Current Awareness

Sign Up To Safety

This monthly Current Awareness Bulletin is produced by the Library Team, Musgrove Park Academy 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.

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Please note that abstracts are not always available for articles.

**FALLS**

**Advanced Practice Nurse-Led Statewide Collaborative to Reduce Falls in Hospitals**

**Author(s):** Gray-Miceli, Deanna; Mazzia, Lisa; Crane, Giles

**Source:** Journal of Nursing Care Quality; 2017; vol. 32 (no. 2); p. 120-125

**Abstract:** Thirty-eight hospitals participated in falls prevention team training, followed by coaching and mentoring over 3 months to develop unit-based initiatives to reduce falls. Initiatives centered on fall risk assessment, rounding, or postfall assessment. Paired t test of the pre-/postintervention fall rates of 23 of the hospitals revealed reduced fall rates (P < .01). The estimated mean decrease was 1.7 falls per 1000 patient days (95% confidence limits of 0.7-2.7). References

**Database:** BNI

**Factors associated with use of falls risk-increasing drugs among patients of a geriatric oncology outpatient clinic in Australia: a cross-sectional study**

**Author(s):** Turner, Justin P.; Tervonen, Hanna E.; Shakib, Sepehr; Singhal, Nimit; Prowse, Robert; Bell, J. Simon

**Source:** Journal of Evaluation in Clinical Practice; Apr 2017; vol. 23 (no. 2); p. 361-368

**Abstract:** Older people with cancer are at increased risk of falling. Falls risk-increasing drugs (FRIDs), comprising psychotropics and medications that cause orthostatic hypotension, are a potentially modifiable risk factor for falls. The objective of this study was to determine the prevalence and factors associated with use of FRIDs in older people with cancer. Patients aged ≥70 years who presented to a hospital outpatient clinic between January 2009 and July 2010 were included in the study. Information on current medication use, falls in previous 6 months, and frailty criteria was collected. Multinomial logistic regression was used to compute odds ratios (OR) and 95% confidence intervals (CIs) for factors associated with levels of FRID use. Overall, 76.1% (n = 293) of 383 patients used FRIDs. This comprised psychotropics (31.2%, n = 120) and medications causing orthostatic hypotension (69.9%, n = 269). In total, 24.0% (n = 92) patients reported falling in the previous 6 months. Risk factors for falling were associated with use of psychotropics but not orthostatic hypotension drugs. Patients with a history of falls had increased odds of using psychotropics (greater than or equal to 3 psychotropics; OR 13.50; 95%CI, 2.64-68.94). Likewise, frail patients had increased odds of using psychotropics (greater than or equal to 3 psychotropics; OR 27.78; 95%CI, 6.06-127.42). Risk factors for falling were associated with the use of psychotropics. This suggests that clinicians either do not recognize or underestimate the contribution of medications to falls in this high-risk patient group. Further efforts are needed to rationalize medication regimens at the time of patients' first presentation to outpatient oncology services. [PUBLICATION] References

**Database:** BNI
Preventing falls in hospital

**Author(s):** Pearce, Lynne

**Source:** Nursing Management (UK); Mar 2017; vol. 23 (no. 10); p. 11

Available in full text at Nursing Management - UK - from RCN Publishing ; Notes: Click on 'Sign in' to top right, then choose OpenAthens option

Available in full text at Nursing Management - UK - from Royal College of Nursing ; Notes: Click on 'Sign in' to top right, then choose OpenAthens option

**Abstract:** Falls are the most frequent adverse event reported in hospitals, usually affecting older patients. Every year, more than 240,000 falls are reported in acute hospitals and mental health trusts in England and Wales, equivalent to more than 600 a day, according to the Royal College of Physicians (RCP). But research shows that when nurses, doctors and therapists work together, falls can be reduced by 20-30%. References

**Database:** BNI

Piloting staff education in Australia to reduce falls in older hospital patients experiencing delirium

**Author(s):** Toye, Christine; Kitchen, Su; Hill, Andrew; Edwards, Deborah; Sin, Michelle; Maher, Sean

**Source:** Nursing and Health Sciences; Mar 2017; vol. 19 (no. 1); p. 51-58

**Abstract:** This study piloted a hospital-based delirium and falls education program to investigate the impacts on staff knowledge and practice plus patient falls. On a medical ward, staff knowledge was compared before and after education sessions. Other data - collected a day before and after program implementation - addressed documentation of patients' delirium and evidence of compliance with falls risk minimization protocols. These data, and numbers of patient falls, were compared before and after program implementation. Almost all ward staff members participated in education sessions (7 doctors, 7 allied health practitioners, and 45 nurses) and knowledge was significantly improved in the 22 who completed surveys both before and after session attendance. Patients assessed as having delirium (5 before implementation, 4 afterwards) were all documented as either confused or delirious. Small changes eventuated in adherence with falls risk management protocols for confused patients and the number of falls decreased. The program merits a stronger emphasis on staff activities relating to the detection, documentation, and management of delirium to inter-professional roles and communication. Evidence of practice enhancement from program implementation should precede rigorous testing of impacts upon falls. References

**Database:** BNI

The Baptist Health High-Risk Falls Assessment: One Assessment Fits All

**Author(s):** Bugajski, Andrew; Lengerich, Alex; McCowan, Denise; Merritt, Sharon; Moe, Krista; Hall, Brittany; Nelson, Debbie; Brockopp, Dorothy

**Source:** Journal of Nursing Care Quality; 2017; vol. 32 (no. 2); p. 114-119

**Abstract:** Assessing high risk for falling among psychiatric inpatients is particularly challenging in that assessments with strong sensitivity and specificity are not available. The purpose of this study was to determine the sensitivity, specificity, and diagnostic odds ratio of the Baptist Health High Risk Falls Assessment (BHHRA), a medical-surgical fall risk assessment, in a psychiatric inpatient population.
Data collected on 5910 psychiatric inpatients using the BHHRFA showed acceptable sensitivity, specificity, and diagnostic odds ratio (0.68/0.70/4.964). References

Database: BNI

**Validity of the Johns Hopkins Fall Risk Assessment Tool for Predicting Falls on Inpatient Medicine Services**

**Author(s):** Klinkenberg, W; Potter, Patricia

**Source:** Journal of Nursing Care Quality; 2017; vol. 32 (no. 2); p. 108-113

**Abstract:** The Johns Hopkins Fall Risk Assessment Tool (JHFRAT) is widely used but few studies have examined its psychometric properties. We examined the predictive validity of the JHFRAT for 13,574 patient admissions to medicine units at a large academic medical center in 2014. There were 204 patient falls reported. While patients who fell had higher JHFRAT total scores, a majority of patients who fell were classified by the JHFRAT as moderate or low risk. References

Database: BNI

**Evaluation of an inpatient fall risk screening tool to identify the most critical fall risk factors in inpatients**

**Author(s):** Hou, Wen-Hsuan; Kang, Chun-Mei; Ho, Mu-Hsing; Kuo, Jessie Ming-Chuan; Chen, Hsiao-Lien; Chang, Wen-Yin

**Source:** Journal of Clinical Nursing; Mar 2017; vol. 26 (no. 5-6); p. 698-706

**Abstract:** Aims and objectives To evaluate the accuracy of the inpatient fall risk screening tool and to identify the most critical fall risk factors in inpatients. Background Variations exist in several screening tools applied in acute care hospitals for examining risk factors for falls and identifying high-risk inpatients. Design Secondary data analysis. Methods A subset of inpatient data for the period from June 2011-June 2014 was extracted from the nursing information system and adverse event reporting system of an 818-bed teaching medical centre in Taipei. Data were analysed using descriptive statistics, receiver operating characteristic curve analysis and logistic regression analysis. Results During the study period, 205 fallers and 37,232 nonfallers were identified. The results revealed that the inpatient fall risk screening tool (cut-off point of ≥3) had a low sensitivity level (60%), satisfactory specificity (87%), a positive predictive value of 2.0% and a negative predictive value of 99%. The receiver operating characteristic curve analysis revealed an area under the curve of 0.805 (sensitivity, 71.8%; specificity, 78%). To increase the sensitivity values, the Youden index suggests at least 1.5 points to be the most suitable cut-off point for the inpatient fall risk screening tool. Multivariate logistic regression analysis revealed a considerably increased fall risk in patients with impaired balance and impaired elimination. The fall risk factor was also significantly associated with days of hospital stay and with admission to surgical wards. Conclusions The findings can raise awareness about the two most critical risk factors for falls among future clinical nurses and other healthcare professionals and thus facilitate the development of fall prevention interventions. Relevance to clinical practice This study highlights the needs for redefining the cut-off points of the inpatient fall risk screening tool to effectively identify inpatients at a high risk of falls. Furthermore, inpatients with impaired balance and impaired elimination should be closely monitored by nurses to prevent falling during hospitalisations. References

Database: BNI
Exercise Interventions for Preventing Falls Among Older People in Care Facilities: A Meta-Analysis

Author(s): Lee, Seon Heui; Kim, Hee Sun

Source: Worldviews on Evidence-Based Nursing; Feb 2017; vol. 14 (no. 1); p. 74-80

Abstract: Background. Falls in older people are a common problem, often leading to considerable morbidity. However, the overall effect of exercise interventions on fall prevention in care facilities remains controversial. Aims. To evaluate the effectiveness of exercise interventions on the rate of falls and number of fallers in care facilities. Methods. A meta-analysis was conducted of randomized controlled trials published up to December 2014. Eight databases were searched including Ovid-Medline, Embase, CINAHL, Cochrane Library, KoreaMed, KMbase, KISS, and KisTi. Two investigators independently extracted data and assessed study quality. Results. Twenty-one studies were selected, that included 5,540 participants. Fifteen studies included exercise as a single intervention, whereas the remaining six included exercise combined with two or more fall interventions tailored to each resident’s fall risk (i.e., medication review, environmental modification or staff education). Meta-analysis showed that exercise had a preventive effect on the rate of falls (risk ratio [RR] 0.81, 95% CI 0.68-0.97). This effect was stronger when exercise combined with other fall interventions on the rate of falls (RR 0.61, 95% CI 0.52-0.72) and on the number of fallers (RR 0.85, 95% CI 0.77-0.95). Exercise interventions including balance training (i.e., gait, balance, and functional training; or balance and strength) resulted in reduced the rate of falls. Sensitivity analyses indicated that exercise interventions resulted in reduced numbers of recurrent fallers (RR 0.71, 95% CI 0.53-0.97).

Linking Evidence to Action. This review provides an important basis for developing evidence-based exercise intervention protocols for older people living in care facilities. Exercise programs, which are combined with tailored other fall interventions and challenge balance training to improve balance skills, should be applied to frail older people with functional limitations in institutional settings.

References

Database: BNI

Psychotropic drugs and the risk of fall injuries, hospitalisations and mortality among older adults.

Author(s): Johnell, Kristina; Jonasdottir Bergman, Gudrun; Fastbom, Johan; Danielsson, Bengt; Borg, Natalia; Salmi, Peter

Source: International Journal of Geriatric Psychiatry; Apr 2017; vol. 32 (no. 4); p. 414-420

Abstract: Objective: To investigate whether psychotropics are associated with an increased risk of fall injuries, hospitalizations, and mortality in a large general population of older adults. Methods: We performed a nationwide matched (age, sex, and case event day) case-control study between 1 January and 31 December 2011 based on several Swedish registers (n = 1,288,875 persons aged ≥65 years). We used multivariate conditional logistic regression adjusted for education, number of inpatient days, Charlson co-morbidity index, dementia and number of other drugs. Results: Antidepressants were the psychotropic most strongly related to fall injuries (OR-adjusted : 1.42; 95% CI: 1.38-1.45) and antipsychotics to hospitalizations (OR-adjusted : 1.22; 95% CI: 1.19-1.24) and death (OR-adjusted : 2.10; 95% CI: 2.02-2.17). Number of psychotropics was associated with increased the risk of fall injuries, (4 psychotropics vs 0: OR-adjusted : 1.53; 95% CI: 1.39-1.68), hospitalization (4 psychotropics vs 0: OR-adjusted : 1.27; 95% CI: 1.22-1.33) and death (4 psychotropics vs 0: OR-adjusted : 2.50; 95% CI: 2.33-2.69) in a dose-response manner. Among persons with dementia (n = 58,984), a dose-response relationship was found between number of psychotropics and mortality risk (4 psychotropics vs 0: OR-adjusted : 1.99; 95% CI: 1.76-2.25). Conclusions: Our findings support a cautious prescribing of multiple psychotropic drugs to older patients. © 2016 The Authors. International Journal of Geriatric Psychiatry Published by John Wiley & Sons, Ltd.

Database: CINAHL
Factors Associated With Injurious Falls in Residential Care Facilities.

**Author(s):** Towne, Samuel D.; Cho, Jinmyoung; Smith, Matthew Lee; Ory, Marcia G.

**Source:** Journal of Aging & Health; Jun 2017; vol. 29 (no. 4); p. 669-687

**Abstract:** Objective: Despite a growing literature on the epidemiology of falls, little is known about injurious falls in residential care facilities (RCFs). Addressing this gap, this study examined demographic, interpersonal, institutional, and community factors associated with injurious falls in RCFs. Method: We conducted analyses using a nationally representative sample (n = 733,309) of RCF residents (2010) examining whether or not a resident experienced a fall that resulted in any injury (past year). Results: Overall, 15% of RCF residents experienced an injurious fall. Residents needing assistance with activities of daily living were more likely to experience injurious falls (adjusted-OR = 1.85), whereas males (adjusted-OR = 0.74) and those residing in smaller facilities (adjusted-OR = 0.68) were less likely. Other resident sociodemographic characteristics, payment status, social connectedness, and rurality were not significant independent predictors. Discussion: Research further exploring multifactorial fall prevention screening and treatment programs in RCFs is recommended for reducing injurious falls in this understudied setting.

**Database:** CINAHL

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Hip and pelvic fracture patients with fear of falling: development and description of the "Step by Step" treatment protocol.

**Author(s):** Kampe, Karin; Kohler, Michaela; Albrecht, Diana; Becker, Clemens; Hautzinger, Martin; Lindemann, Ulrich; Pfeiffer, Klaus

**Source:** Clinical Rehabilitation; May 2017; vol. 31 (no. 5); p. 571-581

**Abstract:** Objective: Based on a theoretical framework and sound evidence, this article describes a rehabilitation programme for patients with fear of falling after hip and pelvic fracture. Rationale: Based on exercise science principles, current knowledge from fall prevention, emotion regulation, and the Health Action Process Approach we developed a theoretical framework, from which the components of the intervention were derived. Description of the intervention: The intervention consists of 6 components: (1) relaxation, (2) meaningful activities and mobility-based goals, (3) falls related cognitions and emotions, coping with high risk tasks and situations, (4) individual exercise programme, (5) planning and implementing exercises and activities, and (6) fall risks and hazards. The intervention comprises of 8 individual sessions during 3 to 5 weeks of inpatient rehabilitation and 4 telephone calls and 1 home visit over a 2-month post-discharge period. Each session or telephone call takes about 30-60 minutes. It is provided to geriatric hip and pelvic fracture patients with concerns about falling and no cognitive impairment. To ensure completeness of reporting, the Template for Intervention Description and Replication (TIDierR) is used. Results: Fifty-seven patients were assigned to the intervention group. All 46 completers met all pre-defined criteria for an intervention per protocol. Conclusion: The programme is feasible to administer. We have completed a randomised controlled trial, which will be submitted in due time (for trial protocol: www.isrctn.org; ISRCTN79191813).

**Database:** CINAHL

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Geriatric Polypharmacy: Pharmacist as Key Facilitator in Assessing for Falls Risk.

**Author(s):** Fritsch, Michelle A; Shelton, Penny S
Abstract: This article highlights the significant health impact of falls among older adults. An emphasis is placed on the vital role of the pharmacist, regardless of practice setting, in assessing and reducing falls risk for this growing population. In addition, the importance of a stepwise comprehensive approach to falls assessment by pharmacists in collaboration with other clinicians is elucidated.

Database: CINAHL

Prevention of falls, malnutrition and pressure ulcers among older persons - nursing staff’s experiences of a structured preventive care process.

Author(s): Lannering, Christina; Ernsth Bravell, Marie; Johansson, Linda

Source: Health & Social Care in the Community; May 2017; vol. 25 (no. 3); p. 1011-1020

Database: CINAHL

Cognitive Impairment Is Very Common in Elderly Patients With Syncope and Unexplained Falls.

Author(s): de Ruiter, Susanne C.; de Jonghe, Jos F.M.; Germans, Tjeerd; Ruiter, Jaap H.; Jansen, René W.M.M.

Source: Journal of the American Medical Directors Association; May 2017; vol. 18 (no. 5); p. 409-413

Abstract: Objectives To evaluate the prevalence of cognitive impairment (CI), including mild CI and dementia, in elderly patients with syncope and unexplained falls. In this population, we compared the use of the Mini-Mental State Examination (MMSE) with a cognitive screening test that assesses executive dysfunction typical of subcortical (vascular) CI, that is, the Montreal Cognitive Assessment (MoCA). Design Observational cohort study. Setting Outpatient fall and syncope clinic. Participants Consecutive patients aged ≥65 years with syncope and unexplained falls without loss of consciousness. Measurements Baseline characteristics, functional status, MMSE, MoCA, and magnetic resonance imaging scans of the brain. Main outcome: prevalence of CI, comparing the MMSE with the MoCA. CI was defined as an MMSE/MoCA score <26. Secondary outcomes: MMSE/MoCA overall and subdomain scores, Fazekas and medial temporal lobe atrophy scores. Results We included 200 patients, mean age 79.5 (standard deviation 6.6) years (Syncope Group: n = 101; Fall Group: n = 99). Prevalence of CI was 16.8% (MMSE) versus 60.4% (MoCA) in the Syncope Group (P < .001) and 16.8% (MMSE) versus 56.6% (MoCA) in the Fall Group (P < .001). Prevalence of CI did not differ between the Syncope Group and Fall Group with either method. Executive dysfunction was present in both groups. Conclusion CI is as common in elderly patients with syncope as it is in patients with unexplained falls, with an overall prevalence of 58%. The MMSE fails as a screening instrument for CI in these patients, because it does not assess executive function. Therefore, we recommend the MoCA for cognitive screening in older patients with syncope and unexplained falls.

Database: CINAHL

Cognitive and Physical Function in Relation to the Risk of Injurious Falls in Older Adults: A Population-Based Study.

Author(s): Welmer, Anna-Karin; Rizzuto, Debora; Laukka, Erika J.; Johnell, Kristina; Fratiglioni, Laura

Source: Journals of Gerontology Series A: Biological Sciences & Medical Sciences; May 2017; vol. 72 (no. 5); p. 669-675
Abstract: Background: We aimed to quantify the independent effect of cognitive and physical deficits on the risk of injurious falls, to verify whether this risk is modified by global cognitive impairment, and to explore whether risk varies by follow-up time. Methods: Data on 2,495 participants (≥60 years) from the population-based Swedish National Study on Aging and Care in Kungsholmen (SNAC-K) study were analyzed using flexible parametric survival models. Two cognitive domains (processing speed and executive function) were assessed with standard tests. Physical function tests included balance (one-leg-stands), walking speed, chair stands, and grip strength. Global cognition was assessed using the Mini-Mental State Examination. Results: A total of 167 people experienced an injurious fall over 3 years of follow-up, 310 over 5 years, and 571 over 10 years. Each standard deviation worse balance, slower walking speed, and longer chair stand time increased the risk of injurious falls over 3 years by 43%, 38%, and 23%, respectively (p < .05). Each standard deviation worse processing speed and executive function was significantly associated with 10% increased risk of injurious falls over 10 years (p < .05). In stratified analyses, deficits in physical functioning were associated with injurious falls only in people with cognitive impairment, whereas deficits in processing speed and executive function were associated with injurious falls only in people without cognitive impairment. Conclusions: Deficits in specific cognitive domains, such as processing speed and executive function, appear to predict injurious falls in the long term. Deficits in physical function predict falls in the short term, especially in people with global cognitive impairment.

Database: CINAHL

Development of a falls reduction yoga program for older adults—A pilot study.

Author(s): Smith, Paul D.; Mross, Paul; Christopher, Nate

Source: Complementary Therapies in Medicine; Apr 2017; vol. 31; p. 118-126

Database: CINAHL

A home program of strength training, movement strategy training and education did not prevent falls in people with Parkinson’s disease: a randomised trial.

Author(s): Morris, Meg E; Taylor, Nicholas F; Watts, Jennifer J; Evans, Andrew; Horne, Malcolm; Kempster, Peter; Danoudis, Mary; McGinley, Jennifer; Martin, Clarissa; Menz, Hylton B

Source: Journal of Physiotherapy (Elsevier); Apr 2017; vol. 63 (no. 2); p. 94-100

Abstract: Questions For people with idiopathic Parkinson’s disease, does a 6-week, comprehensive, home exercise program reduce falls and disability and improve health-related quality of life? Is the program cost-effective? Design Randomised, controlled trial with concealed allocation and assessor blinding. Participants One hundred and thirty-three community-dwelling adults with Parkinson’s disease. Intervention The experimental group completed a 6-week home program comprising progressive resistance strength training, movement strategy training and falls education. The control group completed 6 weeks of non-specific life skills training. Participants in both groups received weekly therapist-guided sessions for 6 consecutive weeks and a weekly self-directed home program. Outcome measures The primary outcome was the rate of falls, documented for the 12-month period immediately after therapy. Secondary outcomes were disability and health-related quality of life, assessed before and after intervention and at a 12-month follow-up. Results A total of 2255 falls were reported by the 12-month follow-up. The proportion of fallers in the experimental and control groups was 61 and 72%, respectively, which was not statistically significantly different (RR = 0.85, 95% CI 0.66 to 1.09). There was no significant between-group difference in the rate of falls (incidence rate ratio = 1.58, 95% CI 0.73 to 3.43). A survival analysis of participant time to first fall
did not show a significant between-group difference (log-rank test $\chi^2 = 0.79, p = 0.37$). No significant between-group differences occurred for mobility, disability or quality of life. The mean cost of delivering the experimental intervention was AUD1596. Conclusion A home program of strength and movement strategy training and falls education does not prevent falls when applied at the dose used in this study. Arguably, the dosage of therapy was insufficient. Future trials need to explore further therapy content, repetitions and duration, in order to optimise outcomes and cost-effectiveness. [Morris ME, Taylor NF, Watts JJ, Evans A, Horne M, Kempster P, Danoudis M, McGinley J, Martin C, Menz HB (2017) A home program of strength training, movement strategy training and education did not prevent falls in people with Parkinson’s disease: a randomised trial. Journal of Physiotherapy 63: 94–100]

**Database**: CINAHL

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**PRESSURE ULCERS**

**Exploring key factors required for hybrid systems: analysis of a focus group**

**Author(s):** Ousey, Karen; Parfitt, Grace

**Source:** Wounds U K; Mar 2017; vol. 13 (no. 1); p. 94-99

Available in full text at Wounds UK - from EBSCOhost

**Abstract:** Background: There is a continued focus in health care that NHS Trusts must make cost savings while ensuring quality and productivity is not adversely affected. It is essential that healthcare professionals have access to pressure reduction/redistributing equipment that is evidence based and can promote skin integrity via adequate reduction of excessive pressures and/or shearing forces. This paper presents the results of a focus group exploring perceptions of a new hybrid mattress and its application to clinical practice. Hybrid systems are increasingly being used in clinical practice to assist in the prevention and management of pressure ulcers (PUs). Innova Care Concepts have launched a new hybrid system, The Solment Serene. Methods: A focus group design was used involving five tissue viability key opinion leaders including an academic, infection control and tissue viability specialists. All data was recorded and transcribed verbatim, data generated was analyzed thematically. Confidentiality and anonymity was assured. Results: Four key themes were identified: (1) Patient suitability (2) Ease of use and effectiveness (3) The importance of inter-professional working (4) Loss of equipment (promotion of cost effectiveness). Conclusions: The consensus was that there is a growing place for hybrid systems in preventing and managing pressure damage effectively. Health and social care should work inter-professionally to improve patient outcomes. The development of a flowchart based on scientific evidence was recommended to assist in the decision making of appropriate equipment. [MEDIUM] References

**Database:** BNI

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**Early detection technology transforms care and releases productivity: an NHS case study**

**Author(s):** Fletcher, Jacqui; Moore, Zena; Smith, Glenn

**Source:** Wounds U K; Mar 2017; vol. 13 (no. 1); p. 74-78

Available in full text at Wounds UK - from EBSCOhost

**Abstract:** With NHS strategy focusing increasingly on improving safety and quality of care, pressure ulcer (PU) incidence is regarded more and more as an indicator of this quality, or lack thereof. This meeting report highlights the importance of early detection of PUs, as presented at the Wounds UK
conference in Harrogate in November 2016. It also provides clinical evidence in support of the SEM Scanner(TM), an innovative early diagnostic tool for PUs, including results of a recent evaluation undertaken by the Isle of Wight NHS Trust in an inpatient setting. Jacqui Fletcher began this meeting with a reminder that the strategic direction of the NHS is changing, as evidenced by the Carter report in England (Department of Health, 2016), which puts great emphasis on improved quality and safety of care, and the need for reduction in variation of outcomes. Increasingly, this message is relevant to the work of the tissue viability nurse, particularly with regards PU prevention. [MEDIUM] References

Database: BNI

Evaluating the effectiveness of pressure-redistributing equipment for the best clinical and financial outcomes

Author(s): Stephen-Haynes, Jackie; Allsopp, Annie; Jones, Hayley
Source: Wounds U K; Mar 2017; vol. 13 (no. 1); p. 70-73
Available in full text at Wounds UK - from EBSCOhost
Abstract: The recent National Institute of Health and Care Excellence (NICE) guidelines on pressure ulcer (PU) prevention and management highlight the importance of appropriate use of medical devices, including pressure-redistributing equipment, as part of robust, evidence-based care strategies (NICE, 2014). [MEDIUM] References

Database: BNI

Clinical audit examining pressure ulcer incidence among end-of-life patients

Author(s): White, Katie
Source: Wounds U K; Mar 2017; vol. 13 (no. 1); p. 42-45
Available in full text at Wounds UK - from EBSCOhost
Abstract: Preventing pressure ulcers in patients at the end of their life often proves difficult despite adequate interventions to prevent pressure ulcers. Difficulty preventing ulcers in such patients is due to many factors, including reduced peripheral tissue perfusion, reduced mobility, malnutrition, incontinence, pain and irregular blood chemistry. This article reports on the results from an audit that examined the mortality rates of all patients reported to have grade 2, 3 or 4 pressure ulcers in acute care within an NHS trust over a 6-month period. Incident reporting provided the data, and each case was reviewed to see whether that patient had passed away within an 8-week period following the report. From the data, 44% of the patients reported to have a pressure ulcer had passed away within 8 weeks. The results indicated that the general organic deterioration of a person towards the end of life affects the skin's integrity and its ability to maintain normal homeostasis. This increases the incidence of pressure damage due to the body's reduced ability to regenerate healthy skin cells, maintain skin integrity, reduce infection and provide an adequate blood supply of nutrition and oxygen to the skin. [MEDIUM] References

Database: BNI

What do we know about paediatric pressure ulcer risk assessment?
Author(s): Anthony, Denis
Source: Wounds U K; Mar 2017; vol. 13 (no. 1); p. 28-31
Available in full text at Wounds UK - from EBSCOhost
Abstract: This paper highlights the problems associated with pressure ulcers in children. Not only do pressure ulcers have poor outcomes in children, their management is expensive. While there are risk assessment scales for assessing the risk of pressure ulcers in children, little is known about which is the best tool or even if any of these tools are better than unaided clinical judgment. [MEDIUM]

References

Database: BNI

An overview of pressure ulcer risk assessment tools

Author(s): Fletcher, Jacqui
Source: Wounds U K; Mar 2017; vol. 13 (no. 1); p. 18-26
Available in full text at Wounds UK - from EBSCOhost

Abstract: Pressure ulcers are believed to largely be preventable, but in order to make best use of both human and physical resources, and maintain patient comfort and dignity, it is important to identify the people most at risk and deliver timely preventative care. Many 'tools' have been developed that purport to identify those who are most at risk; some of these are used generically across all patient groups, others are targeted to specific subgroups of patients; but all have some shortcomings. Clinical judgement should always be a key element of assessing a patient's risk but this can be difficult to articulate and document. Newer ways of identifying at-risk areas rather than at-risk patients are just starting to be developed and used. [MEDIUM]

References

Database: BNI

Prevention of falls, malnutrition and pressure ulcers among older persons - nursing staff’s experiences of a structured preventive care process.

Author(s): Lannering, Christina; Ernsth Bravell, Marie; Johansson, Linda
Source: Health & Social Care in the Community; May 2017; vol. 25 (no. 3); p. 1011-1020
Database: CINAHL

Ongoing nursing training influence on the completion of electronic pressure ulcer records.

Author(s): López, María; Jiménez, José María; Peña, Isabel; Cao, María José; Simarro, María; Castro, María José
Source: Nurse Education Today; May 2017; vol. 52 ; p. 22-27
Database: CINAHL

Pressure ulcers: Prevention and management.

Author(s): Holloway, Samantha
Source: British Journal of Healthcare Management; Apr 2017; vol. 23 (no. 4); p. 150-153
Abstract: This article provides an overview of pressure ulcers. It explores the current burden of pressure ulcers, outlining the current costs to the NHS, and also discusses the current challenges in how they can be effectively prevented and managed.

Database: CINAHL
Patients' knowledge of and participation in preventing pressure ulcers - an intervention study.

Author(s): Schoeps, Lena N; Tallberg, Anna-Brittia; Gunningberg, Lena

Source: International Wound Journal; Apr 2017; vol. 14 (no. 2); p. 344-348

Abstract: The aim of this study was to evaluate a patient information pamphlet on pressure ulcer (PU) prevention using a descriptive, comparative pre- and post-test study design. The patient information pamphlet 'How can you help to stop pressure ulcers?' developed by the European PU Advisory Panel in 2012 was implemented in two surgical wards in a university hospital. A total of 61 patients answered pre- and post-test questionnaires. Patients assessed their knowledge of the risks, causes and ways to prevent PUs significantly higher after the intervention than before. Twenty-eight patients (46%) reported that they had participated in PU prevention during the last 24 hours. The patients assessed the content of the PU pamphlet as useful, its language as quite easy to understand and its layout as good. Patients with a PU pamphlet during their hospital stay were more knowledgeable about and more active in their own care. It is important that nurses invite patients to be active partners in preventing PUs but also that they identify patients who need to have a more passive role. The PU pamphlet could be updated to increase its comprehensibility, meaningfulness and manageability for patients.

Database: CINAHL

Pressure ulcer prevention in care home settings.

Author(s): Ellis, Michael

Source: Nursing Older People; Apr 2017; vol. 29 (no. 3); p. 29-36

Available in full text at Nursing Older People - from Royal College of Nursing ; Notes: Click on 'Sign in' to top right, then choose OpenAthens option

Available in full text at Nursing Older People - from RCN Publishing ; Notes: Click on 'Sign in' to top right, then choose OpenAthens option

Database: CINAHL

Low-level laser therapy in the treatment of pressure ulcers: systematic review.

Author(s): Machado, Renata Saltiel; Viana, Suane; Sbruzzi, Graciele

Source: Lasers in medical science; May 2017; vol. 32 (no. 4); p. 937-944

Abstract: The aim of this study was to evaluate the effects of low-level laser therapy (LLT) in pressure ulcers (PU) in humans through a systematic review of randomized studies. The search includes the databases MEDLINE, PEDro, Cochrane CENTRAL, and Lilacs, as well a manual search until May, 2016. This included randomized clinical trials of LLT compared with other interventions, different types of LLT, LLT placebo, or control in the treatment of PU. The outcomes evaluated were the ulcer area, healing rate, and overall healing rate. The risk of bias was evaluated using the tool of the Cochrane Collaboration, and the results were analyzed descriptively. From the 386 articles identified, only four studies were included, with two LLT used with single wavelength (1: 904 nm vs. control and 2: 940 nm vs. 808 nm vs. 658 nm vs. placebo) and two LLT used to probe cluster. One study compared to different single wavelengths showed a significant 71% reduction of the PU and an improved healing rate in which 47% of PU healed completely after 1 month of therapy with the use of LLT with a wavelength of 658 nm compared with other lengths. The other analyzed wavelengths were not significant in the assessed outcomes. Significant results were observed in the use of LLT with a 658 nm wavelength, and no evidence was found for use of wavelengths above that for the
treatment of PU. Therefore, we also found no evidence in the laser used to probe the cluster. Registration number: CRD42016036648.

**Database:** Medline

**Prevention of falls, malnutrition and pressure ulcers among older persons - nursing staff's experiences of a structured preventive care process.**

**Author(s):** Lannering, Christina; Ernsth Bravell, Marie; Johansson, Linda

**Source:** Health & social care in the community; May 2017; vol. 25 (no. 3); p. 1011-1020

**Abstract:** A structured and systematic care process for preventive work, aimed to reduce falls, pressure ulcers and malnutrition among older people, has been developed in Sweden. The process involves risk assessment, team-based interventions and evaluation of results. Since development, this structured work process has become web-based and has been implemented in a national quality registry called 'Senior Alert' and used countrywide. The aim of this study was to describe nursing staff’s experience of preventive work by using the structured preventive care process as outlined by Senior Alert. Eight focus group interviews were conducted during 2015 including staff from nursing homes and home-based nursing care in three municipalities. The interview material was subjected to qualitative content analysis. In this study, both positive and negative opinions were expressed about the process. The systematic and structured work flow seemed to only partly facilitate care providers to improve care quality by making better clinical assessments, performing team-based planned interventions and learning from results. Participants described lack of reliability in the assessments and varying opinions about the structure. Furthermore, organisational structures limited the preventive work.

**Database:** Medline

**Patients’ Perceptions of a Pressure Ulcer Prevention Care Bundle in Hospital: A Qualitative Descriptive Study to Guide Evidence-Based Practice.**

**Author(s):** Roberts, Shelley; Wallis, Marianne; McInnes, Elizabeth; Bucknall, Tracey; Banks, Merrilyn; Ball, Lauren; Chaboyer, Wendy

**Source:** Worldviews on evidence-based nursing; Apr 2017

**Abstract:** BACKGROUND Pressure ulcers place a significant burden on patients and hospitals. Our team developed and tested a pressure ulcer prevention care bundle (PUPCB) in a cluster randomized trial. As part of the process evaluation conducted alongside the trial, we explored patients' perceptions of the intervention. AIMSTo identify patients' perceptions and experiences of a PUPCB in hospital.METHODSThis qualitative descriptive study explored the perceptions of a subset of patients who participated in a trial testing the PUPCB across four intervention hospitals. A trained interviewer conducted semistructured interviews, which were digitally recorded, transcribed, and analyzed using thematic analysis. FINDINGS Nineteen patients were interviewed across the four hospitals. Three main themes emerged: (a) importance of personal contact in PUPCB delivery; (b) understanding pressure ulcer prevention (PUP) enhances participation; and (c) individual factors impact patients' engagement in PUP. DISCUSSION The extent to which patients adopted the intervention appeared to be influenced by the complexity of education materials, compatibility with patients' existing knowledge and beliefs, and perceived advantage of the intervention; ability for human interaction; and patient-related facilitators and barriers to participating in PUP care. LINKING EVIDENCE TO ACTION This study found patients accepted a PUPCB that encouraged participation in care, particularly as it involved personal and positive interactions with nurses and provision of information that was easy to understand and resonated with patients.
Reducing the incidence of pressure ulcers in critical care units: a 4-year quality improvement.

**Author(s):** Richardson, Annette; Peart, Joanna; Wright, Stephen E; McCullagh, Iain J

**Source:** International journal for quality in health care : journal of the International Society for Quality in Health Care; Apr 2017 ; p. 1-7

Available in full text at International Journal for Quality in Health Care - from Highwire Press

**Abstract:** Quality problem Critical care patients often have several risk factors for pressure ulceration and implementing prevention interventions have been shown to decrease risk. Initial assessment We identified a high incidence of pressure ulcers in the four adult critical care units in our organization. Therefore, avoiding pressure ulceration was an important quality priority. Choice of solution We undertook a quality improvement programme aimed at reducing the incidence of pressure ulceration using an evidence-based bundle approach. Implementation A bundle of technical and non-technical interventions were implemented supported by clinical leadership on each unit. Important components were evidence appraisals; changes to mattresses; focussed risk assessment alongside mandating patients at very high risk to be repositioned two hourly; and staff training to increase awareness of how to prevent pressure ulcers. Evaluation Pressure ulcer numbers, incidence and categories were collected continuously and monitored monthly by unit staff. Pressure ulcer rates reduced significantly from 8.08/100 patient admissions to 2.97/100 patient admissions, an overall relative rate reduction of 63% over 4 years. The greatest reduction was seen in the most severe category of pressure ulceration. The average estimated cost saving was £2.6 million (range £2.1-£3.1). Lessons learned A quality improvement programme including technical and non-technical interventions, data feedback to staff and clinical leadership was associated with a sustained reduction in the incidence of pressure ulceration in the critically ill. Strategies used in this programme may be transferable to other critical care units to bring more widespread patient benefit.

**Database:** Medline


**Author(s):** Tubaishat, Ahmad; Papanikolaou, Panos; Anthony, Denis; Habiballah, Laila

**Source:** Clinical nursing research; Apr 2017 ; p. 1054773817705541

**Abstract:** Little is known about the prevalence of pressure ulcer (PrU) in acute care settings. The aim of this study is to determine the prevalence rate of PrU in acute care settings and to assess the methodological quality of the reviewed publications. The Cumulative Index to Nursing and Allied Health Literature, British Nursing Index, MEDLINE, and Cochrane Database of Systematic Reviews were searched using the keywords pressure ulcer or decubitus ulcer or bed sore or pressure sore or pressure injury, with prevalence and acute care, for studies published between January 2000 and December 2015. Nineteen publications met our criteria. These reported a prevalence range of between 7.8% and 54% for those using European Pressure Ulcer Advisory Panel methodology, 6% and 22% for those using National Pressure Ulcer Advisory Panel methodology, and 4.94% for the study that employed the Torrance system. The likely worldwide PrU prevalence rate range in acute care settings is between 6% and 18.5%. Prevalence rate varies between studies depending on the methodology of data collection. Moreover, the methodological quality of the included studies in the review was variable; therefore, it was difficult to compare the prevalence rate between the studies, settings, and countries.
Risk factors for pressure injuries among critical care patients: A systematic review.

**Author(s):** Alderden, Jenny; Rondinelli, June; Pepper, Ginette; Cummins, Mollie; Whitney, JoAnne

**Source:** International journal of nursing studies; Mar 2017; vol. 71; p. 97-114

**Abstract:** OBJECTIVE To identify risk factors independently predictive of pressure injury (also known as pressure ulcer) development among critical-care patients. DESIGN We undertook a systematic review of primary research based on standardized criteria set forth by the Institute of Medicine. DATA SOURCES We searched the following databases: CINAHL (EBSCOhost), the Cochrane Library (Wilson), Dissertations & Theses Global (ProQuest), PubMed (National Library of Medicine), and Scopus. There was no language restriction. METHOD A research librarian coordinated the search strategy. Articles that potentially met inclusion criteria were screened by two investigators. Among the articles that met selection criteria, one investigator extracted data and a second investigator reviewed the data for accuracy. Based on a literature search, we developed a tool for assessing study quality using a combination of currently available tools and expert input. We used the method developed by Coleman et al. in 2014 to generate evidence tables and a summary narrative synthesis by domain and subdomain. RESULTSoF 1753 abstracts reviewed, 158 were identified as potentially eligible and 18 fulfilled eligibility criteria. Five studies were classified as high quality, two were moderate quality, nine were low quality, and two were of very low quality. Age, mobility/activity, perfusion, and vasopressor infusion emerged as important risk factors for pressure injury development, whereas results for risk categories that are theoretically important, including nutrition, and skin/pressure injury status, were mixed. Methodological limitations across studies limited the generalizability of the results, and future research is needed, particularly to evaluate risk conferred by altered nutrition and skin/pressure injury status, and to further elucidate the effects of perfusion-related variables. CONCLUSIONSS Results underscore the importance of avoiding overinterpretation of a single study, and the importance of taking study quality into consideration when reviewing risk factors. Maximal pressure injury prevention efforts are particularly important among critical-care patients who are older, have altered mobility, experience poor perfusion, or who are receiving a vasopressor infusion.

Database: Medline

**SEPSIS**

Managing Maternal Sepsis: Early Warning Criteria to ECMO.

**Author(s):** PADILLA, CESAR; PALANISAMY, ARVIND

**Source:** Clinical Obstetrics & Gynecology; Jun 2017; vol. 60 (no. 2); p. 418-424

**Abstract:** Maternal sepsis is now a leading cause of direct maternal death during pregnancy. This review addresses the latest advances in the identification and management of critically ill parturients. Specifically, this review will focus on the vulnerability of pregnant women to sepsis, the utility of early warning criteria in the identification of the septic parturient, emphasize the immediate antibiotic management of suspected sepsis, and elaborate upon the latest understanding in the ventilatory management of parturients with sepsis.

Database: CINAHL

**Updated Sepsis Guidelines Provide Consensus Recommendations.**
One dose per day compared to multiple doses per day of gentamicin for treatment of suspected or proven sepsis in neonates: Updated Cochrane Review.

Source: Journal of Pediatrics & Child Health; Apr 2017; vol. 53; p. 70-70

Database: CINAHL

Identifying Patients With Sepsis on the Hospital Wards.

Author(s): Bhattacharjee, Poushali; Edelson, Dana P.; Churpek, Matthew M.

Source: CHEST; Apr 2017; vol. 151 (no. 4); p. 898-907

Abstract: Sepsis contributes to up to half of all deaths in hospitalized patients, and early interventions, such as appropriate antibiotics, have been shown to improve outcomes. Most research has focused on early identification and treatment of patients with sepsis in the ED and the ICU; however, many patients acquire sepsis on the general wards. The goal of this review is to discuss recent advances in the detection of sepsis in patients on the hospital wards. We discuss data highlighting the benefits and limitations of the systemic inflammatory response syndrome (SIRS) criteria for screening patients with sepsis, such as its low specificity, as well as newly described scoring systems, including the proposed role of the quick sepsis-related organ failure assessment (qSOFA) score. Challenges specific to detecting sepsis on the wards are discussed, and future directions that use big data approaches and automated alert systems are highlighted.

Database: CINAHL

Fever in the Emergency Department Predicts Survival of Patients With Severe Sepsis and Septic Shock Admitted to the ICU.

Author(s): Sundén-Cullberg, Jonas; Rylance, Rebecca; Svefors, Jesper; Norrby-Teglund, Anna; Björk, Jonas; Inghammar, Malin

Source: Critical Care Medicine; Apr 2017; vol. 45 (no. 4); p. 591-599

Available in full text at Critical Care Medicine - from Ovid fulltext collection

Abstract: Objectives: To study the prognostic value of fever in the emergency department in septic patients subsequently admitted to the ICU. Design: Observational cohort study from the Swedish national quality register for sepsis. Setting: Thirty ICU's in Sweden. Patients: Two thousand two hundred twenty-five adults who were admitted to an ICU within 24 hours of hospital arrival with a diagnosis of severe sepsis or septic shock were included. Interventions: None. Measurements and Main Results: Body temperature was measured and classified according to four categories (< 37°C, 37-38.29°C, 38.3-39.5°C, ≥ 39.5°C). The main outcome was in-hospital mortality. Odds ratios for mortality according to body temperature were estimated using multivariable logistic regression. Subgroup analyses were conducted according to age, sex, underlying comorbidity, and time to given antibiotics. Overall mortality was 25%. More than half of patients had a body temperature below 38.3°C. Mortality was inversely correlated with temperature and decreased, on average, more than 5% points per °C increase, from 50% in those with the lowest temperatures to 9% in those with the...
highest. Increased body temperature in survivors was also associated with shorter hospital stays. Patients with fever received better quality of care, but the inverse association between body temperature and mortality was robust and remained consistent after adjustment for quality of care measures and other factors that could have confounded the association. Among vital signs, body temperature was best at predicting mortality.

**Conclusions:** Contrary to common perceptions and current guidelines for care of critically ill septic patients, increased body temperature in the emergency department was strongly associated with lower mortality and shorter hospital stays in patients with severe sepsis or septic shock subsequently admitted to the ICU.

**Database:** CINAHL

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**Case Volume-Outcomes Associations Among Patients With Severe Sepsis Who Underwent Interhospital Transfer.**

**Author(s):** Ofoma, Uchenna R.; Dahdah, John; Kethireddy, Shravan; Maeng, Daniel; Walkey, Allan J.

**Source:** Critical Care Medicine; Apr 2017; vol. 45 (no. 4); p. 615-622

Available in full text at [Critical Care Medicine](https://www.criticalcaremedicine.com) - from Ovid fulltext collection

**Database:** CINAHL

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**Increased Time to Initial Antimicrobial Administration Is Associated With Progression to Septic Shock in Severe Sepsis Patients.**

**Author(s):** Whiles, Bristol B.; Deis, Amanda S.; Simpson, Steven Q.

**Source:** Critical Care Medicine; Apr 2017; vol. 45 (no. 4); p. 623-629

Available in full text at [Critical Care Medicine](https://www.criticalcaremedicine.com) - from Ovid fulltext collection

**Abstract:** Objectives: To determine if time to initial antimicrobial is associated with progression of severe sepsis to septic shock. Design: Retrospective cohort. Setting: Six hundred fifty-six bed urban academic medical center. Patients: Emergency department patients greater than or equal to 18 years old with severe sepsis and/or septic shock and antimicrobial administration within 24 hours. Patients with shock on presentation were excluded. Interventions: Not available. Measurements and Main Results: We identified 3,929 severe sepsis patients, with overall mortality 12.8%. Nine hundred eighty-four patients (25.0%) progressed to septic shock. The median time to antimicrobial was 3.77 hours (interquartile range = 1.96-6.42) in those who progressed versus 2.76 hours (interquartile range = 1.60-4.82) in those who did not (p < 0.001). Multivariate logistic regression demonstrated that male sex (odds ratio = 1.18; 95% CI, 1.01-1.36), Charlson Comorbidity Index (odds ratio = 1.18; 95% CI, 1.11-1.27), number of infections (odds ratio = 1.05; 95% CI, 1.02-1.08), and time to first antimicrobial (odds ratio = 1.08; 95% CI, 1.06-1.10) were associated with progression. Each hour until initial antimicrobial administration was associated with a 8.0% increase in progression to septic shock. Additionally, time to broad-spectrum antimicrobial was associated with progression (odds ratio = 1.06; 95% CI, 1.05-1.08). Time to initial antimicrobial was also associated with in-hospital mortality (odds ratio = 1.05; 95% CI, 1.03-1.07). Conclusions: This study emphasizes the importance of early, broad-spectrum antimicrobial administration in severe sepsis patients admitted through the emergency department, as longer time to initial antimicrobial administration is associated with increased progression of severe sepsis to septic shock and increased mortality.

**Database:** CINAHL

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**The Normal Abnormal Vital Sign of Sepsis.**
Author(s): Laupland, Kevin B.; Niven, Daniel J.
Source: Critical Care Medicine; Apr 2017; vol. 45 (no. 4); p. 747-748
Available in full text at Critical Care Medicine - from Ovid fulltext collection
Abstract: The article discusses the study "Fever in the Emergency Department Predicts Survival of Patients With Severe Sepsis and Septic Shock Admitted to the ICU" by J. Sundén-Cullberg and colleagues. The study reportedly examined the role of body temperature and outcome in patients with severe sepsis and septic shock. The results revealed that fever has either no effect or does not reduce mortality in critically ill patients.
Database: CINAHL

Surviving Transfer for Sepsis: Size Matters-Or Does It?
Author(s): Simpson, Steven Q.
Source: Critical Care Medicine; Apr 2017; vol. 45 (no. 4); p. 749-750
Available in full text at Critical Care Medicine - from Ovid fulltext collection
Abstract: The author reflects on the study "Case Volume-Outcome Associations Among Patients With Severe Sepsis Who Underwent Interhospital Transfer" by U. R. Ofoma and colleagues which is published within the issue. Topics include the methodology of the study and its objectives, and the use of the Nationwide Inpatient Sample database in the U.S. Also explored are the limitations of the study, regionalization of critical care, and progression of sepsis.
Database: CINAHL

Suspecting and spotting paediatric sepsis.
Author(s): James, Rebecca; Rao, Arjun
Source: Emergency Medicine Australasia; Apr 2017; vol. 29 (no. 2); p. 132-135
Database: CINAHL

A Quantitative, Risk-Based Approach to the Management of Neonatal Early-Onset Sepsis.
Author(s): Kuzniewicz, Michael W.; Puopolo, Karen M.; Fischer, Allen; Walsh, Eileen M.; Li, Sherian; Newman, Thomas B.; Kipnis, Patricia; Escobar, Gabriel J.
Source: JAMA Pediatrics; Apr 2017; vol. 171 (no. 4); p. 365-371
Database: CINAHL

Does the presence of a urinary catheter predict severe sepsis in a bacteraemic cohort?
Author(s): Melzer, M.; Welch, C.
Source: Journal of Hospital Infection; Apr 2017; vol. 95 (no. 4); p. 376-382
Abstract: Background: Sepsis is a major cause of mortality with an estimated 37,000 deaths in the UK each year. This study aimed to determine host factors that can predict severe sepsis in a bacteraemic cohort.Methods: From December 2012 to November 2013, demographic, clinical and microbiological data were collected on consecutive patients with bacteraemia at a London teaching hospital. These data were used to categorize patients as having severe or non-severe sepsis. Multi-
variate logistic regression was used to determine the association between host factors and severe sepsis. Findings: Five hundred and ninety-four bacteraemic episodes occurred in 500 patients. The majority of cases were in patients aged >50 years (382/594, 64.3%) and in males (346/594, 58.2%). The most common isolates were Escherichia coli (207/594, 34.8%) and meticillin-susceptible Staphylococcus aureus (57/594, 9.6%). In logistic regression multi-variable analysis, site of infection was significantly associated with severe sepsis. For catheter-associated urinary tract infections, the association was significant after adjustment for age, sex, Charlson comorbidity index and where infection was acquired (odds ratio 3.94, 95% confidence interval 1.70-9.11). Conclusions: Urinary catheters increase the risk of severe sepsis. They should only be used if clinically indicated. If inserted, a care bundle approach should be used and the anticipated removal date should be recorded unless a long-term catheter is required. In the context of sepsis, the presence of a urinary catheter should prompt immediate implementation of 'Sepsis Six' and consideration of transfer to a critical care unit.

Database: CINAHL

Evaluation and Management of Newborns with Suspected Early-Onset Sepsis: Comparison of Two Approaches and Suggestion for Guidelines.

Author(s): Riskin, Arieh; Aloni, Yael; Kugelman, Amir; Toropine, Arina; Said, Waseem; Bader, David
Source: American Journal of Perinatology; Mar 2017; vol. 34 (no. 4); p. 315-322
Database: CINAHL

Surviving Sepsis in the Intensive Care Unit: The Challenge of Antimicrobial Resistance and the Trauma Patient.

Author(s): Ramsamy, Yogandree; Hardcastle, Timothy C; Muckart, David J J
Source: World journal of surgery; May 2017; vol. 41 (no. 5); p. 1165-1169
Abstract: Sepsis in the intensive care unit (ICU) presents a great challenge to any critical care clinician. Patients admitted to the ICU are especially vulnerable to sepsis due to the nature of the underlying pathology that warranted admission to the ICU and deranged physiological function coupled with invasive procedures. Nosocomial infections are common in patients admitted to the ICU, and with these infections come the burden of multidrug-resistant organisms. Antimicrobial resistance (AMR) is now a global emergency that warrants the attention of every health-care professional. AMR has escalated to epic proportions and solutions to this problem are now a matter of "life and death." The ICU also represents the "breeding ground" of antibiotic-resistant organisms due to the high broad-spectrum antibiotic consumption. Many would argue that broad-spectrum antimicrobials are overprescribed in this patient population, but do all patients admitted to the ICU warrant such therapy? Is there evidence that narrower-spectrum antimicrobial agents can be employed in specific ICU populations coupled with surveillance strategies? The aims of this review are to focus on strategies with the aim of optimizing antimicrobial use within ICUs, and to highlight the importance of differentiating ICU populations with regard to the use of antimicrobial agents.
Database: Medline

How much excess fluid impairs outcome of sepsis?

Author(s): Genga, Kelly R; Russell, James A
Source: Intensive care medicine; May 2017; vol. 43 (no. 5); p. 680-682
Fluid administration in severe sepsis and septic shock, patterns and outcomes: an analysis of a large national database.

Author(s): Marik, Paul E; Linde-Zwirble, Walter T; Bittner, Edward A; Sahatjian, Jennifer; Hansell, Douglas

Source: Intensive care medicine; May 2017; vol. 43 (no. 5); p. 625-632

Abstract: PURPOSE The optimal strategy of fluid resuscitation in the early hours of severe sepsis and septic shock is controversial, with both an aggressive and conservative approach being recommended. METHODS We used the 2013 Premier Hospital Discharge database to analyse the administration of fluids on the first ICU day, in 23,513 patients with severe sepsis and septic shock, who were admitted to an ICU from the emergency department. Day 1 fluid was grouped into categories 1 L wide, starting with 1-1.99 L up to ≥9 L, to examine the effect of day 1 fluids on patient mortality. We built binary response models for hospital mortality and the propensity for receiving more than 5 L of fluids on day 1, using patient age and acute conditions present on admission. Patients were grouped by the requirement for mechanical ventilation and the presence or absence of shock. We assessed trends in the difference between actual and expected mortality, in the low fluid range (1-5 L day 1 fluids) and the high fluid range (5 to ≥9 L day 1 fluids) categories, using weighted linear regression controlling for the effects of sample size and variation within the day 1 fluid category. RESULTS Day 1 fluid administration averaged 4.4 L being lowest in the group with no mechanical ventilation and no shock (3.6 L) and highest (5.4 L) in the group receiving mechanical ventilation and in shock. The administration of day 1 fluids was remarkably consistent on the basis of hospital size, teaching status, rural/urban location, and region of the country. The hospital mortality in the entire cohort was 25.8%, with a mean ICU and hospital length of stay of 5.1 and 9.1 days, respectively. In the entire cohort, low volume resuscitation (1-4.99 L) was associated with a small but significant reduction in mortality, of -0.7% per litre (95% CI -1.0%, -0.4%; p = 0.02). However, in patients receiving high volume resuscitation (5 to ≥9 L), the mortality increased by 2.3% (95% CI 2.0, 2.5%; p = 0.0003) for each additional litre above 5 L. Total hospital cost increased by $999 for each litre of fluid above 5 L (adjusted R ² = 92.7%, p = 0.0005). CONCLUSION The mean amount of fluid administered to patients with severe sepsis and septic shock in the USA during the first ICU day is less than that recommended by the Surviving Sepsis Campaign guidelines. The administration of more than 5 L of fluid during the first ICU day is associated with a significantly increased risk of death and significantly higher hospital costs.

Database: Medline

Delays From First Medical Contact to Antibiotic Administration for Sepsis.

Author(s): Seymour, Christopher W; Kahn, Jeremy M; Martin-Gill, Christian; Callaway, Clifton W; Yealy, Donald M; Scales, Damon; Angus, Derek C

Source: Critical care medicine; May 2017; vol. 45 (no. 5); p. 759-765

Abstract: OBJECTIVE To evaluate the association between total medical contact, prehospital, and emergency department delays in antibiotic administration and in-hospital mortality among patient encounters with community-acquired sepsis. DESIGN Retrospective cohort study. SETTING Nine hospitals served by 21 emergency medical services agencies in southwestern Pennsylvania from
2010 through 2012. PATIENTS All emergency medical services encounters with community acquired sepsis transported to the hospital. MEASUREMENTS AND MAIN RESULTS Among 58,934 prehospital encounters, 2,683 had community-acquired sepsis, with an in-hospital mortality of 11%. Median time from first medical contact to antibiotic administration (total medical contact delay) was 4.2 hours (interquartile range, 2.7-8.0 hr), divided into a median prehospital delay of 0.52 hours (interquartile range, 0.40-0.66 hr) and a median emergency department delay of 3.6 hours (interquartile range, 2.1-7.5 hr). In a multivariable analysis controlling for other risk factors, total medical contact delay was associated with increased in-hospital mortality (adjusted odds ratio for death, 1.03 [95% CI, 1.00-1.05] per 1-hr delay; p < 0.01), as was emergency department delay (p = 0.04) but not prehospital delay (p = 0.61). CONCLUSIONS Both total medical contact and emergency department delay in antibiotic administration are associated with in-hospital mortality in community-acquired sepsis.

**Database:** Medline

**Biomarkers for diagnosis of neonatal sepsis: a literature review.**

**Author(s):** Sharma, Deepak; Farahbakhsh, Nazanin; Shastri, Sweta; Sharma, Pradeep

**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; Apr 2017 ; p. 1-37

**Abstract:** Sepsis is an important cause of mortality and morbidity in neonatal populations. There has been constant search of an ideal sepsis biomarker that have high sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV), so that both the diagnosis and exclusion of neonatal sepsis can be made at the earliest possible and appropriate antibiotics can be started to neonate. Ideal sepsis biomarker will help in guiding us when not to start antibiotics in case of suspect sepsis and total duration of antibiotics course in case of proven sepsis. There are numerous sepsis biomarkers that have been evaluated for early detection of neonatal sepsis but till date there is no single ideal biomarker that fulfills all essential criteria’s for being an ideal biomarker. The most commonly used biomarkers are C-reactive protein (CRP) and Procalcitonin (PCT), but both have shown varied sensitivity, specificity, PPV and NPV in different studies. We conducted literature search for various neonatal sepsis biomarkers and this review article will cover briefly all the markers with current available evidence.

**Database:** Medline

**Neonatal sepsis.**

**Author(s):** Shane, Andi L; Sánchez, Pablo J; Stoll, Barbara J

**Source:** Lancet (London, England); Apr 2017

Available in print at LANCET - from Library MPH (lib307415)

**Abstract:** Neonatal sepsis is the cause of substantial morbidity and mortality. Precise estimates of neonatal sepsis burden vary by setting. Differing estimates of disease burden have been reported from high-income countries compared with reports from low-income and middle-income countries. The clinical manifestations range from subclinical infection to severe manifestations of focal or systemic disease. The source of the pathogen might be attributed to an in-utero infection, acquisition from maternal flora, or postnatal acquisition from the hospital or community. The timing of exposure, inoculum size, immune status of the infant, and virulence of the causative agent influence the clinical expression of neonatal sepsis. Immunological immaturity of the neonate might
result in an impaired response to infectious agents. This is especially evident in premature infants whose prolonged stays in hospital and need for invasive procedures place them at increased risk for hospital-acquired infections. Clinically, there is often little difference between sepsis that is caused by an identified pathogen and sepsis that is caused by an unknown pathogen. Culture-independent diagnostics, the use of sepsis prediction scores, judicious antimicrobial use, and the development of preventive measures including maternal vaccines are ongoing efforts designed to reduce the burden of neonatal sepsis.

Database: Medline
Investigating Adverse Event Free Admissions in Medicare Inpatients as a Patient Safety Indicator.

**Author(s):** King, Alice; Bottle, Alex; Faiz, Omar; Aylin, Paul

**Source:** Annals of surgery; May 2017; vol. 265 (no. 5); p. 910-915

Available in full text at Annals of Surgery - from Ovid fulltext collection

**Abstract:** OBJECTIVE To investigate adverse event free admissions as a potential, patient-centered indicator aligned directly with the goal of patient safety-freedom from harm. BACKGROUND Preventable adverse event rates in healthcare could be further reduced. These are generally measured separately, one adverse event at a time. However, this does not reveal whether different patients are affected or the same patients are experiencing multiple events. METHODS We examined Medicare inpatient hospital administrative datasets for 2009 to 2011, processed using standard criteria. Events were (i) death within 30 days, (ii) unplanned readmissions within 30 days, (iii) long length of stay, (iv) healthcare acquired infections, and (v) established patient safety indicators not present on admission. We defined adverse event free admissions as those without record of any of these events. National rates were calculated by diagnosis group. Risk-adjusted hospital-specific rates of adverse event free admissions were calculated using colorectal procedures as an example. RESULTS There were 23,991,193 admissions after exclusions. Approximately, 64% went through the acute inpatient Medicare system without record of anything untoward. Multiple events were recorded in 22.7% admissions; 15% of these experienced more than 2 adverse events. Risk-adjusted hospital-specific rates of adverse event free admissions for colorectal procedures showed 131 out of 3786 hospitals below the 99.8% lower control limit of the national upper quartile. CONCLUSIONS Overall, only 60% of admissions were recorded as adverse event free. Multiple adverse events were common. Even if events are under recorded, this measure could provide an easily understandable and useful baseline for clinicians and managers.

**Database:** Medline

The patient safety climate in healthcare organizations (PSCHO) survey: Short-form development.

**Author(s):** Benzer, Justin K; Meterko, Mark; Singer, Sara J

**Source:** Journal of evaluation in clinical practice; Apr 2017

**Abstract:** RATIONALE, AIMS, AND OBJECTIVES Measures of safety climate are increasingly used to guide safety improvement initiatives. However, cost and respondent burden may limit the use of safety climate surveys. The purpose of this study was to develop a 15- to 20-item safety climate survey based on the Patient Safety Climate in Healthcare Organizations survey, a well-validated 38-item measure of safety climate. METHODS The Patient Safety Climate in Healthcare Organizations was administered to all senior managers, all physicians, and a 10% random sample of all other hospital personnel in 69 private sector hospitals and 30 Veterans Health Administration hospitals. Both samples were randomly divided into a derivation sample to identify a short-form subset and a confirmation sample to assess the psychometric properties of the proposed short form. RESULTS The short form consists of 15 items represented 3 overarching domains in the long-form scale-organization, work unit, and interpersonal. CONCLUSION The proposed short form efficiently captures 3 important sources of variance in safety climate: organizational, work-unit, and interpersonal. The short-form development process was a practical method that can be applied to other safety climate surveys. This safety climate short form may increase response rates in studies that involve busy clinicians or repeated measures.

**Database:** Medline

Author(s): Lydon, Sinéad; Cupples, Margaret E; Murphy, Andrew W; Hart, Nigel; O'Connor, Paul

Source: Journal of patient safety; Apr 2017

Abstract: BACKGROUND Primary care physicians have reported a difficulty in understanding how best to measure and improve patient safety in their practices. OBJECTIVES The aims of the study were to identify measures of patient safety suitable for use in primary care and to provide guidance on proactively monitoring and measuring safety. METHODS Searches were conducted using Medline, Embase, CINAHL and PsycInfo in February 2016. Studies that used a measure assessing levels of or attitudes toward patient safety in primary care were considered for inclusion. Only studies describing tools focused on the proactive assessment of safety were reviewed. Two independent reviewers extracted data from articles and applied the Quality Assessment Tool for Studies with Diverse Designs. RESULTS More than 2800 studies were screened, of which 56 were included. Most studies had used healthcare staff survey or interviews to assess patient safety (n = 34), followed by patient chart audit (n = 14) or use of a practice assessment checklist (n = 7). Survey or interview of patients, active monitoring systems, and simulated patients were used with less frequency. CONCLUSIONS A lack of appropriate measurement tools has been suggested to limit the ability to monitor patient safety in primary care and to improve patient care. There is no evident “best” method of measuring patient safety in primary care. However, many of the measures are readily available, quick to administer, do not require external involvement, and are inexpensive. This synthesis of the literature suggests that it is possible for primary care physicians to take a proactive approach to measuring and improving safety.

Database: Medline

Patient safety in practical nurses’ education: A cross-sectional survey of newly registered practical nurses in Canada.

Author(s): VanDenKerkhof, Elizabeth; Sears, Nancy; Edge, Dana S; Tregunno, Deborah; Ginsburg, Liane

Source: Nurse education today; Apr 2017; vol. 51; p. 48-56

Abstract: BACKGROUND Practical nurses have experienced an increasing scope of practice, including an expectation to care for complex patients and function on interdisciplinary teams. Little is known about the degree to which patient safety principles are addressed in practical nursing education. PURPOSE To examine self-reported patient safety competencies of practical nurses. DESIGN A cross-sectional online survey (July 2014) and face-to-face interviews (June 2015). SETTING Ontario, Canada. PARTICIPANTS Survey participants were practical nurses newly registered with the College of Nurses of Ontario between January 2012 and December 2013. Interview participants were faculty and students in a practical nursing program in Ontario. METHODS Survey respondents completed the Health Professional Education in Patient Safety Survey online. Self-reported competencies in various patient safety domains were compared between classroom and clinical settings. Faculty members were interviewed about educational preparation of practical nurses and students were interviewed to provide insight into interpretation of survey questions. RESULTS The survey response rate was 28.4% (n=1104/3883). Mean domain scores indicated a high level of confidence in patient safety competence (2 years and in those who obtained their education outside of Canada. Faculty believed their approach to teaching and learning instilled a deep understanding of the limits to practical nurse autonomous practice. CONCLUSIONS Practical nurses were confident in what they learned about patient safety in their educational programs. The high degree of patient safety competence may be a true reflection
of practical nurses understanding of, and comfort with, the limits of their knowledge and, ultimately, the limits of their individual autonomous practice. Further exploration as to whether the questionnaire requires additional modification for use with practical nurse populations is warranted. However, this study provides the first examination of practical nurses’ perspectives and perceptions about patient safety education.

**Database:** Medline

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**HUMAN FACTORS**

**Human factors: role of cognitive and social skills in clinical practice**

**Author(s):** Wood, Thomas

**Source:** Emergency Nurse; Mar 2017; vol. 24 (no. 10); p. 18-19

Available in full text at Emergency Nurse - from RCN Publishing; Notes: Click on 'Sign in' to top right, then choose OpenAthens option

**Abstract:** The winners of the cardiopulmonary resuscitation competition at last year’s European Resuscitation Congress, in Iceland, discovered how effective team work is as important as clinical skills. [MEDIUM] References

**Database:** BNI

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**Annals for Hospitalists Inpatient Notes - Human Factors Engineering and Inpatient Care-New Ways to Solve Old Problems.**

**Author(s):** Clack, Lauren; Sax, Hugo

**Source:** Annals of Internal Medicine; Apr 2017; vol. 166 (no. 8)

**Abstract:** The article focuses on human factors engineering (HFE) which applies knowledge about human strengths and weaknesses to optimize interactions with the environment and its application to medical care to ensure safe, effective, and efficient patient care. Topics discussed include cognitive load is particularly important in health care, prevention of catheter-associated urinary tract infection and efforts to promote infection prevention through training and education.

**Database:** CINAHL

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**Qualitative ergonomics/human factors research in health care: Current state and future directions.**

**Author(s):** Valdez, Rupa Sheth; McGuire, Kerry Margaret; Rivera, A Joy

**Source:** Applied ergonomics; Jul 2017; vol. 62 ; p. 43-71

**Abstract:** The objective of this systematic review was to understand the current state of Ergonomics/Human Factors (E/HF) qualitative research in health care and to draw implications for future efforts. This systematic review identified 98 qualitative research papers published between January 2005 and August 2015 in the seven journals endorsed by the International Ergonomics Association with an impact factor over 1.0. The majority of the studies were conducted in hospitals and outpatient clinics, were focused on the work of formal health care professionals, and were classified as cognitive or organizational ergonomics. Interviews, focus groups, and observations were the most prevalent forms of data collection. Triangulation and data archiving were the dominant approaches to ensuring rigor. Few studies employed a formal approach to qualitative inquiry.
Significant opportunities remain to enhance the use of qualitative research to advance systems thinking within health care.

**Database:** Medline

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**Evaluating New Skill Sets for Performance Improvement: Human Factors as a Case Study.**

**Author(s):** Day, T Eugene; Henrickson Parker, Sarah; Lederman, Virginia; McKetta, Debbie; Spraycar, Anna

**Source:** The health care manager; Apr 2017

**Abstract:** New skill sets and improvement disciplines are constantly arising across the vast industrial and academic landscape of modern economies. Prescient hospital administrators are routinely searching for new and innovative ways to improve care, care delivery, safety, quality, and access. But, it can be challenging to identify those emerging skill sets, which will likely have lasting effect and will provide strong return on investment, from passing fads with little capacity to move performance benchmarks for a hospital. Here, we present a rubric for investigating new skill sets, using The Children's Hospital of Philadelphia's investigation into human factors engineering as a case study, and determining whether they can support hospital operations and improvements while providing sufficient return to justify the expense and challenge of incorporating ideas and methods into a quality and performance improvement environment.

**Database:** Medline

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**Faculty Perceptions of Workload: A Human Factor's Approach to Instrument Development.**

**Author(s):** Neill, Denise

**Source:** Journal of nursing measurement; Apr 2017; vol. 25 (no. 1); p. 56-76

Available in full text at [Journal of Nursing Measurement - from ProQuest]

**Abstract:** BACKGROUND AND PURPOSE: Research revealed nursing faculty members' perceived workload measures do not adequately capture the complexity of their workload. Using a human factors approach to address the multiple complex dimensions from the subjective perception of the worker, the Nurse Faculty Workload Assessment (NFWA) was developed.

**METHODS:** Survey data from 565 faculty members were used to establish the instrument's psychometric properties.

**RESULTS:** NFWA Sections 1, 2, and 3 demonstrated reliability and internal consistency. Findings supported interrelationships between activity complexity, performance circumstances, and individual characteristics described in human factors workload literature.

**CONCLUSION:** The NFWA provides a tool for administrators to evaluate faculty perception of workload expectations. Further study is needed to refine the NFWA and to compare the perception of faculty regarding workload using various workload formula calculations in various nursing programs.

**Database:** Medline

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**Applying human factors and ergonomics to the misuse of nonsterile clinical gloves in acute care.**

**Author(s):** Wilson, Jennie; Bak, Aggie; Loveday, Heather P

**Source:** American journal of infection control; Mar 2017

**Abstract:** BACKGROUND: Health care workers (HCWs) are recommended to wear nonsterile clinical gloves (NSCG) for direct contact with blood and body fluids. However, there is evidence of extensive inappropriate NSCG use. METHODOLOGY: A mixed-methods study comprising observation of NSCG use in 2
acute hospitals and semistructured HCW interviews. Qualitative data were categorized using thematic analysis. Findings were mapped to the Systems Engineering Initiative for Patient Safety model and used to develop a strategy for improving NSCG use.

RESULTSTwo hundred seventy-eight procedures performed in 178 episodes of care involved the use of NSCG. NSCG were inappropriate for 59% of procedures (165 out of 278). Risk of cross-contamination occurred in 49% (87 out of 178) episodes. Twenty-six HCWs were interviewed; emotion and socialization were key factors influencing decisions to use NSCG. Data from observation and thematic analysis were mapped to 6 interacting components of the Systems Engineering Initiative for Patient Safety work system. Interventions targeting each component informed quality improvement strategies.

CONCLUSIONS: Despite intense promotion of hand hygiene as the key measure to protect patients from health care-associated infection, NSCG dominate routine clinical practice and potential cross-contamination occurs in 50% of care episodes. Such practice is associated with significant environmental and financial costs and adversely affects patient safety. The application of human factors and ergonomics to the complex drivers of inappropriate NSCG behavior may be more effective than conventional approaches of education and policy in achieving the goal of preventing health care-associated infection and improving patient safety.

Database: Medline

DETERIORATING PATIENTS

Rapid response systems supporting end of life care: time for a new approach

Author(s): Hartin, Jillian; Walker, Judy
Source: British Journal of Hospital Medicine; Mar 2017; vol. 78 (no. 3); p. 160-164
Abstract: Rapid response systems have been implemented worldwide to support management of deteriorating patients outwith critical care units, and are increasingly required to support end of life care. These challenges require a new approach to supporting staff involved in do not attempt cardiopulmonary resuscitation decisions. [MEDIUM] References
Database: BNI

Effectiveness of ways to improve detection and rescue of deteriorating patients

Author(s): Hogan, Helen; Carver, Catherine; Zipfel, Rebecca; Hutchings, Andrew; Welch, John; Harrison, David; Black, Nick
Source: British Journal of Hospital Medicine; Mar 2017; vol. 78 (no. 3); p. 150-159
Abstract: A number of interventions has been introduced to improve recognition of and response to deterioration, but evidence for improved outcomes is mixed. Future evaluations need better articulation of intervention components and outcomes, longer run-in times and consideration of the interplay between concurrent interventions. [MEDIUM] References
Database: BNI

Validation of a Modified Early Warning Score-linked Situation-Background-Assessment-Recommendation (SBAR) communication tool: a mixed methods study

Author(s): Burger, Debora; Jordan, Sue; Kyriacos, Una
Aims and Objectives: The objective of this study was to develop and validate a modified Situation-Background-Assessment-Recommendation communication tool incorporating components of the Cape Town Modified Early Warning Score vital signs chart for reporting early signs of clinical deterioration.

Background: Reporting early signs of physiological and clinical deterioration could prevent 'failure to rescue' or unexpected intensive care admission, cardiac arrest or death. A structured communication tool incorporating physiological and clinical parameters allows nurses to provide pertinent information about a deteriorating patient in a logical order.

Design: Mixed methods instrument development and validation.

Methods: We used a sequential 3-phase method: cognitive interviews, content validation and inter-rater reliability testing to validate a self-designed communication tool. Participants were purposively selected expert nurses and doctors in government sector hospitals in Cape Town.

Results: Cognitive interviews with five experts prompted most changes to the communication tool: 15/42 (35.71%) items were modified. Content validation of a revised tool was high by a pre-determined ≥70% of 18 experts: 4/49 (8.2%) items were modified. Inter-rater reliability testing by two nurses indicated substantial to full agreement (Cohen’s kappa 0.61-1) on 37/45 (82%) items. The 1 item achieving slight agreement (Cohen’s Kappa 0.20) indicated a difference in clinical judgement. The high overall percentage agreement (82%) suggests that the modified items are sound. Overall, 45 items remained on the validated tool.

Conclusion: The first Modified Early Warning Score-linked Situation-Background-Assessment-Recommendation communication tool developed in South Africa was found to be valid and reliable in a local context.

Relevance to Clinical Practice: Nurses in South Africa can use the validated tool to provide doctors with pertinent information about a deteriorating patient in a logical order to prevent a serious adverse event. Our findings provide a reference for other African countries to develop and validate communication tools for reporting early signs of clinical deterioration.

Database: Medline

Regular in-situ simulation training of paediatric Medical Emergency Team leads to sustained improvements in hospital response to deteriorating patients, improved outcomes in intensive care and financial savings.

Author(s): Theilen, Ulf; Fraser, Laura; Jones, Patricia; Leonard, Paul; Simpson, Dave

Abstract: AIM OF THE STUDY: The introduction of a paediatric Medical Emergency Team (pMET) was accompanied by weekly in-situ simulation team training. Key ward staff participated in team training, focusing on recognition of the deteriorating child, teamwork and early involvement of senior staff. Following an earlier study [1], this investigation aimed to evaluate the long-term impact of ongoing regular team training on hospital response to deteriorating ward patients, patient outcome and financial implications.

Methods: Prospective cohort study of all deteriorating in-patients in a tertiary paediatric hospital requiring admission to paediatric intensive care (PICU) the year before, 1 year after and 3 years after the introduction of pMET and team training.

Results: Deteriorating patients were recognised more promptly (before/1 year after/3 years after pMET; median time 4/1.5/0.5h, p<0.001), more often reviewed by consultants (45%/76%/81%, p<0.001) and more rapidly escalated to PICU (median time 10.5/5/3.5h, p=0.02). There was a significant reduction in associated PICU admissions (56/51/32, p=0.02) and PICU bed days (527/336/193, p<0.001). The total annual cost of training (£74,250) was more than offset by savings from reduced PICU bed days (£801,600 per annum). Introduction of pMET coincided with significantly reduced hospital mortality (p<0.001).

Conclusion: These results indicate that lessons learnt by ward staff during team training led to sustained improvements in the hospital response to
critically deteriorating in-patients, significantly improved patient outcomes and substantial savings. Integration of regular in-situ simulation training of medical emergency teams, including key ward staff, in routine clinical care has potential application in all acute specialties.

**Database**: Medline

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**RESTRAINT**

**Healthcare law and ethics, 11: restraint and surveillance within care homes (2/2)**

**Author(s)**: Barber, Chris

**Source**: British Journal of Healthcare Assistants; Mar 2017; vol. 11 (no. 3); p. 136-139

Available in full text at British Journal of Healthcare Assistants - from Mark Allen Group

**Abstract**: This article in this series on healthcare ethics will continue the focus on restraint and surveillance begun in the previous article and will highlight the often thorny issues of covert administration of medicines with particular reference to: those with a learning disability; those who are elderly; and the use of surveillance technology in health and social care environments.

**Database**: BNI

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**New approach to restraint**

**Author(s)**: Cole, Elaine

**Source**: Nursing Standard; Feb 2017; vol. 31 (no. 25); p. 22-23

Available in print at Library MPH - from NURSING STANDARD

Available in full text at Nursing Standard - from RCN Publishing; Notes: Click on 'Sign in' to top right, then choose OpenAthens option

**Abstract**: An award-winning practice development team has devised care plans that are reducing use of restraint for mental health patients. The mental health team at Black Country Partnership NHS Trust has created the person-centered physical intervention protocol (PCPIP), which identifies measures that can reduce crisis behaviours and help to de-escalate incidents at an early stage

**Reference**

**Database**: BNI

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**Patient Abuse and Trauma: A Policy Analysis of the Regulation of Seclusion and Restraint in Mental Health Care.**

**Author(s)**: Peterson, H. Leona

**Source**: Journal of Policy Practice; Apr 2017; vol. 16 (no. 2); p. 187-204

**Abstract**: Historically, justifications for the seclusion and physical restraint of hospital patients have stereotyped individuals with mental illness as "dangerous" to themselves and others (Huckshorn, 2004a). It can be argued, however, that it is the policies that regulate the use of seclusion and physical and chemical restraints that are dangerous. This article analyzes the Patients’ Rights section of the Hospital Conditions of Participation (CoPs), Part 482 of CFR 42, including sub-sections: e. Standard: Restraint or seclusion; f. Standard: Restraint or seclusion: Staff training requirements; and g. Standard: Death reporting requirements. The set of CoPs regarding Patients’ Rights are analyzed from a value-critical, process-oriented perspective. This article proposes the following six-point
framework as uniquely suited to evaluating 42 CFR 428.13: 1) introduction to the background and historical significance of the problem; 2) evaluation of the clarity and measurability of the goals and objectives of the policy; 3) overview of the intended impact of the policy; 4) examination of the value criteria; 5) examination of existing power struggles for those impacted by the policy; and 6) examination of the actual impact of the policy. Results of the policy analysis suggest that the policy does not go far enough to reach its stated goals and objectives in full. In the conclusions, suggestions for further protection of patients’ rights are provided. Examples of alternatives to restraint and seclusion are discussed. Finally, the grave importance of reshaping the culture of mental health care, in terms of life-and-death consequences, is considered.

**Database:** CINAHL
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