

GE-NMF PRIMARY CARE LEADERSHIP PROGRAM

PCLP

# Evaluating the Effectiveness of Physician and Clinical Pharmacist Patient Education and Disease Management in Diabetes Mellitus

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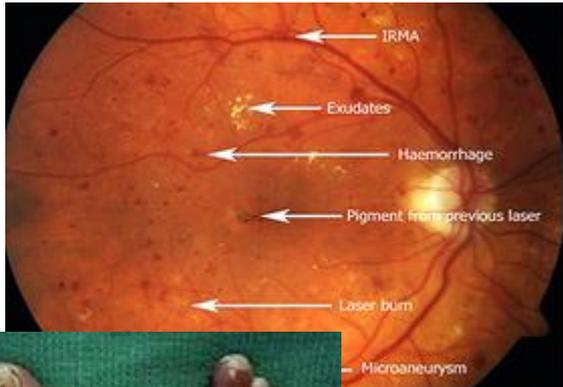
Jackson-Hinds Comprehensive Health Center

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GE Foundation

# Introduction



- **26 million** Americans have diabetes
- Mississippi ranked **2<sup>nd</sup> highest** in diabetes prevalence
- Diabetes cost is predicted to total **\$245 billion** by 2020
  - **10%** of national healthcare spending
- **Leading cause**
  - **Adult blindness, kidney failure, lower limb amputation, heart disease and stroke**
- **Diabetes complication is preventable!**



# Background

- Limited visit time with physicians
- Need for Patient Education
  - Goal: improve glycemic control, delay or avoid complications, increase quality of life, and keep treatment cost effective
- Diabetes Educator and Clinical Pharmacist - Dr. Joshua Fleming
  - Services: diabetes education, counseling, goal setting, medication management, and diet and exercise advisement



# Methodology

## A1c Collection

- Obtained a list of diabetes educator's patients and their A1c record
- Decided parameters and identified patients who fit under parameters using EHR
- June 23, 2014 – July 11, 2014

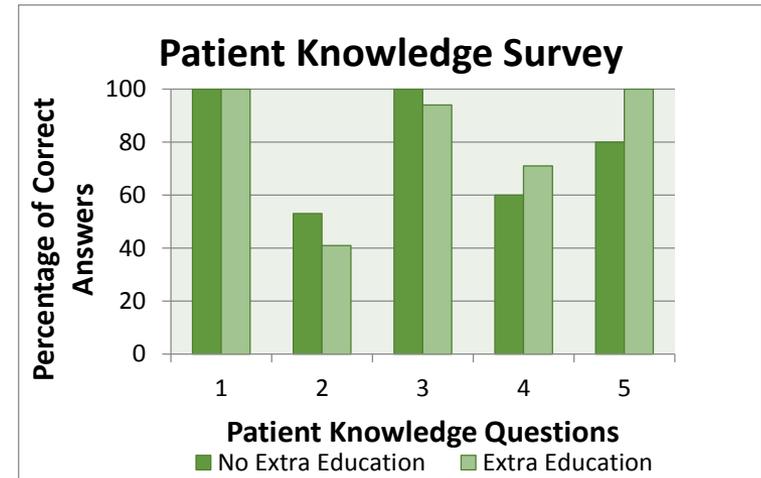
## Patient Satisfaction and Knowledge Survey

- Designed 14 question survey (5 satisfaction, 5 knowledge, 4 personal challenges to control diabetes)
- Surveyed patients who did and did not receive extra diabetes education at the Main and South clinics during visits by reading survey questions to patients
- June 19, 2014 – July 11, 2014

# Results: Patient Satisfaction Survey

- HbA1c outcome shows improvement by a mean of -0.69% for patients after receiving extra diabetes education.
- Patients with extra diabetes education had higher satisfaction (4.6 out of 5) than patient without (4.2 out of 5)
- Patients with extra diabetes education scored only slightly higher on diabetes knowledge than patient without (81.2% vs. 78.7%)
- Data is not statistically significant

	Mean $\Delta$ A1c (%)	Mean A1c (%)	Pt with decreased A1c
Before Education	+0.97 (+0.15/month)	9.55	33 %
Baseline		10.52	
After Education	-0.69 (-0.19/month)	9.83	67 %



# Discussion

- Diabetes education and counseling by a clinical pharmacist helps improve A1c outcome and patient satisfaction and knowledge.
- Percent of A1c decreased after diabetes education is comparable to effectiveness of OAD and consistent with other self-management education studies.
- Other factors than diabetes knowledge alone led to improved A1c outcome.
  - Factors include accountability, financial assistance information, and drug management

## Questions Raised

- What are the A1c outcomes of patients who only see physicians for diabetes management?
- Is diabetes education and counseling cost effective with clinical pharmacists?

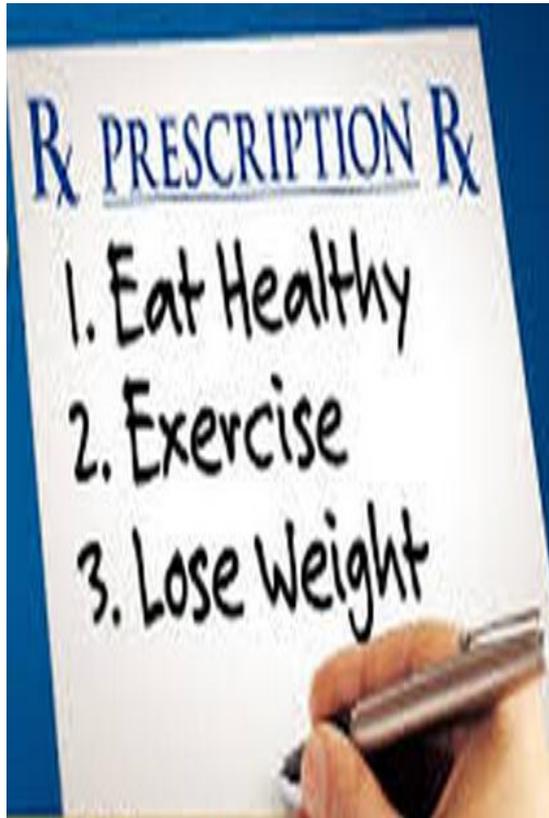
## Further Research Possibilities

- Increase size of study
- Case studies on patient with well controlled diabetes
- Evaluate effectiveness of social worker, CDA, nutritionist, and dietitian

## Possible Tangible Results

- Patients learned correct diabetes facts after taking the survey
- Organized A1c record of 15 patients who received diabetes education for future use

# Recommendations



- **Increase awareness** of diabetes education and counseling availability to all diabetic patients (Free!)
- **Utilize diabetes classes** provided by pharmaceutical companies (Free!)
- Form **diabetes support group** (Free!)
- **Emphasize** normal blood sugar ranges to patients
- Increase consistency of **A1c testing**
- Have **educational brochures** available in waiting and exam room

# Conclusion



- Patient education helps with the control of diabetes
- Other barriers to good health such as finance and environment may negate the helpful benefits of diabetes education
- Free or low-cost resources are available for diabetes education that needs to be utilize to their maximum potential

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Leaders and Staff

