How States Can Develop Better Nursing Workforce Data Systems

The Issue: Efforts to create state-level nursing workforce data systems are frequently hindered by a lack of funding, organizational barriers, and analytical challenges. This second brief, in a series of three, identifies techniques to address common logistical and organizational obstacles to creating a system.

Why It Matters:
- Given the rapid pace of health system change and the increased interest in workforce issues, many states are investigating methods to develop or enhance state-level health workforce data systems.
- Many states do not currently collect or analyze nursing workforce data beyond what is required for licensure and regulation. While licensure bodies collect the data required to regulate members of the nursing profession, they are not typically required to collect data for the purposes of workforce planning. Because of this, regulatory boards may not see data collection and analysis as their responsibility. They may also be unwilling or unable to bear the financial burden of adding basic questions about the demographic, practice and geographic characteristics of the workforce to licensure forms.
- The organizational structure of nursing licensure boards differs from state to state. Some are independent entities, while others fall under the umbrella of state government. The organizational structure of the board can affect the willingness, ability and flexibility of the board to collect the data needed for health workforce analysis.

Key Findings:
Who "owns" the system?
- States struggle with decisions about who should be responsible for collecting and maintaining nursing workforce data. Disconnects can occur between the agencies holding nursing data and those that want to analyze the data to inform policy, regulation and education decisions. Lack of collaboration can lead to "turf wars" if organizations disagree about who should collect, "own," and report data.
- Collaborative partnerships should be formed early in the process to determine who is in the best position to collect, analyze and report the data, and identify what is the best way to sustainably fund and maintain the data system. Partnerships are important to promote open channels of communication, identify shared resources, allow for multiple and diverse viewpoints, and help guide the types of research and policy analysis conducted with the data.
- It is essential that the data system maintains objectivity and refrains from advocacy to build trust among policy-makers. Housing the data system under a neutral party and having clear boundaries between the data reporting and the use of data for advocacy purposes is critical.

Should states legislate the development of data system?
- Some states require, by statute, the collection of health workforce data (e.g., Florida, Texas, Oregon). Legislation provides varying degrees of flexibility about how data are collected and shared. Legislating data collection creates challenges because it relies on annual appropriations; it may limit flexibility in determining which questions can be included; it requires the need for broad consensus on decisions; and it may jeopardize the ability of the data collection and analysis process to remain objective and separate from the political process.
- Some states collect data without legislation (e.g., North Carolina, South Carolina). These states established relationships between stakeholders and developed workforce data systems in the absence of a government directive.

How can states fund the data system?
- Adequate financing is required to cover the costs of a data system, including:
    - Staff time to manage data collection, clean/analyze data, write reports, disseminate results, design/maintain a website and liaise with stakeholders.
    - Staff time required to develop and continuously improve the hard copy and online forms needed to collect the data.
    - Information and communication technology infrastructure needed including hardware, statistical analysis software, geographic information systems and encrypted data storage systems.
    - General office costs and overhead including office rent, utilities, furniture, supplies, printers and other overhead costs.
- Housing a nursing workforce data system within an existing organization, such as a board of nursing, a government agency (e.g., Department of Health), or a university, can ease overhead and start-up costs. However, resources are needed not only for start-up but also for ongoing data collection and cleaning, maintenance, analysis, and reporting.
- Much of the early work of developing a data system involves establishing relationships with partners and stakeholders, designing and testing data collection tools, developing a robust and secure database, and identifying gaps or errors in the data collection and data cleaning processes. As the system matures, staff time and resources will shift more toward analyzing data, writing reports and disseminating results.
- It is best to identify sustainable, long-term funding sources from the beginning. The value of a sustainable, ongoing nursing workforce data system, as opposed to a one-time or periodic workforce surveys, is the ability to track and monitor trends over time.

How can states address stakeholders' data security and confidentiality concerns?
- Ensuring data security and confidentiality is critical. Workforce data systems contain identifying information such as names, license numbers and birth dates. Data system staff should be trained in computer security and data management practices to ensure that data are protected.
- Data use agreements should be created and formally executed to govern the sharing of individual-level or identifiable data between organizations and individuals. These agreements detail who has access to the data, how it will be used, data security and confidentiality policies, and adherence to privacy acts.

Case Study:
- North Carolina has had a data system in place since before 1979. It is founded on a long-standing and voluntary (not legislated) collaboration with the state's licensure boards and with funding from the NC Area Health Education Centers (NC AHEC) Program.
- The participating NC licensure boards collect data as part of their licensure and renewal process (not surveys), and most boards now collect their data through online application and renewal systems.
- The data are housed on secure servers at the Cecil G. Sheps Center for Health Services Research at the University of North Carolina at Chapel Hill but the licensure data remain the property of the licensure boards. Any use of individually identifiable data must first be approved by the board.
- The Sheps Center is able to maintain objectivity as a neutral organization in an academic setting. The Center produces data and descriptive reports for a broad array of stakeholders, who can then make their own interpretations and recommendations based on the data.

References:
Nooney, J.G., Cleary BL, Moulton P, Wiebusch PL, Murray JL, Yore M, Brunell ML. (2010). Toward standardization (part 1): Assessment of state and national nursing workforce data sources. *Policy, Politics, and Nursing Practice, 11*(3): 173-183.