

# The PhD Pipeline: An Imperative for all Nursing Faculty

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AACN Doctoral Education Conference

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## What We Hope to Accomplish

### **Engage in critical conversations about the research doctorate**

- Pipeline trends and possible meaning
- Existing successful educational models and impact on pipeline
- Determine what we know and don't know about PhD numbers,  
funding impact, post-doc capacity, school capacity
- Next steps



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# The Public Needs PhD-Prepared Nurses



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## RAISE the Voice EDGE RUNNER



**Jackie Campbell, PhD, RN, FAAN**

Danger Assessment: An Instrument to Help Abused Women Assess Their Risk of Homicide



**Sarah Szanton, PhD, ANP, FAAN**

Community Aging in Place: Advancing Better Living for Elders (CAPABLE)



**Antonia Villarruel, PhD, RN, FAAN**  
**Loretta Sweet Jemmott, PhD, RN, FAAN**

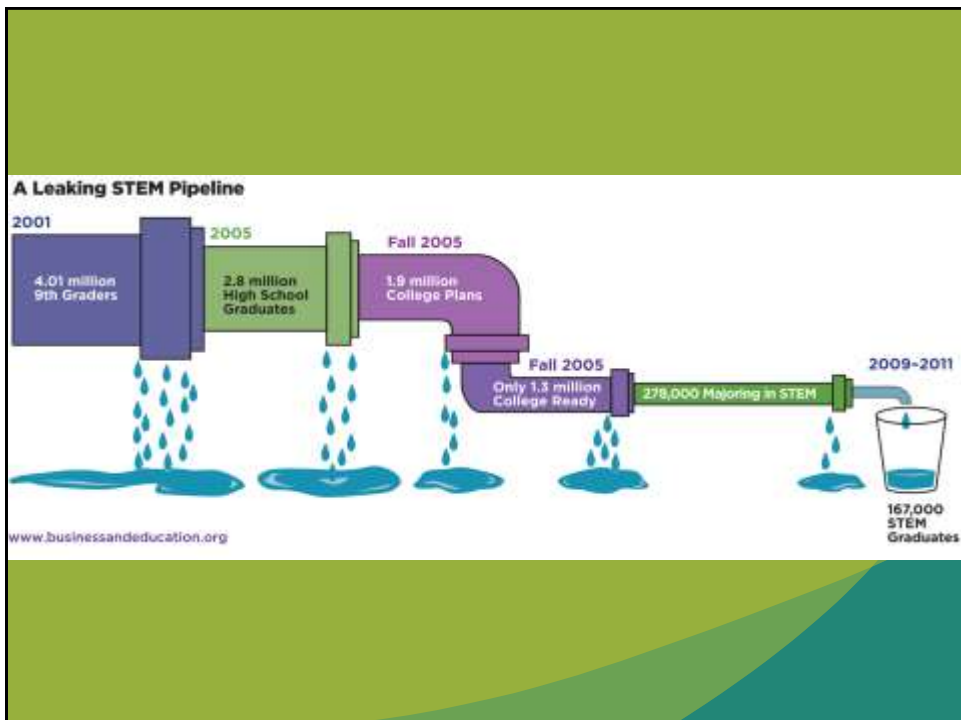
¡Cuidate!

A Culturally-Based Program to Reduce Sexual Risk Behavior Among Latino Youth

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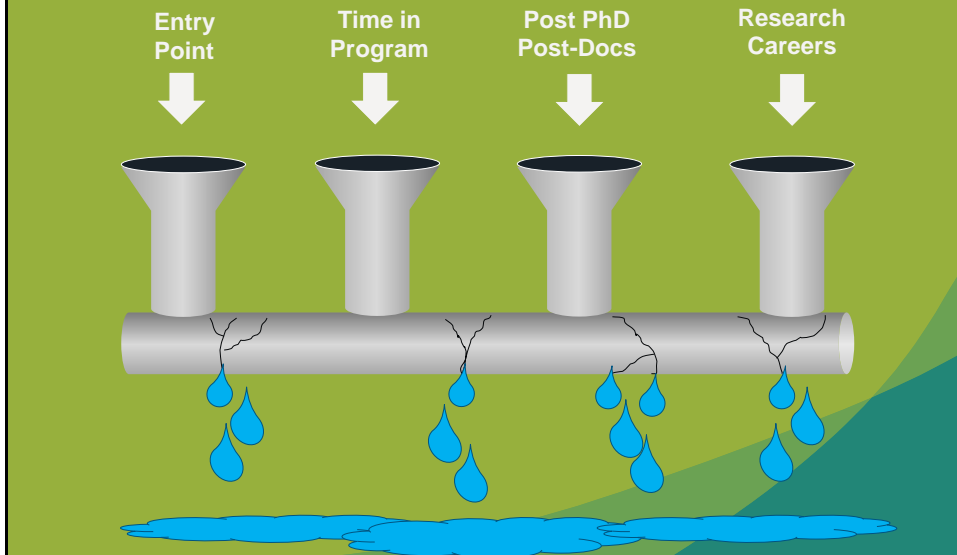


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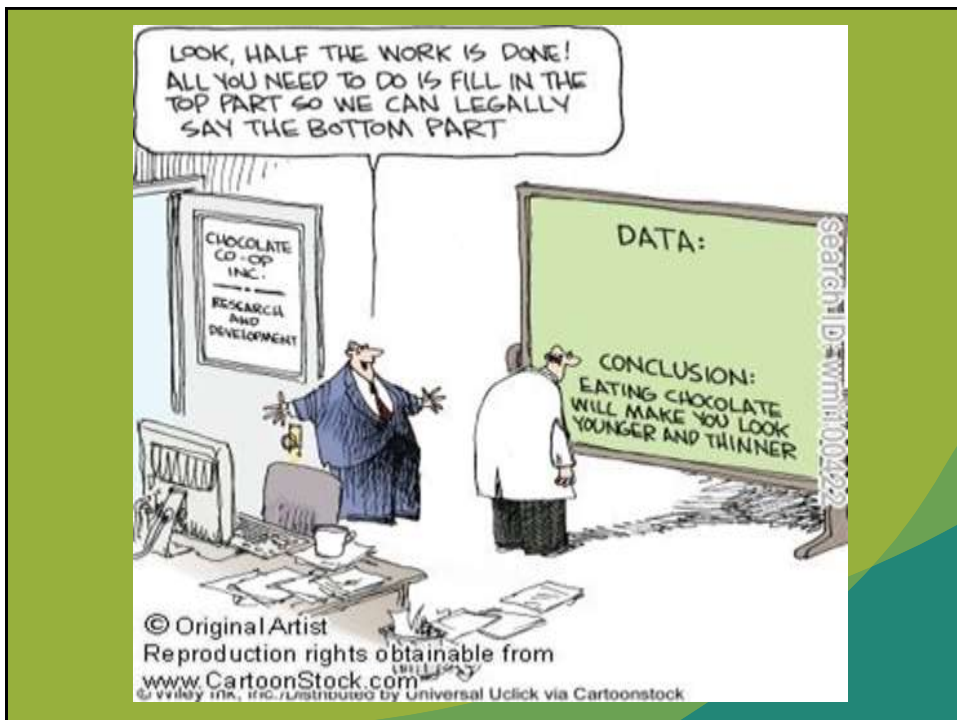


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## Research PhD Pipeline



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## Growing Support for Graduate Nursing Education

To get to graduate education, needed higher entry level

ANA position statement, 1965

Private funders:

- RWJF
- W.K Kellogg Foundation
- Macy Foundation
- Hartford Foundation

***Nurse Scientist Graduate Training Programs established***



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## The Road So Far...



**The American  
Nursing Shortage**

Prepared by Bruce Vladek, M.D., M.P.H. | Edward C. Cook, Ph.D., M.D. | Health Resources Institute  
For the Robert Wood Johnson Foundation, April 2008



**FUTURE OF NURSING™**  
Campaign for Action  
AT THE CENTER TO CHAMPION NURSING IN AMERICA



**\$10M Investment in 2008 to:**

- Strengthen educational pathways
- Increase the number and diversity of nurses
- Address nurse faculty shortage

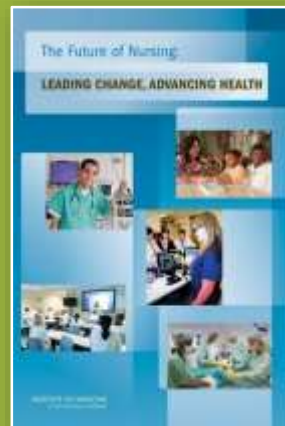


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## Future of Nursing Report 2010

### *Including Recommendations to:*

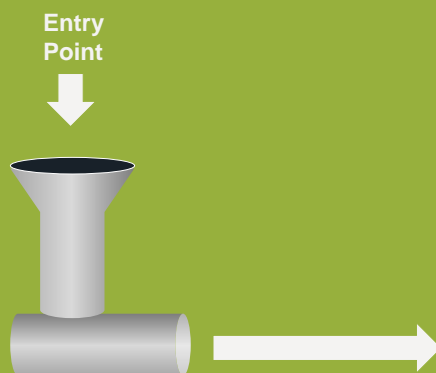
- Double the number of nurses with a doctorate by 2020
- Provide opportunities for nurses to assume leadership positions



*Coming Soon: RWJF funded "Nursing's Role in Building a Culture of Health and Equity" to be released November 2020*

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## What We Have Done... Entering the Pipeline



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## RWJF New Careers in Nursing

*Goal: To help alleviate the nursing shortage and increase the diversity of nursing professionals.*

\$44 Million: 3,571 Scholars, Each Received \$10K

ROBERT WOOD JOHNSON FOUNDATION

# New Careers in Nursing

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## Doctoral Advancement in Nursing (DAN)

Robert Wood Johnson Foundation  
New Careers in Nursing



Doctoral Advancement in Nursing  
Faculty Toolkit

Robert Wood Johnson Foundation  
New Careers in Nursing



Doctoral Advancement in Nursing  
Student Toolkit

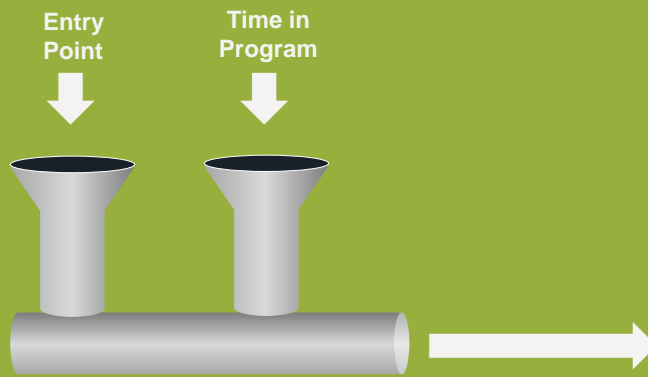
*Collaboration between RWJF and AACN*

<http://www.newcareersinnursing.org/doctoral-advancement-nursing.html>



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## Keeping Students in the Pipeline



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## RWJF Future of Nursing Scholars

*Goal: To create a large and diverse cadre of PhD-prepared nurses, committed to long-term leadership careers in nursing, education, administration, research, and/or policy. The program will develop a best practices model to support a three-year option for nursing PhD programs.*

\$20 million + additional \$ sponsorships from HS/foundations

Over 200 Scholars receive \$75k from program and \$50K from school



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## Betty Irene Moore Accelerated Doctoral Program

*Goal: To produce new faculty for Bay Area nursing schools to help alleviate California's nursing shortage.*

\$9.5 Million: 69 Scholars, Each Received \$60K



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## Hillman Scholars in Nursing Innovation

*Goal: To produce the next generation of nurse researchers who will lead the realignment of health care to become more effective, patient-centered, accessible, equitable, and affordable.*

\$8 Million: 92 Scholars, Each Receives \$75-80K



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## RWJF New Jersey Nursing Initiative

*Goal: To transform nursing education in New Jersey by supporting nurses who pursued advanced degrees in order to become nursing faculty.*

\$30 Million: 21 Scholars, Each Received \$50K  
+ \$30k each in faculty incentives

NEW JERSEY  
NURSING INITIATIVE

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## Federal Support for Doctoral Students

- F31s
- T32s—pre-doc funding



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## Jonas Scholars

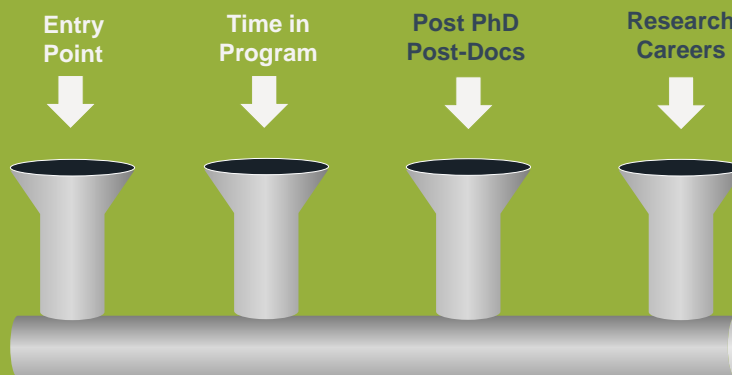
*Goal: To improve healthcare through targeted investments in high-potential doctoral nursing students pursuing PhD, EdD or DNP degrees, whose research and clinical foci specifically address the nation's most pressing healthcare needs.*

\$25 Million: 682 PhD Scholars, Each Received \$10K from program & \$10K from school



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## Post PhD: Post-Doc and Research Career Support



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## Post PhD: Post-Doc and Research Career Support

- F32
- T32 Post-Doc slots
- NCI post-docs
- K awards
- R awards

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## RWJF Nurse Faculty Scholars

*Goal: To develop the next generation of national leaders in academic nursing through career development awards for outstanding junior nursing faculty.*

\$31.5 Million: 90 Scholars, Each Received \$350K

Robert Wood Johnson Foundation  
**Nurse Faculty Scholars**

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## Macy Faculty Scholars

*Goal: To identify and nurture the careers of promising educational innovators in medicine and nursing.*

\$10 Million: 41 Faculty Scholars,  
Each Received \$280K

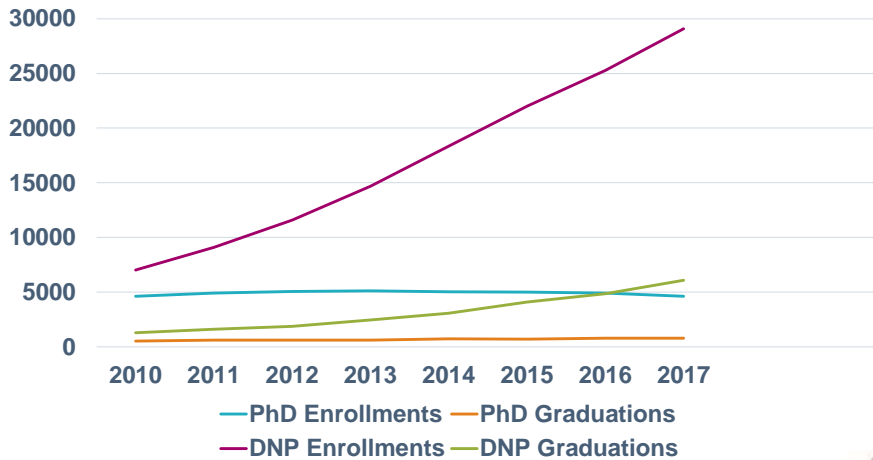


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**What has been accomplished with  
this big investment in PhD  
education from multiple sources?**

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## PhD vs. DNP Enrollment and Graduations 2010-2017



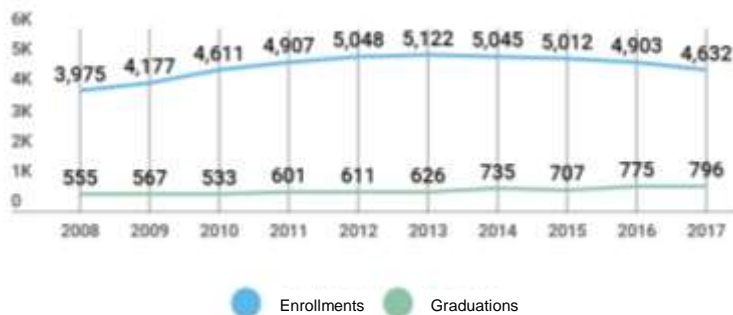
© AACN



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## PhD Landscape

### Enrollments & Graduations

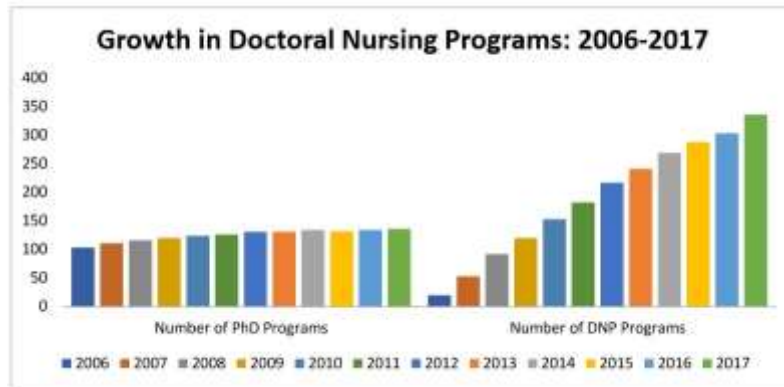


© AACN PhD in Nursing  
Landscape (2008-2017)



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## Doctoral Program Growth

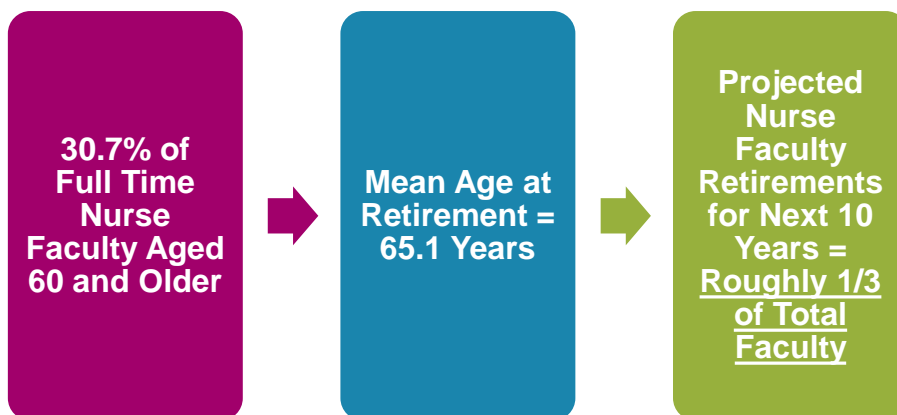


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## Nurse Faculty Shortage



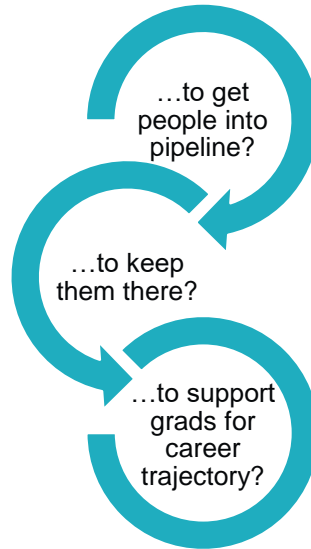
Fang D, Kesten K, Retirements and succession of nursing faculty in 2016-2025. Nurs Outlook. 2017 Sep - Oct;65(5):633-642.



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## What Do We Know and How Do We Best Capitalize on What We Do Know?

What Works...



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## What We Know: Entering the PhD Pipeline

- Exposure to research as an undergraduate
- Encouragement from mentors during undergrad or masters programs
- Schools providing networking opportunities for students to connect with possible doctoral mentors
- Infrastructure to help undergrad nurses plan for GRE testing, reviewing and funding applications, and providing letters of recommendation
- For those with DNPs, desire to gain research skills and theoretical approaches



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## What We Know: Entering the PhD Pipeline

“It was available and I did not have a perceived need for the MSN degree.”

“I wanted to learn how to think like a nurse scientist, and to further my understanding of the business and economics of healthcare. ”

“To open up options in research, policy, leadership.”

“...because I love learning and teaching. I felt a PhD would allow my to continue to pursue those passions.”



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## What We Do Know: Factors That May Discourage Nurses from Entering PhD Pipeline

### Financial Insecurity

- Need to provide for families
- Health system employers more willing to pay for DNP

### Traditional Curricula

- Lack of innovation, data science, precision science, options for public health, etc in nursing

### Not Excited by Research

- See their careers in the practice arena



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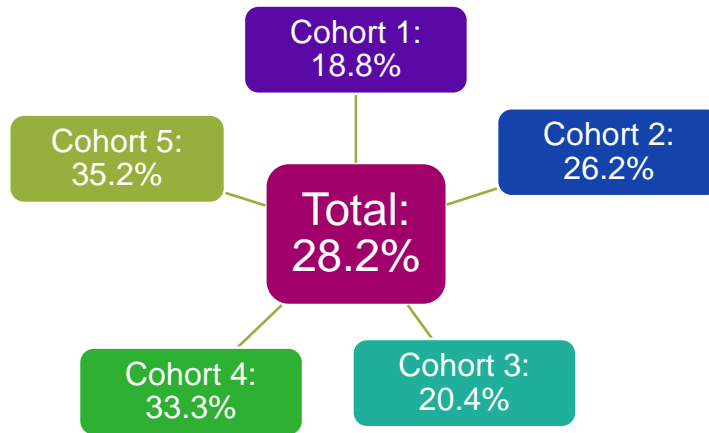
## What We Do Know: When Students Enter the Pipeline....

**BSN-PhD applicants are successful!**



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## FNS Scholars: BSN to PhD



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## Myths about the BSN to PhD Experience that may keep Post-BSN applicants Out of the Pipeline:

### Limitations on Topic Options

Might not have enough experience to pursue a variety of topics

### Must Use Secondary Data Analysis

Either not prepared to collect primary data or use mixed methods... or don't have time

### Few Options for Faculty Roles

Without MSN, you won't be hired for faculty role

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## Realities: BSN to PhD Experience

### No Limitations on Topic Options

Large variety of topic areas

### May Use Secondary Data Analysis

We see a mix of approaches: secondary data analysis, mixed methods, primary data collection, basic science research

### Options for Faculty Roles

Some schools may require MSN, some do not... but MSN may be completed after the fact on a shorter timeline



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## What We Do Know: Trajectory Through the Pipeline

Accelerated programs work for many students!



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## Problems with Longer Completion Times

### Shorter Career Trajectories

- Less time to capitalize on new-found knowledge and skills

### Student Burnout

- Loss of interest in original research topics

### Relevance and Obsolescence

- Studies that depend on quickly changing software and hardware can't take years to complete

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## Why Accelerated Programs Keep People in Pipeline

"Who wants to be an indentured PhD student servant for years on end?"

"I liked the challenge. Why achieve something for 5 years when it can be done for 3 years? "

"I chose the accelerated path in part due to the RWJF requirements, but also because the technology that I am studying is going so fast, I felt I needed to go fast too!"

"I've got a life to live and research to do! I felt that, right now, I had the time, energy, and intensity to commit to an accelerated program. I was convinced when the school that I selected demonstrated its commitment to providing the mentorship and support for this accelerated timeline. "

"I was at the right place in my life for it. I also completed an accelerated BSN and knew I had the drive to be successful. "

"I did an accelerated BSN (it was 11 months). I thrived on the pressure. Plus, I really want to start teaching... seemed very practical to have 3 years of guaranteed funding."

"It would be once in a lifetime and the timeline would allow me to gain clinical experience after if that's what I wanted."

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# AACN Expected Outcomes of Nursing PhD Programs

AACN, The Research-Focused Doctoral Program in Nursing: Pathways to Excellence

Role	Expected Outcomes	FNS Program Sessions
Develop the Science	Include: <ul style="list-style-type: none"> <li>• Conduct original research</li> <li>• Generate new ideas</li> <li>• Utilize ethics</li> <li>• Assume leadership roles</li> <li>• Communicate findings to lay audience</li> </ul>	<ul style="list-style-type: none"> <li>• Writing Workshop</li> <li>• Responsible Conduct of Research</li> <li>• Funding for Science</li> <li>• Policy Intensive</li> <li>• Innovation Intensive</li> <li>• Entering the Conversation (mass media)</li> </ul>
Steward the Discipline	Include: <ul style="list-style-type: none"> <li>• Integrate scholarship components (research, teaching, mentoring service to profession)</li> <li>• Communicate in peer-reviewed presentations and publications</li> <li>• Lead in advancing profession</li> </ul>	<ul style="list-style-type: none"> <li>• Tips on Publishing</li> <li>• Conducting Culturally Competent Research</li> <li>• Ask a Dean</li> <li>• Ask a Community-Based Researcher</li> </ul>
Educate Next Generation	Include: <ul style="list-style-type: none"> <li>• Conduct team science (interdisciplinary teams)</li> <li>• Provide mentorship</li> </ul>	<ul style="list-style-type: none"> <li>• Working with People in Positions of Power</li> <li>• How to Mentor</li> <li>• How to Manage Staff</li> <li>• How to Look for Teaching Positions</li> <li>• Planning for an Academic Career</li> </ul>

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## What We Do Know: What is Possible After Completion When Exiting the Pipeline?



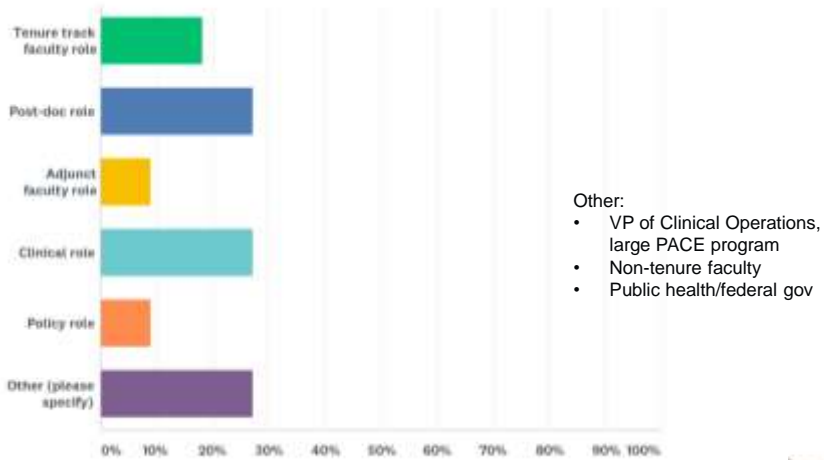
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## FNS Cohort 1: Current Plans

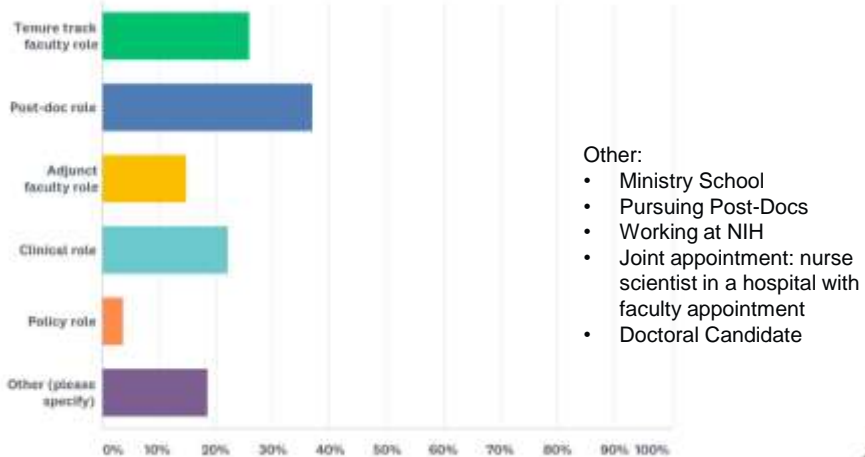
n = 11/16



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## FNS Cohort 2: Current Plans

n = 27/41



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## What We Might Know Something About....

**If we think about the future of health and health care, how should PhD education programs be structured to allow for innovation, experimentation, and excitement about the research process?**

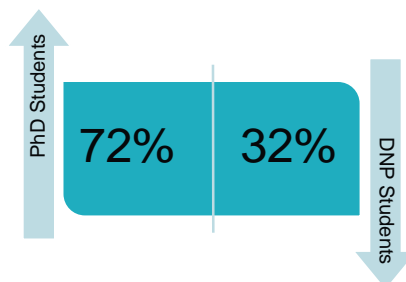
Henly, S. et.al. Emerging areas of science: Recommendations for Nursing Science Education from the Council for the Advancement of Nursing Science Idea Festival, July/August 2015 Volume 63, Issue 4, Pages 398-407.

Villarruel, A. & Fairman, J. The Council for the Advancement of Nursing Science, Idea Festival Advisory Committee: Good ideas that need to go further. July/August 2015 Volume 63, Issue 4, 436-438.

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## What We Might Know: DNP and PhD Students Interest in Academic Careers

- Those seeking academic careers more likely to be influenced by facilitators to faculty careers.
- They were less likely to be dissuaded by barriers to academic careers.



Fang D, Bednash G, Arietti R, Identifying Barriers and Facilitators to Nurse Faculty Careers for PhD Nursing Students, *Journal of Professional Nursing* (2016), 32(3), 193-201.

Fang D, Bednash G, Identifying Barriers and Facilitators to Nurse Faculty Careers for DNP Students, *Journal of Professional Nursing* (2017), 33(1), 56-67.

Thomas Dreifuerst, K. et al., "Exploring the Pursuit of Doctoral Education by Nurses Seeking or Intending to Stay in Faculty Roles," *Journal of Professional Nursing* 32, no. 3 (May 2016): 202-12.

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## Leveraging DNP Resources: PhD-DNP Collaborations... in Academia

### Shared Coursework

- EBP
- Policy
- Stats

### Research Collaborations

- Research Interest Groups
- Working on research teams – sometimes for DNP final project and PhD dissertation
- Shared Publications

### Mentorship

- PhD-prepared faculty mentoring DNP students



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## PhDs and DNPs... in Clinical Settings

### Role of PhD Prepared Nurse

- Lead and Core Research Team Members
- Nurse Scientist Roles
- Leads Clinical Investigation Council

### Role of DNP Prepared Nurse

- Programmatic Leadership Roles
- Clinical Nurse Specialists
- Nurse Practitioners
- Educators
- Quality Coordinators



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## What ABOUT Both?

“This pursuit (PhD) is focused on epistemology, theory development, inquiry, methods... the intellectual architecture...”

“My work experience (clinical informatics) made me see the need to better understand and facilitate dissemination and implementation of new knowledge and discovery to create better results in health care.”

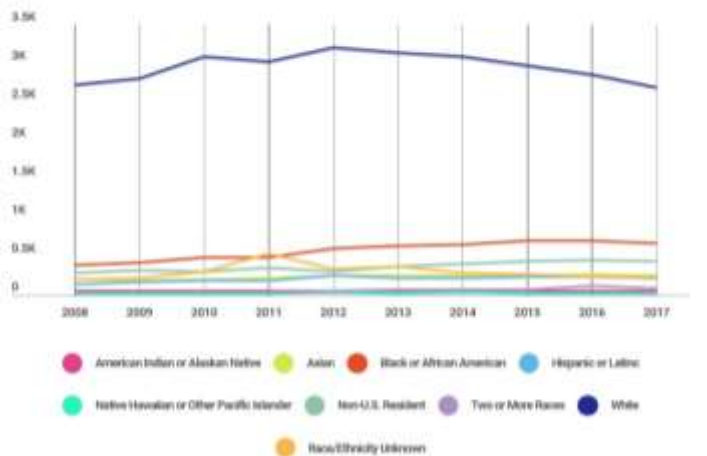


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## What We Don't Know: Influence of Programs on Diversity in the Pipeline

### Trends in Student Diversity: Race and Ethnicity

The number of PhD students from underrepresented groups\* in nursing has increased from 1,250 in 2008 to 1,933 in 2017 (a 55% increase). In contrast, the number of white PhD students has decreased by 15%, from 2,719 in 2008 to 2,379 in 2017.



© AACN PhD in Nursing Landscape (2008-2017)

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## What Do We Not Know About Various Points in the Pipeline?

**How many nurses with research doctorates do we need?**

**Do research-intensive schools have the capacity to accommodate the current number of research doctorate nurses in research and faculty tracks?**

**Do we have enough Post-doc positions to provide the next level of preparation for those who complete accelerated PhDs?**

**Do we have the right level of funding from public and private sources to support research careers?**

**What positions do PhD-prepared nurses take on after completion?**



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## What Do We Not Know About Various Points in the Pipeline?

**What is the role and value of investment in PhD education in building a robust nurse researcher pool?**

**If the funding did not move the needle in a significant way, did it at least keep the numbers of PhD applicants fairly steady or from steeply dropping?**

**Did the programmatic support provided to students increase retention? Did the programmatic support provide the foundation for greater success after completion?**

**Did the programs have an impact on the diversity of the PHD pool?**



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## How Do We Decide Where to Go?



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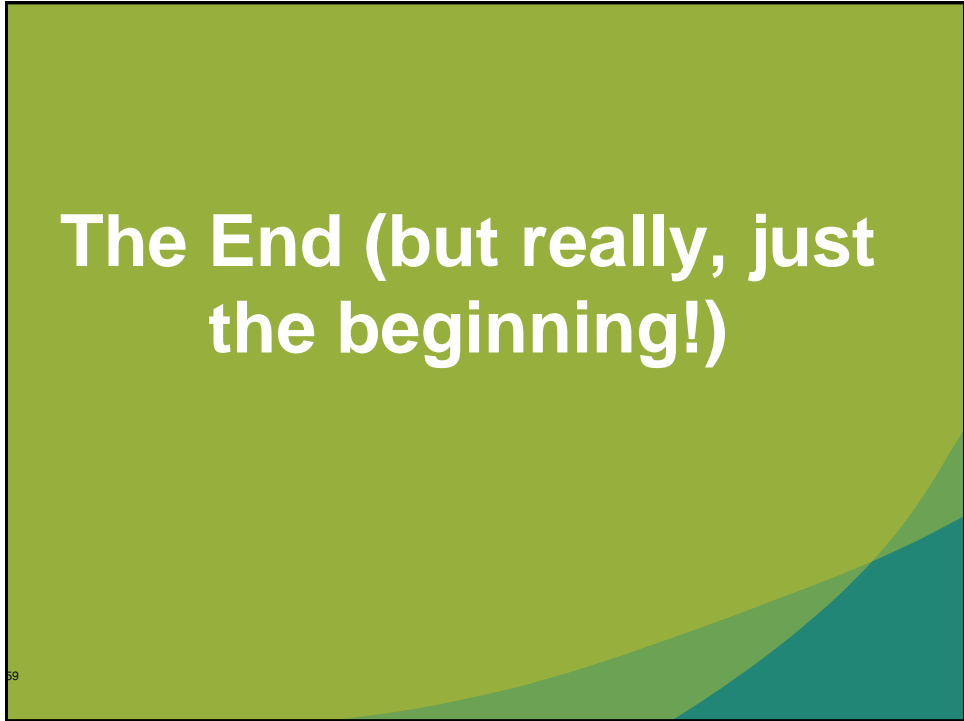
## Emerging Solutions for Faculty in Research Programs

### The PhD Challenge: Join the Call to Action Today

- Session 1 – 2:30pm – 3:45pm
- Session 2 – 4:15pm – 5:30pm



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