## An Interprofessional Approach to Understanding Factors Associated with High-Healthcare Resource Utilization

Drew Robinson<sup>1</sup>, Lance Robinson<sup>1</sup>, Clarence T. Jadye Kee, MS<sup>1</sup>, Jeannie Nguyen, MS<sup>1</sup>, Stephanie Karam<sup>2</sup>, Angela Nguyen<sup>3</sup>, Regina Bentley, RN,EdD<sup>2</sup>, Ruth Bush, MD, JD<sup>1</sup>

Texas A&M University Health Science Center College of Medicine, College Station Campus<sup>1</sup>

Texas A&M University Health Science Center College of Nursing, College Station Campus<sup>2</sup>

Texas A&M University Health Science Center College of Pharmacy<sup>3</sup>



### An Interprofessional Approach to Understanding Factors Associated with High-Healthcare Resource Utilization



# Introduction

- Understanding why patients become high-utilizers of health care allows for the identification of the needs and the resources required to educate these patients, improve their care, and decrease costs.
- Primary goal of this study:
  - To explore how interprofessional medical teams (IPMT) can improve patient care and measure the impact that they can have on the community as patient advocates

# **Project Objectives**

- 1. Build skills in team dynamics with regard to patient-centered medicine
- 2. Obtain insight on the fragmentation and limitations of the current healthcare system
- 3. Determine possible ways to prevent healthcare over-utilization
- 4. Provide patients with educational and community resources that may prevent healthcare over-utilization

# **Learning Objectives**

### Students will:

- Identify an innovative approach to the development and implementation of an interprofessional medical team in a shared patient-centered problemsolving project
- 2. Understand the benefits and lessons learned from this community project
- 3. Be aware of the outcomes of shared patient-centered problem-solving by an interprofessional medical team

# Background

- Interprofessional education (IPE) affords students the opportunity to experience collaborative patient-centered care.
- Discipline specific approaches to professional education limit the increase in breadth of knowledge and skills.
- The IPMT consisted of pharmacy, nursing and medical students as well as faculty mentors.
- This unique experience allowed for critical insight into the needs of future patients and allowed the IPMT to become more mature health care providers.

# Background

- Each team member serves a different but essential role in the management of patients.
- There is a large amount of information provided to patients which may be difficult for the physician to fully explain due to the fast paced nature of their practice.
- The inability to communicate within interprofessional healthcare teams has lead to medical errors and as a result many undesirable outcomes for patients.
- Health professions students have relatively few opportunities to interact with each other during their academic training.

# **Methods**

- A pilot group of four patients and their families/ dependents were sought to begin this project.
- Informed consent for participation in this pilot project was obtained and the medical records reviewed.
- Baseline clinical characteristics, demographic data, and healthcare utilization for the proceeding 12 to 24 months prior to entry into the study was gathered.
- Recorded data included chronic diseases and other medical conditions.
- These patients were observed over a 5 month period.

# **Methods**

- To determine healthcare utilization, we included office visits, phone calls, and hospital/ urgent care/ emergency room visits into the dataset as evidence of healthcare encounters.
- Data was gathered on type and number of diagnoses, number of clinic visits/ telephone calls/ hospitalizations, total hospital days, emergency room visits, and percentage of primary care doctors visit cancellations/ no-shows to determine healthcare utilization.
- The data was presented as baseline characteristics of a pilot cohort of patients in a rural/ small town community healthcare system.

## **Interprofessional Care Plan Template**

#### Developing a Plan of Care

The following grid can be useful to diagram the results of the answers for the guiding questions below.

#### **Guiding Questions for Interprofessional Team Meeting**

Considering the resident's medical, emotional, social, environmental and economic needs, answer each of the following questions:

- What is the overarching goal? At least three perspectives need to be considered and reconciled the patient, their family, their team
- What are the patient's problems? (Again, consider them under a wide range of possible headings medical, emotional, social, environmental and economic).
- 3. What is the impact of each problem on the patient's health and quality of life?
- 4. What strengths and resources does the patient have or can be mobilized to deal with each problem?
- 5. What additional information is needed to adequately define the problem or its implications?
- 6. What is the plan of care? (What needs to be done; who will do it; when will it happen)?
- What priority should be assigned to each problem (in either a linear order or categories of importance)? How important is its effect on the overarching problem? What other factors might influence its relative priority?
- 8. What outcomes should be expected for each problem? These should be expressed in measurable terms. When is the appropriate time to look for the outcomes?

**Overarching Goals** 

Patient's goals:

Family's goals:

#### Interprofessional Team's goals:

Problem	Nursing Diagnosis/ Impact Health & Quality of Life	Strengths/Resources	Plan [what, who, when] (includes getting more info)	Expected Outcome (What to look for, When)

### **Guiding Questions for Interprofessional Team Meetings**

- 1. What is the overarching goal?
- 2. What are the patient's problems?
- 3. What is the impact of each problem on the patient's health and quality of life?
- 4. What strengths and resources does the patient have or can be mobilized to deal with each problem?
- 5. What additional information is needed to adequately define the problem or it's implications?
- 6. What is the plan of care?
- 7. What priority should be assigned to each problem? What factors influence this priority?
- 8. What outcomes should be expected with each problem?

### **Overarching Goals**

Patient's goals:

Family's goals:

Interprofessional Team's goals:

Problem	Nursing Diagnosis/ Impact Health & Quality of Life	Strengths/Resources	Plan [what, who, when] (includes getting more info)	Expected Outcome (What to look for, When)

# **Results**

- Outcomes include:
  - improved knowledge about chronic conditions
  - broader understanding of the unique roles of various providers
  - increased understanding of the importance of communication
  - more in-depth understanding of the healthcare system
- The IPMT of health professions gained
  - hands on experience communicating with patients with limited resources
  - a more profound understanding of the different backgrounds and barriers certain patient populations have when trying to access healthcare

# **Results**

- Students became aware of the professional resources available to complement their own practice.
- The healthcare industry benefited through the identification of commonalities among super-utilizers of health care, thus ensuring limited resources can be used appropriately.
- The IPMT of different health professionals built interpersonal connections, which is crucial in team-based care.

# Conclusions

- Only a minority of universities employ this active learning strategy.
- Incorporating specifically designed active learning experiences in the curricula may result in intentionally and effectively improving the functioning of healthcare teams, thus providing high quality, patient-centered care.
- It is the desire at our University to evaluate data from interprofessional activities that improve patient outcomes.

# References

1.Ateah, C. A., Snow, W., Wener, P., MacDonald, L., Metge, C., Davis, P., Anderson, J. (2011). Stereotyping as a barrier to collaboration: Does interprofessional education make a difference? *Nurse Education Today, 31*, 208-213.

2.Interprofessional Education Collaborative Expert Panel. (2011). *Core competencies for interprofessional collaborative practice: Report of an expert panel.* Washington, D.C.: Interprofessional Education Collaborative.
3.Schmitt, M., Blue, A., Aschenbrener, C.A., & Viggiano, T. R. (2011). Core competencies for interprofessional collaborative practice: Reforming health care by transforming health professionals' education. *Academic Medicine, 86*(11), 1351.

4.Boyd, C.M., Fortin, M. (2011). Future of multimorbidity research: How should understanding of multimorbidity inform health system design? Public Health Reviews, 32, 451-474.

5.Larivaara, P., Taanila, A. (2004). Towards interprofessional family-oriented teamwork in primary services: The evaluation of an education program. Journal of Interprofessional Care, 18, 153-16

# References

6. Lapkin, S., Levett-Jones, T., & Gilligan, C. (2011). A systematic review of the effectiveness of interprofessional education in health professional programs. Nurse Education Today.

7.Collins, L., Arenson, C., Jerpbak, C., Kane, P., Dressel, R., & Antony, R. (2011). Transforming chronic illness care education: A longitudinal interprofessional mentorship curriculum. *Journal of Interprofessional Care, 25*, 228-230.

8.Zirwas, M.J., & Holder, J. L. (2009). Patient education strategies in dermatology; Part 1: Benefits and challenges. The Journal of Clinical and Aesthetic Dermatology, 2(12), 24-27.

9.Peluso, M. J., Seavey, B., Gonsalves, G., & Friedland, G. (2013). An inter-professional 'advocacy and activism in global health': Module for the training of physician-advocates. *Global Health Promotion, 20*(2), 70-73. 10.Brock, D., Abu-Rish, E., Chiu, C. R., Hammer, D., Wilson, S., Vorvick, L., et al. (2013). Interprofessional education in team communication: Working together to improve patient safety. *BMJ Quality & Safety, 22*(5), 414-423. doi:10.1136/bmjqs-2012-000952 [doi]

# **Acknowledgements**

We are grateful to Dr. Nancy Dickey and the staff at Health For All for their guidance and assistance. We would also like to thank the Brazos Valley Food Bank for the education about community resources. In addition, we would like thank Karla Blaine and the Rural & Community Health Institute for their consultation. Lastly, we would like to thank our mentors Dr. Regina Bentley and Dr. Barbara Bush for time and invaluable insight.