A New Approach to Diabetes Navigation in Rural Appalachia

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Outline

- New Diabetes Navigation Program
  - School Navigation Program
  - Peer Support Program
  - Community Health Workers

- Lessons Learned

- Future Directions
Prevalence of Diabetes

Fast Facts on Diabetes

30.3 million people or 9.4% of the U.S. population have diabetes

Diagnosed
23.1 million people

Undiagnosed
7.2 million people
Statement of the Problem

- Diabetes has reached epidemic proportions and Appalachians have been disproportionately affected by this disease.

- Appalachia is 42% rural, compared to 20% of the United States (US) as a whole.

- Appalachians battle a poverty rate 1.5 times that of the US average, and suffer from higher unemployment, lower educational achievement, and lower access to health care.
Statement of the Problem

- Diabetes prevalence is 19.9%, more than double the national average of 9.4%.

- People are diagnosed late, have lower health literacy, and higher rates of complications.

- 1/5th to 1/3rd of residents live below poverty line, have higher rates of unemployment, food insecurity, mental health issues, and less access to care.

de Groot et al., 2007; Schwartz et al., 2009; Zaugg et al., 2014; Holben et al., 2006; Johnson et al., 2011; Johnson et al., 2010; Brown et al., 2012; Beverly et al., 2018; Corrigan et al., 2007; Perry et all. 2013
Statement of the Problem

Social determinants of health & health inequities in southeastern Ohio contribute to health disparities in people with diabetes.
Building on Prior Programs

- Need to provide navigation services and peer support to children with diabetes.
- Need to lower costs of nurse-led diabetes navigation program.
- Need to provide behavioral health care to people with diabetes.
Purpose

To develop a New Approach to Navigation in rural Appalachia that consists of:

1. School Navigation Program
2. Peer Support Program
3. Community Health Worker Program
Objectives

To improve health outcomes and lower health care expenditures for children and adults with type 1 and type 2 diabetes.
Objectives

The health outcome objectives are:

1. To improve glycemic control.
2. To improve diabetes self-care behaviors.
3. To improve quality of life.
Measures

Health outcomes:

- Hemoglobin A1c levels
- Blood pressure
- Body Mass Index (BMI)
- Self-Care Inventory (SCI)
- Problem Areas in Diabetes-5 (PAID-5)
- Patient Health Questionnaire-9 (PHQ-9)
Objectives

The healthcare expenditure objectives are:

1. To reduce emergency department utilization.
2. To reduce hospital admissions and hospital readmissions.
Measures

Healthcare expenditure outcomes:

- Medication profile
- Hospital admissions
- Hospital readmissions
- Emergency department utilization
A New Approach to Navigation

Diabetes Consortium

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- CHW
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- Peer Support
  - DOSES Diabetes Outreach, Support, and Education for Students
- Behavioral Health
  - Ohio University Psychology and Social Work Clinic
School Navigator

- School Navigator is a person from the community who knows the school system and health care system.

- School navigator focuses on the diabetes care needs of the child during the school day.

- Navigator is the interface between the child’s medical appointments, school, and family.
T.B. is a 14-year old child with type 1 diabetes. He was diagnosed at age 2 years. His current A1C is 12% and his average blood glucose numbers are in the 300s mg/dl. He is having problems with the school nurse. The school nurse is there only half a day and is not giving T.B. the proper amount of insulin to cover his carb intake. As a result, he is often sent home from school due to high blood glucose levels.
T.B. met with the School Navigator multiple times:

- Talked to T.B. about making better food choices and checking blood glucose levels consistently.
- Reviewed carb counting to lower blood glucose levels. Changed his insulin to carb ratio.
- Met with family and shared nutrition information so that T.B. can eat healthier foods to lower blood glucose.
- Talked to school nurse about following the Endocrinologist’s diabetes management plan.
- Talked to T.B. about getting an insulin pump and discussed this with Endocrinologist.
Lessons Learned
Diabetes Emergency Care Training

- 1-hour hypoglycemia and glucagon training program.
- School personnel completed pre- and post-surveys to measure diabetes-related knowledge.
- Following the training, participants significantly improved their total diabetes knowledge score.
- Show value of training school personnel on how to treat hypoglycemia in children with diabetes.
Peer Support Program

- Peer Support Model demonstrates effectiveness of peer support in diabetes management.

- Success of peer support is the relationship formed with peers sharing similar experiences.

- Asked the DOSES students to serve as peer support mentors.

- Trained DOSES students in peer-to-peer program to mentor children with diabetes.
Peer Support Program
Peer Support Program

2019 CAT Camp—
A Type 1 Diabetes Day Camp

- 7 Campers Ages 8-15
- 140 Volunteer Hours
- 6 Counties served
Community Health Workers

- CHWs provide a cost-effective strategy to help underserved populations managing diabetes in the home and community.

- Ohio University has a CHW Training Program curriculum, which we used in Year 1.

- We are working with an established group of CHWs at our local health department.

- Our CHW program launched in Year 2.
Future Directions

- Fulfillment of Years 2 and 3 of the grant.
- Conduct a systematic program evaluation to assess the effectiveness and replicability of the program.
- Negotiate pay-for-performance contracts with managed care by documenting improved health outcomes and reduced health care expenditures.
Thank you!
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