

Innovation and Quality Improvement

Current Awareness Bulletin

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Quality of locally designed surveys in a quality improvement collaborative: review of survey validity and identification of common errors.

Reed JE. *BMJ Open Quality* 2024;13(1):e002387.

Survey development requires careful consideration, time and expertise. QI teams should consider whether a survey is the most appropriate form for capturing information during the improvement process. There is a need to educate and support QI teams to adhere to good practice and avoid common errors, thereby increasing the value of surveys for evaluation and QI. The methodology, quality assessment criteria and common errors described in this paper can provide a useful resource for this purpose.

Trust in embedding co-design for innovation and change: considering the role of senior leaders and managers.

Bedenik T. *Journal of Health Organization and Management* 2024;38(9):36-44.

Purpose: In this viewpoint article, the authors recognize the increased focus in health systems on co-design for innovation and change. This article explores the role of leaders and managers in developing and enhancing a culture of trust in their organizations to enable co-design, with the potential to drive innovation and change in healthcare.

Design/methodology/approach: Using social science analyses, the authors argue that current co-design literature has limited focus on interactions between senior leaders and managers, and healthcare staff and service users in supporting co-designed innovation and change. The authors draw on social and health science studies of trust to highlight how the value-based co-design process needs to be supported and enhanced. We outline what co-design innovation and change involve in a health system, conceptualize trust and reflect on its importance within the health system, and finally note the role of senior leaders and managers in supporting trust and responsiveness for co-designed innovation and change.

Findings: Healthcare needs leaders and managers to embrace co-design that drives innovation now and in the future through people - leading to better healthcare for society at large. As authors we argue that it is now the time to shift our focus on the role of senior managers and leaders to embed co-design into health and social care structures, through creating and nurturing a culture of trust.

Originality/value: Building public trust in the health system and interpersonal trust within the health system is an ongoing process that relies upon personal behavior of managers and senior leaders, organizational practices within the system, as well as political processes that underpin these practices. By implementing managerial, leadership and individual practices on all levels, senior managers and leaders provide a mechanism to increase both trust and responsiveness for co-design that supports innovation and change in the health system.

Safety on the ground: using critical incident technique to explore the factors influencing medical registrars' provision of safe care.

Ralston K. *BMJ Open Quality* 2024;13(1):e002641.

This study provides a rigorous and focused understanding of the factors influencing patient safety in hospitals, using the 'insider' perspective of the medical registrar. Safety goes beyond the individual and is reliant on safe system design, interprofessional collaboration and a culture of support, learning and respect. Organisations should also promote flexibility within clinical practice when patient needs do not conform to standardised care pathways.

1. Increasing venous thromboembolism risk assessment through a whole hospital-based intervention: a pre-post service evaluation to demonstrate quality improvement

Authors: Abboud, Juliana;Shaikh, Niaz;Moosa, Musthafa;Dempster, Martin and Adair, Pauline

Publication Date: 2024

Abstract: Venous thromboembolism (VTE) is a primary cause of morbidity and mortality in hospitalized patients. VTE risk assessment is a crucial part of the VTE prevention guideline. However, VTE risk assessment was not consistently undertaken for admitted patients. The aim of this study was to identify whether a quality improvement project implemented to change documentation of VTE risk assessment for hospitalized patients impacted patient safety by decreasing the rate of VTE incidences. The study was set in a 600+ bed acute hospital that provides medical and surgical services for adult patients during the period October 2018-September 2020. The hospital adopted the American College of Chest Physicians (ACCP) 9th edition VTE prevention guidelines and followed the Modified Caprini risk assessment tool. Following the FOCUS-Plan-Do-Check-Act (FOCUS PDCA) improvement methodology, the improvement team implemented multicomponent interventions over a 3-month period, including conducting educational sessions, sharing VTE documentation compliance results, giving reminders during rounds, assigning a VTE liaison physician within each clinical specialty, and updating and communicating the hospital adopted VTE guidelines. A total of 17 612 patients were included, respectively, 8971 in pre-intervention and 8641 post-intervention period. Documentation of VTE risk assessment upon admission increased significantly in the post quality improvement intervention period (60% vs. 42%, relative increase of 30%, $\chi^2 = 1.43$, $P < 0.001$). The run chart trend analysis demonstrated significant improvement shift and improvement trend after quality improvement project implementation, and it was sustained for 15 months. There was no impact on patient safety with a slight not statistically significant decrease in the VTE incidences rate post intervention period (0.4% vs. 0.5%, relative decrease of 1%, $\chi^2 = 0.82$, $P < 0.397$). The quality improvement project intervention significantly increased the percentage of patients assessed for VTE risk in a hospital setting. (© The Author(s) 2024. Published by Oxford University Press on behalf of International Society for Quality in Health Care.)

2. Physician and nurse well-being, patient safety and recommendations for interventions: cross-sectional survey in hospitals in six European countries

Authors: Aiken, Linda H.;Sermeus, Walter;McKee, Martin;Lasater, Karen B.;Sloane, Douglas;Pogue, Colleen A.;Kohnen, Dorothea;Dello, Simon;Maier, Claudia B. Bettina;Drennan, Jonathan and McHugh, Matthew D.

Publication Date: 2024

Journal: BMJ Open 14(2), pp. e079931

Abstract: Objectives: To determine the well-being of physicians and nurses in hospital practice in Europe, and to identify interventions that hold promise for reducing adverse clinician outcomes and improving patient safety.; Design: Baseline cross-sectional survey of 2187 physicians and 6643 nurses practicing in 64 hospitals in six European countries participating in the EU-funded Magnet4Europe intervention to improve clinicians' well-being.; Setting: Acute general hospitals with 150 or more beds in six European countries: Belgium, England, Germany, Ireland, Sweden and Norway.; Participants: Physicians and nurses with direct patient contact working in adult medical and surgical inpatient units, including intensive care and emergency departments.; Main Outcome Measures: Burnout, job dissatisfaction, physical and mental health, intent to leave job, quality of care and patient safety and interventions clinicians believe would improve their well-being.; Results: Poor work/life balance (57% physicians, 40% nurses), intent to leave (29% physicians, 33% nurses) and high burnout (25% physicians, 26% nurses) were prevalent. Rates varied by hospitals within countries and between countries. Better work environments and staffing were associated with lower percentages of clinicians reporting unfavourable health indicators, quality of care and patient safety. The effect of a 1 IQR improvement in work environments was associated with 7.2% fewer physicians and 5.3% fewer nurses reporting high burnout, and 14.2% fewer physicians and 8.6% fewer nurses giving their hospital an unfavourable rating of quality of care. Improving nurse staffing levels (79% nurses) and reducing bureaucracy and red tape (44% physicians) were interventions clinicians reported would be most

effective in improving their own well-being, whereas individual mental health interventions were less frequently prioritised.; Conclusions: Burnout, mental health morbidities, job dissatisfaction and concerns about patient safety and care quality are prevalent among European hospital physicians and nurses. Interventions to improve hospital work environments and staffing are more important to clinicians than mental health interventions to improve personal resilience.; Competing Interests: Competing interests: None declared. (© Author(s) (or their employer(s)) 2024. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.)

3. The organization of nursing work in Italian hospitals-implications for job satisfaction, nurse well-being and patient safety

Authors: Bagnasco, Annamaria;Timmins, Fiona;Moro, Andrea;Barbieri, Martina;Napolitano, Francesca;Aleo, Giuseppe;Catania, Gianluca;Zanini, Milko and Sasso, Loredana

Publication Date: 2024

Journal: Journal of Advanced Nursing 80(2), pp. 405-406

4. Improving Interdisciplinary Communication on an Academic Hospitalist Service: A Quality Improvement Project

Authors: Biederman, Stephen;Sadr, Nargiza and Qayyum, Rehan

Publication Date: 2024

Journal: Journal for Healthcare Quality : Official Publication of the National Association for Healthcare Quality 46(2), pp. 65-71

Abstract: Abstract: Effective communication is essential for quality patient care, and paging remains among the most common forms of communication despite the introduction of secure texting platforms. The goal of this project was to use quantitative and qualitative analyses of paging to guide improvements in paging best practices. A retrospective analysis of pages sent over a 7-day period was completed, characterizing the volume, content, and effectiveness of pages both preintervention and 3-month postintervention. The content of each page was categorized into laboratories, medications, vital signs, diet, patient assessment/clinical change, pain, or miscellaneous/other. Effectiveness was based on the following five critical elements: (1) two patient identifiers, (2) the sender's name, (3) the sender's callback number, (4) priority or acuity of the page, and (5) patient-care concern. Pages were considered successful if they contained all the five essential elements. The preintervention results guided interventions. Of 3,483 included pages, 1,806 and 1,677 were sent during the preintervention and postintervention periods, respectively. Adherence to all essential paging elements increased from 15.2% to 40% ($p < .001$). The largest deficiency was labeling the urgency of a page, which increased from 31.6% to 51.9% ($p < .001$). Quantitative and qualitative analyses of pages effectively guided this project to increase the standardization of paging.; Competing Interests: The authors declare no conflicts of interest. (Copyright © 2023 National Association for Healthcare Quality.)

5. A hospital-at-home care model innovation: An exploratory study

Authors: Cole, Melissa D.;Patil, Nirav T.;Tribout, Jerry A. and Fitzpatrick, Joyce J.

Publication Date: 2024

Journal: Nursing Management 55(2), pp. 16-24

6. Innovation in hospital pharmacy: Modeling the installation of automated dispensing systems based on an oncology hospital experience transfer

Authors: El Baraka, Soumaya; Cherif Chefchaoui, Ali; Bourdaime, Aya; Lahlou, Oumaima; El Alaoui, Yassir and Rahali, Younes

Publication Date: 2024

Journal: Journal of Oncology Pharmacy Practice : Official Publication of the International Society of Oncology Pharmacy Practitioners , pp. 10781552241239593

Abstract: Objective: This study explores automated dispensing systems (ADS) implementation in hospitals, focusing on experience transfer between the National Institute of Oncology of Rabat (NIO) and the specialties hospital of Rabat (SHR) to develop a transferable ADS installation and management model.; Method: A retrospective implementation and experience data analysis of 3 years ADS implementation at NIO and a prospective planification for SHR new implementation on 6 months were employed. Data collection included pharmacist team reports, personnel interviews, direct observations, and information system data exports. The study focused on identifying challenges a plan-do-check-act (PDCA) cycle.; Results: The analysis revealed overestimation in ADS needs at NIO about 42%, leading to: Resource exhaustion; Challenges in timeline installation staff training and management, Disruptions in data integration and Incident Reports. These issues underscored the importance of a phased, well-planned implementation process.; Discussion: The study highlighted the crucial role of many comprehensive strategies. In accordance with the results of several studies, this work demonstrates the benefits of ADS in reducing medication errors and enhancing resource management, while also pointing out the necessity for accurate system sizing, effective integration with hospital information systems, and comprehensive staff training.; Conclusion: The experience transfer between NIO and SHR provides a valuable model for ADS implementation in hospital pharmacies, proposing optimizations on: Implementation process; Timelines and mapping; Risk management and incident reports; Staff training, sensibilization and change control .; Competing Interests: Declaration of conflicting interestsThe authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

7. Improving response time and survival in ward based in-hospital cardiac arrest: A quality improvement initiative

Authors: Leong, Carrie Kah-Lai; Tan, Hui Li; Ching, Edgerton Yi Hao and Tien, Jong-Chie Claudia

Publication Date: 2024

Journal: Resuscitation 197, pp. 110134

Abstract: Background: Survival in cardiac arrest is associated with rapid initiation of high-quality cardiopulmonary resuscitation (CPR) and advanced life support. To improve ROSC rates and survival, we identified the need to reduce response times and implement coordinated resuscitation by dedicated cardiac arrest teams (CATs). We aimed to improve ROSC rates by 10% within 6 months, and subsequent survival to hospital discharge.; Methods: We used the Model for Improvement to implement a ward-based cardiac arrest quality improvement (QI) initiative across 3 Plan-Do-Study-Act (PDSA) cycles. QI interventions focused on instituting dedicated CATs and resuscitation equipment, staff training, communications, audit framework, performance feedback, as well as a cardiac arrest documentation form. The primary outcome was the rate of ROSC, and the secondary outcome was survival to hospital discharge. Process measures were call center processing times, CAT response times and CAT nurses' knowledge and confidence regarding CPR. Balancing measures were the number of non-cardiac arrest activations and the number of cardiac arrest activations in patients with existing do-not-resuscitate orders.; Results: After adjustments for possible confounders in the multivariate analysis, there was a significant improvement in ROSC rate post-intervention as compared to the pre-intervention period (OR 2.05 1.04-4.05], $p = 0.04$). Median (IQR) call center processing times

decreased from 1.8 (1.6-2.0) pre-intervention to 1.4 (1.4-1.6) minutes post-intervention ($p = 0.03$). Median (IQR) CAT response times decreased from 5.1 (4.5-7.0) pre-intervention to 3.6 (3.4-4.3) minutes post-intervention ($p < 0.001$). After adjustments for possible confounders in the multivariate analysis, there was no significant improvement in survival to hospital discharge post-intervention as compared to the pre-intervention period (OR 0.71 0.25-2.06], $p = 0.53$).; Conclusion: Implementation of a ward-based cardiac arrest QI initiative resulted in an improvement in ROSC rates, median call center and CAT response times.; Competing Interests: Declaration of competing interest The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. (Copyright © 2024 Elsevier B.V. All rights reserved.)

8. How do organizational culture and leadership style affect nurse presenteeism and productivity?: A cross sectional study of Hong Kong acute public hospitals

Authors: Lui, Juliana Nga Man;Andres, Ellie Bostwick and Johnston, Janice Mary

Publication Date: 2024

Journal: International Journal of Nursing Studies 152, pp. 104675

Abstract: Background: Presenteeism is defined as a type of work behavior in which employees are physically present at work when ill, often with reduced performance. While organizational culture and leadership style are known to impact the organizational behavior of hospital staff, as indicated by increased burnout and decreased work engagement, their impact on nurse presenteeism and productivity has not been explored. Moreover, nursing studies often neglect the importance of using multi-level analysis, adopting aggregated unit-level scores to account for collective perceptions to evaluate culture and leadership.; Objective: This study aims to evaluate the impact of unit-level organizational culture and leadership style on individual-level nurse presenteeism and productivity in acute care hospitals using multilevel analysis.; Design: Cross-sectional study.; Setting(s): Three major acute care public hospitals in Hong Kong, where public hospitals provide over 90 % of inpatient services.; Participants: All full-time nurses ($N = 4657$) in the three study hospitals were invited to participate in this study. A total of 2339 nurses responded to the survey for a 65 % response rate.; Methods: Organizational culture and leadership style are characterized using the competing values framework and a two-factor leadership style typology, respectively. Multilevel hierarchical linear modeling was applied with unit-level clustering in each hospital.; Results: Hierarchical culture was the dominant culture ($M = 3.64$, $SD = 0.74$) in our nurse sample. None of the unit-level organizational culture and leadership styles were associated with nurse presenteeism, however, rational organizational culture at the unit-level was significantly associated with increased productivity (regression coefficient: 0.17, 95 % CI: 0.04-0.31).; Conclusions: This study provides hospital managers with improved understanding of the differential impact of unit-level organizational culture and leadership style on nurse presenteeism and productivity. Unit-level leadership style did not have a direct impact on nurse presenteeism and productivity in this study, while the externally focused rational organizational culture increased nurse productivity. Further research is needed to understand the impacts of modifiable work factors and nurse psychosocial emotions on presenteeism and productivity.; Competing Interests: Declaration of Competing Interest The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. (Copyright © 2023 Elsevier Ltd. All rights reserved.)

9. Qualitative and Quantitative Evaluation of an Innovative Primary and Secondary Diabetes Clinic in Western Sydney

Authors: Ravi, Sumathy;Meyerowitz-Katz, Gideon;Murugesan, Anandhi;Ayre, Julie;Jayaballa, Rajini;Rintoul, Duncan;Sarkis, Marina;McCaffery, Kirsten;Maberly, Glen and Bonner, Carissa

Publication Date: 2024

Journal: International Journal of Integrated Care 24(1), pp. 13

Abstract: Introduction: Western Sydney Diabetes (WSD) established an innovative diabetes service in May 2020, using virtual and in-person care, linking primary care with the diabetes specialist team. This study evaluated the service's feasibility using qualitative and quantitative methods.; Method: Evaluation included: 1) thematic analysis of interviews and workshops with patients and health professionals (n = 28); 2) quantitative analysis of records of patients admitted July 2020-June 2021 (n = 110).; Results: Key themes related to 1) benefits: convenient location, access to integrated care, advantages of virtual care; 2) challenges: hard for patients to ask questions, technology issues; 3) confidence: shared care decision making, multidisciplinary team; and 4) future directions: additional multidisciplinary services, expanded insulin stabilisation service, promotion.Improvements between baseline and 3 months included 1.3% reduction in HbA 1c (p < 0.05). Sulfonylurea dropped by 25% between initial appointment and follow-up, and GLP1RA/SGLT2i use increasing by 30% (p < 0.05). The clinic covered costs using Medicare billings and Nationally Weighted Activity Units.; Discussion: The findings suggest this integrated care model was feasible and perceived as beneficial by both patients and providers. The clinic offers a promising model of practice that could be developed further to roll out in other regions for rural delivery of care.; Competing Interests: The authors have no competing interests to declare. (Copyright: © 2024 The Author(s).)

10. Innovating Healthcare: The Role of ChatGPT in Streamlining Hospital Workflow in the Future

Authors: Zheng, Yue;Wang, Laduona;Feng, Baijie;Zhao, Ailin and Wu, Yijun

Publication Date: 2024

Journal: Annals of Biomedical Engineering 52(4), pp. 750-753

Abstract: ChatGPT is revolutionizing hospital workflows by enhancing the precision and efficiency of tasks that were formerly the exclusive domain of healthcare professionals. Additionally, ChatGPT can aid in administrative duties, including appointment scheduling and billing, which enables healthcare professionals to allocate more time towards patient care. By shouldering some of these responsibilities, ChatGPT has the potential to advance the quality of patient care, streamline departmental efficiency, and lower healthcare costs. Nevertheless, it is crucial to strike a balance between the advantages of ChatGPT and the necessity of human interaction in healthcare to guarantee optimal patient care. While ChatGPT may assume some of the duties of physicians in particular medical domains, it cannot replace human doctors. Tackling the challenges and constraints associated with the integration of ChatGPT into the healthcare system is critical for its successful implementation. (© 2023. The Author(s) under exclusive licence to Biomedical Engineering Society.)

Sources Used:

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