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Conference Proceedings

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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 projects from teams in countries such as UK, Malaysia, Australia 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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Please Don't Disturb! Ward Round in Progress: a QI project on reducing the number of interruptions during ward rounds

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Background

Ward rounds take place daily for most specialities as it is an important process for the progression of the patient's current management. Royal College of Physicians (RCP, 2012) published the best practice guidelines on ward rounds. During our wards rounds, we observed and realised that 'interruptions' was a barrier; for which there has not been any awareness, even in the RCP guidelines. From further observation, it became obvious that interruptions can affect both efficacy of patient and ward round e.g.:
1. Patient Harm - Missing information during ward round & poor communication verbally & via poor documentation.
2. Patient Safety - Prescribing Mistakes & Missed management plans.
3. Reduced Effectiveness & Efficiency - Time prolonging and causes poor communication among multi-disciplinary team.
4. Poor Quality Care & Cost effectiveness - Not meeting preferred standards; e.g. Unable to complete documentations leading to poor communications and delay in discharge.
5. Productivity - Reduced learning and teaching.

Method

We selected three medical wards and worked with the junior doctors & nurses who run the wards rounds in those departments, to assess the interruptions. We devised a standardised proforma for junior doctors to record the number of urgent and non-urgent interruptions, reasons for interruptions and total duration of the ward round. Urgent interruptions included unwell patients and Speciality input reviewing referrals; and non-urgent interruptions including asked to re-write drug charts, complete discharge paperwork, do non-urgent catheters etc.

We undertook two PDSA cycles. 3 weeks were allocated for changes to be implemented allowing for staff education and raising awareness of the golden rules. The project was presented in the Grand Round and received feedback with input from doctors and nurses.

The aim: To establish an efficient & effective 'Protected Ward Round Time' for both staff and patients.
Outcome: To reduce the total number of interruptions during ward rounds by 50% by April 2017.
We undertook two main interventions including:
1. Established New Golden Rules Posters with non-urgent and urgent interruptions.
2. New 'Do Not Disturb – Ward Round in Progress' Signs.

Outcome

Our first data collection showed over one week there were: 28 interruptions on Gastroenterology ward (89% non-urgent, 11% urgent); 21 interruptions on Respiratory ward (86% non-urgent, 14% urgent); 13 interruptions on Geriatric ward (100% non-urgent, 0% urgent).
After change was implemented a second cycle was undertaken. All the interruptions were included with no exclusion criteria.
The percentage change in the total number of interruptions over 1 week: Gastroenterology Ward: Declined by 14% Respiratory Ward: Declined by 52.3%; Geriatric Ward: Declined by 15.4%; Maximum teaching time 10mins (average) per day, otherwise less.

Conclusion

The change had a positive impact in decreasing the number of interruptions leading to a shorter ward round duration. Feedback from the staff showed that a focused ward round increased opportunities for bedside teaching and more awareness of management plans. This positive impact is anticipated to have a significant contribution in minimizing errors and improving patient care.
There is some correlation in the duration of ward round with the number of interruptions (non-urgent):
Harvey Ward – 11 interruptions led the ward round duration of 3hrs 45mins.
Limitations included: number of staffing and locum agency staffing unaware of golden rules when starting shift.

The effectiveness of physical and psychosocial health promotion activities for elderly in the Community Care Center in Taiwan

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Background

The greatest hope of the elderly in the community is leading a comfortable and carefree life at home. Elderly people generally have visual and oral functional degradation, and psychological aspects of health issues. Well-designed health promotion activities can help the elderly in the community to have good health care and maintain their health status. The purpose of this study was to evaluate the effectiveness of the physical and psychosocial health promotion activities among the elderly using the community care center.

Method

We used the pre-and post-test research design, and selected participants (N = 30, age range: 60~85) from the community care center at Shilin district of Taipei city in Taiwan. The instruments included elderly attendance rate, questionnaire by Likert scale, Healthy Elderly Bedroom Fall Prevention Checklist and qualitative interview. The activities were conducted once or twice times a week and lasts for at least 30 minutes/time, over the six-week period. We used the paired t-test .Analysis was done by using the SPSS for Windows 22.0.

Outcome

The activity resulted in an increased visual self-perceived health ($p<0.001$), vision health behaviour ($p<0.001$), oral health behaviour ($p<0.001$), and positive self-perceived psychological health ($p<0.001$) was significantly improved (Table1). The study supported the effectiveness of physical and psychosocial health promotion activities for the elderly. In this study attendance rate was 80% . There were 10% of the elderly whose living environment need to be modified. The qualitative interview showed that elderly in the community could integrate health behaviour education into their daily life. They also had increased interaction with other people in this program.

Conclusion

The study has achieved the short-term goals for the physical and psychosocial health promotion activities among elderly in the community. We recommended this intervention program could be as a reference for the activities to promote the healthy aging in the future.

Experiences during One Month Postpartum for first time mothers in Taiwan

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Background

A postnatal period or postpartum period or fourth trimester of pregnancy as a pivotal period of transition in women's life, in which women have to confront the physio-psychological change as well as the role and task changes to become a mother. Yet, this is an extremely obliterate period for caring. The aim of this study was to explore the feelings and experiences of primipara during one month postpartum.

Method

A qualitative research methodology was utilized to conduct the research. Before data collection, an administrative connection and agreement were acquired and verified by the Institutional Review Board of the hospital. 20 postpartum women were selected by purposive sampling technique. Participants, recruited from home in Taiwan between April, 2016 and March, 2017, were interviewed about their feelings and experiences about doing first time mothers during one month postpartum. In-depth interviews were conducted and audio-taped at mothers' homes to collect data. Participant descriptions were then sorted and analyzed.

Outcome

After repeated data analysis, it was found that the experiences and feelings of primipara during one month postpartum including three subjects: (1) physical balance: dieting, wearing cleanliness, activity, sleep, (2) mental balance: worry, scare, restless, well-being, and (3) performance balance: neonatal care.

Conclusion

By helping health care providers better understand the feelings and experiences about doing first time mothers during one month postpartum, and consider coping strategies for maternal physio-psychological needs.

Drive safe, Drive longer: self-regulation is the key to road safety in older adults

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Background

Driving helps older adults to stay active, mobile, and maintain independence. However, the risk of being injured or killed in a road crash increases in older adults, contributing to healthcare burden. Most of the older drivers are keeping their licenses longer and driving further than in the past. Previous studies reported that some older drivers self-regulate their driving to maintain their mobility, while reducing crash risk, yet the process remains poorly understood. To our knowledge, there were no studies which elicited how older adults' self-regulate their driving in Malaysia. Considering the importance of sustaining safe mobility in old age, this study aims to explore demographic characteristics, travel patterns, and factors influencing the decision to reduce driving. Survey with current Malaysian drivers, aged 60 years and above who reside in the states of Selangor or Kedah.

Method

A structured questionnaire was used to obtain a broad understanding of the characteristics of the sample population of interest. The questionnaire contains six major sections; including demographics and travel patterns, Driver Behavior Questionnaire, Short Geriatric Depression Scale, and driving difficulty, confidence, and avoidance scales. Consent was obtained prior to the commencement of this study. Participants were required to complete all sections in the questionnaire and a token of appreciation was given to each of them upon completion. This study surveyed older adults recruited via advertisement, online survey tool (Qualtrics), snowball sampling through acquaintances, and in-person approach. These adults opinion were sought throughout the research. Stepwise linear regression analyses were performed to identify significant factors of driving reduction using Stata version 13 (Stata Corp., College Station., Texas, USA).

Outcome

Older adults who did not drive on a regular basis, committed frequent aberrant driving behaviours, and reported facing driving difficulty were more likely to reduce their driving by avoiding one or more challenging situations, especially driving in the rainy night. Apart from commonly reported health-related factors, we found that intrapersonal factors such as behavioural and psychological changes that often accompany ageing are associated with driving reduction among Malaysian older adults. As people grow older, driving progressively becomes a complex task yet, important for survival. Correspondingly, older adults revealed a propensity to adopt self-regulatory driving strategies as opposed to making plans for cessation and continue driving safely for as long as possible without having to stop altogether. Even though these modifications contributed to an overall reduction in mobility, many older adults are more pleased with the idea of reduction over immediate cessation.

Conclusion

The findings of this study will provide an enhanced understanding of the travel patterns and characteristics of older Malaysian current and former drivers. In addition, this study will also serve as a platform to examine and propose enhancements to the relevant policies, programs, and supporting initiatives to assist them in sustaining safe mobility. To summarise, self-regulation is a life transition decision and older adults reported facing various challenges underscoring the need for support to attain and maintain the transition successfully. Knowing the fact that road crashes are largely preventable, we believe that maximal road safety for older adults can be achieved by targeting the road user, vehicle, and its environment. Whilst understanding the true motivations for these behaviours is necessary, future direction of research includes one-to-one interviews with older adults to explore the subjective aspects of practices adopted and their mobility patterns.

Nurses perceptions, acceptance and use of barcode technology in clinical care: testing an expanded technology acceptance model (TAM)

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Background

To investigate the related factors influencing nurses' perception and acceptance in using medication administration and blood transfusion barcode technology system.

Method

We conduct a cross sectional study, use convenience sampling to include nurses' in one medical center who participate in 2017 nurse technology seed examiner consensus meeting. The medical center located in middle Taiwan and use medication administration and blood transfusion barcode technology system. We conduct a medication administration and blood transfusion barcode technology acceptance model questionnaire survey.

Outcome

There were 59 subjects recruited. Nurses have positive acceptance in medication administration and blood transfusion barcode system, agreed that barcode system improved patient safety during clinical care. Acceptance of blood transfusion barcode system was highest than medication administration barcode system, which showed significant difference in perceived usefulness for self (PU-SELF), perceived social influence and system satisfaction. The result of TAM multiple regression analysis showed that importance predictors were perceived usefulness for patient (PU-PT) and perceived social influence, adjusted R2 was 72-89%.

Conclusion

Our study results provides a reference for clinical information system design, implementation strategy and behavior research.

Implementation of the closed-system drug transfer device (CSTD) for safe handling of chemotherapeutic drugs

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Background

Chemotherapeutic drugs play an important role in medicine for the treatment of cancer. However, they have carcinogenic, genotoxic, teratogenic or mutagenic properties that may harm healthcare workers. Falck et al. in the 1970's documented that the healthcare workers who prepared and administered chemotherapeutic drugs were themselves being occupationally exposed to the drugs. A national survey conducted in Washington published in 2007, reported that nurses who have long-term exposure to chemotherapeutic drugs are 42% more likely to develop cancer.

To mitigate this risk of healthcare workers being exposed to chemotherapeutic drugs, the use of a Closed-system Drug Transfer Device (CSTD) was implemented in the Cytotoxic Drug Reconstitution (CDR) unit and Hematology and Oncology Treatment (HOT) unit in Gleneagles Penang hospital. The National Institute for Occupational Safety and Health (NIOSH) and The International Society of Oncology Pharmacy Practitioners (ISOPP) define a CSTD as "A drug transfer device that mechanically prohibits the transfer of environmental contaminants into the system and the escape of hazardous drug or vapour concentration outside the system". It is both leak-proof and airtight.

This project was carried out by a multidisciplinary team consisting of CDR Pharmacist, Quality department, and involved members from the Management, oncologists, CDR staff and HOT nurses.

Problem: Odour (not airtight) and residual chemotherapeutic drugs (not leak-proof) were found during the preparation and administration of chemotherapeutic drugs. This increases the risk of secondary exposure of healthcare workers to the chemotherapeutic drugs.

Method

A coffee test was performed to 3 different types of devices (2 non-CSTD devices, 1 CSTD device) to test for leakage and airtightness. The coffee represents chemotherapeutic drug. A dry connection point indicates that the device is

leak-proof and the absence of coffee smell detection indicates that the device is airtight.

Method: An empty vial was filled with coffee powder, which was then diluted with hot water. A piece of tissue was pressed onto the device tip to test for leakage. Observations whether coffee smell was detected from the device were recorded.

Data collection started after the coffee test. Interventions were decided on after performing trial on 3 different types of devices for its effectiveness in use for preparing and administrating of chemotherapeutic drugs. Then we proposed the interventions to oncologists and HOT nurses as well as having discussion with CEO and getting approval to carry out

Outcome

Residue and coffee smell detected from the tip of first non-CSTD device. No residue found from the second non-CSTD device but coffee smell was detected.
No residue and coffee smell were detected from the 3rd device. This device meets the requirements of a CSTD.

3rd device is leak-proof due to its double membrane feature where it provides a dry connection. It is an airtight device as it collects any air vapor that may escape to the environment into the large air pocket chamber alongside the vial.

No chemotherapeutic drug residue has been observed since the use of the CSTD. The implementation of CSTD therefore created a safer working environment and decreased the occupational risk for healthcare staff.

Conclusion

It is important to ensure that the staffs work under a safe environment with a minimal occupational risk to their health. Therefore, the CSTD plays an important role in preventing hazardous drug release to the environment during the preparation and administration chemotherapeutic drugs.

Despite the high cost, the use of Closed-system Drug Transfer Device (CSTD) is beneficial to prevent long-term harm from chemotherapeutic drug exposure to our healthcare staff.

Bidirectional data feedback mechanism for nursing staff to improve quality of care: using pressure ulcer prevention as an example

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Background

The study site is a medical center with 3000-bed , the nursing information system (NIS) is developed by the department of information management and department of nursing in 2012. The quality management department is responsible for extracting relevant data from the dataset and reporting to the Taiwan Clinical Performance Indicators (TCPI) on a monthly basis.

The nursing quality management committee (NQMC) cooperates with the quality management department to verify the data of nursing-sensitive quality indicators. Of pressure ulcers (PU) indicator, the data is divided into general wards (GW) group and intensive care units (ICU) group for counting the incidence and prevalence rates, the detailed data of PU, e.g. cause of the PU, staging and location of each PU are extracted from the dataset as well.

In 2013, the data source of PU reporting were transformed from paper-based to auto-extraction from electronic dataset. The NQMC reviewed and analyzed the raw paper-based data and electronic data from 10 GW and ICU randomly, the results revealed that; for the data discrepancy between two sources, the major cause is in the paper-based data, incomplete and missing in many days were showed, due to the nature of human factors. The electronic data was extracted from the NIS skin integrity daily assessment data were matched with patients' condition. In the meanwhile, the electronic data also revealed that the staff nurses need more education of PU staging and prevention interventions.

Method

A bidirectional data feedback mechanism was established and started to work on January 2014; a multi-strategy education program was implemented, a 6 hours program was developed based on the evidence-based practice guidelines, combining with lectures, interactive response system and simulation teaching strategies and handon, 10 sessions were held for 1140 clinical staff nurses. The outcome measurement included 1. PU incidence rates, staging, and location, 2. a self-developed PU questionnaire to measure the differences of the knowledge of PU prevention and management care before and after the education program.

Outcome

The patients' PU incidence rates data were provided by the medical quality management department regularly. The accumulated 4 .5 years (2013.01-2017.03) report showed that, the PU incidence rates of GW are dropped from 0.292%, 0.195%. 0.166% to 0.088%, and of ICU are dropped from 0.939%, 0.549%, 0.646 % to 0.141% after the bidirectional data feedback mechanism and education programs.
The 1140 nurses attended the program; the cognition mean score were higher ($p<0.0001$) after the program, the PU staging 2 and above were significantly lowered in patient's in GW and ICU.

Conclusion

This project is implementing for 4.5 years; the bidirectional data feedback mechanism provides clear and detailed information to clinical nurses, they may easily found out the problems and the solutions. The program provided update knowledge and focused on the hands-on training for clinical nurses, over 50% nurses received the training. The PU rates were decreased significantly than before.

Psoriasis Comorbidities Quality Improvement Project

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Background

Psoriasis is a chronic inflammatory disorder that affects approximately 2% of the general population. It is associated with increasing rates of morbidity and mortality. This includes psoriatic arthritis, autoimmune diseases, psychiatric conditions, metabolic syndrome, cardiovascular disease and others.
Psoriasis comorbidities quality improvement project is conducted in Ambulatory Healthcare Services (AHS) which offers easier access to primary and secondary care including comprehensive laboratory and modern diagnostic facilities. The goal is to improve quality of healthcare and long-term management of patients with psoriasis in Abu Dhabi, the capital of the UAE.
Many patients and healthcare providers are unaware of Psoriasis comorbidities.
In addition, Electronic Health Record System (Cerner) doesn't contain screening tools to early detect rheumatologic and psychiatric comorbidities.

Method

Assessment of the problem was done through:
1. A survey to assess patients' knowledge about psoriasis comorbidities (33 patients).
2. A 357 psoriasis patients' records were checked if metabolic and cardiovascular risk factors screening was done within the last 2 years.
3. A survey on the top challenges for early recognition of psoriasis comorbidities was done (25 physicians).
4. Study the estimated mean time for application of Screening Tool (DLQI and PEST) in a busy clinic was done.
Current situation was analyzed and deficits were identified. A quality improvement model (PDSA) was adopted. A program was developed to improve screening methods and preventive strategies. Major activities in an organized timeline were set and distributed among team members. Information and statistics from surveys, questionnaires and workshops' feedback were analyzed. The improvement strategies included patient education, improving physicians' practice, involving nurses in psoriasis assessment and implementing new screening tools in Cerner.

Outcome

Psoriasis awareness day was conducted in AHS and included lectures, educational leaflet and activities for patients and their families. Multiple workshops were done for physicians and nurses to improve their knowledge and skills on dealing with psoriasis patients. Psoriasis Patient's Care pathway for Primary Care Physicians was designed. New screening tools (DLQI and PEST) were Implemented in Cerner.
After preventive strategies implementation, more awareness was noticed among physicians and nurses in applying screening tools on psoriasis patients.
Absence of reminders of tool application for nurses and doctors in their busy clinics will be solved by alert connected to diagnosis code of Psoriasis.
A six-month audit was done among all AHS clinics for screening of DLQI (34.82%), PEST (36.44%), Lipid profile (84.62%) and Glucose (67.21%). The audit is still going on to reach the target of quality care improvement.

Conclusion

Increasing knowledge of patients and healthcare providers and implementing screening tools in Cerner, should allow for early recognition and diagnosis of psoriasis comorbidities. This will improve the outcome for patients and consequently decrease the long term economic burden on Health Authorities.

Improving percentage of Value-Added Services (VAS) Utilisation among outpatients in Hospital Serdang Pharmacy (HSDG)

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Background

Serdang Hospital caters to a population of 10 million, some from as far as 130km radial distance away from the hospital. Its outpatient pharmacy serves 255,000 patients per year. On average, 40% of the outpatient pharmacy patients return to refill their prescriptions. Periodic prescription refill policy is instituted in all Malaysian government healthcare facilities to ensure appropriate use of medications among patients. This has inadvertently led to clogging up at pharmacy, prolonged waiting time and inconvenience for patients.

To overcome these challenges, Value-Added Services (VAS) were rolled out to diversify medication supply system. Under VAS, patients may opt from various Pharmacy Appointment Systems (PhAS) to refill prescriptions. Prescription will be filled before the patient arrive to collect. Unfortunately, VAS is under-utilized by patients and outpatient pharmacy continues to have large patient load with refill prescriptions. Full utilization of VAS enables patients to refill prescriptions with ease and pharmacy staff to concentrate on serving patients with new prescriptions.

Method

A cause-effect analysis diagram was constructed based on brain storming session to identify all possible factors contributing towards low utilization of VAS. The magnitude of each cause was examined using two questionnaires. The first one looks at patients' understanding on VAS and their barriers in utilizing VAS. The second questionnaire explores pharmacists' understandings on VAS and their barriers in providing VAS. Observational study was carried out to assess the percentage of patients being offered VAS. This is followed by a short interview with the patients to find out if any healthcare professional has signposted them to pharmacy to enquire regarding VAS. The results were presented in departmental meeting.
Three main areas identified for intervention were: lack of awareness among patients regarding VAS, poor understanding regarding VAS and poor effort to offer VAS amongst pharmacists and insufficient participation from other healthcare professionals.
We rebranded VAS to E-Plan. Promotions were conducted through desktop screen display, chair posters, pamphlet and banners. VAS Pocket Reference, VAS Quick Guide and VAS Promotion Tracker were introduced to assist pharmacists and simplify VAS enrolment. In Cycle 2 of intervention, we expanded our promotion to the hospital portal to reach out to more patients. Cycle 3 saw increased recruitment of VAS through bedside dispensing by pharmacists, while the E-counter was introduced and dispensing workflow was redesigned in Cycle 4.
VAS was rebranded by simplifying the work process and enrolment criteria. The proposal was discussed in meeting featuring Pharmaceutical Head of Department and all the stakeholders. Feedback from the meeting was taken into account when rebranding exercise was finalized. Workshops were held to disseminate the rebranded service to all pharmacy staff as well as other healthcare staff. VAS were incorporated into orientation module for new staff to ensure the continuity of the service. We also redesigned pamphlets, banners and introduced a tagline to attract patients.

Outcome

Percentage of VAS utilization is derived from the percentage of patients with refill prescriptions who use VAS. Following the interventions, the percentage rose from 12.5% to 16.2% in Cycle 1, 19.2% in Cycle 2, 25.7% in Cycle 3 and 31.4% in Cycle 4.
Waiting time for VAS patients was reduced from 24.6 minutes to 4.6 minutes. The introduction of E-Plan has resulted in a high satisfaction rating of 93% among users. E-Pos in particular, helped patients to save an average of RM18.50 of travelling cost per month. This study was adopted in a multi-centre study in Selangor state and resulted in an increased VAS utilization from 11.0% to 12.8% at the state level.

Conclusion

Streamlining work processes and enrollment criteria are crucial to make services appealing to clients and less confusing for our staff. Multidisciplinary approach is vital in ensuring the success of change in a multi-level organization. All stakeholders should be involved in the planning and execution of all quality activities and approval from higher authority is pertinent to ensure all parties are fully co-operative in solving problems.

Framework for Monitoring Clinical Improvement in Home-Based Stroke Rehabilitation

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Background

Nightingales Home Health Specialist, a Bangalore based company offers comprehensive Stroke rehabilitation services. This study includes 43 patients with middle cerebral artery affection, manifesting as acute (within one month of diagnosis) or chronic stroke due to a cerebral infarction or a hemorrhage. Team involved includes treating Physiotherapists across 4 centres and 3 neuro rehabilitation experts from the department of stroke rehabilitation. Currently, there is no consensus regarding the framework for standardized assessment and follow up care to help deliver optimal services at home, in the Indian scenario. Rehabilitation at home requires efficient monitoring, quantifying clinical improvement, goal setting and active patient participation.
Initially, patient feedback and daily documentation were used to measure patient satisfaction and to check the clinical improvement respectively. However, the intended benefit with the goal setting and patient participation was not seen.

Method

A clinician reported outcome measure Chedoke Mc Master Stroke Assessment Scale (CMSA) was introduced and administered at periodic intervals (every 4-6 weeks) – Baseline/assessment, 4-6 weeks/FU1, 8-10 weeks/FU2, 10-12 weeks /FU3.
Functional activity video recordings were taken to correlate with the CMSA scores and help patients visualize the improvement and garner their active participation.
Training on standard operating procedures, assessment, follow-up evaluation and administering of CMSA scale, was done in June 2016 and data collection began from July 2016 till May 2017.
Monthly quality review meetings were conducted involving the neuro-rehabilitation experts, treating physiotherapists and the team lead. The reviews included analysis of CMSA scores, goals re-adjustment and discussion of treatment approaches to help improve the scores before next follow-up.

Outcome

In acute stroke cases,
FU1 (data sets for 26 patients)
- 88 % patients have shown overall improvement in both activity and impairment inventory
- 77% patients showed significant improvement (more than 10%) in activity inventory and 65% patients showed significant improvement (more than 10%) in the impairment inventory

FU2 (data sets for 11 patients)
- 63% patients have shown overall improvement in activity and impairment inventory

In chronic cases,
FU1 (data sets for 17 patients)
- 88% patients had overall improvement in activity and 64% had overall improvement in impairment inventory

FU 2 (data sets for 5 patients)
- 60% showed overall improvement in activity and impairment

Comparison of average percentage of improvement in Acute and Chronic stroke patients from Assessment to FU2 showed,
- 20-30% improvement in impairment scores for acute patients between assessment to FU1
- mild deterioration in impairment scores and plateau with activity scores for chronic patients between FU1 to FU2.

Conclusion

The study helped us quantify effectiveness of standardized home care. It provided a robust mechanism of assessment, monitoring, goal setting and treatment planning in long term quality of care.
Home care setting provides patients and family, an environment for improved participation in therapy and setting realistic expectations. Consistent patient follow-up and goal re-adjustment using outcome measures improves the therapy compliance.
Our study revealed that >50% of both acute and chronic patients showed >10% improvement in the activity scores at FU 1 which indicates significant improvement in their activities of daily living during that period.
In our study, it is evident that home-based stroke rehabilitation can be equally effective in monitoring patient progress and designing timely interventions, provided there is a well-structured assessment and follow up care protocol.

‘Who is responsible for my care?’ A multihospital audit of surgical patient care

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Background

The Royal College of Surgeons of England published Good Surgical Practice in 2014. This guidance emphasised patient safety and good practice together with advancing surgical standards through improving care delivery.
Good Surgical Practice states:
‘Ensure that the patient knows the name of the person responsible for their care. If the responsible person changes, this should be promptly communicated to the patient.’
During surgical attachments the authors noted that poor adhesion to the above was responsible for poor practice and could potentially impact on patient safety and care.

Method

A prospective audit carried out at two tertiary centres in the Merseyside region – the Plastics Department at St Helens and Knowsley Hospital and the Trauma and Orthopaedics Department at Royal Liverpool and Broadgreen University Hospital.
Trauma and elective patients were asked:
'Do you know the name of the person responsible for your care?’

Outcome

Results: Of the 87 patients included (25 Plastic, 62 Orthopaedic) 56/87 (64%) knew their responsible consultants name. With trauma patients excluded, 51/55 (93%) knew their responsible consultant. Of 32 trauma patients only 5/32 (15.6%) knew their responsible consultant. The results were similar for each hospital (Plastics 1/12 (8%) and Orthopaedics 4/20 (20%)).
Improvement Implementation: Patients told consultants name when entering ward by nursing staff; Consultant name written above patient bed; Consultant name written on trauma clinic board daily; Juniors doctors informed of consultant and name added to trauma list handover sheet; Wearing name badges, introducing ourselves were encouraged (small gestures that go a long way); Introduction of a plastics trauma clinic where patients would attend before surgery, usually the day after referral/injury, to be assessed by a consultant (who would be responsible for their care); Low cost implementation
Re-audit: The trauma patients in the Plastics department were re-audited.; 14/15 (93%) knew the name of the consultant in charge of their care; This was an improvement over all for plastic trauma patients from 8% to 93%.

Conclusion

Effects of change:
Patients: Empowerment, less scared, more likely to ask questions, seen within suitable time frame, understood what was going on, can discuss/ask questions, puts focus back onto patient, safer environment, ready on day of surgery.
Doctors/nurses: Clear escalation of care, patient focused, paperwork easily completed (consent form), introductions set a pleasant tone for the consultation.
Other: Theatre lists more likely to start on time, satisfies the NCEPOD report 2007, “Emergency Admission: A journey in the right direction” which states the initial assessment of an emergency admission patient by a consultant, should take place within 24 hours.
Problems/limitations: Some patients attend the hospital twice which could be inconvenient, some consultants did not have computer codes so patients had to be admitted under alternative consultant name, small sample size, no proper measurement of patient feedback/satisfaction.
Take home message: Patients relax and develop professional relationships when they know who is responsible for their care; Encourage patient involvement; The trauma unit can be an overwhelming environment making it difficult for patients to take information in, unlike elective patients; Promoting professionalism and organisation of departments can have a positive impact on the workforce; Communication is paramount to good patient care/satisfaction.

The “Practice Leadership Advantage”- improving clinical and business outcomes in Australian general practice

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Future Focus Asia Pacific Pty Ltd

Background

The Clinical and Business Leadership program was developed for Primary Care Practices. The initial aim was to assist 61 doctors and 37 practice managers from 62 General Practices, across 4 Primary Health Networks (PHNs) to lead change delivering safer, more effective, more satisfying and sustainable care for people with chronic care needs in an environment where the funding models were changing, and the need for a more patient centred experience was required.
The doctors had previously no framework upon which to lead change, and most did not have practice plans or a practice vision.

Method

We delivered 3 workshops which were spaced over 250 days, with monthly phone coaching for 30 minutes x 6 for each participant.There was workshop pre-reading, data collection and reflection as tasks prior to each workshop, followed by reinforcing activities to support the learning.
Workshop 1: The Foundations: Key demands of leadership, Understanding your leadership style, "Know Your Numbers" and the Quadruple Aim
Workshop 2: Developing Momentum for Leading Change: “What leaders say and do matters” plus understanding your practice culture, and “what works in chronic care”
Workshop 3: "Consolidation": Engaging patients as customers and motivating doctors and staff. The workshops are a cumulative learning program. Each workshop is evaluated by the participants, who are followed up every month for a 30-minute phone coaching session assessing progress and supporting the leader in working through changes with their team and patients.

Outcome

This is a “work in progress”. Preliminary results show improved data, better understanding of the practice population and its specific needs, understanding clinical outcome data gaps, changes in practice culture, practice systems and improved patient and staff engagement. Nurses reported their roles were changing in order to better support patients with chronic complex care needs. Many doctors reported taking up exercise, and reducing their workloads in order to reduce burnout, and to become more effective leaders by focussing on working "on the business" rather than spending all their time working "in the business".

Conclusion

The most used change has been doctors conducting regular 1:1 interviews with nurses, administration staff and other doctors. During the phone coaching sessions, they have reported new insights into staff feelings and thoughts about the workplace and the issues which need addressing to improve clinical care. There has been an increase in regular practice meetings, where GPs and nurses attend together sharing patient care stories, workplace issues and system deficiencies. In the final workshop, a predisposing activity, “Know your numbers”, required GP leaders to interrogate the medical software databases to understand the practice demographics, chronic disease numbers and current outcomes and quality of coding. This has resulted in many practices better understanding the gaps in care they were providing, and has motivated the leaders to “think differently”. The barriers doctors have found is not having enough time, energy or understanding to regularly interact with practice staff, other doctors or asking patients about their experience in order to drive improvements. The program has given leaders a "Practice Advantage" to meet the changing needs of a healthcare business.

The influence of healthcare structure on adherence and health outcomes in Malaysia

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Background

The University of Malaya Medical Centre is a tertiary referral hospital to all of Malaysia as well as a local general hospital to the population of the Petaling District with a catchment of 300,000. Of these 7% are now over the age of 60 years. The acceptance of geriatric interventions such as multifaceted interventions and percutaneous endoscopic gastrostomy (PEG) have been variable, and the factors affecting reluctance to adopt these technologies are highly varied understudied. We therefore described the healthcare system barriers to effective implementation of healthcare technology for older persons in our setting.

Method

The Malaysian Falls Assessment and Intervention Trial (MyFAIT) was a 12-month tailored multifactorial intervention program aimed to reduce falls among community-dwelling older adults. Interventions that were available upon a falls risk assessment were the Otago exercise program, visual correction, cardiovascular intervention, home environment modification, falls education, medication review and footwear review. The PENoH study provides evidence for the use of PEG and NG feeding among older patients requiring long-term enteral feeding in an Asian setting.

Outcome

Final analysis of MyFAIT included 264 fallers (132 Intervention, 132 Control). Overall, 52% had a further fall within the 12-month follow-up period. Participant intervention uptake rate in decreasing order was cardiovascular intervention (80%), Otago exercise program (78%), visual correction (60%) and home environment modification (58%). However, the proportion of people who have successfully completed the intervention was reversed - home modifications (58%), Otago exercise program (46%) and cardiovascular intervention (39%) and visual correction (21%).

The PENoH study provides evidence for the use of PEG and NG feeding among older patients requiring long-term enteral feeding in an Asian setting. In a prospective study of 122 patients that compared NG to PEG for up to a period of 12 weeks, significant differences were found in serum albumin at the 4-week follow-up ($p < 0.05$). The nutritional benefits observed among survivors both in the NG and PEG groups were surprising, as a previous study had demonstrated that NG tube-fed patients in our setting were universally malnourished compared to orally-fed patients.

Conclusion

Fall interventions involving surgical procedures, additional costs or has multiple follow-up visits were at risk of reduced intervention completion. The improved outcome even in the NG control arm of our nutrition study was be explained by the availability of free high quality NG tubes and subsidised meal replacements. Our findings imply that cost subsidies may help increase the uptake of medical interventions in our older population.

Implementation of a Handover Proforma to facilitate communication and improve patient safety

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Background

Safe and effective medical handover is consistently highlighted by the Royal College of Physicians as an area of importance in hospitals. It is particularly important at weekends when patient care often passes to the on call team. On call doctors and allied healthcare professionals are often required to review patients whose care they have not previously been involved in. This can be in the context of a discharge, routine review or as an emergency. Obtaining an accurate summary of the patient's history, current issues and a clear escalation plan is often frustrating, time consuming and can result in and delays or mismanagement in care, leading to a breakdown of trust with patients and their relatives.
Recent feedback has highlighted the need for improvement in weekend handover on our Gastroenterology ward. In the past, lack of formal written handover and escalation plan, have resulted in complex decisions and difficult conversations with relatives being made in haste by the on call team, rather than in a more controlled and appropriate setting by the patient's usual team. This has been a considerable source of frustration for staff, patients and their relatives.

Method

Two methods were used to evaluate the quality of documentation prior to implementing change. Firstly, an audit was undertaken of the pre-weekend documentation in 20 sets of patient records (Table 1.1). In addition, a questionnaire was distributed amongst 18 ward staff (doctors, nurses and AHPs) to gauge their experience of the effectiveness of the current system of weekend handover (Table 2.1). In response to the feedback received, a new weekend handover proforma was designed (Figure 1). This was approved for use following a multi-disciplinary team discussion. The proformas were completed during the ward round on Friday, in place of the traditional entry in the notes. This aims to provide a rapidly accessible summary of the patient's admission, ongoing issues and a clear escalation.

Outcome

Data was extracted from 25 sets of patient notes, six weeks after implementation of the new proformas. Information documented in the weekend handover was compared before and after the implementation of the handover sheet: inclusion of past medical history increased from 10 to 100%; documentation of a list of current issues increased from 20% to 92%; inclusion of escalation plan and resus status increased from 0% to 84%.
The questionnaire was re-distributed amongst ward staff to gauge their experience of the effectiveness of the new handover: 100% of the staff surveyed wanted to see the proforma continued, with 95% believing that it always improved patient safety at the weekends.

Conclusion

The handover proforma has significantly improved the documentation of vital patient information, enabling on call staff to easily access the information that they need when seeing a patient. It has also enabled the patient's team to identify issues which need to be addressed in the patient's care and allowing timely discussions regarding escalation of care and resuscitation status. The overall effect has increased staff and patient satisfaction regarding patient safety at the weekend. The continued success of the proformas depends on teams being committed to fully completing them with up to date and accurate information. It is often difficult to integrate new ideas and solutions into the setting of a traditional ward round, however, small changes can significantly improve quality and safety of care. In a climate where emphasis on communication and patient safety is paramount, willingness to adopt change is vital. We hope to roll out the new proformas across other wards in the hospital in the near future.

Decline in the number of falls in the neurological medical ward of a hospital

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Background

In the neurological department ward, patients with cranial nerve system diseases such as Parkinson's disease and stroke have a high proportion of hospitalization. Therefore, the rate of hospitalization for patients with high risk of falls is also increasing.
Before the intervention, the number of falls is over 100 each year, and there are more than 10 cases each year requiring treatment due to falls.

Method

1. Conference on timely fall prevention
Patients transferred from hospitalized patients and other wards were introduced by nurses in charge at that day, and day workers all reviewed the fall risk assessment. In the case of
2. Examination of exit sensor
Falling that nurse call cooperation can not be obtained We studied what type and how examination about leaving floor sensor to use for high risk patient should be set up.
3. Planned micturition induction using simple excretion table
The urination pattern table was posted on the bedside of the patient, and urination induction was carried out at night also with reference to the urination pattern up to the previous day. To the patient, we explained at what time the nurse came to be guided at night and cooperated to prevent falls during the night.
- Tackle prevention as a reinforcement target for the annual target of the ward and worked for one year.
- Medical safety officials in the wards were the focus, analyzed the number of falls and contents of falls and reported each month.

Outcome

1. The number of annual falls before the intervention decreased to 47 (the fall rate was 2.92 ‰) after the intervention for 103 cases (the fall rate was 6.40 ‰). In the t test, $p < .001$, a significant difference was recognized.
2. The number of cases that required some kind of treatment due to falls decreased from 14 cases a year before intervention to 9 cases.

Conclusion

1. Understand the condition of patients who change day by day, real-time assessment is also important in fall prevention.
2. The risk of falls increases as a result of hospitalization, patient families also need to increase crisis awareness and go to hospital.

Denture quality analysis

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Background

Nightingales Home Health Specialist, a Bangalore based company started 'Dental Care at Home', primarily targeting the geriatric population across city since, this population finds it difficult to access Dental Services.Dentures are one of the important services for the geriatric population and account for significant percentage of our services.The average denture delivery requires 7-10 home visits and a follow up visit after one month to check on patient accustoming to dentures. Even with these many visits, patient dissatisfaction was a persistent issue leading to premature escalations and visits. Organising home visits is strenuous given the patient population and the traffic situation in the city. Factually, denture acceptance improves with usage, practice and re learning functions like chewing and speaking. The other important factors that influence the final outcome of denture is the laboratory processing and the technique practised by the dentists

Method

It was decided to standardise the assessment through Clinician reported outcome measure(CROM) and measure patient feedback through Patient reported outcome (PROM).CROM and PROM were administered on 15th day and one month after denture delivery.
Protocols were devised and the training was conducted in month of June 2016. It was observed during the monthly Quality Review Meeting that usually some patients are unhappy at the 15th day due to discomfort in fit or chewing; but are happy by the end of the month. The 15th day PROM feedback helped the dentist to refit the denture.
The monthly analysis brought out certain issues like laboratory delays due to errors, Old denture wearers challenges with new set of dentures and managing patient expectations.Many patients were comfortable with their previous dentures, though ill-fitting and were reluctant to change and accepting the new dentures. Hence, by end of Q2 'Copy Denture technique' was introduced with hands-on training.

Outcome

There was substantial improvement in the patient satisfaction. 25% patients rated satisfaction very happy in Q2, 32% in Q3 and 44% Q4(after 1 month)
The process of standardisation also helped in reducing the average number of visits for each denture. The average visits per denture was 8.8 in Q2, 6.8 in Q3 and 5.6 in Q4 .
A comparative study on Q2, Q3 & Q4 was done on the number of errors/repeats and the clinical efficiency which showed good reduction in the number of repeats by the dentist, 8 in Q2, 4 in Q3 and 0 in Q4.

Conclusion

Timely identification of key issues and correction by providing a good assessment, patient categorisation into levels of difficulty, standardisation of treatment protocol, training, patient participation through objective feedback outcome and systemic periodic quality analysis has shown an improvement in patient satisfaction, clinical skills and efficiency of Dentists.
Active patient participation helped devise constructive strategy and introduction of 'Copy Denture technique' which helped immediate adaptation in habituated denture wearers.
Reduction in number of visits per denture helped optimise resources in terms of time and manpower.
Additionally, there was cost saving to company by reduction in number of free follow up visits per denture with reduction in total expenses by 20% in Q3.
Q4 data shows that we have been able to sustain the gains and continue to focus on patient satisfaction along with optimisation of resources.

PROM: Tool for measuring effective physiotherapy care

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Background

Nightingales Home Health Specialist, a Bangalore based company offers home-based and Clinic based physiotherapy services across 4 branches in Bangalore. The team involved the treating Physiotherapists, 4 Supervisors and a Lead (Rehabilitation). Knee pain and back pain patients contributed to 60%(380 patients) of the physiotherapy patient population. Providing home based Physiotherapy poses a challenge of closely monitoring the patients' clinical improvement to ensure effective and standardized quality of care.
Initially patient feedback and daily documentation were used to measure patient satisfaction and to check the clinical improvement respectively. However, the intended benefits with the goal setting and patient participation were not seen. Additionally, understanding patient's perspective on symptoms which can't be measured physiologically; such as sleep disturbances, social interactions, frequency & severity of the disability and psychological disturbances, is also critical.

Method

Methodology used is PDSA
Plan: It was decided to use Patient reported outcome measures (PROM) s namely Modified Oswestry Disability Index (ODI) and Western Ontario McMaster Osteoarthritis Index(WOMAC) to quantify improvement in symptoms for back pain and knee pain patients, in both settings- home care (HC) and physical therapy centre (PTC).
Do: The treatment protocols and PROM were designed and training was completed in the month of June 2016. The intervals for administration of scoring sheets being start and end of therapy.
The pilot was conducted at 1 branch and completed in one month.
Study: The encouraging results of the pilot study were shared with the team in the quality review meeting.
Patients who discontinued therapy within 7 days and who discontinued therapy without intimation were excluded from the study.
Action: Following the pilot, implementation was initiated across all the centres from Aug 2016. Monthly functional review meetings were conducted to measure the compliance and analysis of PRE and POST scores.

Outcome

Data collection for both ODI and WOMAC were done from Aug to Jan 2016. Of the total of 191 patients for back pain, percentage of patients with pre and post ODI scores was 51%(97).
Out of the total of 189 patients with knee pain, 95 patients are recruited in study as pre and post WOMAC scores were available.
ODI:
Percentage of patients showing Significant improvement (>10%)
PTC 72 %(54/75)
HC 73 %(16/22)
The effectiveness of therapy was comparable in both the settings of homecare and PTC.
WOMAC:
Significant improvement (>10%)
PTC 64% (30/47)
HC 79% (38/48)
Homecare patients showed substantial improvement as against PTC patients. Almost 69% patients with knee pain under the home care settings experienced more than 20% reduction in pain and disability
44% patients of knee pain had osteoarthritis as their primary diagnosis.
Significant improvement (>10%)
PTC 70%(7/10)
HC 69%(11/16)
The effectiveness of therapy in both the settings is comparable

Conclusion

A systematic approach of using quality tools like PDSA helps in instituting new framework for patient monitoring and outcome measurement. PROM coupled with periodic patient assessment, can be an effective tool to monitor and measure clinical outcomes providing value-based care for physiotherapy patients in PTC and home as well. Patients with home based physiotherapy had comparable results as against those treated at PTC for back pain and knee pain. In case of patients with knee pain, the home care patients showed substantial improvement as against the PTC patients probably because of better compliance to therapy in the elderly age group due to the convenience of home setting. Home based Physiotherapy is equally effective and validates that quality care can be delivered in the home setting at a low cost with 20% savings on expenses by the patient.

Factors influencing the risk perception of nurses

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Background

The subjects of this survey were 60 nursing personnel working in the medium-sized hospital containing 300-500 beds in A-prefecture. Fifty three subjects replied appropriately. They were 3 males (5.7%) and 50 females (94.3%). Eighty percent of the subjects were nurses and twenty percent were nursing assistants. Forty percent subjects had experienced nursing jobs for more than 10 but less than 20 years.
Cultivation of risk perception in individual nurse rather than mass is a core issue of the education program for medical safety. However, both the definition of risk perception and the assessment scale of efficacy resulting from educational program for medical safety have not been established. Therefore it is feared that endeavors in education about medical safety cannot contribute to safe nursing care enough.

Method

We created a risk/hazard sensitivity scale for nursing personnel. We hypothesize that this scale is useful to evaluate the effect of educational program for medical safety. We formed it as a questionnaire which consists of two kinds of inquiries concerning about risk sensitivity and hazard sensitivity. We sent our questionnaire to all participants.
Survey period was since August 12th to 26th in 2016. The questionnaire form is composed of 63 items which consist of the hazard sensitivity part (26 items) and the risk sensitivity part (37 items). We adopted the five-level format of Likert scale.
We analyzed our created proposed scale for its exploratory factor and extracted subscales. We calculated Cronbach's α coefficient about every subscale item.

Outcome

Evaluation of this measurement for internal consistency and reliability shows that it is adequate to use as an assessment scale of educational program for medical safety. Concerning hazard sensitivity, our survey revealed that training events were effective to improve abilities of problem finding/coping, and that length of job experience was an important factor for nature as a nurse. Regarding risk sensitivity, this study showed that participating training events for risk perception would promote faculties of information utilization and occurrence prediction. For the personnel with more than 10 but less than 20years job experience, it was revealed that training events participation was effective to promote their faculties of occurrence prediction.

Conclusion

We implemented this survey to confirm the reliability of our created scale. Further survey in a larger number of samples will be needed to establish it as a standard assessment scale for medical safety education.
If you get proper risk perception, you can reduce risk. Risk reduction will let you to avoid hazard. Then you will never place patients, colleagues, and yourself in peril of medical accidents.
We explained to the head nurses of inquired hospital the necessity of the assessment scale for risk perception. And we convinced them that our created scale would be useful to evaluate the efficacy of educational program for medical safety.

Developing Resilience and Wellbeing with the Third Workforce

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Background

The carers ‘workforce’ (estimated at over 6.5 million people in the UK) functions between public sector health and social care providers. As an unpaid 'Third Workforce', carers provide services that range from simple to complex health care, social and administrative support to families, friends and members of their local communities. Their work brings them alongside their colleagues in health and social care on to the 'front line' of care delivery. As such, they are vulnerable to stress and burnout, which is evidenced through related cognitive, emotional, and physical decline. When this happens the likelihood for sub-optimal care, and termination of the caring role, results in an increase in public sector services required for the carer and the cared for. This work was conducted with a community of carers in rural Mid Wales, UK

Method

The intervention was a resilience and wellbeing programme designed using Antonovsky's (1979) wellbeing theories, known to develop resilience through an emerging 'Sense of Coherence' (SoC). The theories are incorporated in a resilience model developed by Gray (2014; 2016), which provides a platform for learning and opportunities to explore resilience and wellbeing. The programme included learning activities that brought about sustainable micro, meso and macro impact, and encouraged carers to devise salutogenic solutions to remedy pathogenic responses to isolation, stress, and loss of identity. The process included practically applying grays (2014; 2016) model to develop a psychobiological situational awareness of resilience and wellbeing. The intervention had a broaden a build design and ‘homework’ to strengthen social bonds between carers. The intervention requires 4 intervention days spaced 2 weeks apart.

Outcome

The intervention was evaluated using the Shortened Warwick Edinburgh Mental Wellbeing Scale (SWMWBS), augmented by three qualitative questions before and after the intervention took place. The findings demonstrated a significant improvement in mental wellbeing (anything over 0.5 would have shown a positive change, we achieved r=.78), and a shift from managing stressors through being physically active to prioritising a positive mindset and 'self' help.
Specific problems of isolation, stress, and loss of identity were addressed through the SoC/resilience model. This resulted in the creation of a new carer led identity known as 'Caring Friends', the continuance of Caring Friends as a peer work support group, and a proactive approach to 'self' care.

Conclusion

Carers are able to perform their caring roles with improved resilience and wellbeing, have skills and knowledge to manage ‘workplace’ stressors, and the people they care for are able to live within their communities. Carers continue to meet as a peer support work group, without any contribution from health and social care partners, and have a shared responsibility for the resilience and wellbeing of ‘Caring Friends’ as a caring team.
Problems encountered included overcoming a mindset where carers fail to look after themselves, and encouraging commissioners to move from ‘consulting’ mode to one of co-production with carers.
By improving carer resilience and wellbeing we have a positive impact on those they care for and other public services.
The core programme is being developed as a Training the Trainers and young carers programme with carers and commissioners in 2017/18. You can see a short film produced with the carers at http://www.grays-learning.co.uk/films-about-our-work/.

Interdisciplinary team collaboration to improve ventilator weaning success in the respiratory care centre

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Background

This work was done at the Respiratory Care Centre of the hospital. Members of RCC collaborated with the staff of the departments performing protocoled weaning training, nutritional support, physical training, social-economic support and infection control to increase the successful rate of ventilator detachment.

Method

Study the main factors leading to failure: 1. Patient's nutritional calorie and protein demand increased during the detachment training. 2. When the process did not move smoothly, the patient became disturbed and might even refuse to cooperate with the treatment which impacts the training progress. 3. Family's lack of understanding on the follow-up care or economic problems (18 Cases). 4. Many families are hesitant and sometimes refused tracheostomy due to not understanding wanting to leave the wound on the patient's neck and not understanding the need. Developing countermeasures for the above reasons: 1. Physical Therapy Center physiotherapists implemented the rehabilitation campaign. In March 2016, a special project was launched involving the new strategies to enhance the implementation rate of pulmonary rehabilitation exercise. 2. Nutritionist assess the patient's nutritional status. A recommendation is to increase daily calorie intake by 25 ~ 30kcal / kg and protein by 1.2g / kg. 3. Respiratory therapists assess the patient's condition daily and discuss with the physician to ensure the best respirator settings are provided. 4. Check in Nurses shall provide immediate social-psychological evaluation. This allows for early identifications of the need to involve social workers to provide financial consultation, aid, and other helpful social resource referrals. 5, When needed, provide the patient pain relief to relieve anxiety in the process of detachment. Suggestions are to make sure the process takes place in a familiar environment, emotional comfort, be flexible with visitation times, and providing TV to divert attention can be excellent examples. 6. It is important to discuss the tracheostomy procedure with the patient and the family members, providing related health educational videos, discussing the case, setting up group health educational lessons, and offering family conferences for the patient and family members. 7. Perform a combination of prevention of respiratory-related inflammation and pneumonia. Result: There were 272 patients admitted in 2016, of which 228 were tracheostomy patients. 209 (91.67%) of the patients were enrolled in the standardized ventilator detachment training course. 174 were determined to be active patients by the physical therapists and received individual pulmonary rehabilitation exercise. The result scored 9.3 points upon the DEMMI activity function scale. To meet the additional nutritional needs, the nutritionists provided 95 patients a different nutritional plan. There were 53 cases where Social workers assessed and intervened. 10 case discussions were held with 18 family members'. 18 group health educational lessons were held with the participation of 108 family members. 20 family conferences were held with 85 families involved. The respirator detachment success rate has reached 66.42% in 2016. Conclusion: In addition to the ongoing implementation of this process, NTUH is more in need of managing the multiple factors critical to improving respirator detachment rate. In addition to the innovative strategies of individual pulmonary rehabilitation exercise, it is also important to establish a team-based improvement. Only the establishment of multi-disciplinary cooperation protocols, continued discovery and innovation will lead to the establishment of a strategic and systematic procedure to enhance the success rate of the respirator detachment.

Outcome

Of the 272 patients treated at the RCC in 2016, 209 (76.84%) received weaning based on the standardized protocol and weaning success reached 66.42%. Meanwhile, the activity level increased to 9.3 for DEMMI activity function scale, and implementation rate of exercise training of the nurses, nursing workers and families increased 10.8%, 24.3%, and 14.6%, respectively. The dieticians provided 95 patients a different nutritional plan, while social workers assessed and intervened 53 cases. We held 10 case discussions with 18 family members. The percentage of tracheostomy increased to 83.82%, and the rate of ventilator-associated pneumonia decreased from 0.5‰ to 0‰.

Conclusion

In addition to the ongoing implementation of this process, NTUH is more in need of managing the multiple factors critical to improving respirator detachment rate. In addition to the innovative strategies of individual pulmonary rehabilitation exercise, it is also important to establish a team-based improvement. Only the establishment of multi-disciplinary cooperation protocols, continued discovery and innovation will lead to the establishment of a strategic and systematic procedure to enhance the success rate of the respirator detachment.

The significance of clinical complaints in the outpatient clinics

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Background

Pu-Li Christian Hospital (PCH) is a regional teaching hospital in central-Taiwan. We have 268 acute beds, more than 25,000 outpatient department (OPD) visits annually. We found about 60% of the complaints are from OPD. We try to investigate these complaints, including the types, contents, and underlying meanings.

Method

During the period of 2013 Jan.-2015 Dec., we collected and analysed the clinical complaints from patients and family members of our hospital, which is a regional teaching hospital in central-Taiwan.
We use the affinity diagram (Kawakita Jiro Method) to sort out the data.

Outcome

Medical complaints are classified into six categories, including cognitive difference, errors in internal communication, system, training /supervising system, professional competence, and manpower. Misunderstandings were usually caused by autonomy or over-demand from patients, and mismatched concept of fee, thus resulting in most unnecessary argues. Errors of internal communication usually leads to unnecessary conflicts among departments and waste of time (interruption of OPD, repeated visits for related examinations). System errors includes variations of standard operating process among different clinics, or loss of incentive after designed quota was reached. In the area of training /supervision, staffs did not receive adequate training (leading to unclear work specifications or unfamiliar job assignments, panic in facing unexpected conditions). In the field of professional competence, patients did not receive adequate health guidance, or patients suffered from inadequate medical skills, esp. during some intervention procedures (PAP smear, pacemaker adjustment, etc.). Shortage of manpower leads to overloading, increased stress and increased risk of loss of control of temper, which will trigger even more complaints.

Conclusion

In this three consecutive years, the amount of complaints about environment/ equipment has been decreasing, due to effective upgrade of hardware. However, the amount about attitude of medical service and medical process remain the same. First we exclude those unreasonable requests or misunderstandings. After classifying, we sort out the underlying reasons, and will act accordingly. The high turnover rate of staffs seems to be the main cause of several problem categories. Staffs not staying long enough to receive full training, causing the problems in professional competence, supervising system, and internal communication, then overloading of the remaining staffs.

Mishaps in the labour ward: preventable through risk management system

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Background

The study was conducted at the International Medical Center, Jeddah, Saudi Arabia, which is a private tertiary care center with an average of 4200 deliveries annually. In this retrospective study, we used a risk log register in which High Risk Occurrences were identified and recorded. All the cases registered were reviewed weekly by the team of doctors and nurses and remedial plans were put in place.
The aim of this study is to identify the spread of cases in order to identify the most commonly occurring problems in the unit, to analyze the risk score for each category and to highlight the appropriate actions taken to improve the quality of care given.

Method

Review of the digital data bank of Risk log which has a total of 603 cases available on the Access software. Initially data was collected by the unit nurses and doctors in the risk log register manually. It was then later transferred on the access software. About 30 cases had missing data. Risk Management Committee was formed which comprised of doctors, nurses and members from the QIPS (Quality Improvement & Patient Safety) department. Weekly meetings were conducted.
Cases were reviewed in details, risk scores were calculated and numbers were analyzed.

Outcome

By this study we identified that the most common identified problems are 125 cases (20.7%) of Concerns about management in labour, 44 cases (7.2%) of Delay in Elective Cesareans, 42 cases (6.9%) of Birth Injury and 33 cases (5.4%) of Opening second theater for Crash/Emergency Cesareans.
Among the high risk occurrences that were identified were Preeclampsia (1.6%), Eclampsia (0.3%), Shoulder Dystocia (3.9%) , PPH (10.1%), fetal anomaly including undiagnosed fetal anomalies (2.3%), Unexpected transfer to NICU (3.1%), Significant infection 0.9%), Return to theater (0.4%), Post natal readmission of mother (0.4%), Trauma to other internal organs (1.3%), Loss/Retention of swab (0.1%), Manual removal of placenta (0.3%),
Cord Prolapse (0.8%), Misdiagnosis of antenatal screening (3.9%), Seriously ill patient (2.4%), Admission to ICU (1.9%), Still birth/neonatal deaths (1.9%), Low APGAR/low pH (3.9%), Maternal Resuscitation (2.6%), Third/Fourth degree tear (2.6%), Severe sepsis occurred in (0.2%) and VTE & PE (1.3%)
Most commonly identified cause was Non compliance (29.3%), followed by Unpreventable (26%), Communications issues (12.7%) and lack of guideline (11.9%)
Actions taken were discussions done with the involved team/department (50.4%) in most of the cases.
Guidelines/Protocols and flowcharts were put. PROMPT (PRactical Obstetrics & Multi-Professional Training) course was started in house. Physicians, Residents in training and Nurses were trained in order to manage obstetrical emergencies in an evidence based manner.
Most common risk scores were 6 and 9 requiring monitoring and action respectively.

Conclusion

Risk Management System is an important tool in the modern labour ward and provides valuable information in obstetric care. It helps us to direct our resources to deal with high risk cases. The study highlights the need for improvement in antenatal care which would help early identification of high risk occurrences. It is based on the risk register. The feed into the risk log identification system, is by far much more powerful than using Occurrence Variance Reports (OVR). The former is more focused and based on clear parameters with a much easier identification system.

Practitioner recognition of risk factors for obstetric complaints: a survey of Monash Health maternity staff

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Background

Obstetric healthcare complaints represent experienced deficiencies in care. However, complaints data are rarely reviewed once closed and are therefore unavailable to assist in the quality improvement process. We conducted a study in 2016 to review the factors driving obstetric complaints at Monash Health. Monash Health is the largest m aternity service in Victoria, Australia. Monash Health hospitals service a large geographical area in South East Melbourne, with one large tertiary maternity service in Clayton and two lower level metropolitan services in Dandenong and Casey. In follow-up, it was our aim to quantify Monash Health staff understanding of factors driving obstetric complaints.

Method

Analyses were based on the survey analysis methodology employed by Flenady et al. in the Lancet Stillbirth Series. All analyses were conducted both by grouping responses by job role (midwife, trainee or consultant) and by analysing the complete survey population as a single group. Responses indicating that complaint risk increase was ‘likely’ or ‘very likely’ were tabulated, and the percentage split of responses was calculated for each group. Results were compared with the odds ratios identified in our original study. For ranked risk factors, the sum of all rankings within each group for each risk factor were calculated and converted to a percentage of the maximal possible score. This percentage score is an inverse measure of risk ranking.

Outcome

The top 5 risk factors based thought ‘likely’ or ‘very likely’ to increase complaint risk were: Prolonged or obstructed labour (87.1%), third or fourth degree perineal tear (85.1%), emergency caesarean (82.2%), neonatal death (82.2%) and induction of labour (81.2%). In contrast, the top 5 significant risk factors identified in our original study were: Estimated blood loss >2.5L (OR 4.76), fetal medical condition as indication for induction (OR 3.34), person other than doctor, midwife or student acting as accoucheur (OR 3.04), antepartum stillbirth (OR 2.98) and post-term (≥ 42 weeks) gestation (OR 2.76). The top 3 ranked risk factors were emergency caesarean delivery, intrapartum fetal compromise and high-level neonatal resuscitation required. In contrast, the top three multivariate odds ratios from the original study were 5 minute APGAR <7 (OR 3.26), post-term (≥ 42 weeks) gestation (OR 2.34) and a grouped variable including disseminated intravascular coagulation and maternal pyrexia (OR 1.87).

Conclusion

Overall, Monash Health staff were reasonable at identifying factors that were likely to contribute to an obstetric complaint. However, there were large differences in the staff reported risk factors when compared to those identified in the previous study by Nowotny et al. Highlighting risk factors for complaints shows promise as a method for identifying safety and quality improvement opportunities. Quality of care would likely be improved through staff education of these risk factors.

Practitioner recognition of risk factors for obstetric medicolegal claims: a survey of Monash Health maternity staff

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Background

Obstetrics is one of the most highly litigated medical specialties, with the greatest number high value claims. This project was conducted at Monash Health within the maternity service. Monash Health is the largest maternity service in Victoria, Australia. Monash Health hospitals service a large geographical area in South East Melbourne, with one large tertiary maternity service in Clayton and two lower level metropolitan services in Dandenong and Casey. The results presented herein were produced in the second part of survey in 2016 to quantify clinician understanding of risk factors for obstetric complaints and obstetric litigation.

Method

Monash Health staff working as midwives, trainees (including obstetric residents & registrars) and consultant obstetricians were emailed an invitation to participate in the survey. The approach to analysis for the results of this survey are based on those employed by Flenady et al. in the Lancet Stillbirth Series4. Initially, survey participants were grouped by job role, and analysed both in craft group and as a complete population. Questions based on Likert scale risk ratings were recoded into binary variables, where 1 was participants who answered that risk increase was ‘likely’ or ‘very likely’, and 0 was all other responses. The percentage split of responses was then calculated for each group and used to order risk factors. For ranked risk factors, all risk rankings for each variable were summed, and then a percentage of total possible ranking points was used as an inverse measure of risk ranking. All results were then compared to odds ratios identified in our original study.

Outcome

The survey was delivered to 493 midwives, 71 trainees and 79 consultants. The survey was open from December 2016 to February 2017. Responses were received from 36.2% of participants, however only completed surveys were considered in the final analysis. Completed surveys were received from 13.9% of midwives, 19.7% of trainees and 22.8% of consultants. The 5 risk factors with the greatest percentage of responses indicating that they were ‘likely’ or ‘very likely’ to increase risk of medicolegal claim were: Neonatal death (94.1%), third or fourth degree perineal tear (88.1%), shoulder dystocia (84.2%), high level neonatal resuscitation required (84.2%), and intrapartum fetal compromise (83.2%). The top 5 significant risk factors identified in the original study were: Previous complaint to Monash Health (OR 439.36), uterine rupture or hysterectomy (OR 121.57), blood loss ≥2.5L (OR 47.53)3. The three risk factors thought to have the greatest impact on medicolegal claim risk in the relative ranking question were: Previous complaint to Monash Health, uterine rupture or hysterectomy and high level neonatal resuscitation required. In contrast, the most serious risk factors in multivariate modelling were: Estimated blood loss ≥2.5L (OR 15.29), doctor acting as accoucheur (OR 13.21) and 5 minute APGAR below 7 (OR 13.19).

Conclusion

Medicolegal claims represent the most severe breaches in patient safety that have resulted in tangible loss to the patient. Staff education of risk factors for claims shows promise as a method to improve patient safety and quality of care following an adverse event, and as a method by which adverse events can be avoided.

Preparation for medical imaging: a new self-report instrument designed to assess the quality of patients' perceived preparation for medical interventions

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Background

Medical imaging supports the diagnosis and treatment of a wide range of medical conditions. This study was undertaken in the medical imaging department at one major public hospital in regional Australia, where about 125,000 procedures are performed each year. It is an ethical and legal imperative that patients are adequately prepared for medical interventions. Best practice preparation improves physical and psychological outcomes, increases patient satisfaction and knowledge, and reduces imaging examination non-attendance. However, patients are often unprepared for medical interventions. A systematic review found few instruments for assessing patients' preparation for medical interventions. To overcome this, we developed a robust, generic measure of patient perceptions of preparation for medical interventions. This instrument will allow healthcare providers to efficiently identify where their patients require additional preparation.

Method

We undertook a rigorous process of developing a comprehensive and robust instrument (MiPrep) of patients' perceived preparation for medical interventions. Patient consultation and input helped refine and confirm item relevance. The instrument contains two modules: one that assesses whether patients received risk, procedural, sensory, behavioural and psychosocial information (23 items); and a second that covers their overall experience of preparation (14 items). A cross-sectional study of medical imaging outpatients was also conducted to determine the psychometric properties of the instrument (n=354). Dissemination of findings is underway. Healthcare providers will use this data to identify how well they are meeting their patients' preparation needs, as a quality assurance tool to identify areas for improvement, and areas of excellence in patients' preparation. The process and timelines for implementing change are dependent upon staff receipt, evaluation and feedback of findings.

Outcome

Healthcare providers can implement plans for change based on their individual MiPrep findings. Whilst change based on usage of MiPrep has not yet been undertaken; it is envisioned that health services will use MiPrep to identify aspects for improvement in patient's preparation, and also assess the impacts of any subsequent changes within their service. This could be achieved through an annual survey and comparison with data from the previous year's patient cohort; and relevant service performance indicators, such as reduced patient non-attendance and re-examination rates. Once analysis is completed we will disseminate and promote the use of this new tool. The anticipated benefits to patient care are improved patient preparation, including increased procedure-related knowledge and satisfaction, and decreased distress. Improved service performance indicators are also expected, via decreased patient non-attendance and imaging re-examinations.

Conclusion

Development and testing of the MiPrep instrument was our first step to improving quality of care. The next step is to promote use and implementation of the tool in the wider healthcare system. Healthcare providers can use the MiPrep instrument to assess the adequacy of their patients' preparation. While the MiPrep instrument will help healthcare providers assess where preparation could be improved; we may encounter difficulties ensuring that any issues identified are addressed. Uptake of the MiPrep instrument may also present a challenge. However, uptake may be optimised if MiPrep use is associated with tangible benefits to the service (e.g. reduced patient non-attendance).

Medication management therapy in the elderly

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Background

The global population is ageing. In Malaysia, individuals aged 60 years and above are postulated to double from 7.7% to 14.7% by year 2030. As elderly patients tend to take more drugs, the lack of continuity of care and inadequate transfer of information between healthcare facilities, especially in the event of changes of drug regimen, increases the risk for drug related problems (DRPs) among the elderly in care homes. Therefore, this study aims to explore the nature and occurrence of DRPs among elderly in Malaysian care homes.

As DRPs are associated with an increased risk of hospital readmissions, morbidity and mortality, it is crucial to identify the gaps and propose intervention strategies for the improvement of elderly care.

Method

A multi-centered, cross-sectional study was conducted in December 2016 at four care homes in Malaysia. Medical history from 120 residents were collected and medication reviews were conducted for every resident using the Beers' criteria, STOPP (Screening Tool of Older Person's Prescriptions)/ START (Screening Tool to Alert doctors to Right Treatment) criteria and guidelines to identify potential DRPs. Findings were subsequently categorised using the Pharmaceutical Care Network Europe (PCNE) v7.0 classification. Interviews with the caregivers in the care homes were also conducted to assess the care home environment.

Outcome

A total of 273 of DRPs were identified and at least one DRP was detected in 71% of the elderly. Adverse drug reaction was the most common DRP identified among the elderly, accounting for 41% of the total DRPs. The provision of healthcare services varied among four care homes and many have no residential healthcare professionals servicing the facilities.

To fill in the gaps, pharmacist-directed home medication reviews are proposed. This can be coupled with health screening, staff training and telehealth strategies for an optimal geriatric care in the care homes.

Given the increasing attention towards geriatric care, the anticipated outcomes include reduction in hospitalisation rate and an increase in quality of life among the elderly. In addition, the participation of the multidisciplinary team in geriatric care may facilitate establishment of protocols and guidelines for future Malaysian care homes.

Conclusion

Our study showed 52% of the elderly experienced adverse drug reactions and 71% of the elderly experienced at least one DRP which could be potentially life-threatening. This accentuate the need for intervention in elderly care homes in Malaysia. With the increasing demand for health services among the geriatric population, it is imperative for multiple parties no matter from private and government sectors to provide support and collaborate to create a senior-friendly environment for the ageing population.

What happens when physicians meet their patients in the community?: A sample of people centered care in practice

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Background

Several initiatives are underway that are designed to improve health service delivery across the United States. HIWOT (Healthy living Integrated With Optimal Health) is launched to empower vulnerable parts of the Baltimore community to influence health service delivery improvement efforts and to actively participate in finding solutions to challenges that pertains to the Social Determinants of Health (SDH).

Method

A regular meeting between healthcare workers (including the founder Sosena Kebede and other healthcare volunteers) and the community provides open discussion between these two groups in order to identify root causes of specific SDH challenges and to propose collaborative approaches to solving these problems. The forum focuses on hearing the voice of the community in regards to what matters to them as recipients of healthcare services and gives them a unique opportunity to influence the redesign of our health system model to be more people centered.

Outcome

Our preliminary data (using the "What Matters to Me" questionnaire we have developed) shows that patients put high value on the various humanistic qualities of healthcare providers just as much as the provider's knowledge base and most identify the need to be heard and not feel rushed as their top priorities for health service delivery improvement. Our efforts in creating multi-sectoral collaboratives to address the SDH challenges are at various stages of development and include interested parties from academic institutions, local health systems, community organizations and mayoral offices in the area.

Conclusion

This project has created an important dialogue between the community and healthcare workers and is providing a unique opportunity for the vulnerable parts of the community to get their voices heard. It is also paving the way for a multi-sectoral team to tackle the challenges of the SDH as well as to draft a people-centered health service delivery model.

The role of nurse administrators in health promotion in Thailand

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Background

Health promotion is an important task for nurses that aim to enhance the people's capacity in self-care for well-being in a suitable environment. While nurses in Thailand focus on nursing and curative care, the Division of Nursing, a public sector agency, realizes the importance of nurse administrators at three levels – regional, provincial and district – in driving health promotion efforts of nurses in a more distinct manner to ensure people's healthy status in a concrete manner.

Method

This analytical research aims to study essential roles of nurse administrators at the regional, provincial, and district l evels in implementing health promotion programs to raise the levels of nursing quality and people's health. The methodology includes (1) literature review of local and international technical documents as well as research papers between 2005 and 2015; (2) discussions for sharing experiences and lessons learned with nurse administrators at the regional, provincial, and district levels as well as local health team members with outstanding health promotion performance in four provinces, 25–27 persons in each province; and (3) interviews with 11 high-level administrators of relevant agencies and other nurse administrators such as the Nursing Council, deans of the faculties of nursing, chairpersons of nursing clubs/associations, the National Health Security Office, and the Thai Health Promotion Foundation. Content analysis was undertaken on collected data relating to nurse administrators' roles and their health promotion program management structure during a 6-month period (October 2014 – March 2015).

Outcome

The results showed that, regarding the role of nurse administrators at each level, regional nurse administrators play a key role as leaders, advisors, coordinators (with high-level administrators outside of their agencies when asking for support), and team leaders in the monitoring of work. As regards provincial nurse administrators, they serve as coordinators with relevant individuals or agencies/organizations, horizontally and vertically, to establish networks and ask for support or resources (manpower, budget and know-how), empowerment officers for the teams, and monitoring officers with participatory action in all activities. As for district nurse administrators, they play a role as the users of technology and data for health management, core leaders in program operations and evaluators of health promotion programs. Besides, the study has found that, for nurse administrators to be effective, they need to cooperate and form a network of nurse administrators of all three levels.

Conclusion

In conclusion, the role of nurse administrators in health promotion is to create strengths, confidence and readiness for all personnel at the operating level for them to achieve the goals. Thus, guidelines or policy directions should be established for creating a network of nurse administrators as well as its key role in implementing health promotion program in a sustainable manner and influence people's health.

Hand reconstruction or amputation and upper limb prosthesis fitting?

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Background

Tango central hospital is located in countryside in Kyoto prefecture. We receive patients from the local area and often perform microsurgery. Crush injury of the hand is an emergency situation and a doctor and a patient have to choose the treatment instantly. Hand reconstruction or amputation and prosthesis fitting. Hand reconstruction needs longer hospitalization and higher costs. If the reconstruction does not go well, elective amputation is still an option, but it's also tough. Amputation and prosthesis fitting is simple and economic, but patient would ask him/her self what if.

Method

We compare two representative cases. [Case 1] A 65-year-old man was transferred to our hospital because his right hand had crush injury by a mechanical device. Only the thumb had a viable blood supply and the skin was degloved from the wrist to the base of the phalanges. We performed replantation of the fingers and performed a groin flap to cover the dorsum of his hand. One week after the primary procedure, the remaining skin of dorsum of the MP joint became necrotic secondary to a methicillin-resistant coagulase negative staphylococcal infection. After failure of systemic antibiotics, we performed a free latissimus dorsi flap and tried daily local injections of antibiotics, and finally became culture negative for bacteria. [Case 2] A 46-year-old man was transferred to our hospital because his right hand had crush injury by a mechanical device. His fingers were amputated at multiple sites distal to his carpal bones. We discussed with patient about reconstruction of part of his hand using autograft, but he chose amputation. We performed wrist amputation and prescribed prosthesis.

Outcome

[Case 1] Hospitalization was 7 months in total. Total amount of the medical cost was 92800 USD. DASH score was 81.9. [Case 2] Hospitalization was for 2 weeks and prosthesis training was for 2 weeks. Total amount of the medical cost was 17300 USD plus cost for prosthesis. DASH score was 45.8 in disability/symptom, and 56.3 in work.

Conclusion

Because of the healthcare system in Japan, patient pays almost the same amount and this type of injury often covered by worker's compensation. Cost does not influence the decision of the patients. At the time of injury, patients and also medical staff feel upset and also not enough time left for discussion of the possible treatment. We have to take into account the patient's age, work, familial background to choose the best solution.

Management strategies for reducing radiation dose exposure in Computed Tomography examination

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Background

Institut Kanser Negara (IKN) Putrajaya, is a Malaysia national referral centre for cancer patients. The establishment of the IKN is intended to provide high quality care and to address the comprehensive patients need related to the cancer care in Malaysia. In order to fulfil the demand in producing high quality diagnostic images, Department of Radiology in IKN is equipped with high-end Computed Tomography (CT) system to allow faster acquisition of high contrast sectional images with reformatting 3D-reconstruction capabilities. However, despite of its advantages, radiation dose from CT examination is significantly high and hazardous as compared to other ionizing imaging modalities. As reported elsewhere, radiation dose from CT examinations could be reduced by up to 30% if appropriate parameters selected according to the type of examinations and patient's body characteristics. Therefore, in this paper we report our management strategies in reducing radiation dose to the patients underwent CT scan examinations in our department.

Method

Before we took action to minimize the radiation dose, three related issues were taken into considerations: How much is the CT radiation dose a patient receives from the current practice?, what is the level of staff awareness toward CT dose? and lastly, how can we establish an appropriate technique to optimize patient CT dose. To answer those questions, we included three key players in the department i.e. Radiologists, Medical Physicists and Radiographers. The data collection and work performance analysis were disseminated according to the staff roles. Radiologists and Senior Radiographers observed on staff awareness, while Physicists on CT dose monitoring. The data were collected through surveys and observation for six months from June 2016 until December 2016. There were two types of CT dose descriptors, the CT Dose Index (CTDI) and the dose-length product (DLP); both values appeared on the console display after each examinations ended. The dose data were collected using the standard form, tabulated and studied to establish our current diagnostic reference levels (DRLs). Meanwhile, for level of awareness among the radiographers, the radiologists had interviewed and observed the techniques they used particularly on the parameter variables applied especially on small size patients. All datas were analysed using content analysis.

Outcome

Throughout several discussions, we decided to optimize the technique based on kV selection, quality factor (altering pitch factor) and enabling Iterative Reconstruction (IR) function. The DRLs values were obtained by rounding off the third quartiles of whole dose distributions where the values of CTDIvol (mGy) and DLP(mGy.cm) were; 66.0 and 1100.0 for CT brain and 8.0 and 620.0 for CT Thorax-Abdomen-Pelvis (TAP) examinations. Knowledge and skills are fundamental factors that could promote awareness on CT optimization techniques among the Radiology staff. Based on our observation, 90% of radiographers were not aware of the importance in altering the parameter variables before performing the CT examinations. Considering the critical role of radiology personnel especially radiographers, we recommend to continue this study involving various centres in Malaysia focusing on the evaluation of radiographer's knowledge on CT optimization techniques.

Conclusion

In conclusion, this study revealed that CT practice and dose output are inter related and radiology staff must update their knowledge on the new technology in order to provide efficient radiology services and finally, improve patient's healthcare. Therefore, collaboration among the key players in the Radiology department is important, to ensure optimal quality services can be delivered to all cancer patients in IKN.

Adherence to Clinical Practice Guidelines (CPG) in patient care: an illustrative example of CPG Dengue in Malaysia

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Background

The work/research was carried out by a team consisted of relevant multidisciplinary clinicians, Programme Officer from few divisions in Ministry of Health Malaysia, and academician from University of Malaya. Healthcare providers involved in managing patients with Dengue fever in Ministry of Health healthcare facilities were the focus/target population of this research.
Dengue is the world's most rapidly spreading and geographically widespread mosquito borne viral disease. Dengue infection remains a major public health problem and endemic in Southeast Asia as well as in many parts of the world. The rising dengue incidence inevitably demands an effective control of the disease, together with the delivery of quality and appropriate care for the affected patients. CPG on Management of Dengue Infection in Adults (revised 2nd edition) was published in 2010 targeting healthcare providers and has been disseminated nationwide. The CPG outlined recommendations for management of the disease based on best available evidence at the time of development. Effective guidelines will change healthcare processes, improve patients' outcomes and ensure efficient use of healthcare resources. Adherence to the guidelines reflects recommendations are being practiced thus quality of care is given to the patients. However the extent to which our healthcare providers' adhere to the guideline recommendations remain uncertain.

Method

The intervention was guidelines/CPG on Management of Dengue Infection in Adults (revised 2nd Edition) which produced recommendations, and meant for guidance on the management of the disease in clinical practice. Following CPG development, implementation were carried out as a strategy for change. Implementation tools include development of Quick Reference (summary of CPG), Training Modules (TM), echo-training and Patient Information Leaflet. Subsequently, a study was conducted to evaluate the proportion of healthcare providers adherence to the guideline recommendations.
A retrospective cohort study was conducted on registered dengue cases from 1 January 2014 until 1 June 2015 from e-Dengue registry, Ministry of Health Malaysia. Proportionate random sampling of registered dengue patients treated in public hospitals and health clinics in Selangor and Federal Territory (Kuala Lumpur & Putrajaya) was carried out. Only patients aged 12 years old and above were included in this study. Adherence is defined as the presence of documentation of recommended CPG components in the patients' notes. Adherence to the CPG key recommendations, measured by guideline clinical components were recorded by reviewing patients' case notes. Case report form for evaluating adherence level of the CPG was developed. All completed case report forms were checked and verified by trained personnel. Data was analysed descriptively. This study was registered with Malaysia National Medical Research Register (NMRR ID: 20233) and approved by the University of Malaya Medical Centre Ethical Committee (MEC ID: 201412-902).

Outcome

The study included a total of 326 cases were included in the study whereby 261 cases were from hospitals (inpatient) and 65 cases were from health clinics (outpatient). It was demonstrated that overall, the proportion of adherence in the measured components for inpatient versus outpatient settings were (10.1 to 100.0% versus 7.7 to 73.8%) for history taking, (6.7 to 100.0% versus 12.3 to 60.0%) for physical examinations, (18.4 to 100.0% versus 23.1 to 83.2%) for assessment of warning signs, (0.6 to 100.0% versus 12.3 to 87.7%) for assessment of haemodynamic status, (60.0 to 100.0% versus 27.7 to 40.0%) for diagnosis, (46.6 to 80.0% versus 52.3 %) for case notifications, (73.2 to 100.0% versus 89.2 to 96.9 %) for performing specific laboratory investigations and (7.9 to 100.0 % versus 21.5%) for monitoring.

Conclusion

The proportion of healthcare providers adherence to the Dengue CPG varied across measured clinical components. Although these measurements may not truly reflect the actual clinical practice during dengue case management compared to direct observations, it highlights the importance of accurate and complete record documentation by healthcare providers and the need to enhance Dengue CPG utilisation at all level of care.

Information System Development of the Patient Safety Indicators

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Background

Patient Safety is one of the major goals in healthcare system. The Bureau of Nursing of the Ministry of Public Health, which is responsible of nursing quality development of Thailand needs information about patient safety indicators as the input data for improving quality nursing service of the whole country. The objective of this study is to develop the information system about patient safety in the tertiary hospitals of the ministry of public health.

Method

Target groups are the 116 tertiary hospitals of the Ministry of Public Health. Participants are the 116 the nurses who are responsible of the nursing quality in the target hospitals. There are 4 stages of the study 1) Situation analyzing the information system by using questionnaires to the participants 2) Developing the patient safety information system by focus group discussions which consists of 12 nursing expertise 3) Trying-out the system by explaining the information system to the participants before implementing in the hospitals 4) Conclusion of the study of by evaluating the correctness of the patient safety indicator reports during October 2015 to September 2016. Quantitative data were analyzed by descriptive statistics and qualitative data by content analysis. The 4 stages study data were collected between January and September 2015.

Outcome

Situation analyses revealed that there were 10 patient safety indicators.
1) Ventilator-assisted pneumonia (VAP) rates
2) Pressure ulcers rates
3) Medication error rates (categories E-I)
4) Catheter-associated urinary tract infection rates
5) Fall rates
6) Low birth weight rates (less than 2500 grams)
7) Hospital readmission rates
8) Nosocomial infection rates
9) Catheter-related bloodstream infection rates
10) Wrong-site, wrong-procedure, wrong-patient errors (WSPEs)

Monthly results of the patient safety indicators had been reported to the hospital directors. Safety information system comprised of the assigned nurses, manuals and collecting data forms, 5 sensitive patient safety indicators and flowing information from the hospitals to the Bureau of Nursing. The results of the development system found that there were 113 hospitals which sent the correct reports (97.41%) to the Bureau. The sensitive patient safety indicators results: ventilator-assisted pneumonia rates were 6 per 1,000 ventilator days; pressure ulcer rates were 4.66 per 1,000 admission days; medication error rates (categories E-I) were 29 per year; catheter-assisted urinary tract infection rates were 3.33 per 1,000 catheter days; nosocomial infection rates were 12.44 per admission days.

Conclusion

The responsible agency about quality development in the country should emphasize on the patient safety information in order to set up the health care system policy for improving the quality of care.

Clinical practice guidelines - the prerequisites

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Background

Malaysian Health Technology Assessment Section (MaHTAS) develops evidence-based clinical practice guidelines (CPG) and provides guidance on the matter to other guidelines developers. Development of the CPG and subsequently its implementation involves a lot of resources. Thus, guidelines developers should be advised on the important prerequisites to improve the related work process.

Method

Based on its vast experience in evidence-based CPG development and implementation, MaHTAS has outlined nine important prerequisites. These comply with the well-accepted methodology of Appraisal of Guidelines Research and Evaluation II.

Outcome

The CPG prerequisites are executed at different degrees of rigor. Adaptation to local circumstances may be necessary and appropriate. The composition of Development Group is important to ensure comprehensive input and ownership from diverse yet relevant stakeholders. Subsequently, scope of the CPG and systematic review methodology are to be considered and adhered. Effective writing include local applicability which will facilitate peer review and approval by relevant authoritative) body. Issues on conflicts of interest, funding and update of the CPG are to be addressed accordingly. Lastly but not the least, implementation strategies are developed to increase the CPG utilisation.

Conclusion

Planning in CPG development and implementation is paramount to address hurdles faced by the developers in producing high-quality documents. It is hoped that these will eventually be used with ease to improve the quality of healthcare.

Setting up horizon scanning of emerging technologies system: Malaysia experience

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Background

Health technologies are essential in delivering quality health care. The rapid pace of health technology innovations, inadequacy in its evaluation before introduction into the market, leads to complexity of the treatment options and higher costs which put increasing pressure on many health care system. Horizon scanning (HS) system allows proper monitoring and assessment of the new and emerging health technologies before it is being introduced into the market. This is essential to ensure patient safety, and at the same time supports innovation. Malaysia is among the pioneer in establishing HS system in Asia. Its main purpose is to provide advance notice to health service policy makers of selected new and emerging health technologies that might require urgent evaluation, consideration of clinical and cost impact or modification of clinical guidance. This will facilitates the stakeholders of health system in preparing the facilities, financial and training to the staff.

Method

An exploratory survey was conducted to gather the information and opinions from all related stakeholders in terms of the needs to set up the HS system in Malaysia and its focus. A survey form was developed and mailed to 150 stakeholders in the government and private sectors. The results of the survey was analysed using Microsoft Excel. A workshop was organised to create awareness on HS and to propose the framework of the HS system. Following this, a proposal paper was prepared to gain policy approval for the system. This was followed by another workshop to develop a manual on HS of health technologies. The workshop which was filled with briefings and group works was attended by multidisciplinary experts related to health technologies. The system and its related work process was deliberated in the workshop. A pilot project was carried out based on the manual to ensure its feasibility before the system is fully operated.

Outcome

About 92.5% of the respondents agreed on the need to set up HS system in Malaysia. The focus of assessment suggested were drugs, diagnostics, followed by public health interventions and devices. The area of disorders suggested were diabetes, cancer and cardiovascular. A framework of the system was drafted in the workshop on setting up HS system. The policy approval was received in September 2014. A workshop on manual development conducted in October 2014 identified the priority areas as expensive technologies, local innovations and technologies for diseases with high burden in Malaysia. The work process was also delineated. A core team was formed and a pilot project was conducted from June 2015 until June 2016. The pilot project results showed that the work process was feasible and identified 34 emerging technologies where 15 (44.12%) were from reactive identification. The forms were also modified accordingly. The pilot project gave an overview on how the real situation would be once the system is established. Finally, a seminar was conducted to create awareness on HS system among the stakeholders and marked the establishment HS system in the country.

Conclusion

The need for the establishment of a HS system within the Ministry of Health Malaysia is undeniable. This is due to the fact that the health systems need to be able to effectively manage the introduction of emerging health technologies as they may generate new costs and infrastructure requirements. Providing early information to decision makers, allow them to plan the introduction and adoption of innovation more effectively. Furthermore introduction of technologies without proper evaluation may also endanger patient safety. It is hope the system will mature and plays a major role in informing strategic priorities, prioritising research activity, informing guidance development, protects patients, and supports innovation. It is hope Malaysia experience will help other countries to set up their system.

Improving accountability and safety in the management of podiatry instruments at Tan Tock Seng Hospital

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Background

The Podiatry Service at Tan Tock Seng Hospital's Foot Care & Limb Design Centre (FLC) provides treatment for lower limb conditions such as diabetic foot ulcers and ingrowing toenails, with up to eighty such patients requiring these services in a day. Such treatments by Podiatrists require sterile Podiatry instruments, which in turn are sterilised by the TTSH Central Sterile Supplies Department (CSSD). However, a loss of 822 instruments, worth approximately SGD$11,647, was recorded over a two year period between January 2013 to January 2015. There was no existing process in place to identify if these losses were unintentional, systematic or deliberate. Findings from an internal Infection Control audit in 2014 also identified that used instruments were not stored and managed in a safe manner, with inadequate controls to prevent cross infection to staff.

Method

In April 2016, representatives from key stakeholders (Podiatry, Operations, CSSD and Infection Control) were engaged to analyse the problem. A fishbone Cause-and-Effect diagram was mapped to identify the root causes, with the Pareto Principle used to prioritise them. Following that, iterative discussions were held monthly with the Podiatrists and the other stakeholders to refine the solutions for the root causes. Thereafter, the new workflow was implemented in August 2016, where each Podiatrist is made responsible for their designated set of instruments, with a need to account for the instruments at the end of each day. Commonly used instruments have also been bundled into sets to reduce packaging and the quantities to be counted. Furthermore, in aligning with Infection Control guidelines, used instruments are first placed in a plastic box and disinfected with an enzymatic foam before being sent to CSSD, where the instruments are then sterilised and the boxes are surgically washed.

Outcome

A survey administered on the Podiatrists at pre-intervention and three months post-intervention revealed a remarkable improvement in staff satisfaction from 0% to 100%. At six months post-intervention, there was also a marked improvement in the quantity and cost of lost instruments, with a 90.8% and 93.3% reduction respectively. The CSSD team also reported an estimated 44.4% reduction in costs, largely due to the reduced quantities of packaging. The overall cost savings is estimated to be SGD$77,433 per annum. No sharp injuries have been reported since implementation, compared with an average of four cases per annum previously. Furthermore, there is also cost avoidance as there is no need to process orders of replacement instruments, which is estimated at 20 man-hours a year. Besides the objective measures, there is greater visibility of the flow of instruments, allowing the Podiatry team to accurately track discrepancies and recover misplaced instruments before they are lost.

Conclusion

The supply and management of sterile instruments is an important process for any clinical service, especially for Podiatry, where there is a high workload of patients requiring the use of sterilised instruments. Having an effective workflow will help to save costs and allow clinical care to be provided seamlessly, without having to worry about having sufficient instruments. Cost replacing lost instruments. One challenge faced during this project was ensuring that all staff were familiar with, and able to adhere to the new workflow. This was mitigated through clear communication and constant reminders to the team. When embarking on any improvement project, a clear problem has to be identified with the involvement of all key stakeholders, so as to reduce the need for re-work after consulting individual stakeholders one by one. Accountability is also crucial in the success of any team-based initiative, as each team member has a collective responsibility in sustaining the implementation.

Implementation of Early Warning Identification Parameters (EWIP)

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Background

A significant number of patients outside of critical care areas experience critical inpatient events. Often, a patient will exhibit early warning signs (for example, a worsening of vital signs or a subtle change in neurological status) shortly before experiencing significant clinical decline, resulting in a major event. The team consisted of the Performance Improvement Manager and the Risk Manager. The other key stakeholders focused in this project are Nursing Services and Medical Administration. To ensure buy-in and support for the change, the Performance Improvement team met up with the VP for Medical Administration (Medical Staff) and Nursing Services to discuss how we could close the theory practice gap for the novice nurses so as to ensure that both the nurses and patient receive adequate support from the medical team and minimise any major event from happening such as patient deteriorating leading to a code.

Method

Target Timeline was set at 2 months in view of the hospital wide project involving 2 major services. Initial meeting was held with Nursing Services (13 May 2016) and Medical Administration (13 June 2016). A new Policy was formulated and officially approved by the Medical & Dental Committee (MEDEC). Nurses were required to utilize the Early Warning Identification Parameters (EWIP) criteria in early detection of deteriorating patients. When one ≥ extreme values are noted based on the EWIP criteria, a predefined action shall be initiated by the staff, such as to notify the primary doctor during office hours and after office hours the Medical Officer on-call and thus improve clinical outcomes. In-services were conducted for all nurses in the general inpatient wards in batches. The education took 1 month to complete. VP Medical notified all medical staff of the proposed process flow in the Joint Conference for medical staff.

Outcome

1) Results below were from June 2016 – March 2017 (9 months)

No.	REASONS FOR INITIATING EWIP (Adult & Paediatric)	TOTAL
1	Respiration Rate (RR) < 8 breaths per minute	6
2	Heart Rate (HR) < 50 beats per minute	5
3	Heart Rate >120 beats per minute	40
4	Blood Pressure (BP) < 90 mmHg	43
5	SpO2 < 80% (On O2 8L/min)	39
6	Acute Mental status changes	3
7	Acute Significant bleeding	7
8	New onset/ increase seizure activity	0
9	Glasgow Coma Scale (GCS) < 10	7
10	Code	3
11	Chest pain/discomfort	23
12	Others	11
	TOTAL	**187**

No.	IMMEDIATE OUTCOME after initiation of EWIP	TOTAL
1	Transferred to ICU	88
2	Transferred to HDU	4
3	Remain in Ward	43
	TOTAL	**135**

2) Unplanned Transfer to ICU from General Ward (January 2016 to July 2017)

Year	EWIP Implemented (Before & After)	Month	TOTAL
2016	Before EWIP	January - May	28
2016	After EWIP	June - December	75
2017	After EWIP	January - July	89

Conclusion

There was a significant increase of cases where patients were transferred to ICU from the general Ward as a result from the initiation of the Early Warning Identification Parameters (EWIP). It was a learning curve for both novice and experience nurses specially in a busy working environment where any decision made by the nurse is of utmost important and every seconds counts. With the introduction of EWIP, the next step would be for nursing and medical staff to think of forming a Rapid Response team in the hospital. It is of utmost important that all stakeholders (nursing and medical staff) buy in to this process for it to be a success. Nurses and medical staff alike need to be able to rationalize that initiating EWIP is not an additional task or extra documentation required by the hospital; it is actually a tool to assist healthcare providers provide early intervention for ill patients and ensuring safe patient care.

Advancing clinicians' innovation capital by leveraging QI-Collaboratives in long-term conditions care

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Background

Context: Four primary care practices (11 participants) serving the most socio-economically deprived areas of Auckland, New Zealand (NZ) based on NZDep2013 Deprivation Index.

Problem Assessment: Actively engaging front-line clinicians in innovation and building capability for implementing evidence-based Quality Improvement (QI) changes is a global challenge. Hence, there is a gap between what we currently know and what we do in routine practice. Understandably, nurturing an improvement culture is especially complicated in primary care settings that provide chronic illness care for mdisadvantaged communities. Evidence on what works to improve buy-in of primary HealthCare Practitioners (pHCPs) into new QI efforts is also limited in NZ context.

Research question: How, why and in what circumstances can we achieve the commitment of pHCPs towards transformational change in care models and thus shorten the implementation gap in diabetes care for deprived populations?

Method

Qualitative methodology (semi-structured interviews) was used. Multi-disciplinary theories and positively deviant outliers' sampling strategy informed this study. pHCPs, deemed to be successful in the adoption of new diabetes care interventions into their practice, were asked about their insights on factors that enabled the uptake of innovations. A general inductive analytical approach was used to develop a conceptual model.

A key strategic insight was the role of the QI Collaborative (QIC) and it is the focus of this presentation. Other key themes include: compatibility with practice priorities, leadership commitment, local feasibility, impact on existing routines and processes, relative risk and advantage of new practice, building a collective understanding of each other's new responsibilities, forming a commitment to the new practice, and constructing and participating in new collaborations.

Findings will inform the 2015-2020 Living Well with Diabetes plan by the NZ Ministry of Health.

Outcome

Preliminary findings suggest that QIC supported implementation of diabetes care improvements in a range of settings. Expected benefits for patients include care satisfaction, more quality time for engagement with a pHCP team and a potential improvement in HbA1C.

QIC approach facilitated change implementation for pHCP teams in the following ways: • a solid organisational platform to focus on change management • exposure to pilot evidence on successful implementation from the local context • engagement with key thought-leaders/think-tanks • reciprocal knowledge sharing experiences on implementing novel ideas • networking and presenting their successes or challenges to a wider practice network • inspiration for engaging with new ideas, building and reinforcing a shared QI vision • co-designing new care models with improvement advisors • accelerates progress due to periodic audit • ongoing centralised resources and support.

Conclusion

Some practice leadership regarded QIC and change as less important than promoting the "business" of medical practice. pHCPs had been sometimes advised to focus on regular work rather than spending extra time on improvement. Some staff also had issues with using standardised reporting forms. Few clinical change champions also reported resistance from peer-clinicians in adopting change. Furthermore, government incentives were not fully aligned with reaching QIC targets.

Participants can consider integrating QIC in their existing change roadmap for advancing the innovation culture in their region. However, development of organisational readiness, alignment with existing priorities and a practice leadership commitment for innovation are important prior to resources commitment for QIC.

Use of Toys as Play Model for Basic Training for Medical Radiation Emergency & Disaster Response ("RADSIM")

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Background

Adequate training and exposure to various aspects of Radiation Emergencies is essential for better understanding and enhancing preparedness for any such situations. However, to prepare a group of healthcare professionals for radiation response can be quite challenging. Traditional method of disaster management training involves "disaster drills" has challenge of limitations such as being expensive, time consuming, requiring manpower and costly utilities. Many bureaucratic red tapes need to be traversed to involve an interagency or even interdepartmental effort.

Method

A group of 30 emergency physicians were subjected to a pre-test questions regarding radiation emergency medical knowledge and management. The scores obtained formed the baseline knowledge of participants. Following this, a short training utilizing toys and models were conducted. The 'toys' consisted two sets 'spidermen' – black and red representing contaminated and non-contaminated radiation following an 'explosion' incident. Areas of management as recommended by international Atomic Energy Agency documents were 'staged' as play model placed on the floor. By utilizing these toy module, participants were taught regarding the principles of radiation emergency medical management which included agencies and personnel involved, areas for security, screening, decontamination, specimen management, secured entry and exit while the wind direction was utilized. Participants were encouraged to respond freely and even make mistakes while the 'scenario' evolved as a simulation. Periodically, the simulations were 'paused' where participants' responses were evaluated, feedback given and correct response were taught. At the end of training, participants took similar test and the scores assessed. Participants were also asked to evaluate this training module. This module of training is called 'RADSIM'.

Outcome

Pre-test score was 61.24 ± 10.50 %. The post-test score was 90.55 ± 5.15 % ($P < 0.05$). 79.3% strongly agreed (SA) while 13.8% agreed (A) that this method of simulation should be used as a tool for teaching principles of managing radiation mass casualty incident. Only 3.4% were respectively neutral (N) and disagreed (D). 72.4 % SA and 20.7% A that this training was fun while 3.4% N. 65.5% SA and 27.6% A that this method of teaching made understanding radiation principles easy for participants. 68.7% SA, 37.5% A, 3.4% N and 3.4% N would recommend this method of training to teach radiation management principles in mass casualty training. 55.5% SA, 34.5% A, 6.9% N and 3.4% D that this simulation provides multi dimensional understanding of radiation emergency management.

Conclusion

Emergency Physicians participating in this training concluded that radiation simulation training utilizing toys was fun, made understanding radiation management principles easy while it provides multidimensional understanding which lecture alone could not achieve. They recommend that this method should be used as training tool and would recommend this method of training for management of radiation incident in mass casualty setting.

Improvement of door-to-baloon time in a pilot ST Elevation Myocardial Infarction Network Program

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Background

ST elevation myocardial infarction (STEMI) requires prompt revascularization via thrombolytics within 30 minutes or Primary Percutaneous Coronary Intervention (PPCI) within 90 minutes as delayed reperfusion leads to increased mortality.
IJN is a cardiac referral center located in the heart of Kuala Lumpur surrounded by other hospitals including Hospital Kuala Lumpur, a public general hospital. We embarked on a pilot project in October 2014, named HISNET (HKL-IJN STEMI Network), a single spoke-and-hub referring system with 24-hour PPCI service offered by IJN. This is the first fully active STEMI transfer program in Malaysia.
From 2009 to 2013, our door-to-balloon statistics were as follows:

- Median door-to-balloon = 69 to 84.5 minutes
- Percentage of PPCI done within 90 minutes = 57.1% to 73.7%
- In-hospital mortality rate = 5.7% to 15.8%

Method

Quality & Patient Safety Plan 2016-2017 was to reduce AMI Mortality via the following process measures (Graphs 3-6):
- ECG within 10 minutes of arrival for all patients with chest pain
- Cardiac troponins within 15 minutes of arrival for all patients with chest pain
- Anti-platelets within 20 minutes of diagnosis of Acute Coronary Syndrome
- PPCI within 90 minutes of arrival for all cases of AMI

In order to reduce door-to-balloon time, the following strategies were implemented:
1. Improve referral process between hospitals
- Non-complicated cases were referred by Emergency Physicians in HKL to doctors in IJN Emergency Department without Cardiologist consultation
- A direct dial phone line and fax machine installed in HKL Emergency Department and IJN STEMI Hotline established to improve communication efficiency
- Pre-activation of catheterization laboratory before patient arrival
- Pre-counselling of patient for consent by HKL emergency doctors

2. Improve patient management process
- ECG done in HKL not repeated in IJN to reduce redundancy
- Blood taking in HKL using IJN laboratory compatible bottles
- HISNET Data Collection Form which later developed into MySTEMI Data Collection Form
- Various IJN patient documentation forms kept in sets for ease of staff

Outcome

Improvement in median door-to-balloon time to 45 minutes
Improvement in percentage of patients who had PPCI within 90 minutes to 94%
Improvement of in-hospital mortality despite increasing number of cases to 5%

Conclusion

Lessons learned:
- Rapid staff turnover required clear and efficient dissemination of information which can be done during staff orientation or clear work processes that are readily available for reference.
- Monthly meetings between both parties for feedback led to further process improvements.
- Breaking the silos between different specialties and different hospitals by having common goals and good teamwork ensures that the project continues to flourish over time.

Future developments:
- The HISNET project paved the way for the establishment of a state-wide MySTEMI Network in Kuala Lumpur. In future, we hope to replicate the process for all states in Malaysia.
- The 'Save a Heart' phone application is being developed as an online patient referral, STEMI activation and data collection tool for STEMI Networks.

Hospital Disaster Workshop: creating a compact disaster medicine training module

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Background

Currently, conducting training on hospital disaster response for hospital staff is difficult. Training via drills disrupt hospital services and even when done is not sufficient as participants involved only get exposure in the component of their involvement and miss out learning from the whole component of the incident. There is a need to develop a 'high-yield' module of training which involve all participants coupled with effective guides in 'experiential' manner. We challenged ourselves to create an 8 hours' training module which is compact yet effective.

Method

We created a compact training module lasting over a period of 8 hours with the following components: 1. Short lecture on Disaster Management 2. Simulation on hospital response 3. Simulation on incident site response 4. Simulation on hospital internal disaster response & evacuation principles 5. Drill : Fire incident in ward and operation theatre 6. Patient evacuation indoor exercise 7. Video learning based on footage captured during the drill 8. Fire-extinguishing exercise. Participants are asked to answer a set pre-test questions based on their understanding on hospital disaster management. After the training module has been all been conducted, participants were asked to answer a set of post-test questions. Improvement of knowledge was assessed using paired t-test. Participants were also asked to give feedback on the workshop module based on response to statements using the Likert Scale from 1,2,3,4 to 5 correlating with strongly disagree (SD), disagree (D), neutral (N), agree (A) and strongly agree (SA).

Outcome

A total of 123 participants take part (51.6% male and 48.4% female). The mean age of participants is 32.8 +/- 9.30 years. The participants come from 16 categories of hospital staff from health attendants all the way up to specialists. These participants were selected as natural responders involved in any major incidents. A public volunteer also joined the workshop. The scores followed normal distribution on histogram (parametric t-test used to compare means). The mean scores were 28.31 +- 5.52 and 35 +- 4.52 for pre and post-test respectively (paired t test < 0.001). Participants found that this workshop module is effective (1.2% N, 24.7% A & 74.1% SA), fun (2.3% N, 33.3% A & 64.4% SA), simplify disaster principles (2.3% N, 32.2% A & 65.5% SA), provide multidimensional perspective of disaster management (5.7% N, 31.0% A & 63.2% SA and that lectures alone are not enough to understand disaster medicine principles (4.6% N, 23.0% A & 72.4% SA. Except for 1.1% who responded as N, most would recommend this training module for others to attend (24.7% A & 74.1% SA).

Conclusion

A compact 8 hours training module on hospital disaster can be done with good acceptance by utilizing a lot of simulations and 'learning on-the-go' from mistakes made. Video and image analysis of own response is a powerful way to learn 'on-the-go' and saves time. This method of training provides experience with improved knowledge post-exercise. In this sense, hospitals can save cost and time when a carefully planned workshop with multiple simulations and analysis components such as this is carried out.

Use of simulations and toys in disaster training: establishing an economic, fun and effective tool for disaster training

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Background

Training for disaster may take long time, expensive and tiring. We explore the use of toys in classroom training setting and assess its feasibility and effectiveness from the perspective of Emergency Physicians.

Method

A training module using toys is designed with these objectives: 1) minimum in terms of cost 2) fun 3) effective. A simulation model which involves provision of a mass casualty incident (MCI) scenario is created. Participants play medical roles and respond as if they are the responders at the point of time. They are encouraged to make mistakes and answer logically to each scenario. Every 10 minutes, the simulation is 'paused' and feedback given in terms of their errors and what should have been done. Along the way, participants learn the correct methods immediately from these 'pauses'. All participants are encouraged to give comments. Toys are used for management at the 'incident site' which is marked with red, yellow and green zones coloured tapes. Leaders of responders wear hats representing the agencies they role-play. We engaged a total of 31 emergency physicians and attained their perspectives on this method of training based on electronic survey.Responders are asked to give feedback on the workshop module based on response to statements responded on Likert Scale from 1,2,3,4 to 5 correlating with strongly disagree (SD), disagree (D), neutral (N), agree (A) and strongly agree (SA).

Outcome

Discussion

Training for disaster may be made complicated as a lot of planning and time had to be spent to organize simulaitons and drills. This training method makes full use of toys as a tool of training. The results show that toys are powerful to engage participants. Specialists experiencing the training gave very positive feedback on its use. Not only simulations and toys are cheap but they could hold audience's attention and make learning environment very interactive and fun. Role play and the 'pause and tell' method proved to be effective in saving time and cutting short the learning curve on disaster medicine principles.

Results

Out of the 31 who participated, a total of 22 Emergency Physicians (Male 31.82% and Female 68.18%) responded to survey conducted 1 week after the training regarding their perspectives on use of simulations and toys for disaster training. In terms of learning value, 77.27% and 18.8% rated high and very high respectively. Most participants felt 'disinhibited' to take part (4.55% SD. 18.18% D. 18.18% N, 54.55% SA) . They believe that toys encourage active participation (63.64% A & 74.1% SA). Toys simplify complicated concept of disaster management (4.55% N, 50.00% A & 48.45% SA). They provided clarity in explanation (4.55% D, 4.55% N, 68.18% A & 22.73% SA). Participants believe this training is cheap (4.55% N, 72.75% A & 22.73% SA). They believe toys should be used as tools to teach (9.09% N, 77.27% A & 13.64% SA). Toys make disaster training fun (4.55% N, 31.82% A & 63.64% SA). Toys hold participants concentration (9.09% N, 59.09% A & 31.82% SA). Specialists believe that toys will make them remember better (18.18% N, 50.00% A & 31.82% SA). Participants feel confident managing disaster after training with toys (18.18% N, 72.73% A & 9.09% SA).

Conclusion

Simple indoor simulation and toys are powerful medium of training. They are cheap, provide clarity, fun and effective. Use of toys in disaster training is highly recommended by specialists in participating in this programme.


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