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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Validation of Predictors of Fall Events in Hospitalized Patients With Cancer.

Source: Clinical Journal of Oncology Nursing; Oct 2016; vol. 20 (no. 5)
Author(s): Weed-Pfaff, Samantha H.; Nutter, Benjamin; Bena, James F.; Forney, Jennifer; Field, Rosemary; Szoka, Lynn; Karius, Diana; Akins, Patti; Colvin, Christina M.; Albert, Nancy M.
Database: CINAHL

Differing trends in fall-related fracture and non-fracture injuries in older people with and without dementia.
Source: Archives of gerontology and geriatrics; 2016; vol. 67; p. 61-67
Author(s): Harvey, Lara; Mitchell, Rebecca; Brodaty, Henry; Draper, Brian; Close, Jacqueline

Abstract: To explore the impact of dementia on the trends in fall-related fracture and non-fracture injuries for older people. Individuals aged ≥65 years who were admitted to a NSW hospital for at least an over-night stay for a fall-related injury from 2003 to 2012 were identified. Age-standardised hospitalisation rates, length of stay, access to in-hospital rehabilitation, 30-day and 1-year mortality were examined. Annual percentage change (PAC) over time was calculated using negative binomial regression. Of the 228,628 fall-related injury hospitalisations, 20.6% were for people with dementia. People with dementia were more likely to be admitted with a hip fracture, and less likely to be admitted with a fracture of the forearm/wrist, and received less in-hospital rehabilitation than people without dementia. Fall-related hip-fracture rates for people with dementia decreased by 4.2% (95%CI -5.6 to -2.7, p<0.001) per annum; there was no change over time for people without dementia (PAC 0.2%; 95%CI -0.8 to 0.5, p=0.643). Rates for other fractures decreased by 1.2% (95%CI -1.9 to -0.5, p<0.001) per annum in people with dementia, while rates increased by 2.2% (95%CI 1.9-2.5, p<0.001) for people without dementia. By contrast, non-fracture injuries including traumatic brain injury increased significantly for both people with and without dementia. Rates of fall-related fracture and non-fracture hospitalisations for people with dementia remain higher than for those without dementia. However, fall-related fracture hospitalisation rates have decreased for people with dementia, while there has not been a corresponding decrease in people without dementia. Copyright © 2016 Elsevier Ireland Ltd. All rights reserved.
Database: Medline

Do daily ward interviews improve measurement of hospital quality and safety indicators? A prospective observational study.
Source: Journal of evaluation in clinical practice; Oct 2016; vol. 22 (no. 5); p. 792-798
Author(s): Sarkies, Mitchell N; Bowles, Kelly-Ann; Skinner, Elizabeth H; Haas, Romi; Mitchell, Deb; O'Brien, Lisa; May, Kerry; Ghaly, Marcelle; Ho, Melissa; Haines, Terry P
Abstract: The aim of this study was to determine if the addition of daily ward interview data improves the capture of hospital quality and safety indicators compared with incident reporting systems alone. An additional aim was to determine the potential characteristics influencing under-reporting of hospital quality and safety indicators in incident reporting systems. A prospective, observational study was performed at two tertiary metropolitan public hospitals. Research assistants from allied health backgrounds met daily with the nurse in charge of the ward and discussed the occurrence of any falls, pressure injuries and rapid response medical team calls. Data were collected from four general medical wards, four surgical wards, an orthopaedic, neurosciences, plastics, respiratory, renal, sub-acute and acute medical assessment unit. An estimated total of 303 falls, 221 pressure injuries and 884 rapid response medical team calls occurred between 15 wards across two hospitals, over a period of 6 months. Hospital incident reporting systems underestimated falls by 30.0%, pressure injuries by 59.3% and rapid response medical team calls by 17.0%. The use of ward interview data collection in addition to hospital incident reporting systems improved data capture of falls by 23.8% (n = 72), pressure injuries by 21.7% (n = 48) and rapid response medical team calls by 12.7% (n = 112). Falls events were significantly less likely to be reported if they occurred on a Monday (P = 0.04) and pressure injuries significantly more likely to be reported if they occurred on a Wednesday (P = 0.01). Hospital quality and safety indicators (falls, pressure injuries and rapid response medical team calls) were under-reported in incident reporting systems, with variability in under-reporting between wards and the day of event occurrence. The use of ward interview data collection in addition to hospital incident reporting systems improved reporting of hospital quality and safety indicators. © 2016 John Wiley & Sons, Ltd.

Database: Medline

PRESSURE ULCERS

Getting evidence-based pressure ulcer prevention into practice: a multi-faceted unit-tailored intervention in a hospital setting.
Source: International Wound Journal; Oct 2016; vol. 13 (no. 5); p. 645-654
Author(s): Sving, Eva; Högman, Marieann; Mamhidir, Anna-Greta; Gunningberg, Lena
Database: CINAHL

Incidence of hospital-acquired pressure ulcers - a population-based cohort study.
Source: International Wound Journal; Oct 2016; vol. 13 (no. 5); p. 809-820
Author(s): Gardiner, Joseph C; Reed, Philip L; Bonner, Joseph D; Haggerty, Diana K; Hale, Daniel G
Database: CINAHL

Improving Hospital-Acquired Pressure Ulcer Prevention on an Orthopedic Unit.
Source: MEDSURG Nursing; Jul 2016 ; p. 4-7.
Author(s): Tashman, Naomi
Available in full text at Medsurg Nursing - from ProQuest
Available in full text at MEDSURG Nursing - from EBSCOhost
Database: CINAHL
Providing informal home care for pressure ulcer patients: how it affects carers’ quality of life and burden

Source: Journal of Clinical Nursing; Oct 2016; vol. 25 (no. 19-20); p. 3026-3035

Author(s): Rodrigues, Alexandre M; Ferreira, Pedro L; Ferre-Grau, Carmen

Abstract:Aims and objectives To evaluate the quality of life of informal caregivers of patients with pressure ulcer; to assess their levels of burden; to analyse the variables influencing both their quality of life and burden. Background Informal caregivers of pressure ulcer patients, besides coping with the natural dependency of these patients, deal with the specificity of caring these types of wounds. This situation has an impact on not only the quality of life and burden felt by informal caregivers but also on individual and familiar dynamics. Design Descriptive and correlational study. Methods This study focused on 145 informal caregivers providing home care. Measurement instruments were: SF-36v2 and the Burden Interview Scale. Descriptive analysis of the quantitative variables was carried out according to measures of central tendency, and the qualitative variables were described using absolute and relative frequencies. The relationships or associations between variables were explored through correlational analysis and, whenever the data allowed, multivariate techniques were used. Results and discussion Informal caregivers showed low levels of quality of life and, most of them, significant burden. Quality of life decreased with overload, with the increasing number of pressure ulcer and with less experience of informal caregivers, with lack of financial remuneration, with unemployment, with patient positioning and with the direct care of the wound. The burden increased with the number of pressure ulcer in each patient and with the lack of financial remuneration. Conclusion These informal caregivers have low quality of life and are overburdened. Both situations are positively and negatively influenced by factors related to the pressure ulcer and to the patients’ sociodemographic data. Relevance to clinical practice The results of this study allow more effective monitoring by health professionals of levels of burden and quality of life encountered in pressure ulcer informal caregivers, as well as direct interventions to inhibit the factors inducing burden and enhance those that improve quality of life.

Database: BNI

Related factors to semi-recumbent position compliance and pressure ulcers in patients with invasive mechanical ventilation: An observational study (CAPCRI study)

Source: International Journal of Nursing Studies; Sep 2016; vol. 61; p. 198-208

Author(s): Llaurado-Serra, Mireia; Ulldemolins, Marta; Fernandez-Ballart, Joan; Guell-Baro, Rosa; Valenti-Trulls, Teresa; Calpe-Darmians, Neus; Piñol-Tena, Angels; Pi-Guerrero, Mercedes; Paños-Espinosa, Cristina; Sandiumenge, Alberto; Jimenez-Herrera, María F.

Available in full text at International Journal of Advanced Nursing Studies - from ProQuest

Abstract:Semi-recumbent position is recommended to prevent ventilator-associated pneumonia. Its implementation, however, is below optimal. We aimed to assess real semi-recumbent position compliance and the degree of head-of-bed elevation in Spanish intensive care units, along with factors determining compliance and head-of-bed elevation and their relationship with the development of pressure ulcers. Finally, we investigated the impact that might have the diagnosis of pressure ulcers in the attitude toward head-of-bed elevation. We performed a prospective, multicenter, observational study in 6 intensive care units. Inclusion criteria were patients ≥18 years old and expected to remain under mechanical ventilator for ≥48 h. Exclusion criteria were patients with contraindications for semi-recumbent position from admission, mechanical ventilation during the previous 7 days and prehospital intubation. Head-of-bed elevation was measured 3 times/day for a maximum of 28 days using the BOSCH GLM80® device. The variables collected related to patient admission, risk of pressure ulcers and the measurements themselves. Bivariate and multivariate analyses were carried out using multiple binary logistic regression and linear regression as appropriate. Statistical significance was set at p 0.05. All analyses were performed with IBM SPSS for Windows Version 20.0. 276 patients were included (6894 measurements). 45.9% of the measurements were 30.0°. The mean head-of-bed elevation was 30.1 (SD 6.7)° and mean patient compliance was 53.6 (SD 26.1)%%. The main reasons for non-compliance according to the staff nurses
were those related to the patient's care followed by clinical reasons. The factors independently related to semi-recumbent position compliance were intensive care unit, ventilation mode, nurse belonging to the research team, intracranial pressure catheter, beds with head-of-bed elevation device, type of pathology, lateral position, renal replacement therapy, nursing shift, open abdomen, abdominal vacuum therapy and agitation. Twenty-five patients (9.1%) developed a total of 34 pressure ulcers. The diagnosis of pressure ulcers did not affect the head-of-bed elevation. In the multivariate analysis, head-of-bed elevation was not identified as an independent risk factor for pressure ulcers. Semi-recumbent position compliance is below optimal despite the fact that it seems achievable most of the time. Factors that affect semi-recumbent position include the particular intensive care unit, abdominal conditions, renal replacement therapy, agitation and bed type. Head-of-bed elevation was not related to the risk of pressure ulcers. Efforts should be made to clarify semi-recumbent position contraindications and further analysis of its safety profile should be carried out.

References

**Incidence of hospital-acquired pressure ulcers - a population-based cohort study.**

**Source:** International wound journal; Oct 2016; vol. 13 (no. 5); p. 809-820

**Author(s):** Gardiner, Joseph C; Reed, Philip L; Bonner, Joseph D; Haggerty, Diana K; Hale, Daniel G

**Abstract:** Our study sought to estimate the association between race, gender, comorbidity and body mass index (BMI) on the incidence of hospital-acquired pressure ulcer (PU) from a population-based retrospective cohort comprising 242,745 unique patient hospital discharges in two fiscal years from July 2009 to June 2010 from 15 general and tertiary care hospitals. Cases were patients with a single inpatient encounter that led to an incident PU. Controls were patients without a PU at any encounter during the two fiscal years with the earliest admission retained for analysis. Logistic regression models quantified the association of potential risk factors for PU incidence. Spline functions captured the non-linear effects of age and comorbidity. Overall 2-68% of patients experienced an incident PU during their inpatient stay. Unadjusted analyses revealed statistically significant associations by age, gender, race, comorbidity, BMI, admitted for a surgical procedure, source of admission and fiscal year, but differences by gender and race did not persist in adjusted analyses. Interactions between age, comorbidity and BMI contributed significantly to the likelihood of PU incidence. Patients who were older, with multiple comorbidities and admitted for a surgical diagnosis-related groups (DRG) were at greater risk of experiencing a PU during their stay. © 2014 Medicalhelplines.com Inc and John Wiley & Sons Ltd.

**Database:** Medline

**Getting evidence-based pressure ulcer prevention into practice: a multi-faceted unit-tailored intervention in a hospital setting.**

**Source:** International wound journal; Oct 2016; vol. 13 (no. 5); p. 645-654

**Author(s):** Sving, Eva; Högman, Marieann; Mamhidir, Anna-Greta; Gunningberg, Lena

**Abstract:** The aim of the study was to evaluate whether a multi-faceted, unit-tailored intervention using evidenced-based pressure ulcer prevention affects (i) the performance of pressure ulcer prevention, (ii) the prevalence of pressure ulcers and (iii) knowledge and attitudes concerning pressure ulcer prevention among registered and assistant nurses. A quasi-experimental, clustered pre- and post-test design was used. Five units at a hospital setting were included. The intervention was based on the PARIHS framework and included a multi-professional team, training and repeated quality measurements. An established methodology was used to evaluate the prevalence and prevention of pressure ulcers. Nurses’ knowledge and attitudes were evaluated using a validated questionnaire. A total of 506 patients were included, of whom 105 patients had a risk to develop pressure ulcer. More patients were provided pressure ulcer prevention care (P = 0.001) and more prevention care was given to each patient (P = 0.021) after the intervention. Corresponding results were shown in the group of patients assessed as being at risk for developing pressure ulcers. Nurses’ knowledge about pressure ulcer prevention increased (P < 0.001). Positive attitudes towards pressure
ulcer prevention remained high between pre- and post-test surveys. This multi-faceted unit-tailored intervention affected pressure ulcer prevention. Facilitation and repeated quality measurement together with constructed feedback of results seemed to be the most important factor for pressure ulcer prevention. © 2014 The Authors. International Wound Journal © 2014 Medicalhelplines.com Inc and John Wiley & Sons Ltd.

Database: Medline

Hospital-acquired pressure ulcers in spinal cord injured patients: time to occur, time until closure and risk factors.

Source: Spinal cord; Sep 2016; vol. 54 (no. 9); p. 726-731

Author(s): van der Wielen, H; Post, M W M; Lay, V; Gläsche, K; Scheel-Sailer, A

Abstract: Prospective observational cohort study. To describe time to occur and time until closure of hospital-acquired pressure ulcers (HAPUs) in patients with spinal cord injury (SCI). Specialised SCI acute care and rehabilitation clinic in Switzerland. Daily registration of the presence and severity of HAPUs in a consecutive sample of SCI patients during their entire in-patient stay. Out of 185 observed SCI patients, 55 patients (29.7%) developed at least one HAPU. Within the first 30 days after admission, 50% of all HAPUs occurred. Less severe HAPUs occurred earlier than severe HAPUs. The occurrence of HAPUs was significantly associated with reason of admission (P<0.01), and was highest in first rehabilitation (51.4%) and orthopaedic surgery patients (41.4%). The incidences of first HAPU in these groups were 1.04 and 2.31 per patient-year, respectively. Patients in first rehabilitation or readmitted because of pressure ulcer (PU) showed an initial lower risk for HAPUs in the Kaplan-Meier curve compared with patients readmitted for other reasons. Cox regression analysis revealed an association between longer time since SCI and time until occurrence (P=0.01). Closure of the HAPUs during hospitalisation was observed in 37 patients (67.3%) after 38.9 days on average. No significant associations were found between patient characteristics and time until closure. The dynamics of HAPUs varied according to admission reason and time since lesion. However, ongoing awareness to prevent HAPUs is needed in all patients with SCI.

Database: Medline

Marginal Hospital Cost of Surgery-related Hospital-acquired Pressure Ulcers.

Source: Medical care; Sep 2016; vol. 54 (no. 9); p. 845-851

Author(s): Spector, William D; Limcangco, Rhona; Owens, Pamela L; Steiner, Claudia A

Abstract: Patients who develop hospital-acquired pressure ulcers (HAPUs) are more likely to die, have longer hospital stays, and are at greater risk of infections. Patients undergoing surgery are prone to developing pressure ulcers (PUs). To estimate the hospital marginal cost of a HAPU for adults patients who were hospitalized for major surgeries, adjusted for patient characteristics, comorbidities, procedures, and hospital characteristics. Data are from the Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases and the Medicare Patient Safety Monitoring System for 2011 and 2012. PU information was obtained using retrospective structured record review from trained MPMS data abstractors. Costs are derived using HCUP hospital-specific cost-to-charge ratios. Marginal cost estimates were made using Extended Estimating Equations. We estimated the marginal cost at the 25th, 50th, and 75th percentiles of the cost distribution using Simultaneous Quantile Regression. We find that 3.5% of major surgical patients developed HAPUs and that the HAPUs added ~$8200 to the cost of a surgical stay after adjusting for comorbidities, patient characteristics, procedures, and hospital characteristics. This is an ~44% addition to the cost of a major surgical stay but less than half of the unadjusted cost difference. In addition, we find that for high-cost stays (75th percentile) HAPUs added ~$12,100, whereas for low-cost stays (25th percentile) HAPUs added ~$3900. This paper suggests that HAPUs add ~44% to the cost of major surgical hospital stays, but the amount varies depending on the total cost of the visit.

Database: Medline
Reliability of Pressure Ulcer Rates: How Precisely Can We Differentiate Among Hospital Units, and Does the Standard Signal-Noise Reliability Measure Reflect This Precision?

Source: Research in nursing & health; Aug 2016; vol. 39 (no. 4); p. 298-305

Author(s): Staggs, Vincent S; Cramer, Emily

Abstract: Hospital performance reports often include rankings of unit pressure ulcer rates. Differentiating among units on the basis of quality requires reliable measurement. Our objectives were to describe and apply methods for assessing reliability of hospital-acquired pressure ulcer rates and evaluate a standard signal-noise reliability measure as an indicator of precision of differentiation among units. Quarterly pressure ulcer data from 8,199 critical care, step-down, medical, surgical, and medical-surgical nursing units from 1,299 US hospitals were analyzed. Using beta-binomial models, we estimated between-unit variability (signal) and within-unit variability (noise) in annual unit pressure ulcer rates. Signal-noise reliability was computed as the ratio of between-unit variability to the total of between- and within-unit variability. To assess precision of differentiation among units based on ranked pressure ulcer rates, we simulated data to estimate the probabilities of a unit’s observed pressure ulcer rate rank in a given sample falling within five and ten percentiles of its true rank, and the probabilities of units with ulcer rates in the highest quartile and highest decile being identified as such. We assessed the signal-noise measure as an indicator of differentiation precision by computing its correlations with these probabilities. Pressure ulcer rates based on a single year of quarterly or weekly prevalence surveys were too susceptible to noise to allow for precise differentiation among units, and signal-noise reliability was a poor indicator of precision of differentiation. To ensure precise differentiation on the basis of true differences, alternative methods of assessing reliability should be applied to measures purported to differentiate among providers or units based on quality. © 2016 The Authors. Research in Nursing & Health published by Wiley Periodicals, Inc. © 2016 The Authors. Research in Nursing & Health published by Wiley Periodicals, Inc.

Database: Medline

SEPSIS

Development and validation of an Automated Sepsis Risk Assessment System

Source: Research in Nursing & Health; Oct 2016; vol. 39 (no. 5); p. 317-327

Author(s): Back, Ji-Sun; Jin, Yinji; Jin, Taixian; Lee, Sun-Mi

Abstract: Aggressive resuscitation can decrease sepsis mortality, but its success depends on early detection of sepsis. The purpose of this study was to develop and verify an Automated Sepsis Risk Assessment System (Auto-SepRAS), which would automatically assess the sepsis risk of inpatients by applying data mining techniques to electronic health records (EHR) data and provide daily updates. The seven predictors included in the Auto-SepRAS after initial analysis were admission via the emergency department, which had the highest odds ratio; diastolic blood pressure; length of stay; respiratory rate; heart rate; and age. Auto-SepRAS classifies inpatients into three risk levels (high, moderate, and low) based on the predictive values from the sepsis risk-scoring algorithm. The sepsis risk for each patient is presented on the nursing screen of the EHR. The AutoSepRAS was implemented retrospectively in several stages using EHR data and its cut-off scores adjusted. Overall discrimination power was moderate (AUC>.80). The Auto-SepRAS should be verified or updated continuously or intermittently to maintain high predictive performance, but it does not require invasive tests or data input by nurses that would require additional time. Nurses are able to provide patients with nursing care appropriate to their risk levels by using the sepsis risk information provided by the Auto-SepRAS. In particular, with early detection of changes related to sepsis, nurses should be able to help in providing rapid initial resuscitation of high-risk patients. References

Database: BNI
On the right track

**Source:** Nursing Standard; Sep 2016; vol. 31 (no. 4); p. 22-23.

**Author(s):** Whyte, Alison

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:** Hospitals in Manchester are using a new handheld patient tracking device to identify and monitor sepsis and other life-threatening conditions.

**Database:** BNI

**Association of Fluid Resuscitation Initiation Within 30 Minutes of Severe Sepsis and Septic Shock Recognition With Reduced Mortality and Length of Stay.**

**Source:** Annals of Emergency Medicine; Sep 2016; vol. 68 (no. 3); p. 298-311

**Author(s):** Leisman, Daniel; Wie, Benjamin; Doerfler, Martin; Bianculli, Andrea; Ward, Mary Frances; Akerman, Meredith; D'Angelo, John K.; Zemmel D'Amore, Jason A.; D'Angelo, John K; Zemmel D'Amore, Jason A

**Abstract:** Study Objective: We evaluate the association of intravenous fluid resuscitation initiation within 30 minutes of severe sepsis or septic shock identification in the emergency department (ED) with inhospital mortality and hospital length of stay. We also compare intravenous fluid resuscitation initiated at various times from severe sepsis or septic shock identification's association with the same outcomes. Methods: This was a review of a prospective, observational cohort of all ED severe sepsis or septic shock patients during 13 months, captured in a performance improvement database at a single, urban, tertiary care facility (90,000 ED visits/year). The primary exposure was initiation of a crystalloid bolus at 30 mL/kg within 30 minutes of severe sepsis or septic shock identification. Secondary analysis compared intravenous fluid initiated within 30, 31 to 60, or 61 to 180 minutes, or when intravenous fluid resuscitation was initiated at greater than 180 minutes or not provided. Results: Of 1,866 subjects, 53.6% were men, 72.5% were white, mean age was 72 years (SD 16.6 years), and mean initial lactate level was 2.8 mmol/L. Eighty-six percent of subjects were administered intravenous antibiotics within 180 minutes; 1,193 (64%) had intravenous fluid initiated within 30 minutes. Mortality was lower in the within 30 minutes group (159 [13.3%] versus 123 [18.3%]; 95% confidence interval [CI] 1.4% to 8.5%), as was median hospital length of stay (6 days [95% CI 6 to 7] versus 7 days [95% CI 7 to 8]). In multivariate regression that included adjustment for age, lactate, hypotension, acute organ dysfunction, and Emergency Severity Index score, intravenous fluid within 30 minutes was associated with lower mortality (odds ratio 0.63; 95% CI 0.46 to 0.86) and 12% shorter length of stay (hazard ratio=1.14; 95% CI 1.02 to 1.27). In secondary analysis, mortality increased with later intravenous fluid resuscitation initiation: 13.3% ≤30 minutes versus 16.0% (31 to 60 minutes) versus 16.9% (61 to 180 minutes) versus 19.7% (>180 minutes). Median hospital length of stay also increased with later intravenous fluid initiation: 6 days (95% CI 6 to 7 days) versus 7 days (95% CI 6 to 7 days) versus 7 days (95% CI 6 to 8 days) versus 8 days (95% CI 7 to 9 days). Conclusion: The time of intravenous fluid resuscitation initiation was associated with improved mortality and could be used as an easier obtained alternative to intravenous fluid completion time as a performance indicator in severe sepsis and septic shock management.

**Database:** CINAHL

**Application of sepsis calculator in newborns with suspected infection.**

**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; Dec 2016; vol. 29 (no. 23); p. 3860-3865
Author(s): Kerste, Marleen; Corver, Jellina; Sonnevelt, Martine C; van Brakel, Monique; van der Linden, Paul D; M Braams-Lisman, Babette A; Plötz, Frans B

Abstract: To compare actual antibiotic use to the stratification based on the sepsis calculator in newborns with suspected early onset sepsis (EOS). To investigate differences in EOS risk and vital signs between newborns that received early (<12 h) versus late antibiotics (≥12 h of life). Newborns born ≥34 weeks gestation in 2014 treated with antibiotics started within 72 h after birth were included. We calculated the risk per 1000 live births and retrospectively assigned each newborn to one of four recommended categories using the sepsis calculator. There were 2094 newborns, 111 (5.3%) received antibiotics and 108 newborns were included. The incidence of culture-proven EOS was 0.096%. In 57 newborns, the advice of the sepsis calculator was not to start antibiotic therapy. Antibiotic treatment was started early in 66 (61%) and late in 42 (39%) newborns. In the "late treatment" group, clinical condition deteriorated, including two newborns with culture-proven EOS. Tachypnea and respiratory distress were significantly more present. Antibiotic use could be reduced by more than 50%. Newborns with initial low sepsis risk score clinically deteriorated beyond 12 h of life. Continuous good clinical observation remains very important. Prospective validation is necessary to evaluate the safety of this approach.

Database: Medline

A retrospective comparison of helicopter transport versus ground transport in patients with severe sepsis and septic shock.

Source: International journal of emergency medicine; Dec 2016; vol. 9 (no. 1); p. 15

Author(s): Kashyap, Rahul; Anderson, Peter W; Vakil, Abhay; Russi, Christopher S; Cartin-Ceba, Rodrigo

Available in full text at International Journal of Emergency Medicine - from National Library of Medicine
Available in full text at International Journal of Emergency Medicine - from BioMed Central
Available in full text at International Journal of Emergency Medicine - from ProQuest
Available in full text at International Journal of Emergency Medicine - from National Library of Medicine

Abstract: Helicopter emergency medical services (HEMS) extend the reach of a tertiary care center significantly. However, its role in septic patients is unclear. Our study was performed to clarify the role of HEMS in severe sepsis and septic shock. This is a single-center retrospective cohort study. This study was performed at Mayo Clinic, Rochester, MN, in years 2007-2009. This study included a total of 181 consecutive adult patients admitted to the medical intensive care unit meeting criteria for severe sepsis or septic shock within 24 h of admission and transported from an acute care facility by a helicopter or ground ambulance. The primary predictive variable was the mode of transport. Multiple demographic, clinical, and treatment variables were collected and analyzed with univariate analysis followed by multivariate analysis. The patients transported by HEMS had a significantly faster median transport time (1.3 versus 1.7 h, p < 0.01), faster time to meeting criteria for severe sepsis or septic shock (1.2 versus 2.9 h, p < 0.01), a higher SOFA score (9 versus 7, p < 0.01), higher incidence of acute respiratory distress syndrome (38 versus 18 %, p = 0.013), higher need for invasive mechanical ventilation (60 versus 41 % p = 0.014), higher ICU mortality (13.3 versus 4.1 %, p = 0.024), and an increased hospital mortality (17 versus 30 %, p = 0.04) when compared to those transported by ground. Distance traveled was not an independent predictor of hospital mortality on multivariate analysis. HEMS transport is associated with faster transport time, carries sicker patients, and is associated with higher hospital mortality compared with ground ambulance services for patients with severe sepsis or septic shock.

Database: Medline
Comparison of Sepsis Screening Tools' Ability to Detect Sepsis Accurately.

**Source:** Surgical infections; Oct 2016; vol. 17 (no. 5); p. 525-529

**Author(s):** Wawrose, Richard; Baraniuk, Mary; Standiford, Lauren; Wade, Charles; Holcomb, John; Moore, Laura

**Abstract:** Sepsis is the primary cause of perioperative mortality among general surgery patients and is the leading cause of death in non-cardiac intensive care units. To address this issue, the Surviving Sepsis Campaign Guidelines advocate for sepsis screening. However, there is little information in the current medical literature to suggest which sepsis screening tool is optimal. The purpose of this study was to compare a sepsis screening tool that we have validated and published previously, the Sepsis Screening Score (SSS), with a commercially available sepsis screening tool, the St. John's Sepsis Agent (SJSA) developed by Cerner (Kansas City, MO). This prospective observational study compares the accuracy of the SSS with that of the SJSA in the same patient population. The SSS was performed on each patient in our surgical intermediate care unit (SIMU) twice daily. The SJSA monitored these same patients continuously via the electronic medical record (EMR). Epidemiologic data related to sepsis were collected prospectively, and the performance characteristics of the two tests were compared using the two-sample test of proportions. A total of 348 patients were included in the study, and 47 (13.5%) of these patients developed sepsis. The SJSA was determined to have a sensitivity of 44.7%, a specificity of 84.7%, a positive predictive value (PPV) of 31.3%, and a negative predictive value (NPV) of 90.7%, while the SSS was determined to have a sensitivity of 74.5%, a specificity of 86.4%, a PPV of 46.1%, and an NPV of 95.6%. The differences in sensitivity (p < 0.001), PPV (p < 0.001), and NPV (p = 0.011) were found to be statistically significant. Despite the fact that SJSA had constant surveillance over patients’ EMRs, it still detected fewer septic patients than the SSS, which was performed twice per day. The difference in sensitivities and NPVs between the two tests is of particular importance, because this indicates that the SSS is more effective in identifying patients with sepsis. This study establishes a basis for the utilization of the SSS instead of the SJSA.

**Database:** Medline

Fluid management in sepsis: The potential beneficial effects of albumin.

**Source:** Journal of critical care; Oct 2016; vol. 35; p. 161-167

**Author(s):** Vincent, Jean Louis; De Backer, Daniel; Wiedermann, Christian J

**Abstract:** Fluid administration is a key intervention in hemodynamic resuscitation. Timely expansion (or restoration) of plasma volume may prevent tissue hypoxia and help to preserve organ function. In septic shock in particular, delaying fluid resuscitation may be associated with mitochondrial dysfunction and may promote inflammation. Ideally, infused fluids should remain in the plasma for a prolonged period. Colloids remain in the intravascular space for longer periods than do crystalloids, although their hemodynamic effect is affected by the usual metabolism of colloid substances; leakage through the endothelium in conditions with increased permeability, such as sepsis; and/or external losses, such as with hemorrhage and burns. Albumin has pleiotropic physiological activities including antioxidant effects and positive effects on vessel wall integrity. Its administration facilitates achievement of a negative fluid balance in hypoalbuminemia and in conditions associated with edema. Fluid resuscitation with human albumin is less likely to cause nephrotoxicity than with artificial colloids, and albumin infusion has the potential to preserve renal function in critically ill patients. These properties may be of clinical relevance in circulatory shock, capillary leak, liver cirrhosis, and de-escalation after volume resuscitation. Sepsis is a candidate condition in which human albumin infusion to preserve renal function should be substantiated. Copyright © 2016 Elsevier Inc. All rights reserved.

**Database:** Medline

Effects of propofol on vasopressor use in patients with sepsis and severe sepsis: A pilot study.

**Source:** Journal of critical care; Oct 2016; vol. 35; p. 155-160
**Author(s):** Marler, Jacob; Mohrien, Kerry; Kimmons, Lauren A; Vandigo, Joseph E; Oliphant, Carrie S; Boucher, Adam N; Jones, G Morgan

**Abstract:** Propofol is one of the most commonly used sedatives in the intensive care unit (ICU) despite its undesirable hypotensive effects. The purpose of this study was to determine the effects of continuous intravenous (CIV) propofol on vasopressor requirements in mechanically ventilated patients with sepsis. A multicenter, retrospective, propensity-matched pilot study was conducted comparing patients with sepsis or severe sepsis who received CIV propofol for sedation to those who did not. The primary outcome was incidence of vasopressor support. Secondary outcomes included change in mean arterial pressure, mortality, and length of stay. A total of 279 patients (149 CIV propofol, 130 non-CIV propofol) were evaluated, with 174 patients matched 1:1 based on propensity score. There was no difference in vasopressor support requirements (49.4% vs 54%; \( P = .65 \)) or in those experiencing a greater than 20% decrease in mean arterial pressure from baseline (58.6% vs 63.2%; \( P = .53 \)) in the CIV propofol and non-CIV propofol groups. Furthermore, there were no differences in any secondary outcomes including hospital mortality (32.2% vs 33.3%; \( P = .87 \)). Continuous intravenous propofol for sedation did not increase vasopressor requirements in this septic population. Furthermore, CIV propofol was not associated with significant differences in the use of multiple vasopressors, change in mean arterial pressure, length of stay, or mortality. Copyright © 2016 Elsevier Inc. All rights reserved.

**Database:** Medline

**Emerging infection and sepsis biomarkers: will they change current therapies?**

**Source:** Expert review of anti-infective therapy; Oct 2016; vol. 14 (no. 10); p. 929-941

**Author(s):** Jacobs, Lauren; Wong, Hector R

**Abstract:** Sepsis is a heterogeneous syndrome characterized by both immune hyperactivity and relative immune suppression. Biomarkers have the potential to improve recognition and management of sepsis through three main applications: diagnosis, monitoring response to treatment, and stratifying patients based on prognosis or underlying biological response. This review focuses on specific examples of well-studied, evidence-supported biomarkers, and discusses their role in clinical practice with special attention to antibiotic stewardship and cost-effectiveness. Biomarkers were selected based on availability of robust prospective trials and meta-analyses which supported their role as emerging tools to improve the clinical management of sepsis. Expert commentary: Great strides have been made in candidate sepsis biomarker discovery and testing, with the biomarkers in this review showing promise. Yet sepsis remains a dynamic illness with a great degree of biological heterogeneity - heterogeneity which may be further resolved by recently discovered gene expression-based endotypes in septic shock.

**Database:** Medline

**Pathogenic, immunologic, and clinical aspects of sepsis - update 2016.**

**Source:** Expert review of anti-infective therapy; Oct 2016; vol. 14 (no. 10); p. 917-927

**Author(s):** Uhle, Florian; Chousterman, Benjamin G; Grützmann, Robert; Brenner, Thorsten; Weber, Georg F

**Abstract:** Sepsis is a major cause of death worldwide but its orchestrating components remain incompletely understood. On the one hand, development of sepsis results from an infectious focus that cannot be controlled by the immune system, but on the other, responding immune cells that can eliminate the infection inflict damage to the host by contributing to complications such as endothelial leakage, septic shock, and multiorgan failure. In this review we give a comprehensive overview of how sepsis occurs, which exogenous and endogenous factors might affect the immune-pathophysiological course of sepsis and finally how this knowledge translates into up-to-date definitions and therapeutic approaches. Expert commentary: Although new immunological
mechanisms altering the course of sepsis have been identified recently, future research needs to address the limitations of experimental approaches, redirect the research focus into translational approaches, and finally evaluate personalized treatment strategies.

**Database:** Medline

**The Treatment of Severe Sepsis in the Pediatric Age: Long-Awaited Prospects and New Challenges Are Looming.**

**Source:** Critical care medicine; Oct 2016; vol. 44 (no. 10); p. 1960-1962

**Author(s):** Marraro, Giuseppe A; Genovese, Umberto

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

**Database:** Medline

**The long-term burden of severe sepsis and septic shock: Sepsis recidivism and organ dysfunction.**

**Source:** The journal of trauma and acute care surgery; Sep 2016; vol. 81 (no. 3); p. 525-532

**Author(s):** Guirgis, Faheem W; Brakenridge, Scott; Sutchu, Selina; Khadpe, Jay D; Robinson, Taylor; Westenbarger, Richard; Topp, Stephen T; Kalynych, Colleen J; Reynolds, Jennifer; Dodani, Sunita; Moore, Frederick A; Jones, Alan E

Available in full text at Journal of Trauma and Acute Care Surgery - from Ovid fulltext collection

**Abstract:** Severe sepsis and septic shock mortality has improved; however, rates of persistent (28-90 days) and long-term (>90 day) organ dysfunction in sepsis survivors are unknown. Secondary analysis of a prospective cohort of adult emergency department patients with severe sepsis. Of 110 sepsis admissions, we obtained follow-up on 51 of 78 survivors of whom 41% (21 of 51) had persistent organ dysfunction: pulmonary, 18% (9 of 51); renal, 22% (11 of 51); coagulopathy, 10% (5 of 51); cardiovascular, 6% (3 of 51); hepatic, 2% (1 of 51); and neurologic, 3% (3 of 51). We obtained follow-up on 40 of 73 survivors at more than 90 days of whom 38% (15 of 40) had long-term organ dysfunction: pulmonary, 13% (5 of 40); renal, 18% (7 of 40); coagulopathy, 3% (1 of 40); cardiovascular, 5% (2 of 40); hepatic, 0%; and neurologic, 5% (2 of 40). Readmission rate within 90 days was 32% (25 of 78), and recurrent sepsis was the cause of readmission in 52% (13 of 25). Baseline SOFA scores from the index sepsis admission were compared using Wilcoxon rank-sum test and were significantly different in participants with organ dysfunction versus those without organ dysfunction at less than 90 days (z, -2.51; p = 0.01). Readmission with recurrent sepsis and organ dysfunction occurs frequently in sepsis survivors. Baseline SOFA score may be predictive of sepsis recidivism and persistent or recurrent organ dysfunction. Prognostic/epidemiologic study, level IV.

**Database:** Medline

**DETERIORATING PATIENT**

**Family initiated escalation of care for the deteriorating patient in hospital: Family centred care or just "box ticking".**

**Source:** Australian Critical Care; Nov 2016; vol. 29 (no. 4); p. 195-200

**Author(s):** Gill, Fenella J.; Leslie, Gavin D.; Marshall, Andrea P.

**Database:** CINAHL
An analysis of nursing students' decision-making in teams during simulations of acute patient deterioration.

Source: Journal of advanced nursing; Oct 2016; vol. 72 (no. 10); p. 2482-2494

Author(s): Bucknall, Tracey K; Forbes, Helen; Phillips, Nicole M; Hewitt, Nicky A; Cooper, Simon; Bogossian, Fiona; FIRST2ACT Investigators

Abstract: The aim of this study was to examine the decision-making of nursing students during team-based simulations on patient deterioration to determine the sources of information, the types of decisions made and the influences underpinning their decisions. Missed, misinterpreted or mismanaged physiological signs of deterioration in hospitalized patients lead to costly serious adverse events. Not surprisingly, an increased focus on clinical education and graduate nurse work readiness has resulted. A descriptive exploratory design. Clinical simulation laboratories in three Australian universities were used to run team-based simulations with a patient actor. A convenience sample of 97 final-year nursing students completed simulations, with three students forming a team. Four teams from each university were randomly selected for detailed analysis. Cued recall during video review of team-based simulation exercises to elicit descriptions of individual and team-based decision-making and reflections on performance were audio-recorded post simulation (2012) and transcribed. Students recalled 11 types of decisions, including: information seeking; patient assessment; diagnostic; intervention/treatment; evaluation; escalation; prediction; planning; collaboration; communication and reflective. Patient distress, uncertainty and a lack of knowledge were frequently recalled influences on decisions. Incomplete information, premature diagnosis and a failure to consider alternatives when caring for patients is likely to lead to poor quality decisions. All health professionals have a responsibility in recognizing and responding to clinical deterioration within their scope of practice. A typology of nursing students’ decision-making in teams, in this context, highlights the importance of individual knowledge, leadership and communication. © 2016 John Wiley & Sons Ltd.

Database: Medline

PATIENT SAFETY

Nursing Strategies to Increase Medication Safety in Inpatient Settings

Source: Journal of Nursing Care Quality; 2016; vol. 31 (no. 4); p. 335-341

Author(s): Bravo, Katherine; Cochran, Gary; Barrett, Ryan

Abstract: Using data obtained through 2 multidisciplinary studies focused on medication safety effectiveness, this article provides nursing recommendations to decrease medication delivery errors. Strategies to minimize and address interruptions/distractions are proposed for the 3 most problematic time frames in which medication errors typically arise: medication acquisition, transportation, and bedside delivery. With planned interventions such as programmed scripts and hospital-based protocols to manage interruptions and distractions, patient safety can be maintained in the inpatient setting. References

Database: BNI

Evaluating medical errors made by nurses during their diagnosis, treatment and care practices

Source: Journal of Clinical Nursing; Oct 2016; vol. 25 (no. 19-20); p. 2884-2894

Author(s): Kahriman, Ilknur; Ozturk, Havva

Abstract: Aims and objectives The aim of this study was to determine whether the nurses committed medical errors and to identify the types of and reasons for the medical errors. Background Medical
errors have recently emerged as a significant issue both in Turkey and around the world because they result in the death and disability of a number of people each year. Design This study was a descriptive study. Method The study was conducted with 1092 nurses working at a university hospital, 12 public hospitals and a private hospital in Trabzon. Results Twenty-two per cent of the nurses stated that they had made medical errors endangering patient safety, and 4% stated that their medical errors had injured a patient. Of the nurses who made a medical error, 10% indicated that a patient's treatment was delayed and 6% stated that the patient experienced side effects. In addition, 23% of the nurses stated that they had committed medical errors such as delaying/not administering a patient's treatment and 20% stated that they had made medical errors such as using instruments without first checking them. Eighty-three per cent of the nurses stated that they had committed a medical error due to fatigue, 82% were reported to be caused by the hospital's administration due to the limited number of nurses on duty and 75% were caused by physicians and other medical personnel due to a lack of communication. Conclusion Two of five nurses had committed a medical error throughout their career; these errors were due to fatigue, a limited number of nurses and communication problems, and patients were harmed because of these errors. Relevant to clinical practice The results of this study could be used to take precautions against nursing medical errors in Turkey and to enhance institutional policies and activities regarding medical errors and patient safety.

Database: BNI

Handing Off Safety at the Bedside

Source: Clinical Nursing Research; Oct 2016; vol. 25 (no. 5); p. 473-493

Author(s): Groves, Patricia S; Manges, Kirstin A; Scott-Cawiezell, Jill

Abstract: The study purpose was to describe how bedside nurses can use nursing bedside shift report (NBSR) to keep patients safe. NBSR has been recommended as a means of increasing patient safety, but little is known about how or whether it does so. Grounded theory methods were used. Data were collected from 2014 to 2015 with bedside nurses in a pediatric unit with an established NBSR process. The primary process by which bedside nurses use NBSR to keep patients safe is reducing risk of harm through conveying the patient story from shift to shift. Having a perspective from the bedside is a key antecedent to reducing risk of harm, as it supports the nurses' ability to subsequently identify and address risks. Although often seen as a routine exchange of information, how nursing shift report is conducted can impact patient safety. The study reinforces the value of targeting nursing communication to improve patient safety. References

Database: BNI

Identifying patient safety problems associated with information technology in general practice: an analysis of incident reports.

Source: BMJ Quality & Safety; Nov 2016; vol. 25 (no. 11); p. 870-880

Author(s): Magrabi, Farah; Siaw Teng Liaw; Arachi, Diana; Runciman, William; Coiera, Enrico; Kidd, Michael R.

Available in full text at BMJ Quality and Safety - from Highwire Press

Database: CINAHL

On Patient Safety: Do You Say 'I'm Sorry' to Patients?

Source: Clinical Orthopaedics & Related Research; Nov 2016; vol. 474 (no. 11); p. 2359-2361

Author(s): Lee, Michael

Database: CINAHL
Source: Infection Control & Hospital Epidemiology; Nov 2016; vol. 37 (no. 11); p. 1389-1391
Author(s): Marra, Alexandre R.; Jansen, Debra B.; Edmond, Michael B.
Database: CINAHL

Factors Influencing Patient Safety During Postoperative Handover.
Source: AANA Journal; Oct 2016; vol. 84 (no. 5); p. 329-338
Author(s): Rose, Monica
Available in full text at AANA Journal - from EBSCOhost
Available in full text at AANA Journal - from ProQuest
Database: CINAHL

Advancing patient safety through the use of cognitive aids.
Source: BMJ Quality & Safety; Oct 2016; vol. 25 (no. 10); p. 733-735
Author(s): Merry, Alan F.; Mitchell, Simon J.
Available in full text at BMJ Quality and Safety - from Highwire Press
Database: CINAHL

Patient participation in patient safety still missing: Patient safety experts' views.
Source: International Journal of Nursing Practice; Oct 2016; vol. 22 (no. 5); p. 461-469
Author(s): Sahlström, Merja; Partanen, Pirjo; Rathert, Cheryl; Turunen, Hannele
Database: CINAHL

Competencies for Patient Safety and Quality Improvement.
Source: Joint Commission Journal on Quality & Patient Safety; Oct 2016; vol. 42 (no. 10); p. 479-480
Author(s): Greer, Michael; Curdy, Nancy; Kopolow, Andrew; Mercado, Stephanie E.; Moran, Kellyn M.; Harris, Ilene B.; Valenta, Annette L.
Database: CINAHL

Using a STOP/CO protocol in the preoperative area to increase patient safety.
Source: Journal of Perioperative Practice; Oct 2016; vol. 26 (no. 10); p. 229-231
Author(s): Harris, A. M.; Preece, K.; Harris, C.
Available in full text at Journal of Perioperative Practice - from EBSCOhost
Database: CINAHL

A review of patient safety incidents reported as 'severe' or 'death' from critical care units in England and Wales between 2004 and 2014.
Source: Anaesthesia; Sep 2016; vol. 71 (no. 9); p. 1013-1023
Author(s): Thomas, A. N.; MacDonald, J. J.
Abstract: We analysed 1743 patient safety incidents reported between 2004 and 2014 from critical care units in England and Wales where the harm had been classified as 'severe' (1346, 77%) or 'death' (397, 23%). We classified 593 (34%) of these incidents as resulting in temporary harm, and
782 (45%) as more than temporary harm, of which 389 (22%) may have contributed to the patient's
death. We found no described harm in 368 (21%) incidents. We classified 1555 (89%) of the incidents
as being avoidable or potentially avoidable. There were changes over time for some incident types
(pressure sores: 10 incidents in 2007, 64 in 2012; infections: 60 incidents in 2007, 10 in 2012) and
some changes in response to national guidance. We made a comparison with a dataset of all
incidents reported from units in North-West England, and this confirmed that the search strategy
identified more severe incidents, but did not identify all incidents that contributed to mortality.

Database: CINAHL

Patient Safety in the Emergency Department.
Source: Emergency Medicine (00136654); Sep 2016; vol. 48 (no. 9); p. 396-404
Author(s): Farmer, Brenna M.
Database: CINAHL

Evaluating the effect of distractions in the operating room on clinical decision-making and
patient safety.
Source: Surgical endoscopy; Oct 2016; vol. 30 (no. 10); p. 4499-4504
Author(s): Murji, Ally; Luketic, Lea; Sobel, Mara L; Kulasegaram, Kulamakan Mahan; Leyland,
Nicholas; Posner, Glenn

Abstract: Answering telephone calls and pagers is common distraction in the operating room. We
sought to evaluate the impact of distractions on patient care by (1) assessing the accuracy and safety
of responses to clinical questions posed to a surgeon while operating and (2) determining whether
pager distractions affect simulation-based surgical performance. We conducted a randomized
crossover study of obstetrics and gynecology residents. After studying a patient sign-out list, subjects
performed a virtual salpingectomy. They were randomized to a distraction phase followed by quiet
phase or vice versa. In the distraction phase, a pager beeped and subjects were asked questions
based on the sign-out list. Accuracy of responses and the number of unsafe responses were
recorded. In the quiet phase, trainees performed the task uninterrupted. Measures of surgical
performance were successful task completion, time to task completion and operative blood loss. The
mean score for correct responses to clinical questions during the distracted phase was 80 % (SD
±14 %). Nineteen residents (63 %) made at least 1 unsafe clinical decision while operating on the
simulator (range 0-3). Subjects were more likely to successfully complete the surgical task in the
allotted time under the quiet compared to distraction condition (OR 11.3, p = 0.03). There was no
difference between the conditions in paired analysis for mean time (seconds) to task completion [426
(SD 133) vs. 440 (SD 186), p = 0.61] and mean operative blood loss (mL) [73.14 (SD 106) vs. 112.70
(SD 358), p = 0.47]. Distractions in the operating room may have a profound impact on patient safety
on the wards. While multitasking in a simulated setting, the majority of residents made at least one
unsafe clinical decision. Pager distractions also hindered surgical residents' ability to complete a
simulated laparoscopic task in the allotted time without affecting other variables of surgical
performance.
Database: Medline

Patients' perceptions and experiences of patient safety in primary care in England.
Source: Family practice; Oct 2016; vol. 33 (no. 5); p. 535-542
Author(s): Ricci-Cabello, Ignacio; Pons-Vigués, Mariona; Berenguera, Anna; Pujol-Ribera, Enriqueta;
Slight, Sarah Patricia; Valderas, Jose Maria

Abstract: One of the most remarkable features of patient safety research in primary care is the sparse
attention paid to patients’ own experiences. To explore patient’s perceptions and experiences of
patient safety in primary care in England. We conducted a qualitative study in the South of England with an opportunistic sample of 27 primary care users. Information was obtained from four patient focus groups. A thematic content analysis was conducted by three analysts and consensus reached within the research team on the key themes that emerged. Participants’ conceptualizations of patient safety referred to high standards of health care delivery within a relationship of trust. Participants identified four main factors that they believed could potentially affect patient safety. These included factors related to (i) the patient (attitudes, behaviours and health literacy); (ii) the health professional (attitudes, behaviours and accuracy of diagnoses); (iii) the relationship between patients and health professionals (communication and trust); and (iv) the health care system (workload, resources, care coordination, accessibility, interdisciplinary teamwork and accuracy of health care records). Confidentiality, continuity of care and treatment-related safety emerged as cross-cutting major threats to patient safety. The exploration of participants' perceptions and experiences allowed the identification of a wide variety of themes that were perceived to impact on patient safety in primary care. The findings of this study could be used to enrich current frameworks that are exclusively based on professional or health care system perspectives. © The Author 2016. Published by Oxford University Press. All rights reserved. For permissions, please e-mail: journals.permissions@oup.com.

**Database:** Medline

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**HUMAN FACTORS**

Anesthetic management and human factors in the intraoperative MRI environment.

**Source:** Current Opinion in Anesthesiology; Oct 2016; vol. 29 (no. 5); p. 563-567

**Author(s):** Berkow, Lauren C.

Available in full text at [Current Opinion in Anaesthesiology](https://pubmed.ncbi.nlm.nih.gov) - from Ovid fulltext collection

**Abstract:** Purpose Of Review: The use of intraoperative MRI technology during neurosurgery has become increasingly more common over the past several years. These surgical procedures require a specialized operating room designed to accommodate an MRI machine, as well as MRI-compatible anesthesia equipment and monitors. The MRI environment also poses unique risks and challenges to both patients and medical staff.

Recent Findings: General anesthesia in the MRI operating room suite poses several challenges not routinely experienced in a conventional operating room suite, and anesthesia providers delivering care in these suites must complete specialized training and screening. The presence of a magnetic field, as well as reduced access to the patient during the MRI scan, require high levels of vigilance.

**Summary:** The use of checklists and teamwork training can maximize both patient and provider safety in the intraoperative MRI environment.

**Database:** CINAHL

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**Source:** Joint Commission Journal on Quality & Patient Safety; Oct 2016; vol. 42 (no. 10); p. 447-471

**Author(s):** Rhee, Chanhaeng; Phelps, M. Eleanor; Meyer, Bruce; Reed, W. Gary

**Database:** CINAHL

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Using Human Factors Design Principles and Industrial Engineering Methods to Improve Accuracy and Speed of Drug Selection with Medication Trays.

**Source:** Joint Commission Journal on Quality & Patient Safety; Oct 2016; vol. 42 (no. 10); p. 473-477

**Author(s):** Dar-Wei Chen; Chase, Valerie J.; Burkhardt, Mary E.; Agulto, Alma Z.

**Database:** CINAHL
Identifying workflow disruptions in the cardiovascular operating room.

Source: Anaesthesia; Aug 2016; vol. 71 (no. 8); p. 948-954


Abstract: The objectives of this study were to identify the frequency and nature of flow disruptions in the operating room with respect to three cardiac surgical team members: anaesthetists; circulating nurses; and perfusionists. Data collected from 15 cases and coded using a human factors taxonomy identified 878 disruptions. Significant differences were identified in frequency relative to discipline type. Circulating nurses experienced more coordination disruptions (χ² (2, N = 110) = 7.136, p < 0.028) and interruptions (χ² (2, N = 427) = 29.743, p = 0.001) than anaesthetists and perfusionists, whereas anaesthetists and perfusionists experienced more layout issues than circulating nurses (χ² (2, N = 153) = 48.558, p = 0.001). Time to resolve disruptions also varied among disciplines (λ (12, 878) = 5.186, p = 0.000). Although most investigations take a one-size fits all approach in addressing disruptions to flow, this study demonstrates that targeted interventions must focus on differences with respect to individual role.

Database: CINAHL

Safety, efficiency and learning curves in robotic surgery: a human factors analysis.

Source: Surgical endoscopy; Sep 2016; vol. 30 (no. 9); p. 3749-3761

Author(s): Catchpole, Ken; Perkins, Colby; Bresee, Catherine; Solnik, M Jonathon; Sherman, Benjamin; Fritsch, John; Gross, Bruno; Jagannathan, Samantha; Hakami-Majd, Niv; Avenido, Raymund; Anger, Jennifer T

Abstract: Expense, efficiency of use, learning curves, workflow integration and an increased prevalence of serious incidents can all be barriers to adoption. We explored an observational approach and initial diagnostics to enhance total system performance in robotic surgery. Eighty-nine robotic surgical cases were observed in multiple operating rooms using two different surgical robots (the S and Si), across several specialties (Urology, Gynecology, and Cardiac Surgery). The main measures were operative duration and rate of flow disruptions-described as 'deviations from the natural progression of an operation thereby potentially compromising safety or efficiency.' Contextual parameters collected were surgeon experience level and training, type of surgery, the model of robot and patient factors. Observations were conducted across four operative phases (operating room pre-incision; robot docking; main surgical intervention; post-console). A mean of 9.62 flow disruptions per hour (95 % CI 8.78-10.46) were predominantly caused by coordination, communication, equipment and training problems. Operative duration and flow disruption rate varied with surgeon experience (p = 0.039; p < 0.001, respectively), training cases (p = 0.012; p = 0.007) and surgical type (both p < 0.001). Flow disruption rates in some phases were also sensitive to the robot model and patient characteristics. Flow disruption rate is sensitive to system context and generates improvement diagnostics. Complex surgical robotic equipment increases opportunities for technological failures, increases communication requirements for the whole team, and can reduce the ability to maintain vision in the operative field. These data suggest specific opportunities to reduce the training costs and the learning curve.

Database: Medline

A Human Factors Approach to Understanding the Types and Sources of Interruptions in Radiology Reading Rooms.

Source: Journal of the American College of Radiology : JACR; Sep 2016; vol. 13 (no. 9); p. 1102-1105

Author(s): Ratwani, Raj M; Wang, Eric; Fong, Allan; Cooper, Cirrelde J
An interprofessional training course in crises and human factors for perioperative teams.

Source: Journal of interprofessional care; Sep 2016; vol. 30 (no. 5); p. 685-688

Author(s): Stephens, Tim; Hunningher, Annie; Mills, Helen; Freeth, Della

Abstract: Improving patient safety and the culture of care are health service priorities that coexist with financial pressures on organisations. Research suggests team training and better team processes can improve team culture, safety, performance, and clinical outcomes, yet opportunities for interprofessional learning remain scarce. Perioperative practitioners work in a high pressure, high-risk environment without the benefits of stable team membership: this limits opportunities and momentum for team-initiated collaborative improvements. This article describes an interprofessional course focused on crises and human factors which comprised a 1-day event and a multifaceted sustainment programme for perioperative practitioners, grouped by surgical specialty. Participants reported increased understanding and confidence to enact processes and behaviours that support patient safety, including: team behaviours (communication, coordination, cooperation and back-up, leadership, situational awareness); recognising different perspectives and expectations within the team; briefing and debriefing; after action review; and using specialty-specific incident reports to generate specialty-specific interprofessional improvement plans. Participants valued working with specialty colleagues away from normal work pressures. In the high-pressure arena of front-line healthcare delivery, improving patient safety and theatre efficiency can often be erroneously considered conflicting agendas. Interprofessional collaboration amongst staff participating in this initiative enabled general and specialty-specific interprofessional learning that transcended this conflict.


Source: JAMA ophthalmology; Aug 2016; vol. 134 (no. 8); p. 905-911

Author(s): Saleh, George M; Wawrzynski, James R; Saha, Kamran; Smith, Phillip; Flanagan, Declan; Hingorani, Melanie; John, Clinton; Sullivan, Paul

Abstract: Human factors training can enhance teamworking and reduce error. It is used regularly in certain medical disciplines, but its use has not been established for ophthalmology to our knowledge. To explore the feasibility of providing immersive simulation human factors training for ophthalmic surgical teams. Prospective scenario-based simulation and concept description at University College London Hospital and Moorfields Eye Hospital, London, England, from December 12, 2013, to March 13, 2014. At both sites, fully immersive simulated operating theater environments were used, comprising live interactive communication with patients and theater staff, full anesthetic and operating facilities, replicated patient notes, active vital signs, and the ability to contact surgical or anesthetic teams outside of the theater via telephone. Participants were consultant (attending) and trainee ophthalmic surgeons and anesthetists, operating department assistants and practitioners, and ophthalmic nursing staff. The following 4 previously validated rating tools for nontechnical skills were applied to a replicated series of scenarios based on actual patient safety incidents at Moorfields Eye Hospital and in the literature: Observational Teamwork Assessment for Surgery (OTAS), Non-Technical Skills Scale (NOTECHS), Anesthetists' Non-Technical Skills (ANTS), and Non-Technical Skills for Surgeons (NOTSS). The Pearson product moment correlation coefficient was calculated for each pair of scoring tools. Intertool and interassessor reliability was established. Interassessor consistency was compared by calculating a normalized standard deviation of scores for each tool across all assessors. Twenty simulation scenarios, including wrong intraocular lens implantation, wrong eye operation, wrong drug administration, and wrong patient, were provided. The intertool correlations were 0.732 (95% CI, 0.271-0.919; P = .01) for NOTECHS vs ANTS, 0.922 (95% CI, 0.814-0.968; P < .001) for NOTSS vs ANTS, 0.850 (95% CI, 0.475-0.964; P < .001) for OTAS vs...
ANTS, 0.812 (95% CI, 0.153-0.971; P = .03) for OTAS vs NOTECHS, 0.716 (95% CI, -0.079 to 0.955; P = .07) for OTAS vs NOTSS, and 0.516 (95% CI, -0.020 to 0.822; P = .06) for NOTECHS vs NOTSS. The normalized standard deviations of scores obtained using each tool across all assessors were 0.024 (95% CI, 0.014-0.091) for NOTSS, 0.060 (95% CI, 0.034-0.225) for OTAS, 0.068 (95% CI, 0.041-0.194) for ANTS, and 0.072 (95% CI, 0.043-0.206) for NOTECHS. This study describes the feasibility of a high-fidelity immersive simulation course specifically for ophthalmic surgical teams. The ANTS and NOTSS had the highest intertool and interrater consistency, respectively. Human factors simulation in ophthalmology offers a new method of teaching team members, with the potential to reduce serious ophthalmic patient safety events. Further work will define its usefulness and practical applications.

Database: Medline
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- **Sepsis treatment in adults**

Please contact library staff for details on how to access this resource; you will need an Athens password if accessing from home.
The Royal College of Physicians has published a patient leaflet *Falls Prevention in Hospital: a Guide for Patients, their Families and Carers*. This guide is designed to help prevent serious injury and unnecessary cost to the NHS caused by older people tripping or falling when they are in hospital.

**NATIONAL RECOGNITION FOR THE ‘STEADY ON!’ FALLS PREVENTION SERVICE**

The ‘Steady on!’ falls prevention service which is run by Better Care Together partners; Blackpool NHS Foundation Trust, NHS Lancashire North Clinical Commissioning Group and Lancashire County Council has been recognised nationally as a primary falls prevention system.

Read more at:

http://fabnhsstuff.net/2016/10/04/national-recognition-steady-falls-prevention-service/

**Training programme aims to eliminate avoidable harm from pressure ulcers in Cumbria**

Patients in Copeland are now far less likely to suffer from pressure ulcers thanks to a successful training and awareness programme for health and social care staff.

Read more at:

http://fabnhsstuff.net/2016/10/04/training-programme-aims-eliminate-avoidable-harm-pressure-ulcers-cumbria/

**A little a day the easy way event -raising awareness of falls prevention and exercise**

Falls Prevention lead nurse Joanne Lewis Hodgkinson at Sherwood Forest Hospitals NHS Trust was inspired by a reduction in the inpatient falls rate to look at how partnerships with other individuals and groups across the local Health community could come together to provide an event for public and staff to promote the changes individuals can make for a healthier lifestyle that may also reduce the risk of falling.

Read more at:

http://fabnhsstuff.net/2016/10/15/little-day-easy-way-event-raising-awareness-falls-prevention-exercise/
Think Drink Project

Think Drink Project is an initiative at Nottingham University Hospitals which is aimed at minimising fasting times for patients waiting for surgery under sedation or general anaesthetic.

Read more at:

http://fabnhsstuff.net/2016/10/25/think-drink-campaign-nottingham-university-hospitals/

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LITERATURE SEARCH SERVICE

Looking for the latest evidence-based research but haven’t got time to trawl the databases?

Do you need a literature search carried out?

Do you need to find evidence to support an improvement?

Do you want to know how something has been done elsewhere and whether it worked?

Library staff provide a literature search service for busy clinicians who are pressed for time.

To request a search please complete and return the attached form, providing as much information as possible. Alternatively if you would like an assisted search training session, where we will sit down with you and go through the steps of a literature search, then please contact the library.

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TRAINING AND ATHENS

Most electronic resources are available via an Athens password. You can register for this via the Library intranet page, or from home at www.swice.nhs.uk and following the link for Athens self-registration.

Please note that registering from home will take longer as it will need to be verified that you are NHS staff/student on placement.

The library offers training on how to access and use Athens resources, as well as an introductory course on critical appraisal. You can book a course through the Learning and Development intranet page, or by contacting the library directly.