Implementing A Research Framework Getting from Results to Practice and Policy: Implications for Implementation

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Translation Science


Empirical foundation for translational science is evolving from EBP protocols implemented via translational research in a diversity of settings.

Types of Translational Research:

- T1 research expedites the movement between basic research and patient-oriented research that leads to new or improved scientific understanding or standards of care.
- T2 research facilitates the movement between patient-oriented research and population-based research that leads to better patient outcomes, the implementation of best practices, and improved health status in communities.
- T3 research promotes interaction between laboratory-based research and population-based research to stimulate a robust scientific understanding of human health and disease. (Rubio et al., 2010)
Lessons from Practice

- Even the best evidence-based guidelines or protocols cannot always:
  - Change practice
  - Enhance care outcomes
  - Be sustained over time

- Use of theory in translational research can assist in:
  - Analysis of the context where evidence-based guidelines or protocols are being implemented
    - **Theory is a “road map”**
  - Identification of contextual variables, especially beliefs and attitudes
  - Development of strategies to assist in controlling contextual variables
  - Determining dose and timing of interventions
  - Delineating outcomes
  - Development of strategies for sustainability
  - Development of strategies for diffusion of innovation

- Theory use and development = promising approach to better understand the *black box* of implementation

- Within available evidence, issues include:
  - Researchers do not pay enough attention to the theoretical underpinnings of their work
  - Or, provide sufficient contextual details for an assessment of transferability (Grimshaw et al., 2004).
  - Some RCTs do not have long enough test time to provide real understanding of outcomes

- Currently, **no clear directions** for translational researchers, practitioners or administrators to make decisions about:
  - Implementation strategies to use
  - In what context
  - Facilitated by who
  - With what groups or stakeholders
  - What techniques to enhance sustainability
Translation Science Challenges

Translation science (TS) is relatively new to U.S. nursing education and practice

Stakeholders:

- **Health Care Organizations**
  - Need to implement EBP and demonstrate high quality outcomes
  - Need to generate empirical outcomes to meet quality, pay for performance expectations and attain Magnet status

- **Credentialed Nurses: APNs and Nurses in Specialty Practice**
  - Many masters and BSN prepared were educated more than 10 years ago when evidence-based practice and EBP for specified patient populations was not taught or an expectation of practice
  - Few APNs prepared at DNP level and high degree of variability among programs producing DNPs

- **Nurse educators:**
  - Now educating re: EBP, yet many unaware of Translation Science
  - Traditional nurse researchers often see TS as “second class” research, since does not use traditional research methods
  - Limited expectations for TS education; only in DNP essentials of AACN
  - Limited U.S. Translational Science texts, literature and experts
Translation Science Challenges

- Validity, reliability and volume of data generated through documentation of processes and outcomes of translational research protocols holds great promise of:
  - Enhancing knowledge of what interventions are most effective
  - With what populations of patients
  - Done by which professionals

- Logic Modeling can provide insights and stimulate methods used to enhance data capture of contributions of care providers by discipline and credential

- Tracking of EB processes and outcomes is dependent on indicators coded in standardized language and embedded in documentation in the Electronic Health Record (EHR). Yet:
  - Only about 20% of health care organizations in U.S. have fully integrated EHRs
  - Many extant EHRs do not have architecture that will accommodate standardized language coding of indicators
  - Leadership lacks understanding of need for standardized language coding in documentation
  - There are shortages of nurse informaticians, so time to production of documentation screens is protracted
Credentialing and Translational Science

- Translational science done by credentialed nurses should accelerate movement between patient-oriented research and population-based research, leading to:
  - Better patient outcomes
  - Implementation and ongoing evaluation of best practices
  - Sustained best practices
  - Improved safety, quality of care and health status in communities

- Data generated through translational science when captured in coded documentation indicators will provide an ongoing robust data base of process and outcome contributions by credentialed nurses
Role of Credentialed Nurses in Translational Research and Science

- **Credentialed nurses are more likely to:**
  - Pursue credible research in their area of expertise
  - Participate as part of an interprofessional team in health care organizations
  - Understand importance of data, informatics and methods used to capture documentation data
  - Be a member of a professional organization and be more aware of quality, safety and health policy issues
  - Be involved in their community initiatives where they share their expertise
  - Network and take on mentoring with colleagues
  - Understand increasing expectations by HC employers that they take a lead in identifying and using best evidence in care delivery, administrative decision making, education and fostering policy change to enhance quality, safety and care outcomes
  - Understand escalating needs to demonstrate “value added” by credentialed professionals
Role of Credentialed Nurses in Translational Research and Science

- Function as facilitators of Translational Research (TR) teams in health care organizations:
  - Enhance identification of clinical, administrative, educational and policy problems amenable to TR
  - Foster development of collaborative interprofessional TP teams
  - Stimulate identification and use of theory to guide TR projects
  - Communicate and effectively collaborate with stakeholders
  - Mentor TR team members in evaluation of evidence and development of evidence-based protocols
  - Stimulate development of EBP Protocols and modifications based on implementation trend data
  - Effectively foster development of standardized language coded process and outcome indicators through interface with informaticians
  - Create and implement plans for sustainability and diffusion of TR projects
- Mentor other credentialed nurses to assume a TR facilitator role
If Contributions of Credentialed Nurses were Validated Through Research, Then

- Health care employers would hire and/or develop credentialed nurses:
  - Not only for their direct care roles, but leadership in problem identification and moving evidence into practice and sustaining EBP over time
  - For their professional commitment to ongoing growth and development both personally and of peers
  - Also, for their capacity to fully participate in interprofessional teams where quality and safety are paramount
  - Not only for their focus on patient and family engagement, but commitment to population health management
  - For advocacy around issues that impact patients, populations, as well as, providers of care
Recommendations:

- Accelerate pace at which nurse educators learn, appreciate, teach and facilitate translational research in place of descriptive research.
- Foster nurse faculty practice as translational research facilitators in health care organizations.
- Expedite movement to EHR internal architecture that supports use of standardized coding by producers and vendors of EHR software.
Resources for Translational Research

- Dang and Dearholt (2012). *Johns Hopkins Nursing Evidence-based Practice*: Indianapolis: Sigma Theta Tau
Resources for Translational Research
(cont.)

- QSEN Evidence-based Competencies. [http://www.qsen.org](http://www.qsen.org)
Diffusion of innovation model.
Source: Rogers (1995)
Wagner Model

The Chronic Care Model

Community
- Resources and Policies
- Self-Management Support

Health Systems
- Organization of Health Care
  - Delivery System Design
  - Decision Support
  - Clinical Information Systems

Improved Outcomes

Informed, Activated Patient

Productive Interactions

Prepared, Proactive Practice Team