



UNIVERSITY of MARYLAND  
SCHOOL OF NURSING

# **Year One of the University of Maryland's Multi-Year Effort to Advance Implementation Science Education (AdvISE)**

Principal Investigator: Debra Bingham, DrPH, RN, FAAN  
Associate Professor, Healthcare Quality and Safety  
Department of Partnerships, Professional Education, and Practice  
[dbingham@umaryland.edu](mailto:dbingham@umaryland.edu)

1:45pm to 2:15pm

# Objectives:

- Describe why the University of Maryland School of Nursing launched the multi-year effort to Advance Implementation Science Education (AdvISE)
- Describe the major activities of the AdvISE grant
- Discuss next steps for the AdvISE grant

# The Problem

- Inequities in population health
- Improve the quality and safety of healthcare structures, processes, and outcomes
- Reduce moral distress and burnout among RNs.



# Institute of Medicine - 2001

It takes **17 years** to translate research into action.

Institute of Medicine (2001). Crossing the quality chasm: A new health system for the 21<sup>st</sup> Century, pg. 5.



DNP graduates with expertise in translation or diffusion of research into practice using QI methods are the key to reducing the 17-year research-to-practice gap!

## **Vision:**

New DNP graduates will be skilled implementers and implementation scholars.

They will graduate with the knowledge, skills, and confidence to develop and lead quality improvement initiatives that utilize findings from implementation science to more effectively **transform population health and healthcare.**

# Challenges

- Science on quality improvement and implementation science is rapidly expanding
- The journal of Implementation Science is only 12 years old
- It is hard for faculty to keep up-to-date
- Many faculty may not have had education or experience implementing and evaluating QI
- DNP degrees are new and were started by faculty with PhDs
- The taxonomy is under developed, e.g., there is not agreement nationally on how to define and distinguish between implementation science and improvement science

# Definition of Quality Improvement (QI)

*“... systematic, **data-guided** activities designed to bring about immediate, **positive changes** in the delivery of health care in particular settings.”*

Baily, M.A., Bottrell, M., Lynn, J., & Jennings (2006). Special report: the ethics of using QI methods to improve healthcare quality and safety. The Hastings Center: Garrison New York, pg. S5.



No two DNP Projects are identical

Yet ---- all DNP Projects share a similar  
road to success

# Bingham's Evidence-Based Practice Quality Improvement Flow Chart

## 1. Evaluate & Grade the Research or Evidence for the Practice (EBP), Review Population Health Data & Clinical Outcomes

- \*Review surveillance & utilization data to track and review population health and outcomes.
- \*Review the research literature to determine which current practices need to change & how.
- \*Determine the level of evidence and Evidence-Based Practice (EBP) Gaps

### Human Subjects Research

Generate New Clinical Knowledge Evidence-Based Practice

### Implementation Science

Create generalizable knowledge about why and how implementation efforts succeed or fail.

### Improvement "Science"

Investigate how to improve structures, processes, or outcomes.

## 2. Design and Implement a Quality Improvement Initiative

- \*Implement EBP
- \*Design the QI initiative based on research-based implementation theories, & frameworks generated by implementation scientists
- \*Utilize QI process models, methods & tools
- \*Perform data-driven small tests of change that will guide on-going QI project innovations and adjustments

## 3. Evaluate & Determine Next Steps

- \*Program evaluation:
  - Structures,
  - Processes,
  - Outcomes (Healthcare & Population Health)
- \*Identify practice & policy implications
- \*Track un-intended consequences
- \*Recommend modifications
- \*Sustain
- \*Spread

The University of Maryland School of Nursing  
has launched the:

**Advancing Implementation Science Education  
(AdvISE) Initiative in 2017**

**NSP II Funding was obtained in July 2018  
to enhance the AdvISE effort**

# AdvISE Steering Committee

- Debra Bingham, DrPH, RN, FAAN – Committee Chair
- Susan Bindon, DNP, RN-BC, CNE, CNEcl
- Kathleen Buckley, PhD, RN
- Margaret Hammersla, PhD, CRNP-A
- Shannon Idzik DNP, CRNP, FAANP, FAAN – Committee Co-Chair
- Kathryn Montgomery, PhD, RN, NEA-BC – Committee Co-Chair
- Jeff Martin, MBA

## Workgroup Representatives:

- Kathleen Buckley, PhD, RN (DNP Project Courses workgroup)
- Linda Costa, PhD, RN, NEA-BC (Measurement workgroup)
- Patricia Franklin, PhD, RN (Leadership workgroup)
- Lucy Rose Davidoff, RN, DNP\* - AdvISE Grant Project Management Specialist/Research Assistant

# Work Groups

- Measurement
- Leadership
- DNP Project Courses
- Theory



Year	Major Activities for the AdvISE Project
Year 1	<ul style="list-style-type: none"><li>• Perform a needs assessment</li><li>• Obtain state and national input</li><li>• Form the AdvISE Expert Panel</li></ul>
Year 2	<ul style="list-style-type: none"><li>• Host the one-day AdvISE Summit – 9/24/2019</li><li>• Synthesize and summarize the key recommendations for action based on the information gathered during year 1</li><li>• Develop the IS and QI professional development education</li></ul>
Year 2 and 3	Develop the IS and QI professional development education
Year 3	Dissemination activities and final report





# Year 1: UMSO Faculty and Students' Needs Assessment



# Consultant on the Needs Assessments



Anne Belcher, PhD, RN





UNIVERSITY of MARYLAND  
SCHOOL OF NURSING

- Faculty Needs Assessment
  - 38 (52%) out of 73 Faculty Responded
- Student Needs Pre-DNP Project Courses Assessment
  - 53 (36%) out of 147 DNP Students Responded
  - Follow up Post-DNP Project Courses Assessment
    - Fall 2019
- Employer and Recent Graduate Assessment
  - Survey
  - Semi-structured interviews & 2-3 focus groups
- Environmental Scan – Interviews of DNP faculty at other schools of nursing

# How familiar are you with the following Quality Improvement (QI) topics?

1. Differences between QI and Research
2. Ethical Consideration of QI
3. QI Frameworks and Theories
4. Implementation Science
5. Components of a QI Project
6. Developing a QI Project AIMS
7. Developing a QI Project Charter
8. QI Process Models
9. QI – Tools Driver Diagrams
10. QI – Tools Logic Model
11. QI Tools – Fish Bone Diagrams
12. QI Tools – Process Flow Charts
13. Data Collection Guidelines
14. Examples of Chart Audit Tools
15. Data Collection & Analysis
16. Implementation Barriers & Facilitators
17. Implementation Strategies and Tactics
18. SQUIRE Guidelines
19. Dissemination of QI Findings
20. Human Error Theory, Error Proofing
21. Characteristics of High-Reliability Organizations
22. Safety in Healthcare





Year 1: Obtain State and National Input





UNIVERSITY of MARYLAND  
SCHOOL OF NURSING

## 2. Obtain State & National Input



**Mary Dolansky, PhD, RN, FAAN**

- *Director, QSEN Institute*
- *Assistant Professor, Frances Payne Bolton School of Nursing & School of Medicine*
- *Senior Faculty Scholar, VA Quality Scholars Program*



**Donald Goldmann, MD**

- *Chief Medical and Scientific Officer, Institute for Healthcare Improvement*
- *Professor, Department of Immunology and Infectious Diseases*
- *Professor of Epidemiology, Harvard T. H. Chan School of Public Health*
- *Clinical Professor of Pediatrics, Harvard Medical School*





Year 1: Form the Expert Panel & Plan the Summit





UNIVERSITY of MARYLAND  
SCHOOL OF NURSING

### 3. Form Expert Panel



**Bryan Weiner, PhD**

- *Professor*, Department of Global Health and Department of Health Services, University of Washington
- *Author*: Theory of Organizational Readiness for Change (2009)



**Laura Damschroder, MS, MPh**

- *Lead author* of the Consolidated Framework for Implementation Research (CFIR)
- *Research Investigator* with the Veterans Affairs (VA) Ann Arbor Center for Clinical Management Research
- *Project Principle Investigator* with the ProVE (PeRsonalizing Options through Veteran Engagement) Quality Enhancement Research Initiative (QUERI)



**Anne Sales, PhD, RN**

- *Associate Chair* for Health System Innovation PhD, University of Michigan
- *Professor*, Division of Learning and Knowledge Systems
- *Director* of the Health Infrastructures and Learning Systems (HILS) program
- *Research Scientist*, Center for Clinical Management Research, VA Ann Arbor Healthcare System
- co-Editor-in-Chief of *Implementation Science* Journal



**Jeannie S. Garber, DNP, RN, NEA-BC**

- *DNP Program Coordinator* at James Madison University

# Dissemination Activities Year 1 & 2

- Summit on September 24, 2019
- State-wide Webinars
- Video summary of the summit
- Presentations
  - State
  - National

# Major Question for the Summit

- What implementation science knowledge and what quality improvement knowledge, tools, and skills do doctoral prepared graduates need to be proficient in so they can more effectively translate research into action?
  - Implementation Science
  - Quality Improvement



## **Vision:**

New DNP graduates will be skilled implementers and implementation scholars.

They will graduate with the knowledge, skills, and confidence to develop and lead quality improvement initiatives that transform population health and healthcare.

# A Few Examples of DNP Student Projects:

## Community:

- Reduce preventable fetal and infant morbidity and mortality in collaboration with the Montgomery Health Department to increase prenatal kick counts

## Outpatient:

- Work in clinics to increase oral health screening and referral patterns among diverse populations
- Increase the number of individuals in Maryland who get flu vaccines

## Inpatient:

- Increase prophylactic use of protective skin barriers to reduce hospital acquired skin breakdown



Questions?  
[dbingham@umaryland.edu](mailto:dbingham@umaryland.edu)