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Global Signature Recognition for Nurse Practitioners in California

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A B S T R A C T

There are differences in state laws and regulations that restrict nurse practitioners (NPs) from performing certain patient care functions, such as signature recognition. In California, it has been a slow, incremental process for NPs to gain the ability to sign and/or certify forms that facilitate patient care. States are moving forward to ensure NP signatures are recognized either by updating language in their state laws and allowing NPs to sign specific forms or adopting statutes that provide NPs with global signature recognition (GSR). A policy Delphi approach was used to guide the analysis of GSR for NPs in California.

Issue Identification

The American Association of Nurse Practitioners (AANP) refers to signature authority as "state laws that authorize nurse practitioners (NP) to sign or otherwise complete forms related to patient care within their scope of practice (SOP)."[1] Fifteen states and the District of Columbia have signature recognition (SR) laws.[2] NPs treat millions of patients every year; however, in most states, inefficiencies occur when NPs are barred from effectively documenting their patient care.[2] NPs' ability to execute standard/routine documents to secure the satisfaction of orders, transfers, or acknowledgment of care varies from state-to-state. Some policies and state laws include language prohibiting companies and agencies from recognizing a form with an NP signature, creating unnecessary limitations and resulting in inefficiencies and costly delays in care. The restrictions on NPs create barriers to care and result in steep costs to consumers.[3]

According to the AANP, states are moving forward to ensure NPs' signatures are recognized either by updating the language in their state laws and allowing NPs to sign specific forms or adopting statutes that provide NPs with global signature recognition (GSR).[1] Some states are moving slowly in the direction of GSR. For instance, in 1999, NPs in California obtained the ability to sign for sample medications; however, it took another 20 years for NPs to obtain legislative achievements to authorize forms such as Department of Motor Vehicle physicals, disability and disability placards, durable medical equipment, and Physician Orders for Life-Sustaining Treatment.[4]

Background and Significance

The 2001 Institute of Medicine (currently the National Academy of Medicine) report *Crossing the Chasm: A New Health System for the 21st Century*, describes practice environments that control and restrict NPs from performing certain functions of patient care as "inconsistent, contradictory, duplicative, outdated, and counter to best practices."[5] According to the AANP,[1] requiring the involvement of 2 health care providers to sign 1 form increases costs, delays patient care, and decreases productivity. To address these obstacles, a few states have taken a broader, or global, approach to creating statutes authorizing NPs to sign, attest, certify, stamp, verify, endorse, or provide an affidavit for any form that a physician can do, provided it is within the NPs' SOP. These SR laws increase transparency and accountability, provide efficient patient care delivery, promote the productive use of the health care workforce, and prevent delays and unnecessary costs.

Fifteen states plus the District of Columbia have broad-based, or SR laws: Colorado, Georgia, Hawaii, Idaho, Maine, Massachusetts, Montana, Nevada, New Mexico, North Carolina, Rhode Island, Vermont, Virginia, Washington, and Wyoming. Signature laws in these states are in alignment with the recommendations from major policy organizations such as the National Academy of Medicine, National Governors Association, National Conference of State Legislatures, and the Federal Trade Commission.[2]

A few states recognize NPs' ability to sign all forms within their SOP by including them in each relevant statute or rule.[2] This line-item approach requires states to return for additional legislation to authorize NP SR in each statute. Most states have hundreds of statutes relating to health care forms and it would require a very lengthy, intensive process to draft a bill to cover them all.[2] Therefore, a policy Delphi approach was used to guide the analysis of GSR for NPs in California. A description of the policy Delphi methodology and its utility as an approach to contribute to legislative change are further clarified in the subsequent sections.

Methods

Policy Delphi Design

The policy Delphi is based on the philosophy of the Kantian Inquiry System, which holds that to apply oneself to an issue, one

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must first consider and understand all other possible approaches, solutions, and ideas related to the issue.[6] It takes a variety of experts within different, but related, disciplines, with their differing viewpoints and opinions (both pro and con arguments) to ensure that all possible options and alternatives are considered.[7]

A policy Delphi design allows participants to freely express statements, arguments, and comments initiating discussion around an issue. It is necessary to evaluate the ideas expressed by the participants in four areas of this issue: desirability (benefits), feasibility (practicality), importance (relevance), and confidence (validity of the argument or risk of being wrong).[7] This type of communication process may expose other options, determine the initial position on the issue, explore and obtain reasons for disagreement as well as evaluate the underlying reasons for the disagreement, and reevaluate other options.[8]

The Delphi technique is an iterative process involving repeated rounds of surveys given to a selected group of participants. Responses from the first round are analyzed, summarized, and developed into questions in the next round of surveys. An ideal policy Delphi involves a 3-round format.[7] To maintain a 3-round format, each step involved in the policy Delphi rounds of investigation must be carefully planned beforehand. In planning for the first round, the goal is to ensure that the subject to be addressed has been carefully formulated so that respondents have a clear understanding of the issue under consideration. Planning for the second round involves considering and developing a list of choices that have an impact on the issue with a range of options provided that also allows respondents to add options to the list. The third round should be structured so that respondents can be asked for their positions and underlying assumptions on the issue.[7]

A great deal of thought and preparation is required before the launch of the first survey, or Round 1.[6] Four key principles of a policy Delphi must be adhered to, the development of which can be very time-consuming: anonymity, asynchronicity, controlled feedback, and statistical response.[7] The *anonymity* of the participants' responses ensures other participants do not know the identity of the responder and allows for candid responses; *asynchronicity* provides options to participants on how they choose to take part in and to complete the Delphi surveys (electronically, or by print and mailed versions); *controlled feedback* provides background information on the results of one round of questions and operational criteria to create the next round; and *statistical response* takes the viewpoints and opinions of the participants and converts them into quantitative data.[8]

Surveys were sent electronically to the participants. The project steps aligned with the policy Delphi procedures as described by Manley.[6] The initial survey (Round 1) included information on NP GSR legislated in other states compared with the incremental legislative changes passed in California. It also included operational criteria to keep participants on task. The participants' comments were interpreted, coded, and analyzed based on the main idea of the comment and its usability and redundancy. The narrative responses of participants in the first round were organized as themes.

The second round reported the themes from the first round and participants were asked to clarify and evaluate the relevance of these themes.[6] Round 3 reported the results of the first 2 rounds and allowed participants to review the other participants' ratings of relevance and effect, as well as their comments, allowing participants to change their viewpoints and opinions.[6] In addition, participants indicated their confidence about and opinion of the benefits, feasibility, and importance of the supporting arguments and provided a comment/rationale for their choices relevant to GSR. The summary of Round 3 illustrated the degree to which differences existed and where agreement was reached.

Although most policy Delphi pursuits try to maintain a 3-round format limit, additional rounds of surveys may be needed. This is dependent on new information that may be raised by the participants, the need to explore the range of opinions or positions on the issue, exploring, obtaining and evaluating the reasons for disagreements, and reevaluating the available options.[7]

Participants

On the basis of policy Delphi guidelines, a sample size of 10 to 59 participants is recommended, and participants are recruited for their heterogeneity rather than their expertise.[7,9] Inclusion criteria included the following: professionals working in clinical settings in California including NPs, physicians, and health care nursing administrators; nursing faculty; administrators of nursing organizations and agencies; stakeholders outside of health care residing in California; and members of the current California State Assembly or Senate. Health care professionals not satisfying the inclusion criteria and members of Congress were excluded.

Sampling

Purposive sampling was used to recruit participants, followed by snowballing to increase the number of potential participants. A personalized email invitation was sent to each participant describing the background of GSR.

Ethical Considerations

The Institutional Review Board (IRB) from the California State University, Long Beach (CSULB) approved this project. Participants received a cover letter explaining the policy analysis project involved 3 to 5 survey rounds sent over a 3- to 5-month period with each survey requiring approximately 15 minutes to complete.

Procedures

The online survey platform Qualtrics was used. The first survey consisted of open-ended questions soliciting the perceived benefits, risks, limitations, and challenges in obtaining GSR; recommendations to address the risks, limitations, and challenges; and the positive and negative impact of GSR on patients, practice, and the delivery of health care in California. At the end of the first round, participants submitted their completed questionnaires and comments which were interpreted, coded, and presented as themes that emerged from free-text responses.

The second survey round presented the themes that emerged from the first round and percentages of responses that fell into each theme. The purpose of the second round was to clarify and evaluate the relevance of the themes. Using a 5-point Likert scale, participants were asked to indicate their opinion regarding the relevance of each theme (very relevant, relevant, irrelevant, very irrelevant, or unsure) and to provide a free-text comment/rationale for their choices.

The third survey round focused on the relevance of each theme as perceived by each participant. Also presented were the free-text responses to the questions seeking clarification.

The third round sought to determine the *benefits* (definitely beneficial, beneficial, slightly beneficial, not beneficial), *feasibility* (definitely feasible, possibly feasible, possibly unfeasible, definitely unfeasible), *importance* (very important, important, slightly important, unimportant), and *confidence* (certain, reliable, risky, unreliable) of the supporting arguments for GSR for NPs in California. Using a 5-point Likert scale, participants were asked to indicate their opinion regarding these components, including a neutral position of *unsure*, and to provide a comment/rationale for their choices.

Results

Sample Characteristics

Thirty-six participants were contacted to participate; however, 3 of the emails "bounced back," resulting in a total of 33 participants for the first round of surveys. Participants represented 5 groups of professionals, including clinical NPs, nursing faculty, physicians, leaders in nursing organizations and agencies, nursing administrators representing county, private and the Veteran's Administration facilities, and members of the California legislature. Table 1 summarizes the numbers of participants in all survey rounds by profession.

Data Collection Rounds

Three iterative rounds of Qualtrics surveys were conducted between October and December 2020. Approximately 10 days were given to answer and complete each survey. Reminders were sent a few days before the due date. Only those participants who completed a survey round were invited to participate in the next survey round. There was a 3- to 4-week interval between each round for data analysis, survey development, and pilot testing. Before sending each round of surveys, 2 nursing faculty members tested and piloted surveys to ensure accessibility of each survey and recommend modifications to the survey process.

Round 1

Twenty-one of the 33 participants (63.64%) completed the first survey. Seven open-ended questions sought a response to the following: benefits to obtaining GSR; perceived risks, limitations, obstacles, and challenges along with recommendations to reduce these concerns; and the positive and negative impact GSR would have on patients, practice, and the delivery of healthcare in California. Twenty-one participants provided 127 responses to the 7-question survey, each question generating 18 to 21 responses. Responses were grouped into themes, with 2 to 5 themes emerging from each question. A total of 27 themes were presented in the second survey round.

Round 2

Nineteen of the 21 participants (90.47%) completed the second survey. A 5-point Likert scale addressed the relevance of 22 themes that emerged from each of the 7 questions. Five themes from Round 1 not measured for relevance included responses of "none," "no impact," and "unsure." The Likert scale ranged from very relevant, relevant, irrelevant, very irrelevant, including a neutral option of unsure. There were 19 responses to the relevance of 19 themes and 18 responses to 3 of the themes. Participants provided a comment/rationale for their choices for a total of 96 responses, each question generating 15 to 17 responses. Participants responding with very relevant or relevant were asked additional questions to provide clarification of a certain theme. There were 11 additional questions with a total of 157 responses, each question generating 6 to 18 responses. The relevance of each theme and the participants' comments/rationale to each question were presented in the third and final survey round.

Round 3

Thirteen of the 19 participants (68.42%) completed the final survey. Using a 5-point Likert scale, participants indicated their confidence and opinion of the benefits, feasibility, and importance of the themes generated from the first 2 survey rounds. The response choices ranged from very beneficial to not beneficial, definitely feasible to definitely unfeasible, very important to unimportant, certain to unreliable, and a neutral option of unsure. There were 13 responses to each of the components in the Likert scale. Nine open-ended questions requested participants provide a comment/rationale for their choices. Participants provided a total of 70 responses, each question generating 6 to 10 responses

Table 1
Number and Professions of Participants in the Policy Delphi

Rounds	1	2	3
Clinical nurse practitioners	3	3	3
Nursing faculty	9	8	4
Nursing administrators	4	4	3
Physicians	2	1	1
Leaders in nursing organizations/agencies	3	3	2
Total	21	19	13

Discussion

The aim of this policy Delphi was not necessarily to gain consensus but to have an informed group of participants present the differing positions, both opposing and supporting views, in developing a roadmap to action supporting legislation for GSR for NPs in California. Persistent, diligent policy preparation and an understanding of the opposing viewpoints are required if the goal of adopting GSR for NPs in California is to be obtained. This policy Delphi design was used to assist in the informed-decision making process as part of the effort to move this legislation forward.

Participants completed 3 rounds of a web-based survey, generating a total of 22 themes. Four overarching differing viewpoints were generated from the 22 themes. These viewpoints related to barriers to NP practice, the effect on physicians, education, and cost. Table 2 summarizes the viewpoints and related themes.

The majority of participants acknowledged the importance of addressing the barriers to the care NPs provide. Removing barriers to NP practice will provide efficient and timely access to comprehensive, streamlined patient care. However, others commented on the importance of efficient and timely access to patient care, suggesting the messaging should focus on patient care rather than on barriers to the NP role.

The majority of participants indicated GSR would have a beneficial effect on physician practice, reducing interruptions in the workload of the physician and office staff and improving patient satisfaction. One participant stated, working with our physician colleagues, it is important to "Emphasize that global signature

Table 2
Differing Viewpoints and Related Themes

1. Barriers to nurse practitioner (NP) practice
   - Remove barriers for NPs
   - Patients will receive comprehensive care
   - Improve patient access and streamline care
   - Ability to sign death certificates
2. Effect on physicians
   - Benefit to physicians
   - Diminish the role of physicians
   - Improved coordination/efficiency of care and patient, staff, and physician satisfaction
   - Recognition of care NPs can provide
3. Education focus on
   - NP student training/knowledge of the scope of practice
   - Understanding of NP scope of practice and knowledge base by public
   - Improving NPs understanding of their scope of practice and requirements of global signature recognition
   - Agencies recognizing NP signatures
4. Cost

recognition does not change current scope of practice, but rather decreases administrative workload of physicians who spend excessive time signing forms and referrals."

A majority of the participants indicated additional education and training would be required if NPs obtained GSR in California. The focus of the education of NPs and NP students should be the meaning of and significance to their NP role if GSR should pass through legislation. It will be important to educate and strengthen the public's knowledge and understanding of the NP scope of practice. Agencies will also need to be educated on the role of the NP and recognizing NP signatures.

A few participants indicated the costs associated with GSR would include educating NPs, and the development of additional forms, which may be required depending on the work setting of the NP. The majority of participants indicated there would be a cost savings by preventing delays and streamlining care if GSR for NPs were obtained in California.

Limitations

The iterative process inherent in a policy Delphi adds to the burden of participation. The third survey occurred in the month of December, just before the holiday season. Concurrently there was a surge in the global coronavirus 2019 (COVID-19) pandemic. Unfortunately, participation in the third survey decreased.

A strength of a Delphi process is the feature of anonymity of the participants' responses. This feature allows participants to express their thoughts independently, reducing pressure to conform to the group dynamics. Each response received the same level of attention and was weighted equally by the author. The participants views are considered expert opinions and do not provide a specific course of action to obtaining GSR for NPs in California.

Evaluation

The data for this policy Delphi were collected using surveys that resulted in qualitative and quantitative data. The number of responses and nonresponses were tracked. The data were coded using integers or whole numbers to represent quantitative responses using the 5-point Likert scale. Throughout this process, relationships, patterns, themes, concepts, and ideas among the answers to the open-ended questions were classified based on the Likert scale responses

The policy Delphi method revealed the perspectives, concerns of the participants, and identified points of agreement and disagreement on the issue of GSR for NPs in California. The information gained will be used to address the concerns and provide considerations for decision-making, in moving forward with potential legislation. Using the AANP definition of global signature recognition would garner support from the national NP association, creating a strong alliance in moving this legislation forward. The roadmap for this project will end as it began, with the AANP (2018) definition of global signature recognition: "When any provision of the general or public law, or regulation requires a signature, certification, stamp, verification, affidavit or endorsement by a physician, it shall be deemed to include a signature, certification, stamp, verification, affidavit or endorsement by a certified registered nurse practitioner; provided, however, that nothing in this section shall be construed to expand the scope of practice of nurse practitioners."

Conclusion

The purpose of this analysis was to determine the risks, limitations, obstacles, challenges and impact if NPs moved forward with legislation to obtain GSR in California. This policy Delphi used a variety of participants who provided differing viewpoints of the options and alternatives to be considered in this roadmap to action. Concerns raised by the participants were related to the obstacles and challenges from various groups and agencies, specifically organized medicine and the amount of time, money and effort it would take to achieve this goal. These are similar to the arguments put forward to achieve full practice authority.

One area that must be addressed is the education not only of our physician colleagues, health care agencies, and the public, but also of NPs on what GSR means. Additional academic education and clinical training are not necessary to achieve this goal because GSR does not equate to full practice authority but falls within the existing NP SOP. Education must also focus on the provision of patient access and streamlined, comprehensive care, and not on the barriers to NP practice. Advocating for appropriate and improved access to patient care will aid in the containment of the rising cost of healthcare.

Recommendations for future studies are to analyze the processes and tactics used in states that have been successful in achieving GSR and to discover the obstacles NPs overcame and the benefits to their patient population on achieving their goal of GSR. Additional recommended studies include the utilization of the policy Delphi method to guide the analysis of future NP policy issues and legislative campaigns.

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