A Standardized Nurse Practitioner Cardiovascular Residency Program Made into a Reality

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Outline

- Background
- NP's preparedness to practice
- · NP residency programs
- Development of a CV NP residency program
- · Funding a CV NP residency program
- Implementation of CV NP residency program
- · Evaluation of CV NP residency program

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Background

- Leading cause of death in the US is cardiovascular disease (CVD)
- · Prevalence of CVD
 - Increase by 1% -2% per year
 - American Heart Association (AHA) estimates 20 million more people with CVD by 2020.
 - Aging population
 - · Will increase 3.3% annually
 - Increase risk of CVD

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AHA (2010); CDC. (2011); Rogers et al. (2009).

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Cardiology Workforce Crisis

Cardiovascular workforce needs to double in number to fill the needs of the projected population with cardiovascular disease by 2025 = increase of 16,000 practitioners

Table 1. Current Shortage for Cardiologists by Subspecialty,

Cardiology Subspecialty	Current Shortage
General cardiology	1,685
Cardiac electrophysiology	660
nterventional (coronary + peripheral)	1,941
Pediatric	127

Reprinted from the Cardiovascular Workforce Assessment (5

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Rogers et al. (2009). ACC 2009 survey results and recommendations: Addressing the cardiology workforce crisis *JACC*, 54(13), p.1201.

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ACC Recommendations

- · More effective and efficient use of APRNs
- Support expansion of general and cardiology-specific training programs for APRNs
- Educate the cardiology community about team-based care

Rogers et al. (2009). ACC 2009 survey results and recommendations: Addressing the cardiology workforce crisis *JACC*, 54(13).

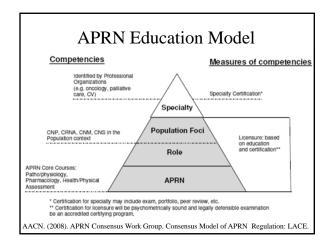
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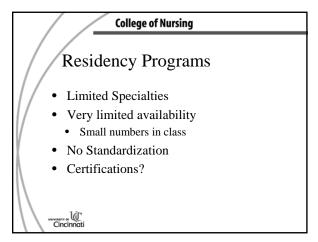
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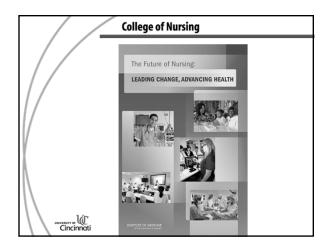
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APRN Preparedness

- Professional development and mentorship needs of the novice APRN not established (Doerdsen, K., 2010)
- · APRN specialization is acquired through:
 - Informal orientation
 - · Individualized mentoring
 - Self-teaching
- NP graduate educational programs do not provide specialized care training (Stanley, J., 2009)







IOM Recommendations 1. Remove scope-of-practice barriers 2. Expand opportunities for nurses to lead & diffuse collaborative improvement efforts 3. Implement nurse residency programs 4. I the proportion of nurses with a BS degree to 80% by 2020 5. Double the number of nurses with a doctorate by 2020 6. Ensure that nurses engage in lifelong learning 7. Prepare & enable nurses to lead change to advance health care 8. Build an infrastructure for the collection & analysis of interprofessional health care workforce data

Research Priorities 1. Transforming Nursing Practice 1. Scope of Practice 2. Residencies 3. Teamwork 4. Value 2. Transforming Nursing Education 3. Transforming Nursing Leadership



Research Question:

What are the components of an effective advanced practice registered nurse cardiovascular residency program?

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Aims

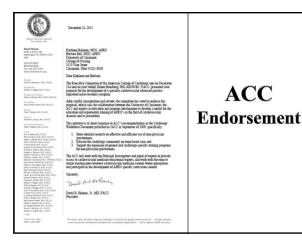
Aim 1: Develop an APRN CV residency program model and credentialing guidelines by consensus of an expert multidisciplinary panel.

Aim 2: Assess the perceived competence and confidence of APRN CV residents longitudinally throughout the residency in comparison to APRNs who have not participated in a specialized residency program.

Aim 3: Explore the impact of the APRN CV residency on public perception of APRN's competency.

Aim 4: Analyze the cost versus benefit of implementing the APRN CV residency program.

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Attributing Causation to Intervention

- Residents are expected to have greater competence & confidence than non-residents.
- Residents are expected to have increasing levels of confidence & competence during course of residency.
- Both access to and cost of CV care due to APRNs attaining a Specialize CV care education are expected to improve.
- Public, patient, practitioner & administrator perception about care & competency are expected to heighten after APRNs complete residency program

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Research Methods

- Theoretical models:
 - Benner's "From Novice to Expert Theory"
 - Kolb's "Experiential Learning Model"
- Analysis of Program Model
 - Case Study
 - Intraclass correlation coefficients
 - Models of (dis)agreement based upon latent class analytic methods

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Research Methods (Continued)

- Analysis of Resident competence and confidence
- · Longitudinal study
- Comparisons with Exact tests
- Regression models
- Analysis of public perceptions of APRN's capabilities
 - Survey
- Opened questions for qualitative data collection

Research Methods (Continued)

- Cost vs Benefit analysis
 - · Risk analysis
 - Qualitative methods to obtain describing variables
- Evaluations of the Program and Process
 - · Monitor progression
 - Examine for need of modification

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Team

- Co-PIs:
 - Kathleen Ballman, RN, MSN, ACNP-BC, CEN
 - Barbara Bell, RN, MSN, ACNP-BC
- Nursing Education and Research Faculty Advisor:
- Theresa Beery, RN, PhD, ACNP-BC, CNE
- Medical Faculty Advisor:
- Neal Weintraub, MD, FACC
- Clinical Faculty
- Alexandru Costea, MD
- ACC Liaison and Advisor:
- Eileen Handberg, RN, PhD, APRN-BC, FAHA, FACC
- Program Development Expert

Statistician

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Summary

- Evidence for the need of an APRN CV residency
- Project is inline with the IOM Research Priorities and Recommendations
- This APRN CV residency program will be endorsed by the ACC and serve a national guideline
- Certification will be developed
- IRB approval will be sought as appropriate for the case study and questionnaires
- Dissemination of the analysis will occur during and after project

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