

Improving Patient Self-efficacy by Incorporating Patient Teaching by Registered Nurse Students in Primary Care

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Disclosures

None

Introduction

Primary Care: Physicians, Nurse Practitioners (NP), Clinical Nurse Specialists (CNS) or Physician Assistants (PA)

- Provide care
- Coordinate services
- Assist with access to care (US Centers for Medicare & Medicaid Services, n.d.)

59 Million Americans live where there is a primary care shortage (Collins, 2012)

- Fewer medical students entering primary care
- Lower pay (55% less) than specialist (Collins, 2012)
- Affordable Care Act created influx of people with insurance
- Uninsured rate declined from 16% in 2010 to 9.1 % in 2015 (Obama, 2016)

Primary Care Shortage

Increased number of patients with decreased number of providers

- Visits shortened to enable more appointments
- 15 minute office visit attempts to manage several problems
- Waiting periods for initial or routine visit (Sullivan, Ibrahim, Ellner, & Giesen, 2016)
- Difficulty getting unplanned visit – leading to urgent care or emergency room (ER) visit (Werner, Canamucio, Marcus, & Terwiesch, 2014)
- Hospital follow up in primary care may be difficult

ER and hospital care is expensive

- Increased uses is associated with decreased primary care involvement (Katz, McCoy, & Vaughan-Sarrazin, 2015)

Care is fragmented when patients use multiple sources

Chronic Disease

Chronic disease management is expensive

- 86% of health care dollars in the US
- 7 of 10 deaths related to chronic disease (Chronic Disease Prevention and Health Promotion, 2015)
- Medicare Part-A increased by 5.2% between 2008 and 2010 with 98% of that cost for patients with 2 or more chronic conditions (Erdem, Prada, & Haffer, 2013)

Problems

Decreased availability of primary care

Increased numbers of patients seeking care

Cost is higher in hospital setting

Fragmentation of care can affect outcomes

Enhanced Primary Care

Increased interest in team-based primary care (Sullivan, Ibrahim, Ellner, & Giesen, 2016)

RNs can focus on uncomplicated acute and chronic care, coordinate services and provide education (Sullivan, Ibrahim, Ellner, & Giesen, 2016)

Patient centered medical home uses patient centered model

Nurse-managed health center (Auerbach, et al., 2013)

Nurse practitioners are part of the solution to care shortage

RN students in Primary Care

Students gain confidence in autonomy (Valente, et al., 2014)

Develop case management skills

Patient education experiences

Clinical Questions

In patients with chronic disease seeking care managed by a nurse practitioner in a rural western North Carolina clinic, does the addition of disease specific teaching improve patient self-efficacy?

Do nursing students who perform teaching on patients with chronic illness in a primary care clinic find the experience interesting and rewarding?

Literature Review

Search using: MEDLINE, CINAHL, Cochrane library

Keywords: nurse, nurse practitioner, nursing students, primary care, collaboration, team work, chronic disease, outcomes., self-care, self-efficacy, quality of life

Multiple studies about collaboration with multidisciplinary teams but few about student involvement

Studies about expanding the RN role in primary care are beginning to emerge

Literature Review

Zwarenstein, Goldman and Reeves, 2009

- Videoconferencing vs audioconferencing had mixed results
- Daily conferencing and rounds had positive impact on length of stay
- Monthly nursing home interdisciplinary team meetings in nursing home – decreased prescribing of psychotropic drugs

Coventry, et al, 2015

- Primary care, multiple co-morbidities with psychological therapy , decreased depression and improvement of self-care.
- Collaboration has best outcomes with good communication and planning

Doggrell, 2010

- Patient support – telephone reminders had low level of impact on patient compliance
- Structured education had best outcome

Literature review

Pumar, et al., 2014

- Holistic approach improved chronic disease management
- Improved quality of life

Shaw, et al., 2014

- Nurse managed protocols and team approach improved diabetes management, decrease in blood pressure and cholesterol
- Improvement of medication compliance

Literature Review

Mackey, Hatcher, Happel & Cleary, 2013

- Nursing curriculum to socialize nursing students into primary care and health promotion can help meet needs in the changing health care environment

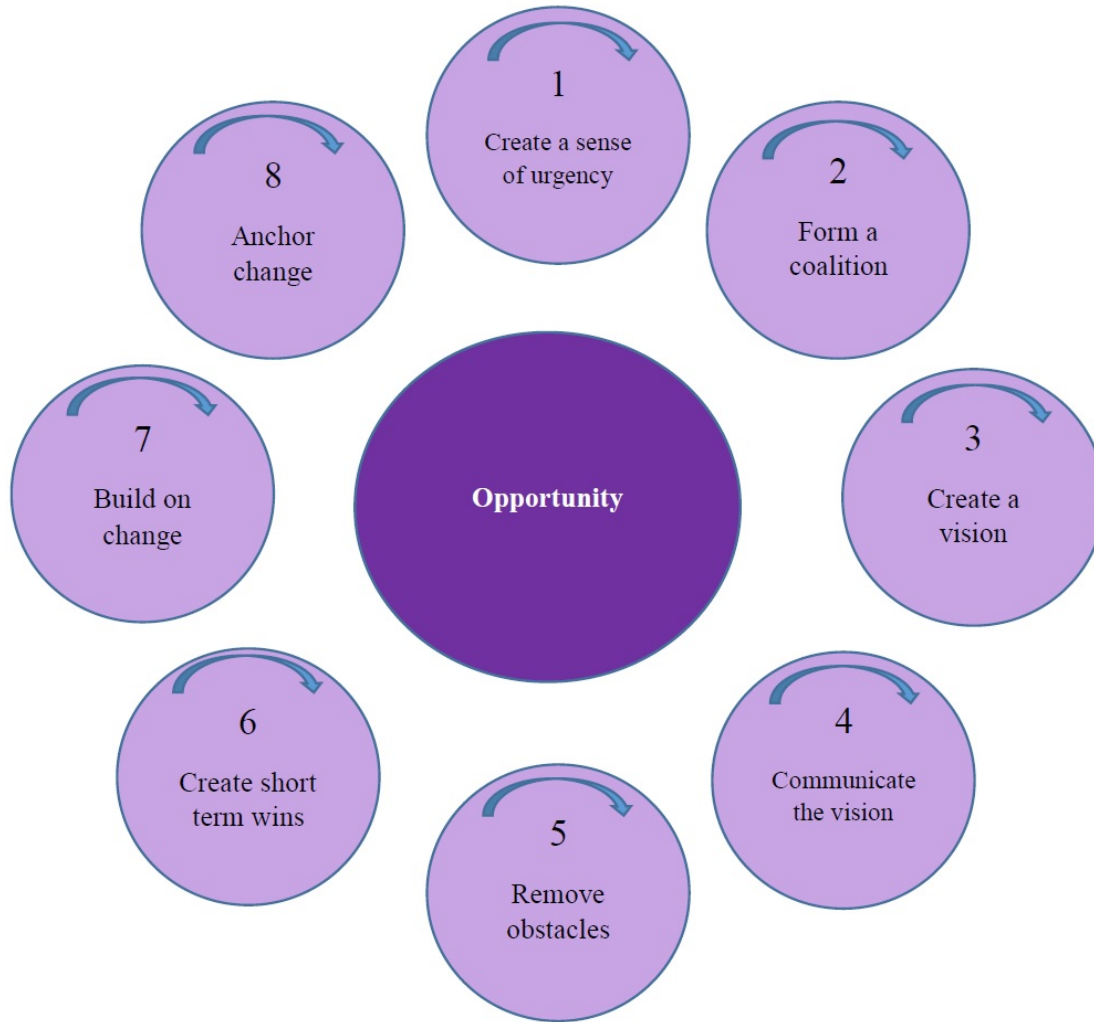
Funk & Davis, 2015

- Use of RNs in patient care management
- Clinic capacity increased by 12% and 17%

Conceptual Framework

Implementation of the plan

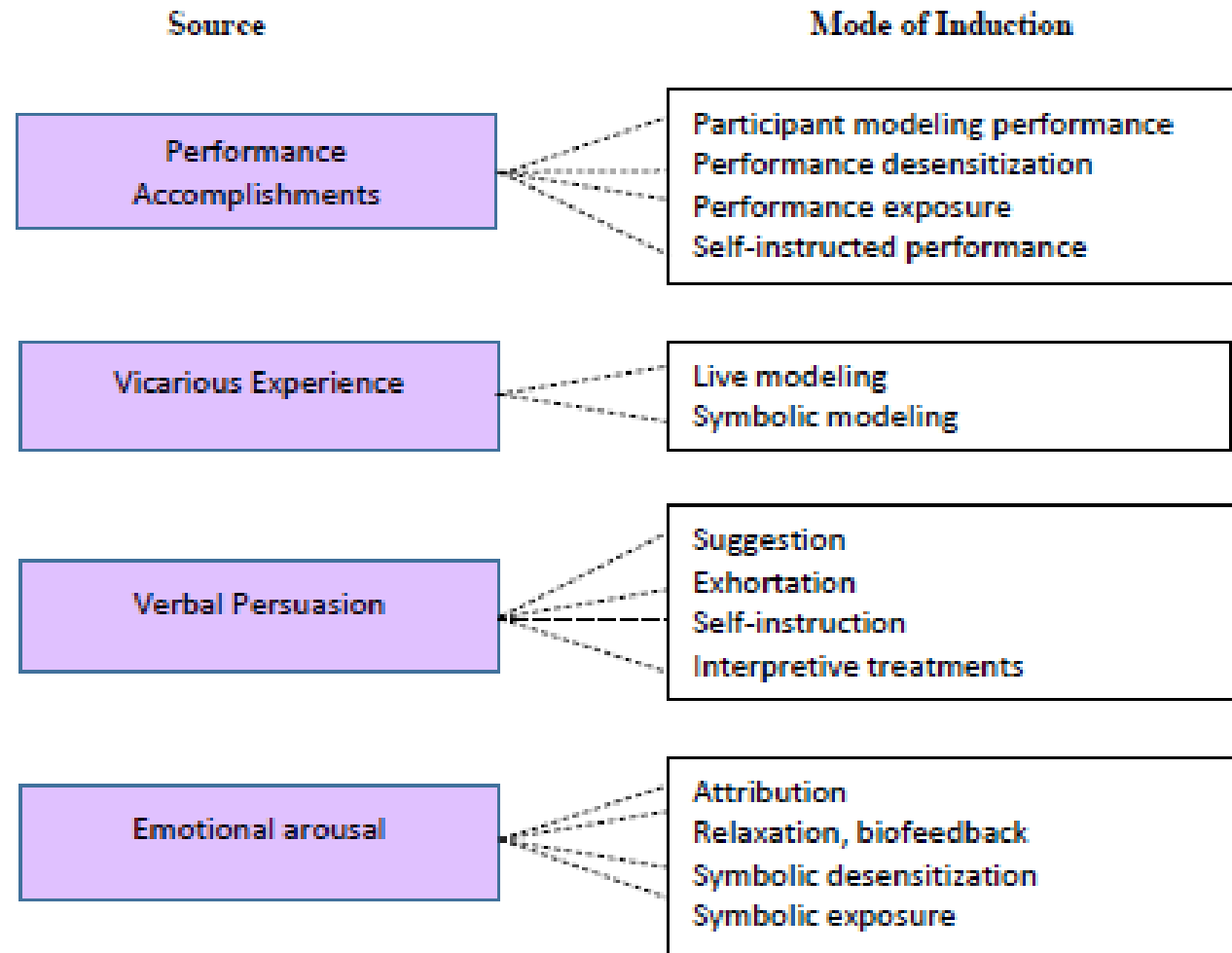
Kotter eight step change model (Kotter,2012)



Theoretical Model

Patient behavior change

Bandura's Self-Efficacy Theory



Mission Statement

TO PROVIDE EXCEPTIONAL PATIENT CARE THROUGH EVIDENCE
BASED PRACTICE, COLLABORATION, AND EDUCATION, TO EMPOWER
PATIENTS IN MANAGING THEIR HEALTH CARE NEEDS

Project Design

Objectives

- Patient empowerment and self-efficacy through education
- Combining outpatient care with the collaborative effort of nursing students
- Enhanced patient support team
- Clarification of healthcare goals

Clinical Site

Privately owned internal medicine clinic

Jackson County, NC and surrounding area

- Population 2014: 40,981 (Quick Facts Jackson County, North Carolina, 2014)
- Great Smoky Mountains
- Moderate climate
- Popular with tourists and retirees

Population

Established with the NP's practice

Willing to participate

Aged over 18 years old

One of the following chronic diseases

- Diabetes
- Chronic obstructive pulmonary disease
- Hypertension
- Chronic back pain
- Major depressive disorder

Student preparation

Student prepared patient education tools

Interdisciplinary approach

Template provided for chronic disease teaching

- Evidence based research techniques
- Collaboration

Components of education tool

- Disease process
- Medications
- Nutritional therapy
- Physical activity
- Behavioral health

Nurse practitioner oversight

Patient care and treatment plan set up by the NP

Clinic staff and physician to accommodate student needs

Student supervision

Student Clinical Experience

Attend clinical day in primary care

Participate as patient educators

Instructed about their role

Student developed brochures provided

NP supervision

Evaluation at the end of the day

Student Evaluation of Clinical Education Environment (SECEE) inventory

Goals

Student

Improving understanding of health promotion

Development of collaboration skills

Engagement in patient education in primary care

Patient

Improved quality of life

Stabilization and improvement of disease processes

Improved self-efficacy

Visit date: _____ Patient number: _____ Age: _____ Gender _____

Self-Efficacy for Managing Chronic Disease 6-Item Scale

Please answer each question on a scale of 0 – 10

1. How confident are you that you can keep the fatigue caused by your disease from interfering with the things you want to do? Not confident at all 0 1 2 3 4 5 6 7 8 9 10 Very confident	Score
2. How confident are you that you can keep the physical discomfort or pain of your disease from interfering with the things you want to do? Not confident at all 0 1 2 3 4 5 6 7 8 9 10 Very confident	Score
3. How confident are you that you can keep the emotional distress caused by your disease from interfering with the things you want to do? Not confident at all 0 1 2 3 4 5 6 7 8 9 10 Very confident	Score
4. How confident are you that you can keep any other symptoms or health problems you have from interfering with the things you want to do? Not confident at all 0 1 2 3 4 5 6 7 8 9 10 Very confident	Score
5. How confident are you that you can do the different tasks and activities needed to manage your health condition so as to reduce you need to see a doctor? Not confident at all 0 1 2 3 4 5 6 7 8 9 10 Very confident	Score
6. How confident are you that you can do things other than just taking medication to reduce how much your illness affects your everyday life? Not confident at all 0 1 2 3 4 5 6 7 8 9 10 Very confident	Score

Patient Data

Self-Efficacy for Managing Chronic Disease 6-Item Scale (Stanford Medical School, 2016)

Developed by Stanford University available for use with out permission

Pre-test and post-test using the same questionnaire

Chronic Disease: Diabetes Hypertension Depression COPD Chronic back pain

Student Survey

Student Evaluation of Clinical Education Environment (SECEE)

Answers 0-5, 5 being most favorable

Used with permission from Kari Sand-Jecklin.

Student Experience Questionnaire						
Please check the scale on the right to answer each question	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree	Can't answer
A wide range of learning opportunities were available at this clinic						
This clinical setting provided adequate opportunities to practice interpersonal communication skills.						
As my skills and knowledge increased, my instructor allowed me more independence.						
This clinical setting provided adequate opportunities for application of information gained in the classroom setting.						
There was adequate time in this clinical rotation to meet my learning goals						
This agency/department had an adequate number and variety of patients appropriate for my clinical nursing abilities.						
Equipment, supplies, and material resources needed to provide patient care and teaching were available in this agency/department.						
Staff in this department informed students of potential learning experiences.						
In this setting, I was allowed to perform "hands on" care at the level of my clinical abilities.						
One-to-one interaction with clients provided sufficient opportunities for skill development.						

Used with permission (Sand-Jecklin, Student Evaluation of clinical Learning Environment, 2003).

Data Analysis

Demographics - patients

Total Participants	Gender	Age	Diagnosis	
n=39	Male = 5 Female = 34	Minimum 25 Maximum 85 Mean 54.9	Hypertension Diabetes Depression Back pain COPD	16 8 11 3 1

Patient Data Analysis and Results

Mean of the 6 questions

Paired t-test

- Data is continuous
- Interval level
- 2 groups are being compared (pre-test and post-test)
- Distribution evaluated using Kolmogorov-Smirnov (K-S) test
- Normal distribution

Improvement of the mean is interpreted as improvement of self-efficacy

- Mean improved from 5.9 to 7.1
- Statistically significant $p=0.000$ $df=35$

Improvement of self-efficacy correlates with improvement in self-care and quality of life

Paired t-test

Paired Samples Statistics				
	Mean	N	Std. Deviation	Std. Error Mean
Pretest	5.9903	35	2.21105	.37374
Posttest	7.1331	35	2.29257	.38751

n=35

4 surveys removed as not completed
Improvement in mean score from 5.9 to 7.1 after teaching session

P=.000 which is statistically significant

Paired Samples Test								
	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pretest - posttest	-1.14286	1.38259	.23370	-1.61779	-.66792	-4.890	34	.000

Student Data

n=11

Mean calculated for each question

Each question answer range 0-5

Higher number is more favorable

One-Sample Test						
	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Q1	28.685	10	.000	4.364	4.02	4.70
Q2	24.245	10	.000	4.727	4.29	5.16
Q3	24.245	10	.000	4.727	4.29	5.16
Q4	14.044	10	.000	4.273	3.59	4.95
Q5	30.478	10	.000	4.636	4.30	4.98
Q6	18.013	10	.000	4.455	3.90	5.01
Q7	33.566	10	.000	4.727	4.41	5.04
Q8	24.245	10	.000	4.727	4.29	5.16
Q9	21.926	10	.000	4.545	4.08	5.01
Q10	33.566	10	.000	4.727	4.41	5.04

Project Analysis

Improvement in patient self-efficacy after one brief intervention with student nurses

Foundation for future intervention

Supports the development of an expanded RN role in primary care

Supports the legitimacy of including primary care experience in nursing education

Translation and Impact on Practice

Primary care impact

- Nurses can positively influence patient outcomes
- Improvement of community health
- Optimizing skills and roles of all providers in primary care can improve services and ease the impact of primary care provider shortage.

Fiscal Impact

- Improved health can decrease ER and inpatient needs
- Decrease over all health care costs

Limitations

Short term study

Small population

One practice site

Students have limited experience with patient teaching

Different student each day

Significance

Modifying primary care practices can help meet the growing needs of our population

Teamwork is essential to build and promote a new program

New practice models that demonstrate improved outcomes, cost effective care and satisfied patients promote health and wellness in a community

Students gained experience with patient teaching and the role of primary care in health promotion

Expanded primary care services with RN intervention can increase productivity of providers and improve access to care.

Recommendations

Investigate correlation of enhanced patient support with use of ER, hospital admission and readmission

- Cost savings
- Financial investment in RN intervention in primary care

RN services

- Case management
- Community resource planning,
- Triage of phone calls to facility prompt office visits
- Improved communication with discharge planners

Promote primary care experiences for RN students

- Patient education
- Care coordination
- Collaboration
- Evidence based practice
- Promote long term critical thinking skills

Recommendations

Innovative patient care strategies

- Build relationships
- Communication
- Improved patient response to care
- Patient engagement in self-care
- Lower health care costs

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