


PREPARING AN IMPLEMENTATION SCIENCE-READY NURSE LEADER WORKFORCE

Heather Nelson-Brantley, PhD, RN, NEA-BC, Assistant Professor & Leadership Program Director
Cari Zegers, PhD, MBA, APRN, FNP-BC, Assistant Professor

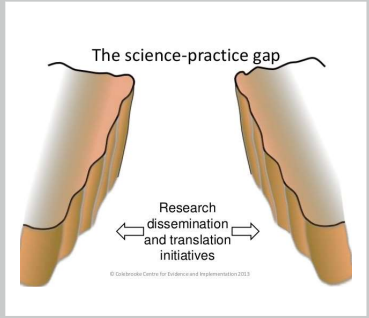


Objectives

<p>1</p> <p>Differentiate EBP, QI, and Implementation Science (IS)</p>	<p>2</p> <p>Appraise role of academic-practice partnerships in developing PhD-DNP IS teams</p>	<p>3</p> <p>Analyze approaches for integrating IS into PhD and DNP curricula</p>	<p>4</p> <p>Evaluate expertise and resources needed for integrating IS into PhD and DNP curricula</p>
---	---	---	--

PROBLEM

- Nurse leaders embrace EBP
- Hospitals have EBP models and activities
- Widespread EBP implementation remains elusive
- Takes 17 years to move 14% of evidence into everyday practice
- Despite efforts to implement rigorous QI targeted at specific metrics, cycle of inconsistent uptake continues



The science-practice gap

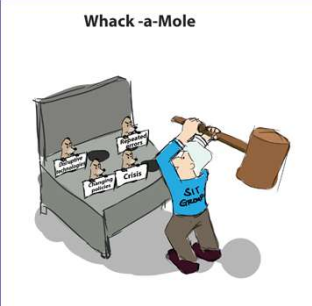
Research dissemination and translation initiatives

© Duke Center for Evidence and Implementation 2021

1. George ME, Clark AM. Nursing's wicked problems: partnering with academic leadership to develop solutions. *Nurs Adm Q* 2021;46(4).
2. Nelson-Brantley H, Zegers C. Implementation science for the post-implementation team leader. *Nurs Adm Q* under review.
3. Baker TA, Brown LA, Shugart G. *Implementation science for health care improvement*. *Health Aff (Millwood)* 2020;39(12).

WHY IS IMPLEMENTATION SO DIFFICULT?


- Practice environment is complex
- What works in one unit does not always translate to others
- Fail to achieve sustainable practice change
- Know *what* to implement but lack adequate training in *how* to implement



Whack-a-Mole

A cartoon illustration of a whack-a-mole game. A man in a blue shirt with 'SIT GUARD' written on it is swinging a mallet. Several moles are popping out of holes in a grey cabinet. The moles are holding signs that say 'Practice Change', 'Sustainability', and 'Evidence'. The man is looking at the moles with a determined expression.

2. Nelson-Stratley, M., Clippel, E. Implementation science for the practice-oriented nurse leader. Nurs Adm Q under review.

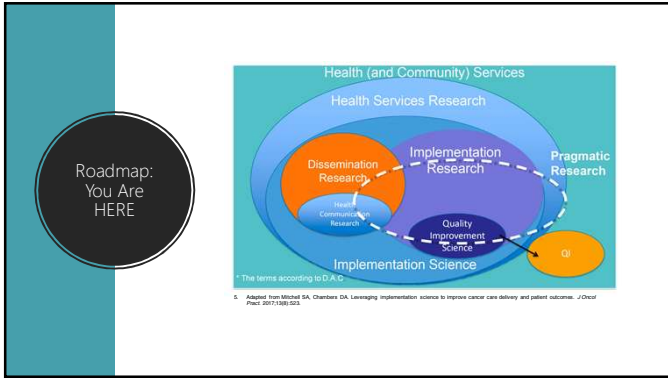


IMPLEMENTATION SCIENCE (IS)

- Multi-disciplinary research-practice field
- Aims to understand *how* to move EBP into routine clinical practice
- Grounded in behavioral change science
- Implementation is complex and context dependent
- Focuses on acceptability, feasibility, adoption, adaptation, and sustainability
- New solution for addressing persistent and intractable challenges

4. Brannaman, R.C., Collins, C.A., Proctor, E. Dissemination and Implementation Research in Health: Translating Science to Practice. 2nd ed. New York, NY: Oxford University Press; 2016.
2. Nelson-Stratley, M., Clippel, E. Implementation science for the practice-oriented nurse leader. Nurs Adm Q under review.

EBP, QI, and IS OH MY!



IS Made Incredibly Simple

- The **intervention/practice/innovation** is **THE THING**
- **Effectiveness research** looks at whether **THE THING** works
- **Implementation strategies** are the stuff we do to help people/organizations **DO THE THING**
- **Implementation research** looks at how best to help people/organizations **DO THE THING**

© Karen Gill. Implementation science made too simple a teaching tool. Implementation Science Communications. 2020;1(1):1-3

COMPARISON OF EBP, QI, AND IS		
<p>EBP: "The Thing/Goal"</p> <ul style="list-style-type: none"> ✓ Evidence-based program, guideline, policy, practice ✓ Derived from research ✓ Includes patient perspective ✓ ROL → assess strength of evidence → implement 	<p>QI Approach</p> <ul style="list-style-type: none"> ✓ Problem brought to attention of Quality Dept. ✓ Error reporting/internal data reports ✓ RCA, protocol, policy review ✓ Quality Dept. hypothesizes how to correct the error(s) ✓ Education, toolkit, audit/feedback ✓ PDSA/PDCA ✓ Same QI strategies used throughout organization 	<p>IS Approach</p> <ul style="list-style-type: none"> ✓ EBP not happening ✓ Assess barriers and facilitators (determinants) ✓ Assess acceptability, feasibility, appropriateness ✓ Workflow mapping ✓ Select implementation strategies based on determinants assessment ✓ Adapt EBP for fit ✓ Design for sustainability ✓ Document adaptations ✓ Document and measure implementation strategies ✓ Scale-up and spread

LEADERSHIP COMPETENCIES FOR SUPPORTING IS

1. Building IS capacity
2. Fostering organizational climate for IS
3. Establishing strong PhD-DNP IS teams

© American Academy of Nursing, 2018. Chapter 8: Implementation, research and nursing leadership. Retrieved from American Academy of Nursing website: <https://www.aan-nursing.org/>

Vision for PhD-DNP IS teams developed through strong academic-practice partnerships

Nurse leaders in **practice** must gain essential competencies for supporting IS

Nurse leaders in **academe** must concurrently focus on integrating IS into PhD and DNP curricula

TRADITIONAL PREPARATION OF PHD AND DNP NURSE LEADERS

PhD nursing students trained in traditional research methods, lack IS methods training

DNP-prepared nurse leaders charged with moving evidence into practice, yet few DNP programs include courses in IS

PhD and DNP programs devoid of collaborative research-practice learning opportunities

PhD dissertations and DNP projects developed without health system partnerships (academic-practice silos)

INTEGRATING IS INTO PHD AND DNP CURRICULA:
STEPS FOR ACADEMIC NURSE LEADERS



AN INNOVATIVE, INTRA- AND INTER-PROFESSIONAL COURSE EXEMPLAR

- How course was developed
- Course content
- Assignments
- Evaluation



COURSE DEVELOPMENT

- Identified faculty with expertise and interest in IS
- Paired research and practice faculty
- Developed with intra- and inter-professional focus
- Sought input from doctoral faculty and IS experts
- Selected textbooks – practice focused and research focused
- Piloted as an elective course – offered to PhD, DNP and other health-related professions doctoral students at KU and nationally via NEXus



NRSG 960: Dissemination and Implementation Science in Healthcare

Intra- and Inter-professional course

16 weeks, online

Open to KU SON, SOM, and SHP doctoral students, and doctoral students nationally via NEXus

Research-focused learners and practice-focused learners co-design an IS project that addresses a critical issue that impacts health or health systems

Leadership competencies for supporting IS research and practice also are explored

NRSG 960: Dissemination and Implementation Science in Healthcare

Module	Content
1. Overview of IS Research and Practice	<ul style="list-style-type: none"> • Origins • Key concepts • Perspectives: policy IS research, improvement science, implementation from a learning perspective, implementation from a habit perspective, organizational perspectives in IS
2. Models, Frameworks, and Theories in IS	<ul style="list-style-type: none"> • Contextualizing evidence • Determinant frameworks • Process frameworks • Evaluation frameworks
3. Research Designs, Measures, and Analyses	<ul style="list-style-type: none"> • Hybrid designs • Adaptive designs • Mixed methods • Intervention/innovation: measures and implementation/dissemination measures: you need both
4. Implementation Strategies	<ul style="list-style-type: none"> • Factors associated with effective implementation • Organizational readiness for change • Changing organizational social context to support EBP implementation • Scaling-up and spread • Implementation of effective services in community settings
5. Fidelity, Adaptation, Evaluation, and Sustainability	<ul style="list-style-type: none"> • Fidelity: rationale and measurement • Fidelity vs. adaptation: an interdependent gradient • Adaptation: sources and measurement • Evaluation: implementation outcomes, services outcomes, and health outcomes • Sustainability: embracing dynamism and designing for dissemination, sustainability, and equity
6. Advancing the Field of IS	<ul style="list-style-type: none"> • Leadership competencies for supporting IS research and practice • Intra- and inter-professional IS research-practice teams: the path forward • Closing the science-practice gap through IS

ASSIGNMENTS

Individual Concept Development

Live Discussion Seminars

Team-based IS Project

3 stages, 45% course grade

2 seminars, 20% course grade


4 stages, 35% course grade

PILOT EVALUATION

Students stated course should be required for every PhD student


Because course was not required, limited diversity of learners (DNP)

Challenge to identify content and assignments that meet the needs of both practice-focused and research-focused learners



RECOMMENDATIONS

- Identify interested faculty and support their development in IS
- Consider learning expectations from other professions and schools
- Engage practice leaders in development, implementation, evaluation, and revision
- Consider your course level – intro vs. advanced
- Start small and scale up
- Identify pathways for integrating into PhD and DNP curricula as a required course
- CQI mindset is crucial



ACKNOWLEDGEMENTS

Thank you, Dr. Esther Chipps, for your contributions to the content shared in this presentation and your review of the presentation.

References

1. Glasgow MES, Colbert AM. Nursing's wicked problems: partnering with academic leadership to develop solutions. *Nurs Adm Q* 2022;46(4).
2. Nelson-Brantley HV, Chippis E. Implementation science for the practice-oriented nurse leader. *Nurs Adm Q*. under review.
3. Balas EA, Boren SA. Managing clinical knowledge for health care improvement. *Yearb Med Inform*. 2000;65-70.
4. Brownson RC, Colditz GA, Proctor E. *Dissemination and Implementation Research in Health: Translating Science to Practice*. 2nd ed. New York, NY: Oxford University Press; 2018.
5. Mitchell SA, Chambers DA. Leveraging implementation science to improve cancer care delivery and patient outcomes. *J Oncol Pract*. 2017;13(8):S23.
6. Curran GM. Implementation science made too simple: a teaching tool. *Implementation Science Communications*. 2020;1(1):3.
7. Nelson-Brantley HV, Chippis E. Implementation science and nursing leadership: improving the adoption and sustainability of evidence-based practice. *J Nurs Adm*. 2021;51(5):237-239.

Training Opportunities, Conferences, and Programs

- Training Institute for Dissemination and Implementation Research in Cancer (TIDIRC): <https://cancercontrol.cancer.gov/IS/training-education/tidirc/index.html>
- Institute for Implementation Science Scholars (IS-2): <https://is2.wustl.edu/>
- Training opportunities online from UCSF: <https://accelerate.ucsf.edu/training/ids>
- Society for Implementation Research Collaboration: <https://societyforimplementationresearchcollaboration.org/>
- Annual Conference on the Science of Dissemination and Implementation in Health. Sponsored by AcademyHealth & NIH: <https://academyhealth.org/events/site/15th-annual-conference-science-dissemination-and-implementation-health>
- National Implementation Research Network (NIRN): <https://nirn.fpg.unc.edu/ai-hub>
- Center for Prevention Implementation Methodology for Drug Abuse and HIV, Improving Population Health Through Implementation Science: <http://cepim.northwestern.edu/psmg>

Online Resources

- NCI resources related to dissemination and implementation of evidence-based practices and programs in cancer: <https://cancercontrol.cancer.gov/is/>
- Science of behavior change from OBSSR at NIH: <https://commonfund.nih.gov/behaviorchange>
- ACCORDS at University of Colorado at Denver: <http://www.ucdenver.edu/academics/colleges/medicalschoo/programs/ACCORDS/s/healthresources/DandI/Pages/Dissemination%20and%20Implementation.aspx>
- VA QUERI Implementation Roadmap: <https://www.queri.research.va.gov/tools/roadmap.cfm>
- Dissemination and implementation research models: <http://www.dissemination-implementation.org/>
- Implementation Science newsletter: <http://news.consortiumforis.org/>
- Implementation Science, Online, open access journal: <https://implementationscience.biomedcentral.com/>
- Implementation Science Communications, Online, open access journal: <https://implementationsciencecomms.biomedcentral.com/>
- RE-AIM: <http://www.re-aim.org/>

Funding Opportunities

- **NIH:** 17 institutes participate, not all in all 3 PARs:
 - **PAR 22-105** (R01) CT optional
<https://grants.nih.gov/grants/guide/pa-files/PAR-22-105.html>
 - **PAR 22-109** (R21) CT optional
<https://grants.nih.gov/grants/guide/pa-files/PAR-22-109.html>
 - **PAR 22-106** (R03) clinical trial not allowed
<https://grants.nih.gov/grants/guide/pa-files/PAR-22-106.html>
- **PCORI:** Pragmatic Trials; Dissemination projects
- **AHRQ:** embedded research studies; new RFAs
- **CDC:** especially Prevention Research Centers
- **VA:** QUERI program
