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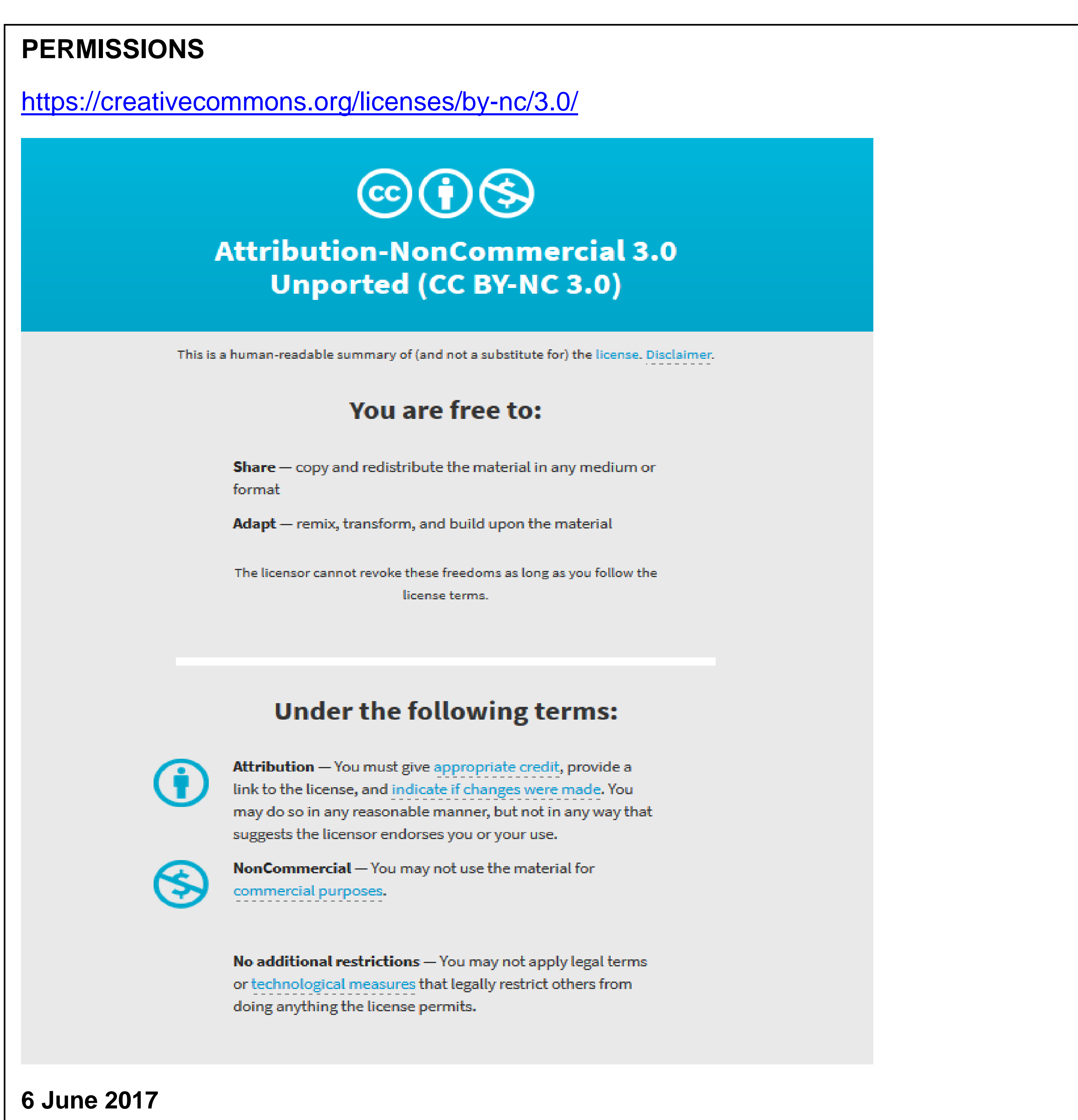
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Applying Theory Informed Global Trends in a Collaborative Model for Organizational Evidence-based Healthcare

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Getting evidence in to practice tends to focus on strategies, theories and studies that aim to close the gap between research knowledge and clinical practice. The evidence to practice gap is more about systems than individual clinician decision making. The absence of evidence for administration and management in the organization of healthcare is persistent. Teaching nurses and providing evidence as the solution to evidence-based healthcare is no longer axiomatic. Previous studies have concluded that unit level strategies integrate multi-professional teams with organizational needs and priorities. This 'best fit' approach that characterizes how healthcare is structured and delivered. The published literature shows that increased readiness for change is aligned with integrated approaches informed by conceptual models. The Joanna Briggs Collaboration is the largest global collaboration to integrate evidence within a theory informed model that brings together academic centres, hospitals and health systems for evidence synthesis, transfer and implementation. The best approaches to implementation are tailored to local culture and context, benchmark against international evidence, combine a theory informed model and stakeholder perspectives to improve the structure and processes of health care policy and practice.

Key Words: Clinical governance/organization & administration; Evidence-based practice; Models, nursing; Translational medical research/organization & administration

INTRODUCTION

Getting evidence in to practice or evidence-based healthcare as it is usually described tends to be focused on strategies, theories and implementation projects that aim to close the gap between research knowledge and clinical practice. A focus on practice as the end-point may risk ignoring the systems, structures and organizational infrastructure, including HR, administration and management without which good clinical care would not be possible. The evidence to practice gap is more about systems than knowledge for individual clinician decision making. Sustainable implementation of evidence-based healthcare (EBHC) will not be achieved if greater emphasis is not given to the organization and administration of healthcare [1]. Despite the growing body of knowledge related to theories, models and methods for practice change, many intervention studies focus on the point of care; but fail to adequately address organizational perspectives.

Evidence consistently points to the need for a theoretical framework as a key ingredient within healthcare environments in order to close the evidence to practice gap and achieve best practice [2]. Systems based approaches that utilize routine hospital/healthcare structures and processes for the organization and management of care are thought to provide better sustainability. Strategies based upon behavior change and theories of behavior change (health professionals and patients) are important to improving healthcare outcomes [3]. In particular, it has previously been argued that creating explicit linkage between quality improvement and EBHC is critical to maximizing the strengths and capabilities of hospitals, infrastructure and personnel without needing to create new resources or strain sustainability [2]. This paper presents considerations for the organization of evidence-based healthcare in light of Australian and global trends. Using the Joanna

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Briggs Institute Centre of Excellence program for global collaboration, this paper highlights structures and processes supportive of getting evidence in to practice. It describes innovative strategies and solutions for integration of evidence related to the individual clinician within an organizational framework that conceptualizes evidence-based healthcare [4-6].

Joanna Briggs Centres of Excellence are a unique organizational structure in the healthcare landscape. Centres are generally situated within an academic facility, usually at the faculty or school level, and chaired by a Dean or Professor. Centre staffs are academics, information scientists, managers and administrators who have received training in EBHC on the JBI (Joanna Briggs Institute) approach to best practice; and are committed to the mission of seeing evidence as the basis of decision making for healthcare. Centers of excellence have a partner hospital or health facility and these two organizations collaborate on local issues for the organization and delivery of evidence-based healthcare, including:

- The development of evidence, education, training and support to increase hospital staff knowledge, skills and capacity for EBHC,
- The development of systematic reviews that respond to partner organization knowledge needs,
- The provision of education and training to partner organization staff to expand readiness and sustainability of EBHC, and
- The facilitation of implementation, monitoring and evaluation of best practice and evidence-based quality improvement projects with the clinical partner to improve the structures, processes and outcomes of healthcare.

BACKGROUND

The history of EBHC and the debates about the research practice gap has its direct comparison with nursing administration and management. Historically, research has been positioned as the source of knowledge that clinicians needed to access. In this model, researchers were gatekeepers of knowledge, and ownership of the research agenda was driven by expertise in attracting research funding, sometimes at the cost of being informed by the knowledge needs of hospitals and healthcare [1,7,8]. Dissemination by publication was a key output from research, and was the researchers' strategy for making their findings available, once published, the researchers job was done, in an era when evidence-based healthcare and integrated research programs were emergent rather than established. This researcher led model tended to operate independently from the needs of clinicians, administrators and managers. Accessing research findings of relevance to policy and practice was difficult, and knowing how to implement complex, often contradictory research findings was a further challenge that health administrators, managers and clinicians were faced with. Issues such as reducing the risk of falls require strategies that incorporate finance, human resourcing, equipment, policy and practice. With the huge amount of research on this one topic rarely providing the comprehensive approach necessary for effective organizational risk of fall prevention strategies. Systematic reviews have assisted to bring this evidence together in a more concise body of research, increasing the accessibility of the overall body of evidence.

The needs of nurse managers and administrators both within their own activities, and in the organization and management of clinical care delivery are complex, and difficult to research. More recent evidence better reflects this complexity, with Colquhoun and colleges identifying that the best approaches to implementation do not study interventions in isolation from barriers to practice change, tailored interventions, theory, and stakeholder engagement [4]. The authors went on to indicate that organizational and system level evidence for implementation of best practice remains limited; with research in to best practice often lacking clarity in the planning and methods [4].

The absence of evidence for administration and management in the organization of healthcare is persistent. Nursing education and training in the skills and knowledge for evidence-based healthcare has become embedded in undergraduate and postgraduate programs, and the evidence informed knowledge needs have been mapped, with cross sectional data indicating nurses need access to evidence at least three times per shift [9]. The change in education and need for evidence at the point of care was central to the growth in training and education for nurses in skills related to evidence-based healthcare. Nurses were taught how to design answerable clinical questions, search the literature for evidence, how to evaluate the quality of evidence, and were taught that implementation should be followed by evaluation of effect. These five steps to EBHC characterize much of the education and training offered to the nursing profession, but represent an assumption that behavioral scientists now recognize as flawed. The idea that teaching nurses and providing evidence as the solution to EBHC is no longer axiomatic. Systems based approaches became an additional layer, with the aim of embedding evidence within electronic medical records and integration of clinical decision support systems to ‘system-

atize' and sustain best practice at the point of care.

However, key functions within hospitals and healthcare facilities are centred around units within a leadership structure that is inclusive of clinical administrative and managerial requirements. Key to the effective functioning of units is clinical leadership. Effective leadership is a key ingredient in EBHC, and development of effective leadership skills is core to getting evidence in to practice. Clinical leadership that brings EBHC in to practice settings, acts to facilitate practice change within the existing quality improvement systems, leads to improved patient outcomes and a strengthening of clinical governance. The growth of leadership capacity is a deliberate, strategic investment in organisational wellbeing and sustainability, it is not a passive process whereby ‘good clinicians' are elevated to more senior roles.

DISCUSSION AND EXTANT LITERATURE

Previous studies have concluded with recommendations that unit level strategies integrate multi professional teams in alignment with organizational needs and priorities. Such models have been linked with effectiveness of mechanisms for evidence-based practice change and evidence-based quality improvement [6,10-13]. A landmark Australian paper addressed the question of how the quality and safety of care could be improved within organizational systems and structures [10]. The authors recognized that hospital managers spend significant amounts of time on the structure of service delivery and cost containment, and advocated for the establishment of leadership groups for implementation and research within the unit based structure. This was proposed as a 'best fit' approach that characterizes how healthcare is structured and delivered. In doing so, the authors described a position that was already characteristic of a dynamic, global collaboration; the Joanna Briggs Institute [14]. Stetler and colleges in the United States of America (USA) evaluated a similar approach and found that establishing evidence-based practice within a theory informed model was associated with greater institutionalization of EBHC. The authors conducted a multi-site comparative analysis and concluded that an approach to EBHC based upon a model provided a useful framework for implementation and evaluation of transformational efforts for EBP institutionalization [11].

One potential barrier to establishing units for best practice is the preparedness of staff for EBHC. Cross-sectional studies in the Australian health care sector demonstrate that nurses in particular have a high level of awareness and preparedness for EBHC [12]. Australian nurses are required by governance models to work within an evidence-based framework that is inclusive of skills such as identifying the relevance of research to practice improvement, demonstrating analytic skills in accessing and evaluating health care information and research evidence, and contributing to research and quality improvement activities [12]. Cross sectional study results indicated a highly receptive, positive attitude to EBHC, but low levels of knowledge and skills specific to the implementation of the stated professional expectations. Interestingly the sample for this study was both established nurses and recent graduates, giving a diverse professional basis to the findings relevance for nursing trends in Australia. The key conclusion from this paper was that individual attempts to implement EBHC are generally insufficient, a whole of nursing profession perspective is needed, and should include organizational and administrative considerations, not just specific skills associated with finding and reading research literature [12]. These findings related to organizational requirements and integration of units across hospitals and healthcare systems have been replicated in experiential and anecdotal reports from the USA [13]. The overriding lesson from published literature is that while focusing on interventions to improve the uptake of EBHC is important, as is individual health professional behavior change to increase readiness for change; the unit based approach is congruent with the structures and functions of hospitals and health care settings, and more aligned with integrated approaches informed by conceptual models for EBHC [2,4,7,10].

While evidence supports the use of theory to inform best practice, combining theory with key characteristics of EBHC requires a model matched to organizational needs across the domains of EBHC (synthesis, transfer, implementation). A model relevant to organizational needs and priorities promotes an integrated approach for the organization and delivery of evidence-based care. The Joanna Briggs Institute conceptual model for evidence-based healthcare provides a theory rich, evidence informed model that facilitates an organizational approach to best practice [5]. The Joanna Briggs Collaboration is a working adaptation of the JBI model that brings together the evidence-based attributes expected of the nursing profession, the organizational characteristics for the proper administration and management of healthcare policy and practice and the key domains of activity related to EBHC [14].

The model includes representation of research (evidence generation) systematic reviews, rapid reviews and guidelines (evidence synthesis) with education strategies and active dissemination (evidence transfer) and getting evi-

dence in to practice (evidence implementation). The model is now on its second iteration, as the framework on which the structure and function this unique international collaboration is based. The Joanna Briggs Collaboration (JBC) is the largest global collaboration to integrate EBHC within a theory informed model that brings together academic centres with hospitals and health systems. Further to this, the functions of the JBC are directed toward the knowledge needs of local hospitals, particularly for systematic review topics and implementation of best practice. The remainder of this paper illustrates how this innovative approach to best practice combines academic trend in partnerships to bring together the strengths that enhance the implementability and sustainability of the JBI Model (Figure 1).

1. Types of Evidence for Healthcare Policy and Practice

Central to the JBI model, and to the knowledge needs for health care administration and practice is that research evidence be reflexive of the knowledge needs in the organization and delivery of care. In JBI we conceptualize this as JBI-FAME, drawing on evidence that is qualitative, quantitative, or economic; using the type of evidence best suited to the knowledge need, not just relying upon clinical trials (Table 1). Given the complexity of healthcare organization and delivery, models that integrate findings of all robust research should be central to how EBHC is conceptualized and understood [5].

2. Evidence Generation

The types of evidence indicated in Table 1 are analogous to research programs underway in many hospitals and healthcare facilities. Research programs in hospitals tend to focus on establishing what works (effectiveness); while less often addressing the other important domains such as how patients perceive and experience care, how the appropriateness of healthcare should be established, or what the cost implications of a new process versus an existing process might be. Where there is existing research evidence, the need for new research should be carefully considered before undertaking studies that risk duplicating existing knowledge without adding to the statistical power, certainty or clarify about magnitude of effect of what is

Figure 1. The JBI conceptual model for evidence-based healthcare.

already known.

3. Evidence Synthesis

This is where the kind of partnership that the Joanna Briggs Collaboration is based upon can strengthen hospitals. In the JBI model, evidence generation (research, expertise and discourse) are aligned to a local health need or priority. The JBC undertake systematic reviews of research, choosing topics in discussion with, or on behalf of a clinical partner organization (usually a hospital or healthcare facility). This avoids costly duplication, and tie up of resources in research projects when good evidence already exists. Each systematic review project within the collaboration framework includes clinical expertise, where the Joanna Briggs Collaborative Centre draws upon clinical knowledge from its partner hospital to better inform the systematic review; in doing so, the specific needs of the hospital are represented in the Centre activity. This is not unique to the JBC as a model, other groups integrate clinical knowledge with the conduct of systematic reviews in similar ways. However, the JBC operational framework is based upon a whole of EBHC model that leads to implementation, therefore systematic review topics are chosen because the evidence is to be used locally within hospitals and health facilities.

4. Evidence Transfer

Findings from systematic reviews are the current best evidence base for clinical decision making and for understanding strategies for the administration and management of healthcare. Increasing the accessibility of these findings enables end users to understand and use them. In the JBC each Centre of Excellence not only conducts systematic reviews that are important to the local organization and delivery of health care, but provides training to enhance organizational capacity to best use the results of systematic reviews. This is consistent with cross sectional study findings that show high attitude response scores to EBHC, but an ongoing trend indicating difficulty in knowing what evidence to use, being confident with statistical data, and a need for knowledge on organizational requirements for EBHC [15,16]. In the JBC, evidence transfer is not a single interaction around a publication, instead it is multi-modal including understandable and actionable messages, targeted to specific user groups and stakeholders delivered in relevant and appropriate education sessions to stakeholder groups [17].

5. Evidence Implementation

Implementation that meets diverse evidence (feasibility, appropriateness, meaningfulness or effectiveness (Table 1) informed by systematic reviews and facilitated by transfer through education is emblematic of the value and utility of the JBI Model. The integration between the components of the model fits with the scope and function of JBI Centres of Excellence and positions JBI as a global leader in EBHC. Evidence-based healthcare is not a clean, linear process, the JBI model enables users to establish organizational approaches from the starting point within the model that best meets their needs. The starting point for a may be implementation. Implementation is where the distinctive approach of the JBC has impact on structures, processes and outcomes of health service delivery.

The objective is improved global health, however, this is always within a local context and therefore each implementation project related to the organization, administration or provision of care meets a local priority, and contributes to the global knowledge base for EBHC [18]. Dr Choi in an implementation study on pain management among cancer patients modeled this approach, demonstrating that implementation extends well beyond the scope of what can be achieved through an electronic medical record [18]. It is transformative, practice orientated, integ-

Table 1. Types of Evidence and JBI-FAME

Knowledge need	Type of evidence
Evidence that informs the practicality or viability of best practice strategies	Feasibility
Evidence that informs the goodness of fit between an intervention or care process and a specific local context	Appropriateness
Evidence that informs our knowledge of how individuals experience the organization, management and delivery of healthcare	Meaningfulness
Evidence that informs our knowledge of what interventions or administrative processes are most beneficial	Effectiveness

JBI=Joanna Briggs Institute, FAME=Feasibility, appropriateness, meaningfulness and effectiveness.

rates unit based approaches to best practice with the reliability of structured programmatic approach that develops advanced skills in practice change, clinical governance and leadership, builds a cohort of expert nurses able to sustain evidence-based quality improvement and work within the organizational mandate. Joanna Briggs Institute Clinical Fellowships are a flagship six-month program focused on evidence-based change to policy and practice within local contexts. Full support and facilitation is provided by expert mentors to guide Fellows through the program.

Evidence-based clinical auditing using a pre and post design to objectively measure practice change, compliance with best practice and end of project evaluation of the impact of change is the basis of the program. Hospital nursing staff are confronted with needs for evidence on average three times per shift, and this program draws on the evidence from systematic reviews to answer these questions as well as provide the quality indicators for measurement. With quality indicators based on evidence, a software guided situational analysis helps fellows and their team within hospital and health care units to identify barriers to practice change, develop strategies to address these barriers and identify the resources required to implement the strategies. An evidence-based implementation study on management of chemotherapy-induced nausea and vomiting by Dr Su kyoung Chung demonstrated that local practice improvement can be effective and impactful while relying upon international evidence from systematic reviews [19]. JBI clinical fellows can be trained locally through their JB Centre of Excellence, thus contributing to global best practice while solving current policy or practice issues. Hosted from over 16 countries, applicability to a wide variety of policy and practice issues has been extensively evaluated and found to be reliable across specialist and generalist areas of policy and practice within the JBI Centre of Excellence model [20].

Hospitals or health facilities that engage with a JBI Centre of Excellence as their partner for best practice are at the forefront of trends and innovations in global collaboration, and entitled to status as an 'Endorsed Evidence-based healthcare provider'. Endorsement is a JBI best practice recognition program that focuses on establishment and sustainability of best practice; and is therefore complementary to either accreditation or Magnet designation implementation projects that are recognized for their importance in helping to produce quality outcomes and improvements under the Magnet Designation program, but where it is primary research that gets greater weight and consideration [11]. Endorsement recognizes the distinctive emphasis of an infrastructure supported by an organizational mandate for evidence-based quality improvement. Endorsement rewards organizations that have 'closed the loop' by going beyond the EMR to engage in unit level best practice initiatives in conjunction with JBI and Centres of Excellence creates the impetus for whole of system planning and preparedness for EBHC of relevance to immediate local priorities

DISCUSSION AND CONCLUSION(S)

The best approaches to implementation do not start with interventions in isolation from planned, structured approaches to identifying barriers to practice change. Instead they are tailored for the local culture and context but benchmark against international evidence of best practice. These widely acknowledged attributes of best practice planning are then combined with the JBI model for EBHC to ensure a theory informed, and stakeholder driven approach that improves the structure and processes of health care policy and practice [4,5]. The organizational and system level implementation of evidence for best practice can consume significant time, finances and human resources; partnering with a global leader in EBHC, using methods informed by a theoretical model ensures activity is targeted to immediate priorities, rather than directed by external agencies.

Recognizing that managers, administrators and policy makers spend significant amounts of time on the structures and processes of health service delivery (including cost containment), this paper has advocated for growth in the global trend toward integrated EBHC where hospitals partner with a specialist providers of tools, resources and infrastructure for best practice. The JBI model is based upon a collaborative framework that brings the scholarship of implementation to policy and practice by engaging with stakeholders and participating in their projects and priorities. The Joanna Briggs model for EBHC is inclusive, partnership orientated and enables healthcare organizations to evaluate and transform clinical managerial and administrative performance using a unit based approach to internalize and sustain best practice.

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