 - b) Hospital website, employees' orientation & internal policies provided necessary information.
 - c) Wrong Patient Identification factors were recognized well by HCP & Non- HCP.
2. The Audits Reflected: Knowledge does not always support the practice. Follow up research is recommended to explore underlying factors.

Conclusion

82% of the HCPs have misidentified their patients due to noncompliance with the hospital internal policy of patient identification. Periodic audits are recommended to continue throughout the year. Hospital wide Performance Improvement project and Educational Campaign paralleled & followed our research study respectively.

The Company Catalogue of Participatory Local Welfare Projects

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Background

The Company Catalogue of participatory local welfare projects of the Integrated Local Health Agency and University of Trieste (ASUITs) comes from the need to track, monitor and evaluate all social and health intervention ASUITs promotes and brings on from years. The idea was developed starting from 2015 from an initiative of the Health and Social Management (HSM) and has involved all of the 4 District Structures and the 3 Departments of ASUITs (Addictions, Prevention and Mental Health). ASUITs leads on many projects involving 4.500 employees working among numerous structures in a complex system of connections and interactions. In a so knotty system, fragmentation, lack of tracking and lack of monitoring are real risks that could threaten the positive spillovers for people. Aiming to contrast these weaknesses, in 2015, the HSM started some enhancement processes, identified a group of professionals for welfare activities and established a working table.

Method

The first step was the creation of a sheet to collect projects data, which was made using the most common word editor software taking into account the theory of Project Cycle Management.

Compiling a data sheet is useful to have a brief informative reference containing all main information about the project and forces project designers to plan actions and interventions in a goal-oriented logic and cost forecasting.

Then the HSM reproduced the text data sheet using Epi-Info, a software designed for the public health community.

The digital data sheet is divided into 8 modules: Project ID, Project Team, Partners, Main Health Topic, Beneficiaries, Description 1, Description 2 and Budget Plan.

Projects are collected using text sheets and then the HSM puts the collected data into the digital database.

The novel about this methodology is that, as far as we know, ASUITs is the first LHA in Italy to apply it in order to improve efficiency, effectiveness and transparency of its activities.

Outcome

The Welfare Activities Team pointed out 44 Projects/interventions Sheets, and after having entered the data into Epi-Info, it was possible to come up with some statistics.

We found out that:

1. most of the projects targeted the whole community as beneficiary
2. the main health topic addressed is "Psychophysical and social well-being" followed by "life environments" and "access to health services"
3. the main General Objective addressed is "Health Promotion" followed by "Social support, inclusion and rehabilitation" and "Life quality enhancement"
4. the main age group addressed as beneficiary is "adults (60-64)" followed by "young people (19-34)" and "adults (35-44)", "adults (55-59)" and "elderlies over 75".
5. the least addressed age group is "kids (3-5)"
6. ASUITs built a network with over 100 partners, the majority of which are voluntary associations and other local institutions, then Cooperative Companies, Schools, other Municipalities and some Business Companies.

Conclusion

The work done until now was a kind of experimentation of the methodology, which resulted being quite good for our purpose, so the HSM is now working to enhance the management tools created and make some step forwards, such as:

1. Evaluation Commission Creation: The SHM is planning to identify a group of experts that evaluates new project proposals and decides if giving them funding in order to optimize financial resources
2. New Proposal selection: the Catalogue will include new projects selected by an Evaluation Commission, the target is to include in the Catalogue all Social and Health Projects promoted by all offices and structures of the Local Health Agency of Trieste
3. Healthcare Projects input: extend the methodology also to healthcare projects (hospital structures ones)
4. Impact indicators monitoring: after a certain amount of years from implementation, it would be possible to monitor impact indicators on the population (general health status, mortality etc.).

Patient Safety rounds- a way of improving safety culture?

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Background

Papworth hospital is the UK's largest Cardiothoracic centre and treats approximately 100,000 patients each year. Each microsystem within the trust comes within its own unique set of challenges and human factors. Understanding these factors is key to improving safety culture overall.

Patient Safety Walkrounds have been previously described in the literature as a way of bridging the perceived gap between frontline clinical staff and Patient Safety leaders and identifying these underlying factors. It has been advocated for by multiple Patient Safety and Quality Improvement institutions. Moreover, several publications have detailed similar rounds in other healthcare settings, noting their positive impact.

Method

Within the trust, Patient Safety Rounds are being carried out on a monthly basis in a wide variety of clinical areas. Locations have been identified by analysis of patient feedback and frontline clinical staff reports.

Patient Safety experts visit the clinical area identified and interview both frontline clinical staff and patients using a standard framework of ten questions. This information is used by the experts to compile a report highlighting areas of good practice, alongside areas for improvements. Suggestions for improvement can be made by frontline staff, patients or safety experts.

Each report is made available to all parties involved and is used to address any areas for improvement.

Outcome

Fourteen Patient Safety Rounds have been conducted since October 2015 and reports have been submitted for each round. These reports highlighted over fifty areas of good practice and ninety-five areas for improvement across the Trust. Each report has been made available for actioning at the local management or 'Quality and Risk Management Group' level, with the aim that these will go on to form the basis for Quality Improvement projects at the micro-system level.

Conclusion

Patient Safety Rounds are still ongoing at the Trust. It will be important to identify what changes have been made in response to these rounds and whether this has impacted on staff and patient perceptions of safety culture. Future rounds will seek to increase patient representation on the safety expert teams. Analysis of positive and negative factors across multiple micro-systems will help to further understand what can be done to improve safety at a Trust-wide level.

Overall, the Patient Safety Round is a way of engaging frontline staff and patients to demonstrate an organisational commitment to patient safety. Ultimately, this facilitates the delivery of safe, high quality care to all patients.

In search of missing rooms in teaching hospitals

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Background

The breaking of bad news involves situations such as the communication about life-threatening diagnoses, the clinical deterioration or even the demise of a patient. The way in which those types of information are conveyed may have profound impact in the understanding of patients and families about the illness, in their ability to cope with the new situation, and may amplify or lessen their suffering. Several guidelines concerning the communication of bad news in healthcare emphasize the importance of an appropriate physical environment for the conduction of that process. However there are very few studies about the physical environments where such communication processes take place. Therefore we proposed the present research to assess the presence and the characteristics of appropriate places for the communication of difficult news within teaching hospitals in the state of Sao Paulo, Brazil.

Method

The main hypothesis of our study is that in most participating hospitals there are scarce rooms appropriate for private communication about sensitive issues with patients and/or their family members. To our best knowledge this is the first study conducted in the World to address this question. All eligible teaching hospitals were invited to participate in the project. Once one of those hospitals accepted to participate, we scheduled a guided visit to the following sectors of each hospital: Intensive Care Units (ICU), access points to operating suites, Internal Medicine, General Surgery, Oncology, Neurology, Geriatrics, Pediatrics, and Palliative Care wards. During those visits a researcher recorded information concerning the presence and features of rooms that were used for the communication with patients or family members about sensitive issues. The information presented within this abstract represents our preliminary results.

Outcome

Thirty teaching hospitals were invited for the study. Fifteen hospitals agreed to participate. We visited 156 different sectors in those 15 hospitals. Twenty-three of those sectors were adult ICU, 23 were pediatric or neonatal ICU, 74 sectors were surgical or clinical wards for adults, 21 were pediatric wards and 15 were operating suites. The mean number of beds in those hospitals was 407. Only 11 of the 46 ICU, 2 of the adult wards, 2 of the operating suites and none of the pediatric wards had a specific room for private conversations between patients/families and professionals. In 12 of the 46 ICU, 28 of the 74 adult wards, and 8 of the 21 pediatric wards there was a possibility to use a room that usually had another destination (e.g. teaching room) for the purposes of a private conversation if that room was not being used at that moment. In 23 ICU, 44 adult wards, 13 pediatric wards and 13 operating suites there didn't exist the possibility to use any private room at all.

Conclusion

Our results show that within most sectors of the teaching hospitals that we visited there is a lack of appropriate spaces for private conversations about sensitive issues with patients or their family members. The absence of such rooms imposes barriers to effective and empathetic communication between healthcare professionals and patients and/or their families. The physical environment of teaching hospitals conveys important soundless messages to students, healthcare professionals and patients about what is valued or not within those institutions. Reflecting critically about the way hospitals organize their space may inspire the redesign of those environments according to the intended values and goals of those institutions.

Experience with using 30-day survival curves to improve quality of care

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Background

Analyses of 30-day, in-and-out-of-hospital mortality for patients admitted to all Norwegian Hospitals with first time acute myocardial infarction (AMI), cerebral stroke, hip fracture, and all-cause admissions have been published annually since 2011. The reports explicitly state that the measures are not suitable for interhospital rankings, but should be used as a means for further inquiry and for targeted improvement efforts. Since 2013 reports with analyses for each hospital have been published including survival curves for all cause admissions, AMI, cerebral stroke and hip fracture. The aim of the presentation is to share our experience with interpreting 30-day mortality data presented as survival curves as a tool for providing information about quality issues in the disease-specific pathway.

Method

Patient administrative data from the hospitals were merged with the National Registry to obtain date of death. The personal identification number (PIN) is used to identify relevant medical information from current and previous hospitalizations and track patients between hospitals. Acute admissions for AMI, stroke and hip fracture were identified according to ICD-10. Patients 18 years and older were included for AMI and stroke, patients with hip fracture were 65 years and older. For patients treated at more than one hospital during the episode of care, the outcome was assigned to each hospital by the fraction of time (within the 30 day period) spent in each hospital to ensure use of all admissions and attributing the outcome to all hospitals involved. The crude fraction of patients alive was plotted as a function of time during the 30-day follow-up period (Kaplan-Meier curves). Patients treated at more than one hospital were assigned to the first hospital in the chain of admissions.

Outcome

The survival curves demonstrate that the variations in 30-day mortality appear immediately for patients with AMI, after 2-3 days for all cause admissions, 5 days after hip fracture and after 8 days for patients with cerebral stroke. This knowledge has been used to plan and implement quality efforts at a number of hospitals, which has been followed by a significant improvement in mortality in all cause admissions and for patients with cerebral stroke in these hospitals and for the Health Region as a whole. From 2011 to 2015 an increase in survival for all cause admission of 0, 5% has been observed – which means a reduction of 500 deaths on annual bases in this region. Furthermore, 30-day mortality after cerebral stroke was significantly higher in the South Eastern Health Region vs national average in the period 2012-2014 whereas no such difference was identified for 2013 – 2015. There are still outlier hospitals in the region that have to implement similar plans for quality improvement.

Conclusion

We have previously reported experience from survival curves to support quality improvement in hospitals with excess 30-day mortality after acute myocardial infarction, cerebral stroke, and hip fracture. The survival curves derived from the national data provide knowledge of where in the clinical pathway the quality issues can be expected, this might be used for planning quality improvement efforts.

Improving the recognition and management of older people with frailty who come to the Emergency Department (ED)

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Background

A large number (400+) of older people come to our Emergency Department in a large general hospital in the South of England. National guidance recommends early identification and comprehensive assessment (CGA) and management of patients with frailty. Such assessment and management can improve outcomes for patients. At baseline there was no routine local identification of frailty and variable adherence across the domains of comprehensive assessment. Assessment of patient experience revealed that the early part of admission and first assessment were the most negative.

Method

We implemented an identification tool for frailty for use by ED staff and introduced proactive CGA as soon as possible after arrival in the ED (rather than the reactive approach that was already in place). This intervention was achieved through a series of steps and PDSAs. Frailty identification tool developed and tested (Sep 2015 - Jan 2016). This was implemented and improved using PDSA cycles by Geriatric Nurse Specialists (Feb - May 2016). Implementation of tool with ED staff with onward referral of suitable patients for CGA (Jun-Aug 2016). A multi-disciplinary group was involved in the design, testing and implementation and we frequently sought feedback and engagement from front line staff.

Outcome

Frailty identification was introduced (voluntary) and 85% of patients coming to the ED were screened for frailty. The proportion of patients admitted reduced and this coincides with the introduction of the frailty screening and CGA although it is difficult in this complex system with multiple changes to exclude other causes for the association it is in keeping with the experience of others. Balancing measures of re-attendance and ED and time spent in the ED remained stable. The number of patients receiving an initial pro-active CGA increased to approximately a 1/3 of those positive for frailty identification.

Conclusion

This work has resulted in an acceptance for the need for routine identification of older people with frailty and ED staff doing this identification. Initial rates of identification have been high but we will need to see these sustained for lasting impact. Older people with frailty are receiving more initial comprehensive assessments which may have contributed to the reduction in admissions. As well as the quantitative changes there appears to have been an improvement in the quality of management of these patients which has been difficult to capture. One of the challenges has been the complexity of measuring CGA. We found that existing tools we initially tried needed to be modified through PDSA cycles. Data, and the visualisation of this, was important both to demonstrate changes and to engage staff as was the information we collected about patient experience.

Patient-controlled hospital admissions for patients with psychosis

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Background

Patients with psychotic disorders are among the most frequent users of inpatient care. Psychosis patients often regard inpatient care as something forced upon them that they associate with negative feelings. Historically, decisions about admissions to inpatient care have been made by doctors. In Norway a model for patient-controlled inpatient care for psychosis patients has been in use for about ten years. The results show decreased number of days in both voluntary and compulsory psychiatric inpatient care. The patients were very satisfied with the care model. The positive results inspired Stockholm County Council to test and evaluate the model in the Swedish context. The Health Care Services decided to launch a patient-controlled hospital admissions project. In 2014 two wards each offered one patient-controlled inpatient bed. Since the start the project has grown by two wards per year. From 2016 the project has been run by the Centre for Psychiatry Research.

Method

Patients with psychosis are offered to sign a contract allowing them to decide when, they wish to be admitted to inpatient care for up to five days, without this being questioned by staff. They are then admitted by a nurse. Patients also decide for themselves when they wish to be discharged.

The study questions are:

Do patient-controlled admissions lead to reductions in care consumption and compulsory care? Do the patients experience an enhanced quality of life?

What are the patients' expectations of patient-controlled admission and how do the patients perceive patient-controlled admissions 12-months later?

How do the patients experience patient-controlled inpatient care?

Are there aspects of patient-controlled admission that patients experiences as helpful/not helpful? The staffs are asked to anonymously answer a questionnaire about their attitudes towards the patients' influence and participation change over time

Outcome

The results are only based on the two wards that were in the project at the beginning of the project (PSS and NSP). Because of lack of statistical power all research questions have not been analysed. The results showed a significant reduction over time regarding the total number of inpatient days and the number of compulsory care days for patients from both PSS and NSP, when analysed together. In separate analyses of patients from NSP and PSS respectively, however, it emerged that only the patients from NSP reduced their care consumption over time, compared with patients from PSS.

The qualitative study showed that the patients were very satisfied. Having the contract and the knowledge that it was possible to admit oneself gave a feeling of relief and security. Being trusted by the care service was also an important positive experience and several patients reported a feeling of greater worth than that they experienced in traditional care.

Conclusion

It is possible to implement the model of patient-controlled admission within an existing organisation of "treatment as usual" in Swedish psychiatric inpatient care. The results show decreased number of days in inpatient care, both voluntary and involuntary and a high score of patients' satisfaction. The patients experience increased influence in connection with patient-controlled admission and this possibility gives a sense of security even if the contract is never used.

Patient-controlled admission entails a shift of power from doctors and care staff to the patient. Routines and the organisation are designed to facilitate this shift. Legislation, documentation routines and ways of working must be taken into account. In order to maintain patient safety this requires the creation of a project organisation with a project leadership that can monitor the work over a longer period of time.

Achieving adequate anticoagulation control for patients with atrial fibrillation: A district general hospital experience

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Background

PAH is a small DGH in Essex serving a large community across a wide area. AF is the most common cardiac arrhythmia and is independently associated with a fivefold increase in the risk of stroke. Oral anticoagulation (OAC) with vitamin K antagonists (VKA) reduces the risk of AF-related stroke by about two thirds. These patients require monitoring to assess their Time in Therapeutic Range (TTR) because deviation from the therapeutic range can result in harm to the patient through complications such as bleeding, or under treatment which increases the risk of the patient suffering a stroke.

Method

An initial audit cycle of 673 patients was undertaken 18th January – 25th January 2016 and the results were presented in a one-hour educational session at a local meeting for all members of the medical team. Staff engagement was achieved through an open discussion and following feedback OAC guidance was updated and made available with the aim of improving the outcomes and safety of patients with AF. A second cycle of 511 patients was undertaken 13th June- 20th June 2016 to assess the impact of the change.

Outcome

Our results demonstrate that approximately one third of the patient population reviewed have a sub-therapeutic TTR. We observed a trend towards an improvement in the anticoagulation control of the patient population from 62% to 68%. As a result the patient population may benefit from a reduced risk of bleeding and decreased risk of stroke.

Conclusion

Local guidelines and meetings play an important role in keeping health care professionals up to date with changes in the medical field and ensuring the best possible care is provided to patients. In conditions such as AF with significant but preventable complications all efforts must be made to provide high quality care to protect patients from harm. We have demonstrated that by engaging health care professionals in local meetings and providing updated reference tools in the form of local guidelines we have improved outcomes for our patients. This method is easily implemented and transferrable to other areas of practice.

Enhanced Recovery, Primary Knee Replacement Surgery and beyond

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Background

We describe the introduction of an Enhanced RAS program into the elective orthopaedic unit of Burwood Hospital, Christchurch, New Zealand for patients undergoing primary knee replacement surgery (350 annually).

Method

Project facilitator appointed, clinical leads identified, project timeline developed
Meetings and email communication facilitated development of pathway and booklet (incorporating agreed ERAS interventions) & implementation process
Feedback from the wider membership of each group (pathway) and patient feedback (information booklet) included
New pathway, patient information booklet & checklist detailing all aspects of surgical journey
Key message - 3 night hospital stay. Emphasized to patients, relatives & general practitioners by all team members at all points of contact with the service

Changes:

Enhanced preoperative education, pre-op carbohydrate drinks
Multi-modal opioid sparing analgesia inc. Intraoperative local infiltration analgesia (LIA), dexamethasone & tranexamic acid, mobilisation day of surgery, minimise urinary catheters, oral analgesia
Intravenous fluids down first post-op morning, patients dressed in own clothes
Quality control phone call 24-48 hours after discharge

Outcome

Patient have less pain & less adverse effects from analgesia modalities e.g. weakness from nerve blocks, nausea from intrathecal or intravenous opioids allowing most to mobilise day of surgery
Fewer catheters, drains and drips & blood transfusions
Percentage of patients staying with length of stay < 4 nights increased from 55% to 80%, mean LOS reduced from 6.25 days to 4.5, no change in readmission rate. Quality control post discharge phone call to patients
93% comfortable
95% pain manageable
5% nauseous, 3% vomited
8% wound problems requiring community input
0% had "any other concerns" when asked
In addition LOS for patients undergoing total hip replacement reduced from 6 to 5 days.

Conclusion

We have successfully changed aspects of culture in an elective orthopaedic unit resulting in patients having knee replacement surgery achieving discharge criteria faster allowing earlier discharge without impacting on readmissions. Post discharge phone calls confirm patients are managing at home after earlier discharge.
Demonstrating the proposed changes were evidence based and would benefit patients helped persuade staff to change the model of care. Although the message of "a 3 night stay" was used to provide a consistent expectation to patients, families and staff this was not used as the driver for change. We were careful to explain that the changes being introduced would allow a more rapid recovery after surgery. The length of stay began to reduce during the planning period before the program was fully implemented (Hawthorne effect). As the results of the ERAS program became visible it was more widely embraced benefiting other patients having surgery in the unit.

Evaluating caller experiences of a medical helpline in London, UK following introduction of a cloud-based 'Patient Relationship Manager' system

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Background

Attendance to Accident & Emergency (A&E) has increased over the past decade (King's Fund, 2017). Of those who attended A&E in 2015/16, 11% were discharged without requiring treatment (NHS Digital, 2017). Recognising that improvements in the delivery of urgent and emergency care (UEC) services were required to ensure patients get the right care at the earliest point of contact, Healthy London Partnership (HLP) were tasked to expand the capacity of NHS 111 (a free medical helpline). This included introduction of the Patient Relationship Manager (PRM) system, a Cloud-based clinical record system designed to improve patient care and pathways by sharing information and directing calls to the most suitable NHS 111 provider. Expected benefits include improved caller experiences and care pathways. Picker, a research charity who aim to promote person-centred care, partnered with a wider collaborative team under the governance of HLP to evaluate the effectiveness of the PRM.

Method

The PRM system has been rolled out in phases across London since December 2015. A patient group who benefit from the PRM are those who call NHS 111 more than once within 96 hours (from the same number). The PRM aims to provide efficient assistance and improve their experience by: routing them to the first NHS 111 provider they spoke to; prioritising those calling for worsening symptoms; and allowing the provider to access details of the previous call. This part of the evaluation measured repeat callers' experiences of NHS 111 since introduction of the PRM. Picker's existing Patient Reported Experience Measure (PREM) was updated to capture callers' experiences, including elements of the PRM system, and implemented using a telephone survey methodology with parents and adults who had recently called NHS 111 across London. A total of 2048 surveys were completed, 1044 adults (callers over 17) and 1004 parents who called NHS 111 on behalf of their child (children under 17 years).

Outcome

An 'experience of call' composite score comprising of feeling listened to, receiving clear information, being involved in decisions about care, and having trust in the professionals the spoke to, was significantly associated with callers following the advice. Furthermore, receiving thorough explanations about why the advice was appropriate was associated with enhanced confidence and trust in the person from NHS 111 assisting them, as well as adherence to the advice. PREM results revealed that when repeat callers perceive that those features of the PRM, namely prioritisation and access to information, are operational, callers are more likely to follow the advice. However, only half of repeat callers felt NHS 111 staff had access to information from their previous call. Furthermore, results highlight the importance of NHS 111 experiences on the effectiveness of the service, particularly in directing callers to the most appropriate care.

Conclusion

The PRM aims to ensure callers receive personalised and coordinated care, and subsequently are directed to and follow the most appropriate care pathway. By achieving this, not only do callers receive person-centred care, but the benefits to the wider healthcare system include reduced pressure on UEC services by patients presenting to the most appropriate services for their needs. The findings support the expectation that the prioritisation and enhanced information sharing functions will improve patient experience and facilitate an appropriate care pathway. The PRM still faces teething problems, particularly regarding repeat callers perceiving the person they spoke to had information about their previous call. This is important, as the purpose of the PRM is to enhance information sharing, and the data revealed an association between callers perceiving that advisors had information about their previous call and adhering to the advice, emphasising the need to get this right.

Improving the Care of the Deteriorating Patient using Mobile Technology

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Background

Calderdale and Huddersfield NHS Foundation Trust and The Health Informatics Service have implemented Nervecentre, a system which uses mobile technology to capture observations at the patient's bedside and automatically escalates to the appropriate clinician when these become abnormal. This enables us to recognise deteriorating patients earlier and inform relevant staff quicker, triggering appropriate review.

This project has seen clinical and technological leads working together to deliver this system to an engaged and informed workforce. It has required transformational change across the organisation and a shift in culture towards the use of mobile technology to enhance patient care.

Method

Nervecentre is a software programme which enables staff to input a patients' observations into a mobile device. If the patient has a raised NEWS Score a notification is sent to the medical team, including handover information, with grade of staff contacted based on the observation policy. Since this process is automated it gets to the correct people faster and means the nurse can stay with a deteriorating patient.

A clinical training team provided ward based training to staff. They all had clinical backgrounds, so staff found it easy to engage with them. Training took place on the ward on an individual or small group basis, 7 days a week from 7am to 10pm, making it easy for staff to attend their training.

A pilot was undertaken prior to go-live. Starting in adults, 2 wards went live every week, then paediatrics. Base wards went live before admission areas so that during the patient's journey they went from paper to electronic documentation, but not back to paper.

Outcome

Prior to implementation around 40% of NEWS scores were incorrect and it could take 30 minutes to contact critical care outreach for review, leading to inappropriate referrals, or lack of referral. Now the NEWS score is always correct and escalations go directly to the appropriate staff. The mobility allows staff to check on patients remotely, receive escalations and give advice when not able to come to the ward, improving staff and patient satisfaction and experience.

A monthly performance dashboard is produced for each ward and the Deteriorating Patient Group, detailing wards performance and data relating to patients with high NEWS scores. Having this data allows focus on these patients and identification of themes. This has been a patient-centric project designed to customise observation and escalation for each patient. Initially some patients were confused seeing staff using mobile devices, but there has now been a culture shift and patients see mobile technology as normality.

Conclusion

1. Automated escalation gets the correct information to the correct person in a timely fashion
2. High levels of clinical engagement and clinician led approach to training based on the ward, enabled high levels of access to and satisfaction with training
3. A culture shift has normalised the use of mobile technology for patients and staff
4. A rolling ward by ward deployment enabled this system to be cascaded through the Trust according to patient journey
5. Accurate monthly data allows focus on deteriorating patients and common themes, to focus efforts to reduce deterioration and mortality in the future

A decade of Lean learning in the NHS – Lessons for scale-up and spread

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Background

It is now a decade since the introduction to the NHS of the Productive Series: Releasing time to care programme. One of the largest and most successful improvement programmes ever established in the NHS, the Productive Series drew on principles of 'Lean Thinking' to empower front line staff to identify areas for improvement and regain control of their work environments.

Method

Co-produced with front line teams and tested in real care settings, the Productive Series empowered frontline staff to make changes to improve the quality and value of their services. The Productive Series programme was delivered as an improvement movement that established a community of practice across NHS organisations. The programme not only provided credible tools and guidance that built improvement capability at the front line of the NHS but also, due to its empowering nature, helped connect 'boards to wards' within organisations.

Outcome

The Productive Series has been thoroughly evaluated over an extended period of time and has demonstrated a significant impact on healthcare improvement in the UK and internationally. Benefits associated with the Productive Series have been identified as:

1. Increased staff engagement in front line problem solving
2. Increased leadership engagement in building improvement capability
3. More time available to provide direct care to patients
4. Improved patient satisfaction
5. Improved safety, productivity and efficiency

Conclusion

A number of lessons for large scale change and spread of improvement have been identified from the Productive Series.

1. Large scale change involves mutual learning utilising the human and social aspects of change
2. Spread must focus on intrinsic motivation and move people to promote change themselves
3. Successful spread is user-focused meeting needs of different adopters
4. Adoption of 'good' ideas requires adequate time for staff to learn new skills
5. Implementation requires communication, empowered project teams, involved leadership and an ongoing support infrastructure

The Productive Series continue to offer considerable potential to help address some of the challenges facing health and care. It offers a powerful way of engaging, supporting and acknowledging staff for improving the services they provide. There are many areas of the health and care system that could potentially benefit from the Productive Series approach and it is timely to consider how this might best be achieved.

Fast Track for patients with hip fractures - from arrival at the Emergency Room to operation

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Background

For several years, it has been a challenge to reach the national standard of 90% postoperative survival for patients operated for hip fractures at Aalborg University Hospital. Waiting time for surgery has been shown to be one of the most important factors to reduce mortality

The Aim of the project was reducing waiting time for operation, so that 75% of all patients are operated within 24 hours and 90% within 36 hours.

Method

The project was designed as an interdisciplinary cooperation between the Emergency Room, the Department of Anesthesiology, the Recovery Ward and the Operation Theatre at Aalborg University Hospital. The project group used the IHI Model for Improvement to test new ways of doing things to address the aim of the project. During a period of 6 months, the group met for two seminars and six meetings to secure progress by discussing and adjusting the changing in workflows that was being tested. The project ended in a Kick-off meeting with the purpose of providing information about the project and the changes made. After 6 months, the group was ready to implement a Fast Track for patients with hip fractures from arrival at the Emergency Room to operation.

Outcome

The goal was fully achieved. 100% of all patients are now operated on within 36 hours. The average waiting time for operation has changed from 27,6 hours in early 2016 to 12.3 hours from September to December 2016. The process is now statistically stable.

Conclusion

The success of this first part of the project,- from arrival to operation - is mainly due to intense efforts made to optimize interdisciplinary cooperation across units. In the second part of the project, the focus is to improve the postoperative recovery from operation to discharge in a collaboration between the Recovery Ward, the Geriatric Ward, the Department of Orthopedic Surgery, nurses and physical therapists. There is a further need to address the last part of the process - "Optimization of transition to municipalities for patients with hip fractures - after discharge from hospital to home" in a collaboration between the Orthopedic Ward, the Geriatric ward, physical therapists and the municipality.

Safe Quality Services: A novel training approach for infection control and emergency care skills in post-Ebola Liberia

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Background

During the West African Ebola Virus Disease (EVD) outbreak healthcare workers were fearful to provide care as a result of not wanting to for risk of EVD or not understanding infection, prevention and control (IPC) practices. During the response IPC was introduced into the healthcare system with a focus on preventing EVD specifically. The duration of the outbreak and conflicting repeated messages resulted in healthcare workers becoming desensitized to IPC. These post EVD attitudes and behaviors identified the need for a standardized national training for HCWs in applied IPC and emergency care to ensure integration of both into routine healthcare delivery.

Method

Train hospital healthcare workers in a combined Liberia specific, post-EVD, IPC and emergency care skills training package, Safe Quality Services (SQS. This novel training combines didactic, case based learning and simulation approaches to deliver the content in either a 2-day or 4-day format for non-clinicians and clinicians (respectively). Knowledge acquisition was measured using pre and post testing with a goal of 10% knowledge gain set. The application of knowledge was assessed through the use of scored skills checklists (non-clinicians) or integrated patient scenarios (clinicians).

Outcome

Our organization partnered with 30 of 38 Liberian hospitals for a total of 3,779 HCWs trained. Of these HCW, 61.5% were clinical and 38.5% were nonclinical. Among all HCW trained, the score improvement was 21% better than the predicted 10% ($p<0.0001$). Stratified by clinical, nonclinical and master trainer groups, the score improvements were 36%, 11% and 32% better than predicted, respectively (all $p<0.0001$). For every 10 percentage point didactic score improvement, one additional task was done correct on the skills checklist (non-clinicians) or the integrated case scenarios (clinicians).

Conclusion

Liberian hospital workers were willing and interested participants in gaining additional IPC and emergency care skills despite desensitization to IPC due to previous training fatigue. This demonstrates the effectiveness of the novel training approach that was used and the ability of the HCW to improve their overall knowledge and immediately apply this knowledge through skills demonstration. With a new integrated approach to IPC, the national hospital workforce has the ability to improve the quality of patient care. It is unknown if this new knowledge will be applied to practice and identifies the need for ongoing mentorship and assessment of knowledge and skill retention.

The attitudes of National Ambulance Service paramedics and advanced paramedics to the medication error reporting process. A qualitative study using focus groups.

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Background

Since 'To err is human' was published in 2000, healthcare has moved towards more accessible incident reporting systems and in general has been swamped with data.

Difficulties have arisen with prioritising events for adequate investigation and subsequent dissemination of the lessons learnt. The Irish National Ambulance Service (NAS) has not had this problem.

In the last 13 years, the NAS has reported only 22 medication errors to the national body with responsibility for risk management and insurance cover.

In 2016, the NAS with approximately 1700 staff members, responded to over 309,000 calls, of which 128,000 were designated potentially life threatening.

The level of reporting appears to be well below what might be expected. Little data is available to explain this apparent discrepancy.

Method

A focus group methodology was chosen to investigate the awareness and attitudes of staff to medication error and the reporting systems. 102 staff from Cork city and county were approached and a convenience sample of 18 front line paramedics and advanced paramedics turned up to discuss medication errors and the medication error reporting process. There were 10 no-shows. Four sessions were led by an independent moderator and were digitally recorded. Data was anonymised and analysed using a process of thematic analysis informed by phenomenological principles described by Dall'Alba 1998 and Larsson & Holmstrom 2010. Quotes were grouped together into themes of medication errors, error reporting and improvements to the system. Answers were studied and similar data were grouped together in sub themes and identified. The main author is a frontline advanced paramedic with the NAS. The co-author is a university professor and working general practitioner. Neither have a managerial role in the NAS.

Outcome

In 2016, the NAS streamlined access to the national electronic reporting system, National Incident Management System (NIMS). It provided editable Word versions of NIMS forms on all ambulance station computers. Feedback is now a standing item on the NAS Leadership agenda.

There has been a month on month increase in the number of incidents reported (561 YTD 16/08/2016) compared to 926 total incidents reported in the entirety of 8 years from 2004 to 2012. (Most are public and employer liability events.) While this increase is encouraging, as of 16th August 2016, only one medication error had been reported for 2016.

Out of eighteen participants, four admitted first hand to making a medication error and two admitted persuading a mistake making colleague to report. It is unclear what time frame was involved and how or if these errors were reported.

Using an independent moderator was crucial, one participant stated "You wouldn't have got half the information if it was an officer up there!"

Conclusion

NAS staff appeared willing to admit to mistakes when provided a safe space to do so.

National figures on errors would appear to be inaccurate.

Practitioners demonstrated an understanding of the importance of reporting medication errors and included patient care and safety, improvement in standards, professional requirements and personal integrity in these.

Suggested improvements by staff to facilitate reporting included simplifying the reporting procedure, an independent reporting body, timely feedback and the publication of a safety bulletin.

Barriers to reporting were consistent with international evidence.

Due to academic deadlines, thematic saturation was not achieved.

International studies would suggest that between 79% and 89% of medication errors from the prehospital setting are self-identified. Without any accurate data on the current extent of medication error within the NAS, further work is necessary to encourage practitioners to come forward and identify issues.

Does applying Training Within Industry (TWI) help in the English NHS?

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Background

Northampton General Hospital (NGH) is a mid-sized English NHS Trust. We have a strong quality improvement (QI) ethos, particularly the Junior Doctor Patient Safety Board.

Method

Reading the history of kaizen (continuous improvement), we found references to "Training Within Industry" (TWI), an American World War II programme that was the origin of the Toyota Production System, and which was used in the English NHS in 1949-50.

TWI has been reintroduced to healthcare at Virginia Mason Hospital, with benefit in standardising practice. We invited a TWI trainer to run a Job Instruction (JI) course, to teach staff how to analyse and instruct common practical skills: one to one, teaching important steps and key points.

Outcome

Cycle 1: Due to the operational busyness, we had fewer than half of the intended staff attending the first course. We began hand hygiene instruction, but this was curtailed due to a ward move and staff sickness. Four months later and without further instruction, staff were still able to remember 15 out of 16 key points.

FY1 doctors received prescribing training in July 2016 as part of their induction: 28 were trained one-to-one in 4 hours by a doctor and two pharmacists. The training was well received for usefulness (8.8/10) and improvement in confidence (5.5 to 8.1/10). There was no relationship between these and score in the UK Prescribing Safety Assessment. Follow up audit 6 months later showed no improvement.

Cycle 2: We have begun to use the JI breakdown for teaching hand hygiene to HCAs. The HCAs rated their training as 9/10 (range 8.5-10) for quality and 9/10 (range 8-10) for usefulness. HCAs remember the key points over time exactly as taught in the instruction session.

Conclusion

We learned that there is no good time to begin an improvement project, but that external factors such as staff sickness or system restructuring can affect the impact of a QI project. Involving senior ward staff both in the planning and delivery of QI training is essential for maximal effectiveness. TWI-Job Instruction is an effective way of teaching skills for the common practical tasks. However, frequent rapid follow-up helps the training stick. One unexpected positive benefit has been to give the HCAs a sense of purpose and community, looking out for each other and being observers to ensure all staff perform correct hand hygiene.

We have found that breaking down a job can be an effective of instructing as a baseline for improvement, but that other people-related aspects can undermine a project. Working out the follow-up schedule in the planning phase is critical. TWI's three-legged stool of instruction, leadership and improvement may be able to help again to improve safety.

A roadmap from strategy to clinical indicators

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Background

The Antwerp University Hospital (UZA) is a JCI-accredited academic medical center for leading clinical and customer-friendly patient care, high-quality academic education and ground-breaking scientific research with a major international dimension. UZA wants to be acknowledged as an innovative, top-quality organization with an excellent reputation, a powerful network and enthusiastic employees. The aim for quality is one of our shared values.

The working group on selected and developed together with clinicians and data managers hospital-wide indicators and department or service specific indicators to be used also in the evaluation process of physicians.

Lack of a uniform process for selection and approval of indicators lead to a large set of indicators too complex to manage and not linked to hospital wide priorities or activities that needed improvement.

A uniform format for description of the indicator and clear instructions for data collection and validation were also missing.

Method

Over 300 clinical indicators existed but only few were used to improve Q&PS. An inventory was made by the working group and reported to the steering committee on Q&PS.

Medical departments were clustered. Each cluster coordinator was asked to select 6 indicators linked to patient safety goals, hospital wide priorities and cluster specific services. Medical and nursing department were visited by a member of the working group, a quality officer, a staff member of BI and a statistician to build the indicator. To each indicator an owner, data manager and a quality officer were assigned for data monitoring and analysis.

The total process was planned to be completed within 8 months. Progress was monitored by BI and quality department. The medical director launched a call for physicians to become 'cluster coordinator'. The working group made a guidance for department leaders and provided education. We communicated regularly in our staff magazine and on several training occasions.

Outcome

After 6 months nearly 50% of the forms was completed and 25% of the indicators were validated successfully.

The working group supports the selection, provides coordination and integration of measurement activities throughout the hospital. An electronic format for description and validation is now used. The selection of a smaller set of indicators (67 in total), (semi)automatic data collection, use of valid data and real-time dashboards contributed to engage leaders and clinicians to use data for quality improvement.

Benefits:

1. A smaller set of indicators relevant to the services we offer
2. Accurate and reliable data
3. Ownership by healthcare workers resulting in active participation in improvement.

Conclusion

A clear communication of hospital wide priorities, a smaller set of indicators, evidence based targets, support by experts, collaboration, uniform format and methodology, ease of data collection and real time access to data resulted in the use of indicators as drivers for improvement.

Next challenge will be the overall follow up and sustainment of improvement projects.

Implementing an effective patient record review process

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Background

The Antwerp University Hospital (UZA) is a JCI-accredited academic medical center for leading clinical and customer-friendly patient care, high-quality academic education and ground-breaking scientific research with a major international dimension. The aim for quality is one of our shared values.

As part of a hospital-wide quality improvement project a multidisciplinary team was installed to perform Closed patient record reviews (CPRR).

Problem:

A patient record, with a standardized format, content and uniform location of data is a basic requirement for integration and continuity of care between healthcare practitioners.

We use a complex patient record composed of a paper nursing record and an electronic medical file that can receive data from different sources. Since we had no review process it was our concern that the record was missing data and contained eligible or incomplete information.

Method

The review is conducted by a trained team of physicians, nurses and other practitioners who are authorised to make entries in the patient record. We clustered the medical departments into 6 cluster Oncology, Cardiology, Mother & child, Surgical, Critical patient cluster, Neurological and Internist cluster.

Per cluster a representative sample of 10 to 30 patient records is reviewed.

At the beginning the team reviewed a representative sample of 128 closed patient records on a monthly base.

The review is organised in a classroom session of one half day per cluster. A quality officer takes the lead and monitors the accuracy and reliability of the input. All the team members are able to discuss any uncertainties or ambiguities they find.

A registration tool was created and made available as SharePoint form. The tool contains 62 items, required by law and regulation, required by JCI and hospital policies and procedures. For each item we check format, content, location and time.

Outcome

Given our complex medical record the effect of change is difficult to observe. The first cycle of Open record review with thematic items is completed and will now be repeated. The overall quality of the patient record and retrieving information improved constantly during the first year.

The compliance check by peers in a multidisciplinary setting is seen as very powerful educational instrument for all parties. The main problem is the manual registration and review fatigue among the team. We have learnt that a high degree of participation is the key to success. Participating departments for the Open record Review have a better compliance in the Closed record review.

An easy data collection tool or automatic extraction of data from the patient file could make the screening effort noticeable lower.

Conclusion

Using a voluntary screening method increases involvement but is challenging to maintain a high level of participation.

A record review process is a powerful tool to learn from each other.

For now patients are not involved in the review process or the feedback loop of the results.

With the future possibility of a patient portal being a part of the medical record, some items might be included regarding patient entered topics.

Increasing Patient Engagement and Motivation to Make Healthier Choices

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Background

People with mental illness have a reduced life expectancy (15-20 years), and those with severe mental illnesses such as bipolar disorder or psychosis are at particularly high risk of physical ill health due to medication side effects, and lifestyle-related risk factors

People taking antipsychotic medicines are more likely to experience adverse effects such weight gain and obesity which lead to a greater risk of developing diabetes or cardiovascular diseases, and contribute to lower quality of life.

Several studies have demonstrated a significant link between self-management, patient activation and health care costs and suggest that highly activated patients have better outcomes.

Our project aim to increase the perceived self-management and activation of service users by 25% directly supports our organisation's quality priorities for 2015-2017 which includes enhancing clinical effectiveness through the improved physical health of our service users.

Method

Service users and the multi-disciplinary team working on two of female medium enhanced secure mental health wards were asked in focus groups what the potential barriers and opportunities for promoting health and wellbeing for patients on clozapine and other high risk psychotropic medicines in women's services were. Feedback indicated that service users were more concerned with outcomes related to self-management and activation.

Key Interventions suggested by staff and service users included: 1. A regular health and wellbeing group; 2. Implementing interventions that support healthier choices; 3. Co-producing a self-management booklet for service users .

The Outcome Measures we used included: 1. Patient Activation Measure; 2. Patient satisfaction survey; 3. Assessment of Primary Care Resources and Supports for Chronic Disease Self-Management (PCRS).

We followed the IHI's Model for Improvement methodology to implement changes.

Our timeline for implementing the change was 9 months

Outcome

A booklet was co-produced as a tool to help service users keep track of their medication, the side effects, and their physical health results (guided by the Lester tool). The booklet contains lifestyle, nutrition, and physical activity tips and guides service users in setting goals. It is anticipated that the booklet will encourage the user to take positive action, express gratitude, and to create "cheerleading statements" for motivation. It includes tips from service users about how to be healthy and more physically active in an in-patient environment.

Benefits include the empowerment of service users to be involved in improving the quality of their own care and increased awareness on physical health monitoring and interventions.

The Assessment of Primary Care Resources and Supports for Chronic Disease Self-Management (PCRS) measure demonstrated an improvement in staff perception of the level of patient involvement in the self-management of their care.

Conclusion

Feedback indicated that rather than their physical health, service users were more concerned with outcomes related to self-management and activation.

Implementing small interventions, frequently, helped to sustain engagement with staff and service users.

Changes implemented demonstrated an improvement in staff perception of the level of patient involvement in the self-management of their care.

Using simpler outcome measures could have led to an increase in staff and service user participation with the assessment of improved self-management.

Our communication and engagement plan was key to sustaining momentum with service users and the wider multidisciplinary team, however we felt that we could have simplified our methods.

Our next steps would be to implement, scale and spread the self-management booklet and implement other suggested interventions including staff coaching and a peer support group whilst sharing our learning across our trust and other organisations.

Co-designing a Digital Platform: Towards e-Health and Continuous Learning in General Paediatrics

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Background

The study is part of a paediatric CPD program in Western Sweden, involving researchers and practitioners with expertise in medicine, informatics, and pedagogy. Based on previous experiences, the program provides a strong learning environment with extensive collaboration and networking among participants, while it is hard to maintain the collegial network and continue to share knowledge and experiences. Research has shown that new information technologies have potential to create learning opportunities and support reflection, collaboration and workplace learning. However, due to a history of IT-related problems in healthcare, where (despite documented benefits) many eHealth initiatives have failed in practice, health professionals are often less supportive towards such technologies. The research question is: How can IT be used for continuous learning and what are the implications of participatory design for the introduction of eHealth for workplace learning and use in clinical context?

Method

Inspired by participatory action research (PAR), the program is designed to offer a learning environment in which participants develop their paediatric and educational practices, as well as improve IT skills and digital competence needed as per today and in the future. In this new program a digital learning platform is introduced with the intention to contribute to formal course objectives but also to function as support for informal learning, networking and knowledge sharing during and after the CPD program, thus promoting long-term continuity of the educational outcomes. During the two-year course, the participants will develop a digital platform together with a Ph.D. student, for paediatric practice, present, and future learning as well as a web-based learning environment.

Outcome

The benefits of this project, where the focus is on eHealth as support for continuous learning, is for healthcare providers and physicians to be able to meet the demands and challenges for the future medical profession. The originality is that the digital platform in use is developed by the participants, integrated into the course and daily work and that the primary focus of the platform is to support continuous learning.

This research is still in an initial stage (2016-2018), and findings are tentative. The project is linked to patient benefit, health professionals' workplace learning, and continuous training. Children, carers or family members are not directly involved in this project, but the CPD program is built up around patient cases and focus on patient outcomes, in terms of improved safety and quality of care of the child.

Conclusion

There are potential difficulties recruiting paediatric educators to the program. This is addressed by supporting the participants in their role as educators and experts in outpatient paediatrics as well as regarding how IT could support not only learning a new subject or training skills but also learning how to learn.

In summary, this project highlights the importance of interdisciplinary and practice-based research for continuous improvement and quality in healthcare, especially due to new demands following the patient-centric care and new role of patients, and sheds light on both benefits and challenges of integrating IT and learning in daily clinical work.

Healthcare organisational learning from patient complaints: a systematic review of current evidence

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Background

This systematic review was conducted at the University of Surrey as part of the lead author's PhD.

Patient complaints are essential quality indicators from which healthcare organisations can learn, however how this learning is demonstrated within government publications is fractured and inconsistent.

Aim: To examine how healthcare organisations demonstrate learning from patient complaints including the barriers experienced.

Method

Methods: British Nursing Index, CINAHL, EMBASE, ERIC, Maternity and Infant Care, Medline, SCOPUS databases were searched. Empirical studies from developed countries that reported on organisational learning from patient complaints are included in the review.

Results: 48 abstracts met the inclusion criteria, of which 29 full text studies were used in the study. The Mixed Methods Appraisal Tool (MMAT) was then applied to evaluate methodological quality of which 17 studies met the 50% required to be used in this review.

Outcome

Three themes were identified: 1. 'Lack of organisational strategy and standardisation'; leading to problems with audit and evaluation of learning. 2. 'The impact of Clinical leadership on learning from complaints'; clinical leaders had the greatest influence on the success of learning initiatives. Professional hierarchy within the NHS and a culture of blame hindered communication. 3. 'Staff attitudes and communication'; healthcare staff prioritised complaints concerning physical care, medication or treatment over communication and attitude. Poor communication between professional groups was noted to obstruct organisational learning from complaints.

Conclusion

Clinical leadership was noted to have the greatest impact on organisational learning from patient complaints. This concept interconnected with attitudes towards complaints as learning tools as well as the professional hierarchy within healthcare. Further research is needed to explore the impact of the clinical leader in order to improve patient care.

The Inter-Hospital Transfer of Surgical Patients

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Background

Maidstone and Tunbridge Wells NHS Trust is comprised of two acute hospitals, both sites have an accident and emergency department however only one site has emergency general surgery cover. With increasing numbers of inter-hospital transfers we analysed our local guidance along with the dated national guidance. Locally the number of reported incidents had been increasing in the past 5 years, from one to seven reported incidents. The transfer of acutely unwell patients requires the clinical team to make an assessment of the stability of the patient, requirement of resuscitation prior to transfer, relaying information to the receiving team and documentation of the transfer discussion. Without Patient transfers are increasing and without these, patients are put at risk, treatment may be delayed and ultimately patients may come to harm.

Method

Locally a retrospective assessment of patient transfers in January 2016 between the two sites was carried out. 35 patients were identified. Documentation was analysed for compliance with AAGBI and ICS guidance. Nationally a Freedom of Information Request was sent to 151 acute trusts with surgical patients in England requesting a copy of the patient inter-hospital transfer document and guidelines, the number of surgical patients transferred between hospitals or trusts between March 2015 - March 2016 (12 months) and the number of related reported incidents in this time frame. We received a response from 119 trusts, 107 provided guidelines, 75 provided the number of surgical transfers and incidents reported.

Outcome

Locally we found there was little documentation and decision for transfer was often by junior staff. 26% of transfer decisions were made by an F2 and 54% had no person documented. 9% had a documented name, and 43% grade, of the receiving surgeon. 51% had no documented risk assessment and 29% had critical care needs assessed. In 34% observations were documented pre and post transfer. As a consequence, in these cases no one was named responsible for care throughout transfer and some patients were being transferred without a documented assessment. Current transfer documents and policies required improved to enhance patient safety.

Nationally our FOI request yielded a 78.8% response rate. Guidelines were unavailable in 10 trusts, 8.4%. Few transfer policies specifically referred to surgical patients. We received data of transfers and incidents from 49.7% trusts. A mean of 546 surgical patients per trust were transferred over the year. 5.5% of transfers resulted in an incident.

Conclusion

Following this a new transfer form was compiled on discussion with the MDT with the aim of improving documentation by both medical and nursing staff and to facilitate the handover process. A re-audit following its introduction is taking place. There is also room for improvement in making the transfer of surgical patients safer nationally.

The gathering of data via the Freedom of Information request proved challenging, with variability in responses and some trusts had no transfer data. Our aim now is to collaborate with a patient safety group in the hope of generating national guidance. We would appreciate help with moving from a local to national scale and using the FOI data to make meaningful change. We hope to be able to improve the care afforded to patients who need to be transferred for surgery.

A Quality improvement project to improve the attendance of parents of children with disabilities to community outpatient clinics

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Background

Children with disabilities have complex needs and have some of the poorest health outcomes compared to any other cohort within paediatrics. Parents of these children struggle to attend multiple hospital appointments. Our community paediatric outpatient clinics at Northwick Park Hospital have very high "Did Not Attend (DNA)" rates for children with disabilities i.e. parents who do not attend pre-booked appointments with healthcare professionals. This in turn impacts children not receiving medical reviews and treatment in a timely manner. It also impacts waiting list time, wasting manpower time and therefore substantial cost implications. We assessed whether phone calls in addition to text messages would improve DNA rates in our community paediatric outpatient clinic that managed children with physical and learning disability between the ages of 0–16 years.

Method

A 3 month quality improvement study was undertaken in the outpatient paediatric community clinic to assess whether two different interventions (commonly referred to plan do study act (PDSA) in quality improvement studies) (i) letter plus phone call one week prior to appointment and (ii) letter plus phone call and text message would improve did not attend (DNA) rates. Data was collected for an initial 6 week period to establish baseline DNA rates. Data was presented as a run chart and a histogram.

Outcome

A total of 248 patients were expected over the initial 6 week period to determine baseline DNA rates. Following the first PDSA, letter plus phone call, 53 patients were expected at the clinic, whilst 47 patients were expected after the PDSA, text message plus phone call plus letter.

DNA baseline rate was 21.8% over a 6 week period, which equated to 34 hours of lost clinic time. Following the first PDSA, a phone call plus the letter, the DNA rate over four weeks was 26.4%, however, when a text message was sent to support the phone call, DNA rate dropped to 14.9% over a 3 week period.

Conclusion

A text message in addition to a phone call, the week prior to appointment, at an outpatient paediatric community clinic reduced DNA rates compared to appointment letters alone. Interestingly, DNA rates did not improve with phone call reminders plus letters. Several issues were encountered during the course of this study including limited admin staff time to undertake phone calls, information governance and ensuring clinicians recorded DNA rates for their respective clinics.

A text message in addition to a phone call and letter may reduce DNA rates and consequently improve clinic and cost efficiency, and improve patient care in a vulnerable paediatric population.

Improvement of OR Cancellation in KAMC

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Background

The newly appointed OR Director was faced with the alerting same day OR cancellation rate of 19.3%. The goal was to decrease the cancellation rate to less than 5 %. An OR coordination unit was established to manage the day to day issues. Additionally, a multidisciplinary team was created for performance improvement using Lean Six Sigma (LSS) as a tool. The indicated OR department is placed in King Abdullah Medical City (KAMC). KAMC is a quaternary center that offers specialized care in Makkah, Saudi Arabia. With a specialized surgical center that offers surgeries in specialties such as Cardio-vascular, ENT, Ophthalmology, Urology, Oncology and others.

Method

In January and February 2015 the OR department undertook an in-depth revision and OR cancellation indicator and its related factors. The modified OR cancellation forms are filled by the surgeon and anesthesiologist taking care of the patient. Analysis of the data showed that patient is not showing to the OR as one of the most common factors. As a response to that, the team arranged for reminder calls to the patient the week before surgery then the day before. Later on, the process was automated by SMS messages.

The next common factor for cancellation is cancellation of OR cases because of unavailability of ICU beds or blood for a patient who would need them. Surgeons would book cases for OR electronically using the electronic hospital system. As an intervention to reduce cancellation, the OR list is daily sorted into scheduled, waiting and pending lists. This classification is according to the preparation of the patient and availability of OR slots.

Outcome

Interventions above led to a decrease in all factors of OR cancellation. In February 2015, the OR cancellation rate averaged at 10%. The rate was reduced to 8% in March and was sustained at that reading in the next month.

Conclusion

An important lesson is the impact of small collective changes in improving performance substantially. Process mapping is a great to facilitate such approach only through re- establishing communication pathways and form modification the cancellation rate was reduced more than half of baseline report and was sustained.

Although a lean six sigma team was formally appointed to handle the OR cancellation as a lean six sigma project, efforts were unsustainable to complete the project this includes having a standardized response plan.

Another limitation is the in depth data driven decisions to test the root cause hypotheses and intervention. This might be attributed to the absence of a certified black belt LSS leader.

We attribute this to change in organizational leadership while outsourcing interdepartmentally in a hierarchal structured organization. A valuable lesson here is building departmental capabilities to use performance improvement tools

Collaborative Evaluation for the Utah All Payer Claims Database Capacity Enhancement

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Background

All Payers and Claims Databases provide transparency in pricing across healthcare providers. This transparency, it is reasoned, will allow market forces, instigated by the payers and the public, to drive down cost and increase quality. We present a collaborative evaluation process that stakeholders viewed favorably. Stakeholders, such as employers, the public, insurers, and payers, all participate in healthcare decisions. All are influential drivers in cost reduction. Public health researchers at universities and the Utah Department of Health (UDOH), and policy makers are also interested in quality of care and in optimal use of APCDs. Gathering and engaging a stakeholder pool with diverse interests is important to develop a useful APCD. Other successful evaluation efforts have noted that ongoing and systematic evaluation, including development and use of logic models, is also important.

Method

We choose a collaborative evaluation model as multiple stakeholders, such as employers, the public, insurers, and payers, all participate in healthcare decisions. Any or all are influential drivers in cost reduction. Public health researchers at universities and the UDOH, and policy makers, are also interested in the quality of care and influential in optimal use of APCDs. Gathering and engaging a stakeholder pool with diverse interests is important for development of the APCD.

Outcome

The three surveys focused on HIT, logic models, and collaborative evaluation. Feedback yielded overwhelmingly positive results and showed that our stakeholders had increased confidence in our collaborative efforts. The majority of respondents specifically felt the evaluation plan positively contributed to the Cycle III project, while a minority felt neutral and an even smaller minority felt that the plan did not positively contribute. This was a noticeable improvement from the previous year's survey, demonstrating improvement in sharing and utilizing the collaborative evaluation model in the APCD development project.

Conclusion

Our collaborative evaluation framework was instrumental in the development and success of Utah's APCD implementation to date. We found that communication is essential to effective collaboration. We promoted stakeholder engagement by extensive, ongoing contacts by email and meeting to explain the project, address concerns, and promote ownership of APCD among different participants. We recognize that we used a new applied practice in public health evaluation, and stakeholders are more accustomed to the outcome-based evaluation process.

Significant Event Analysis in General Practice; A Quality Improvement Project

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Background

This Quality Improvement project was completed in Carrig Clinic, a General Practice in Greystones, Co Wicklow, Ireland. This is a suburban group practice with 3 full time General Practitioners, a GP Registrar, a part time practice nurse and 4 part time practice receptionists. It cares for approximately 10,000 patients of all ages, backgrounds and demographics in the local area. The practice is a training practice with the HSE Dublin Mid-Leinster GP Training programme. Prior to commencement of this project, this practice had no formal process for identifying, analysing and learning from significant events within the practice.

Method

Different significant event analysis templates and models were trialled. Significant event analysis (SEA) was incorporated into protected tutorials for the registrar and used as an effective teaching tool. Once the registrar and GP trainer were confident in using the methodology, it was scaled up to include other members of the practice team. This was achieved through regular structured practice team based meetings. These meetings provided a forum to disseminate the SEA model, to analyse new incidents within the practice and to review actions from previous meetings. This improvement project was completed over an 8 month period. The project was commenced between just 2 doctors within the practice and then scaled up. All practice team members had the opportunity to provide input and feedback into the project during team based meetings and subsequent formal SEA meetings. Patients were informed of the project on an opportunistic basis and encouraged to provide feedback.

Outcome

This project resulted in a formal SEA process being embedded into the practice. This resulted in multiple improvements in patient care and safety within the practice by empowering all members of the practice team to identify and analyse significant events. These improvements included enhanced vaccine safety, implementation of a formal practice feedback and complaints policy for patients, improvements in the repeat prescribing policy within the practice and further education for all staff on managing patient files, as well as celebrating successes. In addition to this, it also became a catalyst to facilitate structured practice meetings whereby other issues affecting the practice could be discussed.

Conclusion

Small projects such as this one are person centred at their core, for both patients and doctors and have the potential to be scaled outside of the individual practice to achieve system level quality and safety improvements. In this regard, trainees can provide a fresh viewpoint and can cross-pollinate healthcare sites and settings with improvement initiatives and ideas, thus building front line system capability. The biggest barrier to change and implementation of the SEA in this practice was achieving stakeholder buy-in. Several stakeholders questioned the necessity of such a formalised process and the time commitment it would require. Demonstrating gains and quick wins early improved stakeholder buy in. Persistence and starting small with an improvement idea can pay off. Healthcare professionals of all experience levels should not underestimate their ability to identify poor care practice for patients, and then to successfully improve it.

Team Talk - every patient, every day

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Background

The Sydney Children's Hospitals Network (SCHN) encompasses two paediatric hospitals – The Children's Hospital at Westmead and Sydney Children's Hospital Randwick. 'Team Talk; every patient, every day' is a network wide safety and care coordination initiative across all clinical patient settings.

NSW has set a performance target of 50% of admitted patients must be transferred to the inpatient ward by 4 hours. SCHN has not met this target since its introduction in September 2015.

Mismatched demand and capacity due to discharge delay and poor coordination remains one of the critical barriers to improving performance.

With limited daily conversations and varied practices across SCHN, focussing on the care coordination and safety our patients, a need was identified to implement an initiative that increased situational awareness.

Method

'Team Talk' is a structured interdisciplinary team conversation and is two fold The care coordination component focuses on the coordination of investigations, treatment and discharge planning needs, ensuring patients are on track for discharge from hospital in the agreed and sufficient time frame.

The Safety Pause component focuses on the safety and quality of care for the inpatients and clinical areas. The framework for this part is based on the safety huddle (S.A.F.E.), however adapted locally to meet the needs of the Network. Implementation is taking place in 28 clinical areas across 2 paediatric hospitals.

Consultation occurred across SCHN and key professional groups at various committees and forums including the SCHN Families and Consumer council (FACC). Collaboration between clinical and non-clinical teams within the SCHN includes the Clinical Governance Unit (CGU), Public Relations (branding and messaging) and the audio-visual team (develop videos supporting roll out).

Outcome

Main impact has been qualitative and increased collaboration for the care team. Further review is currently taking place to measure the impact Team Talk has had on access to care, length of stay and impact on clinical risks.

Benefits for wards that have commenced Team Talk:

1. Increased situational awareness and patient safety by discussing every patient, every day.
2. Consistent information from the care team provided to families
3. Reduction in variation of length of stay
4. Improved collaboration and coordination of care
5. Collaborative monitoring of clinical incidents and their mitigation strategies
6. Interdisciplinary approach to patients care every day
7. Enhanced communication between different disciplines ensuring quality holistic patient care
8. Timeliness Allied Health Referrals and early identification of Allied Health involvement.
9. Improved prediction of Demand and Capacity with accurate group determined Estimated Discharge Dates.

Conclusion

1. Improved culture, collaboration and situational awareness on the wards that have implemented Team Talk.
2. One model will not suit all clinical areas.
3. Strong Leadership and Sponsorship to Express, Model and Reinforce the change.
4. Defined terminology to enable consistent language through all streams of staff.
5. Understanding the value-add in each clinical space will increase buy in
6. Success of the initiative is reliant on Clinician to Clinician support and leadership.
7. Establishment of an Implementation Clinical Leadership group is key to setting up the project for success.
7. The opportunity to implement a Network Wide consistent approach to our patient safety and care coordination has enabled safer patient care across all settings.

Improving access to elective coronary intervention in the catheterization lab in Qatar

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Background

The catheterization lab in the Heart Hospital is the only CATH Lab serving Doha and its surrounding . It receives More than 4000 requests per year for angiography and percutaneous coronary intervention (PCI). More than 20% of the requests are for elective procedures.

Scheduling for elective procedures was based on first come first served. Due to limited resources and busy schedule in the CATH Lab, patients waited up to 8 months for their procedure to be scheduled as day care cases. This lead to adverse medical and social consequences on patients and their families.

Method

In August 2014 a specific task force was appointed to study the situation and find the solution for the long waiting list for elective coronary interventions. A process map and the current patient flow was studied. Reasons for long waiting list were summarized. The main reasons were rescheduling due to change in medical condition, inability to pay for the procedure and bed crises.

The plan was to reduce the waiting time from 24 - 32 weeks to 4 - 6 weeks. Plan-do-study-act (PDSA) methodology was used. Several interventions were implemented including angio / PCI order forms, prioritization scheduling scheme and diagnostic coronary angiogram pre-admission selection tool. Implementation of intervention was on September 2014. Progress and obstacles to the implementation of interventions were discussed in the weekly CATH Lab meeting. Patients satisfaction was collected and results were displayed on the quality boards across the hospital. Data were collected daily and aggregated monthly.

Outcome

Waiting time to elective angio/PCI procedure was the main outcome. Data showed that there was a significant impact on reducing waiting time from 24 - 32 weeks in 2014 to 4 -6 weeks in 2015. This change was sustained in 2016 with an average waiting time of 4. Patients were highly satisfied with the timing to access to the CATH Lab.

Conclusion

Implementation of clear angio/PCI process pathway lead to efficient access to high quality of care which spontaneously had significant impact on patient care experience, improving patient safety and reducing unnecessarily procedures. Several factors contributed to the success of the implemented changes including: involving frontline staff in problem identification and solving and value their suggestions, continuous support from hospital leaders and considering patients comments and feedback regarding the process.

Neonatal ICU Safe Hands Project: Adaptation of WHO Multimodal strategies to improve practice of Hand hygiene in the largest level 3 NICU in the Middle East

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Background

HMC is main provider of specialized care in Qatar. It is JCI accredited. It collaborates with Weill Cornell, IHI & Partners Healthcare for excellence. Its 107 bed NICU is largest in Middle East & only level 3 in Qatar. Its occupancy often exceeds capacity. It has 400+ staff. Large occupancy, regular staff joining, multiple rounds, visiting subspecialists, residents on short rotations and movement across dependency areas all risk HAI. An outbreak of gram negative sepsis in 2015 along with increasing CLABSI (4.28 vs 4.07), VAP (1.36 vs 0.79), HAI (5.84 vs 5.53) & poor hand hygiene compliance (82% vs 84%). A survey in 2015 dawn showed hand hygiene being most deficient. Later steps and moments are often skipped. Project aims to create a robust sustainable program to improve practice of hand hygiene, adapting WHO multimodal approach, reducing HAI rate, ushering attitude & behavioural change of caregivers. Staff compliance targeted at 86% by Dec 2016 and 90% by Dec 2017, from 82% in May 2015.

Method

Major PDSAs

1. System Change: a. Ensure POC equipment across NICU b. Install additional handwash & receptionist areas c. "Outbreak alert mechanism" d. "Gel-over-water" drive
2. Training & Education: a. Infection control coordinator train staff b. Technique evaluation using HH inspection machine c. Yearly competency check d. Parent leaflet
3. Evaluation & Feedback: a. Questionnaire based survey b. Biannually facility check c. Parent feedback form d. Annual staff feedback. e. Monthly feedback via email f. Streamlining behavioural audit & feedback
4. Reminders in workspace: a. Posters & roll-ups in patient & staff areas & QI dashboard b. Parent/staff badges c. Info in website & internal media
5. Institutional Commitment: a. Support from & feedback to Director b. HH day & iC week

PDSAs in small areas & if successful, across unit. Timelines set. Successful PDSAs standardized into SDSAs with individual leads & collective responsibility.

Outcome

- A. Outcome measures:(2016 vs 2015): 1. HAI Rate: 27% less ;2 . Late onset sepsis: 21% less; 3. CLABSI: 58% less; 4. VAP:28% less.
- B. Process Measures:1. Compliance to Hand Hygiene: 87% vs 84%; 2. Technique: better practice of 7 steps; 3. 5 HH Moments:4th & 5th moments improved 5% & 10% respectively
- C. Balance measures: 1. Length of Hospital Stay: 4.5 vs 6.1 days; 2. Staff & parent satisfaction: better
- CHANGE IN WORK CULTURE.. It has become more "reflexive" than "thoughtful". Reminding is not offensive. No cross infection over past 1 year. Infection Control practitioner well empowered.
- Patient: 1. Less risk & rate of HAI; 2. Lesser needle pricks, iv lines, infiltrations, antibiotics & pain; 3. Shorter ventilator days & length of stay
- Unit: Less occupancy & cost.
- Staff: 1. Culture & behavioral change; 2. Better compliance & technique; 3. Feels "everyone's business"; 4. Less workload; 5. Feels empowered
- Family: 1. Better trained; 2. Responsible; 3. Empowered for feedback & reminders; 4. Less frustration.

Conclusion

The multipronged approach towards improving hand hygiene practices encompassing multiple PDSA cycles, utilizing WHO multimodal approach has helped us to achieve our patient safety goals by better hand hygiene compliance and reduced infections in our NICU.

Problems encountered: a. Material Management streamlining; b. New installation needed unit restructuring; c. High nurse: patient ratio; d. Inadequate Training & Education; e. Loose feedback mechanism; f. Seldom workplace reminders; g. Late adopters and laggards.

Lessons learnt: 1. Involve all stakeholders and workforce. 2. Multipronged approach for difficult tasks. 3. Multiple small PDSA cycles add to big results 4 Sustainability brings success 5. How to improve by small steps

Messages for others: 1. Multipronged approach works. 2. Implement in small area before putting across unit 3. Make adult learning interesting. 4. Workplace reminders and systematic feedback essential.

Should we now change our policy of tetanus prophylaxis thanks to a bedside immunochromatographic test for the detection of anti-tetanus antibodies.

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Background

In Emergency Department of our hospital we observed a high rate of tetanus. 90% of the patients with a wound received a vaccination and 50 % of them immunoglobulins (TIG) although 70% of the population was protected. We assumed that the cause of the problem was the inappropriate value of clinical history. Several studies demonstrated that sensitivity and specificity of clinical history was respectively 40% and 85%. As a result, most of the patients receive unnecessary vaccinations. In the year 2005 a POCT that detects the level of antibodies in 10 minutes was released onto the market. Validity studies performed by us and others showed a better accuracy than clinical history. POCT shows 93% sensitivity and 94% specificity. So we decide to use POCT in our tetanus prevention algorithm.

Method

We did a comparative study of tetanus prevention of the number of vaccine and globulin using POCT with the number of vaccine and globulin without POCT. We also compared the cost of tetanus prevention with both types of prevention. We studied a cohort of 1995 patients without a vaccination proof. All these patients were tested and categorised according to their clinical history. 1874 patients had a negative clinical history and 121 patients had a positive clinical history. If the result of POCT was found negative the patient received a tetanus prevention. Booster when the wound was clean, booster plus TIG when the wound was dirty. To calculate costs of prevention using POCT we added costs of POCT to the costs of booster and TIGs administered when POCT was negative. To calculate costs with clinical history -the WHO algorithm- we added costs of booster and TIGs administered when clinical history was negative

Outcome

Prevention using POCT :

On the cohort of 1995 patients using POCT systematically we found that among 1995 POCTs 564 were negative. Moreover 294 of these patients had a dirty wound. So 564 boosters and 294 TIG were administered. We observed that among the 121 patients who assume to be protected 35 are not protected, they had a negative POCT

Prevention with WHO algorithm use: as mentioned above 1874 patients had a negative history and among them 930 had a dirty wound, a tetanus prone wound. With this algorithm 1874 boosters and 930 TIG are needed.

Cost-Benefit Study: cost benefit study was conducted with POCT in comparison with WHO algorithm. To calculate the cost of prevention using POCT we have added the cost of 1995 POCT to the cost of 564 boosters and 294 TIG. We observed that the total cost was €22,313. On the other hand, to calculate the cost of the prevention with WHO algorithm we have added the cost of 1874 boosters to the cost of 930 TIGs. The total cost is €37,235

Conclusion

POCT is a good tool to use in tetanus prevention and we think it could be used routinely because

- 1) POCT avoids unnecessary vaccination and unnecessary TIG administration
- 2) it is quick and accurate
- 3) more significantly POCT allows a cheaper tetanus prevention.

Allergy alerts in ED: Improving patient safety

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Background

Medway Maritime Department (ED); a busy ED department in England. The patient group; all ED patients. Following a significant event, allergy documentation was noted to be lacking, thereby leading to patients receiving drugs to which they had a known allergy. The number of allergy boxes completed on the patient notes was surveyed and found to be around 10%. The number of clinical incident reports relating to the administration of drugs to a patient with a known allergy was checked. Each staff group involved in the documentation process was asked why they thought so few of the allergy boxes had been completed. Only administrators knew how to fill in the box but couldn't do so as their logins were non-clinical. Patients were noted not to have red allergy bands and if a patient was unconscious, the ED IT system could not draw their allergy status from previous inpatient/GP records. The ED IT system was not being populated with allergy information for future visits. Findings were presented.

Method

1. The patient journey was assessed from their arrival in the ED through to their departure.
2. Current practice was identified.
3. Areas for improving patient safety were identified.
4. Findings were presented to stakeholders both at individual and group levels to seek their ideas and support, over the course of a six month period.
5. Solutions were devised focusing on:
 - a) education around allergies; posters for patients and teaching for staff
 - b) documentation of allergy status; allergy status documented on all clinical records (including ED front sheet and discharge summary) and issuing of red allergy bracelets.
6. Patients and staff were given the opportunity to give feedback about the project when it was displayed in the hospital foyer on two occasions.

Outcome

As the project is still in progress, these are the preliminary and anticipated results:

1. Promoted a patient safety culture in the ED in relation to allergies
2. Implementation of National guidelines regarding issuing red allergy bracelets as a marker of allergy status
3. Increased awareness of dangers of prescribing without knowledge of patient's allergy status
4. Increased awareness of prescribing antibiotics in the penicillin allergic patient
5. Increased satisfaction amongst staff working in the ED that national and international safety checks are in place to prevent drug errors in relation to allergies
6. Increased satisfaction amongst patients using the hospital that a safety culture is place where mistakes are learnt from

Conclusion

While human error cannot be eliminated, it can be minimised. By the implementation of these interventions, there is considerably less scope for errors slipping through the net. We anticipate that the problem highlighted will be significantly less likely to re-occur. Challenges encountered were limited funding and disseminating information to effect change in a timely manner.

It can be difficult ACCEPTING practices which could be improved upon. However, by witnessing service improvement, the sense of achievement leads to design of further quality improvement projects.

Making both visible and invisible changes to the way people's allergy status is recorded inspires confidence and trust among patients in our services by demonstrating that we take their safety seriously and learn from our mistakes. This is not just important at a local but also a national level as ultimately it is a publicly funded service.

Improving Weekend Handover Systems

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Background

Southern DHB covers a large rural area in the South Island of New Zealand with many services centralised to Dunedin Public Hospital (DPH). DPH has 400 inpatient beds including medical and surgical specialities, along with paediatrics, maternity care and medicine for the elderly. Prior to 2016, it was identified through an audit of Internal Medicine, Ward 8MED, handover processes, that there was no standardised method for weekend handover between doctors. Safe and effective handover is recognised as crucial to safe patient care therefore we set out to develop an easy-to-use electronic handover tool with the aim to improve and maintain effective handover between doctors.

Method

Between October 2015 and January 2016 consultation between the authors and the DPH IT department resulted in the creation of the electronic handover tool. Ward 8MED was used to pilot the tool through February 2016. We sought feedback by formal meeting and SurveyMonkey of the doctors; adaptations were then made to the handover tool, largely re-formatting some sections. In March 2016 the electronic handover tool became the primary method for formal weekend handover. New doctors were provided with a short teaching session on how to use the tool and provided with written guidelines for their reference. Following the initial changes after the pilot study a further SurveyMonkey was again conducted. Further changes were made including re-arranging how patients were organised on the final handover document. The re-audit was conducted over the 4 weekends in March 2016.

Outcome

Prior to development of the handover tool only 50% of patients on 8MED had a weekend handover completed. With implementation of the tool, within 2 months, 90% of all patients had a weekend handover completed using a standardised format. Junior doctors rotating through other departments then chose to introduce and use the handover tool as their form of weekend communication. June 2016 the tool was introduced to the general surgical and orthopaedic departments; by October 2016 obstetrics and gynaecology were using it; in December 2016 medicine for the elderly started to use it; January 2017 all medical specialities had incorporated it into their weekly routine and in March 2017 the paediatric department adopted its use.

Conclusion

We experienced excellent clinician engagement throughout the project which was crucial for the use of the handover and the feedback process. In addition to this we had face-to-face meetings and continuous support from our IT department. The greatest challenge encountered was related to formatting and design problems with the handover tool. Few of these impacted on the actual use of the tool however ease of accessibility to the IT department was vital.

As a result, at least 90% of patients now have a formal weekend handover tool completed. By developing a standardised communication tool we expect to promote and harness a culture of safe and effective handover.

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Background

The Hospital Municipal Infantil Menino Jesus is a public institution that serves children and adolescents, from 0 to 17 years and 11 months. It is a pediatric reference in the city and is located in the central region of São Paulo. It has 20 UTIP beds. Serves SUS patients with complex clinical and liver transplanted pathologies. More recently it has expanded 10 beds of the ICU to be Reference Center in Multivisceral Transplantation.

The General Hospital of Grajaú is a state public school hospital that serves the population of the South region, with almost one million inhabitants. It is reference in urgency / emergency and in calls of medium complexity. Currently, it has 268 operational beds, including adult, infantile and neonatal intensive care units. The ICU serves pediatric patients with clinical and surgical problems.

Method

This project was developed based on the Improvement Model (Langley et al). We started working with brainstorming and to answer the question: what is missing for us to reduce rates of central line associated infection in the PICU? The information obtained were organized in an Affinity and a Cause-Effect Diagram. A Driver Diagram was performed for changes. The insertion and maintenance central line bundles were applied. Specific needs were raised by discussions with the involved PICUs multiprofessional team. Small tests for each change was realized through the use of PDSA methodology. The result and process measurements were followed.

The project team was made up of healthcare professionals and infection control personnel. Weekly meetings were aligned and easy communication forms through email and Whatsapp groups for daily exchange of information were used. We used every moment to integrate healthcare staff to disseminate and share learnings, also through the learning board.

Outcome

The improvements were followed by results and process measurements. Both hospitals have obtained better results and the reduction of data variation shows more reliable processes. The goal is 90 days between infections until June 2017. Baseline data were collected since september 2016 and data achieved at this time were 6 and 10 "days between" (median) central line associated infection for HGG and HMJ respectively. After 6 months the results were 22 and 14 days between, respectively. Also, central line-associated bloodstream Infection (CLABSI) Rate per 1000 Central Line-Days was decreased around 50% in both hospitals.

Adherence to CVC insertion and maintenance bundles is greater than 90% in almost all of the observed procedures (goal >95%). Adherence to hand hygiene is more than 95%.

Conclusion

The implementation of an improvement model and new forms of team communication can perform better results for patients.

Paediatric Safety Checklist based on the principles of the WHO Safer Surgery Checklist Paediatric Safety Checklist based on the principles of the WHO Safer Surgery Checklist

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Background

A 3 year old child presented to a General Paediatric Department with apparent respiratory problems. The child was diagnosed to be in diabetic ketoacidosis only several hours later. We regarded this misdiagnosis as the equivalent of a surgical 'Never Event' and hypothesized that use of a checklist similar to the WHO Safer Surgery Checklist could avoid similar occurrences in the future.

Method

The first version of the checklist was tested in September 2014. A number of measures were undertaken to involve the multidisciplinary team with the aim of fostering a feeling of clinical ownership. This involved training and education on multiple occasions, identifying champions and project leads, seeking staff feedback with incorporation of suggestions and conducting a staff survey. Both informal feedback from parents and formal feedback from staff were positive. Data was collected using repeated PDSA cycles measuring the number of checklists used correctly. This was initially 55% in September 2014, however had fallen to 17% in March 2015. Training and education was repeated. Further data capture in May and June 2015 showed the correct use increased to 62% and 67% respectively. The checklist was then integrated into the standard admission proforma.

Outcome

Retesting in November 2016 demonstrated that use of the checklist had fallen out of favour and that compliance rates had fallen dramatically in comparison to July 2015. A reassessment of staff attitude to both the checklist and the wider culture of quality improvement in the department was conducted to identify barriers for implementation and sustainability. Our repeated staff survey in 2016 clearly demonstrated that staff continues to feel that the approach is the right one, although somewhat less so than before. Staff were also found to agree with the importance of principles as described by the Institute for Healthcare Improvement with all of these domains being rated very highly with regard to perceived importance.

Conclusion

We continue to believe that a checklist approach is feasible, as has been demonstrated with the WHO Safer Surgery Surgical Checklist. Ideally this should be ingrained in patients' flow through the hospital and should be supported with better use of IT systems.

Improving Patient Safety by having a doctor present on each medical ward on a Bank Holiday

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Background

The project was undertaken at the Basingstoke site of Hampshire Hospitals NHS Foundation trust. The focus of this project was to improve the timeliness and manner of how deteriorating patients on medical wards are being reviewed and their care escalated.

Whilst completing data collection over a course of one month we found there was a culture of not calling for help as demonstrated by over 50% of patients not being reviewed for more than 24 hours. While there seems to be a lack of escalation between nurses and doctors, it was also observed that in most of the cases FY1s did not escalate a patient for a senior review. The main concern involved was that patient with a high NEWS would not be escalated and reviewed in a timeliness manner, particularly over a long weekend.

Moreover, it was also found that the escalation protocol was not followed in terms of repeating observations, involvement of outreach and consultant reviews.

Method

Improving patient safety was the theme of this project and it was this vision that meant our doctors were prepared to work a bank holiday. We have shown having increased doctor presence on a bank holiday means our hospital will be safer. From this experience we have learnt that we need to work on encouraging healthcare staff in escalating high NEWS score.

We assessed the cause by collecting data over the course of one month of how NEWS is implemented on the different medical wards and assessing specific patient cases where flaws occurred. We conducted detailed causative analysis with the individual groups involved in the escalation pathway.

Outcome

We looked at the response to a NEWS score greater than 7, in regards to escalation and timeliness of doctor review. Our comparison data was the month of data collection and weekend prior to the bank holiday. On the Bank Holiday, almost all patients were escalated and seen by a doctor. In comparison to the weekend prior, only less than half (40%) of NEWS over 7 had been escalated and only 35% of patients reviewed.

This project showed that patients who had a higher NEW Score on the Monday of a bank holiday were more likely to be seen by a doctor. . There was a clear discrepancy between in-hours escalation and out of-hours escalation, not explained by the lack of doctors as on most occasions the initial call was never made. One recurrent theme was a call was more likely to be made if there was an identifiable doctor present. With a reduced doctor presence over a weekend including a bank holiday, patients who have a high NEWS score may not be appropriately escalated.

Conclusion

The data supports the theory that doctor presence on a ward meant a high NEWS score was more likely to be escalated and reviewed in a timely manner as it served as a reminder. Data from studies show that early review and treatment reduces deterioration and improves outcome. This intervention fits with our work on improving timely escalation of deteriorating patients. Moreover, a NEWS activation call escalation plan has been made to ensure unwell patients scoring a NEWS above 7 are flagged up to the on call. The medical doctors rota was reconfigured to ensure enough cover on long Bank Holiday weekends in order to increase Patient Safety.

Gender disparities in red blood cell transfusion in elective surgery: a post hoc multicentre cohort study

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Background

The Austrian Institute of Technology (AIT) together with experts in the field of Patient Blood Management (PBM) collected data in two consecutive benchmarking studies, including a total of 6530 patients undergoing elective surgery. The main focus was the transfusion related triad of adverse outcome: anaemia, blood loss and transfusion.

Women are more likely to be transfused than men and together with perioperative blood loss and anaemia they have a higher risk for adverse outcomes. The main risk factors - namely preoperative anaemia, blood loss and transfusion of blood components - can be mitigated by adequate and timely prevention and treatment. This strategy has led to the development of the PBM concept, which is based on three pillars: optimization of the patient's endogenous red blood cell mass; minimization of diagnostic, interventional, and surgical blood loss; and optimization of the patient's tolerance of anaemia.

Method

In all surgical groups, the transfusion rate was significantly higher in women than in men (Coronary Arterial Bypass Graft (CABG) 81 vs. 49%, Total Hip Replacement (THR) 46 vs. 24%, Total Knee Replacement (TKR) 37 vs. 23%). In transfused patients, the absolute blood loss was higher among men in all surgical categories while the relative blood loss was higher among women in the CABG group (52.8 vs. 47.8%) but comparable in orthopaedic surgery. The relative RBC volume transfused was significantly higher among women in all categories (CABG 40.0 vs. 22.3; TKR 25.2 vs. 20.2; THR 26.4 vs. 20.8%). On postoperative day 5 the relative haemoglobin values and the relative circulating RBC volume were higher in women in all surgical categories.

The use of a liberal transfusion strategy lead to over-transfusion in women.

Outcome

A European PBM implementation guide was developed as a supporting tool for hospitals (EUROPEAN COMMISSION Directorate-General for Health and Food Safety Directorate B — Health systems, medical products and innovation Unit B.4 — Medical products: quality, safety, innovation, 2016). It has taken inspiration from successfully implemented programmes in different parts of the world. This guide is the result of the combined expertise of an international, multidisciplinary team of clinicians and PBM professionals and the collective experience gathered from a 30 month pilot programme for the implementation of PBM in five European teaching hospitals. The final goal is to support PBM as a sustainable standard of care across the EU.

Conclusion

Up to now, no final results of the specific implementation of PBM in women are available.

After its implementation, primary outcome measures will be the number of RBC units transfused and differences in transfusion rate between men and women in further observational studies. Secondary outcomes will include perioperative blood loss, volume of RBCs transfused, perioperative haemoglobin values and circulating red blood volume on postoperative day 5. Mann-Whitney U test for continuous variables, chi-square test for frequencies and multivariable analyses on gender disparities will be used for statistics.

The higher transfusion rate and volume in women in elective surgery can be explained by clinicians applying the same absolute transfusion thresholds irrespective of a patient's gender, even though women have a lower baseline RBC volume. This, together with the common use of a liberal transfusion strategy, lead to substantial over-transfusion in women.

Improving compliance with the Sepsis 6 Bundle in a Cardiothoracic ward through staff engagement and local ownership

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Background

As a national resource for Scotland, the Golden Jubilee National Hospital is the home of regional and national heart and lung services for NHS Scotland.

Despite best efforts, the compliance with many safety bundles was not generally sustained above 95%. Compliance with the Sepsis 6 Bundle in this pilot area - a Cardiothoracic ward was approximately 36%.

This was due to many factors, including clinical non-engagement. Other factors included our largely elective case mix and many triggers for Systemic Inflammatory Response Syndrome (SIRS) were not related to infection.

It was identified that clinicians worried some patients would inappropriately receive intravenous fluids and antibiotics, leading to the decision that all triggers for SIRS would be logged, with a detailed description of each decision for patient care being clearly laid out with respect to the 6 elements of the bundle.

The aim was to improve overall compliance by at least 50% by December 2015

Method

A project team drawn from all staff groups met in May/June 2015. A flow chart and force field analysis was used to identify the main reasons for low compliance, agree the appropriate interventions to test, and gain permission from the national patient safety body to modify the tool to reflect local scenario.

Based in part on the model described by John Kotter in 'Accelerate', and on Deming's theory of profound knowledge, the main change idea (already embedded with VTE work) was a 10-30-minute weekly "work-with" round by the core project team to look at the Sepsis 6 data, aiming to help staff understand them; plan PDSA cycles to test ideas to improve compliance; providing mentorship and support.

Testing of this new approach and other change ideas including flow redesign and giving individual feedback to clinicians started in June 2015 and took place over a six-month period.

Monthly display of the Sepsis 6 compliance data helped place an emphasis on the transition to local ownership.

Outcome

At the end of the project period, there was a clear shift based on run chart rules. The overall compliance improved from 36% to 73%.

The new approach and model gave the team a boost and has helped compliance to rise to nearly 90% since then, despite ongoing challenges.

Conclusion

The work suggests that employing a listening approach to quality improvement, using simple QI tools and methods and a weekly 'work-with' QI round model improves front-line staff engagement. These in turn improve compliance with safety bundles and assured an improved system of intervention to reduce risk of harm from Sepsis.

Building capacity for carrying out QI work remain an ongoing challenge. Also, the turnover of doctors, who are the major drivers, due to training rotations meant starting afresh every 4-6 months to achieve clinician engagement.

Without forming a coalition with front-line staff, urgency for QI work can be easily lost in a busy surgical ward. Urgency and engagement are crucial to success and can be easily created and sustained using data and regular meet-ups.

Neonatal ICU Safe Hands Project: A journey towards patient Safety Culture in the largest level 3 NICU in the Middle East

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Background

HMC is main provider of specialized care in Qatar. It is JCI accredited. It collaborates with Weill Cornell, IHI & Partners Healthcare for excellence. Its 107 bed NICU is largest in Middle East & only level 3 in Qatar. Its occupancy often exceeds capacity. It has 400+ staff. Large occupancy, regular staff joining, multiple rounds, visiting subspecialists, residents on short rotations and movement across dependency areas all risk HAI. An outbreak of gram negative sepsis in 2015 along with increasing CLABSI (4.28 vs 4.07), VAP (1.36 vs 0.79), HAI (5.84 vs 5.53) & poor hand hygiene compliance (82% vs 84%). A survey in 2015 dawn showed hand hygiene being most deficient. Later steps and moments are often skipped. Project aims to create a robust sustainable program to improve practice of hand hygiene, adapting WHO multimodal approach, reducing HAI rate, ushering attitude & behavioural change of caregivers. Staff compliance targeted at 86% by Dec 2016 and 90% by Dec 2017, from 82% in May 2015.

Method

Major PDSAs

1. System Change: a. Ensure POC equipment across NICU b. Install additional handwash & receptionist areas c. "Outbreak alert mechanism" d. "Gel-over-water" drive
2. Training & Education: a. Infection control coordinator train staff b. Technique evaluation using HH inspection machine c. Yearly competency check d. Parent leaflet
3. Evaluation & Feedback: a. Questionnaire based survey b. Biannually facility check c. Parent feedback form d. Annual staff feedback. e. Monthly feedback via email f. Streamlining behavioural audit & feedback
4. Reminders in workspace: a. Posters & roll-ups in patient & staff areas & QI dashboard b. Parent/staff badges c. Info in website & internal media
5. Institutional Commitment: a. Support from & feedback to Director b. HH day & iC week

PDSAs in small areas & if successful, across unit. Timelines set. Successful PDSAs standardized into SDSAs with individual leads & collective responsibility.

Outcome

A. Outcome measures:(2016 vs 2015): 1. HAI Rate: 27% less; 2. Late onset sepsis: 21% less; 3. CLABSI: 58% less; 4. VAP:28% less.

B. Process Measures:1. Compliance to Hand Hygiene: 87% vs 84%; 2. Technique: better practice of 7 steps; 3. 5 HH Moments:4th & 5th moments improved 5% & 10% respectively

C. Balance measures: 1. Length of Hospital Stay: 4.5 vs 6.1 days; 2. Staff & parent satisfaction: better

CHANGE IN WORK CULTURE.. It has become more "reflexive" than "thoughtful". Reminding is not offensive. No cross infection over past 1 year. Infection Control practitioner well empowered.

Patient: 1. Less risk & rate of HAI; 2. Lesser needle pricks, iv lines, infiltrations, antibiotics & pain; 3. Shorter ventilator days & length of stay

Unit: Less occupancy & cost.

Staff: 1. Culture & behavioral change; 2. Better compliance & technique; 3. Feels "everyone's business"; 4. Less workload; 5. Feels empowered

Family: 1. Better trained; 2. Responsible; 3. Empowered for feedback & reminders; 4. Less frustration.

Conclusion

The multipronged approach towards improving hand hygiene practices encompassing multiple PDSA cycles, utilizing WHO multimodal approach has helped us to achieve our patient safety goals by better hand hygiene compliance and reduced infections in our NICU.

Problems encountered: a. Material Management streamlining; b. New installation needed unit restructuring; c. High nurse: patient ratio; d. Inadequate Training & Education; e. Loose feedback mechanism; f. Seldom workplace reminders; g. Late adopters and laggards.

Lessons learnt: 1. Involve all stakeholders and workforce. 2. Multipronged approach for difficult tasks. 3. Multiple small PDSA cycles add to big results 4 Sustainability brings success 5. How to improve by small steps

Messages for others: 1. Multipronged approach works. 2. Implement in small area before putting across unit 3. Make adult learning interesting. 4. Workplace reminders and systematic feedback essential.



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