An Innovative EMS Health Care Delivery System
A Program Development Using Pender’s Health Promotion Model

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Objectives

1. Define the problem
2. Explain the evidence of the problem
3. Describe the significance of the problem
4. Define the purpose of the project
5. Recall frameworks for the project
6. Explain Pender’s HPM
7. Recognize the adaptation of Pender’s HPM
8. Summarize the review of literature
Importance of the Project

❖ Health Care Reform
  ▪ Leaders
  ▪ Prospective PCP shortage
  ▪ Health care cost
  ▪ EMS system identified
  ▪ Theoretical Program development
The Problem

An innovative program with a lack of structure prohibits implementation of a paramedic health care delivery system.
Evidence of the Problem

❖ Inappropriate use of the EMS system
❖ “the wrong care in the wrong place at the wrong time”
❖ Innovative programs

NEHI, 2010
Evidence of the Problem

Lack of primary care and the misuse of emergency rooms for nonemergency visits

NEHI, 2010
The Purpose of the Project

Development of a EBG to be used in an innovative health care delivery program for patients with CHF
Introduction

- HF-EBG program contents
  - A 2-day paramedic lesson plan
  - 2 EBG notebooks – paramedic and patient version
- HF-EBG delivered by paramedics
  - 10-week structured program
Frameworks Used

- PDSA Model & Pender’s HPM
  - Review of Literature
    - Framework
    - Applying the Framework
  - Adaptation of the Framework
PDSA: Review of Literature

Ongoing Process

1950 • Stemmed from the Shewhart cycle
1951 • Deming wheel
1986 • Reintroduced the Shewhart Cycle
1993 • PDSA cycle

Shero, 1993; Edwards Deming Institute, 2015; & Walton, 1986
PDSA: Applying the Framework

Plan
- detailed proposal for a “change or test aimed at improvement”

Do
- “carry out the change or test”

Study
- “examine the results”

Act
- “adopt the change, abandon it, or run through the cycle again”

Moen & Norman, 2010
PDSA: Review of Literature

Adaptation of the Framework

Moen & Norman, 2010

- Evaluation of the EMS program
- CHF – EBG
- Minimum competencies for paramedics by appointed leaders

- Collaborate of appointed leaders and stakeholders
- Conducting a ROL
- Defining job descriptions
- Using Pender’s HPM to develop a CHF EBG
- Recommending minimum competencies for paramedics

- A tailored evidenced-based guideline (EBG)
- With minimum competencies

- Implementation of the program’s progression based on the findings from the “study” step
- Revising specific aspects of the program, if needed,
- Plan to abort or continue with the program’s changes

Plan  
Do

Act  
Study

Moen & Norman, 2010
Pender’s HPM: Review of Literature

- Engage in behaviors that lead to HP
- Published in 1982; revised in 1996
- Consist of 3 constructs, 11 major concepts
  - Construct #1 two major concepts
  - Construct #2 six major concepts
  - Construct #3 three major concepts
Pender’s HPM: Applying the Framework

Constructs #1
Individual Characteristics and Experiences

Prior related behavior

“frequency of the same or similar behavior in the past”

Personal factors

“predictive of a given behavior and shaped by the nature of the target behavior being considered”

Sakraida, 2002
Pender’s HPM: Applying the Framework

Construct #2 Behavior-specific Cognitions and Affect

- **Perceived benefits of action**
  “anticipated positive outcomes that will occur from health behavior”

- **Perceived barriers of action**
  “anticipated, imagined, or real blocks and personal costs of undertaking a given behavior”

- **Perceived self-efficacy**
  “judgment of personal capability to organize and execute a health-promoting behavior”

- **Activity-related effect**
  “subjective positive or negative feelings that occur before, during, and following behavior based on the stimulus properties of the behavior itself”

- **Interpersonal influences**
  “cognitions concerning behaviors, beliefs, or attitudes of others”

- **Situational influences**
  “personal perceptions and cognitions of any given situation or context that can facilitate or impede behavior”

Sakraida, 2002
Pender’s HPM: Applying the Framework

Construct #3 Behavior Outcome

Commitment to a plan of action

“the concept of intention and identification of a planned strategy [that] leads to implementation of health behavior”

Health-promoting behavior

“endpoint or action outcome directed toward attaining positive health outcomes”

Sakraida, 2002
Pender’s HPM: Review of Literature

Adaptation of the Framework

**Individual Characteristics and Experiences**

- Daily regimen of uninsured or underinsured patients greater than 40 years of age diagnosed with CHF
- Low socio-economic state and decreased mood

**Behavior-specific Cognitions and Affect**

- Awareness of changes needed
- Perceived obstacles to make changes needed
- Acceptance ownership of needed changes
- Decision about interest or disinterest in making changes
- Identification of support system

**Behavior Outcome**

- Decision to comply daily with treatment regimen
- Health Promotion
  - Daily compliance with treatment regimen
HF–EBG Framework:

1. Plan for HF management
2. Socioeconomic factors / lifestyle
3. Awareness of changes needed
4. Perceived obstacles to making needed changes
5. Acceptance of ownership of needed changes
6. Decision about interest or disinterest in making changes
7. Identification of support system
8. Decision to comply with the HPB plan
9. Compliance with health-promoting behavior
HF–EBG Framework: Pender’s HPM

1. Informed Consent/Initiate HF–EBG Plan of Care
2. Compliance with the Medication Plan
3. Monitoring Weight
4. Monitoring Healthy Diet/Limiting Salt Intake
5. Monitoring Fluid Intake
6. Being Active
7. Monitoring Symptoms of Heart Failure
8. Modifying Risk
9. Attending All Scheduled Appointments
10. Assessing Implementation of HPB 1–6
11. Assessing Implementation of HPB 7–8/Discharge
A city in western central area of Alabama

- 70 square mile area
- Metropolitan area
- Progressive FRS
- One hospital
Population

- Interprofessional Disciplines
  - FRS administrators
  - EMS MD
  - EMS personnel
  - Paramedics
  - PCP providers

- CHF patients
Review of Literature

❖ Defined Key Concepts
❖ Reflection of Synthesis
Defined Key Concepts

- Expanding the role of paramedics
- Challenges to this expanded role
- Training and development
- Screening outcomes
Reflection of Synthesis

Expanding the role of paramedics

❖ Heightened attention within paramedics’ communities to assist individuals in multiple areas with the potential to cut healthcare costs
  ▪ primary care
  ▪ health promotion
  ▪ minor conditions
  ▪ management of chronic disease

(Agarwal et al., 2015; Bigham, Kennedy, Drennan, & Morrison, 2013; Mason, Knowles, Freeman, & Snooks, 2008).
Reflection of Synthesis

Challenges to the expanded role

- not clearly defined
- leads to role confusion
  - an inadequately defined role identity
  - insufficient organizational development for paramedics
  - a perceived absence of accountability with programs

(Bigham et al., 2013; Brydges, Spearen, Birze, & Tavares, 2015).
Training and development

❖ Sufficient program training and development should support paramedics in their expanding role

❖ Outcome evaluations must be implemented for a program to be sustainable

(Agarwal et al., 2015; Bigham et al., 2013; Brydges et al., 2013; Mason et al., 2007; Mason et al., 2008; Shah et al., 2010).
Screening outcomes

- Screening tools are being implemented in community health awareness programs by emergency medical services (CHAP-EMS) for the purpose of health outcomes evaluation as part of their assessment (Agarwal et al., 2015; Shah et al., 2010).
Conclusions

Lessons Learned
❖ Communication barrier
❖ Maintaining a patient focus

Limitations
❖ Paramedic’s scope of practice
❖ Lack of resources to develop a statewide infrastructure
❖ Minimal funding opportunities
Conclusions

Barriers
❖ Stakeholders with opposing views
❖ Legal and regulatory barriers

Conclusion
❖ Environmental assessment
❖ Early support of stakeholders
❖ Program design
❖ Additional need for research
Summary

❖ Clinical significance
❖ Innovative methods for health care reform
❖ Evidence of the problem
❖ Paramedics

❖ Synthesis of literature
❖ Defined topics
❖ Review of literature
❖ Recommendations
❖ Conclusion
Questions?
References


References


Bush, V. (1945). *Science, the endless frontier; a report to the President on a program for postwar scientific research*. National Science Foundation. Retrieved from http://ia700408.us.archive.org/18/items/scienceendlessfr00unit/scienceendlessfr00unit.pdf


References


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