



Capitalizing on the DNP Project Experience: Engaging Undergraduate Students in Collaborative Project-Based Learning to Improve Healthcare Outcomes

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BACKGROUND

- Ineffective medication adherence among older adults can lead to the exacerbation of chronic health conditions, hospital admissions, and other avoidable healthcare costs.
- As hospitals increasingly focus on population health, the use of technology in the patient's home is one approach to increase overall adherence with medications.
- Successful use of technology can reduce the number of medication errors including missed doses, taking extra doses, and taking the wrong drug.
- This faculty guided telehealth project used the unique skill set gained by the DNP project experience to engage students in the role of mobile health with a "real world" initiative to improve healthcare outcomes.
- The purpose of this pilot feasibility project was to assess the benefits and barriers to patient use of technology to improve medication adherence in a community setting.

OBJECTIVES

1. Recognize at least two unique skills gained by the DNP project experience that prepares the nurse educator to lead collaborative project-based learning projects.
2. Discuss at least one DNP-prepared faculty collaborative project designed to engage students in project-based learning.
3. Recognize at least two benefits of academic and healthcare agency collaborations.



**"I will never look at patient education in the same way again."
– RN to BS Student, Spring 2015**

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METHODS

- MedMinder medication dispensers were obtained through a grant.
- Team members identified a target population, and medication dispensers were placed in homes.
- Clients were educated about the project and trained to use the electronic medication system.
- Questionnaires were administered to participants, pre- and post intervention.
- Students used the MedMinder technology notification features to monitor clients for missed doses.



RESULTS

- Student participants (16) were able to explore, assess, implement, evaluate, and disseminate project findings related to the benefits and barriers to the use of medication monitoring technology in the home setting.
- Clients (15/15) enjoyed participating in the project, and using the technology.
- Some clients (2/15) reported that they would pay to continue using the MedMinder electronic dispenser.



CONCLUSIONS

- Recommendations included follow up telehealth projects, increasing the time of the intervention, a larger number of caregivers to receive missed dose notifications, inclusion of standardized pre- and post questionnaires, and report data analysis.
- Pilot allowed students to examine the use of technology as a strategy to improve medication adherence in the home setting. This can later improve the nurse to patient education of as to how to take medications at home.
- DNP faculty-guided technology projects such as this allow students to participate in real world situations that can bridge education and practice.
- The literature supports the use of medication dispensers and reminder systems to improve medication adherence. It is important to continue to evaluate technology as a solution to solve health care issues.
- Collaborations between academia and healthcare agencies strengthen the work of team members. Students recognize their value to the team and become more invested in their work. Agencies receive additional workers and findings to inform administrators and move program needs. The academic partner gains positive recognition for its current students and interest from potential students.
- DNP-prepared faculty are uniquely prepared to use project-based learning in a collaborative environment that can be used to engage students. Introducing project-based learning to students and agencies early will provide an understanding for the nature of the DNP project experience in the DNP degree.

REFERENCES

1. Billingsley, L. & Carruth, A. (2015). Use of technology to promote effective medication adherence. *The Journal of Continuing Education in Nursing*, 46(8), 340-342.
2. Larmer, J. (2012). PBL: What does it take for a project to be "authentic"? Edutopia. Retrieved <http://www.edutopia.org/blog/authentic-project-based-learning-john-larmer>
3. Persaud, N., Moffitt, G., Kravette, K., & DeRoss, A. (2013). Usability and benefits of a telehealth pilot for older adults: Via a service-learning technology partnership. *Communications of the IIMA*, 13(4), 43-53.