



# **Barriers to the Quality of Control of Diabetes in Rural Community Health Centers: East Arkansas Family Health Center**

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# Introduction

- In 1974, **East Arkansas Family Health Center (EAFHC)** was constructed in West Memphis, Arkansas, out of an existing retail mall. It was pieced together as a non-profit organization in order to provide “**accessible, comprehensive, and quality healthcare** to the communities [in which they] serve with an emphasis towards the traditionally underserved” (4).
- It acts as a fundamental health care provider to **Crittenden, Poinsett, Mississippi, and Phillips counties**
- Despite its strong presence and aid to the community, however, there is a strong **need for improvement in the delivery of healthcare:**
  - Over 28% living below 100% of FPL and 49% living below 200% of FLP (4)
  - 54% of its patients are uninsured
  - Diagnoses and manages a higher percentage of patients suffering from COPD, hypertension, hyperlipidemia, CHF, and diabetes when compared to the state and national averages (2)

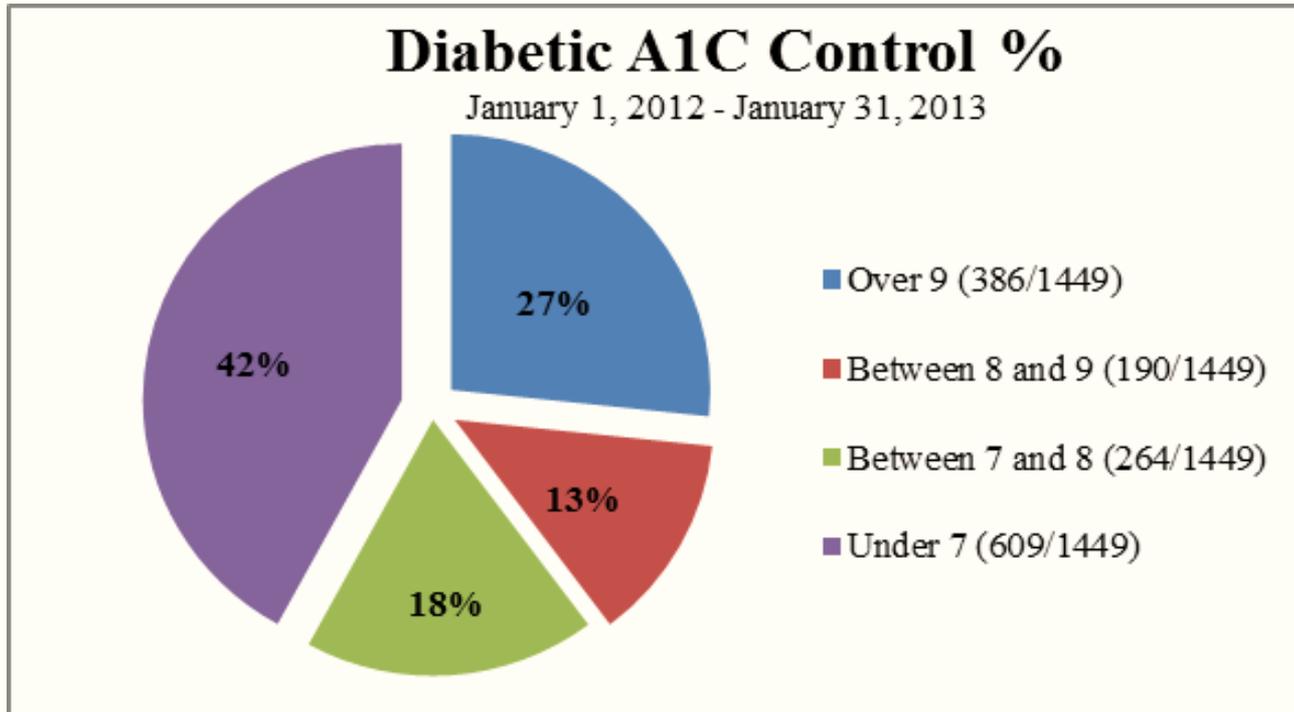
# Background

- Diabetes is one of the **fastest growing chronic illnesses** affecting mankind. Many of the long-term complications associated with diabetes, including macrovascular disease, coronary heart disease, stroke, retinopathy, and kidney diseases, **can be reduced, delayed, or prevented** if early diagnosis and control of diabetes was achieved
- As the **level of remoteness increases** in a residence, the number of hospitalization and deaths related to diabetes also increases



Paul, C. L, et. al. (2013). "Diabetes in rural towns: effectiveness of continuing education and feedback for healthcare providers in altering diabetes outcomes at a population level: protocol for a cluster randomised controlled trial". *Implementation Science*. 8 (30): 1 – 8.

# Background . . . . (Cont.)



- EAFHC has a reported **2,290 patients** out of a total number of 7,340 who are clinically diagnosed with Diabetes mellitus
- More than **57%** of its patients between the ages of 19 and 75 have hemoglobin A1C (HbA1c) values of **above 7%**



# Methodology

- In order to construct the **needs assessment** of EAFHC, I utilized several types of assessment methods:
  - **windshield survey** of the physical environment of EAFHC
  - **Key informant** interviews of the providers, administrative staff, and individuals associated with EAFHC
  - **Informal interviews** of the providers, nurses, and staff of EAFHC
- After identifying the need (**diabetes**):
  - Coordinated with the Continuous Quality Improvement (**CQI**) Specialist
  - Conducted **interviews of a subset of the patient population** in order to see how the center could better meet the needs of the patient population

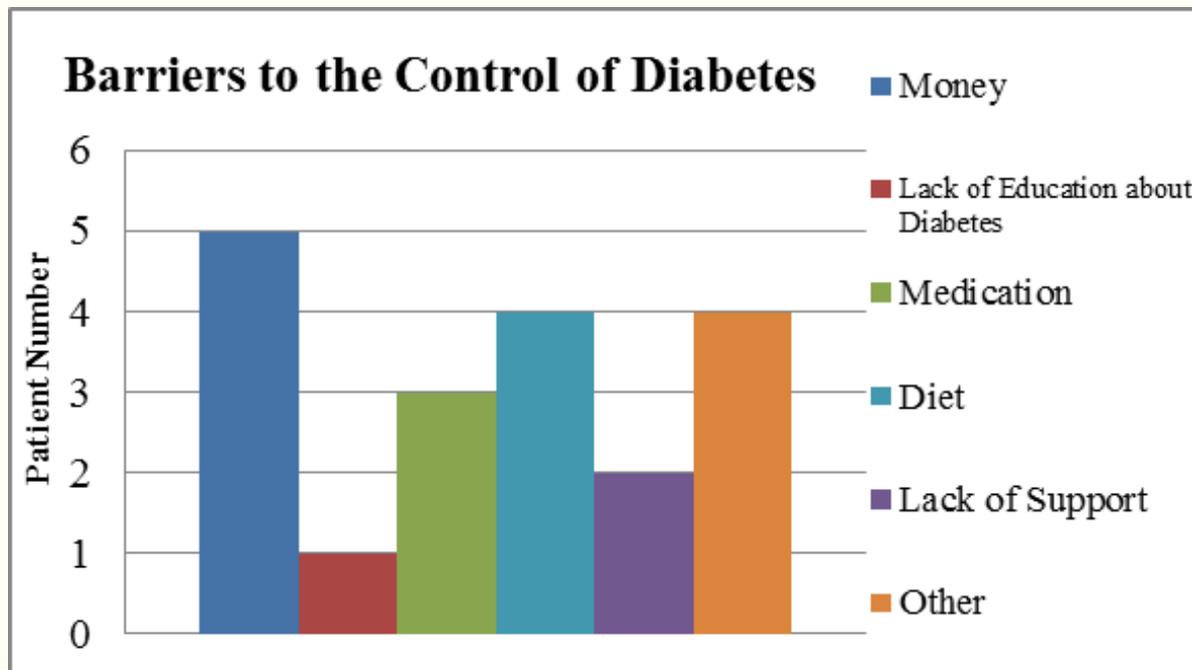


# Results

- **Key findings** pertaining to the barriers to the management of diabetes:
- Lack of **Money** and Insurance
- Limited Access to Healthy **Food** Options
- Inadequate Understanding of How to **Prepare Diabetic-Friendly Meals**
- Inflation in the Level of **Control**

# Discussion

- Lack of Money/Insurance:
  - Affects the overall care of delivery
  - Difficulty with buying medication and healthy food options
  - 5/13 patient interviewees stated that money was a major issue in the control of their diabetes

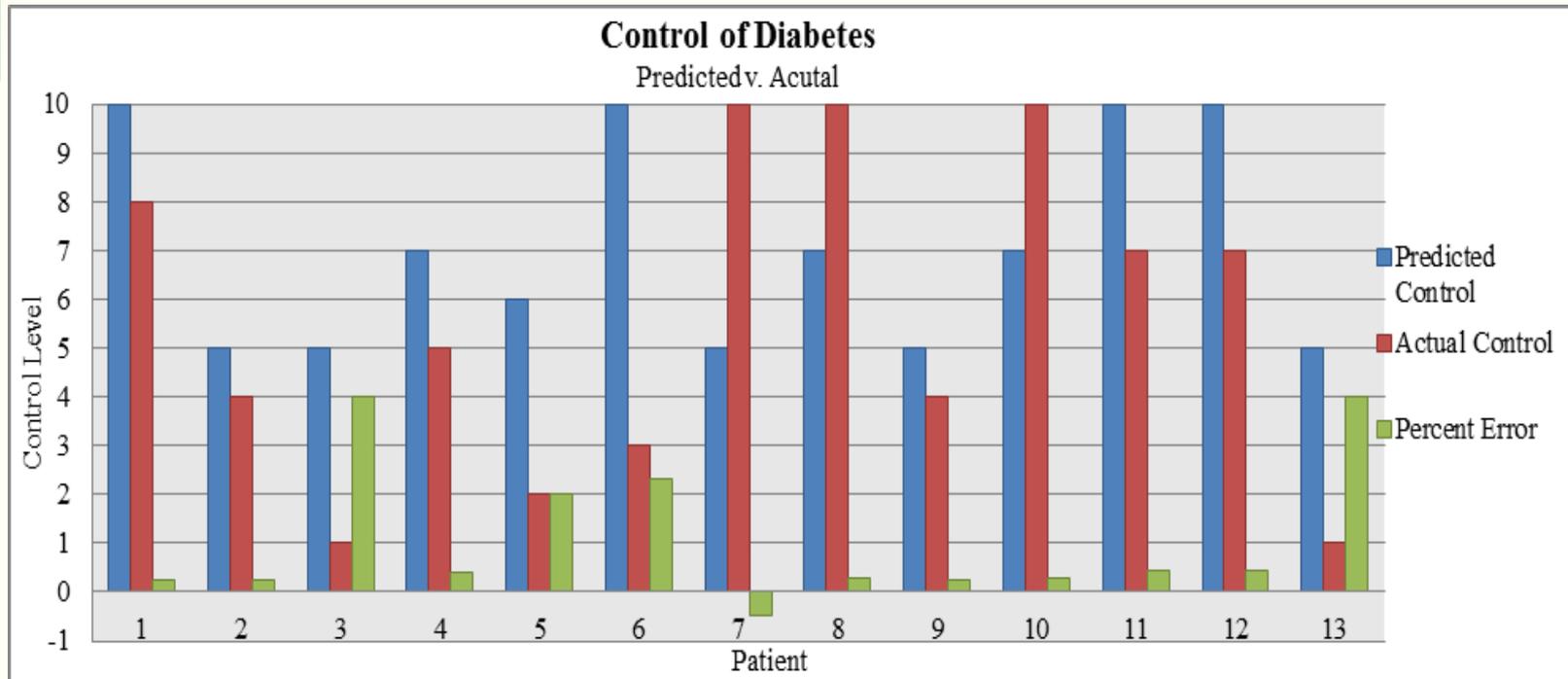




# Discussion . . . . (Cont.)

- **Limited Access to Healthy Foods:**
  - Lack of an adequate supply of nourishing produce
  - 64% of Crittenden County contains fast food restaurants
  - 4/13 patients stated that there are few places to buy quality groceries
- **Inadequate Understanding of How to Prepare Diabetic-Friendly Meals:**
  - Little cooperation from support systems
  - Distaste for diabetic-friendly foods
  - 69% of the patients demonstrated either a moderate or poor level of control with their diabetes via diet
  - Inadequate understanding of portion sizes

# Discussion . . . . (Cont.)



- **Inflation in the Level of Control:**

- 12/13 patients had inflated their level of control by at least 50%
- The average level of control for all 13 patients was 4.8, indicating that most interviewed patients have a moderate level of control in their diabetes



# Recommendations

- In order to help patients better manage their diabetes, I recommend:
  - An On-Site Registered Dietician
  - Continuing Medical Education Program
    - Educate patients as well as the family/support system
    - Pamphlets with anecdotes from people living with and managing their diabetes
    - Bi-monthly cooking classes
  - Diabetic-Friendly Recipes
  - Home Visits



# Conclusion

- Despite being a strong force in the delivery of primary medical services, East Arkansas Family Health Center is faltering in its management and control of patients suffering from diabetes.
- With more than 32% of its patients being clinically diagnosed with diabetes mellitus, it is evident that there is a need for improvement in the management and education of diabetes.
- It is my hope that through the implementation of the aforementioned recommendations, EAFHC can improve its control and management of patients suffering from diabetes.



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