Technology Focused DNP/NP Projects as Practice Implementation Tools
Laurel Shepherd, PhD, PNP

Overview of Program Objectives
• Provide students with projects that will aid them in implementing technology into practice
• Assist students in understanding practice barriers to the implementation of technology and strategies for overcoming them.

Program Addresses Barriers to Adoption of Technology
• In order for technology to be utilized to its fullest potential, practices must be willing to adopt it
• All too often, practices resist the implementation of technology. This may be due to lack of understanding, fear of change, no time, or confusion
Champions for Telehealth Ensure Successful Implementation

- Practices that successfully implement technology usually have a member of the team that is willing to champion the initiative

- In order to create champions, DNP/NP students were assigned projects in technology implementation

Students Asked to Prepare Technology Project

- Choose one of the modalities presented in the technology workshop (electronic health records, social media, telemedicine, or clinical decision support)

- Assess the need and select a specific technology appropriate to their practice setting

Projects Based on Specific Guidelines

- Develop a step-by-step plan for implementing the chosen technology

- Assess and identify barriers related to cost, knowledge, and resources

- Develop specific strategies to overcome barriers
Projects Focused on One of Four Areas

- Telehealth
- Electronic Health Records
- Clinical Decision Support
- Social Media

- Many practices began adopting new healthcare technologies
- Some students conducted technology focused DNP Capstone Projects

Telehealth Project

Telehealth Stroke Prevention Education in Elderly Appalachian Virginians

Patty Schweickert, MSN, FNP, DNP Candidate

Project Focused on Determining if Telehealth Stroke Education is as Effective as In-Person Education

- Involved quasi-experimental, non equivalent pretest-posttest control group design
- Conducted in Big Stone Gap, Virginia
- Utilized videoconference for TeleHealth session via University of Virginia
Slide 10

Outcomes Suggest TeleHealth Stroke Education Comparable to In-person Education

- Suggests feasibility and effectiveness of TeleHealth stroke education for the rural elderly
- Offers model for expanded role of TeleHealth in patient education

Slide 11

Results will be Presented at the American Telemedicine Association

- "Telehealth Stroke Prevention Education in Elderly Appalachian Virginians"
- May 2011
- Investigators/Presenters:
  - Patty Schweickert, MSN, FNP, DNP Candidate
  - Carolyn M. Rutledge, PhD, FNP

Slide 12

EHR Project

Effectiveness of an EHR in Adherence to Asthma Guidelines with Children
Jennifer McMurray, DNP, CPNP
Slide 13

Project Focused on Determining if an Asthma Template Improved Management in Children

• Involved retrospective review of chart prior to implementation of template and again after implementation of template

• Adherence to Asthma Guidelines and Patient Health Status Improved as a Result of Template

Slide 14

Results Presented at the NAPNAP Annual Conference

• "Effectiveness of an EHR in Adherence to Asthma Guidelines with Children"

• April 2010

• Investigators/Presenters:
  – Jennifer McMurray, DNP, CPNP
  – Laurel Shepherd, PhD, PNP

Slide 15

Internet Project

Using Web focused Nutritional Intervention on Weight loss and Dietary Behaviors in Primary care

Krystyna Caratachnea, DNP, CFNP
Slide 16

Project Focused on Web-based Patient Education Program for Weight Loss

- Involved quasi-experimental, non-equivalent pretest-posttest control group design
- Conducted in Family Practice Setting
- Intervention
  - Training on the selection and use of computer technology to teach obese patients about making healthy nutritional choices through web-based support
  - E-mailed reinforcement and encouragement on utilizing the web-based weight loss program accompanied

Slide 17

Two Research Questions were Investigated

1. Will there be a pre and post-difference in weight loss behaviors, subjective health, weight loss, and comfort in using web-based support in participants that receive the nutritional web-focused intervention program?
2. What is the difference in weight loss behaviors, subjective health, weight loss, and comfort in using web-based support between individuals that receive the web-focused nutritional intervention and those that do not receive the intervention?

Slide 18

Significant Improvement in the Intervention Group

- The intervention group had significant weight loss while the comparison group did not change
- Intervention group was significantly more comfortable with using the computer after completing the program than the comparison group
Results Presented at VCNP Annual Conference

• "The Impact of a Web-Focused Nutritional Intervention on Weight Loss and Dietary Behaviors in Primary Care"

• March 2010

• Investigators/Presenters:
  – Krystyna Caratachnea, DNP, CFNP
  – Carolyn Rutledge, PhD, FNP

---

eCommunications Project
Electronic Communication in Pediatric Home Health: Impact on Parental Well-Being and Satisfaction
Tina Haney MSN, CNS, DNP Candidate

eCommunications Project
Electronic Communication in Pediatric Home Health: Impact on Parental Well-Being and Satisfaction
Tina Haney MSN, CNS, DNP Candidate

---

Project Focused on Providing Support for Parents of Homebound Children through eCommunication

• Involved pretest-posttest survey design using a convenience sample of parents of children associated with a pediatric home health agency located in a metropolitan city

• Intervention
  – Twelve week structured communication between an advanced practice nurse (APN) and parental caregivers
  – Weekly e-mail blasts of educational or parenting information selected for the special needs and interests of a parent with a medically fragile technologically dependent child
  – Supplemented by individual parent e-mails
Pre and Post-intervention Differences in Self-reported Well Being and Satisfaction Not Significant

- Pre and post-intervention differences were not significant
  - Self-reported well-being (PedsQL™ Family Impact Module) (p=.227)
  - Satisfaction scores (PedsQL™ Healthcare Satisfaction Module) (p =.528)

- Yet, parents voluntarily provided qualitative comments such as:
  - “It is nice to feel that someone cares”
  - “I sent the information to a friend”

- Twelve of nineteen requested the communication program continue

Results Presented at National Association of CNS Annual Meeting

- “Electronic Communication in Pediatric Home Health: Impact on Parental Well-Being and Satisfaction”

- March 2011

- Investigators/Presenters:
  - Tina Haney, MSN, CNS, DNP Candidate
  - Kimberly Adams Tufts, DNP, FAAN

Program Outcomes

- Educational programs focusing on healthcare technology can be effective in increasing the use of healthcare technologies in practice

- Students are able to take a leadership role in implementing and evaluating the use of technology in healthcare

- Students demonstrated the effectiveness of the four modalities in impacting healthcare outcomes