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Evaluating an Evidence-Based Practice Curriculum for Nurses Entering Clinical Practice in the Veterans Health Administration

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Abstract

Introduction: The Veterans Health Administration (VHA) registered nurse (RN) Transition to Practice (TTP) program is a 1-year comprehensive, standardized curriculum taught for entry-level nurses to assist them in transitioning to VA-trained, competent, professional RNs. The TTP program includes revised modules on Evidence-Based Practice (EBP) clinical decision making. The revised curriculum emphasizes EBP as a problem-solving approach to clinical decision making rather than a project-based approach to implement practice changes. The goal of this quality improvement project was to evaluate the content, delivery, and outcomes of a revised Evidence-Based Practice Curriculum (EBPC) for use in the VHA RN TTP program. **Methods:** Focus groups were conducted with TTP coordinators, who teach the program and facility EBP content experts from 32 VHA Medical Centers. All attended a three-day face-to-face training at a central location. Qualitative data were managed and analyzed with a rapid assessment process. **Discussion:** Leaders within and outside of organizations are commonly believed to affect the success of implementing and sustaining any program or initiative through their influence on organizational climate, leadership processes, and leadership alignment across multiple levels of leadership. Our findings were in line with other research showing that leaders should prioritize EBP and fuel it with resources to create sustainable change. **Conclusions:** In conclusion, the EBPC was reviewed very favorably by all who planned to use it in their facilities in teaching the content to practicing registered nurses. Future evaluation will focus on the degree to which faculty use the program, how they use the modules, and what feedback nurses provide after exposure to EBPC.

Keywords: Evidence-based practice; Program evaluation; Nursing education

Abbreviations:

EBP: Evidence-Based Practice; EBPC: Evidence-Based Practice Curriculum; ONS: Veterans Health Administration Office of Nursing Services; NICE: Nursing Innovations Center of Evaluation; RN: Registered Nurse; TTP: Transition to Practice; VHA: Veterans Health Administration

Introduction

Evidence-based practice (EBP) is a method of improving nursing clinical decision making by combining the best evidence-based interventions with clinical expertise and patient preferences [1]. In nursing, implementation of EBP has resulted in better patient outcomes; however, many nurses are not using EBP as a clinical decision-making tool [2,3]. Reasons why nurses do not adopt EBP as a clinical decision-making tool stems from several issues including: lack of appreciation by some nurses for the relevance of research to clinical practice, absence of EBP role models, and limited research experience [4].

In 2011, the Veterans Health Administration (VHA) implemented a new training program, The Resident Nurses Transition-to-Practice (TTP) Program [5]. The TTP Program is a 1-year, comprehensive, standardized curriculum for entry-level nurses to assist them in transitioning to competent, professional registered nurses in the VHA. The revised EBP Curriculum (EBPC) section of the TTP was rolled out in 2014. The revised EBPC is based on a perspective that integrates evidence, clinical expertise, and patient preferences with the explicit goal of transforming nurses into professionals who can transform care at the bedside [1]. The curriculum emphasizes EBP as a problem-solving approach to clinical decision making rather than a project-based approach to implementing practice changes [1]. The EBPC uses a coaching model of instruction that includes simulation, skill building, and role modeling and uses multi-media learning strategies such as discussion guides, electronic slides, an online course system, videos, web links, worksheets, and written materials available at the Office of Nursing intranet website [6]. The course modules included: EBP Process, Quality Improvement, System Redesign and Research, Stakeholder Engagement, Acquiring Evidence, Appraising Evidence, and Applying Evidence. Further, the EBPC meets the standards for accreditation of Post-Baccalaureate Nurse Residency Programs [7].

To disseminate the EBPC to TTP program directors and content experts, a train-the-trainer model was used, by which participants attended one of two, three-day-long, face-to-face training sessions on how to implement the revised EBPC. While participants were overwhelmingly positive about the EBPC and the training, they identified local nursing leadership as a critical feature of the environment that determined how EBP was implemented. They felt that nursing

leadership's endorsement of a project-based approach to EBP in the VHA undermined the curriculum's perspective of EBP as an approach to guide nursing practice at the bedside.

According to the leading theories of implementation, context matters, although in an analysis of existing frameworks, Pfadenhauer and colleagues [8] proposed that context usually played a minor role in research and conceptualization. Moreover, context often was limited to both the setting and the environment, that is, organizational context. Through a scoping review and concept analysis they identified seven dimensions of context including geographical, epidemiological, socio-cultural, socio-economic, ethical, legal and political. In proposing a general theory of implementation, [9] suggested that implementation is a function of the interaction between agency, or the things people do, and the dynamic elements of context, that is the social-structural and social-cognitive resources that people draw upon to act. The well-known framework, promoting action on research implementation in health services (PARIHS), posited that implementation is a function of evidence, the quality of the environment in which implementation occurs (context), and facilitation and all of their interactions [10]. According to PARHIS, four categories of context affected implementation including receptive context, culture, evaluation and leadership. The success of leadership was characterized by transformational leadership, role clarity, effective teamwork, effective organizational structures, democratic inclusive decision-making processes and to enabling or empowering approaches to teaching, learning, and managing. In a mixed methods explanatory case quality improvement project of EBP institutionalization, Stetler et al. [11] arrived at a refined conceptualization of EBP leadership that included functional, strategic, and cross-cutting behaviors. Strategic behaviors were actions mainly of Chief Nursing Officers and were characterized by goal-focused actions over time that were multifaceted and addressed organizational factors.

While the train-the-trainer program was received very positively and recognized the crucial role that local context plays in implementation of research, we sought to learn more contextual barriers and facilitators of the curriculum implementation. Objectives were to understand initial implementation successes and challenges, identify barriers and facilitators of implementing the EBPC as perceived by nurse executives, and identify leadership strategies for implementing an EBP orientation in the VHA.

Methods

This project was approved as a quality improvement project by the James A. Haley Veterans' Hospital Research and Development Committee. The evaluation was guided by the Theory of Planned Behavior [12,13] and the Kirkpatrick Model for evaluating training [14]. In the Theory of Planned Behavior, intention to engage in a behavior—in this case, to understand and apply EBP to nursing practice—is a product of motivation (attitude toward behavior and subjective norms) and perceived ability (behavioral control) to perform that behavior. In the Kirkpatrick Model, training effectiveness, or the extent to which training improves quality as a direct result of behavior, is the product of the reaction to the training and the actual learning effected by the training. To complete the objectives of this project, data were collected from two groups: TTP program directors and EBP content experts. The objective was to evaluate their reactions to the EBPC from the following: overall impressions, perceived usefulness, perceived facilitators and barriers for implementation, and suggestions for modifications.

Analysis

Quantitative data were analyzed by descriptives and frequencies. Qualitative data were managed and analyze with a rapid assessment process, which is a team-based approach that emphasizes speed of data collection and analysis in relation to focused, programmatic questions or problems. It is an iterative process that allows data collection, management, and analysis to happen concurrently [15]. The analysis team: (1) created domains that corresponded with interview questions; (2) developed a standard note taking template; (3) conducted debriefing and refined notes following focus groups and interviews; (4) categorized responses by domains; (5) transferred notes to an Excel matrix; (6) reviewed categorizations and established consensus; and (7) analyzed and summarized domains for key themes, variations, and information gaps. Free-listing activities were categorized and frequencies of categories were calculated [16].

Results

There were a total of 32 participants, 15 TTP coordinators and 17 EBP content experts. Most participants had a master's degree in nursing or another field (n = 30) and 16 had doctoral degrees in nursing or another field. Average experience as a nurse was 24 years and average length of time as a nurse in the VHA was 7.9 years. For the TTP program directors, the average time spent teaching the TTP program was 2.1 years. The amount of time the TTP program directors spent teaching EBP to graduate nurses varied from as little as 3 days to as long as a year threaded throughout the one-year TTP program. Participants represented 15 of the 19 Veterans' Integrate Service Networks (VISNs) or geographical regions.

TTP program directors and EBP content experts reacted positively to the training. One participant stated, "Best hands-on conference I have ever been to!" Participants attributed success of the training to: (1) a high level of engagement as achieved by "hands-on" exercises and to a high level of discussion and dynamic presenters, (2) a high level of congruity between learner needs and content delivered, and (3) the highly experienced ONS EBP trainers who taught the training and had a deep understanding of the topics. Both TTP program directors and EBP content experts felt that their needs were very well served because the EBPC provided the content they needed, the website and module format were easy to follow, and the overarching EBPC perspective helped them to connect clinical expertise with an academic perspective. Participant experience with EBP ranged from novice to expert, and participants noted that the EBPC ONS faculty who taught the sessions were accommodating and engaging regardless of attendee level of expertise.

All participants reported that the EBPC training changed their understanding of EBP and would change their teaching

practices. All realized that their previous EBP training had significant deficiencies that limited their abilities to teach EBP to other nurses. Specifically, they indicated that they had previously conflated EBP with conducting a project, with system redesign, or with quality improvement activity. Following the training, they reported that EBP is a process and an approach to nursing practice. In the free-listing activity, participants generally indicated that a specific module was most useful when they had limited familiarity with or experience teaching the content and recognized its importance to EBP (Table 1). For example, this was the case with Appraising Individual Pieces of Evidence for 81.3% of participants (Table 1). Almost 60% of participants indicated the Defining EBP for Nursing module was most useful. They also found content useful when it addressed issues that their students often struggled with.

Module content was judged least useful when participants already had a strong baseline understanding of the content or when the content was deemed too difficult for TTP nurses to understand (Table 1). Appraising Evidence Part 1 was considered the least useful by 37% of participants because many believed this content was too advanced for TTP nurses to easily understand. Participants felt that this section could meet the needs of a broad range of students by tailoring the content for nurses with different knowledge levels.

Table 1 EBPC Content[1]	Most Useful N=32 (n, %)	Least Useful N=32 (n, %)
Section 1: EBP Overview		
Defining EBP for Nursing	19 (59.4)	1 (3.1)
EBP as a Foundation of Nursing Practice	0	0
Section 2: Defining Patient Preferences	1 (3.1)	0
Section 3: Clinical Expertise Component	2 (6.25)	0
Section 4: Evidence Component		
The EBP Process	0	1 (3.1)
EBP Process, Quality Improvement, System Redesign, Research	6 (18.8)	0
Asking a Practice Question	3 (9.4)	1 (3.1)
Stakeholder Engagement	2 (6.3)	2 (6.3)
Acquiring Evidence Part 1: Types of Evidence	0	0
Acquiring Evidence Part 2: Internet Resources for Evidence	0	9 (28.1)
Acquiring Evidence Part 3: Searching for Evidence	4 (12.5)	3 (9.4)
Appraising Evidence Part 1: Introduction to Validity, Reliability, Bias	1 (3.1)	12 (37.5)
Appraising Evidence Part 2: Appraising Individual Pieces of Evidence	26 (81.3)	0
Appraising Evidence Part 3: Appraising a Body of Evidence	5 (15.6)	0
Roadmap and comparison of EBP Process Steps	6 (18.8)	3 (9.4)
Applying Evidence Part 1: Making a Practice Recommendation	0	0
Applying Evidence Part 2: Changing Behavior (Implementing a Practice Change)	7 (21.9)	3 (9.4)
Applying Evidence Part 3: Developing/Implementation Plan	8 (25.0)	0
Assessing Evidence: Evaluating/Sustaining Practice Change	5 (15.6)	0
Dissemination	0	0
Section 5: Supporting References		
Additional "module content" cited by participants	0 (0.0)	4 (12.5)
Organization of module content	16 (50.0)	5 (15.6)
Reference based v. EBP	1 (3.1)	7 (21.9)

Note. EBPC, evidence-based practice curriculum.
[1]Module content has been organized to reflect the EBPC website of the Office of Nursing Services of the Veterans Health Administration and the structure of the in-person training session agendas.

Table 1: Summary of Free-Listing Activity Results: Most and Least Useful Content.

Hands-on group activities and subsequent debriefing discussions were considered the most useful teaching methods by almost all participants (93.7%) because, through these activities, they learned to apply what they were learning. One participant summarized the group activities as follows: "You get to see your instructors face-to-face and they are explaining the content and then we get the opportunity to apply it hands on."

When identifying the least useful teaching strategies, almost 40% of participants noted that distributing handouts during the session created confusion, organizational problems, and disruption in the flow of the training session. It was suggested that a single document inclusive of all the instruction, articles, and tools needed should be provided prior to the workshop. The majority found the videos to be the least useful because they were judged to be were sterile, lacked depth, and disrespected students' class time.

Barriers and Facilitators

TTP program directors and EBP content experts agreed that a lack of protected time and other resources were significant barriers for implementing EBP (Table 2). For the facilitators, all agreed that the VHA could provide protected time for nurses to implement EBP and should establish standard policies and procedures for all facilities (Table 3).

Barriers	TTP Program Directors (*n* = 15)	EBP Content Experts (*n* = 17)
Nurses receive different levels of EBP preparation in nursing programs (difficult to teach to everyone's level with limited time and resources)	X	X
Lack of protected time to ensure nurse understanding of EBP process	X	X
Lack of other resources to effectively implement EBP • Guidance or support for IRB processes • Librarians • Clinical researchers and statistical mentors • Dedicated EBP staff person	X	X
Pushback from nurse managers/nurse executives (EBP not seen as vital when requires pulling staff from units for EBP training and work)	X	X
Pushback from late and early career nurses who challenge integration of EBP into practice because they think of EBP as research and science, not a framework for practice (do not understand value of EBP)		
Pushback from physicians who do not understand value of EBP		
Lack of support from local leadership	X	X

Note: EBPC, evidence-based practice curriculum; TTP, Transition-to-Practice.

Table 2: Barriers to Implementing the EBPC.

Facilitators	TTP Program Directors (*n* = 15)	EBP Content Experts (*n* = 17)
Provide protected time to nurses • Develop competitive EBP scholars' program that covers a portion of Nurse FTE • Vocalize importance of EBP to nurse managers and help them understand how to build additional staff time for EBPC training into staffing methodologies	X	X
Provide mentors to those teaching EBP during the TTP and leading EBP efforts locally	X	
Provide continued support for EBP Leads and TTP program directors and EBP content experts as they implement EBP locally such as monthly conference calls and webinars	X	X
Establish standard policies and procedures with criteria for EBP, so that all facilities engaging in the EBP process might "speak the same language" and understand minimum resource requirements	X	X
Use of shared governance to establish facility-wide expectations for EBP		
Use of DNPs as EBP experts to support implementation locally		

Curriculum; TTP: Transition-to-Practice; ONS: Office of Nursing Services; FTE: full-time equivalency; DNP: Doctor of Nursing Practice.

Table 3: Facilitators to Implementing the New EBPC.

Discussion

Leaders within and outside of organizations are commonly believed to effect the success of implementing and sustaining any program or initiative through their influence on organizational climate, leadership processes, and leadership alignment across multiple levels of leadership [17]. Our findings were in line with Melnyk's findings in a survey of 47 interprofessional leaders who reported that leaders should prioritize EBP and fuel it with resources to create sustainable change [18]. The top 3 leadership strategies identified were: (a) making EBP a priority; (b) increasing EBP education and awareness; and (c) using a collaborative approach to health care. In Melnyk's follow-up summit, experts were asked to identify high-priority action tactics. Interestingly, EBPC was not directly identified, although the experts suggested developing a common language for EBP, teaching EBP to nursing and health sciences faculty, incorporating EBP into professional education curricula, and teaching nurses and other healthcare providers how to influence organizational and heath policy with evidence. The EBPC supports these actions, yet again, although missing an interprofessional focus. While our quality improvement project focused on facility educational leadership, [19] found that leadership at the nursing unit level influenced 7-year sustainability of an evidence-based program. Effective leaders used a variety of strategies (e.g., communicating and discussing, educating and training, using reminders, evaluating performance, integrating changes into other initiatives) to promote teamwork, accountability, and an environment that was supportive of enduring change. Additionally, leaders used two overarching strategies to align guideline use with a vision of providing

quality patient care: maintaining the priority of using guidelines amid other administrative and clinical demands, and reinforcing expectations for best practice guidelines. Finally, results of a study by Harper et al. [20] on nursing professional development (NPD) practitioners reinforced the importance of implementing evidence-based practice in the context of shared governance councils. This idea was expressed by our nurse executive sample perhaps because organizations with EBP councils had higher levels of EBP competence, implementation, and organizational readiness.

After the evaluation and roll out of the new EBPC, the Office of Nursing Services convened a multi-disciplinary Field Advisory Committee for EBP (FAC EBP) to disseminate the new EBP decision making tool. This committee replace the former EPB Goal Group. The Goal Group had a 9-year history of promoting EPB through consultation and training activities. The aim of the FAC EBP is to continue the Goal Group's efforts to increase the use of evidence-based practice to improve nurse sensitive indicators (e.g., falls with injury, pressure injuries, restraints, and hospital-acquired infections) (NDNQI) [21]. While these indicators improve with optimum quantity and quality of nursing care, they are also affected by non-nursing care (e.g., medical or rehabilitation care). Because these outcomes are strongly linked to nursing and to a lesser extent, care by other disciplines, the Office of Nursing Services designed the FAC to include 12 nurses and 3 non-nurses. The interprofessional FAC is expected to consider a wide range of barriers, facilitators, and resources that affect the efficient and timely translation of EBP as a framework for nursing practice within VHA.

In conclusion, the EBPC was reviewed very favorably by all who planned to use it in their facilities in teaching the content to practicing registered nurses. Future evaluation will focus on the degree to which faculty use the program, how they use the modules, and what feedback nurses provide after exposure to EBPC.

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Conflict of Interest

The authors declare that they have no conflict of interest.

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