Application of an Evidence-Informed Health Policy Model for the Decision to Delegate Insulin Administration

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In 2014, the South Dakota Board of Nursing decided to allow registered nurses to delegate diabetes care for school children to trained unlicensed personnel. The policy changes were based on a pilot study, a review of the literature, expert opinion from diabetes clinical nurse specialists, and input from stakeholders. This article retrospectively applies Loversidge's model for evidence-informed health policy to the board of nursing's process for making policy decisions and is intended to serve as an example of using a model that promotes evidence-based nursing regulation.

In 2014, the South Dakota Board of Nursing (BON) adopted a policy change allowing registered nurses (RNs) to delegate insulin administration to trained unlicensed personnel. The change was largely driven by evidence from a pilot project, called the Virtual Nurse Study, which tested the safety and efficacy of RNs delegating diabetes care for school children to trained unlicensed providers using a virtual, telehealth model of nursing care (Damgaard & Young, 2014). Other evidence supporting the policy decision included a review of the literature, expert opinion from diabetes clinical nurse specialists, and input from stakeholders.

At the time, a model for evidence-based nursing regulation was not used for policy decisions. This article retrospectively applies Loversidge's (2016) model for evidence-informed health policy to the BON's process for making its policy decisions and is intended to serve as an example of using a model that promotes evidence-based nursing regulation.

In Pursuit of Evidence-Based Nursing Regulation

In 2006, Pawson wrote that research must come before policy. He proposed using a systematic review process as a method of ensuring this order of events. As he stated, "The expectation is that policymakers on the threshold of a decision will summon reviewers to have a close look at the evidence before the leap into policy and practice" (Pawson, 2006).

In 2010, Spector adopted Pawson's systematic review process and identified six steps of evidence-based health care regulation that BONs can use in making health care policy decisions (Spector, 2010):
- Formulating the question
- Identifying and collecting evidence
- Appraising the quality of the evidence
- Processing the data
- Disseminating the findings
- Evaluating the effectiveness and efficiency.

In 2012, the International Council of Nurses (ICN) published a toolkit titled, *Closing the Gap: From Evidence to Action*, empowering nurses to use an evidence-based, informed approach to making health care–related decisions. The ICN toolkit offers a comprehensive approach to understanding the evidence-based practice process, implementing change based on evidence, assessing the context and culture when contemplating changes, and understanding the factors that drive change, including the following:
- Political factors: the role of policy, government, elections
- Economic factors: financial considerations, supply and demand issues
- Social factors: public reactions
- Technological factors: development of new devices, information systems, tests
- Legal factors: legislative issues, contract law
- Ethical factors: professional standards, access issues.

In 2016, Loversidge developed an evidence-informed health policy (EIHP) model by modifying Melnyk and Fineout-Overholt's (2015) steps of evidence-based practice. Loversidge's EIHP model includes these steps:
- Cultivate a spirit of inquiry in the policy culture environment.
- Ask the policy question in PICOT (ie, population, intervention, current status, outcome, and timeframe) format (Loversidge, 2016).
- Search for and collect the most relevant best evidence.

- Critically appraise the evidence.
- Integrate the best evidence with issue expertise and stakeholder values and ethics.
- Contribute to the health policy development and implementation process.
- Frame policy change for dissemination to the affected parties.
- Evaluate the effectiveness of the policy change and disseminate the findings.

According to Loversidge, developing skill in the EIHP is challenging for nursing regulators because of their varied practice and educational backgrounds. These diverse backgrounds may lead to a lack of understanding and skill in using evidence-based practice.

Applying the Steps of the EIHP Model

In 2008, a national association was lobbying in South Dakota for legislation to allow trained unlicensed personnel to administer insulin in the school setting and to assist with other diabetes management tasks. The nursing community was divided on the issue. Certified diabetes educators strongly supported the legislation, but the school nurse association strongly opposed it. Because of these opposing views, the sponsoring legislator agreed not to introduce the bill, and the BON agreed to examine the issue and propose policy changes for the betterment of schoolchildren living with diabetes (Damgaard & Young, 2014).

Loversidge's (2016) EIHP model was chosen for this retrospective analysis of the South Dakota BON's decision-making process.

Cultivate a Spirit of Inquiry in the Policy Culture or Environment

First, the BON brought together key stakeholders to hold conversations on the issue. Stakeholders included school administrators, policymakers, physicians, diabetes clinical nurse specialists, school nurses, and concerned parents. In a World Café format, the following question was posed: "What possibilities exist to enhance diabetes management when a nurse is not present?" A model emerged to link trained unlicensed assistive personnel with a virtual RN to manage the care of schoolchildren living with diabetes (Damgaard & Young, 2014). The BON perceived this model as innovative and one that sparked the spirit of inquiry; it led to the development of the Virtual Nurse Study. A grant from the National Council of State Boards of Nursing Center for Research Excellence, as well as funding from South Dakota Department of Health, supported the study on the safety and efficacy of delegating insulin administration to unlicensed personnel.

Ask the Policy Question in the PICOT Format

The EIHP model advises policymakers to examine their subject in the PICOT format, or population, intervention, current status, outcome, and timeframe. The Virtual Nurse Study asked the fol-

lowing research question; "To what extent is a model of nursing care utilizing a virtual RN linked to a trained unlicensed provider through telehealth technology safe and effective in the care of schoolchildren with diabetes, including insulin administration?" (Damgaard & Young, 2014).

Population: The PICOT format for the EIHP model (Loversidge, 2016) involves using all consumers of nursing care for the population focus. Even though the safety and efficacy of the virtual model was piloted on schoolchildren with diabetes, the outcome had implications for all consumers of nursing care.

Intervention: In the Virtual Nurse Study, the intervention consisted of amending the administrative rules of South Dakota to allow the delegation of insulin administration and identifying standards to allow such delegation.

Current status: The description of the current status included the administrative rules prohibiting the delegation of medications by the parenteral route, including subcutaneous injections such as insulin.

Outcome: The anticipated outcome of the policy change was that consumers would have greater access to diabetes care, particularly those residing in rural communities and children attending schools without nurses. Other outcomes included the development of the trainer program for RNs to delegate insulin administration, a standardized curriculum developed by certified diabetes educators for the training of unlicensed assistive personnel, a mandatory examination for unlicensed personnel who complete training, and a registry of all trained and tested unlicensed personnel. Insulin administration would remain a function that must be delegated by a nurse, and the registry would allow the nurse to verify that the unlicensed personnel completed the training and testing before delegating this task.

Timeframe: The Virtual Nurse Study took place between December 2010 and May 2013. The policy decision was implemented in 2014.

Search for and Collect the Most Relevant Best Evidence

The three main components of best evidence in the EHIP model are external evidence, issue expertise, and stakeholder values and ethics (Loversidge, 2016). External evidence for the study included a review of the literature before writing the National Council of State Boards of Nursing Center for Research Excellence grant proposal. Two landmark studies, the Diabetes Control and Complications Trial (The Diabetes Control and Complications Trial Research Group, 1993) and the United Kingdoms' Prospective Diabetes Study (American Diabetes Association, 2003) supported the need for vigorous treatment of patients with diabetes to decrease morbidity and mortality. Another randomized controlled study tested the feasibility and effectiveness of telemedicine technology with school nurses to improve care for children with type 1 diabetes and concluded that a telemedicine program can improve diabetes care in the school setting. Another study of interest was a project to establish school-based telehealth