



TEXAS TECH UNIVERSITY
HEALTH SCIENCES CENTER
Anita Thigpen Perry School of Nursing



HEALTH SCIENCE CENTER
TEXAS A&M UNIVERSITY

Enhanced Care Coordination Logic Model Construction to Reduce Nursing Home Resident Hospitalization and Improve Quality of Life

Lisa Campbell, DNP, RN, APHN-BC

Elizabeth A. Thomas, PhD, MPH, RNC, APHN-BC

APHA Presenter Disclosures Statement

Your presenters, Dr. Lisa Campbell and Dr. Elizabeth Thomas, have no financial relationships with commercial interests relevant to this presentation to disclose.



HEALTH SCIENCE CENTER
TEXAS A&M UNIVERSITY



Presentation Objectives

1. Describe the three essential elements of the logic model in elder care program coordination in nursing homes.
2. Identify at least two components necessary to implement an enhanced care coordination program in nursing homes.
3. Discuss the cost-benefit of implementing an enhanced care coordination program in nursing homes.



New Objectives (Emerging Thinking)

4. Discuss how a Logic Model case study exercise presenting an unresolved, real-time problem enhances situated cognition in population health practice with nursing home communities.
5. Explore practice problem solving using conceptual frameworks that address the unique challenges of the Problem, People, Place, Process and Product in nursing home communities.



Crisis of Costs: Nursing Home (NH) Care Context

Costs of Hospitalization

- **Residents:** Increased risk of nosocomial infection, iatrogenic injury, cognitive decline, emotional distress, diminished quality of life
- **Families:** Emotional distress, financial burden
- **Health Care Facilities:** Readmission penalties, increased risk for sentinel events and sanctions, credentialing warnings
- **Society:** Ineffective/inappropriate use of community & population health resources.



Re –Thinking the Problem

- What is needed to address the problem?
- Who are the people affected?
- How are the affected impacted?
- What are factors contributing to the situation?
- What could be new ways to think about the problem?
- How might solutions used in other complex health care situations be considered for application to this problem?



Working Through Costs of Care - Reducing NH Resident Hospitalizations

- Doctor of Nursing Practice (DNP) students in an Epidemiology & Population Health course were challenged to work through a real life population health practice problem presented by faculty member working with a NH organization.
- DNP students were provided the structure of a Centers for Medicare & Medicaid Services grant to formulate a proposed solution to reduce nursing home resident hospitalizations.
- Goal: Reduce costs, enhance care coordination and improve residents quality of life.



Work Group – DNP Students in Executive Leadership & Advanced Practice Concentrations

- DNP students reflected a wide spectrum of nursing and health care administrative experience.
- Health System Chief Nursing Officers (CNOs), Vice Presidents (VPs) of Nursing, Nurse Practitioners involved in direct care of patients (urban & rural), senior Public Health Commissioned Corps officers, health system case management executives.
- DNP students (Executive Leadership & Advance Practice tracks) used an informal Focus Group process and approach to brainstorm the problem and work through the proposal process.



Logic Models: Visualizing the Problem, People, Place, Process and Product

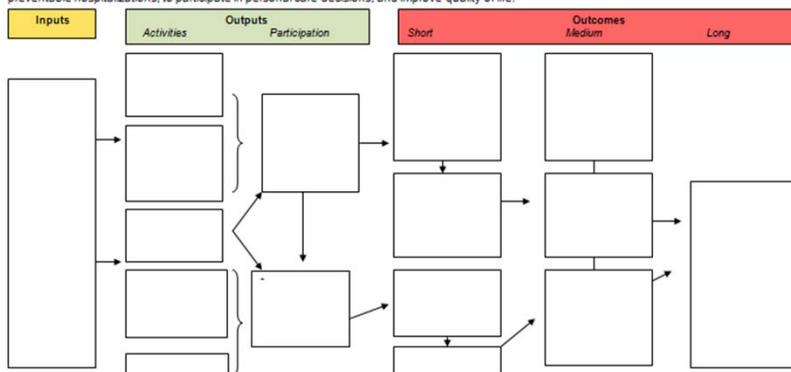
- Faculty introduced the value of constructing a Logic Model (LM) to create a visual representation to explain a program or a proposed solution.
- Discussed the use of LMs in well known evidence-based practice population health programs (e. g Nurse Family Partnership; http://www.nursefamilypartnership.org/assets/PDF/Communities/Implementation_Logic_Model)
- Faculty provided students with a LM template to serve as the framework for the construction of the solution (Taylor-Powell, Steele & Douglah, 1996; <http://www.uwex.edu/ces/pdande/evaluation/evaldocs.html>)
- LM template included Situation and Assumptions statements reflecting specifics of the grant proposal.



Logic Model Framework

Program: Enhanced Care Coordination

Situation: From 2005-2010 Texas received over \$44 Billion in charges for potentially preventable hospitalizations. Currently there are 1,149 Nursing Homes in Texas and an aging population according to the 2010 Census of over 2.6 million. Common ambulatory care sensitive (ACS) medical conditions are bacterial pneumonia, UTI, COPD/Asthma, CHF, & dehydration. Several studies have analyzed ACS and projected 37-45% of these admissions could have been prevented. Residents in nursing homes deserve coordination of care to avoid preventable hospitalizations, to participate in personal care decisions, and improve quality of life.



Assumptions although it is ideal for seniors to "age in place" nursing homes are often needed for temporary or long term residential placement. Nursing homes have a mission of respecting residents preferences while maintain optimum function and quality of life. Therefore, partnering with other stakeholders to prevent avoidable hospitalizations is logical.

External Factors

Template use with permission:(Taylor-Powell, Steele, & Douglah, 1996)



Faculty Facilitated Logic Model

Essential elements: Inputs, Outputs (Activities & Participation), Outcomes

Processes indicated by arrows

Assumptions Box: statement initiated group dialogue; aided in identifying External Factors expected to be constraining forces that would limit the design



Elucidating Emerging Goals

- DNP students, working in two discussion sessions, led to the emergence and development of a common agreement related to the goals that needed to be considered as givens of the proposed solution:
- Need for some bridging structure & process to reduce communication gaps and enhance care coordination between hospital staff, NH staff, NH residents, NH residents' families and community support services.
- A program combining communication/informatics technologies, NH staff education and the development of a new type of NH staff member, a community health worker.



CHWs in NH Care Coordination: New Care Context for a CHW

- DNP students explored using CHWs beyond the typical community care role reflected in most of public and population health literature.
- Beyond more traditional CHWs roles: health promoters (promotoras), health educators, patient navigators (providing linkage to social support systems), direct delivery of basic care (direct observable therapy of antibiotics and HIV meds) (Swider, 2002; Islam, Wakai, Ishikawa, Chowdhury, & Vaughan, 2002; Kash, May, & Tai-Seale, 2007)
- NH residents, NH residents' families, NH nursing staff and certified nurses' aides (CNAs) can be conceptualized as a community needing cultural brokers who can bridge the communication gap between the hospital & NH community.



Value of CHWs in Nurse Led Enhanced NH Care Coordination

- CHWs may better reflect the **level of homophily** needed to maximize the **Diffusion of Innovation (DOI)** (Rogers, 2003) across the social systems of the NH, hospital and larger community:
- “Homophily, is the degree to which pairs of individuals who interact are alike. . . To encourage lower-status and least innovative clients [targets of innovation] to change, one answer is to select change agents who are as much like their clients as possible” (p. 381, 383).
- NH-CHWs can more easily speak to and reflect the perspective of the NH residents and NH families instead of mirroring perspectives of licensed professional staff.



Benefits of NH CHWs

- Benefits of NH-CHWs on Enhanced Care Coordination Team:
- NH-CHWs can reflect and reinforce the perspective that the NH resident is “a member of our NH community” not “a patient in our facility.”
- NH-CHWs can share with providers and staff how to balance care decisions with the specific and highly valued aspects of the NH resident’s care that are quality of life priorities for the NH resident and NH resident’s family.
- NH-CHW can provide a familiar face and voice, be a cognition stabilizing bridge, to support NH resident when transferred to the hospital, during in-patient stay and when discharged from the hospital.



CHWs Targeting NHs as Care Communities in Elder Population

- CHWs, working with nurse team leaders, would reflect the NH community needs, be educated to build care coordination and create more seamless transitions from hospital to NH, reflecting the challenging health needs of the NH resident community
- NH-CHWs could be recruited from NH family members, NH ombudsmen, ranks of senior CNAs and certified CHWs.
- Or alternately recruited from graduates of growing number of baccalaureate level public health programs (e. g. Texas A&M University School of Rural Public Health Bachelor of Science of Public Health, <http://srph.tamhsc.edu/degrees/bsph-overview.html>)



Logic Model Construction: Mapping the Way to the Goals

DNP students devised a three-part proposal using

- Communication/informatics technology (24/7 Charge Nurse Hotline)
- Nursing & Certified Nursing Assistants Staff Education (targeting “Why and how we need to keep our residents out of the hospital”)
- Nurse-CHWs NH Care Coordination Teams with CHWs trained in NH care needs.
- Explored the unique qualifications, backgrounds and skill sets of CHWs needed for the Nurse-CHW NH Care Coordination Teams.



Merging Situated Cognition with Diffusion of Innovation and Positive Deviance Approach

Logic Model exercise presented an unresolved, real-time case; valuable to DNP population health education because it:

- Builds Situated Cognition and “focus on actions in particular situations” (p.82); identified as an essential shift needed to radically transform nursing education by Benner, Stephen, Leonard and Day (2010).
- Enhances the identification, recognition, championing, mentorship and support of the NH community members in the varying Adopters of Innovation roles: Innovators, Early Adopters, Early Majority, the Late Majority and Laggards, looking at the socioeconomic status, personality values and communication behavior of each type of role (Rogers, 2003).
- Allows for a Positive Deviance (PD) approach, “strength-based, problem-solving approach for behavior and social change. The approach enables the community to discover existing solutions to complex problems within the community” (Positive Deviance Initiative, 2013, para. 2).



Positive Deviance (PD) Approach

Concept of PD is based on the premise that the best solutions to complex problems are found by skilled problem solvers in the community

“that in every community there are certain individuals or groups (the positive deviants), whose uncommon but successful behaviors or strategies enable them to find better solutions to a problem than their peers. These individuals or groups have access to exactly the same resources and face the same challenges and obstacles as their peers.” (Positive Deviance Initiative, 2010, para 1.)

There is increasing acceptance of PD approach to solve wide range of complex problems in healthcare, public health and management. (Bradley, Curry, Ramanadhan, Rowe, Nembhard & Krumholtz, 2009; CDC – MMWR, 2012; RWJF, 2012).



PD as A Goal to Innovative Care

Gary (2013) explored the concept of PD initially focusing on the intentional act of breaking rules to serve the greater good yet identified the need for PD in health care. She suggested:

We should consider PD through the lens of complexity science; from the premise of organizations as complex adaptive systems, interconnected and inherently unpredictable, requiring flexibility to solve emerging problems (p.32)

“PD must become a goal . . . Patient care and outcomes will improve when nurses have the courage to make intentional, honorable decisions to provide innovative, creative and adaptive care in situations that demand it” (p. 34).



Logic Model to DOI to PD

Our DNP students started with the constraints of the given assumptions, limitations and boxes of a linear visual schematic, a Logic Model.

In encouraging this group of senior nurse providers and administrators to think expansively, they embraced the Innovation process, allowed discussion of the Adopters of Innovation Roles and ‘outside-the-box’ PD thinking to emerge.

Reflecting DOI concepts (Adopter Roles and Homophily) and PD concept of Positive Deviants (expert problem solvers in the community) they developed a proposal/program concept of a Nurse-Led Care Coordination team with a new CHW role, a NH-CHW, supported by staff education and informatics (24/7 Charge Nurse Hotline).



Acknowledgements

We acknowledge the dynamic, thoughtful and reflective dialogue, commitment to scholarly discourse and energetic engagement in the group process of the TTUHSC DNP students, Class of 2012, whose coursework contributions are the basis of this presentation.

It was a privilege and an honor to have worked with such wonderful professional colleagues who consistently reflected what it means to be transformation science nursing scholars.

Our special thanks also to Dr. Barbara Cherry, Department Chair of Leadership Studies, for her unwavering encouragement and thoughtful mentorship in the development of the DNP Population Health course.



Questions:

Elizabeth A. Thomas, PhD, MPH, RNC, APHN-BC
 Associate Professor, College of Nursing,
 Texas A & M University Health Science Center
 Bryan/College Station, Texas
thomas@tamhsc.edu

Lisa Campbell, DNP, RN, APHN-BC
 Associate Professor, School of Nursing
 Texas Tech University Health Sciences Center
 Lubbock, Texas
lisa.a.campbell@ttuhsc.edu



References

- Benner, P., Sutphen, M., Leonard, V. & Day, L. (2010). *Educating nurses: A call for radical transformation*. San Francisco: Jossey-Bass, A Wiley Imprint.
- Bradley, E. H., Curry, L. A., Ramanadhan, S., Rowe, L., Nembhard, I. M., & Krumholz, H. M. (2009). Research in action: using positive deviance to improve quality of health care. *Implementation Science*, 4: 25. doi:10.1186/1748-5908-4-25. Retrieved from <http://www.implementationscience.com/content/4/1/25>
- Centers for Disease Control and Prevention (March 16, 2012). Reducing Bloodstream Infections in an outpatient Hemodialysis Center - New Jersey, 2008–2011. *Morbidity and Mortality Weekly Report*, 61(10), 169-173. Retrieved from <http://www.cdc.gov/mmwr/pdf/wk/mm6110.pdf>
- Gary, J. C. (2013). Exploring the concept and use of Positive Deviance in nursing. *American Journal of Nursing*, 113(8), 26-34. doi: 10.1097/01.NAJ.0000432960.95762.5f
- Islam, M. A., Wakai, S., Ishikawa, N., Chowdhury, A.M.R., & Vaughan, J. P. (2002). Cost-effectiveness of community health workers in tuberculosis control in Bangladesh. *Bulletin of World Health Organization*, 80(6). 445-450.
- Kash, B. A., May, M. L. & Tai-Seale, M. (2007). Community health worker training and certification programs in the United States: Findings from a national survey. *Health Policy*, 80, 32-42.



References cont.

Lewin, S. A., Dick, J., Pond, J., Zwarenstein, M., Aja, G., van Wyk, B., Bosch-Capblanch, X., & Patrick, M. (2005). Lay health workers in primary and community health. *Cochrane Database of Systematic Reviews*. 10.1002/14651858.CD004015.pub2.

Nursing Family Partnership (n.d.). Implementation Logic model. Retrieved from http://www.nursefamilypartnership.org/assets/PDF/Communities/Implementation_Logic_Model

Ouslander, J. G. & Berenson, R. A. (2013). Reducing unnecessary hospitalizations of nursing home residents. *New England Journal of Medicine*, 365 (13), 1165-1166.

Positive Deviance Initiative. (2010). About PD: What is the Positive Deviance Approach? Retrieved from http://www.positivedeviance.org/about_pd/index.html

Robert Wood Johnson Foundation (March 23, 2012). Pioneering Ideas Blog: Positive Deviance research continues to impact health care system. Retrieved from <http://www.rwjf.org/en/blogs/pioneering-ideas/2012/03/positive-deviance-research-continues-to-impact-health-care-system.html>

Rogers, E. M. (2003). *Diffusion of Innovations (5th ed)*. New York: Free Press, Simon & Schuster.

Swider, S. M. (2002). Outcome effectiveness of community health workers: An integrative literature review. *Public Health Nursing*, 19(1), 11-20.

Taylor-Powell, E., Steele, S., & Douglass, M. (1996). Planning a program evaluation. Program Development & Evaluation University of Wisconsin Cooperative Extension. Retrieved from <http://www.uwex.edu/ces/pdande/evaluation/evaldocs.html>

Texas A&M University School of Rural Public Health (n.d.). BSPH Overview. Retrieved from <http://srph.tamhsc.edu/degrees/bsph-overview.html>

