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Integrated care model of swallowing training for elderly having minor disability with dysphagia in community

Evidence implementation of swallowing training for aged person with dysphagia

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Background: Difficulty swallowing increases with aged person having minor disability with dysphagia. Dysphagia is a major health condition as it can lead to aspiration pneumonia, a common life threatening condition observed in community.

Objectives: The aim of this evidence-implementation project was an integrated care model (dysphagia assessment, management, oral health and nutrition) to maintaining oral health and effective management of dysphagia enhance nutrition and decreased the incidence of aspiration pneumonia at community in Taiwan.

Methods: Three clinical audits (assessment, management, oral health) were undertaken using the Joanna Briggs Institute Practical Application of Clinical Evidence System tool. Appropriate audit criteria that represent best practice recommendations of three clinical audits were used. Each baseline audit was conducted followed by the implementation of multiple strategies and finalized with a follow-up audit to determine change in practice.

Results: Results from pre- and post-implementation audits indicated that compliance rates for each criterion of the three clinical audits were reached 75-100%, respectively, in the 12 weeks follow-up audit.

Conclusion: The project was successful in improving aged person having minor disability with dysphagia maintaining oral health and effective management of dysphagia enhance nutrition and decreased the incidence of aspiration pneumonia. A variety of strategies, such as an effective education program, simple and clear instruments, and multiple educational materials can facilitate implementation of evidence in clinical practice. Future plans for continuous improvements in practice and outcomes should be discussed. Further audits will need to be carried out to monitor practice and effect change as required.

Keywords: Best practice; clinical audit; evidence-based implementation; oral health; dysphagia
Knowledge Translation Plan Guides: A Pragmatic, Conceptual Synthesis

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Knowledge translation (KT) guides help users to devise KT strategies for their research and its use. While the number and diversity of these guides has grown, their content and value remain poorly understood. This pragmatic review breaks down the similarities and differences between KT guides and assesses their quality. This project has two aims: (1) To present a comprehensive overview of the knowledge translation guidance readily accessible to researchers and knowledge users; and (2) to provide researchers and knowledge users with an analysis of the guides’ key attributes, gaps, strengths and weaknesses, and alignment with evidence and best practice.

We developed a Google plain search strategy to mimic common user search techniques, in consultation with an academic librarian. Term clusters for knowledge translation (16) and guide (9) were joined with a Boolean operator (AND), then searched with/without quotations. English language guides providing advice on KT plan development (e.g., tangible steps, instructions, general advice) were included. Mixed methods were used to extract pre-defined variables and inductively capture key elements and themes.

Few guides describe an underlying conceptual framework, model or evidence base, nor are they independently evaluated. Common guide characteristics include consideration of context (barriers, facilitators, user needs); research knowledge; audience; strategy types; and monitoring, evaluation, and resource requirements. Through an inductive construction of content categories we will demonstrate the most common KT advice offered, describe the degree to which guides are congruent with the latest KT evidence, and present a composite guide that synthesizes distinct elements of all included guides.

Keywords
Knowledge translation; integrated knowledge translation; dissemination and implementation
Unplanned Readmission prevention by Geriatric Emergency Network for Transitional care (URGENT): A prospective before-after study

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Background. URGENT is a comprehensive geriatric assessment (CGA) based nurse-led care model in the emergency department (ED) with geriatric follow-up after ED discharge aiming to prevent unplanned ED readmissions.

Design. Prospective, sequential before-after design with two cohorts.

Setting. ED of University Hospitals Leuven (Belgium).

Sample. 1680 community-dwelling ED patients aged ≥ 70 years.

Intervention. The interRAI ED Screener© and clinical judgement of ED staff were used to identify patients at risk for unplanned ED readmission. A geriatric nurse was available during office hours to conduct CGA in ED patients at risk. Subsequently, a personalized interdisciplinary care plan was made. Discharged at risk patients were offered case manager follow-up. Hospitalized at risk patients received geriatric follow-up on a geriatric ward or by the inpatient geriatric consultation team if considered necessary.

Outcome Measurement. Primary outcome was unplanned 90-day ED readmission. Secondary outcomes were ED length of stay (LOS), hospitalization rate, in-hospital LOS, 90-day higher level of care, 90-day functional decline and 90-day mortality.

Results. Unplanned ED readmission occurred in 170 of 768 (22.1%) control cohort (CC) patients and in 205 of 857 (23.9%) intervention cohort (IC) patients (P=.11). Statistically significant secondary outcomes were ED LOS (CC: 19.1 versus IC: 12.7 hours; P=.0003), hospitalization rate (CC: 67.0% versus IC: 70.0%; P=.0.0026) and functional decline (CC: 21.5% versus IC: 26.6%; P=.0.023). ED LOS and hospitalization rate remained statistically significant after Bonferroni correction.

Conclusion. The URGENT care model shortened ED LOS and increased the hospitalization rate, but did not prevent unplanned ED readmissions.

Keywords geriatric emergency medicine, care model, comprehensive geriatric assessment, case management, unplanned readmission
Extracting Findings for Metasynthesis to Generate Evidence: Are all Findings Created Equal?

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Background: Evidence informed practice relies on providing clinicians with the best available evidence. The generation and presentation of findings from qualitative research studies varies across methodologies. The conduct of a JBI metasynthesis of qualitative studies is reliant on the presentation of high quality, readily understandable findings. However, because the quality of findings is not assessed until the data extraction stage of the systematic review, there is a high possibility of including studies that contain a number of unsupported findings. The result is a less robust data set. Ideally, systematic review processes should be designed to arrive at the best possible data set prior to data extraction.

Purpose: To generate discussion on the following questions: a) What constitutes a finding in qualitative research for the purpose of metasyntheses? b) Is there a need to consider conducting the quality assessment of findings at the full text review stage? And c), Are there other quality measures of findings that could be applied to contribute to metasyntheses of the best available evidence?

Methods: Examples of findings from a study conducted by the authors will provide context for a guided discussion.

Summary: For practice to become evidence-informed, clinicians need to know that the evidence generated is the best available. Confidence in the quality of the evidence can contribute to evidence-informed practice. Discussion of the above questions will contribute to decisions about guidelines used to assess the robustness of the evidence included in JBI qualitative systematic reviews and to the uptake of the evidence.

Keywords
evidence-informed, findings, metasynthesis, quality
Bedside shift report enhances patient satisfaction and improves the content of nurse-to-nurse communication.

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Objectives  Bedside shift reports are viewed as an opportunity to ensure patient safety and to empower patients to communicate with the nursing staff. Although models of bedside shift report have been developed, the practice is not yet commonly adopted in Flemish hospitals. The aim of this study was to evaluate the implementation of an adapted protocol for bedside shift report based on the ISBARR-protocol.

Methods  A pre- and post implementation mixed methods design was used. First the ISCAP-model was developed: a Flemish model of bedside shift report. Six medical or surgical units in 4 different hospitals were trained in using this ISCAP-model before implementing bedside shift report. Baseline patient satisfaction scores, nursing perceptions on patient safety, quality of care and shift handover and content of nurse-to-nurse communication were collected. Three months after the implementation the same outcomes were measured and observed again.

Results  Statistically significant improvements were found in patient satisfaction scores. Nursing perceptions improved significantly in quality of care and nursing staff satisfaction with shift handovers. Communication content increased post implementation from a mean score of 6 to 11 items.

Implications  The present study documented several positive outcomes. Bedside shift reports can result in improved patient and nursing satisfaction and increased communication content in shift handovers. Although the transition to bedside shift report was accompanied with limited resistance, the use of a structured protocol and communication tool (ISCAP-model) in combination with extensive planning, training and organisational support during the implementation made this project a success.

Keywords
Bedside shift report, implementation
The best evidence project for supporting end-of-life care in Japan

Supporting older adults with advanced dementia and their families

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Providing high quality end-of-life care for older people with advanced dementia has been a big challenge for health care professionals and caregivers. The aim of the project is, firstly, to determine the best available scientific evidence necessary to develop a set of clinical recommendations for supporting the delivery of end-of-life care for people with advanced dementia and their families; secondly, to identify the gap between existing research findings and evidence required to deliver optimal end-of-life care for such population. Furthermore, the project considers papers published in both English and Japanese languages so that culturally sensitive and context specific evidence-based recommendations can be facilitated.

This presentation will address preliminary findings from the first component of the project. Since many review articles have already been published in recent years about end-of-life care in advanced dementia, the project has started exploring existing review articles before primary studies are reviewed. The initial review included both keywords “end-of-life care” and “palliative care” if they were written in the context of advanced dementia. The major database search identified 37 review articles meeting the inclusion criteria. Emerging themes from the review include decision making and ethical issues related to end-of-life care such as: advance directives or withdrawal of treatment, pain and symptom management, use of palliative care approach, family support, support for health care providers, and others. Lack of evidence from rigorous research has been observed.

\textbf{Keywords}
end of life care, dementia, evidence review
Nutritional Screening and Nutritional Interventions in Zhongshan Hospital: a best practice implementation project

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**Background:** Malnutrition is common and has many adverse outcomes. Improving nutritional risk screening and nutritional support could reduce the malnutrition prevalence and its adverse outcomes.

**Aims:** The aim of the project was to improve nutritional screening and nutritional interventions in patients scheduled for gastrointestinal surgery in general surgical ward.

**Methods:** The project used the Joanna Briggs Institute’s Practical Application of Clinical Evidence System (PACES) and Getting Research into Practice (GRiP) audit tool for promoting change in surgical wards. Six audit criteria were created. A baseline audit was conducted followed by the implementation of multiple strategies, and then two cycles follow-up audits were conducted to determine changes in practice.

**Results:** Results from baseline and follow-up audits shown an improvement for most criteria. Criteria one to three increased from 0% to 100%. Criteria four increased from 32% to 100%. These four criteria sustained 100% in follow-up cycle 2. Criteria five increased from 8% to 50% in follow-up cycle 1, decreased to 0% in cycle 2. Criteria six increased from 45% to 56% in follow-up cycle 1, decreased to 48% in cycle 2.

**Conclusions:** The objectives regarding nutritional risk screening, nurse knowledge, patients and families were successfully realized and sustained positive results in this project. Nursing Information System and long-term patient education is the essential strategies to achieve and sustain the results. The objectives regarding preoperative nutritional support and postoperative earlier enteral food intake were the challenges and main barriers. In the future, multiple and effective interventions will be implemented to reach the goal.

**Keywords**
Best practice, nutrition screening, nutrition intervention, surgical patients, implementation
Caring perceptions and experiences of fathers of children with congenital heart disease

A systematic review of qualitative evidence

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Background: Congenital heart disease is one of the most common chronic illnesses in childhood. Most previous studies have focused on the roles of being mothers of children with congenital heart disease. Fathers’ perceptions and experiences need to be further clarified.

Aim: This review aimed to identify fathers’ perceptions and experiences of taking care of their children with congenital heart disease.

Methods: Five electronic databases (PubMed, Clinical key, The Joanna Briggs Institute EBP Database, CINAHL Complete and Cochrane Library) were explored and qualitative studies through December 2017, language mainly in Chinese and English were included. Joanna Briggs Institute (JBI) Critical Appraisal Tool for Qualitative Studies guidelines was adopted. Key themes were extracted and synthesized.

Results: Six main themes regarding fathers’ perceptions and experiences of taking care of their children with congenital heart disease were identified from four studies. Themes were: (1) lack of mastery of disease knowledge, (2) responsibility to the family and pent-up feelings, (3) gratitude for the continuation of life, (4) acceptance of the difference with others, (5) regrouping and planning the future, and (6) struggle between father-child relationships.

Conclusions: Fathers in caring process for their children with congenital heart disease are just like a suffering warrior full of hardship and forging. Under the self-imposed sense of responsibility and pent-up feelings, fathers may feel lonely and painful, but they must fight for their families and children. Healthcare professionals need to involve and support fathers in caring for children with congenital heart disease.

Keywords
father, congenital heart disease, caring perceptions, experiences
Surgical Site Infection Prevention in Cesarean Section at Kenyatta National Hospital, Kenya

A Best Practice Implementation Project

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Background: Surgical Site Infections (SSIs) remain a substantial cause of morbidity, prolonged hospitalization, and death; accounting for 3% maternal mortality.

Objectives: The aim of this evidence implementation project was to make contribution to promoting evidence based practice in surgical site infection prevention practices in caesarean section; thereby contribute to reduction of maternal mortality and morbidity at Kenyatta National Hospital, Kenya.

Methods: Seven evidence-based audit criteria were developed from evidence summaries. Using the Joanna Briggs Institute Practical Application of Clinical Evidence Software (PACES), a baseline audit was undertaken on a convenience sample of 400 patients. Thereafter, the Getting Research into Practice (GRiP) component of PACES was used to identify barriers and strategies. After implementation of the strategies, a follow-up audit was undertaken using 100 cases and same audit criteria.

Results: The baseline results showed poor adherence to best practice especially in creation of a sterile surface and utilization of antibiotic and infection prevention policy. However, following implementation of strategies, including professional education, provision of sterile drapes and hair clippers, compliance rates improved significantly.

Conclusion: Surgical Site Infection (SSI) prevention practices improved at the end of the project which reflects the importance of an audit process.

Keywords
Surgical site infection prevention; best practice; clinical audit; implementation project, JBI
Engaging Policy-Makers, Health System Managers and Policy Analysts in the Conduct of Knowledge Synthesis

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Background: To increase relevance and facilitate the transfer and implementation of research findings into policy and practice, health systems and research funders encourage the engagement of knowledge users and relevant stakeholders who are affected by the research topic. Additionally, health policy-makers, policy analysts, and health system managers are increasingly commissioning knowledge synthesis to meet their decision-making needs. Despite this imperative to increase engagement and rely upon knowledge syntheses, opportunities for and approaches to engaging knowledge users in the knowledge synthesis process remain unexplored.

Objectives: To present findings from a scoping review on engaging knowledge users in the knowledge synthesis process, and to discuss the feasibility of implementing strategies identified from the literature.

Methods: The JBI guidance for scoping reviews was followed with nine databases and two grey literature sources searched from 1996-2016. Frequency and thematic analyses were conducted. Results: After screening 8,395 titles and abstracts followed by 394 full-texts, 84 unique documents were included. Systematic reviews represented the most common opportunity for knowledge user engagement. Strategies and trends on where and how knowledge users were engaged in the knowledge synthesis process were identified, as well as commonly reported barriers and facilitators to this engagement.

Conclusions: Researchers should document and evaluate knowledge user engagement in the evidence synthesis process. Knowledge user engagement plans developed with consideration of the known barriers and facilitators and potential strategies to deal with these may support increased engagement with end-users of research and support enhanced transfer of evidence into policy and practice.

Keywords
Stakeholder Engagement, Knowledge Synthesis, Knowledge Translation, Knowledge Transfer, Policy Makers
Background: The Spanish Implementation Program is part of the Best Practice Spotlight Organizations® (BPSOs) international Program, coordinated by the Registered Nurses’ Association of Ontario (RNAO).

Aim: To influence the uptake of nursing BPGs across health care organizations, to enable practice excellence and positive client outcomes.

Methods: After translating the RNAO’s BPGs into Spanish the Host Organization published a formal call for proposals to select Spanish healthcare settings to implement the RNAO’s BPGs and evaluate the results. The approach is: nursing-led and multidisciplinary; context-specific; and involving a wide range of stakeholders. The Implementation is based on BPG Toolkit: cascade training, selection of recommendations, 3 years planned implementation activities, and process and outcome results monitoring (60 days/year).

Results: The first call was launched in 2012 and the second one in 2015. Eight and 10 healthcare settings were selected respectively. The total 76 sites selected (52 Primary Healthcare Centers, 22 Hospitals and 2 Universities) provide health services to 8.170.000 inhabitants.

In overall, 20 BPGs have been implemented; more than 1800 nurses and other professionals have been trained, evidence based protocols have been updated or developed, patient education have been promoted, and international BPSO® process and outcomes indicators have been evaluated.

Discussion and Conclusions: The results obtained suggest that RNAO implementation method can be replicated. Adaptation to local context have been successful and we have consolidated a network that shares knowledge and strategies and promotes evidence-based culture among Spanish healthcare settings and evidence-based care to patients.

Keywords
Spanish Implementation Project, Best Practice Spotlight Organizations, Implementation, Best Practice Guidelines
Systematic reviews informing legislation in Belgium

Two success stories on blood donor eligibility criteria

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Background: The Belgian Red Cross Blood Service wants to support its blood donor eligibility criteria with solid evidence from systematic reviews (SRs), to guarantee donor and recipient safety and a sufficient blood supply. However, current blood donor eligibility criteria are often determined at legal level and based on the precautionary principle, and it is a challenge to use scientific evidence to influence policy.

Methods: (1) SRs were developed via the Cochrane methodology and published in peer-reviewed journals; (2) two examples illustrated how we went from a SR to an amendment for a particular group of potential blood donors.

Results: We developed SRs for 9 items of the donor health questionnaire, containing mainly observational studies. In the SR on hemochromatoses (hereditary iron overload) no evidence was found that patients undergoing regular bloodletting had an increased risk for the blood supply compared to healthy donors. Our SR was used to inform the Belgian Senate on a proposed amendment, allowing stable hemochromatoses patients to donate blood. In the SR on men who had sex with men (MSM) a link was shown between recent (<12 months) MSM contact and HIV-1 infection. The SR was part of a round table discussion initiated by the Minister of Health and resulted in a proposed amendment to a temporary deferral of MSM. Both amendments got approved in September 2017 and the changes were implemented at our Blood Service.

Conclusions: SRs can inform governments to develop evidence-based policies ensuring donor and recipient safety and a qualitative blood supply.

Keywords
Systematic reviews, amendments, evidence-based policy making, blood donation
Patient participation in health policy making: results of a qualitative systematic review

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Background: Public and patient participation refers to involvement of patients in making decisions about health care services or policy making. This involvement has shown to increase health system responsibility.

Aim: This qualitative systematic review was conducted to evaluate the policy implications and different strategies of patient participation in health policy making.

Methods: Following databases were searched until January 2018: PubMed, The Cochrane Library, Scopus, Embase, and ProQuest. The search strategy included a combination of MeSH and Free Keywords of “Patient Involvement”, “Patient Participation”, “Patient Empowerment” and “Health Policy”, “Healthcare Policy”. Two reviewers independently extracted data using JBI data extraction tool and assessed qualities of studies using JBI critical appraisal checklist. Thematic synthesis was used to synthesize the qualitative evidence.

Results: Eleven studies out of 280 were included in this systematic review. Public consultation was mentioned as a current type of patient participation with other strategies including involvement, recruitment, face-to-face participation, group moderation, forming association, observation, vocal participation, voting member, and communication. Also results showed that a series of measures should be taken to develop an adequate involvement framework such as choosing right participant, development and enforcement of relevant legislation, setting principles and goals for public and patient involvement, and above all, the establishment of a common language between public and policy-makers.

Conclusion: Regarding increased attention to patient participation in policy making, there is no comprehensive evidence to support decisions. Policy makers may wish to rely on evidence based on this review for effective strategies and frameworks of patient involvement.

Keywords
Patient participation, Policy making, Qualitative systematic review
Clinical Practice Guidelines in the Czech Republic

Project of development of National Centre for Clinical Practice Guidelines in the Czech Republic

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Currently in the Czech Republic, there does not exist such institution as “National Centre for Clinical Practice Guidelines” (NCCPG), which would systematically collaborate with all relevant stakeholders in the Czech Health System (Professional medical and allied health care organizations, Health and Social Insurance institutions, Patient organizations, etc.). In 2017, there were about 123 professional healthcare organizations which developed about 1909 guidelines until 2017. However, majority of these guidelines are “expert opinion” or “consensual” based guidelines lacking in vast majority Evidence-Based Medicine principles and methods. This situation together with international experiences that high quality systematically developed Clinical Practice Guidelines (CPG) has potential to positively influence quality of health care in particular country, initiated wider discussion of relevant stakeholders about the project of NCCPG. The project is jointly developed by two important institutions of Ministry of Health of the Czech Republic, The Czech Health Research Council and Institute of Health Information and Statistics of the Czech Republic with support from policy makers, academics, clinicians and members of the Czech Republic Centre for Evidence-Based Healthcare.

Main tasks of the project will be to develop centrally coordinated elaboration of methodological documents, their control and updating in order to unify the preparation of CPG, preparation for legislative anchoring of the methodology of CPG, development and establishment of NCCPG. Overarching aims are reductions of heterogeneity of provided health care due to non-objective circumstances (geographical, availability, individual professional health worker erudition, lack of staff, etc.), and increasing quality and optimizing the funds spent on health care.

Keywords
Clinical practice guidelines, healthcare, evidence-based, national center, health policy.
As funder of treatments, governments strive to quantify the effectiveness, efficiency and cost-benefit ‘value’ of technologies and drugs based on evidence-based methods. The implementation of such analyses can lead to positive changes in healthcare systems, such as control over prices, conditional approval mechanisms which revisit efficacy and price (as adopted by the National Institute for Health and Care Excellence, NICE), and ideally an improvement in both quality and consistency of care. Yet, despite these possible noble outcomes, there is a gap between evidence-based data and policymaking. This gap might be explained by the fact that evidence is often not presented ‘on time’ or its relevancy, as most systematic reviews are considered out-of-date at the time of publication. Lack of comprehensive dissemination of information can also explain this gap. But, policymakers may also be regarded responsible, as governments often restrict their attention only to those interventions/diagnostics for which there is a solid body of evidence, ignoring areas in which the available evidence is considered ‘weak’. One might also argue that the policy-making process may be affected by electoral considerations, rather than being based purely on science. Moreover, geopolitical events (like Brexit) may also affect the gap between evidence and policy.

What can be done from both governments and researchers to narrow the evidence-policy gap? In this presentation, we summarize the main concepts that affect this gap between research and its implementation through policies, as well as emphasize the relevancy to Brexit.

Keywords
health care, evidence-based, policymaking, JBI
Establishing Rapid Review Response System between policy makers and researchers to uptake research evidence in Ethiopia

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Introduction: Alliance for Health Policy and System Research (AHPSR)/WHO, Geneva funded to establish rapid review response system engaging policy/decision makers to use evidence research in policy and program guidelines preparations.

Process: We established National Advisory Committee (NAC) for following Rapid Review Response System (RRRS) consisting of various stakeholders. Committee is chaired by head of the state health minister’s office. NAC approved above structure for RRRS between Federal Ministry of Health (FMOH) and evidence based research institutions. Policy makers were engaged in research question identification, commissioning it through Policy Analysis Case Team (PACT) to EEBHCC and EEBHCC produced rapid reviews and disseminated to PACT members. Production and utilization of rapid review results: Until now 8 rapid reviews produced, disseminated to policy makers in FMOH and they used it in their policy making and training. Another 10 research topics have been sent to EEBHCC by FMOH at the time of this abstract submission.

Conclusion: This demand and supply system for utilization of research utilization is permanently created linking FMOH and evidence based institutions and will be sustaining.

Keywords: Rapid Review Response System, Demand creation for evidence, supplying evidence to policy makers
We are fortunate in Canada that our national research funding body, the Canadian Institutes of Health Research (CIHR), is mandated to ensure that new knowledge is applied in practice, programs, and policy. Thus, research applicants must demonstrate to CIHR that they have developed a plan of effective strategies for knowledge translation. However, novice researchers, without adequate graduate coursework and training, may be unprepared to fulfill this expectation or simply adopt the typical end of grant knowledge translation activities, such as conference presentations and journal publications, in contrast to an integrated knowledge translation approach that involves patient or knowledge user engagement from the onset of the research project beginning with identification of priority questions. During this presentation we employ CIHR’s Knowledge to Action cycle to illustrate how to prepare and to assist graduate students to understand, value, and adopt the integrated knowledge translation paradigm and to successfully engage with knowledge users throughout the research process. Our recommendations are drawn from the research experiences of graduate supervisors, the learning experiences of graduate students, and key CIHR resources. Recommendations cover curricular topics and textbooks, pedagogical approaches and exercises, and training in specific research methodologies.

Keywords
graduate education, knowledge translation, patient engagement, research utilization
Nursing management of dysphagia in post stroke patients admitted to the Beijing Dongzhimen hospital: a best practice implementation project.

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Background: Stroke could affect any organ associated with swallowing, causing dysfunction and related clinical manifestations. Early identification and management of dysphagia could decrease the pulmonary infection and fatal complications, and improve the patients’ quality of life.

Objective: The objective of this best practice implementation project was to implement evidence-based strategies for screening, identification and management of post-stroke dysphagia, with a view to improve the patients’ quality of life and resource utilization.

Methods: The project used the Joanna Briggs Institute’s Practical Application of Clinical Evidence System (PACES) and Getting Research into Practice (GRiP) audit tool for promoting change in clinical practice. A baseline audit was conducted, followed by implementation of evidence-based strategies with a focus on staff and patient education. A follow-up audit was performed to assess the effects of the interventions on compliance with best practice.

Results: The baseline audit showed that there was no evidence-based approach to screening, assessment and management of post-stroke dysphagia in practice, with only two of the 8 audit criteria showing compliance greater than 50%. Education programs for nursing staff and patients were established. The follow-up audit showed a significant increase in the utilization of evidence-based strategies, with all the 8 criteria achieving above 90% compliance.

Conclusion: An evidence-based program to screen, identify, assess and manage post-stroke dysphagia was successfully implemented.

Keywords
dysphagia, implementation, evidence-based, JBI
Supporting implementation of best practice with clinical librarian-led education

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Implementation of evidence-based practice (EBP) into nursing is critical to improving patient and family-centered care outcomes. Nurses and other healthcare professionals require knowledge of EBP, and how to locate studies that provide the best available evidence in order to effectively transfer and implement change within patient care settings. A 2012 survey of 1015 RNs found that knowledge of EBP was a significant barrier to implementation; 76% agreed it was important that they receive more education to use EBP. Clinical librarians (CLs) are positioned to provide education to nurses at or near the point of care. In a recent thematic analysis, CLs noted their roles as expert searchers, content managers, patient advocates, and teachers. The teacher role includes structured learning and unstructured activities such as one-on-one consultations. At UCSF Medical Center, CLs from the Fishbon Library regularly provide education on EBP. The CLs round on nursing units and regularly teach a course on how to search the literature in support of EBP. They also provide one-on-one training with nurses, either on the units or via in-office consultations. Within the JBI CSR course and EBP Fellows' programming offered through the UCSF Medical Center Institute for Nursing Excellence, the CLs teach literature searching skills for EBP and consult with those working on EBP projects and systematic reviews. This oral presentation will provide an overview of clinical librarian-led education strategies for healthcare professionals, and describe in detail how CLs at UCSF Medical Center educate nurses about EBP to support its implementation into practice.

Keywords librarians, evidence-based practice, implementation, literature search, rounding
Theories of teaching and learning and teaching methods in postgraduate education in health sciences: scoping review

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Background Teaching at postgraduate level in the health science disciplines is a complex endeavour, as higher level knowledge, skill acquisition and decision making must be taught in a world which is seeing more complex health problems. This scoping review was prompted by requests for help in teaching at the postgraduate level when conducting teaching workshops for faculty.

Review question: Which theories of teaching and learning and/or models and or methods of teaching are used in postgraduate teaching?

Methodology: The scoping review methodology described by the Joanna Briggs Institute was implemented. Studies conducted in postgraduate health science disciplines, including but not limited to medicine, nursing, occupational therapy, physiotherapy, pharmacy and dentistry were considered. Both quasi-experimental study designs, analytical observational studies and analytical cross-sectional studies were considered for inclusion. Also considered were descriptive observational study designs and qualitative studies, text and opinion papers. Five databases were searched. A data extraction table was developed.

Results: A total of 5381 papers were identified. Sixty-one papers were included in the review, the majority of which were from the medical disciplines. Most of the studies were undertaken in the USA. Surveys were the most common research method used. While a number of innovative teaching methods were described, didactic teaching in the form of lectures was often included. Theories of teaching and learning seldom formed the basis for the innovation.

Conclusion: Theories of teaching and learning are often only alluded to, with poor explanation of application of the theory to practice.

Keywords Graduate pedagogy; innovation in education; postgraduate teaching; trend
Education program for asthma self-management among parents in a children’s respiratory clinic

A best practice implementation project

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**Background**  Asthma is one of the most common diseases in children and leads to some unexpected mortality. A self-management program can effectively improve the outcomes of asthma and reduce the burden on health care services.

**Objectives**  The aim of this project was to integrate the best evidence on asthma self-management education into practice in a children’s respiratory clinic and improve the compliance with best practice.

**Methods**  The Joanna Briggs Institute (JBI) Practical Application of Clinical Evidence System (PACES) and Getting Research into Practice (GRiP) audit and feedback tools were used in this project. Seven audit criteria were developed for the pre- and post-audit based on the best available evidence.

**Results**  The baseline audit showed a big gap between clinical practice and the best evidence. The only criteria that achieved high compliance was provision of inhaler guidance (100%). After implementation, there were substantial improvements in compliance for many criteria. Training of clinicians increased from 13% at baseline to 67% at follow-up. Education of parents improved, with specific education about asthma triggers increased from 55% to 100%, education about warning signs increased from 30% to 85%, and education about effective asthma treatment options increased from 40% to 85%. Use of written asthma action plans increased from 0% to 25%.

**Conclusion**  Strategies developed in this project were effective to provide information needed for parents and improved the compliance with evidence. Further implementation strategies and audits are still needed to improve the use of asthma action plans and ensure they are reviewed periodically.

**Keywords**  Best practice, asthma self-management, education, parents, respiratory clinic
Integrating Evidence Based Practice into Graduate Nursing Education

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Evidence-based practice (EBP) concepts need to be included in graduate nursing education to provide the competencies and skills required for knowledge generation and application. The competencies of EBP can be taught and applied in systematic review (SR) methodology. The UMMC SON, has incorporated the Joanna Briggs Institute’s SR methodology into the Doctor of Nursing Practice (DNP) curriculum to teach nursing students EBP competencies. The objective of the DNP program is to “prepare nurse leaders at the highest level of nursing practice to improve patient outcomes and translate research into practice”. The DNP degree also focuses on providing leaders in evidence-based practice, which requires competence in evaluating evidence and translating that evidence into practice.

The process of teaching DNP students to perform the steps of a systematic review occurs throughout two courses within a two year time frame and gives students hands-on application of evidence-based practice competencies to prepare them for real-world application and translation. We use a faculty review committee to guide the student through the entire process. Two to three faculty members mentor the student, help keep them on track, and work through peer reviewer’s comments and corrections together.

Since the integration of the JBI SR methodology into our curriculum, we have had 24 protocols published with 8 systematic reviews currently under peer-review. The curriculum changes we have made and use of a review committee could be replicated in any graduate nursing education program.

Keywords Nursing education, evidence-based, JBI
Integration of simulation training in nursing education

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Although simulation has been used as a training technique in nursing education since 1950, in recent years it has gained even more in popularity. Simulation based learning is an activity learning paradigm that re-enacts the clinical environment in order to improve technical and non-technical skills. One type of simulation is role-play, which involves three steps: Firstly, students create a role-play scenario. Subsequently, the scenario is played followed by the third step, a debriefing session. Due to a theory-practice gap, nursing students often experience stress and anxiety during their first clinical practice internship. Since professional self-confidence is important to provide high quality patient care, simulation based training and feedback is considered to improve professional self-confidence. Research on the impact of simulation based training on professional self-confidence of nursing students is sparse.

The aim is to examine professional self-confidence in nursing students before and after simulation training in order to evaluate and improve simulation education.

An explanatory sequential mixed method design will be used in this study, since the use of quantitative in combination with qualitative research provides the ability to examine data more extensively. In the quantitative part students will be questioned by use of quota sampling. Students’ opinions on simulation education will then be measured using three different scales. In the qualitative part, data from one focus group will be used. The results from the quantitative part will be discussed so as to improve simulation education.

The study design as well as preliminary results will be presented at the conference.

Keywords: simulation training, nursing education, explanatory sequential mixed method design, professional self-confidence
Preparing nursing students to implement Evidence-based Practice in a demanding health care environment is hard work for nurse educators. It is well documented that high quality nursing care delivery depends on graduates demonstrating competence, commitment, compassion, and curiosity, which Hartrick Doane and Varcoe refer to as “relational capacities” and which constitute some of the key components of their Relational Inquiry nursing practice approach. In order to practice from the Relational Inquiry approach, nurses must expand their thinking; that is, they need to reflect on the complexities of the patient situation which the co-developers have categorized as layers of interpersonal, intrapersonal, and contextual factors that shape nurse-patient interactions. Relational Inquiry has been purported to effectively bridge the gap between nursing theory and practice, thereby helping students integrate theoretical knowledge into the clinical workplace. However, nurse educators must be able to assess student appropriation of each capacity in order to advance capacity development but few assessment instruments exist. During this presentation we discuss development of the new Relational Inquiry Capacities Scale. Scale development entailed an integrative literature review, a modified Delphi technique, readability and comprehension assessment, and pilot testing of psychometric properties through a cross-sectional study of 301 nursing students. We will demonstrate how the Scale can serve as an assessment tool and as an innovative tool for promoting Evidence-based Practice in undergraduate curriculum.

**Keywords:** evidence-based practice, nursing competencies, nursing curricula
Teaching EBHC and its role in implementing evidence-based practice

An overview of EBHC educational programs

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Introduction: As all health professionals are now expected to practice within an evidence-based context it becomes essential for health professionals to develop the knowledge and skills to deliver evidence-based healthcare (EBHC). Teaching EBHC principles has been a strategy to assist health professionals in acquiring this knowledge and skill.

Objective: To provide an overview of the evidence in relation to EBHC educational programs and explore the role teaching EBHC plays in the implementation of evidence-based practice.

Findings: A substantive amount of research has been published on the teachings of EBHC. A structured search of PubMed and Embase revealed a number of published systematic reviews related to this topic. The findings of the systematic reviews were analysed and are presented with specific focus on their theoretical foundations, participant and educator composition, program content, delivery methods and evaluation processes.

Outcomes: Teaching EBHC is a multi-faceted, complex process. Evaluating the teaching of EBHC focused predominantly on assessing skill, knowledge and attitudes towards EBHC. There is small but limited evidence focussed on evaluating behaviour. A valid and reliable tool that evaluates all components of the EBHC cycle should be used to assess the impact of EBHC educational programs.

Keywords: evidence-based health care, education, teaching
Effectiveness of surgery for adults with hallux valgus deformity: a systematic review

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The objective of this review was to establish the effectiveness of surgery compared to conservatory management for adults with hallux valgus. This review included adults (18 years or older) with hallux valgus deformity undergoing any type of hallux valgus surgery compared to no surgery, conservative treatment or different types of hallux valgus surgeries. The outcomes included gait measurement, quality of life, patient satisfaction, pain and adverse events. A three-step search strategy aimed to identify published and unpublished studies in 16 databases. 25 studies medium to poor quality were included in the review (from initial 2412 citations) after removal of duplicates, paper retrieval and critical appraisal using standardized instrument. 24 trials compared the effectiveness of different types of surgeries. Meta-analysis revealed no difference in level of pain between distal chevron type osteotomy and other surgical procedures. One trial reported that distal chevron osteotomy is more effective than Lindgren osteotomy in terms of walking speed. One medium quality trial compared the effectiveness of hallux valgus surgery to conservative or no treatment and showed that distal chevron osteotomy is a more effective for pain than conservative treatment and no treatment in the first year. This systematic review showed that differences between various types of surgical procedures, specifically osteotomies of the first metatarsal on clinical outcomes, are minimal. However, there were lack of studies dealing with similar types of hallux valgus treatments that assess the same outcomes. This systematic review identified one study comparing surgical and conservative treatment resulted in favor of surgery.

Keywords Hallux valgus, surgery, conservative treatment, gait, quality of life.
Cost-effectiveness of Adipose-driven stem cell for Facial Repairement: A systematic Review

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Introduction: Desire for beauty in the facial area has grown significantly. Various methods are implemented to meet this need using technology and biological advances. Assessing the safety, clinical effectiveness, and cost-effectiveness of these methods is a concern of patients, health professionals and policymakers. The purpose of this study was to evaluate fat injecting with adipose-derived stem cell (stromal vascular fraction (VAS)) compared to other methods.

Materials and methods: By searching the selected keywords in Medline (PubMed), Cochrane, EMBASE, and ProQuest databases, 691 articles were retrieved. Manual search gave us 500 more. Removing duplicates, 831 articles entered to selection. At this stage, two experts analyzed 831 articles based on title, abstract, and full-text according to inclusion criteria. Two independent reviewers evaluated 11 articles according to the type of studies by the JBI tool. 11 articles reached to data synthesis and cost analysis.

Results: Results showed that SVF method is successful and non-complicated compared to fat alone. Six months after, fat survival and clinical improvement were higher in SVF group. Enrichment of fat by platelet-rich plasma (PRP), SVF, or both improved the skin significantly (12-month period) (P <0.01). The use of PRP and SVF alone showed similar results. Incremental cost-effectiveness ratio (ICER) showed that adding one quality year to PRP, costs 456940IRR more than fat-injection with SVF.

Conclusion: Injecting SVF-enriched fat is more effective and safer than the graft alone and PRP. Cost-effectiveness analyzes concluded that fat injection with SVF has more lifetime quality and cost-effectiveness than PRP and FAT graft alone.

Keywords: Adipose-driven stem cell, Facial Repairement, Cost-effectiveness, Platelet-rich plasma, Fat injection
Comparative Analysis of ANCOVA, Change Scores and Final Values Meta-analyses

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Background: Pooling the effect sizes of randomized controlled trials (RCTs) from continuous outcomes such as glycated haemoglobin (HbA1c) level is an important method in evidence syntheses. However, due to challenges related with baseline imbalances and pre/post correlations, simple analysis of change scores (SACS) and simple analysis of final values (SAFV) may result in under- or over-estimation of effect estimates. This study aimed to compare pooled effect sizes by using Analysis of Covariance (ANCOVA), SACS and SAFV meta-analyses, using HbA1c outcome data from RCTs of digital interventions.

Methods: Three databases were systematically searched for RCTs published from 1993 through June 2017. Two reviewers independently assessed titles and abstracts. Baseline imbalances and pre/post correlations were calculated. Pooled HbA1c effect sizes were computed using ANCOVA, SACS and SAFV meta-analyses.

Results: ANCOVA, SACS and SAFV resulted in pooled HbA1c mean differences (MD) of -0.39% (95%CI: [-0.51, -0.26]), -0.37% (95% CI: [-0.47, -0.27]), and -0.34% (95%CI: [-0.48, -0.19]), respectively. Removing studies with both high baseline imbalance (>=±0.2%) and pre/post correlation of more than ±0.6 resulted in an MD of -0.39% (95%CI: [-0.53, -0.26]), -0.40% (95%CI: [-0.54, -0.26]) and -0.33% (95%CI: [-0.48, -0.18]) with ANCOVA, SACS and SAFV meta-analyses respectively. Egger’s test did not indicate evidence of publication bias for all methods.

Conclusions: We found slight differences in pooled estimates depending on the statistical method. To take full advantage of these methods and to minimise bias in pooled analyses of continuous outcomes, detailed summary data and, ideally, access to individual patient data from RCTs is essential.

Keywords: Meta-analysis, ANCOVA, Change Scores, Final Values, HbA1c
Refinement of the JBI Mixed Methods Systematic Review Methodology: What’s it all about?

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**Background:** Mixed methods systematic reviews (MMSR) bring together the findings of qualitative and quantitative reviews and can assist decision-makers in making informed choices regarding the health and social care of the population. They are increasing in popularity however a degree of complexity exists regarding these types of reviews. In 2014 methodological guidance for conducting MMSR was published by the Joanna Briggs Institute (JBI). To reflect developments made in the literature this guidance has recently been revised.

**Objective:** To present the changes that have been made to the JBI methodological guidance for conducting MMSR.

**Methods:** The working group reviewed the literature and worked together via email, teleconference and round table discussions to debate and achieve consensus on the proposed approach.

**Results:** The main issues in undertaking MMSR relate to: how (and if) data is transformed, the sequence in which synthesis occurs and how data/evidence are integrated together. The JBI guidance aligns with the typology developed by Hong et al 2017 in which there are two designs a MMSR can follow: convergent - where synthesis occurs at the same time and sequential - where syntheses occur one after another. Within the convergent approach two subtypes exist with the nature of the question/s posed driving the approach to synthesis.

**Conclusion:** MMSR allow for a richer understanding of a topic/phenomena and are important in health services research. The JBI has provided updated guidance on how to undertake a MMSR that aligns with the current evidence base.

**Keywords:** mixed methods, systematic review, methodology, JBI
Augmenting the chances of successful evidence-based guideline implementation: strategies used by the Belgian Red Cross

The example of a guideline on tackling loneliness and social isolation in elderly

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Background: In order to reduce feelings of loneliness and social isolation in elderly, the Belgian Red Cross (BRC) has set up a new project in which volunteers pay regular visits and supply need-adapted library materials to elderly. To assist the volunteers supporting this activity, an evidence-based guideline is currently being developed.

Methods: Throughout the development process, several strategies are being used to enhance guideline implementation in the near future. First, the methodologists developing the guideline work in close collaboration with the operational service responsible for the project. Second, the multidisciplinary expert panel includes volunteers who support the activity in local BRC chapters. Third, the project will be piloted in several local chapters, allowing the BRC to further tweak the guideline to the target population’s preferences.

Results: Systematic literature searches were performed to identify the best available scientific evidence on the effect of a home visit by a volunteer to prevent or improve loneliness and/or social isolation in elderly, and on the effect of book reading on physical and mental health in elderly (MEDLINE, Embase, Cochrane Library, Campbell Library, PsycNet, Sociological Abstracts, Social Sciences Citation Index, ERIC). In April 2018, this evidence base is discussed during an expert panel consensus meeting, where different stakeholders, including BRC volunteers, get to share their expertise. From May 2018 onwards, the project will be piloted in a number of local chapters.

Conclusions: Guideline development is only useful when the guideline gets implemented successfully. Therefore, exploring different implementation strategies during the development process is worthwhile.

Keywords: Guideline development, evidence-based guideline, implementation, social care
Hospital protective isolation rooms for highly immunosuppressed patients: guidelines and controversies.

A scoping review to assess the best available evidence

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Hospitalized patients treated with intensive chemotherapy regimens for hematological malignancies are at high risk for nosocomial fungal infections that can be caused by hospital environmental exposures to mold spores. Notably, invasive aspergillosis (IA) is a severe infection with high morbidity and mortality rates among these patients. Single protective isolation room equipped with High Efficiency Particulate Air (HEPA) filtration with or without Laminar Air flow (LAF) is part of the environmental key measures to reduce the risk for nosocomial IA.

Though, protective isolation recommendations involve multiple actors/specialties (hematology, infectious diseases, infection control and hospital epidemiology) and the evidence underlying these recommendations is typically unclear. Particularly, hospital room’s technical requirements and air handling norms for the management of these high risk patients remain controversial issues, with potential impacts on patient safety and hospital resources (financial investments for specific rooms/ward’s construction, maintenance and control).

We will perform an exhaustive literature review following a specific methodology (“scoping review”) to describe current protective isolation guidelines and practices, the evidence underpinning these, and identify any knowledge gaps within the existing literature to generate further research opportunities. In scoping reviews, the research question and the application scope are broader than for a systematic review, including different types of articles, scientific communications, recommendations and grey literature.

We expect the scoping study protocol to be finalized and submitted for publication at the time of the Conference, detailing the systematic search strategy for relevant materials starting from our research question, the data chart, summary process and reporting of the results.

Keywords: Hematology, risk management, research gap, scoping review
Experiences of Stigma among Family Members of Persons Living with Schizophrenia: A Systematic Review

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Schizophrenia appears to be the most stigmatized disorder of all mental illness and adds increased suffering and challenges to the illness itself which contributes further to social isolation, limited life chances and delayed help-seeking behavior. The stigma associated with mental illness globally is the greatest impediment to improving the lives of people with schizophrenia. The stigma is widespread and affects the experiences of not only individuals possessing the stigmatizing characteristics but also family members/relatives (courtesy stigma) with whom the stigmatized person interacts disrupting multiple life domains (e.g. resources, social relationships and coping behaviors) for all.

This qualitative systematic review sought to explicate the experiences of stigma among family members of persons living with schizophrenia. More specifically, the review sought to describe the experiences of stigma among family members, describe the factors that influence the experience of stigma, and the strategies and approaches family members used to cope with stigma.

The review reveals that the experience of stigma is universal and that family members experience stigma on many levels. It is through their association or relationship with the individual that had schizophrenia that they experienced and felt stigmatized. As a result, family members curtailed, limited and restricted who they shared information with, socialized with and even isolated and avoided contact with others to avoid the feeling and experience of stigma.

Health care providers need to be cognizant of this and recognize that family members need attention and education on how to deal with stigmatization as well as needing guidance and support.

Keywords: Schizophrenia, stigma, qualitative research, family members, courtesy stigma
Developing methodological guidance for systematic reviews of measurement properties

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Systematic reviews of measurement properties aim to synthesize the best available evidence on the properties of construction and validation of measurement instruments. The major measurement properties include reliability (consistency), validity (measures what it is supposed to measure), and responsiveness (ability to detect change over time). These properties determine the overall quality of an instrument. Conducting a systematic review of measurement properties may identify a gold standard instrument and settings or contexts in which instruments should or should not be used. Alternatively, a systematic review of measurement properties may identify a gap in knowledge demonstrating where a reliable, valid instrument needs to be developed.

The Joanna Briggs Institute (JBI) has an active methodology program to provide direction to systematic reviewers. A group consisting of members from the Joanna Briggs Collaboration has been developing methodological guidance for JBI systematic reviews of measurement properties. The group has explored the utility of the COnsensus-based Standards for the selection of health status Measurement INstruments (COSMIN) taxonomy and checklist, which were developed by an international panel of experts in health measurement properties. The JBI guidance aims to provide essential advice and examples to systematic reviewers regarding inclusion criteria, key definitions and terminology, search strategies, how to utilize the COSMIN checklist for assessment of methodological quality, which data to extract, what to report and how best to synthesize, present, and interpret the findings of the review. The development of this guidance is timely to assist JBI reviewers to conduct high quality systematic reviews of measurement properties.

Keywords measurement instruments, psychometrics, clinimetrics, systematic reviews
The Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Statement

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Background: In 2014, a Joanna Briggs Institute (JBI) methodology group developed up-to-date guidance for the conduct of scoping reviews, elaborating upon previous foundational work. Following this, a reporting guideline, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA-ScR) was developed by a 26-member expert panel. This reporting guideline is intended to be used as the gold standard for reporting the conduct of scoping reviews to enhance best practices in evidence synthesis research.

Objectives: To describe each of the items included in the PRISMA-ScR and provide examples from existing scoping reviews to illustrate good reporting.

Methods: The PRISMA-ScR was developed according to published guidance by the EQUATOR (Enhancing the QUAlity and Transparency Of health Research) Network. A modified Delphi approach was used, with three rounds of ranking and six working groups, and interaction at either an in-person meeting or online using Conceptboard.

Results: The final PRISMA-ScR checklist contains 20 items considered to be essential components of a scoping review article, plus two optional items. A rationale for each item, along with an example of good reporting, is provided. Consistencies with the JBI guidance for the conduct of scoping reviews are noted.

Conclusions: This presentation will assist reviewers to understand the PRISMA-ScR statement and enhance uptake of the reporting guideline. The PRISMA-ScR is consistent with the JBI methods guidance and is intended to guide the reporting of scoping reviews, improving transparency and completeness of reporting; facilitating the appraisal of results, and increasing the relevance of scoping reviews for decision-making.

Keywords Scoping reviews, reporting guidelines, research methodology, PRISMA
Implementation of a Sleep Protocol in an adult intensive care unit using a ‘sleep cart’.

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Sleep deprivation is a major concern for critical care patients and is linked to serious consequences. The role of caregivers in the implementation of Evidence-Based Practices to promote sleep in the clinical setting is crucial. A baseline audit by means of a questionnaire was conducted in our Intensive Care Unit (ICU) and revealed that nurses with experience exceeding 10 years were more likely to apply best practice recommendations regarding patients’ sleep. Interestingly, regardless if nurses had received training about the importance of sleep and/or behaviour modification programs promoting sleep in the ICU setting - both Grade B recommendations - only those with said experience (≥10 years) significantly demonstrated a more extensive application of these recommendations.

In order to help less experienced nurses adhere to guidelines aimed at improving patients’ sleep, one of the hospital's five ICU units was selected as a pilot test in the introduction of a Sleep Protocol (SP).

A cart containing ear plugs, noise cancelling headphones, eye masks, and details about the SP was created and made available to the unit. The goal was to reduce night-time light and noise pollution, plan a period of uninterrupted rest, and offer herbal tea as part of a bedtime ritual, when possible.

The care bundle was presented to the team, with champion nurses ensuring successful implementation through coaching.

A follow-up audit was conducted three months after the introduction of the SP and preliminary reports appear to be in favour of implementing this practice in the hospital's other ICUs.

Keywords Intensive Care, Sleep protocol, Best Practice Recommendations
Prevention of catheter-associated urinary tract infection practices in neurological post operation patients: a best practice implementation project

Prevention of catheter-associated urinary tract infection

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Background: Catheter-associated urinary tract infection (CAUTI) has been associated with increased morbidity, mortality, hospital cost, and length of stay. Urinary drainage systems are often reservoirs a source of infection to patients. Effective prevention of CAUTI requires an evidence-based approach.

Objective: The aim of this evidence implementation project was to make a contribution to promoting evidence based practice in neurology and neurosurgery units in regarding prevention of catheter-associated urinary tract infection.

Method: A clinical audit was undertaken using the Joanna Briggs Institute Practical Application of Clinical Evidence System tool. Nine audit criteria that represent best practice recommendations for CAUTI were used. A baseline audit was performed followed by the implementation of multiple strategies throughout 20 weeks and finalized with a follow-up audit to determine change in practice.

Results: Results from pre- and post-implementation audits indicated that compliance rates for Criterion 1 (closed drainage system), Criterion 5 (hand hygiene), Criterion 7 (received training) reached 100% in the follow-up audit. The compliance rate for Criteria 2 (change catheters and drainage bags), Criterion 3 (catheters are removed within 24 hours), Criterion 4 (Documentation records) and Criteria 6 (systemic antimicrobials are being administered) attained 84.4% to 96.9%, respectively, in the follow-up audit.

Conclusions: The project was successful in improving nurses' knowledge and skills around CAUTI. A variety of strategies, such as an effective education program, simple and clear instruments, collaboration with physicians in caring of patients with high risk of CAUTI, and multiple educational materials can facilitate implementation of evidence in clinical practice.

Keywords: Catheter-associated urinary tract infection; best practice; prevention, surgery patients, evidence implementation
Prevention of Constipation in Older Adults: An Evidence Implementation Project in Mental Health Setting

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Background Constipation can be compounded in elderly patients from psychiatric setting due to side effects of psychotropic drugs, poor dietary habits and sedentary lifestyle, compromising their quality of life, even leading to death. However, preventing constipation does not hold as much emphasis when compared with mental health issues. Thus, evidence for preventing constipation needs to be reinforced. This project aimed to examine the extent to which 8 evidence-based criteria from Joanna Briggs Institute (JBI)’s guideline “prevention of constipation in older adults” is adopted.

Methods This project utilized JBI’s Practical Application of Clinical Evidence System and collected data from 40 patients and staff in a psychiatric hospital. Interventions was implemented to address identified gaps from baseline audit and evaluated by post audit after 12 months.

Results Staff educating patients regarding their bowel functions had the lowest adherence (3.33%) due to lack of access to educational materials. Educational resources were developed and staff were educated about strategies to prevent constipation. Roadshows generated greater staff awareness on methods to access these resources. Post audit showed improvement of adherence to 100%. For criteria indicating documentation of patients’ bowel functions and habits, full adherence was revealed in both baseline and post audit.

Conclusion This JBI process enabled the timely identification of potential lapses in the prevention of constipation. Areas of practice with low adherence were addressed timely. Findings suggested that roadshows and educational sessions have the potential to enhance adoption of evidence while sustaining areas with high adherence to evidence.

Keywords Constipation, evidence-based, psychiatric, JBI
Decreasing procedural pain in pediatric patients with cancer: a best practice implementation project

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Background: As a common negative experience, procedural pain was not well managed in pediatric patients. There was a big gap between best evidence and clinical practice.

Objective: The aim of this project was to implement the best available evidence for management of procedural pain into the nursing practice of a pediatric cancer department.

Methods: The current evidence implementation project utilized the Fudan Model of Evidence-based Quality Improvement. Seven audit criteria were established on the best available evidence. The implementation of multiple strategies, including age-appropriate, family-centered dissemination strategies, was conducted for four months. The baseline audit and follow-up audit was conducted before and after implementation period.

Results: Results from pre- and post-implementation audits showed increased compliance rates for preparation before procedure (93.02%), utilization of lidocaine before procedure (34.88%), attention distraction during procedure (79.07%), and family education (84.29%). The average procedural pain of pediatric patients with cancer also decreased from 5.74 ± 2.74 to 2.65 ± 1.75 (P<0.01). The percentage of moderate or higher procedural pain (FACE or VAS ≥4) decreased from 75.0% to 25.6% (P<0.01).

Conclusions: The project was successful in decreasing procedural pain in pediatric patients with cancer. Through different implementation strategies, the project led to various changes, such as involvement of families, active participation of healthcare providers, and various dissemination methods (paper, bulletin, video, and social networks). Further audits are necessary to sustain behavior change and monitor potential areas for continuous quality improvements.

Key words: Procedural pain, pediatric patients, best practice implementation
Implementing the sedation scale in an intensive care unit: a best practice implementation project

The implementation of Richmond Agitation Sedation Scale

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Background. Adequate sedation can lead to patient-ventilator synchrony, facilitation of treatment and decrease in patients’ physical and psychological discomfort in intensive care unit (ICU) patients with respiratory failure. The Richmond Agitation Sedation Scale (RASS) was identified as the most suitable tool in sedation assessment.

Objectives. This project aimed to perform an audit of sedation assessment practices to implement evidence-based best practice recommendations to evaluate the effectiveness of these strategies of RASS assessment for mechanically ventilated patients in ICU.

Method. This implementation project was conducted in an ICU at a tertiary medical center in Taiwan. Using the Joanna Briggs Institute Practical Application of Clinical Evidence System software, a baseline audit was conducted in the ICU followed by an identification of barriers of RASS assessment and management of strategies to improve the consistency of sedation assessment.

Results. The baseline audit results showed that the four criteria results were found to be 0%, which indicated poor compliance with the current evidence. Following the implementation of the strategies, which included education, visual management, and development of a “RASS Reminder Card”, there was an improvement in all the criteria audited, with criteria 1-6 achieving 85~100% compliance.

Conclusion. The project was successful in improving the implementation of RASS around the respiratory ICU through evidence-based audit. Following the development and implementation of evidence-based resources related to using RASS in ICU setting for patients with ventilator, a high level of compliance was achieved.

Keywords based implementation, intensive care unit, mechanical ventilation, Richmond Agitation Sedation Scale
Treatment of nipple pain among breastfeeding women in a post-partum ward

A best practice implementation project.

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\textbf{Background:} Breast milk represents the optimal nutrition for a child and is recommended during the first six months. However, nipple pain often occurs during the onset of lactation and may affect breastfeeding and exclusive breastfeeding duration rates. Multiple treatments are available in the postpartum units of the Lausanne University Hospital (CHUV, Lausanne, Switzerland) and are used empirically, according to caregiver preferences.

\textbf{Objectives:} The aim of this project is to implement a care plan for nipple pain according to the best recommendations and evidence-based studies.

\textbf{Methods:} The project was developed using the Joanna Briggs Institute framework and PACES tool. Five audit criteria were used, thanks to a pre and post audit, to observe the evolution in the compliance to the recommendations. The Getting Research into Practice was used between audits to identified stakeholders, barriers and facilitators of the project.

\textbf{Results:} Four criteria were improved, without increasing the pain experienced by breastfeeding mothers. More women received adequate information (from 47\% to 64\%) and support (47\% to 58\%). Each item composing the criteria 2 (adequate information) and 3 (adequate support) has been improved. The adequate management of painful nipples also increases from 8\% to 31\%. However, it remains an important point to reflect on.

\textbf{Conclusions:} Despite the limitations associated with small samples, the results of this project shows that implementation of good practice is possible even though it consisted of the withdrawal of unnecessary treatment. Another evaluation seems to be necessary later to consolidate and improve these results.

\textbf{Keywords:} Best practice; Breastfeeding; Painful nipple; Clinical audit; Evidence-based practice;
Patients’ comfort and safety, specially related to sedation therapy for critically ill patients is essential in critical care practice. Nurses’ ability to rapidly assess patients’ sedation levels is of great importance for therapeutic titration of sedation adequacy according to the needs of individual patient. The aim of this project was to conduct an audit of clinical sedation assessment practices to implement evidence-based best practice recommendations to improve the quality of sedation assessment in the targeted ICU. We used the Joanna Briggs Institute’s Practical Application of Clinical Evidence System and Getting Research into Practice audit tool for promoting change in healthcare practice. A baseline audit was conducted including a sample size of 30 patients followed by development of strategies to improve the quality of sedation assessment. A follow-up audit including a sample size of 28 patients was conducted by using same audit criteria. Sixty-five nursing staff were surveyed in both baseline and follow-up audits. The baseline audit results revealed significant deficits between current practice and best practice in all criteria. Barriers for implementation of best practice criteria were identified and a bundled strategy was implemented, which included education, revision of sedation scoring system and development of a “RASS Reminder Card”. There were significantly improved outcomes across all criteria in the follow-up audit. The frequency and accuracy of sedation assessment were enhanced on the completion of the project as there was an increased ability and understanding of the sedation assessment best practice among nursing staff in the unit.

Keywords sedation assessment, mechanical ventilation, clinical audit, evidence implementation, JBI
5 years of student based innovation in EBM education: A successful case study

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Introduction: Iranian Student center for Evidence Based Medicine (ISCEBM) is one of the first and most active student EBM and research centers in the world. Celebrating its fifth birthday; this is a summary of 5 years of innovational education and research.

Case presentation: “EBM summer school” has been a key feature of ISCEBM. The one week program started with a project selection in 5 student teams through the courses the students were taught how to write, appraise and present scientific evidence step by step. Games with educational purposes and “best team” competition were other aspects. The “EBM journal club drama” was a theatrical play of a real journal club with a taste of humor. The students acted and the audience were the actual attending and residents. “Students as teachers” was were the students were the lecturers of a topic on EBM with supervision of an EBM specialist. In “The reverse appraisal” students assessed the risk of bias in RCTs of a Cochrane systematic review to practically learn the appraisal process.

Outcome: In five years students acquired a deep knowledge of EBM and 10 Original articles for each team member. The students developed presentation, communication and team work skills. EBM was widely introduce in a general aspect throughout the university. The biggest achievement was conducting the international student EBM congress with a successful number of 300 student abstracts, 400 attendees and comprehensive workshops and lectures by greatest experts.

Conclusion: Students can play a leading role in introducing and educating EBM.

Keywords: ISCEBM, EBM, education, student
Effect of evidence-based medicine workshop on the knowledge and practical abilities of clinical residents

Satisfaction assessment of EBM workshop

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Background: Evidence based medicine (EBM) is the obvious, judicious and practical use of modern, best evidences in making decisions for the patients care. It aims to increase the use of high quality clinical research in clinical decision making. This study aimed at investigating the effect of evidence-based medicine workshops on the knowledge and practical abilities of clinical residents from their point of view.

Methods: This project is a cross sectional study conducted in 2016. For data collection, satisfaction assessment questionnaire (including 8 questions) was used. The questionnaire was sent to 145 residents participating in the EBM workshops in medical faculty, and finally 91 questionnaires were fully answered.

Results: Mean age of the responders was 31 ± 4.56 years. From the point of view of the residents, 87% agreed on the successful EBM workshop which provided theoretical information, and 61% of them stated that the workshop provided the essential practical skills of EBM. About 46% of residents acknowledged that clinical decision-making is not based on EBM essentials in clinical units.

Conclusion: It seems that practical skills development needs to be taken more into consideration in evidence-based medical courses. It is also necessary to find appropriate solutions in clinical sections to apply clinical evidence in decision-making.

Keywords EBM, workshop, satisfaction, residents
Evaluation of a Guideline Developed to Reduce HIV-Related Stigma and Discrimination in Healthcare Settings

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Background Developing guidelines and policies is critical to address HIV-related stigma and discrimination (SAD) in healthcare settings. To this end, a multidisciplinary panel developed a guideline to reduce SAD. This project evaluated the appropriateness of implementing the guideline in the Ethiopian context.

Methods A consensus of the expert panel was established through a Delphi technique which was followed by a panel meeting. Initial tentative recommendations were distributed to experts through e-mails to be evaluated using the modified guideline implementability appraisal (GLIA) v.2.0 checklist.

Results In the first round of the Delphi survey, all (13) panel members evaluated the guideline. The overall score for the general domain of the modified GLIA checklist was 96.56%. The scores for individual recommendations ranged from 68.33% to 92.76%. Maximum and minimum scores were attained for measurability (97.71%) and flexibility (59.77%) domains respectively. Percentages mean score lower than 75% was obtained for flexibility and validity domains. Suggestions for additional tools and training and for improving the clarity of the recommendations were made.

In the second round of the survey, all the recommendations received endorsement with scores above 75%. Maximum and minimum scores were attained for measurability (100%) and flexibility (86.88%) domains respectively. During the panel meeting, issues of responsibility for implementing the guideline were discussed.

Conclusion The project evaluated implementability of a guideline developed to reduce HIV-related SAD in healthcare settings. The Delphi survey was followed by a face-to-face meeting that helped in further clarifications of points.

Key words: Guideline implementability, Stigma, Delphi technique, HIV
Prevention of Catheter Associated Urinary Tract Infection in Imam Reza Teaching Hospital: A best practice implementation project

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Background and aim: Preventing catheter associated urinary infection (CAUTI) in inpatient setting and improving the quality of insertion and care monitoring of urethral catheterization in urology department of imam Reza teaching hospital, Tabriz University of Medical Science to implementation of best practice project. The aim of this project was to integrate the best available evidence on preventing urethral catheter associated Urinary infection.

Methods: The current evidence implementation project utilized the Joanna Briggs Institute (JBI) Practical Application of Clinical Evidence System (PACES) and Getting Research into Practice audit (GRIP) and feedback tools. Nine audit criteria were established on the best available evidence. The first and second Follow-up phases were done at intervals of 6 months compared to the initial phase to ensure sustainability of the implemented practices in the urology department.

Results: Significant improvements was detected in most of the follow-up audits criteria (P<0.05). Most of criteria improved followed by Intervention of the phase 1 between 50-100% and Intervention of the phase 2, between 81.4-100% compared to the baseline. This measure was 89.60-100% for the observed difference between Intervention of the phase 1 and 2.

Conclusion: The project made various changes in quality of care in urethral catheterization in urology department, such as increasing compliance for right indication and well documentation of monitoring process. In addition no symptomatic UTI was reported. Further audits will need to improve the quality of care in other departments.

Keywords: Evidence-Based Practice, Catheter Associated Urinary Infection, Urethral Catheterization
Clinical Management of Cancer-Related Fatigue among Patients in Hospital: a best practice implementation project

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Background: Cancer-related fatigue (CRF) is one of the most common symptoms in patients with cancer and significantly affects their functioning and quality of life. However, it is often inadequately addressed and evidence-based practices are not always followed.

Objectives: The project aimed to identify and promote evidence-based practice in the management of CRF in the oncology unit of Nanfang Hospital affiliated with the Southern Medical University in People’s Republic of China.

Methods: The Joanna Briggs Institute (JBI) have a validated audit and feedback tool to assist with best practice implementation audits. JBI’s Practical Application of Clinical Evidence System (PACES) was used in this project. A three-phase project was undertaken: 1) a pre-implementation audit of current practice against evidence-based audit criteria, 2) identification of barriers and implementation of strategies to improve practice using the JBI’s Getting Research into Practice (GRIP) tool and 3) a post-implementation audit.

Results: The baseline audit results identified non-compliance to best practices in all areas of CRF. Strategies to improve practice involved relevant education for nurses, establishment of a CRF management routine and related documentation systems and displaying and distributing educational materials for the patients. Improved compliance was shown across all audit criteria in post-evaluation.

Conclusions: The implementation of institution specific evidence-based resources demonstrated immediate improvement in CRF management and practice. Continuous effort is required to maintain changes and further improve practice. Future projects should focus on measuring the impact of changed practice on patient outcomes.

Keywords: Evidence-based practice, quality improvement, cancer-related fatigue, clinical audit, evidence implementation
Dissemination strategies and associated barriers of fall prevention implementation program in hospital

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**Background**: Effective falls prevention interventions for older adults has been produced however to assure the complete and effective uses of evidence-based programs in practice further implementation research for dissemination strategies is required.

**Aim**: The current project aimed to improve fall prevention and management through clinical audits and the implementation of a quality-improvement cycle at the local level. The aim of this study is to describe dissemination strategies and relate them to barriers.

**Methods**: Continuous clinical audit was conducted during five years using Knowledge to Action Framework in a hospital (290 beds). The method for identify and assess barriers was based on SWOT analysis. Dissemination strategies were identified and related to barriers.

**Results**: Dissemination strategies were focused to patients and healthcare professionals. Recommendations based on evidence were disseminate to patients and careers at admission and pamphlets were delivered to them. Dissemination strategies to healthcare professionals were multifaceted: 1) Nursing champions were designed to disseminate and give support directly to units; 2) Head nurses also disseminate procedure developed at hospital; 3) embedded remainders in hospital; and 4) Programed training by nursing champions. The associated barriers were the low compliance of assessment of fall risk on admission, low documentation/reporting of falls.

**Discussion and Conclusions**: In a long term implementation program multifaceted dissemination strategies were needed. The teams should be structured to give support to the implementation program, as the study showed champions had key role.

**Keywords** fall prevention; evidence based practice; dissemination strategies
The power of the ‘hackathon’: Implementing an experienced-based co-design framework

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This implementation project aimed to introduce and implement some of the low to zero cost recommendations of a large NIHR funded study within the acute care setting. The goal was to examine and assess if the findings of a detailed ethnographic analysis can be implemented and if they can improve the delivery of care for people living with dementia. We held a ‘Hackathon’ event that allowed for input, discussion and feedback from representatives of Dementia UK and a group of specialist nurses with experience of caring for people living with dementia in acute settings. The event produced a lively debate and discussion across two days and generated several ‘hacks’, three of which were identified as both useful and appropriate for feasibility testing within an acute care setting. Following ethical and governance procedures, we then: 1) Provided ward staff with the opportunity to discuss the hacks identified from the primary data. 2) Assessed the potential usage of the hacks with ward staff for improving care for people living with dementia, and the feasibility of implementing each of them. 3) Ran a co-design group with ward staff and users over a four month period to work on agreed improvements in the form of hacks and, 5) Evaluated patient outcome measurements and patient and staff satisfaction surveys to establish the feasibility of using our hacks to inform quality improvement at ward level.

This project will inform a larger-scale acute-setting wide pilot to examine whether the supporting change at ward level is scalable.

Keywords Hacks, dementia care, experienced-based, co-design
Promoting Equity and Access in Africa by Translating JBI Evidence into French

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Background: Getting best evidence to policymakers and practitioners is essential for better healthcare delivery and outcome. Healthcare standards in Africa are low and little evidence inputs could have remarkable impact but this opportunity remains unexploited. Language barrier is a limitation to evidence consumption in Africa, with considerable inequity and lack of access for French speaking Africa, with over 120 million French speakers unable to access English publications. Available research evidence in French seems to respond to the needs of French speaking developed countries.

Objective: Highlight benefits for investing in translating available JBI evidence into French.

Method: We classified African countries by languages to measure ability to use available evidence. We mapped out evidence hubs and generation sites in Africa according to work and publication language, by searching available online evidence database. We classified JBI collaborations per country and continent to assess the footprint and identify key opportunity for ripple effects within the francophone knowledge corridor.

Result: 38% of African countries have French as national language. However, there are no French evidence sites; 20% of evidence sites in Africa have potential to develop evidence in French. Globally 5% of JBI collaboration sites use French. 34% use English and 61% use other languages. 2% of African journals publish in French while 95% in English. This result highlights inequity in resources within the evidence ecosystem, with the French community largely residing within a dark knowledge corridor. It is essential that for global health equity we explore the possibility of translating evidence into French.

Keywords Health care, evidence-based, JBI, French, Africa
i-PARIHS framework based Evidence implementation of Enteral Nutrition with Infants with Congenital Heart Disease

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Objective To promote nurses’ evidence-based decision making practice and sustain their behaviors by introducing the evidence; To improve the in-hospitalized infants’ nutrition status and clinic outcomes.

Method Based on the JBI model, non-concurrent clinic trial design was used to evaluate the effectiveness of evidence utilization on promoting staff’s evidence-based practice compliance, improving health situation of the target population; to describe the influence on local and organizational context. i-PARIHS framework was used to develop the evidence implementation protocol.

Result Nurses’ evidence-based practice compliance was significantly improved. The detected proportion of the true nutritional risk (P=0.000), the proportion of patients start EN (P=0.044), the starting time (P=0.071) was significantly improved. The environment of EN practice was significantly improved in the pilot site, including establishment or updating of 6 flows, introduction or development of 7 tools, optimizing the hospital medical information system such as the “high risk nutrition warning”.

Conclusion The evidence utilization of CHD infants EN effectively promoted nurses’ compliance of evidence-based practice, improved the health status of infants with CHD and optimized clinical practice environment. Filter the evidence, address recipient-centered measurements, analysis the advantages and disadvantages of local and organizational context, activate the facilitators or facilitating factors are the key strategies to promote the successful evidence utilization.

Keywords
Congenital Heart Disease, Enteral nutrition, i-PARIHS
Evidence based care barriers, knowledge and perceptions in Iran: A systematic review

EBM in Iran

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Background: Evidence-based care is the integration of clinical knowledge, patient values, and the best research evidences into the decision-making process for patient care. The current study aimed at systematically review the barriers, knowledge and perception of evidence based care in Iran.

Methods: A systematic search was conducted by a professional librarian with skills in informatics by searching electronic databases of PubMed, Medlib, Magiran, SID, CINAHL, Google Scholar, and Iranmedex using the following key words: evidence-based care, evidence-based, evidence-based education, evidence-based nursing, evidence-based practice, evidence-based medical, evidence-based activity, applying research results, research application, and their combinations with the key words of awareness, function, obstructions, knowledge, facilitators, perception, and Iran.

Results: Initial searches from all sources identified 819 references of which finally 25 articles were selected. Lack of time, facilities, and skill in research methods were the most important barriers of evidence-based practice. The most important information sources used were reference books. The results indicated that familiarity with specific terms of evidence-based practice was low (44.22%). The level of awareness, knowledge, and evidence-based performance was less than 50.0%. From providers’ point of views, scientific, qualified and patient-oriented care, and considering service quality were the main concepts of evidence-based practice. Positive effects of interventional studies were shown in improvement of evidence-based care.

Conclusion: Based on this systematic review, weak knowledge and attitude, and lacking time were the most significant barriers of considering and applying evidence-based care in Iran. More precise planning and encouraging policies are needed for improving this defects.

Keywords EBM, barriers, knowledge, perceptions, Iran
**Blurred lines: Differentiating between the transfer and implementation of evidence into practice**

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**Background:** The goal of evidence-based healthcare (EBHC) is for health professionals and policy makers to improve patient outcomes by making well-informed decisions that are based on rigorous forms of evidence. Once evidence is synthesized it needs to be transferred and subsequently implemented into practice but how distinct are these two stages in the EBHC cycle and can we clearly delineate between them?

**Aim:** To discuss the boundaries between evidence transfer and evidence implementation in relation to the Joanna Briggs Institute (JBI) Model of EBHC.

**Methods:** A review of the literature including the examination of theoretical underpinnings related to the transfer and implementation of evidence was undertaken. The review was subsequently submitted and accepted for publication.

**Results:** The crossover between the transfer and implementation of evidence in terms of their role and the methods used to undertake them is evident however we argue there are some boundaries that can be established and instead they should sit on a continuum. This recommendation is strengthened by aligning our Model with the work by Nutely’s et al. Rogers’ diffusion of innovations theory and Glasziou and Haynes evidence pipeline model.

**Conclusions:** The transfer-implementation continuum of evidence proposed by the JBI offers additional insight into the complexities associated with ensuring evidence is used in practice.

**Keywords**

transfer, implementation, health care, evidence-based, JBI
The experience of hope in patients with spinal cord injury

A systematic review of qualitative evidence
Hope in patients with SCI

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Background: Spinal cord injury is a devastating and life-changing event. It typically leads to permanent neurological injury and disabilities. Furthermore, SCI affects not only a person’s physical function, but also their mind-body wellbeing. The experience of hope is activated via the suffering, loss, stress and life-threaten.

Objectives: The objective of this review is to identify through the best available evidence, how patients experience SCI worldwide.

Methods: Using a three-step search strategy, the databases PubMed, CINAHL, ProQuest, JBI, SCOPUS, Web of Science, Google Scholar, CESP, and Airiti Library were searched to identify both published and unpublished articles from 1960 to 2017. Studies published in languages other than English and Chinese were excluded. The Joanna Briggs Institute Qualitative Appraisal and Review Instrument (JBI-QARI) data extraction form for interpretive and critical research was used to appraise the methodological quality of all papers.

Results: Six papers met the inclusion criteria. Sixteen categories were aggregated and five meta-synthesis were derived: (1) awareness of uncontrolled body, (2) fall into despair, (3) encounter between hope and despair, (4) never extinguished hope, and (5) I can: full of hope.

Conclusion: Hope represents the resilience of patients with SCI. Patients with SCI experienced loss of control of their body under the intertwine between despair and hope, as well as recognized a whole new Body. Learning love, positive belief, will and responsibility helps to instill hope in patients with SCI and permits their life to move forward along new directions.

Keywords: Hope, spinal cord injury, qualitative research, meta-synthesis
Nurses experiences in end-of-life care in PICU: a systematic review of qualitative evidence

End-of-life care in PICU

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Background. Dying children and their families have unique palliative care and hospice care needs. Pediatric end-of-life care entails challenging tasks for nurses.

Objective: The objective of this review was to identify, through the best available evidence, the nature of nurses experience in end-of-life care in PICU.

Search strategy: Using a three-step search strategy, databases were searched to identify both published and unpublished articles from 1970 to 2018. The search was conducted using CINAHL, PubMed, Ovid MEDLINE, ISI Web of Science, and PsychINFO for qualitative studies expressing the voice of nurses experiences in end-of-life care in PICU. The review was restricted to studies published in English and Chinese.

Methodological Quality: All studies that met the inclusion criteria were assessed by at least two independent reviewers for methodological quality using a standardized critical appraisal tool from the Joanna Briggs Institute Qualitative Assessment and Review Instrument (JBI-QARI). Qualitative data were extracted using the JBI-QARI. Findings were pooled using JBI-QARI. Findings were rated according to their level of credibility and categorized based on similarity in meaning and then were subjected to a meta-synthesis.

Results: The five meta-syntheses were: challenge of end-of-life care, leaning to be strong and get rid of sorrow, listening to child’s perception of death, nurses’ cohesion, and assist families participating into end-of-life care.

Conclusion and implementation. Enhancement and integration of end-of-life care represents an important opportunity for improvement in the PICU. Providing child center care and family oriented care important in the end-of-life care.

Keywords Experience, end-of-life care, nurse, PICU, qualitative systematic review
A Patient-Clinician Partnership to Set Research Priorities for Hyperemesis Gravidarum

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Background: Hyperemesis Gravidarum (HG) is a serious complication of pregnancy characterized by extreme nausea and/or vomiting, affecting around 1-2% of pregnant women. HG has long been considered self-limiting and harmless, denying the negative effect on women’s quality of life. The limited research conducted is largely heterogenous, leaving uncertainties relevant to patients and clinicians. Furthermore, treatment studies have been hampered by fears of exposure to pharmacological agents in pregnancy. This project seeks to address these uncertainties, encouraging researchers to produce clinically valuable answers to the most pressing questions.

Objectives:
1. In collaboration with patients and clinicians, identify uncertainties about HG treatments/management which have not yet been adequately answered by existing research.
2. Determine by consensus a prioritized list of those uncertainties, to guide future research.
3. To publicize the results among researchers, commissioning bodies and the public in order to stimulate research in these areas.

Methods: An international HG Priority Setting Partnership representing patients and clinicians has been established and will follow the established James Lind Alliance (JLA). A steering group consisting of patients and clinicians will recruit stakeholders (patients, their carers and professionals of all relevant medical disciplines) to complete an online survey to gather uncertainties. Questions will be formatted and checked against existing evidence. True uncertainties will then be prioritized.

Outcomes: By following the protocol a prioritised list of uncertainties relevant to both patients and their clinicians will be identified which can inform the international HG research agenda, funders and policy makers.

Keywords Hyperemesis gravidarum, research priorities, patient clinician collaboration
Consumer involvement in the development of evidence-based point of care resources in cancer care

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Background: The JBI Cancer Care Specialty encompasses the development of evidence-based point-of-care resources to support the provision of best clinical practice and improved consumer outcomes. Consumer representatives are engaged in identifying priorities for new resources and ensuring their appropriateness.

Objectives: This paper describes the approach and impact of working in partnership with consumer representatives and offers suggestions to health professionals working in similar fields.

Methods: The authors describe and reflect upon work carried out around ensuring meaningful, systematic consumer involvement in the JBI Cancer Care Specialty with supporting examples and lessons from broader work around consumer engagement.

Results: Successful, evidence-based consumer partnerships are based upon establishing and maintaining trusting, respectful relationships, common understandings, and shared goals. Consumers can be involved in the development of evidence-based resources across the entire trajectory; from conceptualization of topics of importance to ensuring that the wording of recommendations for practice is appropriate and adequately foregrounds the consumer’s perspective and preferences. Ways of successfully working with consumers in the development of evidence-based resources are offered.

Conclusions: Working with consumers is a critical step for clinicians and researchers and constitutes best-practice in the co-creation of high quality, valued research and information priorities and resources. Token consumer engagement and unidirectional information flow is no longer acceptable. Superior resources are developed when legitimate, meaningful and coordinated partnerships are established with consumers from project inception through to publication.

Keywords Health consumer, Evidence-based, Cancer, Consumer involvement, Healthcare resources
Experience-based co-design in acute care settings - patient and staff perspectives driving change: a scoping review

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**Background:** Evidence supports incorporating consumer experience into healthcare service design and delivery to positively influence a range of outcomes for both patients and the organization. Experience-based co-design (EBCD) is recognized as an effective method for gathering powerful data from patients and staff regarding their interactions and driving change within a healthcare service.

**Aim:** The aim of this scoping review was to examine and map the qualitative and quantitative literature on EBCD, specifically in the acute care health context.

**Methods:** This scoping review, utilizing the Joanna Briggs Institute methods, included an extensive search of the databases for published and unpublished literature. The review considered any type of quantitative, qualitative or mixed methods research evidence for inclusion. Each included study was assessed by two independent reviewers and data was extracted from included papers using a standardized data extraction tool.

**Results:** The studies summarized in the review highlight the current scope of research in this area. Specifically the review provides information on: how EBCD is defined within the literature and how this methodology differs from other types of similar approaches to consumer engagement such as co-production, patient-centered care, and family-centered care. The review also summarizes the outcome measures used by studies undertaking the EBCD methodology. Furthermore, areas where research is lacking have been identified and recommendations for research and clinical practice have been made.

**Conclusions:** This review provides recommendations on the benefits of EBCD methodology for acute care health services including the long-term impact of EBCD on consumers, patients, staff and organizations.

**Keywords** Experience-based co-design, EBCD, acute care, scoping review
Introduction: In recent years, research has uncovered sex differences in pain in a variety of conditions. Pain is common in patients with multiple sclerosis (MS), a condition with a higher prevalence in women than in men. In the Czech Republic (CR), research concerning pain experience in females with MS and, specifically, their subjective preference of pain scales is lacking.

Aim: To determine convergent validity of three self-report pain intensity scales and their subjective preference in Czech women with MS.

Methods: Females with MS rated their pain intensity using three self-report pain scales: the Numeric Rating Scale (NRS), Visual Analog Scale (VAS), and Faces Pain Scale-Revised (FPS-R). Following this task, they ranked their preference of the scales according to their usability. Pain intensity was compared and convergent validity determined using Spearman's rank-order correlation ($r_s$).

Results: 43 female patients with MS receiving ambulatory or inpatient care in the neurological department of a regional hospital were enrolled (average age: 46.9±13.5 years; average time since diagnosis: 9.5±7.1 years). The correlation coefficient among the scales ranged from 0.812 ($p<0.01$) between NRS/FPS-R to 0.913 ($p<0.01$) between NRS/VAS. FPS-R ranked first most often (n = 22; 51.2%), followed by VAS (n = 11; 25.6%), and NRS (n = 10; 23.3%).

Conclusion: The results suggest that of the three pain intensity scales, the FPS-R could be the most suitable for use in Czech women with MS as it was preferred the most frequently; its convergent validity with the other two scales was high.

Keywords multiple sclerosis, pain scale, preference, convergent validity
Primary food care as a treatment for chemotherapy-induced taste alterations

A phase-one pilot study of a complex intervention

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Flavor perception is a consequence of the detection and processing of gustatory, olfactory and trigeminal stimulation. Alterations in taste are one of the most common distressing side effects noted in cancer patients receiving chemotherapy. Moreover, the nature of taste and smell changes varies among cancer patients during chemotherapy. The aim of this study was to demonstrate the short-term effects of the consumption of self-baked bread, the recipe for which was based on the individual food hedonics profile of patients suffering from chemotherapy-induced taste disturbances (CITD). This clinical trial was a first-phase pilot study in a complex multi-phase intervention and was conducted in an outpatient chemotherapy unit of a large university hospital in Belgium. A total of 64 patients were divided into a bread-baking group (BBG) and a control group (CG) according to patients’ preferences. The follow-up period was three weeks. The consumption of self-baked bread tended to positively influence BMI and quality of life. Patients from the intervention group lost less weight (BBG mean 25.2 vs 25.1 p.95 after intervention; CG 25.9 vs 24.1 p.86). They reported being less nauseous and being suffering less from obstipation and reduced appetite. This resulted in better overall wellbeing among patients in the intervention group (BBG mean 50.8 vs 51.3 after intervention p.25; CG 52.1 vs 47.8 p.23). Barriers that should be considered in phase two include withdrawal, the Hawthorne effect, waiting times and communication issues.

Keywords Primary food care, oncology, taste alterations, chemotherapy, complex intervention
The transition path from Clinical Practice Guidelines to patients’ guidelines

A case study of high-risk patients with diabetic foot

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Background: With the further development of evidence-based medicine, it has greatly promoted the transformation of evidence to clinical practice. As the bridge between evidence and practice, the Clinical Practice Guidelines (CPG) provide scientific and valid recommendations of effective intervention for medical staff in clinical decision-making. However, the CPG is too professional and difficult for other non-professionals to understand, which has resulted in patients failing to obtain the best evidence of the treatment and care of disease, meanwhile a large number of guidelines cannot be fully utilized. Therefore, how to transform CPG into patients’ guidelines is particularly important.

Objective: To explore the transition path from CPG to patients’ guidelines and provide best evidence on basic treatment and nursing for patients.

Methods: In this study, we took the adaptation and construction of patients’ guidelines for high-risk patients with diabetic foot as an example. Under the guidance of the guideline adaptation method, we systematically searched the existing CPG of diabetic foot related based on the problems and needs that patients concerned greatly. Afterwards we used the AGREEII system to evaluate the quality of these guidelines, and then selected and integrated the recommendations from high-quality guidelines. Finally after the experts review, we used a multiform and easy-understand manner that patients prefer to construct the patients’ guidelines.

Conclusion: The adaptation of CPG to patients’ guideline has formed high quality evidence resources and provides reliable evidence support for patients and other lay-professionals.

Keywords clinical practice guideline, patients’ guideline, evidence-based, patient-centered, foot self-management
Background: Healthy education is one of the essential therapeutic methods for Diabetes Mellitus. The effective healthy education of diabetic patients can not only help patients to identify the disease of foot early. At the same time, it can prevent the occurrence and development of foot ulcers. However, at present, the healthy education that majority of patients with high risk of diabetic foot received is seldomly involved the scientific and systematic foot care. Moreover, the method of education is still based on traditional one-way indoctrination, which can not be targeted to solve patients' needs. Therefore it is urgent to find a effective method to help patients improve their ability of foot management.

Objective: To combine the LEARNS model with the healthy education of diabetic foot, and explore a appropriate and systematic method.

Methods: The LEARNS model in the best practice guideline of Facilitating Client Centred Learning that developed by RNAO, put forward a scientific and systematic education procedure through six implementation steps. In this study, we focus on the main position of patients in each link and fully consider the interaction among the nurses, patients, knowledge and environment, the four major factors during the education. On the basis of this, we combine the six steps of the LEARNS model with the patients' needs and preference, and finally form the systematic education method for the patients with diabetic foot.

Conclusion: Applying the LEARNS model to healthy education of diabetic foot will provide a scientific and effective way to improve patients' self-management ability.

Keywords healthy education, LEARNS model, evidence-based, patient-centered
Evaluating what we intend to reach? Children’s quality of life in a palliative context

Searching for valid indicators of quality palliative care for children and their families

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Background: Paediatric palliative care (PPC) is delivered in Belgium through 5 paediatric liaison teams (PLT). PPC aims to promote quality of life (QoL). However, validated short instruments available in French and able to capture QoL in a family-centred and holistic approach, are still lacking. Measuring QoL is challenging due to heterogeneity in age and disease; lack of consensus on when PPC starts; and legal/ethical requirements involved in researching children.

Objectives: to analyse from the perspective of children, parents and health care professionals, the relevance, feasibility and acceptability of the new French version of the APCA-Children’s Palliative Outcome Scale (CPOS).

Methods: After a cross-cultural validation of the English version of the CPOS into a French version, a pilot-test was started among children and their parents, at one PLT in Belgium. The added SEIQoL interview guide and QOLLTI-F verified the completeness of dimensions covered by the CPOS. Focus groups and think aloud protocols among PLT were performed.

Results: 6 children (8-18 years) and 9 parents participated. Social interactions of children did not seem to be sufficiently identified by the CPOS. Overall feasibility and acceptability of the other instruments were observed, except for the SEIQoL which could not be used among children with severe cognitive impairment. PLT showed strong interest to implement outcome measures for evaluating the quality of care provided.

Perspectives: Further pilot-testing of CPOS is requested before extended multi-centric field-testing.

Keywords
Children; Palliative care; Patient-reported outcomes; Quality indicators.
Implementation of a Peripheral Intravenous Catheter Care Bundle to Reduce the Incidence of Phlebitis

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**Background:** One major complication associated with peripheral intravenous catheter cannulation (PIVC) is phlebitis, resulting in delay of treatment, increased healthcare costs and prolonged hospitalisation.

**Objectives:** To evaluate the effectiveness of a standardised PIVC Care Bundle in increasing the compliance of phlebitis assessment; and reducing the incidence of phlebitis.

**Methods:** The project was conducted in 3 medical wards in a Singapore hospital, using a pre- and post-implementation audit approach, as well as using the Joanna Briggs Institute (JBI) Practical Application of Clinical Evidence System (PACES) and Getting Research Into Practice programme. The project included PIVC care bundle and education on the implementation of PIVC care bundle was carried out in three phases from June 2017 to December 2017. An audit tool comprising four criteria from JBI PACES was utilised.

**Results:** The one month post implementation audit results achieved 30% to 90% and and the 3-month post-implementation results achieved 81.1% to 96.7%. The findings revealed moderate to significant improvement in criteria 1, 2 and 4 ($p<0.001$) but no significant improvement in criteria 3 ($>0.05$) However, the 6-month post-implementation audit achieved 76% to 100% showing significant improvement in all 4 criteria ($p<0.05$). Phlebitis incidences increased in the first month of implementing the PIVC care bundle and subsequently significantly decreased from the second month onwards.

**Discussion:** The initial increase in phlebitis rates could be attributed to the care bundle facilitating prompt identification of phlebitis. A longer implementation period may be useful in ascertaining the effectiveness of PIVC care bundle in reducing phlebitis rates.

**Conclusion:** This project showed the implementation of a standardised PIVC care bundle significantly enhanced compliance on phlebitis assessment and reduce phlebitis rates. Having a system incorporated into the nurses’ care processes enable prompt assessment, early identification and more accurate reporting of phlebitis. The pre- and post-implementation audits are helpful in monitoring the uptake of the new practice.

**Keywords:** phlebitis, prevention, JBI, evidence-based
Strengthening Health Systems by Integrating Evidence Based Clinical Audits into Primary Health Care Practice

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Background: Health systems in LMIC have significantly improved from Alma Ata and further so after the Bamako initiative for Africa. Structured to have the district health service as an operational level, they still face challenges with evidence implementation, making them less effective than should be.

Objective: To increase the cost effectiveness of getting research into practice for the treatment of malaria in children under 5 years of age in Cameroon by integrating the JBI GRiP (Getting Research into Practice) approach.

Methods: This evidence-implementation project used the JBI Practical Application of Clinical Evidence System (PACES) and Getting Research into Practice (GRiP) audit and feedback tool. The PACES and GRiP framework for promoting evidence-based healthcare involved three phases of activity: Phase 1: Stakeholder engagement and baseline audit data collection with identification of barriers to implementation; Phase 2: Design and implementation of strategies to improve practice through Getting Research into Practice; Phase 3: Follow-up audit post implementation of change strategy. A cost effectiveness ratio analysis for integrating the JBI approach in LMIC was calculated.

Results: We reached 3 health facilities within the Bali Health District over a one-year period. Cost ratios calculated showed reduced costs of $1,577/health facility with evidence implementation compared to $4,731/health facility if the single clinical partner approach was used.

Conclusion: This approach exploits the existing health system and significantly strengthens the health system with evidence-based practice which improves the quality of care. The DHS approach facilitates systematisation, ownership and sustainability within healthcare systems in LMIC.

Keywords: Healthcare, evidence based, cost effectiveness, JBI
Analysis of the Clinical implementation of TCM Nursing Scheme for Stroke with PARIHS Framework

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Objective: To understand the clinical nursing staff's view and experience of using TCM nursing program in stroke by interview.
Methods: Determination of interview outline based on PARIHS Framework and Clinical investigation. A sample of first-line nurses, head nurses and hospital project leaders were interviewed by objective sampling. For the analysis of the collected data, we refer to the Colaizzi seven-step analysis method and the generic analysis method. Finally, the core elements and specific contents of the PARIHS framework are used to classify and integrate all the codes to form a theme.
Results: A total of 20 nurses were interviewed. A total of 107 codes were obtained, and 10 categories were collected and analyzed. The 3 categories about the content of the program: it is different from the nursing experience, it does not focus on the patient's will, and it does not match the clinical work situation. The 2 categories about the implementation aspects of this program: the implementation type is task-oriented, implementation process stereotype is not combined with clinical practice. 5 categories about the scheme application experience: it promotes the level of TCM nursing work and cultural atmosphere, stimulates the enthusiasm of clinical application and research of TCM nursing, promotes the medical communication and cooperation, and lacks the way of regulation and control based on clinical practice, application effect evaluation is unreasonable.
Conclusion: The implementation and application of the program is still in the exploratory stage, and the mode of implementation is generally task-based, and nurses call for the introduction of flexible and efficient application and extension methods.

Keywords
Interviewing method, TCM nursing program, Clinical implementation, PARIHS framework
Evidence from Implementation Science: behavioural approaches, audit and feedback

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**Purpose:** The purpose of this project was to establish the degree to which the Theoretical Domains Framework domains are reflected in published Joanna Briggs Institute implementation reports, and to determine whether evidence based clinical audit has an implicit conceptual basis in the behaviour theory which has not previously been identified.

**Basic Procedures:** Joanna Briggs Institute implementation reports published between January 2016 and July 2017 were tested against the core definitions for each TDF domain or subconstructs. Grounding between the JBI Levels of Credibility and the available textual data was also assessed.

**Main findings:** Frequently reported domains within the implementation reports were goals, knowledge, social/ professional role and identity and environmental context and resources. Domains with less coverage included emotion, optimism, memory, belief about consequences and intentions.

**Principle conclusions of the study:** There is clear evidence of behavioural theory domains and constructs in published Implementation Reports. Specific areas of theoretical domains framework and the frequency of reporting relevant to the context of the implementation reports were identified in the reports. The most frequently identified domains and concepts demonstrated characteristics of pragmatism and appeared to fit within the usual operational boundaries within the realm of a clinician. Conversely, the least frequently identified domains and concepts were categorised as subjective, and less tangible to the day to day practice of clinicians.

**Key words** Behaviour-theory, implementation science, audit and feedback
A systematic review of indicators used to evaluate evidence-based nursing implementation in Mainland China

Fifteen years development

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Purpose: The purpose of this study was to summarize indicators used to evaluate evidence-based nursing implementation in Mainland China and to identify appropriate quality indicators.

Methods: A systematic review was performed on existing literature of implementation studies conducted in nursing context in Mainland China. After systematically searching eight (four Chinese and four English) databases, data from the included studies was extracted and analyzed.

Results: Ninety-five articles met inclusion criteria, including twelve randomized controlled trials, twenty-four before-after trials, nine historical controlled trials and fifty case reports. Four types of indicators were reported, involving patients, caregivers, healthcare providers and healthcare system. Patients related indicators were most popular (94.7%), especially disease related outcomes (89.5%), and others were biochemical index (10.5%), knowledge (6.3%), behavior (6.3%) and satisfaction (7.4%). Seventeen studies (17.9%) used healthcare system related indicators-compliance of criteria. Healthcare providers related indicators were used in twelve studies (12.6%), which included knowledge (8.4%), attitude (2.1%) and behavior (5.3%). Caregivers related indicators were reported in seven studies (7.4%), and the indicators were satisfaction (5.3%), knowledge (1.1%) and treatment decision (1.1%) respectively. In the first five years, only patients related indicators were used. Caregivers related indicators were reported in the second five years. Researchers began to use healthcare providers and healthcare system related indicators in the last five years.

Conclusions: A comprehensive evaluating indicators system should be developed, which include at least patients, caregivers, healthcare providers and healthcare system related indicators. More indicators should be used to better evaluate evidence-based nursing implementation, such as economic indicators.

Keywords evidence-based nursing, implementation, evaluation, indicator, China
Clinical audit of patient education in Children hospital of Tabriz, Iran

Clinical audit of patient education

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Aim: This study was conducted to audit the compliance of patient education in NICU and infants ward of Children hospital in Tabriz, Iran with the JBI standards.

Methods: JBI criterion in patient education used in this study include eight components. After auditing the patient education process for the first time, some interventions were designed and implemented and then the process was re-audited. Eighty patient attendants were participated in this study (40 before and 40 after intervention). Descriptive statistics and McNemar test were used to describe the results and compare the degree of compliance before and after the interventions.

Results: Compliance degree of nursing education, appropriate teaching strategies, and condition relevant patient education were 90, 95 and 97%. An individualized teaching plan based on patient’s needs and evidence-based educational resources were both 85% compliant with standards. Evaluation of patient learning, patients’ learning needs assessment, and availability of different educational resources in wards were less compliant with the standards (65, 55 and 32.5% respectively). Interventions including publishing written handouts, brochures, and links to online materials; and holding one training session for nurses in order to learn about patient learning assessment and evaluation were implemented in the two wards. After implementation of these interventions, compliance degree of three latter components was improved to 77.5, 62.5 and 67.5% respectively (significant in the availability of different educational resources P=0.018).

Conclusion: The improvement in one of the components was significant after intervention. We need other interventional strategies to bridge the gap between standards and current situation.

Keywords Clinical audit, Patient education, Children hospital
Employee satisfaction measurement is one of the quality management standards in the Czech Republic

The results of employee satisfaction survey in an acute care hospital

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The measurement of employee satisfaction and patient satisfaction are the quality management standards for acute care hospitals under law in Czech Republic. Assessment of satisfaction and finding incentives for engagement of employees should be a standard tool of human resources management. In healthcare organizations, satisfied and engaged employees are a guarantee of quality health care. The way leads through satisfied employees to satisfied patients, who are the main subject of interest of medical facilities. Organizational culture has a significant influence on the employee satisfaction and engagement. It is a task for the management to create a healthy organizational culture, conditions for effective communication, increase employee loyalty and motivate employees to achieve good results. This paper presents a part of the results of the satisfaction survey in a selected acute care hospital in the Czech Republic. The survey included 1 564 respondents. Data were obtained using anonymous questionnaires. These questionnaires contained six domains of stimulants involved in the creation of job satisfaction. The paper provides information on the average value of individual domain ratings and about relations between all domains expressed by Spearman’s correlation coefficient. The survey also shows the differences between doctor and nurse assessment.

Keywords Health care, quality management, engagement
Reflection on implementing evidence-based nursing in Mainland China

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Although evidence-based nursing is widely recognized as the foundation for quality care, it remains unclear how evidence is implemented in various practice contexts. As the world’s largest developing country, Mainland China has embraced evidence-based nursing for more than sixteen years. Therefore, it is essential to contribute to the global knowledge by exploring the Chinese cases of evidence implementation in nursing practice.

A grounded theory study using unstructured in-depth individual interviews was conducted with 56 participants involved in 24 evidence-based nursing implementation projects in Mainland China. Then, a qualitative secondary data analysis was conducted on 15 transcripts of interviews of nurse managers from the parent grounded theory study. A model with the core “Taking Root” was developed to describe evidence implementation in nursing practice in Mainland China. This model included three components, i.e., the evidence implementation process, influencing factors and Chinese nursing managers’ leadership practice to promote evidence implementation.

Throughout this study, four important lessons have been learned from the Chinese cases. The first one is about taking a continuous, systematic, dynamic, and integrative perspective to look at evidence-based nursing implementation. The second one is related to the further exploration of core elements in evidence-based nursing, i.e., the interaction between evidence and nurses’ expertise, the involvement of patients, the influence of context. The third one deals with the role of leadership in evidence-based nursing implementation. The fourth one is about the influence of Chinese culture on implementation of evidence.

Keywords China; Evidence-based practice; Evidence implementation; Nursing
Using knowledge transfer as a foundation to teach implementing best practices and research

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Knowledge transfer has been identified as an essential component to develop knowledge in nursing. Curriculum alignment serves as the action plan and drives what is taught. In nursing education many factors and values play an integral role in this process. One such influence is the increasing prevalence of EBP in clinical practice. Therefore, it is essential that nursing programs prepare students to meet these future demands and become champions of implementing best practices and research. Using both the cognitive and interpersonal processes of knowledge transfer in both course and assignment design can be a relevant way to teach students skills for implementing best practice and research in the clinical setting and in future practice. This presentation will examine the cognitive and interpersonal processes of knowledge transfer embedded in a graduate level course; including curricular alignment, course design and assignment development. In addition, student insights will be shared related to the impact of the course on learning outcomes.

Keywords Knowledge transfer, evidence-based practice, course design, curriculum alignment
Learning about Evidence-based Practice through an Arts-based Multimedia Presentation


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**Background:** Despite the expectation that nurses use research to provide excellent patient care, undergraduate students are challenged to recognize the value of evidence-based practice (EBP). Experiential and engaging approaches are needed to deepen nursing students' understanding of EBP and assist with connecting research to practice. To address this need, we implemented an innovative assignment in which students create an arts-based Multimedia Knowledge Translation Presentation (MMKT) to effectively communicate systematic review findings to a target patient population.

**Objectives:** The purpose of our mixed-method study is to evaluate the impact of the MMKT assignment on nursing students' satisfaction, learning, and anticipated behavior changes regarding EBP and to assess what factors influence their evaluation of the assignment. In this presentation, we will describe this novel assignment and share the preliminary findings from our ongoing study.

**Methods:** Guided by the Knowledge-to-Action Framework, students work in small groups to develop and present the assignment. Kirkpatrick's Evaluation Model and Groff's Theory of Whole-mindedness provided the theoretical framework for our study. Our study includes a quantitative cross-sectional survey and qualitative focus groups. We are recruiting nursing students from two baccalaureate programs. Quantitative data are being analyzed with descriptive statistics and a multiple generalized linear predictive model. Qualitative data, including focus group, field notes, and open-ended survey responses, are being analyzed with content analysis to identify salient themes.

**Conclusion:** Creative approaches hold potential to deepen students' understanding of EBP. These findings will provide important insights into how the MMKT assignment impacted students' learning to inform future pedagogical initiatives.

**Keywords** teaching and learning, evidence-based practice, knowledge translation
Knowledge translation across a health science faculty

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**Background:** For health care professionals to be ready to ‘use evidence and improve lives’ they must be equipped with the knowledge, skills and tools of evidence-based healthcare. The challenge is to ensure that all involved from knowledge creators to knowledge users have a shared understanding of all facets of translational science (TS) and knowledge translation (KT).

**Objectives:** To map TS/KT learning and teaching activities across a health sciences faculty at undergraduate and postgraduate levels. Establish a baseline to consider; coverage of all the elements of TS/KT, uniformity of the teaching across disciplines, the potential for increased inter-professional learning and articulation of learning through undergraduate and postgraduate programs.

**Methods:** All coursework programs from Dentistry, Medicine, Nursing, Psychology and Public Health were examined for content related to TS/KT. Coordinators were interviewed and a content analysis conducted using curriculum documents to identify and map the various elements of TS/KT. The analysis was guided by a model developed by a faculty wide task force

**Results:** Of 352 courses (32%) contain some TS/KT content. Only 10 courses had a primary focus of TS/KT. The most common elements of TS/KT taught were problem identification and knowledge creation (26% of courses containing any TS/KT content). The least common elements were implementation (13%) and evaluation (8%).

**Conclusions:** There needs to be an increased emphasis on teaching health sciences students the practical aspects of implementing and evaluating evidence based practices. This should occur within the context of inter-professional learning.

**Keywords**
Translational science, knowledge translation, education, health sciences.
Strategies for implementation and dissemination of first aid guidelines

The example of sub-Saharan Africa

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Background: The Belgian Red Cross (BRC) develops evidence-based first aid and prevention guidelines for laypeople, not only for the Belgian context, but also for other regions, such as India, Nepal and Sub-Saharan Africa.

Guideline development: A first aid and prevention manual for Sub-Saharan Africa (African First Aid Materials) was developed in 2011 and updated in 2016. The guideline is developed according to the principles of Evidence-Based Practice. The Centre for Evidence-Based Practice (CEBaP) of the BRC searched for the best available scientific evidence. The preferences and available resources of the target group were taken into account by CEBaP and by the International Department of BRC. An African expert panel discussed and validated the draft recommendations and materials, and formulated good practice points where evidence was lacking.

Implementation and dissemination: The materials were adapted to the target group: the different conditions in the guideline are classified according to most important signs for easy recognition; the texts and illustrations include youths, adults and elderly people from multiple ethnic and religious backgrounds and all illustrations were checked for clarity in a pilot study; the manual was translated in different languages (English, French, Portuguese). The manual is digitally available which helps the local societies to develop their own first aid manuals, first aid courses, posters, slides or flipcharts. An illustrated example of how Zambia used the African First Aid Materials to develop didactic materials adapted to the local context and to train first aid trainers and volunteers will be presented.

Keywords: First aid, evidence-based guideline, implementation
Clinical audit of informed consent in Children hospital of Tabriz, Iran: What are the barriers and interventions to improve the process?

Clinical audit of informed consent

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Background: Informed consent is an ethical and legal requirement for all clinical interactions between a physician or nurse and patients and forms part of their duty of care.

Aim: This study was conducted to audit the compliance of obtaining informed consent in ENT and surgery wards of Children hospital in Tabriz, Iran with the JBI standards and recognize the barriers and interventions to improve the process.

Methods: Standards of JBI consisted five components. Based on the results of audit, some interviews with key stakeholders were conducted to recognize the barriers and interventions to improve non-compliant areas. Forty patient attendants and 12 stakeholders were participated in the audit and interview phases of study respectively. Descriptive statistics were used to describe the results of audit phase. Interviews were transcribed and analyzed using thematic analysis.

Results: Compliance degree in three areas of providing information about alternative treatments, consequences of treatments, and nature and effect of treatments were 37.5, 40, and 52.5%. Based on the findings from interviews, important barriers of non-compliance in these areas include lack of time, lack of knowledge and literacy in patients, lack of motivation in the public sector and above all lack of organizational culture support. Also interventions include behavioral change such as encouragement, and changing organizational culture in the hospital over time.

Conclusion: We need other interventional strategies to bridge the gap between standards and current situation. Also the change in degree of compliance after interventions should be assessed in order to observe the impacts of interventions.

Keywords Clinical audit, Informed consent, Children hospital
Pilot-testing the GUIDES checklist to develop tailored computerized decision support for knee osteoarthritis

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We systematically developed the GUIDES checklist to support professionals to implement computerized decision support (CDS) successfully. The checklist contains four CDS domains with 16 factors: context, content, system and implementation. To pilot the checklist, we developed tailored CDS for knee osteoarthritis. The objective was to evaluate the performance of the checklist and to identify the most important factors for successful implementation of this CDS intervention.

We organized six focus groups with 22 patients and 8 general practitioners (GP), two focus groups each in Norway, Belgium and Finland. At the start of the focus group, we presented the concept of a CDS intervention for a hypothetical knee osteoarthritis patient. After that participants discussed and the moderator asked probing questions using the checklist. At the end, each participant prioritized five most important factors for successful implementation. We classified the data according to the checklist by labeling quotes to a specific domain.

The participants identified 59 unique factors that could affect the success of the CDS intervention. Five factors were prioritized in each of the three countries: potential to address the information needs for GPs, potential to address the information needs and demands for patients, credibility of the CDS information, need for personal dialogue about the CDS between the GP and patient and timing of delivery of CDS for patients.

This pilot showed that the checklist could help to identify and classify factors shaping the success of CDS interventions. The checklist may also prevent that important factors are overlooked.

Keywords checklist, decision support, evidence-based, guideline, knee osteoarthritis
Perceptions and experiences on using computerised clinical decision support systems

A qualitative evidence synthesis

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**Background:** A clinical decision support (CDS) is a technology that uses patient-specific data to provide relevant medical knowledge at the point of care.

The objective of this study is to synthesise qualitative research evidence on the perceptions and experiences regarding the use of CDS to support the implementation of recommendations. This study was conducted in close cooperation with the authors of the GUIDES framework, a tool developed to assist professionals when implementing CDS, to further advance the existing framework.

**Methods:** We conducted a qualitative evidence synthesis using studies identified through a previous literature search, reference lists of relevant studies, contacting authors of potentially relevant articles included in a previous meta-aggregation study and suggested articles by Google Scholar and Mendeley. Study titles and abstracts were screened against inclusion criteria. Full articles were assessed for eligibility and sampled based on data richness and relevance. Findings were constructed through a framework analysis using the existing GUIDES framework. Levels of confidence were assigned using the GRADE-CERQual approach.

**Results:** We identified 219 studies, out of these, we included 23 studies in our final sample. 30 findings were constructed and organized using the GUIDES framework. Important findings include that the CDS be easy to use, time efficient and that information about the system is adequate.

**Conclusion:** Findings identified in this study can be used to improve the existing GUIDES framework, in order to guide developers to successfully implement CCDSS in clinical practice. The most important findings will be discussed at the JBI Colloquium 2018.

**Keywords** Clinical decision support system, Qualitative evidence synthesis, GUIDES checklist, Guideline implementation.
Investigating the role of decision support systems in health care: a systematic review

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Background and aim: Decision support systems refer to one of the types of information technology applications that can help clinicians to make right and timely decisions about patients. The aim of this study is to learn more about DSS and their applications and effects on health care.

Methods: In this systematic review, articles which were published between 2000 and 2018, which were available as full texts through databases such as PubMed, The Cochrane Library, Scopus, Embase, and ProQuest, which were also of clinical trials type were examined.

Results: Forty-five studies out of 1112 with inclusion criteria were included in this systematic review. The findings show that decision support systems were applied in five areas in health care, which had a significant effect on improving the process of care and the performance of providers. These areas are as follows: disease progress management, care and treatment, medication, evaluation, and prevention. Of the 28 studies that examined the impact of DSS on improving the quality of patient care, 22 studies had improved the quality of patient care. In 8 studies, the effect of the DSS on reducing the amount of unnecessary diagnostic and therapeutic care was studied, which was effective in all cases of the system. 13 studies also examined the impact of these systems on reducing medical errors, of which 11 were effective.

Conclusion: Decision support systems in clinical practice increase the quality of care, reduce unnecessary diagnostic and therapeutic measures, and reduce medical errors. In general, improvement can be seen in three areas: quality of care and patient safety, cost effectiveness, and provider’s level of knowledge.

Keywords: Decision Support System, Health Information Technology, Health Care.
Development and Evaluation of Clinic Readiness to Evidence-based Nursing Assessment Scale

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Objective To develop a Clinic Readiness to Evidence-based Nursing Assessment (CREBNA) and test its reliability and validity.

Methods Primary item pool of CREBNA was obtained by qualitative interviews and scoping review of PARIHS model. After two rounds of experts’ evaluation, the CREBNA item pool of evidence-based nursing practice readiness was established and formed the questionnaire. The test version was identified by experts’ judgment of the relevance between the items and dimensions in the expected structure and the content validity. Convenience sampling was used and nurses who participated in Evidence Implementation Program were selected as investigators. The dimensions, reliability and validity were tested by exploratory factor analysis and reliability analysis.

Result The CREBNA item pool included 3 dimensions, 36 items. The S-CVI is 0.976. 256 questionnaires were included in the final analysis, the correlations between items and the scale total score ranged from 0.482-0.781, 3 factors were extracted by exploratory factor analysis and labeled as Evidence, Context, Facilitation, explained 62.524% of total variance. The formal scale contained 31 items with the Cronbach $\alpha$ coefficients 0.959 for the scale and 0.915-0.940 for 3 subscales. The test-retest reliability was 0.917 and split-half reliability coefficient was 0.978.

Conclusion It suggests that the CREBNA scale is reliable and valid to be applicable to evaluate the evidence-based practice.

Keywords evidence-based, PARIHS, organizational readiness
Initial perceptions of, and intention to use an online guideline adaptation framework: a descriptive survey

Use of Guideline Adaptation Frameworks, a cross-sectional study

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Aim: The aim of this research was to develop a contextual and demographic profile of potential users and assess perceptions and intention to use CAN-Implement.Pro© as a structured and systematic process for planning evidence implementation.

Methods: A descriptive cross-sectional study was undertaken to capture the demographic characteristics, initial perceptions of, and intention to use CAN-Implement.Pro© software for guideline adaptation.

Results: Only 43% of respondents had taken part in at least one previous implementation project. The majority (67%) found CAN-Implement.Pro© to be well-organised, easy to navigate, and reliable. Most (80%) indicated they would use the software than not. More than half (60%) were very satisfied or satisfied. In terms of evidence informed functionality, 75% of the respondents concluded that the software could assist guideline groups to provide structure for their implementation planning; a similar proportion (75%) indicated that the software would also enhance or improve coordination, communication and logistics management in guideline related implementation projects. Participants were familiar with a range of resources, models, theories and frameworks for implementation, implementation planning and guideline adaptation. The most common frameworks were related to behavioural theories or variations of the PARIHS framework.

Conclusions: Groups consider CAN-Implement.Pro© as a useful tool for implementation planning and are likely to use the software in their future implementation projects. The intention to use CAN-Implement.Pro© were related to the software’s functionality, ease of use and access, and whether it is endorsed by respondents’ organisation or international health-related organisations that advocate evidence-based healthcare.

Keywords ICT, Implementation, evidence-based guidelines
HIV-infected adults and health care providers experiences with health care delivery practices influencing engagement

A qualitative systematic review and meta-synthesis

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Background: HIV/AIDS is a major public health problem that has claimed the lives of more than 34 million people world-wide. Health is optimized by ongoing engagement in HIV care, yet many people living with HIV either don’t enter or fall out of care. This review was conducted to identify, evaluate and synthesize the existing qualitative evidence on the experience and impact of health care delivery on health care engagement for adults infected with HIV in the US.

Methods: Using a three-step search strategy, databases of published and unpublished articles were searched from 1997 to 2017. All included studies were assessed by two independent reviewers for methodological quality, extracted and pooled using JBI SUMARI. Findings were rated, categorized then subjected to a meta-synthesis, then shared and discussed with members of the AIDS Education and Training Center Program to identify strategies for translation into clinical practice.

Results: 1038 articles were identified of which 41 were included after critical appraisal. Meta-synthesis generated four findings: (1) What I want from my provider; (2) I can’t do it alone; (3) Help me to understand; (4) One-stop care.

Conclusions: Findings illustrate clear quality indicators for primary care practice emphasizing the patient-provider-care team partnership, shared decision making, reframing HIV associated misperceptions/myths, helping patients navigate through and interact with the healthcare system and holistic care that takes into account a patient’s whole life, responsibilities and stressors. This presentation will highlight specific quality improvement indicators found to improve engagement of people living with HIV with healthcare services.

Keywords: adults; engagement; HIV/AIDS; healthcare; qualitative
A Systematic Review of the Association between Prenatal Exposure to Environmental Tobacco Smoke and Childhood Obesity

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Background: Research suggests a multifactorial etiology of childhood obesity. These include social and environmental factors such as prenatal exposure to environmental tobacco smoke (ETS). Objective: To determine if prenatal exposure to environmental tobacco smoke increased the risk of obesity and overweight in children.

Method of the review: Cohort, case control, retrospective and/or cross-sectional studies on children of women who were non-smokers, but reported exposure to environmental tobacco smoke during pregnancy were included. Outcomes of interest included weight, height and Body Mass Index of children from birth up to the age of eighteen. A three-step search strategy was used to search for published and unpublished studies in the English language. No search range (years) was set. Two reviewers assessed the studies for inclusion and methodological quality using the Joanna Briggs Institute Meta-Analysis of Statistics Assessment and Review Instrument (JBI MASTARI). Data were extracted by two reviewers independently and entered into JBI-MAStARI extraction tool. Where possible, extracted data were pooled in a statistical meta-analysis based on a random effects model.

Results: Eight studies were included in the final meta-analysis. An association between prenatal exposure to ETS and childhood obesity (OR: 1.905, CI: 1.23-2.94), but not overweight (OR: 1.51, CI: 0.49-4.59) was found. The high rates of heterogeneity between studies, determined by the $I^2$ statistic (97% and 99%, respectively), sanction caution in the interpretation and use of these findings.

Conclusions: Evidence suggests that childhood obesity is associated with prenatal exposure to ETS. Existing policies on ETS should be reviewed and strengthened.

Keywords Childhood obesity, childhood overweight, environmental tobacco smoke, second hand smoke
Outcome evaluation gaps in UK social marketing campaigns focused on infections

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Introduction Social marketing interventions have been valuable in addressing communicable diseases. Outcome evaluation is a critical yet often excluded component of any intervention, hindering implementation. We applied a novel set of evaluation criteria to UK social marketing campaigns focused on infections.

Methods Campaigns between 2001 and 2013 were identified from literature and internet. Two researchers scored each campaign on 13 areas including (1) Understanding of problem and stakeholders; (2) Clear definition of outcome; (3) ‘A priori’ indication of required change for long-term effect; (4) Clear theory/plausibility of intervention mode of action; (5) Outcome measures that meet stakeholder needs; (6) Impact measurement; (7) Acceptability and sustainability; (8) Link between intervention and outcome; (9) Competing factors; (10) Unpredicted effects; (11) Evaluation strategy; (12) Economic analysis, and (13) Peer-reviewed publication. Campaigns received 0, 1 or 2 points depending on how well they conducted or reported on the indicators.

Results 17 campaigns focusing on vaccination, sexual health, hand hygiene and others were identified. Median score for all campaigns was 14.2+/−2 (26 points maximum). Indicators 1 and 5 were best described (score 26; 34 points maximum). The lowest score (11) was achieved for indicator ‘Link between intervention and outcome’. Indicators 3, 7, 10 and 12 were insufficiently or inadequately reported in 88% campaigns.

Conclusion(s) UK social marketing campaigns could improve their reporting of key outcome evaluation aspects, which would aid implementation efforts. Sustainability, economic evaluation and unintended effects of campaigns require increased attention.

Keywords Social marketing, infection, outcome evaluation
Evidence-based removal of neonatal peripheral intravenous devices

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Objective To integrate the best available evidence on the removal of neonatal peripheral intravenous catheter into clinical practice, to improve the quality of nursing, to reduce the injury of peripheral vein and the catheter extubation-related complications, and to improve the normalization of catheter extubation.

Methods The study was performed guided by the standard procedure which was supported by the JBI—PACES programs. Based on the best available evidence, five review criteria were formulated and carried out into routine care in one NICU ward, including baseline audit, evidence implementation, and re-audit. 186 neonatal patients were recruited in the study. Data were collected by using field observation and review of nursing records. Barriers to evidence implementation, available resources and solutions were analyzed. Nurses' compliance with each criterion and catheter extubation-related complications were used to evaluate the effectiveness of evidence implementation.

Results After the application of the evidence, the compliance rate of the four criteria increased significantly. The incidence of venous extravasation was decreased from 31.2% in the baseline audit to 16.5% in the re-audit (P<0.01).

Conclusion The evidence-based quality review program has improved the clinical nursing practice to prevent the catheter related complications, but continuous quality audit is needed to improve the nursing quality.

Keywords Neonatal, evidence-based nursing, best practice, peripheral intravenous, removal
Compassion fatigue (CF) has received increased attention across all disciplines and improving the work life of health care providers has become a priority. Nurse leaders from a tertiary care facility prioritized addressing CF within their strategic initiatives. They partnered with faculty from a JBI center to perform both a quantitative and qualitative systematic review on compassion fatigue asking: what is the experience of compassion fatigue and what is the effectiveness of planned interventions to reduce compassion fatigue. Qualitative findings identified work and professional environment stressors that create a risk for CF, how nurses respond to these stressors, symptoms of CF, and strategies to keep CF at bay. The quantitative systematic review, found that the majority of research on CF looked at prevalence. In examining the limited effectiveness research, it was found that a combined approach using education and self-care was effective. Continuing with the academic-practice partnership, the results from these two reviews were used to design and test an intervention incorporating education and self-care facilitation to prevent CF in new graduates. A pre/post-test intervention design measuring professional quality of life and work satisfaction was proposed. The interventions include monthly seminars aimed to increase awareness of CF, managing stress in the workplace to minimize CF, and development of a self-care/wellness plan. This is being tested with a group of baccalaureate students in their last year of school and a group of new nurse orientees hired by the tertiary hospital.

**Keywords:** compassion fatigue, academic-practice partnership
Clinical and academic partnerships

Closing the research-practice gap in healthcare

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Introduction: Practice based on the best available evidence is central to the improvement of healthcare outcomes for patients as well as improving structures and processes of care for the professions and health care organizations. However, often the gap between research and practice prevents this from occurring. Collaborative partnerships between academics and clinicians play an important role in reducing the research-practice gap. Researchers and knowledge users working together is a powerful combination for practice change but these complex partnerships require a coordinated approach. The Joanna Briggs Institute (JBI) has established a unique program to facilitate academic and clinical partnerships through establishing expert references groups as link-partners to assist in reducing the research-practice gap and enable the implementation of the best available evidence into practice.

Aim: To present the JBI framework for collaborative academic and clinical partnerships for practice improvement within the core activities of the JBI Implementation Science program.

Findings: Academic and clinical partnerships are a core component to the success and functioning of the specialty groups. Key characteristics of the academic and clinical partnership framework will be presented alongside discussion of the practicalities, enablers and barriers of implementing this framework within the specialty groups. The individual and shared role and function of the group will be explored with supportive examples from existing specialty groups.

Conclusion: Incorporating a strategic framework that focuses on collaboration, and where a shared common goal between the clinicians and academics is to improve evidence based practice, can assist with reducing the research-practice gap.

Keywords Implementation, collaboration, best practice
The Role of Facilitation in an Evidence-based Clinical Fellowship Program

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Background: The Joanna Briggs Institute (JBI) offers a clinical fellowship program as part of its strategy to promote evidence-based health care (EBHC). A key aspect of the JBI clinical fellowship program is facilitation.

Objectives: The objective of the study was to identify features of facilitation in a JBI clinical fellowship program that can promote the use of evidence into clinical practice, and to explore the views and perspectives of clinical fellows and JBI facilitators regarding the value of facilitation in EBHC, ‘what works’ and ‘what doesn’t work’ and how the facilitation might be improved to achieve better implementation outcomes.

Methods: A mixed methods study utilising a survey and interviews with purposively selected clinical fellows and JBI facilitators was applied.

Results: The majority of survey respondents were nurses working in senior roles. The survey identified a combination of internal facilitation responsibilities for clinical fellows and external facilitation roles for the assigned JBI facilitator. Major elements of internal facilitation included planning for change, implementing and managing change, and monitoring progress whereas external facilitation was related to capacity building and provision of support and mentoring. Interviews with clinical fellows and JBI facilitators validated the survey findings and identified other facilitation-related activities and strategies to improve JBI’s approach to the clinical fellowship program.

Conclusion: Facilitation in an evidence-based clinical fellowship program is a collaborative effort that involves a set of internal and external facilitation activities. The findings of this study provide preliminary data on how and why facilitation when embedded in a clinical fellowship program can influence practice change.

Keywords Facilitation, Clinical Fellowship, Implementation Science
Exploring the Effects of Current and Future Trends on Evidence Informed Health Policy Making

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In approach of evidence informed health policy making (EIHPM), policy process is a systematic and complex process that uses evidence as well as analysis in all stages of the policy process by different actors. Policymakers always need to analyse various local and global trends to make rational policy decisions and allocate resources in an appropriate direction. In formulating and implementing polices especially in macro levels of health systems policy makers should pay attention to all current and future trends and their effects on their policy decisions. Hence, this study aimed to answer two main questions: first what are the main trends affecting EIHPM and second, what are the effects of trends on EIHPM and their opportunities and threats to EIHPM. The data were collected through face to face interviews with key informants and focus group discussions. During the development of categories and themes, data were coded, memos were analyzed and subthemes and themes were generated. The effects of trends on EIHPM categorized in four main themes including political, social, economic and environmental and 32 subthemes. These trends affect the EIHPM and the policy making approach differently. In terms of the importance, severity, speed and duration of effects, social, technological and economic trends influence the EIHPM more directly than political and environmental trends.

Keywords Evidence Informed policy making, Health system, Global trends
Challenges faced by organizations in the south include finance, politics, capacity, access to evidence and inequity in global health research. Opportunities exist within JBI Networks, evidence ecosystem networks and local development agencies. Strong networks like JBI and eBASE resulted from G-I-N; this highlights how networks could support growth in Africa.

To showcase eBASE coping strategies with barriers encountered during evidence implementation in Cameroon and more existing opportunities within JBI network.

We analyzed our evidence implementation activities to identify barriers and coping strategies from 2012 to 2017. We looked at all components of the JBI evidence wheel with an attempt to highlight how we contribute to global health. We developed logic frameworks and attempted to generalize findings to other LMIC settings. We explored existing opportunities within JBI network based on membership at past JBI convenors meetings, JBI resources, Partner organizational resources, local development agencies resources, ministry of health resources. We extracted qualitative data on opportunities and used these for logic framework development.

We identified 19 evidence implementation barriers. We identified opportunities for creating sustainable collaborations or live bloodlines to organizations in LMIC which can be integrated into healthcare systems with minimal resources. These included 8 capacity building opportunities; 21 collaborative opportunities for funding; 14 partnership opportunities. We developed an innovative tool to measure use of evidence in development projects called the evidence barometer. Use of evidence in our programs improved over the years following JBI support. Based on these findings, more networks within JBI will improve capacity and resources in Africa.

**Keywords** health care, evidence-based, Evidence Barometer, JBI
Methods to reduce the risk of bias in knowledge translation interventions: Protocol of systematic review

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Introduction: Every single piece of activity that tries to fill up the “knowledge to action gap” can be considered as a Knowledge Translation&Exchange(KTE) intervention. Most of the KTE interventions do not have enough compatibility, usually because of the dependency of their effects on the context of studies. Furthermore, different levels of quality over studies can also be responsible for observed heterogeneity between estimated effects of similar interventions. Therefore, application of validated methods to reduce the risk of bias(ROB) can increase comparability over KTE studies, as well as promoting the validity of studies.

Objectives: 1-To describe how different methods (sequence generation, allocation concealment, blinding, incomplete outcome data, selective outcome reporting) were applied to reduce the ROB in KTE interventional studies and 2- To estimate the contribution of the estimated ROB in observed heterogeneity between the study’ estimated effects of KTE interventions in health related issues.

Search: MEDLINE, Cochrane central register, DARE, SCOPUS, ERIC, EPPI and Web of Science. An example of search strategy is accessible here.

Synthesis: A narrative synthesis of the findings from the included studies, structured around the type of the method, type of study intervention/outcome (according to EPOC) and study audience will be provided. An estimation of the risk of each bias(selection bias, performance bias, attrition bias, detection bias) and the overall ROB for every single included study will be provided. The relationship between the intervention/method/audience with ROB will be drown. The contribution of each method to the observed heterogeneity between different studies will be estimated through meta-regression.

Keywords Implementation, evidence-based, JBI, validity
Initiatives to successfully improve the acceptance of Evidence-Based Practice in an aid organisation

The example of the Belgian Red Cross

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The Belgian Red Cross (BRC) is an aid organisation with a wide range of activities, from blood collection over first aid education to international development aid. BRC is a fine example of how the philosophy of Evidence-Based Practice (EBP) can be implemented in all layers of a multi-faceted organisation. Several initiatives have been taken to improve the uptake of EBP within the organization.

Firstly, the uptake of EBP has been incorporated in the long-term strategic vision of the Belgian Red Cross since 2010. A top-down managerial focus on EBP increased the awareness of all employees and volunteers. Newly recruited employees are screened on a positive attitude towards EBP.

Secondly, a Centre for Evidence-Based Practice (CEBaP) has been founded within the BRC in 2009. To date, CEBaP consists of 8 highly trained professionals who are involved with the implementation of EBP.

Thirdly, employees have the opportunity to receive education on the principles of EBP through a blended learning approach, consisting of a newly developed E-learning module (5 sessions, 1.5 h to complete) and a 1.5 h face-to-face moment with CEBaP. Efficacy and acceptance of this approach have been demonstrated.

Finally, monthly journal clubs are being organised for employees of both the blood collecting service and humanitarian services, to gain familiarity with primary research. Employees are stimulated to present and discuss a paper that is of relevance to their field, with guidance from CEBaP.

In conclusion, multiple managerial and educational approaches are being used to successfully implement EBP in the BRC.

Keywords EBP education, EBP implementation, Humanitarian Aid Organisation
Improving quality of sedation assessment among patients with mechanical ventilation: a best practice implementation project

The Richmond Agitation Sedation Scale

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Patients’ comfort and safety, specially related to sedation therapy for critically ill patients is essential in critical care practice. Nurses’ ability to rapidly assess patients’ sedation levels is of great importance for therapeutic titration of sedation adequacy according to the needs of individual patient. The aim of this project was to conduct an audit of clinical sedation assessment practices to implement evidence-based best practice recommendations to improve the quality of sedation assessment in the targeted ICU. We used the Joanna Briggs Institute’s Practical Application of Clinical Evidence System and Getting Research into Practice audit tool for promoting change in healthcare practice. A baseline audit was conducted including a sample size of 30 patients followed by development of strategies to improve the quality of sedation assessment. A follow-up audit including a sample size of 28 patients was conducted by using same audit criteria. Sixty-five nursing staff were surveyed in both baseline and follow-up audits. The baseline audit results revealed significant deficits between current practice and best practice in all criteria. Barriers for implementation of best practice criteria were identified and a bundled strategy was implemented, which included education, revision of sedation scoring system and development of a “RASS Reminder Card”. There were significantly improved outcomes across all criteria in the follow-up audit. The frequency and accuracy of sedation assessment were enhanced on the completion of the project as there was an increased ability and understanding of the sedation assessment best practice among nursing staff in the unit.

Keywords sedation assessment, mechanical ventilation, clinical audit, evidence implementation, JBI
Instruments for measuring undergraduate nursing students’ knowledge, attitudes and skills in evidence based practice

Preliminary results of a systematic review

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Background: Undergraduate nursing curricula should be based on evidence-based practice (EBP) principles to educate future nurses on EBP use. Therefore, it is required good quality instruments to assess the impact of the EBP educational programs on undergraduate nursing students’ attitudes, knowledge and skills regarding EBP.

Objective: To identify, appraise and describe the measurement properties of the available instruments for measuring undergraduate nursing students’ knowledge, skills and attitudes regarding EBP.

Methodology: This review followed the Joanna Briggs Institute (JBI) and COnsensus-based Standards for the selection of health Measurement Instruments (COSMIN) methodologies. A three step search was undertaken to find published/unpublished studies (from 1996) in Portuguese, English and Spanish. Inclusion criteria were as follow. Participants: undergraduate nursing students. Constructs of interest: attitudes, knowledge and skills regarding EBP. Outcomes: measurement properties according to the operationalization of COSMIN. Types of studies: validation studies or others on the development/assessment of measurement properties. Two independent reviewers analyzed the title/abstract and the full-text to verify the eligibility criteria.

Results: The search strategy founds 1405 records (375 were excluded as duplicates). After title/abstract assessment (n=1030), 982 records were excluded and 44 remained for full-text analysis. Of this analysis, 20 records were excluded. Two independent reviewers are assessing the 14 papers for methodological validity using the COSMIN Checklist.

Conclusion: This review will inform on the need to perform more validation studies of useful instruments or, eventually, to develop a new instrument. This is very important to measure the effectiveness of EBP educational programs on undergraduate nursing students’ EBP competence.

Keywords attitudes, evidence-based practice, knowledge, skills, undergraduate nursing students
The effectiveness of an evidence based practice (EBP) educational program in undergraduate nursing students

A randomized control trial protocol

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Background: It has been recognizing that EBP increases healthcare quality. Nevertheless, there is several gaps between research and practice that hinder the EBP implementation and sustainment. Education seems to be the way forward to reduce these gaps. Consequently, it is mandatory that undergraduate nursing curricula include EBP contents to promote an EBP culture on future nurses.

Objective: To evaluate the effectiveness of an EBP educational program in undergraduate nursing students' EBP beliefs and knowledge, and the extent of their EBP implementation.

Methodology: This protocol was register at ClinicalTrials.gov (register number: NCT03411668). A randomized control trial (RCT) with two groups will be perform at a Nursing School in Portugal. Six optional courses of the 8th semester will be randomly selected (3 to experimental group – educational EBP program, and 3 to control group – usual education). An independent researcher will perform this assignment using random.org. Over 17 weeks, the students in EBP educational program will undergo 12 hours of classroom lessons (all optional course) plus 6 hours of mentorship regarding EBP (2/3 students per group). All participants will be assessed before (week 0) and after (week 18) the intervention by blind assessors using validated instruments to assess undergraduate nursing students' EBP beliefs, the extent of their EBP implementation and their knowledge in EBP.

Discussion: This will be the first study of its kind in Portugal. The findings of this RCT may identify a potentially effective way to embed EBP in the undergraduate nursing curricula so that future nurses use it into clinical practice.

Keywords nursing students, evidence-based practice, education, randomized control trial protocol
Delirium management among cancer patients in a palliative care ward

An academic-clinical collaborative implementation program

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Delirium is common but under managed among patients in palliative care settings. In our palliative care ward, no delirium management had previously been performed. To promote evidence-based delirium management in the ward, a best practice implementation project was conducted. It was a collaborative project between academic and clinical staff. An implementation team consisting of two academic staff, the ward manager, and a senior nurse, was established. Regular meetings were held during the three phases of the implementation program. Clear assignment and effective discussion among team members led to the successful accomplishment of the program.

In phase one, the academic staff developed the evidence-based audit criteria and the ward manager and the senior nurse collected data. In phase two, barriers and solutions were identified during regular meetings. The academic staff localized and adapted a screening tool to facilitate standardized delirium screening and an evidence-based practice guideline. They also prepared a training program for the nurses in the ward and a delirium record sheet was designed as well. The senior nurse supervised the nurses’ practice in the ward and collected their feedback. In phase three, a follow-up audit was conducted to assess the practice change. Now the delirium management is the routine practice in the ward.

Keywords delirium, management, palliative care, evidence-based
High-Flow Nasal Cannula in Apnoeic Oxygenation before intubation: a systematic review and meta-analysis

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Background: Undergoing intubation of critical patients is associated with hypoxia-related adverse events. High-flow nasal cannula (HFNC) which deliver continuous oxygenation has the potential to provide apnoeic oxygenation and may prevent life-threatening hypoxia.

Objectives: To assess the effectiveness of HFNC for apnoeic oxygenation before intubation in the critically ill.

Search Methods: The Cochrane Central Register of Controlled Trials, MEDLINE, Joanna Briggs Institute (JBI) Library of Systematic reviews, Huayi online library (updated November 31, 2017) were searched. An extensive search strategy identified studies comparing receiving preoxygenation using HFNC with other devices prior to intubation in the critically adult ills.

Results: We included 4 studies with 419 participants. There are significant differences for primary outcome of the lowest oxygen saturation (SpO2) throughout the intubation procedure which favors the experimental groups and secondary outcome of the ICU stays which favors the control groups (mean difference (MD), inverse variance (IV), random-effects 3.32, 95% confidence interval (CI) 0.96 to 5.67, P= 0.006, four studies, 419 participants; and MD, IV, fixed-effects 3.03, 95% CI 2.66 to 3.4, P<0.01, two studies, 199 participants respectively).

There was no differences for the analyzable secondary outcomes such as desaturation <80 % (p = 0.691), death (p = 0.38), mortality rate on day 28(p = 0.4), time on ventilator(p = 0.23), occurrence of ventilator-associated pneumonia (p = 0.681).

Conclusion: The meta-analysis evaluates all the accessible studies for each outcome. These findings support the effectiveness of HFNC in reducing lowest oxygen saturation throughout the intubation procedure compared with other respiratory therapies.

Keywords High-Flow Nasal Cannula, intubation, critical, oxygenation
SueñOn®: a project to improve the sleep in hospitalized patients

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Background: Alteration of sleep and sleep deprivation are related to different stimulus and internal and external conditions. Prolonged sleep deprivation can have physical and mental consequences, which affect the health of the person. Hospitalization can alter the sleep / wake cycle, caused by internal factors (pathological process) or external factors (noise, illumination or interruptions by nursing healthcare).

Aim: The project aimed to raise awareness to health professionals and institutions in order to respect the sleep pattern in hospitalized patients and to establish evidence-based recommendations to reduce external factors influencing sleep disruption.

Methods: Social media campaign intervention was used, directed to health professionals and institutions of the Spanish National Health System (SNS). It was used scientific printed and online material which include evidence-based recommendations, mass-media (television, press, radio…) and social networks to achieve greater meaning and dissemination of the importance of respect the sleep in hospitalized patients.

Results: Dissemination strategies were successful. In overall, the project had achieved the recruitment of a total of 4000 health professionals and 55 health institutions from a period of a year (June 2016-June 2017). They have sign an agreement in order to implement evidence-based recommendations in hospitalized wards.

Discussion and Conclusions: This project has provided the opportunity to health professionals and institutions to be more aware of the importance of respecting the sleep of hospitalized patients through and to launched simple evidence-based measures.

Keywords Health care, evidence-based, sleep, nursing.
Factors influencing pragmatism level of nursing randomized controlled trials

Evaluation by PRECIS-2 tool

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Nursing scientific literature growing more and more in the last ten years. Nursing practices should be based on proof to allow economic, efficient and reliable care. Scientific studies should be made with high internal validity and allow an easy transfer of results in practice. Randomized controlled trials (RCTs) are the gold standard for validity and reliability of a research trial because many bias are deleted or mitigate. However, RCTs doesn’t reflect the applicability potential of studies results. Applicability of a study and it transfer in practice is highly correlated of level of pragmaticity. Pragmaticity is the realization in real condition of a study. Although many nursing studies are published, few are put in practice. This study aims to interpret and analyze factors of pragmaticity level of nursing studies.

A literature review has been conducted with 2 databases (CINAHL and PubMed) with key words “medicine”, “drug”, “treatment”, “medication” and filters “randomized controlled trial”, “nursing journal”, published between 01/01/2002 to 31/12/2005 and between 01/01/2012 to 31/12/2015. After read on title/abstract and classified in 5 fields, 400 articles were chosen by randomization. Level of pragmaticism has been evaluated by PRECIS-2 tool. This study is not finish. Results are being analyzed by descriptive and predictive analysis. Periods of time, fields, number of co-authors, h-index of first and last author, journal impact factor, source of funding, type of blind, randomization design, sample size, comparator; will be test as predictive factors of pragmaticism by uni and multivariate analysis.

Keywords Pragmatism, nurse, randomized controlled trial, applicability
Improving clinical reasoning in physiotherapy students using a blended learning approach.

First experiences.

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Background We aimed to set up a clinical reasoning (CR) course in the fourth-year physiotherapy curriculum of the Vrije Universiteit Brussels (83 students). Therefore, we used a blended learning approach with high interaction between students and with special emphasis on critical thinking (meta-cognition).

Methods We implemented the ‘Physical Therapy Clinical Reasoning and Reflection tool by using the Think – Pair – Share method. Students required coming to campus on three occasions from October-December 2017. During the first contact, a clinical problem was presented. Subsequently, students individually prepared (at home) a CR exercise based on pre-defined questions to enhance clinical decision making (CDM), taking into account evidence-based practice (Think). For this, students were encouraged to use an online forum to stimulate interaction. Next, groups of four students physically met on campus, discussed their CDM process, and submitted a consensus report (Pair). Finally, each group presented their findings in a plenary session (Share). Students’ feedback was inquired by using an online survey.

Results A total of 59 (71%) students provided feedback of which the most important:

1. Implementation of this method earlier in the curriculum would be appropriate.
2. More intensive mentorship during the process.
3. During the plenary session, a teacher’s synthesis would be appreciated.
4. One case report for the total group is too limited.
5. This method was a good preparation for the clinical internships.

Conclusion First experience with this method to enhance CR skills seems to be appreciated and further development will be done based on students’ and teachers’ feedback.

Keywords health care, evidence-based, clinical reasoning, physiotherapy, clinical decision making
Blood glucose control in nondiabetic patients during chemotherapy with high dose of glucocorticoid:

A best evidence-based practice

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Objective To integrate the best evidence concerning blood glucose control in patients with non-diabetic with high-dose glucocorticoids during chemotherapy, and to promote nurses' behavior of blood sugar management based on evidence.

Methods The study was performed guided by the standard procedure which was supported by the JBI-PACES programs and Getting Research into Practice audit tools\(^1\), based on the best available evidence. Six evidence-based audit criteria were developed, then a baseline audit was conducted including a sample size of 19 nurses and 53 patients. According to the results of the nurses training and the evidence should be apply for nursing practice then conducted follow-up audits. A follow-up audit including a sample size of 19 nurses and 53 patients and were conducted by using the same audit criteria.

Results The rate of implementation of the 6 criteria increased from 0 to 96% after the second round of audit. The score of nurse knowledge by questionnaire increased from 15.8% to 91.8% after the second round of audit, in average of 76%; the rate after the application of blood glucose monitoring in patients after discharge increased by 49% in the project; the knowledge of the patients increased from 7.6% in baseline to 72%; The project showed that the rate patients taking high doses glucocorticoid after high blood glucose detection accounted for 43.3%.

Conclusion Evidence-based practice can improve nurses’ implementation and effectively improve blood sugar management of non-diabetic patients with oral high-dose glucocorticoids during chemotherapy.

Keywords Glucocorticoid; Chemotherapy; Evidence-based
The role of nurses in the involvement of men in Family Planning consultations

A systematic review of the literature

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Introduction: The appointment of family planning (FP) is directed to the woman, man or the couple and the nurse is one of the main agents of therapeutic education, whose intervention allows clients to perform responsible choices.

Objective: Identify the factors that promote the involvement of men in the Family Planning nursing appointment.

Methods: Realization of systematic revision of literature followed methodology of Joanna Briggs Institute. The research was done in databases Pubmed, RCAAP, B-on e Scielo referring to the period from 1st January 2012 until 8th December 2017. This process was done by two researchers, so that the evaluation could be independent.

Results: 5 studies were included, that had in total a sample of 4311 men in fertile age. Results showed that exists a variety of factors that influence the involvement of men in Family Planning, like social, demographic and economic characteristics, knowledge and men’s attitudes towards FP. One of the factors that brings men closer to family planning and to the sharing of responsibilities with their partners is men discussing these subjects with health professionals, namely nurses.

Conclusion: The nurses appointment of FP is a service that goes beyond contraceptive choices and the men have a decisive role in all choices related to sexual and reproductive health of the couple, so the nurse must know the factors that influence the involvement of men in FP decisions, so they can plan and provide medical care according to those factors and promote strategies of active participation of man in FP.

Keywords Family Planning, involvement, male or man, nurse’s role
Background In-depth exploration of local factors is needed to integrate a guideline into routine practice. This project aimed to assess expected barriers and facilitators to the implementation of the guideline developed to reduce HIV-related stigma and discrimination (SAD) in the Ethiopian healthcare settings.

Methods A descriptive qualitative research that used key informant interviews was conducted using a semi-structured interview guide that was developed based on the framework suggested by Registered Nurses Association of Ontario (RNAO). The key informant interviews were transcribed, coded and analysed using Atlas ti version 7.5 software packages.

Results Guideline attributes, provider-related factors and the presence of other health-related goals that complement SAD reduction programs were identified as factors that potentially affect the implementation of the guideline. Expert patients, regular health education programs, quality movement, compassionate, respectful, and caring (CRC) and Clean and Safe Health Facility (CASH) initiatives were identified as currently existing opportunities that may be used as agents and platforms for the implementation of the guideline. Study participants recommended that the guideline should be disseminated through multidisciplinary team (MDT) meetings, gatekeepers such as opinion leaders and unit heads, one-to-five networks and mentorship programs, training and workshops, and posters.

Conclusion Policy makers should disseminate the guideline through existing opportunities such as MDT meetings, CRC, one-to-five networks, training and workshops. Teamwork and partnership with stakeholders should be strengthened to tackle barriers related to the implementation of the guideline.

Key words: Barriers, facilitators, guideline implementation, HIV, stigma
The Barriers to and Facilitators of Evidence Implementation in China

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Objective: To determine perceived barriers to and facilitators of evidence implementation in China.

Methods: Qualitative research design was used in this study. 45 evidence-based nursing practitioners (22 practitioners who participated in the 1st evidence implementation clinical programs that hold by Fudan EBN Center, 12 practitioners who finished JBI evidence-based clinical fellowship programs, 7 graduates students of Fudan University and 4 graduates from other Universities who finished their thesis about evidence implementation) were recruited. Data was collected through observation and semi-structured interviews. A qualitative content analysis was performed.

Main Results: The barriers included 10 groups: the barriers are in culture; there can't match the hospital' need; there is not good atmosphere; there doesn't have enough evidence; the evidence can't match the clinical; the project leads have deficiency of good perceptions, attitudes and abilities; there is short of leader power, especially in high level's power; the barriers are in nurses; the barriers are in interdisciplinary cooperation; the patients have low perceptions, attitudes, knowledge and requirements. The facilitators included 11 groups: there can match the hospital' need; there is good atmosphere; there have enough evidence; the evidence can match the clinical; the project leads have good perceptions, attitudes and abilities; there is a lot of leader power, especially in high level's power; the facilitators are in nurses; the facilitators are in interdisciplinary cooperation; the patients have high perceptions, attitudes, knowledge and requirements; there also have additional facilitators from inside & outside.

Keywords evidence implementation, perceived barriers, perceived facilitators, qualitative, Chinese
Linking Patient Satisfaction to Nursing Workload in a Singapore Tertiary Hospital

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Background: Patient satisfaction, a quality of care indicator is important to healthcare organizations. The quality of nursing care is perceived as providing direct care to patients with attributes such as caring, empathetic and respectful. Failure to deliver proper nursing care are frequently the results of high patient workload and staff shortages. Standardized workload measurement system ensure daily nursing workload allocation is according to patients’ needs; and hence improve patient satisfaction.

Aim: This study examine the correlation between patient satisfaction with nursing care and nursing workload management in a Singapore hospital.

Method: Secondary analysis was used to examine data from 270 patients’ satisfaction score obtained using the Revised Humane Caring Scale and nursing workload data extracted from the TrendCare Patient Acuity System.

Results: The patients were generally satisfied with nursing care and the mean transformed score of the total scale was 74.58(SD13.66). The results from Spearman’s test revealed positive ($r_s = .212$ to $r_s = .120$) and negative ($r_s = -.120^* to r_s = -.196$) correlations between patient satisfaction and nursing workload. The workload variables that were associated with patient satisfaction were patient acuity hours, clinical hours that patients required per shift, allocation of nursing hours and the number of beds in a ward. These variables influenced patient satisfaction in the aspects of respect, communication, and involving patients in care planning.

Conclusion: Patient satisfaction is related to workload variables. The workload measurement system distribute nursing workload levelling which enhance workplace atmosphere, promoting a positive caring environment and quality nursing care.

Keywords patient satisfaction, nursing workload, quality of care
Management of urinary catheters among patients in a gynecological oncology ward: an evidence-based implementation project

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Background: Urinary catheters (UCs) are commonly used in hospital settings. While effective in solving urine retention, severe consequences such as Catheter Associated Urinary Tract Infections may also occur. Management of UCs includes daily hygiene, removal, and trail of void after removal, which directly resulted in patient health outcomes. With certain strategies, UCs can be managed more effectively and collaboratively by clinicians.

Objectives: This project aims to improve the management of UCs by implementing evidence-based practice within the gynecological oncology ward and assess the effectiveness of these strategies.

Methods: Evidence-based criteria formed from literature reviews were used to conduct an audit. This evidence implementation project using the JBI Practical Application of Clinical Evidence System and Getting Research into Practice tool involved three phases of activity and was conducted from July to November 2017, among 30 patients, 30 nurses and 10 physicians.

Results: The baseline audit revealed the huge gap between the current clinical situation and best practice. Several strategies were introduced after the identification of the barriers by the project team. Significant improvement has been achieved according to the follow-up audit. All the compliance for 5 criteria reached 100% except one that is still zero and requires additional investigation.

Conclusions: Significant improvements (except one) were shown in the follow-up audit which confirmed the strategies to be effective. During this project, the actions and knowledge of health providers along with the system and the processes in our ward have all been improved thus ensuring clinical practice continues to support better patient outcomes.

Keywords gynecological oncology, clinical audit, urinary catheter management, evidence implementation
Introduction: The main treatment for cardiac infarction patients with elevated ST segment and unstable angina pectoris, which did not respond to drug therapy, is percutaneous coronary intervention (PCI). This method may not prevent recurrent ischemia and cardiac infarction. Abciximab can reduce these risks and increase the life expectancy of patients.

Materials and Methods: To evaluate the effectiveness, a systematic review and meta-analysis was conducted. The outcomes were major adverse cardiac events (death, myocardial infarction and restenosis (MAC)) and major bleeding. The incremental cost-effectiveness ratio (ICER) was implemented to compare the costs of each alternatives. The study was reviewed from the viewpoint of the Iran ministry of health as the governmental provider.

Results: Among 462 extracted articles retrieved in comprehensive search, 22 were included. Major bleeding due to the treatment with Abciximab was slightly more than the stenting group, but they were not life threatening, therefore, considered safe (3.2% in compare to 1.7%). The rate of MAC events showed a significant difference between the use of Abciximab and not using it (RR: 0.84, CI 95%, P<0.0001). The total cost of treatment for the intervention group was 28979670(IRR) and the control group was 2312550(IRR).finally, by adding 227980(IRR) to the current cost of stenting, one additional death can be prevented.

Conclusion: Considering the subsequent costs and the positive effects, the overall costs do not change by a high rate. Therefore Abciximab is safe, effective, and cost-effective.

Keywords: Myocardial Infarction, Abciximab, Unstable Angina, Stenting
Development of A Nutritional Minimum Data Set Within Primary Health Care

Ensuring High Levels of End-User Usability Through A Five-Step Process

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Background: The development of a Nutrition Minimum Data Set (Nutrition MDS) seeks to address the concerns regarding inadequate and poor nutritional care practice leading to high malnutrition rates in primary health care, by providing an overall framework upon which health care professionals can base their documentation. This study utilized a five-step process in order to design a Nutrition MDS in order to inform health care professionals in primary healthcare of which core elements should be documented and observed in patients and to facilitate a standardized approach to nutrition care practice.

Methods: This study uses a five-step design model (LUMEN model) that is based on the conceptual framework of experience design pioneer Jesse James Garrett and his five planes of user experience.

Results: A Nutrition Minimum Data Set have been developed through a five-step process using different kind of methods with focus on end-user involvement. The final Nutrition MDS consists of a total of 40 variables divided into 9 main categories. 40 variables which all can have a direct or indirect influence on patients nutritional status in primary health care.

Keywords Minimum Data Set, Nutrition, Primary Healthcare, Scoping Review
Experience of recovery in patients undergoing HSCT

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Background. Patients with hematological malignancies receiving hematopoietic stem cell transplantation treatment (HSCT) were under a life-threatening and stressful situation. It is vital to understand the nature of the experience of patients’ recovery process while they are undergoing HSCT.

Objective. Identify, evaluate and synthesize the existing qualitative evidence on patient’s experience of recovery while they are undergoing HSCT.

Method. Using a three steps search strategy, databases were searched in December 2017 to identify both published and unpublished articles from 1959 to 2017. The meta-synthesis followed the meta-aggregative method from the Joanna Briggs Institute. Qualitative data were extracted using the JBI-QARI. Qualitative research findings were synthesized using the JBI-QARI. The critical appraisal of the original articles were used JBI Qualitative Assessment and Review Instrument. Findings were rated according to their level of credibility and categorized based on similarity in meaning and then were subjected to a meta-synthesis.

Result. Ten studies were included in this review. Five meta-syntheses were generated. They were: (1) accepting and facing the threatening of illness, (2) having the power from external support, (3) maintaining positive emotions, (4) prioritizing belief, and (5) establishing a body-mind balance.

Conclusion. Patients’ recovery experience during the HSTC is a multi-dimensional phenomenon. Patients experience internal and external strengths throughout the positive adjustment strategies toward a new body-mind balance.

Keywords Experience, recovery, perceptions, positive emotion, body-mind
Effects of discharge planning program on readmission rate, satisfaction, knowledge, health outcomes, and quality of life of mothers after childbirth

Effects of discharge planning program

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Background: For many patients, discharging from hospital is a commonplace that requires no further care. But the rest need to receive more care after discharge in order to be assured about complete treatment.

Aim: The purpose of this study was to investigate the effects of discharge planning program on hospital readmission, quality of life, mother’s satisfaction, mother’s knowledge, and health outcomes on mothers and their children in patients discharged after childbirth in a University Hospital of Uremia, Iran.

Methods: A case-control study was conducted including 39 in each intervention and control groups. Patients were randomized through balanced block randomization to receive discharge planning intervention or usual discharge. Discharge plan in this study had 12 steps and was designed in a booklet according to Re-Engineered Discharge (RED) method. After two months of intervention, data were collected in five measures of readmission, patient satisfaction, health outcomes, knowledge and quality of life. Data analysis was performed using SPSS.16.0.

Results: Seventy-five mothers with the mean of age 25.44 (SD 4.9) participated in the program, 38 in the control group and 37 in the intervention group. Discharge planning led to a significant improvement in the intervention participant’s satisfaction scores, number of health outcomes, and knowledge compared with those who didn’t receive discharge planning intervention.

Conclusion: Maternal support programs for physical and emotional problems after discharge must be given more attention in health system of Iran. Service providers and policy makers can use these findings to design and implement early discharge planning for maternity care.

Keywords Discharge Planning, Maternal, Postpartum, Infant, Iran
Causes of nursing medication errors and factors affecting its failure to report from nursing staff's perspective in Sina hospital, Tabriz, Iran

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Background: Medication errors cause serious problems for patients, their families and the health system. Initial and natural results of medical errors increase hospital length of stay as well as costs.

Aim: The aim of this research was to determine reasons of medication errors and the barriers of error reporting from nurse's perspectives.

Methods: This study was a descriptive and cross-sectional study which was conducted in Sina hospital, Tabriz, Iran at 2016. One hundred twenty four nurses were included in the research. Data were collected using a standardized questionnaire. Statistical analyses were performed using SPSS software, version 16.0.

Results: The most important reasons of medication errors from nurse's perspectives include illegible medication orders, work-related fatigue, noises in the ward, and shortage of nursing staff. Furthermore, influencing factors which prevent error reporting were emphasis of managers to the wrongdoer, regardless of other factors involved in the mistake, and the lack of clear definition of medication error.

Conclusion: Given the importance of patient safety, the following can lead to improvement in hospital safety. Establishing an effective system for reporting and recoding errors, minimizing barriers of error reporting by establishing a positive relationship between manager and staff, developing positive reactions toward error reporting, and establishing retraining courses on drug information for nurses.

Keywords Medication errors, Error reporting, Nurse, Tabriz, Iran
Paternal postpartum depression and relevant factors in the early postnatal period

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Background: It has recently been recognized that paternal postpartum depression (PPD) is a serious problem during pregnancy and may cause harm to the child and the family. Transforming to the fatherhood may lead to the disorders in fathers’ emotion. However, very few studies investigated the neonatal fathers’ mental health at the early stage after delivery. Objectives: To investigate the prevalence of paternal PPD at the first 3 days of delivery and the risk factors related to the paternal PPD. Methods: A cross-sectional study was conducted among 318 fathers from 1 to 3 days after their partner’s delivery. Self-reported questionnaires including Edinburgh Postnatal Depression (EPDS), General Self-Efficacy Scale (GSES) and other factors were used to collect the data. Results: In all, 70 out of 318 (22%) fathers were found to be depressed during the investigation period. The risk factors were father’s age, educational level, accidental pregnancy, receiving the information about prenatal guidance, average sleep time per night, satisfaction with the living condition, parity and self-efficacy. Conclusions: This study increases the evidence for paternal postpartum depression at early stage after childbirth and emphasizes the importance of early detection, early diagnosis and early treatment. It also appeals the attention and support on fathers during this period of life.

Key words Father, paternal postpartum depression, prevalence, influencing factor
Intra-hospital transport of critically ill patients

A best practice implementation project

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Objective: To explore a scientific and effective plan for intra-hospital transport of critically ill patients so as to ensure the safety of critically ill patients.

Methods: The review criteria were determined by searching the literature. We investigated and analyzed the clinical realities, formulated procedures, checklists and contingency plans, and trained staff. The protocol based on these steps was used for the intra-hospital transshipment of critically ill patients in the Respiratory Care Unit between September and November 2017 and after-effects investigations were conducted.

Results: By observing and assessing the intra-hospital transport in 30 critically ill patients, we found that using the transport protocol effectively improved the organizational ability of staff and shorten the transport time. Meanwhile, it also helped transport staff to observe the patient's condition more carefully and establish a complete and standardized transport record, so that the continuity of treatment during transshipment could be ensured.

Conclusions: Making scientific and rational transport plans that combined with clinical practice has instructional significance for clinical staff, and it also can improve the safety of patients with critical illnesses.

Keywords Intra-hospital, Transport, Safety
Systematic review of Polices in the Control of Antibiotic Resistance: A Protocol

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Background: Despite many policy papers and reports from countries around the issue of microbial resistance, there is not a systematic review of textual findings about these policies.

Aim: The aim of this review is to systematically search and appraise all relevant texts and policy papers in order to determine effective strategies to tackle microbial resistance worldwide.

Methods: In this systematic review of texts and policies, we will consider government reports, expert opinions, discussion papers, and other forms of text, published in the English language. Technical reports, statistical reports and epidemiological reports will be excluded. Studies published since 2000 will be included. The databases to be searched include: MEDLINE, CINAHL, ISI Web of Knowledge, SCOPUS, Cochrane Central Register of Controlled Trials, World Health Organization (WHO), LILACS. The Internet will also be searched for reports of projects within the following organizations such as United Nations, World Bank and USAID. Initial keywords include: microbial resistance, unnecessary antibiotic prescribing, antibiotic use, policy, and document. Textual papers selected for retrieval will be assessed by two independent reviewers using JBI-NOTARI. Also textual data will be extracted from papers included in the review using the standardized data extraction tool from JBI-NOTARI. Textual papers will, where possible be pooled using JBI-NOTARI. Where textual pooling is not possible the conclusions will be presented in narrative form.

Discussion: Policy makers and health care managers may wish to rely on evidence based on this review for effective strategies and policies to control microbial resistance.

Keywords Microbial resistance, Policy options, Systematic review, Text, Opinion
Rehabilitative approach in hospitalised care

Factors influencing the implementation of Evidence-based Practices

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Background and purpose: Implementation of Evidence-based Practices (EBP) is paramount to optimise rehabilitation and recovery outcomes in hospitalised care. Rehabilitation is characterised by multiple treatment recommendations and an interdisciplinary team approach. Although the importance of EBP in clinical guidelines is highlighted, a variety of studies have reported that these guidelines are not routinely implemented. There is also lack of studies describing how to facilitate rehabilitative approach in everyday nursing. Therefore, the purpose of this study was to understand the factors influencing the implementation of rehabilitative approach from the perspective of interdisciplinary team members and head nurses in hospitalised care.

Methods: A qualitative ethnographic research design involving focus group methodology employing individual and group interviews was used. Inductive content analysis was used to understand the factors influencing the implementation of rehabilitative approach.

Results: Semi-structured interviews were conducted among head nurses (n=5) and interdisciplinary team members (n=25) in five acute care units in a central hospital in Finland. Preliminary results show that the following factors influencing the implementation of rehabilitative approach in hospitalised care emerged: facilitation (e.g. interdisciplinary teams, managers role, organizational support, research-practice collaboration), familiarity with the recommended practices (e.g. research-practice gap, making the evidence visible, education, information searching skills), environmental factors (e.g. time, the amount of staff, space, equipment), and communication (e.g. team communication and interdisciplinary collaboration). Final results will be reported in the conference.

Conclusions: The implementation of the rehabilitative approach to everyday nursing is a complex phenomenon. Final conclusions will be reported in the conference.

Keywords rehabilitative approach, evidence-based, implementation, hospitalised care
Comparing interprofessional and interorganizational collaboration in healthcare: A systematic review of the qualitative research.

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Background: Interprofessional (IC) and interorganizational collaboration (IOC) have become important components of a well-functioning healthcare system. By their leadership, nurses can create a culture that encourages values and role models that favour collaborative work within a team context.

Aim: This systematic review aims at clarifying the specific features of conceptual frameworks of IC and IOC in the healthcare field.

Methods Cochrane, JBI, CINAHL, Embase, Medline, Scopus, Academic Search Premier, Sociological Abstract, PsycInfo, and ProQuest were searched, using terms such as professionals, organizations, collaboration, and frameworks. Qualitative studies describing a conceptual framework of IC or IOC in the healthcare field, published between 2004 and 2014, were included.

Results Sixteen articles were included in the synthesis. Several concepts were found to be common to IC and IOC, such as communication, trust, respect, mutual acquaintanceship, power, patient-centredness, task characteristics, and environment. Other concepts are of particular importance either to IOC, such as the need for formalization and the need for professional role clarification, or to IC, such as the role of individuals and team identity. Promoting IOC was found to face greater challenges, such as achieving a sense of belonging among professionals when differences exist between corporate cultures, geographical distance, the multitude of processes, and formal paths of communication.

Conclusion This review sets a direction to follow for implementing changes that meet the challenge of a changing healthcare system and the transition towards non-institutional care. It also shows that collaboration between nurses and healthcare professionals from different healthcare organizations is still poorly explored.

Keywords Collaboration; Interorganizational; Interprofessional; Nursing; Systematic review.
The personal active aging strategies of older adults in Europe: a systematic review of qualitative evidence

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Aim: The objective of this review was to investigate the older adult's perspective on the personal strategies related to active aging among older adults in Europe.

Method: This review considered qualitative studies including older adults (age over 55 years) who live in Europe and dealing with older adults’ perspectives on (any) personal strategies related to active aging. A three-step search strategy identified published and unpublished studies without date or language limitation. Relevant studies were appraised for methodological quality and data were extracted from the papers included in the review using the standardized tool and two independent reviewers. Data synthesis was performed using the meta-aggregation approach of meta-synthesis.

Results: 14 studies were included in this systematic review. 42 findings were extracted; findings were synthesized into four categories: (1) positive approach to life, (2) mental, social and physical activities, (3) adaptation, and (4) financial independence. Categories were synthesized into two synthesized findings: (1) if older adults adapt to changing situations and choose a positive attitude, they can find an active way to live and also a mission and meaning in their lives, (2) if older adults learn new activities, participate in exercise, keep balanced relationships and manage their financial resources, they will stay mentally, socially and physically active, and also financially responsible.

Conclusion: This review has highlighted that active aging is an important and complex part of life and that if older adults develop their own strategy to active aging, they are able to age successfully.

Keywords Active aging; healthy lifestyle; older adults; personal strategies; qualitative synthesis.
Promoting early expression of breast milk of preterm infants: a best practice implementation project

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Background. There is available evidence to suggest the value of breast milk for pre-term infants. Breast milk feeding has been described to mediate immune modulation and mechanical and biochemical priming of the gut in pre-term or premature infants.

Objectives: The aim of this evidence implementation project was to promote evidence-based practice in early expression of breast milk in mothers of preterm infants in maternal wards and thereby promote continuous improvement in breast feeding practice of preterm infants to lead to a successful lactation and sustained expression of milk.

Methods. Seven criteria identified by the Joanna Briggs Institute were used to conduct an audit in a hospital in China. 30 mothers and 15 nurses were involved. The JBI Practical Application of Clinical Evidence System and Getting Research into Practice audit tools for promoting change in health practice were used. The program included three phases and was conducted over 19-week.

Results: There were improvements with compliance for each criterion. Providing mothers information and instructions, providing access to electronic breast pump and other support, milk pumping diary achieved 100%. Nurses receiving comprehensive training program (28.6% to 85.7%), a protocol of expressed breast milk (64.2% to 85.7%), telephone support (25% to 90%) respectively, in the fellow-up audit. Conclusion: Following the development and implementation of evidence related to expression of breast milk could improve the competencies of clinical practice and a high level of compliance of milk expression in mothers of preterm infants.

Keywords Best practice, clinical audit, preterm infant; breast milk, breastfeeding
Brain tumor is the most high risk disease of adolescents. While an adolescent having a brain tumor, it will have great impact on their family and life. How to deal with this disease and face the problems will be the issue to the adolescents. The aim of this study is to investigate the essence of the experience of coexistence with the illness of adolescents with brain tumor. This study used Colaizzi’s phenomenological method. Data were collected through in-depth interviews. The participants were the adolescents with the brain tumor disease that treated at the medical center in the north of Taiwan. A total of 10 adolescents were participated into the study. The interviews were conducted in depth about 40 to 60 minutes, with the strict control of the four criteria proposed by Lincoln and Guba. The results of the study showed the experiences of adolescents with brain tumor coexisting with illness. There were four themes emerged: 1) a new body in the world, 2) self-empowerment toward positive adaption; 3) Rich resources and strength to shared responsibility of taking care of illness; 4) Return to school and fulfill the self-development. The results help nurses to take care of these special group and families with high quality and let the adolescents know how to coexist with the illness in the future.

Keywords: adolescents, brain tumor, phenomenology, coexistence, empowerment
**Hypertonic Saline Nasal Irrigation in Children with Allergic Rhinitis: A Systematic Review and Meta-analysis**

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Background: Allergic rhinitis (AR) is a very common childhood disease that is associated with a significant reduction in the patients’ quality of life. Recent evidence suggests that hypertonic saline nasal irrigation (HSNI) may be useful an adjunctive treatment in children with AR.

Objectives: This study aimed to establish the efficacy of HSNI in improving nasal symptoms, adverse event, quality of life and sleep, and decreasing consumption of oral antihistamines.

Methods: We conducted a systematic search of PubMed, EBSCO, CEP, and Cochran Central Register of Controlled Trials published before December 2017 on HSNI in children with AR. Prospective, randomized, controlled trials that assessed the effect of HSNI on five different outcome parameters were included. Two review authors independently assessed trial quality and extracted data.

Results: Four trials with a total of 351 Patients were included in the review. Patients treated with HSNI had a significantly lower nasal symptom score compared to those treated with 0.9% SNI (MD-1.08, 95% confidence interval (CI) -1.64 to -0.51, p= 0.002). There was no significantly between group difference in decreasing antihistamine consumption (hypertonic group 66/123; isotonic group 56/121). The risk ratio (RR) was 1.36 (0.81 -2.29, p= 0.24). There was also no difference in adverse event (4/58 vs 3/59). The risk ratio was 1.37 (0.30 - 6.40, p=0.69). The quality of life and sleep were also significantly improvement.

Conclusions: In children with AR, HSNI is effective in improving nasal symptoms, with an effective beneficial effect on quality of life and sleep.

**Key words:** hypertonic saline nasal irrigation, allergic rhinitis, children, nasal symptom
Using AGREE II to evaluate the quality of physical restraints clinical practice guidelines

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Background: Until now several societies have produced and disseminated clinical practice guidelines (CPGs) for patient physical restraint. However, to data, the quality of such CPGs has not been appraised.

Objective: To search and evaluate the quality of CPGs for patient physical restraint, in order to provide reference and consultation for clinical practice in China.

Method: To search CPGs from guideline website at home and abroad, related organization website and database, etc. (from January 2000 to August 2017). According to inclusion and exclusion criteria determine the guideline. The chosen CPGs were evaluated by AGREE II instrument. Meanwhile Inter-rater reliability was assessed by intragroup correlation coefficient (ICC).

Results: The study included four CPGs, including 3 in the United States and 1 in Canada. Domains of “Scope and purpose” (84.26%) received the highest scores in all CPGs. Other areas were “Clarity of presentation” (76.50%), “rigor of development” (66.97%), “editorial independence” (63.54%), and “participants” (63.54%), “applicability”(62.15%). The average of guidelines overall score is 4.94±1.30, there are 2 level A guidelines, 2 level B guidelines. The ICC values for CPGs ranged from 0.62 to 0.76.

Conclusion: There are few CPGs with physical restraint, and the overall quality of the chosen CPGs are still to be improved, especially in application, independence and participation area. In China there is no physical restraint guideline. We can consider introducing foreign mature clinical guidelines and use those according to our present clinical situation. In order to guide clinical nursing and improve the clinical quality of care.

Keywords Physical restraint; AGREE II; Clinical practice guidelines; Quality assessment
Introduction: Pain is quite common in patients with stroke. These patients can use self-report pain intensity scales if they are able to respond appropriately. Due to visual field defects or neglect syndrome (NS), vertical pain scales are sometimes recommended. However, no evidence-based vertical pain scales are available in Czech.

Aim: To translate the Iowa Pain Thermometer-Revised (IPT-R) into Czech and to conduct its transcultural validation and testing in a sample with stroke.

Methods: The IPT-R was translated using forward-back translation. The preliminary Czech versions were subjected to reconciliation and harmonization, intended to yield a valid and conceptually equivalent translation of the original tool. The final step focused on testing the tool with Czech patients with stroke. Patients’ performance during the task was observed. Cognitive debriefing consisted of paraphrasing individual items, which was used to calculate item comprehension rate (ItCR), and requesting feedback on self-perceived respondent burden, using a 3-point Likert scale.

Results: Seven patients participated (mean age 67.3±4.4; 5 men). The most frequently observed problems were: did not read instructions (n=6), additional explanation needed (n=4) and had to re-orient to the relevant parts of the form (n=4). ItCR of pain descriptors ranged from 42.9–85.7%. Most patients thought the tool was simple and could be completed quickly.

Conclusion: The Czech version of the IPT-R was perceived favorably; however, nurses should be available to assist patients as necessary. Further testing is recommended with patients who have the above-mentioned impairments from stroke as they could impact the tool.

Keywords IPT-R, pain scale, stroke, translation, transcultural validation
First steps in education of EBP skills at Department of Anthropology and Health Education

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Introduction: Students of the field of Teaching vocational subjects at Health Schools have weaknesses in the basic knowledge of Evidence Based Pedagogy. That is why the first and second steps of EBP were included in the teaching modul. Enhanced skills of the students will be base for teaching of another steps of EBP. The abstract shows an example of the search strategy realised by students at Faculty of Pedagogy. The search was focused on obtaining relevant information on the validation of the Q-DIO, tool used for evaluation of the quality of nursing documentation in practice.

Search question: What procedures were used for Q-DIO - the Quality of Nursing Diagnoses, Interventions and Outcomes to validate and test the reliability of the instrument and with what outcomes?

Search strategy: The primary search terms were P-Problem: Q-DIO, I-Intervention: validation, measurement of reliability, C-Comparison: not applicable and O-Outcomes: validity, reliability. Based on findings from the first step of the search, the keywords were adapted for the second step. Databases: MEDLINE (the PubMed interface), CINAHL Plus with Full Text, Wiley Online Library, Bibliographia Medica Čechoslovaca (the Medvik interface), OpenGrey, the web search engines MedNar and Google Scholar. For all of them: advanced search, title/abstract, period 1/2000-6/2017, no language restrictions. Grey literature resources were included based on the Joanna Briggs Institute (JBI) standard search recommendations to increase the thoroughness of search results.

Keywords EBP skills, pedagogy, future teachers
Impact of breastfeeding or bottle-feeding on surgical wound dehiscence after cleft lip repair in infants

A systematic review

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Background: Immediately after cleft lip repair in infants, breastfeeding and bottle-feeding are generally restricted. Alternative feeding methods such as spoon-feeding are recommended to avoid placing tension on the surgical wound, although they are reported to cause incessant crying and postoperative weight loss in infants. However, a consensus on this topic has not been reached. The objective was to examine the impact of the feeding method on surgical wound dehiscence after cleft lip repair.

Methods: This review considered randomized controlled trials on feeding interventions after cleft lip repair. If randomized controlled trials were not available, other research designs such as cohort studies were considered for inclusion. Quantitative data were pooled in a statistical meta-analysis. Effect sizes were expressed as odds ratios. Heterogeneity was assessed statistically using the standard chi-square test. A three-step search strategy was utilized in five databases.

Results: Three randomized controlled trials and one retrospective cohort study were extracted. The study quality was low due to the lack of blinding and small sample sizes. The surgical wound dehiscence rates did not differ significantly between the two feeding method groups after cleft lip repair (pooled weighted difference = 0.37 [95% confidence interval = 0.04–3.72], P = 0.40).

Conclusions: This review provided no evidence of the impact of the feeding method on surgical wound dehiscence after cleft lip repair, although the quality of included studies was low. It is not necessary to restrict breastfeeding or bottle-feeding immediately after cleft lip repair.

Keywords Breastfeeding; bottle-feeding; cleft lip; cleft palate; surgical wound dehiscence
Evidence-based practice projects and the DNP: Is there a place for nursing theory?

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Nursing theory is at a crossroads in the discipline of nursing. While it is well known that theory is a backbone of any scientific discipline, nursing theory is not always seen as useful in nursing, despite its resurgence as hospitals pursue Magnet® status. Concurrently, evidenced-based practice (EBP) has become the underpinnings of many nursing programs and healthcare systems in the search for improving patient care. Where is the role of nursing theory in EBP projects? While some use evidence-based change theory as a process in deciding which nursing theory to underpin their model of care, others see that both EBP and nursing theory can live together; one to ensure safe care for patients, the other to explain how nurses are with patients. Others use critical reflection exercises to encourage students to see the connection between EBP and nursing theory.

Working with Doctor of Nursing Practice (DNP) students in an academe underpinned in EBP, it was noted that there was use of theory in their projects, but not necessarily nursing theory. Students were using knowledge translation frameworks to frame their projects and change theory to implement their EBP interventions. It was with the use of publication guidelines from outside of nursing, that it became clear where nursing theory fits. It is in the rationale of the problem, intervention, or the reasons why the interventions are expected to work, where nursing theory, even middle-range theory, can be utilized. This is good news for the discipline of nursing.

Keywords evidence-based, nursing theory, SQUIRE 2.0
The implementation of evidence through nursing capstone projects: The living experience of one faculty mentor

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Lack of knowledge and skills are barriers to successful implementation of evidence. Hospitals struggle to improve care for patients with limited knowledge of what implementation of evidence-based practice (EBP) truly means. Nursing programs, underpinned by evidence-based practice frameworks are providing EBP education to students at all levels, including capstone projects where students work in conjunction with healthcare stakeholders to improve patient care. This experience is a win-win for the student as well as the healthcare system, as the student gets the experience of working with others to change practice and the system gets a literature search for evidence-based change ideas. One often wonders: Do these projects get implemented? What if any are the impact of these projects if they do get implemented? What happens if the healthcare system needs something from the students that the students cannot provide, or the stakeholders have barriers to implementing the project in an evidence-based fashion? What happens then? This author will review some examples of the living experience of mentoring nursing capstone projects at the baccalaureate, masters, and DNP level and how they were implemented or not, stakeholder input into the project, and the impact these projects may have had on improved patient care.

Keywords health care, evidence-based practice, capstone projects
Background. Parents often experience a sense of uncertainty while acknowledging their children with cancer. However, this could reduce family's ability to seek resources and affect family adaptation. Family resilience involves dynamic processes fostering positive adaptation while facing with crises.

Objective. Based on the resiliency model of family stress, adjustment, and adaptation, the purpose of this study was to investigate the relationships between the uncertainty, family resilience and hope in parents of children with cancer.

Methods. This study used cross-sectional and descriptive correlational design. A total of 114 parents of children with cancer were recruited from a medical center in Taiwan. Data were collected by using the Parent Perception of Uncertainty Scale, Family Resilience Scale and the Herth Hope Index.

Results. A significant positive correlation was noted between family resilience and the total score of parental sense of hope. A significant negative correlation was found between parental uncertainty factor II (unclear of treatment) and factor III (lack of information), and parental sense of hope. Parental uncertainty for factor I (ambiguity), family resilience for factor I (family belief systems) and family resilience for factor III (family communication processes) were indicators of parental sense of hope and accounted for 44.5% of the total variance.

Conclusion. The result of this study suggests ways to improve parental hope through enhance the family resilience belief systems and communication processes, as well as release the parental ambiguity of child’s condition in caring the parents of children with cancer.

Keywords Parent, cancer, uncertainty, family resilience, hope
Barriers of implementing evidence-based nursing guidelines and the Guideline adaptation: the dissemination and implementation in China

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Between 1983 and 2018, 568 nursing guidelines were produced by 67 Chinese developers and produced in 40 Chinese universities and hospitals, and the number of guidelines is increasing annually. No systematic data have been published on the implementation of, and adherence to, nursing guidelines in China. 9 Nursing guidelines from China Academic Journal Network Publishing Database based on the JBI model of evidence-based healthcare involved inpatient fall prevention, symptom management with HIV, management of lung function rehabilitation and long-term oxygen therapy, adaption of medication adherence management on highly active antiretroviral therapy, removal time of peripheral intravenous catheters, nursing network information resources platform, cancer related fatigue management and inpatient fall prevention[1]. The researches of applicable adaptation methods of ADAPTE Collaboration, guideline adaption: a resource toolkit has put on the agenda by the Fudan University in China. It is difficult to disseminate evidence-based nursing practice, not adequately educated and time pressure are the biggest obstacles. Obstructive release channel and uneven versions of the guidelines were the prominent problems in obtaining and accessing them. Primary supervisor nurses appear low awareness of, attention to and compliance with nursing practice guidelines. The greatest challenge for guidelines’ popularization in nursing is difficult availability. In addition, the dissemination of evidence-based nursing guidelines is very poor, and there is great potential and challenge in the gap of knowledge implementation and knowledge transformation in China.

Keywords nursing practice guidelines, implementation, adherence, knowledge translation
In recent years there has been an increase in the production of knowledge in the scientific field of nursing, which sought to respond to current issues and to contemporary challenges of nurses, the exploration of new strategies of action and deepening of knowledge of the population to whom the care is intended, always with the focus on providing excellent nursing care. Concomitantly, it was also observed the development of Nursing Education, appeared new models of education in face of current needs, some curricula were redesigned, and pedagogical practices were evaluated, always with a focus on teaching excellence. Despite all the development, not all the contributions of the development of knowledge were integrated by professionals and contexts of care and teaching, despite the importance of have established nursing clinical/educational practice in the best evidence available. Some factors have been identified as an obstacle to the translation of knowledge to the contexts where this knowledge can be operationalized like the limitation of resources, the consumption of time required for dedication to research, the knowledge and the ability to develop the process in a systematically and correctly way. This project, named Nurse'In 4BE intends to strengthen the partnership between Higher Education Institutions and Health Institutions in the construction of norms of orientation/consensus in nursing towards procedures or clinical/educational actions relevant to the construction of being nurses and sensitive to care of nursing, with the purpose of improving health and educational practices for the benefit of the target public and professionals.

**Keywords**  health care, evidence-based, nursing, education, partnership
Nurses make clinical decisions at the point of care and are expected to deliver the best possible care even in the most complex situations. It is critical for nurses at the forefront of care to have access to the best and current evidence as they provide care and when they implement any practice change. This presentation will focus on a Cochrane evidence summary writer’s experience on how she used her expertise in EBP to bridge the research-practice gap for nurses in two large academic medical centers in the United States. For example, the process of integrating EBP processes in nursing professional governance councils at the hospital such as the Research and EBP Council and Practice Committee, specifically when evaluating clinical workflow, weighing risks and benefits of new procedures and revising clinical policies. Librarians have been traditionally involved in the conduct of systematic reviews in academia. However, the author had co-led the initiative to engage librarians in the work of various nursing councils leading to collaborative evidence reviews and successful translation of research into practice.

Keywords Shared governance, research-practice gap, nurses
Non-pharmacological and non-surgical interventions to reduce the impact of rheumatoid arthritis

A scoping review protocol

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Introduction: In the last decades, a marked positive improvement in the treatment of Rheumatoid Arthritis (RA) was observed mainly through the novel immunosuppressive therapies. Nevertheless, a considerable proportion of patients still describe important levels of disease impact. Adjunctive nonpharmacologic treatments seems to be a wiser therapeutic choice. However, literature is dispersed, fragmented and interventions were poorly described.

Objective: To examine and map the non-pharmacological and non-surgical interventions (implemented and evaluated) to reduce the impact of RA.

Methodology: This scoping review will follow the Joanna Briggs Institute methodology. A three-step search strategy will be undertaken to find both published and unpublished studies (from 2000 onwards) in English, French, Spanish and Portuguese language. Inclusion criteria are as follows- Participants: patients with rheumatoid arthritis aged 18 years or over. Concept: non-pharmacological and non-surgical interventions, and impact of disease. Context and Types of studies: no restrictions. Two independent reviewers will analyse the title/abstract and full-text to assess eligibility according to the inclusion criteria.

Results: Search results will be presented in a PRISMA flow diagram. Data will be extracted from selected papers, using a data extraction instrument developed specifically for this review. Two reviewers will extract data independently.

Conclusion: This review will summarize available evidence on the nonpharmacological interventions for patients with RA to reduce the global or domain-specific impact of the disease. This will represent an important clinical measure because when inflammation has been abrogated adjunctive interventions targeting the uncontrolled domains of disease impact may result in improved patient-centred outcomes.

Keywords arthritis, rheumatoid, non-pharmacological interventions, outcome assessment (health care), review
The Circle of Searching: The Rigor of Searching Using Keywords,

Citations and Cited By Search Methodology Complete

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The Circle of Searching methodology, is a unique way to search for undiscovered articles; the concept was developed to explain closing of the loop whilst searching for all possible articles on a topic, for a rigorous systematic review. Joanna Briggs Institute has a very thorough and rigorous approach to search methodology in various training materials. This method goes a step beyond the typical hand-searching for articles in reference lists, and finds articles that have cited the articles retrieved. Since a systematic search can be executed in many ways, the expertise of a research librarian and the aforementioned methodology, helps to guarantee the success of a search on any given topic.

**Keywords** Search Methodology, Keywords, Citations, Cited By
The construction of the health education guideline model for the clients with knee osteoarthritis

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Objective This study aims to construct the health education guideline model for the clients with knee osteoarthritis (KOA), hence, to provide reference to the health education and self-management strategies of KOA.

Methods Theoretical and literature analysis was used to form the classes of the concepts. And the evidence based clinical practice guidelines which evaluated by the tool of AGREE II provide the contents of the draft model. The panel meeting with four KOA clients and eight health care professionals was conducted to form the final model.

Results Six clinical practice guidelines searched worldwide were employed, which provided 23 recommendations. The panel meeting excluded 8 recommendations with reasons and reconstructed the model logically. The final model composes three classes, including disease management (etiology; pain management; pharmacotherapy; conservative therapy and invasive therapy), role management (ability to perform job; adjustment to home and workplace), and emotion management (screen for depression and stressors).

Conclusion Pain management, exercise strategy and weight control are the core contents in this health guideline model. Practitioners and KOA patients should take all factors involving in the model into consideration while conducting personalized health education and self-management strategies, hence to improve patients’ quality of life and delay the progression of KOA.

Keywords Knee Osteoarthritis, health education, evidence based practice
Evaluation of exercise practice guidelines for type 2 diabetes mellitus patients based on AGREE II

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Objective To evaluate the quality of exercise clinical practice guidelines for T2DM patients in order to provide the evidence for making clinical standardization guidance in T2DM patient exercises.

Methods We used computer to search databases, guideline network and the websites of related diabetes professionals. The retrieval time was from 2010 to 2016. The published clinical guidelines of exercise for T2DM patients were recruited. Descriptive analysis included general information such as the name of the guide, the issuing institution, the year of issue, the year of updating and the source of the guide.

Results A total of 5 guidelines were included, of which one were from China, 1 from Canada, 1 from England and 2 from the United states. The scores of guidelines according to the domains of AGREE II decreased from "scope and purpose"(96.1%), "clarity of presentations"(83.6%), "editorial independence"(76.3%), "participants"(69.7%), "rigour of development"(67.1%), and "applicability"(61.9%).

Conclusions The clinical nursing practice of T2DM exercises start late, and lack high quality clinical practice guidelines to support the work currently in China; Local practice of high quality guidelines should be carried out to find evidence suitable for exercises of T2DM patients in china.

Key words Type 2 Diabetes Mellitus; Clinical Practice Guideline; AGREE II; Guideline Evaluation
An evidence-based online training with peer support program in dementia care for home care staff

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Home care staff often have insufficient knowledge and skills of caring people with dementia at home. Many training courses for home care staff are not developed according to their educational background and workplace needs. They also lack support systems to care for people with dementia. It can lead to high turnover rate of home care staff and further affect quality of care of those with dementia. Research suggest that internet training strategies hold considerable promise for meeting educational and support needs of home care staff at reduced costs. Therefore, providing accessible and suitable training for self-learning with workplace mentoring support in dementia care is essential for home care staff.

An innovative evidence-based online training with peer support program in dementia care was developed and consists of online cloud platform with various training courses and resources, on-the-job mentoring support by senior peers, and social networking in dementia care. All training materials are based on the newest evidence and designed to suit the educational levels of home care staff who often have lower education levels. They can access to the online cloud platform by computers or smart phones anytime for immediate access to information in dementia care. They can also consult with senior peers for care problems by social network platform and attend monthly dementia care forum.

This multifaceted online training with peer support program have the potential to improve knowledge and skills of dementia care among home care staff and further improve quality of care of people with dementia at home.

Keywords dementia, home care, staff, online training, peer support
Knowledge and perceived competence of home care workers about dementia care

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Background: Older people with dementia often display behavioural and psychological symptoms of dementia which are reported to be the most stressful and challenging care problems by caregivers. Home care workers who provide the majority of direct care usually receive insufficient training in caring for those with dementia at home. This may lead to low job satisfaction and burnout.

Methods: This cross-sectional survey explored the knowledge and perceived competence of dementia care among home care workers in rural areas of Taiwan. Knowledge was assessed using the Knowledge in Dementia Scale, whereas perceived competence in relation to dementia care was assessed using the Sense of Competence in Dementia Care Staff scale. A total of 212 questionnaires were obtained.

Results: This group of home care workers considered to be older (46.6±8.81 years) with lower education levels compared to those working in urban areas. About 40% did not receive any training in dementia care. It revealed that they did not have adequate dementia care knowledge and had medium level of perceived competence in caring for those with dementia at home. The most common and difficult problems reported in caring for those with dementia at home were assessment of emotion and cognitive functions, management of behavioural and psychological symptoms, and communication skills.

Conclusions: Many home care workers, particularly those working in rural areas, are not adequately trained in dementia care. Providing accessible and suitable dementia care training for home care workers according to their education levels and needs are recommended.

Keywords dementia care, home care worker, knowledge, competence
The experience of group therapy of cancer patients: a systematic review of qualitative studies

The experience of group therapy of cancer patients

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Background. A significant amount of evidence suggests that many cancer patients experience adjustment difficulties. In the late 1970s, group therapy was reported as helpful for patients with cancer. A qualitative systematic review is the best method for exploring these parents’ experiences of group therapy.

Objectives. The objective of this review was to identify, critically appraise and synthesize the best available evidence that articulates the nature of the experiences and understanding on the part of cancer patients who have participated in group therapy.

Methods. This review considered studies that used qualitative methods to examine the experience of participating a group therapy of patients with cancer. A systematic literature search of both English and Chinese databases was undertaken, covering the period between 1970 and December 2017.

Results. The findings of this study included five meta-synthesis. They were: (1) the awareness of the crisis of self-identify, (2) self-reflection, (3) the togetherness in group, (4) constructing a new life style, (5) toward family well-being. Group therapy was shown to help cancer patients deal with stress, achieve self-empowerment and development of family well-being.

Conclusions. The findings of this study recommend that group therapy can be used to facilitate managing effectively the stress, achieving self-empowerment, and developing family well-being in cancer patients.

Keywords cancer, self-empowerment, self-identity, systematic review
Health workers Motivation and Retention Strategies bridging Human resource gap in Ethiopia: A Scoping Review

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Background: Ensuring health care workers job satisfaction and motivation in developing countries are important if they must be retained and deliver efficient health services either in the public or private sectors. As the backbone of the health system, health workers usually account for the largest share of public expenditure on health. The aim of this review is to map and describe the available evidences on mechanism and strategies of motivating and retaining health care worker to bridge the gap in human resource for health in Ethiopia.

Methods: Scoping review methodology of WHO -TAC and JBI was used to identify and collate evidence from studies included in the review. Search information is shown in the PRISMA flow diagram and four data bases were searched.

Result: A total of seven studies were included in the review and the studies are cross-sectional study design. The result of the study reveals that out comes including; pleasant work environment, fair payment/salary, conducive working condition, fair supervision, accessible administration &policies, fair workload, care to standard, better achievements, job content are factors directly associated with health care workers motivation to their job.

Conclusion and Recommendation: Salary, incentives, house allowance/provision of house, relationship with supervisors, opportunities to get training were factors positively associated with motivation and retention of health care workers. Majority of health care workers leave their job to learn or look for better payment. Further studies of high quality designs are required to inform practice.

Keywords: Health care workers, motivation, retention, evidence based, Ethiopia.
Professional empowerment and evidence-based practice in nursing

A systematic review

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Introduction: Health organization characteristics, leadership and Evidence-Based Practice are associated. There is evidence of a positive relationship between dimensions of Structural Empowerment and the ability and willingness of Evidence-Based Practice and the use Evidence-Based Practice impact Professional Empowerment.

Objective: To identify the relationship of an empowerment environment on the implementation of Evidence-Based Nursing; to explore how an empowerment environment interacts with the implementation of Evidence-Based Practice; to critically examine how this topic was studied in the literature.

Methodology: A systematic search of bibliographic databases, with the use of keywords and controlled vocabulary will be performed. Hand searching will be also conducted by screening the reference lists of eligible articles for further identification of other relevant studies. Experts in the field and key authors will be contacted to identify additional published and unpublished studies. Publications 2011 onwards in English, Portuguese and Spanish language will be included.

Participants: nurses or healthcare practitioners with a sub-group analysis reported for nurses, either working in clinical setting or management role. There will be no restriction on type of health-care facilities. Two independent reviewers will analyse independently the title/abstract and full-text to select studies according to the inclusion criteria: studies that evaluate professional empowerment and Evidence-Based Practice implementation

Results: The screening process will be carried out using the PRISMA flow chart, using a data extraction instrument developed specifically for this review. Conclusion: with this review, we will summarize the available evidence on the relationship between empowerment and Evidence-Based Practice in nursing.

Keywords Empowerment; Hospital Administration; Evidence-Based Practice; Nurses
Augmented Reality and Evidence Based Practice: The ARsim2care Project

Using the best evidence to enhance nursing students' practice.

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Background: Augmented reality (AR) initiatives which support blended learning in health education are rapidly appearing. However, to date limited scientific evidence exists in relation to the use of AR and best practice.
The ARsim2Care project offers an international (Spain, Belgium, Portugal, Argentina, El Salvador) and interprofessional platform to create practice scenarios based on educational needs while using the best evidence to inform the students’ learning. The first part of this project is presented here.
Objectives:
Reviewing best evidence in practice for specific procedures
International benchmarking
Using AR technology to facilitate and enhance the process of integrating knowledge and technical skills into best practice for nursing students.
Methodology: Four initial nursing techniques were selected. A systematic review or the best evidence was conducted for each of the techniques in: CINAHL Plus, PubMed, ERIC, Embase, Medline, SCOPUS and ProQuest databases.
Grey literature was consulted an international consensus was sought within the participating teams.
Results: Best evidence was carefully identified, described and transferred into a specific format shared by all the participating institutions. A clinical guideline and user’s manual was produced for each selected technique.
Engineers transferred the evidence-based information into the AR software program so that students have access to best practice scenarios.
Conclusions: Using best evidence in order to generate new learning scenarios in health education is needed. ARsim2Care project provides an example of enhancing the quality of the learning process while using new pedagogical approaches.
International and interprofessional collaboration have facilitated the process of using new technologies in nursing education.

Keywords Evidence-based practice, augmented reality, innovation, nursing education.
Effectiveness of vibratory stimulation on needle-related procedural pain in children

A systematic review

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Background: Needle-related procedures are common medical procedures that cause severe pain in children. Based on the gate control theory, vibratory stimulation (VS) is commonly used to reduce pain in several clinical studies. We aimed to identify, evaluate, and synthesize evidence of the effectiveness of VS to reduce needle-related procedural pain (NRPP) in children aged 18 years and under, in comparison with no stimulation.

Methods: This systematic review included randomized controlled trials (RCTs) examining child’s pain using either or both self-reported and observer-reported pain scales. For potential confounder, we conducted a subgroup analysis, including age, type of NRPP, type of device, and topical analgesia as usual care subgroups. Secondary outcomes included child’s anxiety, duration of the procedure, and venipuncture success rate. A three-step search strategy was utilized in 9 databases.

Results: After assessing methodological validity, 21 RCTs involving 1727 children participants were included. No study achieved blinding. Meta-analysis showed that VS was significantly effective in reducing NRPP in children, measured using both self-reported and observer-reported pain scales. However, heterogeneity was high. The venipuncture, intramuscular injection, and BUZZY subgroups had a medium effect size. VS was effective in reducing child’s anxiety (95% confidence interval [CI]: -0.92 to -0.59) and shortening the duration of the procedure (95% CI: -1.98 to -1.42). The success rate of venipuncture was not significantly reduced by intervention (95% CI: 0.75 to 2.11).

Conclusion: VS was effective in reducing child’s NRPP. However, quality of confidence was low. Further blinded studies are necessary to validate VS effectiveness.

Keywords vibratory stimulation, needle-related procedure, child, pain, systematic review
Visualization of Scientific Collaboration in the field of Evidence-Based Librarianship: A Social Network Analysis Study

Social Network Analysis of Evidence-based Librarianship

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Objective: This study aims to analyze and visualize the scientific collaboration networks of authors, and countries in the field of evidence-based librarianship.

Methods: The current research is a descriptive study, which has been conducted using scientometric and SNA approach. The population of the study was comprised of 523 publications on evidence-based librarianship indexed by the Scopus and the Web of Science (WoS) during 1998 to 2017. Ravar PreMap, Netdraw, UCINet and VOSviewer software were utilized for data visualization and analysis.

Results: The co-authorship network of authors and countries in the evidence-based librarianship consists of 73, 45 nodes and 384, 270 link. Results of the study revealed that the UK and the United States occupied the topmost positions with regard to centrality metrics, clearly indicating their important structural role in the evidence-based librarianship research and in regard to normalized betweenness centrality, the most influential authors in the network are Booth A., Eldredge J.D. and Cleyle S. The network of evidence based librarianship research in terms of the degree of connectedness showed low density in both authors’ co-authorship network (0.013) and the countries’ co-authorship network (0.214).

Conclusion: There is a necessity for further research collaboration amongst the scholars, and countries worldwide, due to the incoherent and scattered structure of the evidence-based librarianship network.

Keywords Evidence-based Librarianship, Social Network Analysis, Co-authorship Network, Scientometrics.
The role of evidence-based management in emergency department: a systematic review

Evidence-based management in emergency department

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Background and Aim: Evidence-based management uses the best evidence available in management science for management decisions. This systematic review was conducted to study the role and effect of evidence-based management in emergency department.

Methods: Following databases were searched until February 2018 PubMed, The Cochrane Library, Scopus, Embase, and ProQuest. The search strategy included a combination of MeSH and Free Keywords of "evidence-based management", "evidence-based administration" "emergency department", "emergency ward", "emergency unit", "emergency Service". Two reviewers independently extracted data using JBI data extraction tool and assessed qualities of studies using JBI critical appraisal checklist.

Results: Out of the seventy initial studies, eight studies were included in this systematic review discussing the role of evidence based management in different conditions in emergency room. The conditions in the studies include acute hand injuries, pediatric orthopedic injuries, acute otitis media, acute asthma, dental pain, acute croup, priapism, and asthma during pregnancy. Two of eight studies mentioned high adherence to the evidence, while other two studies declared noncompliance. The rest didn’t mention to the evidence adherence. Also studies showed positive effects of evidence based management.

Conclusion: Findings showed that evidence based management and practice in emergency room maximizes patient outcomes and resource utilization, however the evidence was scarce to draw a net conclusion about this.

Keywords
Evidence-Based Management, Emergency Department, Systematic Review.

Reducing length of stay.

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Background: Enhanced Recovery After Surgery (ERAS) protocols are multimodal perioperative care pathways. A body of knowledge confirms the effectiveness of ERAS protocols in accelerated recovery, decreased complications and reduced length of stay within acute care settings. The Promoting Action on Research Implementation in Health Services (PARIHS) framework was developed to guide the implementation of evidence into practice. The framework suggests that successful implementation is greatest with a high level of evidence, supportive context and facilitated process. The aim was to decrease the mean length of stay.

Method: The PARIHS framework was utilized as a conceptual framework to guide implementation of the ERAS protocol within the ward of abdominal surgery and urology of the university hospital. The implementation was facilitated by involving all the stakeholders in a partnership. Every party played a significant role in representing the different views and offering critical reflections. From January till May 2015 the team developed a protocol specific to the setting. The protocol was pilot tested from May till November in a subset of patients and implemented throughout the ward in December. The culture within the hospital was focused on providing EBP. The team was led by a physician. The outcome indicator of mean length of stay was used.

Results: The overall mean length of stay decreased within the ward. The mean length of stay shifted from 8.45 days pre-intervention to 6.35 days post-intervention.

Conclusion: The ERAS protocol was successfully implemented by using the PARIHS framework.
Bedside briefing: taking patient satisfaction to the next level

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Background: Effective communication between patients and nurses is important to optimize the professional relationship during a patient's stay at the hospital. This is in line with JCI’s International Patient Safety Goal number 2: improve effective communication. From research we know, that patients need additional information about their care plan, examinations and clinical nurse. Better informed patients are likely to have shorter length of stay, are more satisfied and less errors occur. A study in our hospital showed that 28.6% of our patients indicate that they “always” feel involved in the decisions concerning their care plan. Our aim was to improve the feeling of involvement of patients.

Method: By using the research development and diffusion model we introduced the bedside briefing tool. It was based on the Clinical Handover at the bedside Checklist of the Patient Safety Unit Queensland Health. In collaboration with reference nurses for patient safety and nurse managers the tool was adapted to the clinical context. During the implementation teams got intensive support from the nurse manager and the staff member of the nursing department. Weekly feedback sessions were held. Patients were involved to evaluate the impact of the introduced tool.

Results: Each quarter patient satisfaction was measured. There was an important increase in the number of patients answering “always” to the question “I was stimulated to participate in the decision regarding examinations, treatment and care”: pre-intervention: 28.6% post-intervention: 48.10%.

Conclusion: Implementation of the bedside briefing tool showed an important increase in patient satisfaction levels.
Evidence Based Nursing: When to replace Peripheral Intravenous Catheter?
The influence on phlebitis and costs

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Background: The guideline care of peripheral intravenous catheter (PIC), used in our hospital, recommended the routinely replacement after 72 to 96 hours in order to prevent peripheral intravenous catheter related phlebitis. Conform the guideline of the US Centers for Disease Control and Prevention. However an update in 2015 of a Cochrane review showed that there was no evidence for routinely replacement of PICS. Our aim was to compare these two guidelines and evaluate the incidence of PIC-related phlebitis, risk factors and cost effectiveness when clinical indicated replacement was applied instead of routinely replacement.

Method: A comparative study was performed. Clinical nurses collected data of each inserted PIC on a data sheet between August 2014 and April 2016.

Results: Data of 214 patients were collected. 159 PICs were not inserted based on clinically indicated replacement. During the first 4 days the incidence of phlebitis were highest (21,2%). A drop of the risk to develop symptoms of phlebitis was shown after 4 days with 44,3% (p=0.06) in comparison within the first 4 days of insertion. No statistical differences were found on diameter as well as location. Clinical indicated replacement of PIC at our hospital prevent insertion of 36.421 PICS in comparison with routinely replacement. This corresponds to a cost effect of €118.987.

Conclusion: Clinical indicated replacement of PIC decreases the incidence of phlebitis and is cost saving. In addition the local guideline was changed.
Quality appraisal of evidence-based guidelines on prevention and management of perineal injury at vaginal delivery

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Background: Perineal injury is common after vaginal birth which may cause pelvic floor dysfunction. Guidelines are often good resources for clinical practitioners to refer to prevent the severe perineal injury and provide better repair. Their quality, however, is often discrepant.

Objective: To evaluate the quality of evidence-based guidelines related to prevention and management of perineal injury, provide references for clinical decision-making.

Methods: Systematically searched the official website of American Congress of Obstetricians and Gynecologists (ACOG) and 6 other globally recognized institutes of Obstetricians and Gynecologists; National Guideline Clearinghouse (NGC) and 8 other guideline development organizations; Database and cross-media search engine with specific search terms (e.g. Perineal laceration, perineum tearing, perineal injury, obstetrical anal sphincter injuries) were also searched from 2011~2016. Evaluate the quality of final included guidelines with AGREE II after deleting those inconsistent with the inclusion and exclusion criteria. Rank them with A level, B level and C level according to the number of domain score ≥60% and ≤30%.

Results: Seven pieces of evidence-based guidelines are finally included. The overall qualities are high. Four of them are ranked as A level and the other three are rank as B level.

Discussion: There's still distance between China and foreign guideline development association. There was no Chinese evidence-based guideline in this field. We shall resort to the best available evidence to guide clinical nurses and midwives’ prevention and management work of perineal injury at vaginal delivery.

Keywords perineal injury, natural childbirth, evidence-based nursing, guidelines, AGREE II
An evidence-based program to minimize adverse effects of hospitalization in a Chinese mainland hospital

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**Background:** The patient centered care is fundamental to caring for children in hospital. Evidence shows that Child Life program can promote the children’s optimal development and minimize the adverse effects of their experiences in health care settings. Child Life interventions facilitate their coping and adjustment. Child Life program has become standard in most large pediatric centers in USA and Canada. However, in Chinese Mainland there is only one Child Life program in the public children’s hospital.

**Objectives:** This review article aims to provide a summary of the localization services, which are supported by definitive and systematically reviewed evidence, that can be implemented by Certified Child Life Specialist (CCLS) and nurses to reduce negative impacts for children in the Children’s Hospital Zhejiang University School of Medicine (ZUCH).

**Results:** providing play opportunities in the playroom or bedside, preparing children for surgeries and diagnostic/therapeutic procedures, distracting patients during the scaring procedures, utilizing non-pharmacologic pain management strategies, educating and supporting parents for positive involvements in patient care, have all been implemented by nurses and one CCLS and shown to decrease patients’ anxiety, fear and pain in ZUCH.

**Conclusions:** When a hospital is extremely short of CCLS, well trained nurses can make the Child Life services widely provided through the hospital. There currently remains a knowledge-to-practice gap in the implementations of Child Life program. This article has identified multiple localization services to address patients’ psychosocial concerns.

**Keywords** Child Life, localization, evidence-based practice
Evidence-based flushing and locking of pediatric peripheral intravenous devices

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Objective: To integrate the available evidence of pediatric peripheral intravenous (IV) devices flushing and locking into to improve nurses’ compliance with the implementation of evidence into clinical practice, and to reduce catheter—related complications.

Methods We searched NICE, GIN, SIGN, Cochrane library, JBI Database of Systematic Reviews, RNAO, NZGG, EBM reviews to collect literatures about guideline. The study was performed guided by the standard procedure which was supported by JBI—PACES programs. Evidence regarding flushing and locking was obtained from the network that we searched then audit criteria were identified. The data were collected by questionnaire, field observation, interviews, and medical records. Barriers to evidence implementation, available resources and solutions were analyzed. Nurses’ compliance and awareness rate with each criterion and the rate of catheter related complications, were used to evaluate the effectiveness of evidence implementation.

Results Six criteria that nurses showed poor compliance with in the baseline audit, like rubbing interface 5-15s by alcohol prep pad, routinely flush devices with 0.9% sodium chloride solution and flush devices with 5% glucose solution when using incompatible solution with 0.9% sodium chloride solution, were significantly improved. The awareness rate of criteria was increased from 32.9% in the baseline to 95.1% in the re-audit, the implementation rate was increased from 16.7% to 79.1%, the average maintenance time was increased from 39.4h to 48.2h, the incidence of complications was decreased from 23%to 7%.

Conclusion Application of evidence-based pediatric peripheral IV flushing and locking, can improve nurse’s catheter maintenance behavior and nursing quality.

Keywords pediatric, evidence-based nursing, best practice, flushing and locking, peripheral intravenous devices
Analysis of TCM Nursing Scheme in Acute and convalescent stage of stroke with PARIHS Framework

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Objective: In order to provide scientific reference for the TCM nursing scheme of stroke’s revision and optimization. We analyzed the TCM nursing scheme of stroke based on the concept of evidence-based nursing.

Methods: First of all, we need to count up the word frequency of the apoplexy symptoms and TCM nursing techniques which are related to them through bibliometrics. Then according to the five step method of evidence-based medicine, the evidence support of the symptoms and TCM nursing technology was explored. Lastly, the clinical application of the scheme was investigated by using the self-made questionnaire and interview outline which are designed according to the PARIHS framework.

Results: According to the analysis with PARIHS framework, we know that evidentiary elements and contributing factors of programme content are at a low level, and organizational environmental factors are at a medium level.

Conclusion: There is a need to apply evidence-based approaches to optimize existing programmes. As well as perfecting the content of the scheme based on the existing scientific research evidence. Moreover adjusting scheme’s promotion and application with Evidence-based practice model.

Keywords: PARIHS, Stroke, TCM Nursing Program, Evidence-based, Clinical Application
Determining the best strategy to develop evidence-based practice regarding culturally-competent health care in Japan

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The provision of culturally sensitive health care for people with diverse backgrounds is an urgent issue in Japan. The decline of the workforce due to Japan's low birth rate and its rapidly increasing ageing population has led to the growth of the country's immigrant population. This influx is a contributor to the expansion of ethnically and culturally diverse patient populations in Japan. The current national policy of attracting tourists to visit Japan and the approaching Tokyo Olympic games in 2020 have also obviously accelerated the need for healthcare services that are sensitive to the requirements of discrete cultural and ethnic groups of people. Japanese health care is now required to transform its approach from ‘health care by Japanese workers for the so-called homogeneous Japanese people’ to ‘health care that can embrace people from culturally and ethnically diverse backgrounds’.

The present project aims to produce evidence-based recommendations for health care professionals and for students in Japan with regard to effective and appropriate strategies that may be employed to develop culturally competent health care. The project examines papers that address the topic of cross-cultural competence, racial sensitivity, multi-national awareness or international safety skills among health care professionals and/or students in health care fields. The papers published in both English and Japanese are considered for inclusion in the project.

This presentation will report the preliminary results of the first component of the project. It illuminates the experiences of nurses in relation to culturally competent/sensitive care or with respect to training/education on cultural competence/sensitivity.

Keywords cultural competency, nursing practice, evidence-based health care
Trend Analysis and Scientific Mapping of Evidence-Based Librarianship Based on Co-Word Cluster Analysis

Co-word analysis and subject clusters of Evidence-Based Librarianship

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Background and Aim: Scientific trend and co-word analysis can help inform research topic trend. The purpose of this study is to identify World current Status in the field of evidence-based librarianship.

Methods: All the articles of evidence-based librarianship were selected from Scopus and Web of Science from 1998 to 2017. The information visualization software Ravar PreMap and VOSviewer were used to conduct co-word and clustering analyses on these articles.

Results: A total of 1901 keywords of 523 articles were identified. Applying a threshold of three or more occurrences, only 134 keywords were remained. Keywords with the highest frequency in the evidence-based librarianship research were found to be “library science”, “evidence-based medicine”, “evidence-based practice”, “systematic review” and “education”. Moreover, seven important subject clusters were identified in the evidence-based librarianship research network are as follows: (1) Library and Information Science; (2) Health and Medical Information; (3) Education and Nursing; (4) Clinical Outcome; (5) Management; (6) Evidence-Based Medicine; (7) Information Storage and Retrieval.

Conclusion: Using scientometrics methods to visualize research of evidence-based librarianship can provide us with new ideas and research methods. The occurrence of the keywords related to the medicine, nursing and health in three subject clusters reveals the influence of evidence-based librarianship in the clinical and health sections. The diversity of research, articles in the field of evidence-based librarianship in the world.

Keywords Evidence-Based Librarianship, Social network analysis, Co-word analysis.
Quality Assessment of Clinical Practice Guidelines for Gestational Diabetes Mellitus: A Systematic Appraisal

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Objective  To critically evaluate the quality of clinical practice guidelines for gestational diabetes mellitus that were published in guideline website, diabetes related association website, and medical journals.

Methods  Guidelines were selected by searching NGC, GIN, SIGN, NICE, NZGG, RMAO, WHO, IDF, ADA, CDA, ADIPS, as well as Best practice, UpTodate, Clinical Key for Nursing and Chinese databases. All guidelines published between 2007 and 2017 were considered. The quality of eligible guidelines was assessed independently by four reviewers using the Appraisal of Guidelines for Research and Evaluation (AGREE) II instrument.

Results  Thirteen guidelines were identified through double screening, which were from NICE, ADA, CDA, DGA, NGC, NZGG, SIGN, IDF, ADPSG, FIGO, WHO, PubMed and China medical association. Four reviewers assessed the quality of guidelines using AGREE II instrument. The quality ranged from good to acceptable in the scope and purpose (mean, 88%; range, 58%-100%), clarity and presentation (mean, 88%; range, 33%-100%), and applicability (mean, 77%; range, 42%-100%) domains but not in stakeholder involvement (mean, 67%; range, 17%-100%), rigor of development (mean, 65%; range, 20%-100%), and editorial independence domains (mean, 69%; range, 0-100%). Nine guidelines were considered "strongly recommended" or "recommended with minor modifications" for clinical practice.

Conclusions  The quality of the clinical practice guidelines for gestational diabetes mellitus varied. As a whole, the domains including stakeholder involvement, rigor of development, applicability, and editorial independence should be considered and improved in the future for the development of clinical practice guidelines for gestational diabetes mellitus.

Key words  Clinical practice guideline, gestational diabetes mellitus, AGREE, quality assessment
Evidence-based nursing practice aims to apply the best evidence to clinical care. Based on the huge gap between research and practice, the conversion of research results into practice is relatively slow. As a result, ineffective interventions have not been applied to clinical care in a timely manner. Some ineffective and even harmful interventions are still being used, leading to inefficiencies in clinical practice, poor efficacy of care and unfair use of health resources. In order to promote the translation of research results and bridge the gap between evidence and practice, Canadian Institutes of Health Research put forward the concept of "Knowledge Translation" in 2000 and carried out the world's first knowledge translation project. In 2006, Canadian scholars developed "Knowledge to Action framework, KTA" to promote the integration, dissemination and application of knowledge. This paper will give a comprehensive description of KTA conceptual framework and its application in evidence-based nursing practice, aiming at providing theoretical support and method guidance for researchers and practitioners to carry out knowledge translation.

**Keywords** Evidence-based, KTA, Knowledge translation, nursing practice
Prevention of venous thromboembolism in post-operative abdominal patients: a best practice implementation project

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Background: Venous thromboembolism, which includes deep venous thrombosis and pulmonary embolism, is a leading cause of morbidity and mortality in hospitalized patients. Despite strong evidence, many patients do not receive optimal thromboembolism prophylaxis. Venous thromboembolism prevention is primarily based on an adequate risk stratification.

Objectives: This project’s aim was to ensure that venous thromboembolism assessment was performed accurately, and that adequate prophylaxis was followed-up to decrease the incidence of venous thromboembolism post-operatively, and enhance the recovery after surgery.

Methods: A baseline audit on venous thromboembolism prevention utilizing the Joanna Briggs Institute Practical Application of Clinical Evidence System program was undertaken that involved 21 nurses and 30 patients. An intervention including venous thromboembolism education, clinical practice and prophylaxis was conducted, following which a post-implementation re-audit was undertaken.

Results: The baseline audit results showed that four audit criteria results were found to be less than 30%, which indicated poor compliance with the current evidence. After implementing the strategies, including education, VTE video etc., there was a huge improvement in most of the criteria audit achieving 100% compliance.

Conclusions: Overall the project achieved a significant improvement in establishing evidence-based practice regarding prevention of venous thrombosis implemented in two wards. Sustaining best practice should be developed in the future.

Keywords barriers; clinical audit; evidence-based practice; implementation project; venous thromboembolism
The Effectiveness of Educational Interventions on Evidence-Based Practice for Clinical Nurses on Patient Outcomes: A Systematic Review

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Objectives: To primarily gather, assess, and synthesise the current available evidence on the effects of EBP educational programmes for clinical nurses on patient outcomes.

Date Sources and Methods: Medline (Ovid), Web of Science, CINAHL, the Cochrane Library, ERIC, and LISA databases were searched from inception to May 2017 to identify relevant studies investigating EBP educational interventions for clinical nurses on patient outcomes. Hand and grey literature searches including reference and citation tracking, four key journals and four grey literature websites were also conducted. The quality of the included studies was assessed using a modified Health Care Practice R&D Unit (HCPRDU) tool. Because of the poor homogeneity of the included studies, the data were analysed by narrative synthesis.

Results: Of the 4,284 articles identified, 18 were included: 12 pre–post studies, three qualitative studies, and three mixed-methods study designs. The level of quality was modest in the studies. Patient outcomes of EBP educational interventions on clinical nurses could be identified through three main subcategories: EBP project-based specific outcomes (16/18 articles), qualitative data from participants (4/18 articles), and the results of a questionnaire survey (1/18 articles). The majority of the articles concluded there was a positive change in patient outcomes. EBP projects and qualitative interviews were the two main approaches used to assess patient outcomes.

Conclusion: EBP educational interventions for clinical nurses have promising results on patient outcomes. However, further testing and development is needed to improve the quality of studies and evaluation instruments to confirm the current findings.

Keywords evidence-based practice, EBP, clinical nurses, patient outcomes, instruments
How about Characteristics of Clinical Studies of Chinese Herb Oral Care

**A Bibliometric Analysis**

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**Background:** Chinese herb oral care (CHOC) has been widely applied in China for thousands of years. This bibliometric analysis designs to provide a comprehensive review of the characteristics of clinical studies on CHOC.

**Methods:** Clinical studies such as randomized clinical trials (RCTs), controlled clinical studies (CCTs), case series (CSs), case reports (CRs), and cross-sectional studies on CHOC for any condition were included. Seven databases were searched from inception date to October 2017. Bibliometric information design type, characteristics of participants, details of the intervention and comparison, and outcome were extracted and analyzed.

**Results:** A total of 388 clinical studies involved 43,005 participants were identified and published between 1979 and 2017. 282 RCTs (72.68%), 41 CCTs (10.57%), 62 CSs (15.98%) and 2 CRs (0.51%) were included and all studies were from China. The top five condition categories applied by CHOC were primary oral problem (250, 49.12%), radiotherapy associated (41, 8.22%), chemotherapy associated (38, 7.62%), gastrointestinal infected with HP (28, 5.61%), and stroke (22, 4.41%). Among 324 controlled studies, the majority compared CHOC alone with different treatments, which contained 10 subcategories with 272 comparisons. The most commonly applied controls were types of chemical mouthwash. CHOC superior outcomes, oral comfort (4 studies, 1.04%) and bad breath improvement (37 studies, 9.59%), were seldom reported.

**Conclusion:** Much research on CHOC has been published in China which mainly focuses on preventing and treating primary oral problems. The findings can be used to inform research by highlighting areas of greatest impact for CHOC in the future.
The Framework of Evidence-based Continued Clinical Quality Improvement and its Application in Evidence Implementation

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Background Globally, health care systems are experiencing the challenges of improving the quality of care and decreasing the risk of adverse events. To help nursing professionals improve the quality of health care, we developed the framework of evidence-based continued clinical quality improvement in 2017. Based on this framework, we carried out nine implementation projects related to management of peripheral venous catheters.

Objective The objective of this article was to introduce how to implement the best evidence related to management of peripheral venous catheters into practice based on the framework of evidence-based continued clinical quality improvement.

Methods Based on the framework of evidence-based continued clinical quality improvement, nine projects related to management of peripheral venous catheters in nine wards for children were identified. All projects adopted four phases including evidence collection, situation analysis, piloting evidence and outcome evaluation.

Results Nine projects related to management of peripheral venous catheters were identified, including assessment and device selection, insertion, fixing, dressings, flushing and locking, patency assessment, prevention of phlebitis, prevention of extravasation and catheter removal. During the phase of evidence collection, 92 items of evidence were searched, and 83 indicators were developed. In the phases of situation analysis and piloting evidence, 132 barriers were recognized and 106 strategies were adopted to overcome the barriers. During the phase of outcome evaluation, the compliance rate of 83 indicators were increased, and knowledge score of nursing staff and care givers of children were improved.

Conclusions The framework of evidence-based continued clinical quality improvement provided nursing professional’s a concept and method of promoting evidence into practice and promoting clinical nursing quality.

Key words Evidence-based practice, evidence implementation, continued clinical quality improvement