MedBiquitous Conference
October 18, 2023
Workshop Summary

Title: Implementing a Vision for Sharing Data and Information Across Health Professions Education

Facilitators:

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Goal: To develop a common framework for the development and implementation of an interoperable data sharing system across health professions education.

Objectives:

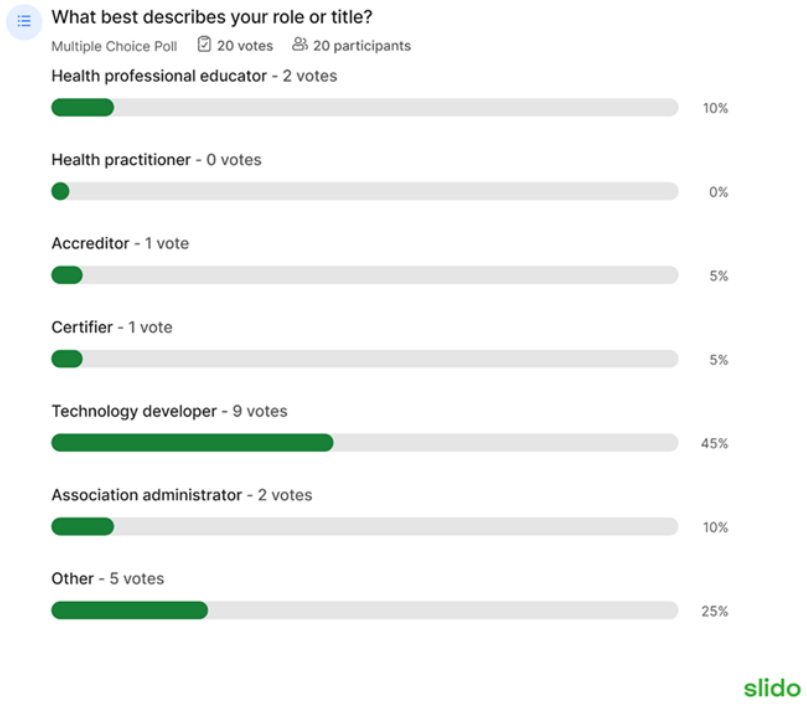
1. Recognize the importance of data sharing for quality health professions education and regulation.
2. Reflect on the challenges and opportunities to develop an interoperable communication system across health professions education.
3. Develop strategies for implementing a common vision for sharing data within and across organizations/institutions.

Description:

The transition of health professions education to competency-based education and assessment (CBE) provides a unique opportunity to re-envision how technology can and should be used to best support this transition. The applicability of academic nursing's vision and goals for an interoperable, integrated information system that supports the sharing of data and information among schools, healthcare settings, and regulatory bodies to all health professions education was explored. The criteria for the development of technologies to support this transformation were shared, and collective strategies for implementation were discussed with the workshop participants in an interactive format.

Introduction:
Prior to providing participants with the background for nursing's new vision for data and information sharing, participants were asked to respond to several questions using an interactive format. Not all participants responded. The questions and the responses were:

Question 1:



Question 2:

Question 3: We also asked participants if they were optimistic about implementing a system like this within 5 years. A majority indicated they were not optimistic about an interoperable data sharing system like this being created in the next 5 years with responses ranging from 0-5 on a 10-point scale with 10 being extremely optimistic.

Session Description:
After reviewing the interactive questions, participants were given an overview on the background and process of developing a *Vision for Sharing Data and Information Across Nursing Education, Practice, and Regulation*.

In 2021, the American Association of Colleges of Nursing (AACN) membership, which includes more than 865 schools of nursing, overwhelmingly approved *The Essentials: Core Competencies for Professional Nursing Education*. The *Essentials*, curricular standards for baccalaureate, master's, and Doctor of Nursing Practice (DNP) programs, calls for new approaches to preparing nurses using competency-based education (CBE). To support this transformation, AACN created the *Essentials* Technology Working Group, comprised of experts from nursing, medicine, technology standards, and business with diverse backgrounds. The group was charged with developing recommendations regarding the use of technology in academic nursing; identifying existing or needed technology and digital tools to support the implementation of the *Essentials;* and tools that support the needs of AACN member schools, accreditors, and students.

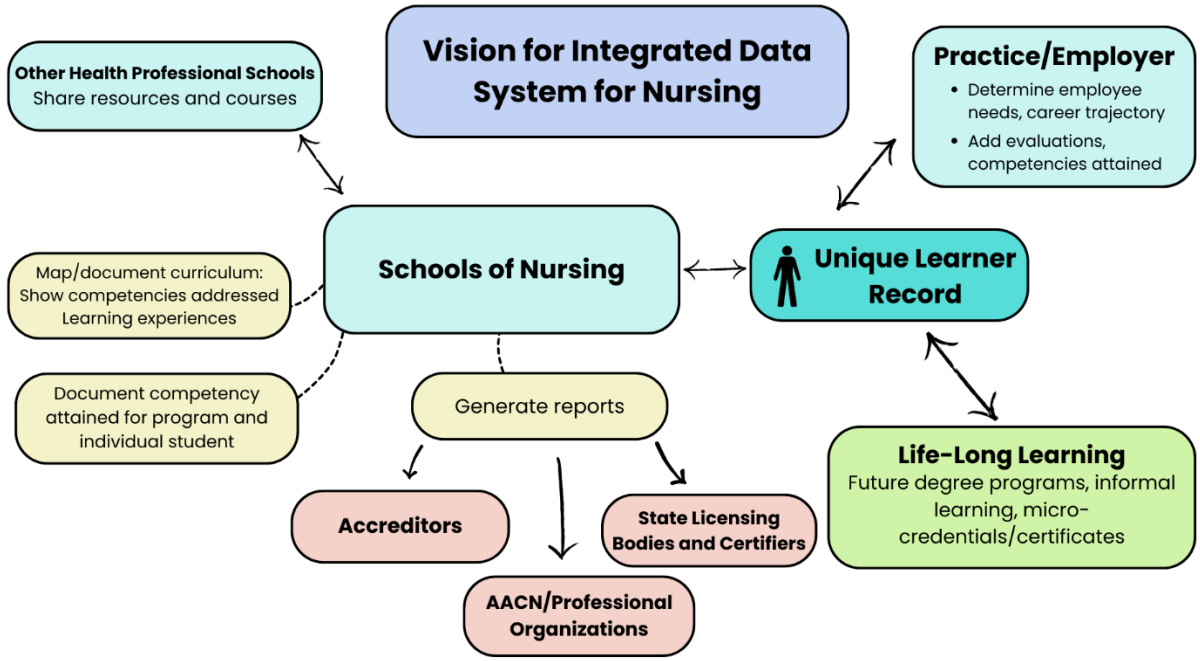
The Technology Working Group initiated its charge by asking: What are the vision and goals for technology use in academic nursing? The ***Vision for Sharing Data and Information Across Nursing Education, Practice, and Regulation*** was developed and calls for *an interoperable, integrated, information system – supported by technology, people, and processes – that facilitates the sharing of data and information among schools of nursing, healthcare settings, and regulatory bodies. This system must support the needs and promote the best use of resources for schools of nursing, faculty, students, practicing nurses, employers, and regulators, including licensing, accrediting, and certifying bodies.*

Possible uses for this system include:

- Supporting the development, revision, and implementation of nursing curricula, including the ability of schools to map curricula, track competencies and learning outcomes across the curriculum, and generate reports for accreditation, licensing, and certification boards.
- Creating an electronic learner record for students that allows tracking of competency development and assessment in their current education program, future education programs, and lifelong learning experiences. The goal would be that the learner record would then become a trackable and editable document throughout the individual's professional career.
- Creating reports for/by accreditors, certifiers, educators, and licensing bodies.

- Promoting sharing and collaborative development of learning resources and courses among nursing and other health professional education programs.

Diagram of Vision for Data Sharing (AACN,2023):



Description:
After providing the participants with an overview and background of the process and information about the *Essentials* and how the Vision was developed, we asked them to gather at tables and engage in small group discussion by having them respond to the following questions. We gave the groups 10-15 minutes to respond to the questions and post their responses on sticky notes under each question. Some individuals chose to post their individual as well as group responses. Takeaways and major themes from the discussion are below.

Question 1: From your perspective (educator, accreditor, certifier, standard developer, consumer), what opportunities do you see for creating an interoperable data sharing system for health professional education for your organization?

- Collaborating across and among institutions and health professions to standardize terms, taxonomies, and data architectures which would also allow for benchmarking opportunities and simplifying software development.
- Tracking student competencies and learning outcomes within and among different professional fields.
- Positioning data as an institutional resource which would allow for breaking down siloes within an institution and collaboration across fields.
- Creating opportunities for better understanding of the healthcare workforce.

- Ultimately improving student outcomes, patient outcomes, and overall health care.

Question 2: What challenges do you envision for creating such a system?

- Culture, politics, unfunded mandates, building trust, engaging the right stakeholders in the conversation, and buy-in from stakeholders.
- Maintaining data privacy and security, in addition to complying with federal regulations like FERPA & HIPAA, while also allowing for cross-institutional collaboration.
- Creating a system that can be integrated, upgraded, and maintained regularly.
- A concern that data will reveal institutional weaknesses and make them look inferior.
- Overcoming proprietary resistance and the notion that sharing data devalues it.
- Developing trust and accountability.
- Varying data structures and lack of ability to communicate across platforms, challenges with integrating into existing systems, and the steep learning curve.
- Developing buy-in on the value, importance, and benefits.
- Determining data access and authorization, especially given privacy concerns and concerns about data sharing.
- Adequate infrastructure at an affordable price for institutions, especially those with fewer resources.

Question 3: What strategies would you propose to create such a system? Or what needs to happen to make this a reality?

- Determine which stakeholders should be included at the table to discuss data, infrastructure, and the systems and people required to adopt and maintain it.
- Build trust with institutional leadership by focusing on the outcomes and benefits: Focus on "who" and "how" we are helping to demonstrate the value.
- Students, patients, and other underrepresented stakeholders should be included in the conversations.
- Develop data standards, a common taxonomy, and definitions through a consensus process and using best practices, in addition to creating use cases for data exchange and other purposes.
- Explore funding opportunities from other private foundations or federal funders.
- Define a clear scope for the work; start small with pilot testing, retesting, perhaps using models from other sectors and build on those: Don't try to boil the ocean.
- Work across health professions and use common elements (like competencies).
- Frequent and continual reporting and updating within and across health professions.

After a robust discussion around these three questions, we shared the criteria for technology development that were included in the Vision document. They are:

- Ability to integrate data models and export/import data with other systems necessary for the delivery of nursing education, including possible future systems required by curriculum or regulatory agencies.
- Ability to be integrated with other systems through use of data standards, APIs, or other enabling technologies.
- Use MedBiquitous, IMS, IEEE or other relevant education data standards or demonstrate compatibility with them.
- Open source or readily accessible.
- Vendor plan for faculty training and ongoing support for the implementation and use of the product.
- Vendor plan to maintain and sustain the currency of the product.
- Reasonably priced to allow schools to have access, not only for initial use, but for sustained, long-term use.
- Competency tracking tool should adhere to the principles of Self Sovereign Identity and have the capability for students to retain ownership of their own data after graduation.
- Competency tracking tools allow access to faculty, preceptors, and students with context-based views for easy input and access to the right information at the right time for the right purpose.
- Vendor should clarify insurance, policies, and procedures regarding indemnifications for university.
- Vendor policies and processes regarding individual/student privacy and intellectual property are in accordance with local, international regulations as applicable; for example Family Educational Rights and Privacy Act (FERPA) and General Data Protection Regulation (GDPR).

We then asked a follow-up question.

Question 4: Are there other criteria that should be included or considered?

- The important thing is not to limit access.
- If there is a framework, then the vendors can create their system to meet those standards and then what comes out of the system will be usable.
- There should be a common set of criteria for exchange between different disciplines so that there is an ability to exchange data.
- Creating frameworks for tracking competencies across the board is important.

The workshop concluded with asking the participants again how optimistic they were that such a system could be developed in 5 years, and the participants again expressed their skepticism, but acknowledged the benefits and importance and that 8-10 years may be a more realistic expectation.

Takeaways

- Participants were not optimistic that an interoperable data sharing system would be created in the next five years.
- However, opportunities included:
  - Collaborating across and among institutions and health professions education to standardize data vocabulary and schemas.
  - Positioning data as an institutional resource to breakdown silos.
  - Improving student, patient, and overall outcomes.
- Challenges included:
  - Building trust and accountability.
  - Engaging and getting buy-in from the right community of interest.
  - Overcoming the sense of proprietary ownership of the data.
- Developing an understanding of the benefits and value.
  Strategies included:
  - Get the right stakeholders (broadly defined) into the discussion.
  - Build trust among the institutional leadership and belief in the benefit and value.
  - Develop common language, taxonomy, and processes.
  - Start small with a clearly defined scope.
  - Communicate frequently and regularly within and across institutions and professions.