Current Awareness

Sign Up To Safety

This monthly Current Awareness Bulletin is produced by the Library Team, Musgrove Park Hospital to provide staff with a range of resources to support Sign Up To Safety. It includes recently published guidelines and research articles, news and policy items.

This guide provides a selection of relevant resources and is not intended to be a comprehensive list. All websites have been evaluated and details are correct at the time of publications.

Details correct at time of going to print. Please note that resources are continuously updated.

For further help or guidance, please contact a member of library staff.

This guide has been compiled by:

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Contribution to informed and quality patient care by supporting evidence-based practice

Issue 38
July 2019
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Fall burden of falls in people with glaucoma in National Health Service Hospital Trusts in the UK.

**Author(s):** McGinley, Patrick; Ansari, Ejaz; Sandhu, Harjit; Dixon, Tricia

**Source:** Journal of medical economics; Jul 2019 ; p. 1
Available at Journal of medical economics - from Unpaywall

**Abstract:** Aims: Falls have devastating consequences in older people with a considerable cost burden. Glaucoma is a risk factor for falls and patients with glaucoma who fall are at high risk of hospital admission. Our aim was to quantify the cost burden of falls to NHS Trusts in people with glaucoma in the UK. Methods: Financial data were used to identify non-elective episodes and associated costs from 2012 to 2018, for all admissions where glaucoma was recorded as a secondary diagnosis, admissions for falls (all, with and without a glaucoma secondary diagnosis). A secondary diagnosis is only recorded by the admitting clinician if it is clinically relevant, therefore, a secondary diagnosis of glaucoma was used as a proxy for glaucoma as a contributory factor to falls. Limitations: Use of financial records means that data on other falls risk factors was unavailable and we cannot be certain that glaucoma was the only relevant factor in all falls. Although this methodology is imperfect, case capture was biased towards cases with clinically significant glaucoma and financial data is robust. Potential coding errors mean that we may have excluded patients in whom glaucoma was a factor in their fall. Results: At Maidstone and Tunbridge Wells (MTW) NHS Trust 11.7% (95% confidence intervals [CI] 10.7-12.8) of admissions for falls were in patients with a secondary diagnosis of glaucoma. This extrapolates to an estimated annual 10,056 admissions at a cost of £28.6 million across the UK. This is an underestimate of cost as A&E attendance without admission and outpatient appointments are excluded. Conclusions: At MTW, glaucoma potentially plays a part in around one in eight falls resulting in hospital admission, at considerable personal and financial cost. We suggest that further work should explore early diagnosis of glaucoma, treatment and mitigation of falls risk.

**Database:** Medline

Toileting-related falls at night in hospitalised patients: The role of nocturia.

**Author(s):** Rose, Georgie; Decalf, Veerle; Everaert, Karel; Bower, Wendy F

**Source:** Australasian journal on ageing; Jul 2019
Available at Australasian journal on ageing - from Wiley Online Library Medicine and Nursing Collection 2019

**Abstract:** OBJECTIVEThe purpose of this study was to describe the prevalence and characteristics of toileting-related falls in hospitalised older people. METHODSRetrospective analysis of falls related to
night-time toileting in patients 60 years or over in a tertiary hospital during a one-year period.**RESULTS** Overall 34% of falls were related to toileting with at least 44% of these falls occurring during the night. Toilet-related falls peaked between 11 pm and 1 am, a period that coincides with maximum supine-induced diuresis. Almost half of night falls occurred at the bedside. In 80% of night toileting-related falls, patients were mobilising without the recommended level of assistance. Half of all patients had no strategies for toileting documented in their care plan.**CONCLUSION** Findings support screening for nocturia in older inpatients and implementation of strategies to reduce both the need for toileting at night and risk factors for falling.

**Database:** Medline

**Using Functional Independence Measure Subscales to Predict Falls-Rapid Assessment**

**Author(s):** Fusco-Gessick, Benjamin, MA; Cournan, Michele, DNP, RN, CRRN, ANP-BC

**Source:** Rehabilitation Nursing; 2019; vol. 44 (no. 4); p. 236

**Abstract:** Background Falls remain a major issue in inpatient rehabilitation. Decreased scores on the Functional Independence Measure (FIM), given to every patient, have been shown to predict falls risk. Purpose The aim of the study was to extend previous research using FIM to predict falls by using only subscales assessed earliest during admissions to indicate high risk of falls. Design Retrospective cohort study. Methods Two consecutive samples of patients (n1 = 1,553, n2 = 12,301) admitted to a rehabilitation hospital over 9-month and 5-year periods, respectively, were used to evaluate the predictive utility of using only a small number of FIM subscales. Subscales were selected from those assessed earliest and were related to previously published research on falls risk factors. The metric was developed using a historical data set and was validated with a second, separate group of patients. Receiver operating characteristic curves were used to evaluate predictive utility. Findings The combination of Toileting and Expression subscales yielded a comparable area under the curve to the full FIM, and both were greater than the existing method of falls risk assessment. Likelihood of falling was strongly linearly related to score on the Toileting/Expression metric. Conclusions The sum of two FIM subscales can be used to predict which patients may fall during their stay in a rehabilitation hospital. Clinical Relevance The FIM scores are assessed early during a patient’s stay, are required for all Medicare patients, and may be useful for simple, rapid, and accurate assignment of falls risk.

**Database:** BNI

**Design, delivery and evaluation of a simulation-based workshop for health professional students on falls prevention in acute care settings**

**Author(s):** Kiegaldie, Debra; Nestel, Debra; Pryor, Elizabeth; Williams, Cylie; Kelly-Ann Bowles; Maloney, Stephen; Haines, Terry

**Source:** Nursing Open; Jul 2019; vol. 6 (no. 3); p. 1150

Available at Nursing Open - from Europe PubMed Central - Open Access
Available at Nursing Open - from Unpaywall

**Abstract:** Aims and objectives To describe the design, delivery and evaluation outcomes of a simulation-based educational workshop to teach a patient-centred falls prevention strategy to health professional students tasked with implementing the strategy during clinical placement. Background Falls are among the most common and costly threat to patient safety. The Safe Recovery Programme (SRP) is an evidence-based, one-to-one communication approach with demonstrated efficacy at preventing falls in the postgraduate context. Simulation-based education...
(SBE) is commonly used to address issues of patient safety but has not been widely incorporated into falls prevention.

Methods This study was a Pre–Post-test intervention design. Health professional students were taught how to deliver the SRP in an SBE workshop. The workshop incorporated content delivery, role-play simulations and interactions with a simulated patient. Students completed surveys immediately before and after the workshop and after clinical placement. Linear and logistic regression analysis was undertaken to identify differences within each pairwise comparison at the three time points. Qualitative free text responses underwent content analysis.

Results There were 178 students trained. The educational design of the programme described in this paper was highly valued by students. Following the workshop, students' falls knowledge increased and they correctly identified evidence-based strategies except bedrail use and patient sitters. Following clinical placement, fewer SBE students correctly identified evidence surrounding bed alarm use. Students became more confident about falls communication post-SBE; however, this confidence decreased postclinical placement. Motivation to implement the SRP decreased between postworkshop and postclinical placement time points.

Conclusions Falls research often includes educational components but previous studies have failed to adequately describe educational methods. Students learnt about best evidence falls prevention strategies using interactive educational methodologies with a workshop viewed by students as being well-designed and assisting their learning from theory to practice. While students valued the delivery of the SRP using SBE, confidence and motivation to implement falls strategies were not sustained following clinical placement. A programme of education including SBE can be used to support the delivery of falls-based education, but further research is needed to identify what factors may influence student’s motivation and confidence to implement falls prevention strategies during clinical placement.

Database: BNI

Multilevel factors influencing falls of patients in hospital: The impact of nurse staffing

Author(s): Kim, Jinhyun; Kim, Sungjae; Park, Jinhee; Lee, Eunhee

Source: Journal of Nursing Management; Jul 2019; vol. 27 (no. 5); p. 1011

Available at Journal of Nursing Management - from Wiley Online Library Medicine and Nursing Collection 2019

Abstract: Aim The objective of this study was to investigate both individual and organizational factors influencing the falls of patients in hospitals. Background Falls and fall-related injuries, which cause health problems and increase the economic burden to patients, are a critical issue for patient safety.

Methods This study retrospectively reviewed patient data and analysed factors influencing patient falls using a mixed-effect model.

Results The total number of patients in the study was 60,049, and the characteristics of the patients showed statistically significant differences according to the type of hospital where the fall occurred. The average rate of falls was 0.92 per 1,000 days. The rate of falls in general hospitals was the highest among all hospitals. Age, mobility impairment and hours per patient day for care delivered by registered nurses were factors influencing patients’ falls.

Conclusion Since the number of patient falls in an acute-care setting might increase in the future because of the growing elderly population, we should consider these risk factors for falls and construct preventative programs accordingly.

Implications for nursing management An adequate level of nursing staff is an essential factor in the number of patient falls.

Database: BNI
Exploring purpose-designed audio-visual falls prevention messages on older people's capability and motivation to prevent falls

Author(s): de Jong, Lex D; Lavender, Andrew P; Wortham, Chris; Skelton, Dawn A; Haines, Terry P; Anne-Marie Hill

Source: Health & Social Care in the Community; Jul 2019; vol. 27 (no. 4); p. e471

Available at Health & Social Care in the Community - from Wiley Online Library Medicine and Nursing Collection 2019

Abstract: The number of falls and fall-associated injury rates among older people continues to rise worldwide. Increased efforts to influence older people's falls prevention behaviour are needed. A two-phase exploratory community-based participatory study was conducted in Western Australia. First, three prototype audio-visual (AV) falls prevention messages were designed collaboratively with six older people. Second, the messages’ effect on community-dwelling older people’s knowledge, awareness and motivation to take action regarding falls prevention was explored using focus groups. Data were analysed using thematic analysis to explore participants’ responses to the messages. The participants’ (n = 54) perspectives on the AV messages varied widely and stereotypes of ageing appeared to influence these. The presented falls facts (including falls epidemiology statistics) increased some participants’ falls risk awareness and falls prevention knowledge. Other participants felt ready-to-use falls prevention information was lacking. Some expressed positive emotions or a personal connection to the messages and suggested the messages helped reduce ageing-related stigma. Strongly opposing viewpoints suggested that other participants identified implicit negative messages about ageing, which reduced their motivation with the messages. Suggestions to improve the message persuasiveness included adding more drama and tailoring messages to appeal to multiple age groups. Overall, the AV falls prevention messages designed in collaboration with older people elicited a divergent range of positive and negative perspectives from their peers, which was conceptualised by the overarching theme ‘we all look at things different ways’. Opinions differed regarding whether the messages would appeal to older people. Public campaigns targeting falls prevention should be designed and tailored towards older peoples’ differing perspectives about ageing.

Database: BNI

Gait symmetry in the dual task condition as a predictor of future falls among independent older adults: a 2-year longitudinal study.

Author(s): Gillain, Sophie; Boutaayamou, Mohamed; Schwartz, Cedric; Dardenne, Nadia; Bruyère, Olivier; Brüls, Olivier; Croisier, Jean-Louis; Salmon, Eric; Reginster, Jean-Yves; Garraux, Gaëtan; Petermans, Jean

Source: Aging Clinical & Experimental Research; Aug 2019; vol. 31 (no. 8); p. 1057-1067

Abstract: Background: Given the potential consequences of falls among older adults, a major challenge is to identify people at risk before the first event. In this context, gait parameters have been suggested as markers of fall risk. Aim: To examine, among older people, the prospective relationship between gait patterns assessed in comfortable and challenging walking conditions, and future fall(s). Method: A total of 105 adults older than 65 years, living independently at home and without a recent fall history were included in a 2-year, longitudinal, observational study. All underwent physical and functional assessment. Gait speed, stride length, frequency, symmetry and regularity and Minimum Toe Clearance (MTC) were recorded in comfortable (CW), fast (FW) and dual task walking (DTW) conditions. Gait parameter changes occurring between CW and FW and between CW and DTW were calculated and expressed in percent. DTW cost was calculated as the change of DTW relative to CW. Fall events were recorded using fall diaries. Comparisons according to
fall occurrence were performed by means of univariate analysis and multivariate binary logistic regression analysis. Results: Two-year follow-up was available for 96 participants, of whom 35 (36.5%) fell at least once. Comparative analysis showed that future fallers had shorter FW stride length and higher symmetry DTW cost than non-fallers (p < 0.05). Binary logistic regression analysis showed that each additional percent of stride symmetry cost was associated with an increase in future fall risk (odds ratio 1.018, 95% Confidence Interval (CI) 1.002–1.033; p = 0.027). Discussion: Our results confirm the association between a symmetry decrease in DTW and future fall(s). Indeed in this study, the mean symmetry DTW cost in fallers is almost 20% higher than in non-fallers, meaning a fall risk that is around 36% higher than among non-fallers. Conclusion: This exploratory study shows the usefulness of considering gait parameters, particularly symmetry in challenging walking conditions, for early identification of future fallers.

Database: CINAHL
The number of falls in the past year was reported at the baseline interview. MCI was identified using a cutoff of 1.5 SD below the age-adjusted mean on at least 2 of the standardized cognitive performance tests. SE (eg, keeping in touch with friends and family, volunteering, participating social activities...) was assessed with the Late Life Function and Disability Instrument, and required a score above the median value 49.5 out of 100. MCI was present among 42% of participants and 42% reported at least 1 fall in the preceding year. Using generalized estimating equations, MCI was associated with a 77% greater rate of falls (P <.05). There was a statistically significant interaction between SE and MCI on the rate of falls (P <.01), such that at a high level of SE, MCI was not statistically associated with falls (P = .83). In participants with lower levels of SE, MCI is associated with 1.3 times greater rate of falls (P <.01). While MCI is associated with a greater risk for falls, higher levels of SE may play a protective role. • Among older primary care patients, 42% exhibited MCI and self-reported falls in the prior year. • Mild cognitive impairment is associated with an increased fall rate in the prior year. • Social engagement may be an important priority in fall treatment programs for MCI patients.

Database: CINAHL

**Chemotherapy-Induced Peripheral Neuropathy: Association with increased risk of falls and injuries.**

**Author(s):** Autissier, Estelle

**Source:** Clinical Journal of Oncology Nursing; Aug 2019; vol. 23 (no. 4); p. 405-410

**Abstract:** BACKGROUND: Chemotherapy-induced peripheral neuropathy (CIPN) is a debilitating and degenerative side effect of many commonly used chemotherapy agents. Symptoms manifest as sensory and motor neuropathies. CIPN may necessitate chemotherapy dose reduction or discontinuation. OBJECTIVES: This review intends to summarize literature linking CIPN to an increased risk of falls and injuries and provides recommendations to help maintain patient safety and maximize physical function. METHODS: A literature search was conducted using MEDLINE®, PubMed®, and ScienceDirect. FINDINGS: Assessment of CIPN and CIPN-related falls and injuries is vital in preventing related complications, and proper education of oncology nursing staff on CIPN assessment and management is necessary.

Database: CINAHL

**Medication and medical diagnosis as risk factors for falls in older hospitalized patients.**

**Author(s):** Wedmann, Fabian; Himmel, Wolfgang; Nau, Roland

**Source:** European Journal of Clinical Pharmacology; Aug 2019; vol. 75 (no. 8); p. 1117-1124

**Abstract:** Objective: To examine the impact of medication and medical conditions on the fall risk in older hospitalized patients. Design: Matched case-control study. Setting: Large regional hospital in a mid-sized German city. Subjects: Four hundred eighty-one inpatients aged ≥ 65 years who fell during hospitalization ("cases") and a control group of 481 controls, matched for age, gender, and hospital department. Methods: Diagnosis, medication, vital parameters, and injuries were compared between cases and controls. Univariate and multivariable odds ratios (ORs) and their corresponding 95% confidence intervals (CIs) were calculated. Main results: Several drugs were significantly associated with falls in multivariate analyses: long-acting benzodiazepines (adjusted OR = 3.49; 95%-CI = 1.16–10.52), serotonin-noradrenalin reuptake inhibitors (SNRI) (2.57; 1.23–5.12), Z-drugs (2.29;
1.38–3.59), low-potency neuroleptics (1.87; 1.08–3.23), ACE inhibitors/sartans (1.42; 1.07–1.89). Digoxin (0.32; 0.11–0.99) and aldosterone receptor antagonists (0.54; 0.33–0.88) were negatively associated with falls. No significant association in multivariate analyses was found for short- and intermediate-acting benzodiazepines, mirtazapine, and opioids. Hyponatremia (1.52; 1.15–2.03) and leukocytosis (1.39; 1.05–1.87) in blood examination on admission showed significant association with falls. As secondary diagnoses, Parkinson syndrome (2.38; 1.27–4.46) and delirium (3.74; 2.26–6.21) were strongly associated with falls. The use of more than one psychoactive drug was a separate risk factor for falls (p < 0.0001). Conclusion: Several drugs including SNRI, neuroleptics, and Z-drugs showed a significant association with inpatient falls. The frequently prescribed tetracyclic antidepressant mirtazapine did not appear to increase the risk of falls. Psychoactive polypharmacy should be avoided.

Database: CINAHL

Development and validation of a pragmatic natural language processing approach to identifying falls in older adults in the emergency department.

Author(s): Patterson, Brian W.; Jacobsohn, Gwen C.; Shah, Manish N.; Song, Yiqiang; Maru, Apoorva; Venkatesh, Arjun K.; Zhong, Monica; Taylor, Katherine; Hamedani, Azita G.; Mendonça, Eneida A.

Source: BMC Medical Informatics & Decision Making; Jul 2019; vol. 19 (no. 1)

Available at BMC Medical Informatics & Decision Making - from BioMed Central
Available at BMC Medical Informatics & Decision Making - from Europe PubMed Central - Open Access
Available at BMC Medical Informatics & Decision Making - from ProQuest (Health Research Premium) - NHS Version
Available at BMC Medical Informatics & Decision Making - from Unpaywall

Database: CINAHL

Long-term effect of community-based continence promotion on urinary symptoms, falls and healthy active life expectancy among older women: cluster randomised trial.

Author(s): Tannenbaum, Cara; Fritel, Xavier; Halme, Alex; van den Heuvel, Eleanor; Jutai, Jeffrey; Wagg, Adrian

Source: Age & Ageing; Jul 2019; vol. 48 (no. 4); p. 526-532

Available at Age & Ageing - from Unpaywall

Abstract: The article presents a pragmatic cluster randomised trial which examined the long-term effect of community-based continence promotion on falls, healthy active life expectancy and urinary symptoms in older women. The subjects were recruited from community organisations in Canada, France and Great Britain. Also cited is the key role played by community organisations in improving health education among older women.

Database: CINAHL

Real-Time Video Detection of Falls in Dementia Care Facility and Reduced Emergency Care.

Author(s): Xiong, Glen L.; Bayen, Eleonore; Nickels, Shirley; Subramaniam, Raghav; Agrawal, Pulkit; Jacquemot, Julien; Bayen, Alexandre M.; Miller, Bruce; Netscher, George
The authors discuss a pilot study on the impact of fall videos on reduction of emergency medical team and emergency department visits. Highlights include the feasibility and acceptability of using SafelyYou Guardian in six residential care facilities from June 1 to August 31, 2018, the impact of reduction in use of emergency services on healthcare costs and stress among residents and facility staff, and the reliance of staff on routine protocol to manage each fall.

Database: CINAHL

The prevalence and impact of falls in elderly dialysis patients: Frail elderly Patient Outcomes on Dialysis (FEPOD) study.

Author(s): van Loon, Ismay N.; Joosten, Hanneke; Iyasere, Osasuyi; Johansson, Lina; Hamaker, Marije E.; Brown, Edwina A.

Source: Archives of Gerontology & Geriatrics; Jul 2019; vol. 83; p. 285-291

Abstract: In the frail elderly dialysis population falls are frequently encountered. • Fall incidence is comparable between elderly hemodialysis and assisted peritoneal dialysis patients. • Diabetes and previous falls are associated with new falls in frail elderly patients. • Literature shows frailty is related to falling and falling increases the risk of mortality and hospitalization. • Falls negatively impact QoL, as fallers have a higher prevalence of fear of falling and perform limited activities. As the numbers of older patients on dialysis rise, geriatric problems such as falling become more prevalent. We aimed to assess the prevalence of falls and the impact on mortality and quality of life in frail elderly patients on assisted PD (aPD) and hemodialysis (HD) from the FEPOD Study. Data on falls and quality of life were collected with questionnaires at baseline and every six months during 2-year follow-up. Multiple regression analysis was used to evaluate factors associated with falls. Additionally, we performed a review of literature concerning the relation between falls and poor outcome. Baseline fall data were available for 203 patients and follow-up data for 114 patients. Dialysis modality was equally distributed (49% HD and 51% aPD). Mean (SD) age was 75 ± 7 years. Fall rate was 1.00 falls/patient year, comparable in HD and aPD. Falls led to fear of falling, resulting in less activities in 68% vs 42% (p < 0.01) and leaving the house less in 59% vs 31% (p < 0.01) of patients. Patients with diabetes mellitus were twice as likely to report falls at baseline [OR 1.91 [95%CI 1.00–3.63], p = 0.05] and falls at baseline were associated with falls during follow-up [OR 2.53 [95%CI 1.06–6.04] p = 0.03]. Literature revealed frailty was a strong risk factor for falling and falling results in a higher mortality and hospitalization rate. Falls were frequent in older dialysis patients and have a negative impact on quality of life. Fall incidence is comparable between aPD and HD.

Database: CINAHL

Drug Treatment, Postural Control, and Falls: An Observational Cohort Study of 504 Patients With Acute Stroke, the Fall Study of Gothenburg.

Author(s): Westerlind, Ellen K.; Lernfelt, Bodil; Hansson, Per-Olof; Persson, Carina U.

Source: Archives of Physical Medicine & Rehabilitation; Jul 2019; vol. 100 (no. 7); p. 1267-1273

Abstract: To identify whether, and to what extent, treatment with cardiovascular drugs and neurotropic drugs are associated with postural control and falls in patients with acute stroke. Observational cohort study. A stroke unit at a university hospital. A consecutive sample of patients (N=504) with acute stroke. Not applicable. Postural control was assessed using the modified version of the Postural Assessment Scale for Stroke Patients. Data including baseline characteristics, all drug
treatments, and falls were derived from medical records. Univariable and multivariable logistic regression and Cox proportional hazards models were used to analyze the association of drug treatment and baseline characteristics with postural control and with falls. In the multivariable logistic regression analysis, factors significantly associated with impaired postural control were treatment with neurotropic drugs (eg, opioids, sedatives, hypnotics, antidepressants) with an odds ratio (OR) of 1.73 (95% confidence interval [CI], 1.01-2.97, P = .046); treatment with opioids (OR 9.23, 95% CI, 1.58-54.00, P = .014); age (OR 1.09, 95% CI, 1.07-1.12, P < .0001), stroke severity, which had a high National Institutes of Health Stroke Scale-score (OR 1.29, 95% CI, 1.15-1.45, P < .0001), and sedentary life style (OR 4.32, 95% CI, 1.32-14.17, P = .016). No association was found between neurotropic drugs or cardiovascular drugs and falls. Treatment with neurotropic drugs, particularly opioids, in the acute phase after stroke, is associated with impaired postural control. Since impaired postural control is the major cause of falls in patients with acute stroke, these results suggest opioids should be used with caution in these patients.

Database: CINAHL

Case finding for urinary incontinence and falls in older adults at community pharmacies.

Author(s): Duong, Eric; Al Hamarneh, Yazid N.; Tsuyuki, Ross T.; Wagg, Adrian; Hunter, Kathleen F.; Schulz, Jane; Spencer, Margaret; Sadowski, Cheryl A.

Source: Canadian Pharmacists Journal; Jul 2019; vol. 152 (no. 4); p. 228-233

Available at Canadian Pharmacists Journal - from Europe PubMed Central - Open Access

Available at Canadian Pharmacists Journal - from Unpaywall

Database: CINAHL

Exercise programmes to prevent falls among older adults: modelling health gain, cost-utility and equity impacts.

Author(s): Deverall, Eamonn; Kvizhinadze, Giorgi; Pega, Frank; Blakely, Tony; Wilson, Nick

Source: Injury prevention : journal of the International Society for Child and Adolescent Injury Prevention; Aug 2019; vol. 25 (no. 4); p. 258-263


Abstract: BACKGROUND Some falls prevention interventions for the older population appear cost-effective, but there is uncertainty about others. Therefore, we aimed to model three types of exercise programme each running for 25 years among 65+ year olds: (i) a peer-led group-based one; (ii) a home-based one and (iii) a commercial one. METHODS An established Markov model for studying falls prevention in New Zealand (NZ) was adapted to estimate incremental cost-effectiveness ratios (ICERs) in cost per quality-adjusted life-years (QALYs) gained. Detailed NZ experimental, epidemiological and cost data were used for the base year 2011. A health system perspective was taken and a discount rate of 3% applied. Intervention effectiveness estimates came from a Cochrane Review. RESULTS The intervention generating the greatest health gain and costing the least was the home-based exercise programme intervention. Lifetime health gains were estimated at 47 100 QALYs (95% uncertainty interval (UI) 22 300 to 74 400). Cost-effectiveness was high (ICER: US$4640 per QALY gained; (95% UI US$996 to 10 500)), and probably more so than a home safety assessment and modification intervention using the same basic model (ICER: US$6060). The peer-led group-based exercise programme was estimated to generate 42 000 QALYs with an ICER of US$9490. The commercially provided group programme was more expensive and less cost-
effective (ICER: US$34 500). Further analyses by sex, age group and ethnicity (Indigenous Māori and non-Māori) for the peer-led group-intervention showed similar health gains and cost-effectiveness.

**CONCLUSIONS**
Implementing any of these three types of exercise programme for falls prevention in older people could produce considerable health gain, but with the home-based version being likely to be the most cost-effective.

**Database:** Medline

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**The Impact of Nocturia on Falls and Fractures: A Systematic Review and Meta-Analysis.**

**Author(s):** Pesonen, Jori S; Vernooij, Robin W M; Cartwright, Rufus; Aoki, Yoshitaka; Agarwal, Arnav; Mangera, Altaf; Markland, Alayne D; Tsui, Johnson F; Santti, Henrikki; Griebling, Tomas L; Parylukhin, Alexey E; Riikonen, Jarno; Tähtinen, Riikka M; Vaughan, Camille P; Johnson, Theodore M; Heels-Ansdell, Diane; Guyatt, Gordon H; Tikkinen, Kari A O

**Source:** The Journal of urology; Jul 2019 ; p. 101097JU0000000000000459

**Abstract:** PURPOSE Although nocturia is associated with various comorbidities, its impact on falls and fractures remains unclear. We performed a systematic review and meta-analysis to evaluate the association between nocturia with falls and fractures, both as a prognostic and causal risk factor.

MATERIALS AND METHODS We searched PubMed, Scopus and CINAHL and abstracts of major urologic meetings up to December 31, 2018. We conducted random effects meta-analyses of adjusted relative risks (RR) of falls and fractures. We applied the GRADE approach to rate the quality of evidence for nocturia as a prognostic and causal factor of falls and fractures.

RESULT SOF 5230 potential reports, nine observational longitudinal studies provided data on the association between nocturia and falls or fractures (1 for both, 4 for falls, 4 for fractures). Pooled estimates demonstrated a risk ratio of 1.20 (95% confidence interval 1.05-1.37; I²=51.7%; annual risk difference 7.5% among the elderly) for association between nocturia and falls and 1.32 (95% confidence interval 0.99-1.76; I²=57.5%; annual risk difference 1.2%) for association between nocturia and fractures. Subgroup analyses showed no significant effect modification by age, gender, follow-up time, nocturia case definition or risk of bias. We rated the quality of evidence for nocturia as a prognostic factor as moderate for falls and low for fractures, and as very low as a cause of falls/fractures.

CONCLUSIONS Nocturia is probably associated with an approximately 1.2-fold increased risk of falls and possibly with an approximately 1.3-fold increased risk of fractures.

**Database:** Medline

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**PRESSURE ULCERS**

**Cohort study to determine the risk of pressure ulcers and developing a care bundle within a paediatric intensive care unit setting**

**Author(s):** Smith, Hazel A; Moore, Zena; Tan, Mong Hoi

**Source:** Intensive & Critical Care Nursing; Aug 2019; vol. 53 ; p. 68

**Abstract:** Objective Determine the incidence and risk factors for pressure ulcers in a paediatric intensive care unit. Use the information gathered to develop preventive pressure ulcer care bundles.

Research methodology Prospective cohort study using Braden Q Scale for Predicting Pressure Sore Risk and European Pressure Ulcer Advisory Panel Pressure Ulcer Staging tool.

Setting General paediatric intensive care unit in a tertiary level hospital between May and October 2017. Results Seventy-seven children were recruited. Most children were male (n = 42,
54.5%) and all nine children (11.7%) that developed a pressure ulcer were male. The main risk factor for developing a pressure ulcer was lack of physical activity. None of the children assessed as high or severe risk developed a pressure ulcer. Eight (89%) pressure ulcers were assessed as grade one. Seven pressure ulcers (77.8%) were on the facial and scalp area and all seven children were receiving airway support at the time the pressure ulcers developed. Conclusion: Incidence of pressure ulcers was 11.7%, with the facial and scalp area the most common anatomical areas affected. Medical devices appeared to be the prime causative factor. Based on our data we have modified and launched the SSKIN care bundle for the paediatric intensive care unit setting.

Database: BNI

The Origin of Present-on-admission Pressure Ulcers/Injuries Among Patients Admitted from the Community: Results of a Retrospective Study

Author(s): Kirkland-Kyhn, Holly; Teleten, Oleg; Joseph, Reena; Schank, Joy

Source: Wound Management & Prevention; Jul 2019; vol. 65 (no. 7); p. 24

Abstract: Research about community-acquired pressure ulcer/injuries (CAPU/I) remains limited. Purpose: The aim of this descriptive, retrospective study was to quantify the number of patients with pressure ulcers/injuries (PU/Is) present on admission (POA), with particular attention to patient residence (home or skilled/long-term care facility [SNF]). Methods: Data from the electronic medical records (EMR) and the incident reporting system of a 620-bed integrated health system in northern California from January 1, 2017, to December 31, 2017, were examined and used to create a registry that included patient demographics, length of stay (LOS), source of admission (home versus SNF), co-existing conditions, and documentation on end of life and death. A manual chart review was conducted to confirm the accuracy of data entered into the registry. All patients at least 18 years old and with a nurse-reported incident and EMR-documented PU/I that was listed as POA were included; pediatric, pregnant, or incarcerated patients were excluded. Extracted variables included demographic data, stage of PU/I on admission, and major diagnosis (or co-existing condition) by groups (spinal cord injuries [tetraplegia, paraplegia], neurological conditions, end-stage renal disease, cardiac and vascular disease, end of life [EOL], and death while in hospital during the year 2017). Descriptive analysis was used to examine the data. Results: Of the 2340 records of patients with an PU/I POA, 477 were complete and analyzed. The majority (336, 70.4%) originated from home. Patients admitted from home were younger than those admitted from SNF (average age 62.9 and 71.5 years, respectively) and had a higher proportion of co-existing paraplegia/tetraplegia (24.4% vs 12.8%). More than 60% of all patients had a stage 3, stage 4, or unstageable PU/I. Conclusion: The majority of patients with a PU/I POA were admitted from home. Additional research and improved efforts to help high-risk individuals living at home prevent and manage PU/Is are needed.

Database: BNI

Pressure ulcers in patients receiving palliative care: A systematic review

Author(s): Ferris, Amy; Price, Annie; Harding, Keith

Source: Palliative Medicine; Jul 2019; vol. 33 (no. 7); p. 770

Abstract: Background: Pressure ulcers are associated with significant morbidity and mortality as well as high cost to the health service. Although often linked with inadequate care, in some patients, they may be unavoidable. Aim: This systematic review aims to quantify the prevalence and incidence of pressure ulcers in patients receiving palliative care and identify the risk factors for pressure ulcer development in these patients as well as the temporal relationship between pressure ulcer
development and death. Design: The systematic review is registered in the PROSPERO database (CRD42017078211) and conducted in accordance with the ‘PRISMA’ pro forma. Articles were reviewed by two independent authors. Data sources: MEDLINE (1946–22 September 2017), EMBASE (1996–22 September 2017), CINAHL (1937–22 September 2017) and Cochrane Library databases were searched. In all, 1037 articles were identified and 12 selected for analysis based on pre-defined inclusion and exclusion criteria. Results: Overall pressure ulcer prevalence and incidence were found to be 12.4% and 11.7%, respectively. The most frequently identified risk factors were decreased mobility, increased age, high Waterlow score and long duration of stay. Conclusion: The prevalence of pressure ulcers is higher in patients receiving palliative care than the general population. While this should not be an excuse for poor care, it does not necessarily mean that inadequate care has been provided. Skin failure, as with other organ failures, may be an inevitable part of the dying process for some patients.

Database: BNI

How consistent and effective are current repositioning strategies for pressure ulcer prevention?

Author(s): Woodhouse, Marjolein; Worsley, Peter R.; Voegeli, David; Schoonhoven, Lisette; Bader, Dan L.

Source: Applied Nursing Research; Aug 2019; vol. 48 ; p. 58-62

Abstract: To examine the inter-practitioner variability of repositioning for pressure ulcer prevention, the effectiveness of the intervention, and whether the provision of written guidance influenced the repositioning technique. A pre-test post-test study design was utilised. Descriptive data regarding the work history of participants was collected. Participants were invited to reposition a healthy volunteer before and after reviewing guidance detailing the 30° side-lying technique. The researchers measured the resulting turn angles and assessed offloading of bony prominences. The repositioning technique varied considerably in the sample of nurse participants. Turn angles decreased following the guidance, but offloading of body sites vulnerable to pressure damage remained sporadic. Pressure ulcer prevention training should include practical demonstrations of repositioning. Clear guidance regarding the optimal repositioning technique for pressure ulcer prevention is needed.

Database: CINAHL

The influence of incontinence pads moisture at the loaded skin interface.

Author(s): Bostan, Luciana E.; Worsley, Peter R.; Abbas, Shabira; Bader, Daniel L.

Source: Journal of Tissue Viability; Aug 2019; vol. 28 (no. 3); p. 125-132

Abstract: Prolonged mechanical loading on soft tissues adjacent to bony prominences can lead to pressure ulcers. The presence of moisture at the skin interface will lower the tolerance to load. Absorbent pads manage moisture in individuals with incontinence, although their role in maintaining skin health is unknown. The present study investigated the effects of moist incontinence pads on skin physiology after periods of mechanical loading. Twelve healthy participants were recruited to evaluate a single incontinence pad design under three moisture conditions: 0% (dry), 50% and 100% fluid capacity. For each pad condition, pressure (9 kPa) or pressure in combination with shear (3 N) was applied to the sacrum, followed by a period of off-loading. Measures included trans-epidermal water loss (TEWL) and inflammatory biomarkers sampled at the skin interface. Results revealed no change in TEWL in the loaded dry pad condition. By contrast, when the pads contained moisture, significant increases in TEWL were observed. These increases were reversed during off-loading. Inflammatory biomarkers, specifically IL-1α/total protein ratio, were up-regulated during dry pad
loading, which recovered during off-loading. Loaded moist pads caused a significant increase in biomarkers, which remained elevated throughout the test period. The study revealed a marked compromise to stratum corneum integrity when the skin was exposed to moist incontinence pads in combination with mechanical loads. These physiological changes were largely reversed during off-loading. Incontinence pads provided some protection in the dry state, although more research is required to determine optimal clinical guidance for their use. • Dry incontinence pads provide some skin barrier protection during mechanical loading. • Addition of moisture within the incontinence pads reduces the skin barrier function, with recovery during off-loading. • Inflammatory cytokines levels increased after loading with moistened pads, with partial recovery during off-loading. • Periods of pressure relief and careful management of moisture are critical for the maintenance of skin health. • Introduction.

**Database:** CINAHL

**Outcomes for Pressure Ulcer Trials (OUTPUTs): protocol for the development of a core domain set for trials evaluating the clinical efficacy or effectiveness of pressure ulcer prevention interventions.**

**Author(s):** Lechner, Anna; Kottner, Jan; Coleman, Susanne; Muir, Delia; Bagley, Heather; Beeckman, Dimitri; Chaboyer, Wendy; Cuddigan, Janet; Moore, Zena; Rutherford, Claudia; Schmitt, Jochen; Nixon, Jane; Balzer, Katrin

**Source:** Trials; Jul 2019; vol. 20 (no. 1)

Available at Trials - from BioMed Central

Available at Trials - from Europe PubMed Central - Open Access

Available at Trials - from Unpaywall

**Database:** CINAHL

**Sacral Skin Temperature and Pressure Ulcer Development: A Descriptive Study.**

**Author(s):** Yilmaz, İlkin; Günes, Ülkü Yapucu

**Source:** Wound management & prevention; Aug 2019; vol. 65 (no. 8); p. 30-37

**Abstract:** Existing evidence is inadequate to assume increased skin temperature is a risk factor for the development of pressure ulcers (PUs). **PURPOSE** The purpose of this prospective, descriptive study was to examine the relationship between sacral skin temperature and PU development. **METHODS** Using convenience sampling methods, patients who were hospitalized in the tertiary intensive care unit (ICU) of the internal medicine department of a university hospital in Izmir, Turkey, between April and December 2015 were eligible to participate if they were ≥18 years of age, had an expected hospital stay of at least 5 days, a Braden score ≤12, and were admitted without a PU. Demographic and clinical data collected included age, gender, body mass index, diagnosis, mattress type, length of follow-up (days), systolic and diastolic blood pressure, body temperature, hemoglobin level, sacral skin temperatures in the supine and lateral positions, room temperature, PU stage and duration, and Braden score. Temperature was measured the day of hospitalization as a baseline measurement (day 1) and once every day thereafter up to 22 days, until the patient did or did not develop a PU, died, was no longer undergoing position change, or was discharged. Sacral skin temperature was taken immediately after the patient was moved to a lateral position following 120 minutes of supine position (referred to as supine position sacral skin temperature measurement) and after 30 minutes in lateral position (referred to as lateral position sacral skin temperature measurement). Data were collected using paper-and-pencil questionnaires and entered into a
software program for analysis. Descriptive statistics, Student’s t test, one-way analysis of variance test, Pearson product-moment correlation analysis, and Spearman’s rank-order correlation analysis were used for data analysis.

RESULTS Of the 37 patients who met the inclusion criteria and were monitored for at least 5 days, 21 (56.8%) developed PUs. No statistically significant difference in supine position sacral skin temperature on day 1 or day 5 was found between patients who did and did not develop a PU (36.90°C ± 0.29°C and 37.15°C ± 0.53°C, respectively, on day 1; t = -1.656, P = .112; and 37.37°C ± 0.53°C and 37.30°C ± 0.79°C, respectively, on day 5; t = 0.259, P = .798). Day 5 lateral position skin temperatures also did not differ significantly between the 2 groups (37.44°C ± 0.44°C and 37.31°C ± 0.75°C, respectively; t = 1.306, P = .621). A statistically significant difference was noted between mean sacral skin temperature in the supine position among patients ages 75 to 90 years compared with patients 38 to 64 years and 65 to 74 years (36.93°C ± 0.39°C; F = 13.221, P = .000) and with use of a viscoelastic mattress compared with an alternating pressure air mattress and continuous lateral rotation alternating pressure air mattress (37.85°C ± 0.54°C; F = 14.039, P = .000). No statistically significant differences in sacral skin temperatures were found for any of the other variables assessed.

CONCLUSIONS Sacral skin temperatures were not statistically different between ICU patients who did and did not develop a PU. Additional research may help increase understanding of the relationship between skin temperature and PU development.

Database: Medline

SEPSIS

Impact of timing to source control in patients with septic shock: A prospective multi-center observational study

Author(s): Kim, Hongjung; Sung, Phil Chung; Choi, Sung-Hyuk; Kang, Gu Hyun; Tae Gun Shin; Kyuseok Kim; Park, Yoo Seok; Kap Su Han; Han Sung Choi; Suh, Gil Joon; Won Young Kim; Tae Ho Lim; Byuk Sung Ko

Source: Journal of Critical Care; Oct 2019; vol. 53 ; p. 176

Abstract: Purpose Current guidelines recommend that rapid source control should be adopted in patients not >6–12 h after sepsis is diagnosed. However, evidence level of this guideline is not specified, and there is no previous study on patients with septic shock visiting the emergency department (ED). Therefore, we aimed to assess the impact of rapid source control in patients with septic shock visiting the ED. Materials and methods In a prospective, observational, multicenter, registry-based study in 11 EDs, Cox proportional hazards model was used to assess the independent effect of source control and time to source control on 28-day mortality. Results Cox proportional hazard models revealed that 28-day mortality was significantly lower in patients who underwent source control (HR 0.538 (0.389–0.744), p < .001). However, no significant association between the performance of source control after 6 h or 12 h from enrollment and 28-day mortality was noted. Conclusions Patients with septic shock visiting the ED who underwent source control showed better outcomes than those who did not. We failed to demonstrate the performance of rapid source control reduced the 28-day mortality in septic shock patients. Further studies are required to determine the impact of rapid source control in sepsis and septic shock.

Database: BNI

Validation the performance of New York Sepsis Severity Score compared with Sepsis Severity Score in predicting hospital mortality among sepsis patients

Author(s): Sathaporn, Natthaka; Bodin Khwannimit
**Abstract:** The aim of this study was to compare the performance of the New York Sepsis Severity Score (NYSSS) with the Sepsis Severity Score (SSS) and Acute Physiology and Chronic Health Evaluation and Simplified Acute Physiology Scores for predicting mortality in sepsis patients. Method: A retrospective analysis was conducted in the intensive care unit. The primary outcome was in-hospital mortality. Results: Overall 1680 sepsis patients were enrolled. The hospital mortality rate was 44.4%. The NYSSS underestimated actual mortality with a standard mortality ratio (SMR) of 1.28 (95%CI 1.19–1.38). However, the SSS slightly overestimated the actual mortality with an SMR of 0.94 (0.88–1.01). The NYSSS had moderate discrimination with an AUC of 0.772 (0.750–0.794), in contrast to the SSS which had good discrimination with an AUC of 0.889 (0.873–0.904). The AUC of the SSS was statistically higher than that of the NYSSS. The AUCs of both the NYSSS and SSS were significantly lower than other standard severity scores. The calibrations for all severity scores were poor. The SSS had better overall performance than the NYSSS (Brier score 0.149 and 0.201, respectively). Conclusion: The SSS had better discrimination and overall performance than the NYSSS. However, both sepsis severity scores were poorly calibrated.

**Clinical controversies in abdominal sepsis. Insights for critical care settings**

**Author(s):** Martin-Loeches, Ignacio; Timsit, Jean Francois; Leone, Marc; de Waele, Jan; Sartelli, Massimo; Kerrigan, Steve; Luciano Cesar Pontes Azevedo; Einav, Sharon

**Source:** Journal of Critical Care; Oct 2019; vol. 53 ; p. 53

Available at [Journal of Critical Care](https://www.journalofcriticalcare.com) from Unpaywall

**Abstract:** Sepsis is a deadly condition in which the outcome is associated with prompt and adequate recognition, intensive supportive care, antibiotic administration and source control. This last item makes abdominal sepsis a unique treatment challenge. Although pneumonia constitutes the leading cause of sepsis, abdominal sepsis has unique features that merit discussion. The abdomen may be implicated as the primary occult, secondary dependent or secondary independent source of infection. The major factors determining whether a patient will develop an uncomplicated infection or septic shock are: (1) patient susceptibility to infections, (2) age, and (3) comorbidities. The epidemiology of abdominal sepsis and its outcomes are difficult to assess due to the large clinical heterogeneity associated with this entity. Further complicating issues is the debate surrounding the effect of early source control (i.e. the "surgeon effect"). This review evaluates and summarizes the current approach to current challenges in patient care and which are the future research directions.

**Database:** BNI

**The search for the holy grail continues: The difficult journey towards the ideal fluid!**

**Author(s):** Manu LNG Malbrain; Jacobs, Rita; Perner, Anders

**Source:** Journal of Critical Care; Aug 2019; vol. 52 ; p. 254

**Abstract:** According to the Surviving Sepsis Campaign guidelines crystalloids are advocated for initial resuscitation, followed by albumin for additional volume replacement [15]. Assessment consist of clinical parameters, imaging techniques, POCUS (point-of-care ultrasound), biomarkers, hemodilution parameters (hemoglobin, albumin), blood volume assessment, transpulmonary thermodilution with volumetric preload indices, etc... [...]fluid DE-resuscitation may even be of more importance than the initial resuscitation [24-27] (Fig. 1). 5 Variable volume effect The amount of fluid administered was significantly higher with crystalloids than with albumin and hemodynamic
Endpoints were significantly lower in the crystalloid group [6]. [...] an early detection and prevention of inappropriate fluid prescription and administration is necessary to avoid possible adverse events and complications (e.g. renal failure or fluid overload). [...] although more relevant when it comes to avoidance of unnecessary expensive antibiotic use, cost effectiveness and savings should be achieved by implementing preventive quality improvement measures and follow up of KPI’s like the amount of fluids used per patient, the avoidance of inappropriate fluid administration, the ratio between buffered and unbuffered crystalloids, the ratio between colloids and crystalloids, etc.9 Take home message In conclusion, the study performed by Martin et al. on hemodynamic response to crystalloids vs. colloids for fluid resuscitation in critically ill adults is noteworthy.

Database: BNI

Sepsis early warning scoring systems: The ideal tool remains elusive!

Author(s): Postelnicu, Radu; Pastores, Stephen M; Chong, David H; Evans, Laura

Source: Journal of Critical Care; Aug 2019; vol. 52; p. 251

Abstract: Unfortunately, sepsis remains a complex syndrome with no gold standard for its detection. 1 Scoring systems The Sepsis-3 Definitions task force of the Society of Critical Care Medicine and European Society of Intensive Care Medicine used multivariable logistic regression to develop qSOFA - a quick Sequential Organ Failure Assessment (SOFA) score to assist clinicians identify, among patients with suspected infection, those who are at risk of death and morbidity from sepsis. Screening should ideally be performed longitudinally over time. [...] recently, majority of EWS studies have focused on mortality prediction in patients with sepsis, rather than on identifying a process which should be reversed rapidly and to recognize a patient with a suspected infection who requires immediate attention. [...] sepsis can be present in patients without a qSOFA score ≥2, as demonstrated by the limited sensitivity of qSOFA to detect organ dysfunction [15]. [...] a qSOFA of ≥2 can also be present in infected patients who are not septic. Additionally, SIRS and qSOFA revealed similar discrimination for organ dysfunction (AUROC 0.72 vs 0.73, respectively). qSOFA was specific but poorly sensitive for organ dysfunction (96.1% vs 29.7%, respectively). [...] although a qSOFA ≥2 shows high specificity, it has very poor sensitivity, thereby limiting its utility as a bedside screening tool and a potential trigger for intervention.

Database: BNI

Opportunities for achieving resuscitation goals during the inter-emergency department transfer of severe sepsis patients by emergency medical services: A case series

Author(s): Froehlich, Adam; Tegtmeier, Ryan J; Faine, Brett A; Reece, Jennifer; Azeemuddin Ahmed; Mohr, Nicholas M

Source: Journal of Critical Care; Aug 2019; vol. 52; p. 163

Abstract: Purpose This study aimed to describe the care provide by Emergency Medical Services (EMS) to severe sepsis patients being transferred between acute care hospitals and identify how that care contributes to sepsis care goals. Methods This was a single-center retrospective cohort study conducted at a 60,000-visit Midwestern academic emergency department, using run reports from 13 ambulance services transferring from 9 hospitals. Results 39 patients were included in the final cohort, transferred by 13 ambulance services from 9 hospitals. Included patients were adults with severe sepsis transferred by ambulance between 2009 and 2014. Thirty-nine patients were included in this cohort. 41% (n = 12) of patients received an adequate fluid bolus of 30 mL/kg (median 42.9 mL/kg crystalloid fluid, IQR 8.0 mL/kg) prior to tertiary care arrival. Seventeen percent (n = 2) of patients completed the adequate bolus during transfer time. Broad-spectrum antibiotics were
initiated during transfer in 2 patients. Conclusions: EMS sepsis care during transfer was limited. EMS crews primarily continued treatments previously initiated and did not take additional steps toward resuscitation targets. Data suggests the inter-emergency department transfer period may provide an opportunity to continue working toward treatment targets, though the time is currently underutilized.

**Database:** BNI

**Strategies for preventing early-onset sepsis and for managing neonates at-risk: wide variability across six Western countries.**

**Author(s):** Berardi, Alberto; Rossi, Cecilia; Guidotti, Isotta; Lucaccion, Laura; Spada, Caterina; Vellani, Giulia; Lanzoni, Angela; Azzalli, Milena; Papa, Irene; Giugno, Chiara

**Source:** Journal of Maternal-Fetal & Neonatal Medicine; Sep 2019; vol. 32 (no. 18); p. 3102-3108

**Database:** CINAHL

**SepsRISK score: Pilot examination to predict the susceptibility of a primarily cardiogenic shock patient population to the development of sepsis.**

**Author(s):** Párkányi, Anna; Zima, Endre

**Source:** Resuscitation; Sep 2019; vol. 142

**Database:** CINAHL

**Early recognition of sepsis through emergency medical services pre-hospital screening.**

**Author(s):** Borrelli, George; Koch, Erica; Sterk, Ethan; Lovett, Shannon; Rech, Megan A.

**Source:** American Journal of Emergency Medicine; Aug 2019; vol. 37 (no. 8); p. 1428-1432

**Database:** CINAHL

**Trends and Outcomes in Sepsis Hospitalizations With and Without Atrial Fibrillation: A Nationwide Inpatient Analysis.**

**Author(s):** Desai, Rupak; Hanna, Bishoy; Singh, Sandeep; Omar, Ahmed; Deshmukh, Abhishek; Kumar, Gautam; Foreman, Marilyn G.; Sachdeva, Rajesh

**Source:** Critical Care Medicine; Aug 2019; vol. 47 (no. 8)

**Database:** CINAHL

**Updating Your Practice: The 2017 Sepsis Guidelines.**

**Author(s):**

**Source:** Critical Care Nurse; Aug 2019; vol. 39 (no. 4); p. 72-72

**Abstract:** The article discusses some practice pointers and important issues to consider related to sepsis. Topics covered include whether a Sequential Organ Failure Assessment score is similar to an Acute Physiologic and Chronic Health Evaluation score, the evidence for maintaining a mean arterial pressure of 65 millimetre of mercury, and whether there is a body of literature associating an increased mortality with delays in antibiotics. **Database:** CINAHL
Sepsis in the dental setting.

Author(s): Whiteford, Peter
Source: Dental Nursing; Aug 2019; vol. 15 (no. 8); p. 404-405
Abstract: Peter Whiteford investigates the mysteries of this potentially life-threatening condition
Database: CINAHL

Preventing central line sepsis.

Author(s): Hulse, Anna Louise
Source: British Journal of Nursing; Jul 2019; vol. 28 (no. 14)
Abstract: The author conveys her concerns about the prevention of healthcare-associated infections, catheter-related bloodstream infections, and central line sepsis. Topics covered include the definition of a central venous line-associated bloodstream infection, introduction of the National Institute for Health and Care Excellence sepsis guideline, and the use of chlorhexidine-impregnated dressings and antibiotic-impregnated catheters.
Database: CINAHL

Wide Interest in a Vitamin C Drug Cocktail for Sepsis Despite Lagging Evidence.

Author(s): Rubin, Rita
Source: JAMA: Journal of the American Medical Association; Jul 2019; vol. 322 (no. 4); p. 291-293
Database: CINAHL

Trends in sepsis mortality over time in randomised sepsis trials: a systematic literature review and meta-analysis of mortality in the control arm, 2002–2016.

Author(s): Luhr, Robert; Cao, Yang; Söderquist, Bo; Cajander, Sara
Source: Critical Care; Jul 2019; vol. 23 (no. 1)
Available at Critical Care - from BioMed Central
Available at Critical Care - from Europe PubMed Central - Open Access
Available at Critical Care - from Unpaywall
Database: CINAHL

Maternal sepsis is an evolving challenge.

Author(s): Turner, Michael J.
Source: International Journal of Gynecology & Obstetrics; Jul 2019; vol. 146 (no. 1); p. 39-42
Available at International Journal of Gynecology & Obstetrics - from Wiley Online Library Medicine and Nursing Collection 2019
Available at International Journal of Gynecology & Obstetrics - from Unpaywall
Abstract: Despite major advances in the last century, particularly in high resource settings, maternal sepsis remains a common and potentially preventable cause of direct maternal death globally. A barrier to further progress has been the lack of consensus on the definition of maternal sepsis.
Publications from two recent multidisciplinary consensus conferences, one on sepsis in the non-pregnant adult and the other on sepsis in the pregnant woman, concluded that the criteria for diagnosing sepsis should be clinically-based, applicable at the bedside, and should not be laboratory-based. Informed by reviews of the evidence, in 2017 WHO published a new definition of maternal sepsis based on the presence of suspected or confirmed infection. It also announced a Global Maternal and Neonatal Sepsis Initiative to identify the diagnostic criteria for the early identification, epidemiology, and disease classification of maternal sepsis. Standardizing the criteria for maternal sepsis optimizes clinical audit and research. It may facilitate the evaluation of the role of different clinical parameters and biomarkers in the diagnosis, earlier recognition and management of maternal infection and sepsis. Further work is required to develop an international consensus on the criteria for diagnosing maternal sepsis and any associated organ dysfunction.

Database: CINAHL

Epidemiology and Changes in Mortality of Sepsis After the Implementation of Surviving Sepsis Campaign Guidelines.

Author(s): Herrán-Monge, Rubén; Muriel-Bombín, Arturo; García-García, Marta M; Merino-García, Pedro A; Martínez-Barrios, Miguel; Andaluz, David; Ballesteros, Juan Carlos; Domínguez-Berrot, Ana María; Moradillo-Gonzalez, Susana; Macías, Santiago; Álvarez-Martínez, Braulio; Fernández-Calavia, M José; Tarancón, Concepción; Villar, Jesús; Blanco, Jesús

Source: Journal of intensive care medicine; Sep 2019; vol. 34 (no. 9); p. 740-750

Abstract: PURPOSE To determine the epidemiology and outcome of severe sepsis and septic shock after 9 years of the implementation of the Surviving Sepsis Campaign (SSC) and to build a mortality prediction model. METHOD This is a prospective, multicenter, observational study performed during a 5-month period in 2011 in a network of 11 intensive care units (ICUs). We compared our findings with those obtained in the same ICUs in a study conducted in 2002. RESULT The current cohort included 262 episodes of severe sepsis and/or septic shock, and the 2002 cohort included 324. The prevalence was 14% (95% confidence interval: 12.5-15.7) with no differences to 2002. The population-based incidence was 31 cases/100 000 inhabitants/year. Patients in 2011 had a significantly lower Acute Physiology and Chronic Health Evaluation II (APACHE II; 21.9 ± 6.6 vs 25.5 ± 7.07), Logistic Organ Dysfunction Score (5.6 ± 3.2 vs 6.3 ± 3.6), and Sequential Organ Failure Assessment (SOFA) scores on day 1 (8 ± 3.5 vs 9.6 ± 3.7; P < .01). The main source of infection was intraabdominal (32.5%) although microbiologic isolation was possible in 56.7% of cases. The 2011 cohort had a marked reduction in 48-hour (7% vs 14.8%), ICU (27.2% vs 48.2%), and in-hospital (36.7% vs 54.3%) mortalities. Most relevant factors associated with death were APACHE II score, age, previous immunosuppression and liver insufficiency, alcoholism, nosocomial infection, and Delta SOFA score. CONCLUSION Although the incidence of sepsis/septic shock remained unchanged during a 10-year period, the implementation of the SSC guidelines resulted in a marked decrease in the overall mortality. The lower severity of patients on ICU admission and the reduced early mortality suggest an improvement in early diagnosis, better initial management, and earlier antibiotic treatment.

Database: Medline

Comparison of SIRS, qSOFA, and NEWS for the early identification of sepsis in the Emergency Department.

Author(s): Usman, Omar A; Usman, Asad A; Ward, Michael A

Source: The American journal of emergency medicine; Aug 2019; vol. 37 (no. 8); p. 1490-1497
Abstract: OBJECTIVES The increasing use of sepsis screening in the Emergency Department (ED) and the Sepsis-3 recommendation to use the quick Sepsis-related Organ Failure Assessment (qSOFA) necessitates validation. We compared Systemic Inflammatory Response Syndrome (SIRS), qSOFA, and the National Early Warning Score (NEWS) for the identification of severe sepsis and septic shock (SS/SS) during ED triage. METHODS This was a retrospective analysis from an urban, tertiary-care academic center that included 130,595 adult visits to the ED, excluding dispositions lacking adequate clinical evaluation (n = 14,861, 11.4%). The SS/SS group (n = 930) was selected using discharge diagnoses and chart review. We measured sensitivity, specificity, and area under the receiver-operating characteristic (AUROC) for the detection of sepsis endpoints. RESULTS NEWS was most accurate for triage detection of SS/SS (AUROC = 0.91, 0.88, 0.81), septic shock (AUROC = 0.93, 0.88, 0.84), and sepsis-related mortality (AUROC = 0.95, 0.89, 0.87) for NEWS, SIRS, and qSOFA, respectively (p < 0.01 for NEWS versus SIRS and qSOFA). For the detection of SS/SS (95% CI), sensitivities were 84.2% (81.5-86.5%), 86.1% (83.6-88.2%), and 28.5% (25.6-31.7%) and specificities were 85.0% (84.8-85.3%), 79.1% (78.9-79.3%), and 98.9% (98.8-99.0%) for NEWS ≥ 4, SIRS ≥ 2, and qSOFA ≥ 2, respectively. CONCLUSIONS NEWS was the most accurate scoring system for the detection of all sepsis endpoints. Furthermore, NEWS was more specific with similar sensitivity relative to SIRS, improves with disease severity, and is immediately available as it does not require laboratories. However, scoring NEWS is more involved and may be better suited for automated computation. QSOFA had the lowest sensitivity and is a poor tool for ED sepsis screening.

Database: Medline

Safety of vitamin C in sepsis: a neglected topic.

Author(s): Khoshnam-Rad, Niloofar; Khalili, Hossein

Source: Current opinion in critical care; Aug 2019; vol. 25 (no. 4); p. 329-333

Abstract: PURPOSE OF REVIEW Although vitamin C is essentially a nontoxic vitamin; however, it is important to be aware regarding the safety of high doses before the wide clinical use. RECENT FINDINGS Minor side effects of vitamin C have been reported, many being reported in earlier studies. High doses of vitamin C (up to 1.5 g/kg three times a week as intravenously) were safe in cancer patients with normal renal function and perfect glucose-6-phosphate dehydrogenase activity. As the dose and duration of administration of vitamin C in sepsis are lower and shorter than those used in cancer patients, it seems that it is relatively safe for this population. In ongoing trials, safety of high doses of vitamin C is considered. SUMMARY Data regarding the safety of high doses of vitamin C are scant. Until more data become available, caution should be applied in the use of high doses of vitamin C in patients with hemochromatosis, glucose-6-phosphate dehydrogenase deficiency, renal dysfunction, kidney stone, oxaluria, and pediatrics.

Database: Medline

Shock Index Predicts Outcome in Patients with Suspected Sepsis or Community-Acquired Pneumonia: A Systematic Review.

Author(s): Middleton, David J; Smith, Toby O; Bedford, Rachel; Neilly, Mark; Myint, Phyo Kyaw

Source: Journal of clinical medicine; Jul 2019; vol. 8 (no. 8)

Available at Journal of clinical medicine - from Europe PubMed Central - Open Access
Available at Journal of clinical medicine - from Unpaywall

Abstract: BACKGROUND To improve outcomes for patients who present to hospital with suspected sepsis, it is necessary to accurately identify those at high risk of adverse outcomes as early and
swiftly as possible. To assess the prognostic accuracy of shock index (heart rate divided by systolic blood pressure) and its modifications in patients with sepsis or community-acquired pneumonia.

METHODS
An electronic search of MEDLINE, EMBASE, Allie and Complementary Medicine Database (AMED), Cumulative Index to Nursing and Allied Health Literature (CINAHL), Open Grey, ClinicalTrials.gov and the WHO International Clinical Trials Registry Platform (WHO ITRP) was conducted from conception to 26th March 2019. Eligible studies were required to assess the prognostic accuracy of shock index or its modifications for outcomes of death or requirement for organ support either in sepsis or pneumonia. The methodological appraisal was carried out using the Downs and Black checklist. Evidence was synthesised using a narrative approach due to heterogeneity.

RESULTS
Of 759 records screened, 15 studies (8697 patients) were included in this review. Shock index ≥ 1 at time of hospital presentation was a moderately accurate predictor of mortality in patients with sepsis or community-acquired pneumonia, with high specificity and low sensitivity. Only one study reported outcomes related to organ support.

CONCLUSION
Elevated shock index at time of hospital presentation predicts mortality in sepsis with high specificity. Shock index may offer benefits over existing sepsis scoring systems due to its simplicity.

Database: Medline

NEWS2 is Superior to qSOFA in Detecting Sepsis with Organ Dysfunction in the Emergency Department.

Author(s): Mellhammar, Lisa; Linder, Adam; Tverring, Jonas; Christensson, Bertil; Boyd, John H; Sendi, Parham; Åkesson, Per; Kahn, Fredrik

Source: Journal of clinical medicine; Jul 2019; vol. 8 (no. 8)

Available at Journal of clinical medicine - from Europe PubMed Central - Open Access
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Abstract: Early administration of antibiotics is associated with better survival in sepsis, thus screening and early detection for sepsis is of clinical importance. Current risk stratification scores used for bedside detection of sepsis, for example Quick Sequential Organ Failure Assessment (qSOFA) and National Early Warning Score 2 (NEWS2), are primarily validated for death and intensive care. The primary aim of this study was to compare the diagnostic accuracy of qSOFA and NEWS2 for a composite outcome of sepsis with organ dysfunction, infection-related mortality within <72 h, or intensive care due to an infection. Retrospective analysis of data from two prospective, observational, multicentre, convenience trials of sepsis biomarkers at emergency departments were performed. Cohort A consisted of 526 patients with a diagnosed infection, 288 with the composite outcome. Cohort B consisted of 645 patients, of whom 269 had a diagnosed infection and 191 experienced the composite outcome. In Cohort A and B, NEWS2 had significantly higher area under receiver operating characteristic curve (AUC), 0.80 (95% CI 0.75-0.83) and 0.70 (95% CI 0.65-0.74), than qSOFA, AUC 0.70 (95% CI 0.66-0.75) and 0.62 (95% CI 0.57-0.67) p < 0.01 and, p = 0.02, respectively for the composite outcome. NEWS2 was superior to qSOFA for screening for sepsis with organ dysfunction, infection-related mortality or intensive care due to an infection both among infected patients and among undifferentiated patients at emergency departments.

Database: Medline
Sepsis calculator for neonatal early onset sepsis - A Systematic Reviews and meta-analysis.

Author(s): Deshmukh, Mangesh; Mehta, Shailender; Patole, Sanjay

Source: The journal of maternal-fetal & neonatal medicine : the official journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians; Jul 2019 ; p. 1-11

Abstract: Background: Overinvestigation and overuse of empirical antibiotics is a concern in management of neonatal early onset sepsis (EOS) using the Center for Disease Control and Prevention guidelines. "Sepsis calculator" is a risk-based prediction model for managing neonates at risk of EOS. Objective: To compare outcomes of neonatal EOS using of sepsis calculator versus conventional approach. Methods: A systematic review of randomized controlled trials (RCT) and non-RCTs reporting on outcomes after implementation of sepsis calculator for EOS for neonates > 34-week gestation was conducted using the Cochrane methodology. Databases PubMed, CINAHL, Embase, Cochrane Central library and Google Scholar were searched in May 2019. Primary outcomes were antibiotics usage and laboratory tests for managing EOS. Secondary outcomes included hospital admissions and readmissions, blood culture positive EOS and mortality. The level of evidence (LOE) was summarized using the GRADE guidelines. Results: Total 377 articles were retrieved after initial search. Six high quality non-RCTs fulfilled inclusion criteria. Meta-analysis (random effects model) showed that implementation of sepsis calculator was associated with reduced antibiotic usage [N = 172 385; OR = 0.22 (0.14-0.36); p < 0.00001; Heterogeneity (I²) = 97%, Number needed to treat (NNT): 22], laboratory tests [N = 168 432; OR = 0.14 (0.08-0.27); p < 0.00001; I² = 99%, NNT = 8], and admissions to neonatal unit [N = 16 628; OR = 0.24 (0.11-0.51); p = 0.0002; I² = 98%, NNT = 7]; LOE: moderate. There was no difference in mortality, culture positive EOS, and readmissions. Conclusion: Moderate quality evidence indicates that implementation of sepsis calculator was associated with reduced usage of antibiotics, laboratory tests and admission to neonatal unit with no increase in mortality and readmissions.

Database: Medline

HUMAN FACTORS

Human factors influencing out-of-hospital cardiac arrest survival.

Author(s): Morgan, Dominic P; Muscatello, David; Hayen, Andrew; Travaglia, Joanne

Source: Emergency Medicine Australasia; Aug 2019; vol. 31 (no. 4); p. 600-604

Abstract: Objective: Programmes that reduce the time to defibrillation are likely to improve overall survival rates from out-of-hospital cardiac arrests (OHCAs). This research sought to identify human factors common among community responders taking an automated external defibrillator (AED) to a victim of an OHCA that are either barriers or enablers of desired behaviour. Methods: A qualitative methodology was used. Community members who had access to an AED and who had been notified of an incident of OHCA near them were approached to participate in the research. Participants completed a written survey and undertook a semi-structured interview. A thematic analysis was undertaken using NVivo software and triangulated against findings from an automated data-mining package, Leximancer. Results: The study found that 100% of people who were notified of the need for an AED responded. Twelve participants subsequently identified during interviews that they held
some form of leadership role in their community. First aid training and previous experience of, and competency in managing emergencies were the strongest motivations for their response. Personal risk was not a concern when responding to victims in immediately life-threatening situations.

Conclusion: Prospective programmes may be able to be designed to increase the likelihood that community members with AEDs will respond in advance of emergency medical services by targeting common human factors, such as leadership behaviour, training, competency and experience in managing emergencies, leading to better overall survival rates from OHCA.

**Human Factors Engineering Contributions to Infection Prevention and Control.**

**Author(s):** Drews, Frank A.; Visnovsky, Lindsay C.; Mayer, Jeanmarie

**Source:** Human Factors; Aug 2019; vol. 61 (no. 5); p. 693-701

Available at Human Factors - from Unpaywall

**Database:** CINAHL

**Human Factors and the Impact on Patient Safety: Tools and Training.**

**Author(s):** Call, R. Christopher; Ruskin, Keith J.; Thomas, Donna-Ann; O’Connor, Michael F.

**Source:** International Anesthesiology Clinics; Jul 2019; vol. 57 (no. 3); p. 25-34

**Database:** CINAHL

**Design errors in vital sign charts used in consultant-led maternity units in the United Kingdom.**

**Author(s):** Isaacs, R; Smith, G; Gale-Andrews, L; Wee, M; van Teijlingen, E; Bick, D; Hundley, V; Modified Obstetric Early Warning Systems (MObs) Research Group

**Source:** International journal of obstetric anesthesia; Aug 2019; vol. 39 ; p. 60-67

**Abstract:** BACKGROUNDPaper-based charts remain the principal means of documenting the vital signs of hospitalised pregnant and postnatal women. However, poor chart design may contribute to both incorrect charting of data and clinical responses. We decided to identify design faults that might have an adverse clinical impact.

METHODSOne hundred and twenty obstetric early warning charts and escalation protocols from consultant-led maternity units in the United Kingdom and the Channel Islands were analysed using an objective and systematic approach. We identified design errors that might impede their successful use (e.g. generate confusion regarding vital sign documentation, hamper the recognition of maternal deterioration, cause a failure of the early warning system or of any clinical response).

RESULTSWe found 30% (n=36/120) of charts contained at least one design error with the potential to confuse staff, render the charts difficult to use or compromise patient safety. Amongst the most common areas were inadequate patient identification, poor use of colour, illogical weighting, poor alignment and labelling of axes, and the opportunity for staff to ‘game’ the escalation.

CONCLUSIONSWe recommend the urgent development of an evidence-based, standardised obstetric observation chart, which integrates 'human factors' and user experience. It should have a clear layout and style, appropriate colour scheme, correct language and labelling, and the ability for vital signs to be documented accurately and quickly. It should incorporate a suitable early warning score to guide clinical management.

**Database:** Medline
Human factors associated with CGM use in patients with diabetes: A systematic review.

Author(s): Smith, Madison Brick; Albanese-O'Neill, Anastasia; Macieira, Tamara G R; Yao, Yingwei; Abbatematteo, Joseph; Lyon, Debra; Wilkie, Diana J; Haller, Michael; Keenan, Gail

Source: Diabetes technology & therapeutics; Jul 2019

Abstract: Consistent continuous glucose monitor (CGM) use is associated with substantial improvements in glycemic control, yet the uptake and continued use of these technologies remains low. This systematic review aims to identify and summarize the state of science on human factors and their association with CGM use to inform training methods and best practices that support adherence to CGM use and automated insulin delivery systems. A literature search was conducted in PubMed, CINAHL, The Cochrane Library, and PsychInfo databases using PRISMA guidelines to identify studies that reported psychological human factors related to CGM or sensor augmented pump (SAP) use in patients with type 1 diabetes. In total, 389 records were identified through our database search and 26 studies published between 2010 and 2017 were included. Articles underwent quality appraisal using the Effective Public Health Practice Project Quality Assessment Tool and were categorized according to study outcomes. Identified human factors with a potential association with CGM use were treatment satisfaction, quality of life, emotional distress, and self-efficacy. Eight patient-reported barriers to CGM use were identified as a sub-component of satisfaction. To date, studies of human factors associated with CGM use generally lack standardized measures and sufficient methodological rigor necessary to establish causation. A more robust understanding of how identified human factors influence CGM use is necessary. Future studies should test interventions that target human factors to improve consistency of use and establish best-practices for enhancing patients’ experience and acceptance of these technologies, especially within adolescents and young adults.

Database: Medline

RESTR AINT

Eliciting critical care nurses’ beliefs regarding physical restraint use

Author(s): Via-Clavero Gemma; Sanjuán-Naváis Marta; Romero-García, Marta; de la Cueva-Ariza Laura; Martínez-Estalella, Gemma; Plata-Menchaca, Erika; Delgado-Hito, Pilar

Source: Nursing Ethics; Aug 2019; vol. 26 (no. 5); p. 1458

Abstract: Background: Despite the reported harms and ethical concerns about physical restraint use in the critical care settings, nurses’ intention to apply them is unequal across countries. According to the theory of planned behaviour, eliciting nurses’ beliefs regarding the use of physical restraints would provide additional social information about nurses’ intention to perform this practice. Aim: To explore the salient behavioural, normative and control beliefs underlying the intention of critical care nurses to use physical restraints from the theory of planned behaviour. Research design: A belief elicitation study was conducted. Participants and research context: Twenty-six critical care nurses were purposively sampled across gender, work-shift patterns and professional experience in five intensive care units of three hospitals in Spain. Data were obtained from a nine-item open-ended questionnaire and a focus group. Deductive content analysis was performed. Ethical considerations: Ethical approval was obtained from the hospital ethics committee. Participants were assured their participation was voluntary. Findings: Nurses framed the use of restraints as a way of prioritising patients’ physical safety. They referred to contextual factors as the main reasons to justify their application. Nurses perceived that their decision is approved by other colleagues and the
patients’ relatives. Some nurses started advocating against their use, but felt powerless to change this unsafe practice within an unfavourable climate. Control beliefs were linked to patients’ medical condition, availability of alternative solutions, analgo-sedation policies and work organisation. Discussion: Safety arguments based on the surrounding work environment were discussed. Conclusion: Nurses’ behavioural and control beliefs were related. Nurses should be trained in alternatives to physical restraint use. The impact of analgo-sedation protocols, relatives’ involvement, leadership support and intensive care unit restraint policies on physical restraint practices need to be revised. Further research is required to explore why nurses do not act with moral courage to change this harmful practice.

Database: BNI

Staff experiences and understandings of the REsTRAIN Yourself initiative to minimize the use of physical restraint on mental health wards.

Author(s): Duxbury, Joy; Thomson, Gill; Scholes, Amy; Jones, Fiona; Baker, John; Downe, Soo; Greenwood, Paul; Price, Owen; Whittington, Richard; McKeown, Mick

Source: International Journal of Mental Health Nursing; Aug 2019; vol. 28 (no. 4); p. 845-856

Available at International Journal of Mental Health Nursing - from Wiley Online Library Medicine and Nursing Collection 2019

Abstract: International efforts to minimize coercive practices include the US Six Core Strategies© (6CS). This innovative approach has limited evidence of its effectiveness, with few robustly designed studies, and has not been formally implemented or evaluated in the UK. An adapted version of the 6CS, which we called ‘REsTRAIN Yourself’ (RY), was devised to suit the UK context and evaluated using mixed methods. RY aimed to reduce the use of physical restraint in mental health inpatient ward settings through training and practice development with whole teams, directly in the ward settings where change was to be implemented and barriers to change overcome. In this paper, we present qualitative findings that report on staff perspectives of the impact and value of RY following its implementation. Thirty-six staff participated in semi-structured interviews with data subject to thematic analysis. Eight themes are reported that highlight perceived improvements in every domain of the 6CS after RY had been introduced. Staff reported more positively on their relationships with service users and felt their attitudes towards the use of coercive practices such as restraint were changed; the service as a whole shifted in terms of restraint awareness and reduction; and new policies, procedures, and language were introduced despite certain barriers. These findings need to be appreciated in a context wherein substantial reductions in the use of physical restraint were proven possible, largely due to building upon empathic and relational alternatives. However, yet more could be achieved with greater resourcing of inpatient care.

Database: CINAHL

An examination of the incidence and nature of chemical restraint on adult acute psychiatric inpatient units in Adelaide, South Australia.

Author(s): Hu, Feyan; Muir-Cochrane, Eimear; Oster, Candice; Gerace, Adam

Source: International Journal of Mental Health Nursing; Aug 2019; vol. 28 (no. 4); p. 909-921

Available at International Journal of Mental Health Nursing - from Wiley Online Library Medicine and Nursing Collection 2019

Abstract: Reducing and/or eliminating the use of coercive measures in psychiatric services is a priority worldwide. Chemical restraint is one such measure, yet to date has been poorly defined and
poorly investigated. The aim of this study was to examine chemical restraint use in 12 adult acute inpatient psychiatric units in Adelaide, South Australia. Methods involved the analysis of all reported chemical restraint events occurring over a 12-month period analysed using a descriptive quantitative design. There were 166 chemical restraint events involving 110 consumers. The highest prevalence rate in an individual unit was 28.78 events per 1000 occupied bed days, with the lowest being 0.12 events per 1000 occupied bed days. More males (n = 69, 57.5%) were involved in chemical restraint than females. Schizophrenia, schizotypal, and delusional disorders were the predominant diagnoses among consumers who were chemically restrained. The most events occurred during three time blocks: 14.00–14.59 pm, 16.00–16.59 pm, and 21.00–21.59 pm. The two most common medications used were olanzapine and clonazepam. The study presents a general picture of the practice of chemical restraint in Adelaide and identifies areas of concern in relation to the need for monitoring of side effects and completion of systematic processes of documentation regarding chemical restraint events. Findings highlight the need for sustained focus on reducing the need for chemical restraint and exploring less restrictive measures with those most likely to receive medication against their will.

Database: CINAHL

Predicting mechanical restraint of psychiatric inpatients by applying machine learning on electronic health data.

Author(s): Danielsen, A A; Fenger, M H J; Østergaard, S D; Nielbo, K L; Mors, O

Source: Acta psychiatrica Scandinavica; Aug 2019; vol. 140 (no. 2); p. 147-157

Abstract: OBJECTIVE: Mechanical restraint (MR) is used to prevent patients from harming themselves or others during inpatient treatment. The objective of this study was to investigate whether incident MR occurring in the first 3 days following admission could be predicted based on analysis of electronic health data available after the first hour of admission. METHOD: The dataset consisted of clinical notes from electronic health records from the Central Denmark Region and data from the Danish Health Registers from patients admitted to a psychiatric department in the period from 2011 to 2015. Supervised machine learning algorithms were trained on a randomly selected subset of the data and validated using an independent test dataset. RESULTS: A total of 5050 patients with 8869 admissions were included in the study. One hundred patients were mechanically restrained in the period between one hour and 3 days after the admission. A Random Forest algorithm predicted MR with an area under the curve of 0.87 (95% CI 0.79-0.93). At 94% specificity, the sensitivity was 56%. Among the ten strongest predictors, nine were derived from the clinical notes. CONCLUSION: These findings open for the development of an early warning system that may guide interventions to reduce the use of MR.

Database: Medline

Factors behind ethical dilemmas regarding physical restraint for critical care nurses.

Author(s): Salehi, Zahra; Najafi Ghezeljeh, Tahereh; Hajibabaee, Fatemeh; Joolaee, Soodabeh

Source: Nursing ethics; Jul 2019 ; p. 969733019858711

Abstract: BACKGROUND: Physical restraint is among the commonly used methods for ensuring patient safety in intensive care units. However, nurses usually experience ethical dilemmas over using
The aim of this study was to explore factors behind ethical dilemmas for critical care nurses over using physical restraint. METHODS: This is a qualitative study using conventional content analysis approach, as suggested by Graneheim and Lundman, to analyze the data. DESIGN: Seventeen critical care nurses were purposefully recruited from the four intensive care units in Tehran, Iran. Data were collected through in-depth semi-structured interviews and were concurrently analyzed through conventional content analysis as suggested by Graneheim and Lundman. ETHICAL CONSIDERATION: This study was approved by the Ethics Committee of Iran University of Medical Sciences, Tehran, Iran with the code: IR.IUMS.REC.1397.795. Before interviews, participants were provided with explanations about the aim of the study, the confidentiality of the data, their freedom to participate, and the right to withdraw the study, and their free access to the study findings. Finally, their consents were obtained, and interviews were started. RESULTS: Factors behind ethical dilemmas for critical care nurses over using physical restraint were categorized into three main categories, namely the outcomes of using physical restraint, the outcomes of not using physical restraint, and emotional distress for nurses. The outcomes of using physical restraint were categorized into the three subcategories of ensuring patient safety, physical damage to patients, and mental damage to the patient. The outcomes of not using physical restraint fell into two subcategories, namely the risks associated with not using physical restraint and legal problems for nurses. Finally, the two subcategories of the emotional distress for nurses main category were nurses’ negative feelings about restraint use and uncertainty over the decision on physical restraint use. CONCLUSION: Decision-making for restraint use is often associated with ethical dilemmas, because nurses need to weight the outcomes of its use against the outcomes of not using it and also consider patient safety and autonomy. Health authorities are recommended to develop clear evidence-based guidelines for restraint use and develop and implement educational and counseling programs for nurses on the principles of ethical nursing practice, patient rights, physical restraint guidelines and protocols, and management of emotional, ethical, and legal problems associated with physical restraint use.

Database: Medline

International research into 22 years of use of chemical restraint: An evidence overview.

Author(s): Muir-Cochrane, Eimear; Oster, Candice; Grimmer, Karen

Source: Journal of evaluation in clinical practice; Jul 2019

Available at Journal of evaluation in clinical practice - from Wiley Online Library Medicine and Nursing Collection 2019

Abstract: BACKGROUND: Chemical restraint (CR) (also known as rapid tranquillisation) is the forced (non-consenting) administration of medications to manage uncontrolled aggression, anxiety, or violence in people who are likely to cause harm to themselves or others. Our population of interest was adults with mental health disorders (with/without substance abuse). There has been a growing international movement over the past 22 years towards reducing/eliminating restrictive practices such as CR. It is appropriate to summarise the research that has been published over this time, identify trends and gaps in knowledge, and highlight areas for new research to inform practice. AIM: To undertake a comprehensive systematic search to identify, and describe, the volume and nature of primary international research into CR published since 1995. METHODS: This paper reports the processes and overall findings of a systematic search for all available primary research on CR published between 1 January 1996 and 31 July 2018. It describes the current evidence base by hierarchy of evidence, country (ies) producing the research, CR definitions, study purpose, and outcome measures. RESULTS: This review identified 311 relevant primary studies (21 RCTs; 46 non-controlled experimental or prospective observational studies; 77 cross-sectional studies; 69
retrospective studies; 67 opinion pieces, position or policy statements; and 31 qualitative studies). The USA, UK, and Australia contributed over half the research, whilst cross-country collaborations comprised 6% of it. The most common research settings comprised acute psychiatric wards (23.3%), general psychiatric wards (21.6%), and general hospital emergency departments (19.0%).

**DISCUSSION** A key lesson learnt whilst compiling this database of research into CR was to ensure that all papers described non-consenting administration of medications to manage adults with uncontrolled aggression, anxiety, or violence. There were tensions in the literature between using effective CR without producing adverse events, and how to decide when CR was needed (compared with choosing non-chemical intervention for behavioural emergencies), respecting patients' dignity whilst safeguarding their safety, and preserving safe workplaces for staff, and care environments for other patients. The range of outcome measures suggests opportunities to standardise future research.

**Database:** Medline

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**PATIENT SAFETY**

**Reducing postoperative mortality rates in England**

British Journal of Surgery 2019, July


**Prevalence, severity, and nature of preventable patient harm across medical care settings: systematic review and meta-analysis**

BMJ 2019; 366 doi: [https://doi.org/10.1136/bmj.l4185](https://doi.org/10.1136/bmj.l4185) (Published 17 July 2019)

[https://www.bmj.com/content/366/bmj.l4185](https://www.bmj.com/content/366/bmj.l4185)

**Putting out fires: a qualitative study exploring the use of patient complaints to drive improvement at three academic hospitals**

**ABSTRACT** Background and objectives Recent years have seen increasing calls for more proactive use of patient complaints to develop effective system-wide changes, analogous to the intended functions of incident reporting and root cause analysis (RCA) to improve patient safety. Given recent questions regarding the impact of RCAs on patient safety, we sought to explore the degree to which current patient complaints processes generate solutions to recurring quality problems. Design/setting Qualitative analysis of semistructured interviews with 21 patient relations personnel (PRP), nursing and physician leaders at three teaching hospitals (Toronto, Canada). Results Challenges to using the patient complaints process to drive hospital-wide improvement included: (1) Complaints often reflect recalcitrant system-wide issues (eg, wait times) or well-known problems which require intensive efforts to address (eg, poor communication). (2) The use of weak change strategies (eg, one-off educational sessions). (3) The handling of complaints by unit managers so they never reach the patient relations office. PRP identified giving patients a voice as their primary goal. Yet their daily work, which they described as ‘putting out fires’, focused primarily on placating
patients in order to resolve complaints as quickly as possible, which may in effect suppress the patient voice. **Conclusions** Using patient complaints to drive improvement faces many of the challenges affecting incident reporting and RCA. The emphasis on ‘putting out fires’ may further detract from efforts to improve care for future patients. Systemically incorporating patients’ voices in clinical operations, as with co-design and other forms of authentic patient engagement, may hold greater promise for meaningful improvements in the patient experience than do RCA-like analyses of patient complaints.

Full text at:

https://www.patientlibrary.net/tempgen/197011.pdf

"I'm Trying to Stop Things Before They Happen": Carers’ Contributions to Patient Safety in Hospitals

**Author(s):** Merner Bronwen; Hill, Sophie; Taylor, Michael

**Source:** Qualitative Health Research; Aug 2019; vol. 29 (no. 10); p. 1508

Available at [Qualitative Health Research](https://www.patientlibrary.net/tempgen/197011.pdf) - from Unpaywall

**Abstract:** Patient safety policies increasingly encourage carer (i.e., family or friends) involvement in reducing health care–associated harm in hospital. Despite this, carer involvement in patient safety in practice is not well understood—especially from the carers’ perspective. The purpose of this article is to understand how carers of adult patients perceived and experienced their patient safety contributions in hospital. Constructivist grounded theory informed the data collection and analysis of in-depth interviews with 32 carers who had patient safety concerns in Australian hospitals. Results demonstrated carers engaged in the process of “patient-safety caring.” Patient-safety caring included three levels of intensity: low ("contributing without concern"), moderate ("being proactive about safety"), and high ("wrestling for control"). Carers who engaged at high intensity provided the patient with greater protection, but typically experienced negative consequences for themselves. Carers’ experiences of negative consequences from safety involvement need to be mitigated by practice approaches that value their contributions.

**Database:** BNI

Resource allocation and rationing in nursing care: A discussion paper

**Author(s):** Anne, Scott P; Harvey, Clare; Felzmann Heike; Suhonen Riitta; Habermann Monika; Halvorsen, Kristin; Christiansen, Karin; Toffoli Luisa; Papastavrou Evridiki

**Source:** Nursing Ethics; Aug 2019; vol. 26 (no. 5); p. 1528

Available at [Nursing Ethics](https://www.patientlibrary.net/tempgen/197011.pdf) - from Unpaywall

**Abstract:** Driven by interests in workforce planning and patient safety, a growing body of literature has begun to identify the reality and the prevalence of missed nursing care, also specified as care left undone, rationed care or unfinished care. Empirical studies and conceptual considerations have focused on structural issues such as staffing, as well as on outcome issues – missed care/unfinished care. Philosophical and ethical aspects of unfinished care are largely unexplored. Thus, while internationally studies highlight instances of covert rationing/missed care/care left undone – suggesting that nurses, in certain contexts, are actively engaged in rationing care – in terms of the nursing and nursing ethics literature, there appears to be a dearth of explicit decision-making frameworks within which to consider rationing of nursing care. In reality, the assumption of policy makers and health service managers is that nurses will continue to provide full care – despite
reducing staffing levels and increased patient turnover, dependency and complexity of care. Often, it
would appear that rationing/missed care/nursing care left undone is a direct response to
overwhelming demands on the nursing resource in specific contexts. A discussion of resource
allocation and rationing in nursing therefore seems timely. The aim of this discussion paper is to
consider the ethical dimension of issues of resource allocation and rationing as they relate to nursing
care and the distribution of the nursing resource.

**Database:** BNI

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**Enhancing interprofessional education through patient safety and quality improvement team-
training: A pre-post evaluation**

**Author(s):** Quatrara, Beth; Brashers, Valentina; Baernholdt, Marianne; Novicoff, Wendy; Schlag,
Katherine; Haizlip, Julie; Plews-Ogan, Margaret; Kennedy, Christine

**Source:** Nurse Education Today; Aug 2019; vol. 79; p. 105

**Database:** BNI

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**Patient acceptability of wearable vital sign monitoring technologies in the acute care setting: A
systematic review**

**Author(s):** Sprogis, Stephanie K; Currey, Judy; Considine, Julie

**Source:** Journal of Clinical Nursing; Aug 2019; vol. 28 (no. 15-16); p. 2732

**Available at:** Journal of Clinical Nursing (John Wiley & Sons, Inc.) - from Wiley Online Library

**Abstract:** Aims and objectives To examine patient acceptability of wearable vital sign monitoring
devices in the acute setting. Background Wearable vital sign monitoring devices may improve patient
safety, yet hospital patients' acceptability of these devices is largely unreported. Design A systematic
review. Methods Cumulative Index to Nursing and Allied Health Literature Complete, MEDLINE
Complete and EMBASE were searched, supplemented by reference list hand searching. Studies were
included if they involved adult hospital patients (≥18 years), a wearable monitoring device capable of
assessing ≥1 vital sign, and measured patient acceptability, satisfaction or experience of wearing the
device. No date restrictions were enforced. Quality assessments of quantitative and qualitative
studies were undertaken using the Downs and Black Checklist for Measuring Study Quality and the
Critical Appraisal Skills Programme Qualitative Research Checklist, respectively. Meta-analyses were
not possible given data heterogeneity and low research quality. Reporting adhered to the Preferred
Reporting Items for Systematic Reviews and Meta-Analyses guidelines and a Preferred Reporting
Items for Systematic Reviews and Meta-Analyses checklist was completed. Results Of the 427 studies
screened, seven observational studies met the inclusion criteria. Six studies were of low quality and
one was of high quality. In two studies, patient satisfaction was investigated. In the remaining
studies, patient experience, patient opinions and experience, patient perceptions and experience,
device acceptability, and patient comfort and concerns were investigated. In four studies, patients
were mostly accepting of the wearable devices, reporting positive experiences and satisfaction
relating to their use. In three studies, findings were mixed. Conclusion There is limited high-quality
research examining patient acceptability of wearable vital sign monitoring devices as an a priori
focus in the acute setting. Further understanding of patient perspectives of these devices is required
to inform their continued use and development. Relevance to clinical practice The provision of
patient-centred nursing care is contingent on understanding patients' preferences, including their
acceptability of technology use. **Database:** BNI
Patient safety culture in obstetrics and gynecology and neonatology units: the nurses' and the midwives' opinion.

Author(s): Ribeliene, Janina; Blazeviciene, Aurelija; Nadisaukiene, Ruta Jolanta; Tameliene, Rasa; Kudreviciene, Ausrele; Nedzelskiene, Irena; Macijauskiene, Jurate

Source: Journal of Maternal-Fetal & Neonatal Medicine; Oct 2019; vol. 32 (no. 19); p. 3244-3250

Database: CINAHL


Author(s): Haugen, Arvid S.; Sevdalis, Nick; Søfteland, Eirik

Source: Anesthesiology; Aug 2019; vol. 131 (no. 2); p. 420-425

Database: CINAHL

Implementing Smart Pumps to Enhance Patient Safety.

Author(s): Davis, Sondra; Blanchard, Corliss; Lewis, Jevon

Source: Hospital Pharmacy; Aug 2019; vol. 54 (no. 4); p. 217-219
Available at Hospital Pharmacy - from Europe PubMed Central - Open Access

Abstract: The article offers information on the implementation of the safe medication practices in patient care. Topics discussed include information on the implementing or optimizing intravenous smart pumps providing safer care for patients; discussions on the implementing smart pumps as standardization of drug concentrations; and the information on the role of smart pumps providing clinical support for registered nurses.

Database: CINAHL

The new NHS patient safety strategy.

Author(s): Tingle, John

Source: British Journal of Nursing; Jul 2019; vol. 28 (no. 14); p. 948-949

Abstract: John Tingle discusses the new NHS patient safety strategy launched early this month

Database: CINAHL

Testing the temperature of patient safety in the NHS.

Author(s): Tingle, John

Source: British Journal of Nursing; Jul 2019; vol. 28 (no. 13); p. 888-889

Abstract: John Tingle, Global Patient Safety Specialist, ECRI Institute, discusses several recent NHS reports which show the current state of patient safety in the NHS

Database: CINAHL
Health Literacy in the Inpatient Setting: Implications for Patient Care and Patient Safety.

**Author(s):** Glick, Alexander F; Brach, Cindy; Yin, Hsiang Shonna; Dreyer, Benard P

**Source:** Pediatric clinics of North America; Aug 2019; vol. 66 (no. 4); p. 805-826

**Abstract:** Health literacy plays a role in the events leading up to children's hospitalizations, during hospital admission, and after discharge. Hospitals and providers should use a universal precautions approach and routinely incorporate health-literacy-informed strategies in communicating with all patients and families to ensure that they can understand health information, follow medical instructions, participate actively in their own/their child's care, and successfully navigate the health care system. Interventions that incorporate health-literacy-informed strategies and that target patients/families and health care systems should be implemented to improve patient outcomes and patient-centered and family-centered care.

**Database:** Medline

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**SIMULATION**


**Author(s):** Lee, Joy Yeonjoo; Donkers, Jeroen; Jarodzka, Halszka; van Merriënboer, Jeroen J.G.

**Source:** Computers in Human Behavior; Oct 2019; vol. 99 ; p. 268-277

**Abstract:** Computer-based simulation games provide an environment to train complex problem-solving skills. Yet, it is largely unknown how the in-game performance of learners varies with different levels of prior knowledge. Based on theories of complex-skill acquisition (e.g., 4C/ID), we derive four performance aspects that prior knowledge may affect: (1) systematicity in approach, (2) accuracy in visual attention and motor reactions, (3) speed in performance, and (4) cognitive load. This study aims to empirically test whether prior knowledge affects these four aspects of performance in a medical simulation game for resuscitation skills training. Participants were 24 medical professionals (experts, with high prior knowledge) and 22 medical students (novices, with low prior knowledge). After pre-training, they all played one scenario, during which game-logs and eye-movements were collected. A cognitive-load questionnaire ensued. During game play, experts demonstrated a more systematic approach, higher accuracy in visual selection and motor reaction, and a higher performance speed than novices. Their reported levels of cognitive load were lower. These results indicate that prior knowledge has a substantial impact on performance in simulation games, opening up the possibility of using our measures for performance assessment. • Developing theory-based indicators of expertise leads to sound validation. • Experts show higher systematicity in their task approach than novices. • Experts attend critical areas more and intervention areas less often than novices. • Self-reported cognitive load negatively correlates with eye-gaze transition rate. • Experts perform faster than novices, with higher accuracy and lower cognitive load.

**Database:** CINAHL

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Simulation-Based Palliative Care Communication for Pediatric Critical Care Fellows.

**Author(s):** Brock, Katharine E.; Tracewski, Meghan; Allen, Kristen E.; Klick, Jeffrey; Petrillo, Toni; Hebbar, Kiran B.

**Source:** American Journal of Hospice & Palliative Medicine; Sep 2019; vol. 36 (no. 9); p. 820-830
Abstract: Background: Pediatric palliative care (PPC) education is lacking in pediatric critical care medicine (PCCM) fellowships, despite the desire of many program directors and fellows to expand difficult conversation training. Simulation-based training is an experiential method for practicing challenging communication skills such as breaking bad news, disclosing medical errors, navigating goals of care, and supporting medical decision-making. Methods: We describe a simulation-based PPC communication series for PCCM fellows, including presimulation session, simulation session, debriefing, and evaluation methods. From 2011 to 2017, 28 PCCM fellows participated in a biannual half-day simulation session. Each session included 3 scenarios (allowing for participation in up to 18 scenarios over 3 years). Standardized patients portrayed the child’s mother. PCCM and interprofessional PPC faculty cofacilitated, evaluated, and debriefed the fellows after each scenario. Fellows were evaluated in 4 communication categories (general skills, breaking bad news, goals of care, and resuscitation) using a 3-point scale. A retrospective descriptive analysis was conducted. Results: One hundred sixteen evaluations were completed for 18 PCCM fellows. Median scores for general communication items, breaking bad news, and goals of care ranged from 2.0 to 3.0 (interquartile range [IQR]: 0-1) with scores for resuscitation lower at 1.0 (IQR: 1.5-2). Discussion: This experiential simulation-based PPC communication curriculum taught PCCM fellows valuable palliative communication techniques although revealed growth opportunities within more complex communication tasks. The preparation, methods, and lessons learned for an effective palliative simulation curriculum can be expanded upon by other pediatric training programs, and a more rigorous research program should be added to educational series.

Database: CINAHL

Simulation-Based Training Promotes Higher Levels of Cognitive Control in Acute and Unforeseen Situations.

Author(s): Pedersen, Ingunn; Lee Solevåg, Anne; Solberg, Marianne Trygg

Source: Clinical Simulation in Nursing; Sep 2019; vol. 34 ; p. 6-15

Abstract: Simulation-based training has been recommended to improve patient safety. This study summarizes intensive care nurses' perceptions of what facilitates learning during simulation-based team training in preparation for acute and unforeseen situations. This study is a literature review with thematic analysis. Seven qualitative articles were included. Synthesis with a cognitive perspective revealed six key factors for intensive care nurses' learning: (a) relational coordination, (b) analytical cognition in task management, (c) situational awareness, (d) self-awareness, (e) cognitive control, and (f) high-quality communication within the team. The main factor that contributes to learning in simulation-based training is that nurses have cognitive control when time allows the use of analytical thinking. • In simulation-based team training, nurses learned how to interact and collaborate, and about one's own and others' tasks. • The foundation to learn in simulation-based team training is that nurses have cognitive control by using time and analytical thinking. • Success factors to perceive learning during simulation-based team training is to use analytical mode of cognition in task management with a situation awareness.

Database: CINAHL

A Peer-Led Interprofessional Simulation Experience Improves Perceptions of Teamwork.

Author(s): Lairamore, Chad; Reed, Clinta Ché; Damon, Zack; Rowe, Veronica; Baker, Jacob; Griffith, Keitha; VanHoose, Lisa

Source: Clinical Simulation in Nursing; Sep 2019; vol. 34 ; p. 22-29
Abstract: Simulation-based interprofessional education (IPE) improves teamwork, self-efficacy, and clinical preparedness among health profession students. A mixed-method design assessed differences in perceptions, knowledge, and skills related to a peer-led, acute care–focused IPE experience for 319 nursing, physical therapy, and occupational therapy students. All students demonstrated an improvement in positive perceptions of teamwork and collaborative practice. Qualitative themes derived included the importance of teamwork, communication, and valuing other professions, increased understanding of the roles of other professions, and improved leadership skills. Peer-led simulation-based IPE effectively improved student attitudes, values, and beliefs regarding interprofessional collaboration and increased student understanding of professional roles in an acute-care environment. • Interprofessional education (IPE) simulation positively influenced students’ opinions of collaborative practice. • IPE simulation improved the understanding of acute-care professional roles. • Peer-led IPE is an effective method for improving student leadership skills.

Database: CINAHL

Preparing Perinatal Nurses for Obstetric OR Emergencies by Using Simulations.
Author(s): Stokes, Tanesha L.; Koslan, Garrett
Source: AORN Journal; Aug 2019; vol. 110 (no. 2); p. 162-168
Abstract: A cesarean hysterectomy (CH) is an emergency procedure that can save a woman’s life in the event of postpartum hemorrhaging. If the CH is anticipated, it can take place in the general OR; however, more complex patients with multiple comorbidities are undergoing cesarean deliveries, resulting in unanticipated CHs and emergent procedures occurring in the obstetric OR. Many perinatal nurses believe they are not properly trained to provide the level of perioperative care required during a CH. Perinatal nurse leaders implemented a perinatal perioperative simulation program to address this knowledge gap. Feedback from perinatal nurses after completing the simulation revealed they gained a comprehensive understanding of the flow of the procedure and the instrumentation needed to perform it. The simulation also improved communication and leadership skills in the obstetric OR. Simulations may help perinatal nurses provide safer, higher quality care when a delivery develops into a high-risk operative procedure.

Database: CINAHL

Crash testing the dummy: a review of in situ trauma simulation at a Canadian tertiary centre.
Author(s): Minor, Samuel; Green, Robert; Jessula, Samuel
Source: Canadian Journal of Surgery; Aug 2019; vol. 62 (no. 4); p. 243-248
Available at Canadian Journal of Surgery - from Europe PubMed Central - Open Access
Available at Canadian Journal of Surgery - from ProQuest (Health Research Premium) - NHS Version
Available at Canadian Journal of Surgery - from Unpaywall

Database: CINAHL

Simulation Observers Learn the Same as Participants: The Evidence.
Author(s): Johnson, Brandon Kyle
Source: Clinical Simulation in Nursing; Aug 2019; vol. 33 ; p. 26-34
Abstract: Confusion continues regarding the value of the observer in simulation and whether they engage in the active and experiential learning environment that underpins simulation. Despite studies demonstrating no differences in knowledge between the participant and observer, it is still unknown how observers learn in simulation and how they apply that learning to a contextually similar situation, a critical aspect of debriefing. An experimental, pretest-multiple posttest, repeated-measures study was used to describe the knowledge demonstration, knowledge retention, and knowledge application of participants and observers after a simulation and debriefing. There was no significant difference between participant and observer in any of the measures. There was significant knowledge gain regardless of role and significant knowledge decay in both groups four weeks later. The observer appears to construct knowledge similarly to participants. Educators must consider the value of assigning learners to both participant and observer roles. • The participant and observer are common role assignments in simulation. • Observers mirror the gains and decays in knowledge of those in participant roles. • Observers apply knowledge to parallel situations similarly to participants. • Debriefing and sequencing simulations promote deliberate thinking practice.

Database: CINAHL

The Changing Landscape of Simulation-Based Education.

Author(s): Morse, Catherine Jean; Fey, Mary; Kardong-Edgren, Suzie; Mullen, Ann; Barlow, Melanie; Barwick, Stephanie

Source: The American journal of nursing; Aug 2019; vol. 119 (no. 8); p. 42-48

Abstract: Once considered solely as an educational tool in undergraduate education, simulation-based education (SBE) now has many uses. SBE is now embedded in both graduate and undergraduate nursing education programs and has become increasingly accepted practice in hospital orientation and transition-to-practice programs. Newer applications include ongoing professional education, just-in-time training, teamwork development, and systems testing. This article highlights the changing landscape of SBE and describes elements critical to its successful use, including facilitator competencies, the necessity of providing a psychologically safe environment to enable learning, and the importance of addressing other safety concerns, such as the possibility of accidentally introducing simulated equipment and medications into real patient care.

Database: Medline

Improving safety for medical students and patients during medical electives—a novel simulation-based course.

Author(s): Maweni, Robert M; Foley, Robert W; Lupi, Micol; Woods, Amy; Shirazi, Shahram; Holm, Vaughan; Vig, Stella

Source: Irish journal of medical science; Aug 2019; vol. 188 (no. 3); p. 1033-1045

Abstract: INTRODUCTION The medical elective is a common component of undergraduate medical education in the UK and Ireland. These are often undertaken in varied hospitals and countries across the world, most of which are not related to their parent institutions, in order to explore specialties and regions of interest. However experiences are varied, with goals not always established beforehand, or indeed reached, when present. METHODS Using a novel 20-item, self-administered questionnaire distributed via social media to 436 medical students and doctors in the UK and Republic of Ireland, we sought to delineate common elective experiences and establish what procedures and clinical scenarios medical students commonly undertake and manage during their medical electives, in order to ascertain their confidence level with each of these tasks at the time of their medical electives. We also looked to determine if there are any adverse effects or events
related to these situations. Following this, we developed a simulation-based course to address knowledge and skill gaps identified in the above fields. This course was delivered to two groups of medical students from St George’s University London and King’s College London medical schools by the same faculty over two separate afternoons.

RESULTS
We found that a significant proportion of medical students feel pressured to perform skills, which are beyond their competence level during their elective placements, putting both patient and student safety at risk. Our simulation course was successful in significantly improving key technical and non-technical skills, which would be useful for students during their medical electives.

Database: Medline

DETERIORATING PATIENTS

Strengthening nursing surveillance in general wards: A practice development approach

Author(s): Peet, Jacqueline; Theobald, Karen; Douglas, Clint

Source: Journal of Clinical Nursing; Aug 2019; vol. 28 (no. 15-16); p. 2924

Abstract:

Aims and objectives
To explore the context and culture of nursing surveillance on an acute care ward. Background
Prevention of patient deterioration is primarily a nursing responsibility in hospital. Registered nurses make judgements and act on emerging threats to patient safety through a process of nursing surveillance. Organisational factors that weaken nursing surveillance capacity on general wards increase the need for patient rescue at the end point of clinical deterioration with poorer outcomes. Yet little is known about cultures that enable and sustain ward nursing surveillance for patient safety. Design
Workplace observations and semistructured interviews using a critical lens as the first stage of a larger emancipatory practice development project. Methods
Researcher immersion including 96 hr of nonparticipant observation with 12 semistructured interviews during July–August 2017. This study adhered to the COREQ guidelines. Results
We offer a metaphor of nursing surveillance as the threads that support the very fabric of acute care nursing work. These hidden threads enable nurses to weave the tapestry of care that keeps patients safe. This tapestry is vulnerable to internal and external forces, which weaken the structure, putting patients and staff at risk. Conclusion
Understanding local context is essential to supporting practice change. This workplace observation challenges us to find ways to creatively engage nurses with the underlying cultural and systems issues that so often remain hidden from view in the deteriorating patient literature. Relevance to clinical practice
Building cultural values that strengthen nursing surveillance is a prerequisite for safe and effective hospital care. As such, practice-based research that empowers frontline nurses and teams to develop person-centred workplace cultures can hold the key to unlocking sustainable improvements in patient safety.

Database: BNI

The impact of introducing the Modified Early Warning Score 'MEWS' on emergency nurses' perceived role and self-efficacy: A quasi-experimental study.

Author(s): Al-Kalaldeh, Mahmoud; Suleiman, Khaled; Abu-Shrooor, Loai; Al-Mawajdah, Hala

Source: International Emergency Nursing; Jul 2019; vol. 45 ; p. 25-30

Abstract:

• Impact of Early Warning Score on emergency nurses’ self-efficacy is established. • Impact of Early Warning Score on emergency nurses’ perceived role is approved. • Early Warning Score
enhances nurses' contribution in the acutely ill assessment. • Introducing Early Warning Score program in the Jordanian context is recommended. Early warning Score is a bedside track and trigger system used to facilitate early detection and management of deteriorating patients. Although emergency department nurses are the key to implement this task, their interaction and contribution to provide an estimate of patients' severities is still suboptimal and neglected. This study aimed to introduce an educational programme using the Modified Early Warning Score (MEWS) to nurses working in the emergency departments and to assess the programme impact on nurses' self-efficacy and perceived role. This non-equivalent, multi-centre, quasi-experimental study, assigned two groups of emergency nurses into intervention and control. The intervention group received three interactive educational sessions totalling 12 h relevant to the application of MEWS in emergency situations using a validated programme called 'COMPAs'. The other group received no intervention. Both groups were assessed for self-efficacy and perceived role in the pre-test, immediate post-test, and three months later follow-up phase. A total of 232 participants were divided into intervention and control groups (118 and 114, respectively), having no variations in age, gender, or experience as registered nurses. The intervention group showed a significant improvement in the self-efficacy scores for the nurses (F : 152.21, df: 2, p < 0.001). Similarly, the intervention nurses exhibited a significant improvement in the perceived role scores after the intervention (F : 121.20, df: 2, p < 0.001). The control group showed no changes in either variable across the three phases. While older nurses with longer experience showed higher self-efficacy after the programme, the perceived role explained an additional 57.0% of the variance in self-efficacy after controlling these two demographics (Beta: 0.743, p < 0.001, CI: 1.18–1.66). The existence of an early warning system in the emergency department is able to enhance nurses' self-efficacy and perceived role coinciding with nursing interactions with the multidisciplinary team.

**Database:** CINAHL

**The introduction of the Early Warning Score in the Emergency Department: A retrospective cohort study.**

**Author(s):** McCabe, Catherine; O'Brien, Margaurita; Quirke, Mary B.

**Source:** International Emergency Nursing; Jul 2019; vol. 45 ; p. 31-35

**Abstract:** Following the introduction of the EWS in the ED, identification of the most serious patients (i.e. MTS 1) remained stable, however, staff were more likely to place other patients in a higher risk category. • Post EWS implementation, patients allocated an MTS of 2–5 waited significantly longer to see a clinician and overall spent a longer period of time in the ED. • Once introduced, staff were consistent in how they approached the allocation of MTS in conjunction with the EWS. • The effective and sustained combined use of the MTS and EWS in the ED requires resources in terms of increased bed capacity and experienced clinical staff. The combined use of the Manchester Triage System (MTS) with the Early Warning Score (EWS) may be useful in ensuring both appropriate prioritisation and continued monitoring in the Emergency Department (ED) leading to early intervention for deteriorating patients thus improving patient outcomes especially in overcrowded EDs. Determine the effect of the EWS and MTS on accuracy of the MTS and ED waiting times. A retrospective cohort chart review of all adult patients who presented to the ED in one large hospital in Ireland (n = 10,048) at three time points between 1st September 2015-30th September 2016; 3 months prior to EWS introduction, implementation month and 9 months post-implementation. Patients were significantly more likely to be categorised as an MTS category 2 (rather than 3–5) after the EWS was introduced (p < 0.001). Waiting times between triage and clinician review (p 0.001). A similar finding was observed for patients with an MTS of 3–5. Although positive in terms of patient outcomes, the effective and sustained combined use of the MTS and
EWS requires increased bed capacity and experienced clinical staff to ensure that the ED journey time reduced rather than increased.

**Database:** CINAHL
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A just culture is a culture of trust, learning and accountability. It is particularly important when an incident has occurred; when something has gone wrong. How do you respond to the people involved? What do you do to minimize the negative impact, and maximize learning? This third edition of Sidney Dekker's extremely successful Just Culture offers new material on restorative justice and ideas about why your people may be breaking rules. Supported by extensive case material, you will learn about safety reporting and honest disclosure, about retributive just culture and about the criminalization of human error. Some suspect a just culture means letting people off the hook. Yet they believe they need to remain able to hold people accountable for undesirable performance. In this new edition, Dekker asks you to look at 'accountability' in different ways. One is by asking which rule was broken, who did it, whether that behavior crossed some line, and what the appropriate consequences should be. In this retributive sense, an 'account' is something you get people to pay, or settle. But who will draw that line? And is the process fair? Another way to approach accountability after an incident is to ask who was hurt. To ask what their needs are. And to explore whose obligation it is to meet those needs. People involved in causing the incident may well want to participate in meeting those needs. In this restorative sense, an 'account' is something you get people to tell, and others to listen to. Learn to look at accountability in different ways and your impact on restoring trust, learning and a sense of humanity in your organization could be enormous.
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