## 45th Biennial Convention (16-20 November 2019)

Overcoming Barriers to Diabetes in Homeless Adults Through the Environmental Barriers to Adherence Scale (EBAS)

Laura Schipper, DNP, AGPCNP-BC

Nursing Department, Calvin College, Grand Rapids, MI, USA

April Bigelow, PhD

Department of Health Behavior and Biological Sciences, University of Michigan School of Nursing, Ann Arbor, MI, USA

Michelle Pardee, DNP

University of Michigan School of Nursing, Ann Arbor, MI, USA

**Background:** Homeless persons have diabetes rates similar to the general population with estimates ranging from 6.8 to 9.2%5, however homeless individuals are more likely to face barriers to appropriate chronic disease management<sup>1</sup>. Little research has been published addressing barriers to diabetes care in the homeless population or how to overcome these barriers. Objectives: This quality improvement project had two objectives. First, to improve assessment of patient identified barriers to diabetes selfcare of homeless adult diabetic patients (Type 1 or Type 2) receiving primary care at a health clinic. Barriers were assessed using the Environmental Barriers to Adherence Scale (EBAS)<sup>4</sup>, a tool addressing barriers to diabetes self-care in four main categories: diet, exercise, blood glucose monitoring, and medication. The second objective was to determine if the patient-identified barriers would prompt providers to offer referrals or recommendations in an effort to improve care for these diabetic patients. **Methods:** Diabetic (Type 1 and 2) patients who presented to the health clinic for primary care during the project dates were asked to complete the EBAS tool. This was facilitated by the Medical Assistant (MA). Providers were given the completed tool and asked to make referrals and recommendations based on the patient's self-identified barriers to their diabetes self-care. Referrals and recommendations considered standards of care for diabetic patients did not count for this project (annual podiatry exam; annual ophthalmology exam; annual BUN, creatinine, and urine microalbumin, A1C testing). Results: Twelve diabetic (Type 1 and 2) adult patients presented to the health clinic for primary care during the dates of the project. All twelve diabetic patients completed the EBAS questionnaire (N=12, 100%). Providers offered referrals and/or recommendations to 10 out of the 12 diabetic patients (83%). Reasons referrals or recommendations were not offered were due to patient refusing and patient having just received diabetes care the month before at another practice. Conclusions: The health clinic did not use a tool to assess for barriers in diabetic patients at the start of the project. Using the EBAS tool provided the opportunity to assess for patient-perceived barriers to diabetes self-care. The tool also prompted providers to make referrals and recommendations, ultimately influencing the healthcare these patients received.

#### Title:

Overcoming Barriers to Diabetes in Homeless Adults Through the Environmental Barriers to Adherence Scale (EBAS)

## **Keywords:**

Barriers, Diabetes and Homeless

#### References:

- 1. Chiu, S., & Hwang, S. W. (2006). Barriers to healthcare among homeless people. *Diabetes Voice*, *51*(4), 9-12.
- 2. Chlebowy, D. O., Hood, S., & LaJoie, A. S. (2010). Facilitators and barriers to self-management of type 2 diabetes among urban African American adults. *The Diabetes Educator*, *36*(6), 897-905.
- 3. Glasgow, R. E., McCaul, K. D., & Schafer, L. C. (1986). Barriers to regimen adherence among patients with insulin-dependent diabetes. *Journal of Behavioral Medicine*, *9*(1), 65-77.
- 4. Irvine, A. A., Saunders, J. T., Blank, M. B., & Carter, W. R. (1990). Validation of scale measuring environmental barriers to diabetes-regimen adherence. *Diabetes Care*, 13(7), 705-711.
- 5. Lebrun-Harris, L. A., Baggett, T. P., Jenkins, D. M., Sripipatana, A., Sharma, R., Hayashi A. S., ... Ngo-Metzger, Q. (2013). Health status and health care experiences among homeless patients in federally supported health centers: Findings from the 2009 patient survey. *Health Services Research*, *48*(3), 992-1017.
- 6. White, B. M., Logan, A., & Magwood, G. S. (2016). Access to diabetes care for populations experiencing homelessness: An integrated review. *Current Diabetes Reports*, *16*(11), 112.

## **Abstract Summary:**

Homeless persons have diabetes rates similar to the general population, however are more likely to face barriers. This quality improvement project identified barriers to diabetes care in homeless individuals through the Environmental Barriers to Adherence Scale (EBAS) and tracked provider responses in an effort to improve patient care.

#### **Content Outline:**

- 1. Background and Clinical Significance
- Rates of diabetes
- Rates of homelessness
- Number of homeless patients with diabetes
- 2. Literature Appraisal
- Current research
- Selection of articles for this project
- Results from the selected articles
- 3. Theoretical Model: Ottawa Model of Research (OMRU)
- 4. Role of the Nurse/Nurse Practitioner
- 5. Methods
- Project setting
- Purpose of the project
- o Timeline
- Objectives of the project (3 objectives)
- Environmental Barriers to Adherence Scale (EBAS)

- Project Implementation
- 6. Measurables/Evaluation Plan
- 7. Results
- Findings from the EBAS tool
- Findings from referrals and recommendations offered by providers to homeless diabetic patients
- Reasons referrals and/or recommendations were not offered
- 8. Discussion
- Meeting the objectives
- Patient identified barriers
- Recommendations for practice
- Sustainability
- 9. Future Steps
- o Future plans!

### First Primary Presenting Author

# **Primary Presenting Author**

Laura Schipper, DNP, AGPCNP-BC Calvin College Nursing Department Assistant Professor Grand Rapids MI USA

**Author Summary:** Laura Schipper holds a DNP degree from the University of Michigan, in Ann Arbor, MI. Her DNP residency work involved overcoming barriers to diabetes care in the homeless population, a population which has become her passion. Laura also works as a Geriatrics Nurse Practitioner and full-time faculty in the Calvin College Nursing Department.

#### Second Author

April Bigelow, PhD
University of Michigan School of Nursing
Department of Health Behavior and Biological Sciences
Clinical Associate Professor
Ann Arbor MI
USA

**Author Summary:** Dr. April Bigelow is a clinical associate professor at the University of Michigan. She teaches graduate students in the primary care nurse practitioner programs and sees patients clinically at the local homeless shelter and health department. She takes students to rural Thailand for clinical rotations.

## **Third Author**

Michelle Pardee, DNP University of Michigan School of Nursing Clinical Assistant Professor Ann Arbor Michigan USA

**Author Summary:** Dr. Michelle Pardee is a clinical assistant professor at the University of Michigan School of Nursing where she teaches in the graduate nurse practitioner programs. She sees patients in an adolescent health clinic in Detroit, Michigan. She takes students to Thailand on clinical rotation.