Diabetic Health Literacy Among Hispanics at Clinton Family Health Center

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Introduction

- Over 29 million Americans in the U.S. have diabetes (American Diabetes Association, 2013).

  - Hispanics – 15%

- The burden of disease continues to escalate yearly at a significant rate (Cavanaugh, 2011).

- Recent efforts have focused on the concept of *health literacy* as a pivotal determinant to diabetes health outcomes.

  - Health literacy can be defined as the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions (White et al., 2013).

- Poor health literacy represents a major public health concern for Hispanics, who represent the largest and fastest-growing minority population in the United States (Calderon et al., 2014).

  - It is estimated that 66% of Hispanics have basic or below basic health literacy skills (White et al., 2013).

Background & Significance

- Type 2 Diabetes is a progressive, chronic, and complex disease that disproportionally affects the Hispanic Population (Valen, Narayan & Wedeking, 2012).

- More than **2.5 million Hispanic adults** affected with type 2 diabetes (Valen, Narayan & Wedeking, 2012).

- Higher rates of morbidity and mortality than non-Hispanic white individuals (Valen, Narayan & Wedeking, 2012).

- Hispanics are 50% more likely to develop diabetic retinopathy, 4.5-66 times more likely to develop diabetes related kidney disease, and 1.8 times more likely to suffer from a lower limb amputation (Hatcher and Whittemore, 2007).

Methodology

Setting and Sample:

Clinicians: 3 Primary care providers

Patients: Convenience sample of 16 Hispanic patients

- Age: 39-79 years, Diagnosed with type 2 diabetes , HbA1c > 6.0%

- Descriptive qualitative study

Data Collection:

Clinicians:

- Clinicians surveys included a combination of qualitative questions and a 5 point Likert scale used to identify the challenges and knowledge deficits of the patients.

Patients:

- Patient Surveys addressed signs and symptoms of hyper/hypoglycemia, sick day management, alcohol and diabetes, nutrition label, and carbohydrate allowance per meal.

- Structured interviews were used and questions were read aloud to patients.

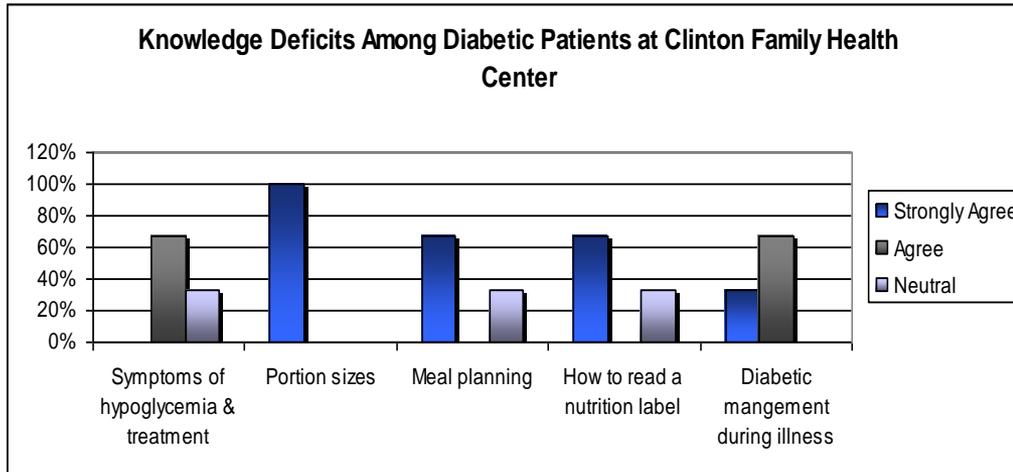- Patient data was collected over 4 days

Results

Patient population

- Female (62.5%), mean age of 55.7 years

- Puerto Rican (87.5%) and Cuban (12.5%)

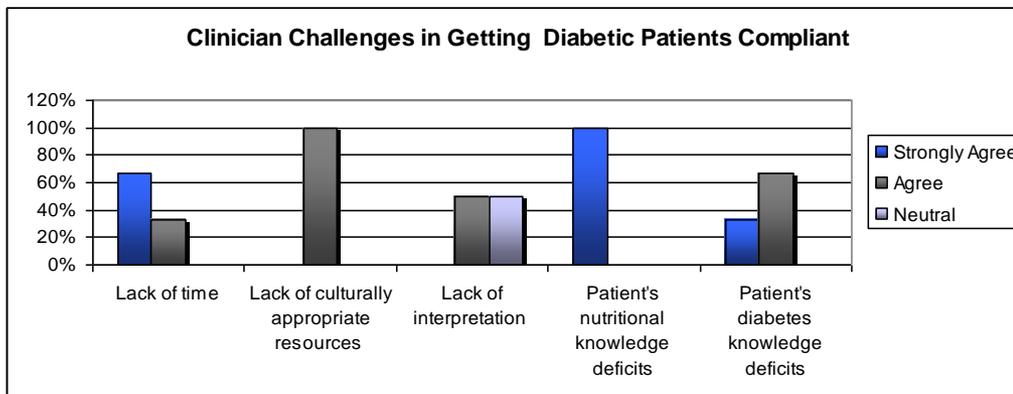- Years with diabetes 5.5 years

- HbA1c 8.2

Results

Clinician Surveys

Knowledge Deficits Among Diabetic Patients at Clinton Family Health Center

Legend: ■ Strongly Agree ■ Agree ☐ Neutral

Categories: Symptoms of hypoglycemia & treatment; Portion sizes; Meal planning; How to read a nutrition label; Diabetic mangement during illness
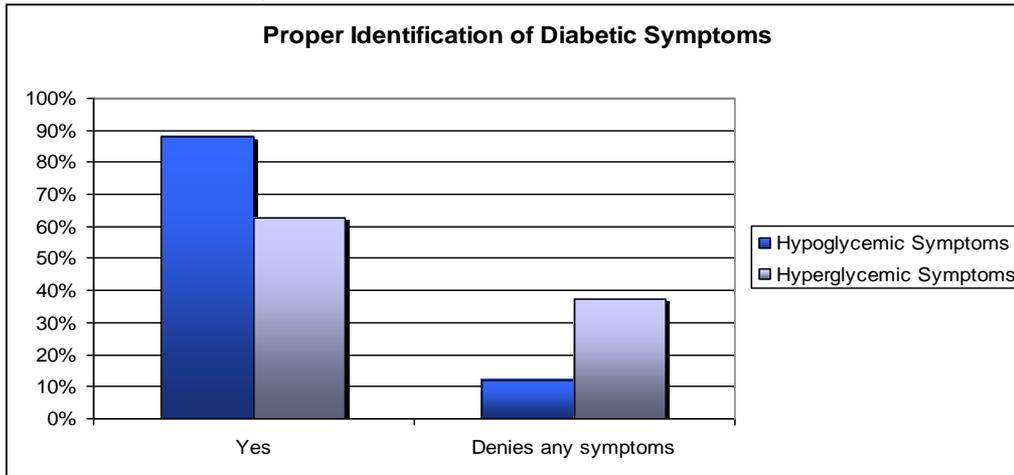
The greatest knowledge deficits cited by clinicians were with respect to *portion sizes*, *meal planning*, and *properly reading a nutrition label.*

Clinician Challenges in Getting Diabetic Patients Compliant

Legend: ■ Strongly Agree ■ Agree ☐ Neutral

Categories: Lack of time; Lack of culturally appropriate resources; Lack of interpretation; Patient's nutritional knowledge deficits; Patient's diabetes knowledge deficits

The greatest challenges in achieving target HbA1c were associated with *nutritional knowledge deficits* and *lack culturally appropriate resources.*
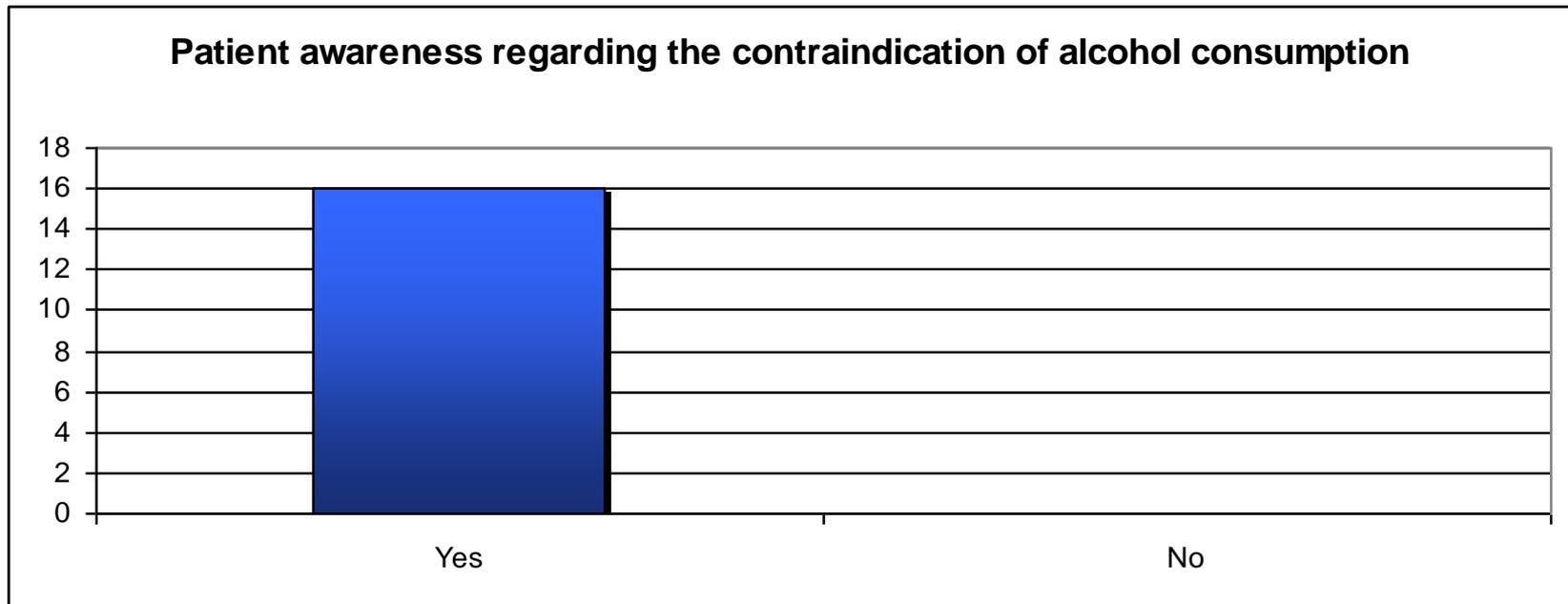
Results

Patient Surveys

Proper Identification of Diabetic Symptoms

Legend: Hypoglycemic Symptoms, Hyperglycemic Symptoms

X-axis: Yes, Denies any symptoms

90% of patients accurately reported the symptoms and corresponding treatment for hypoglycemia.

Patients Compliant with Diabetic Medications During "Sick Days"

X-axis: Yes, No, Not on medications
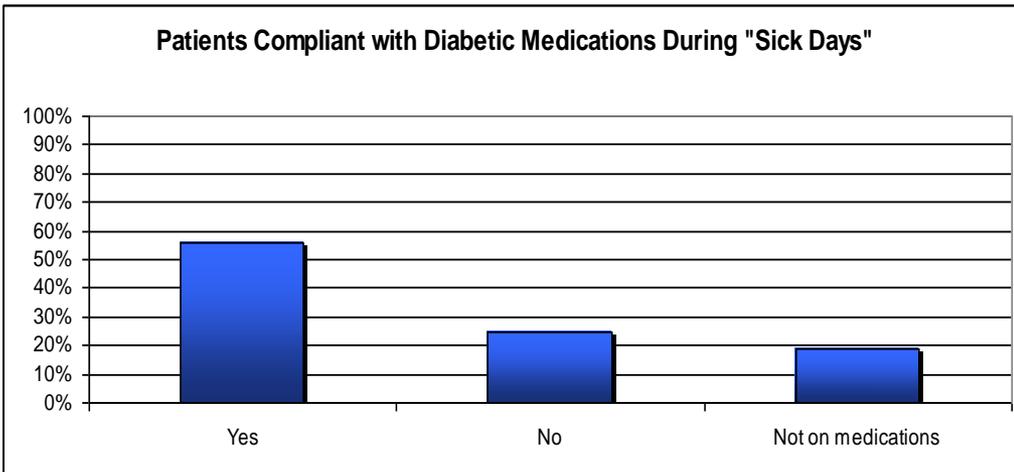
56.3% of patients were aware of the need to continue their diabetic medication regimen despite a lack of food consumption

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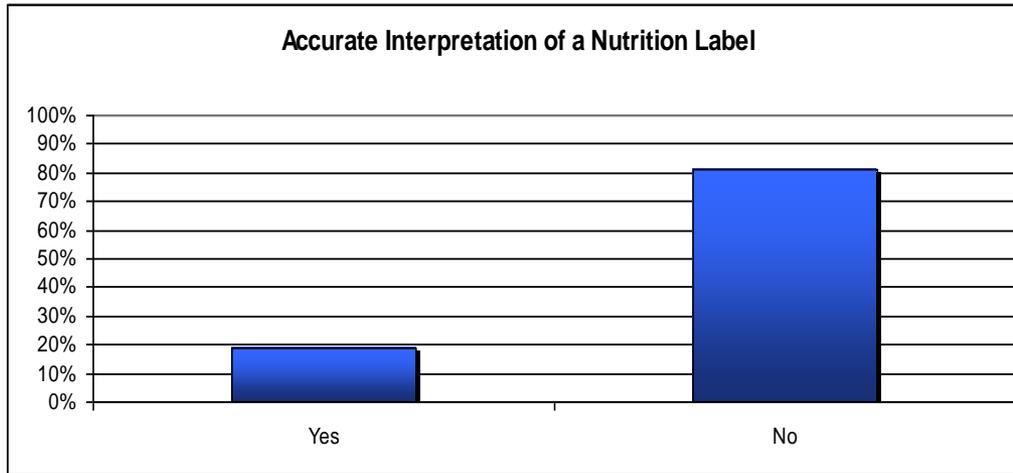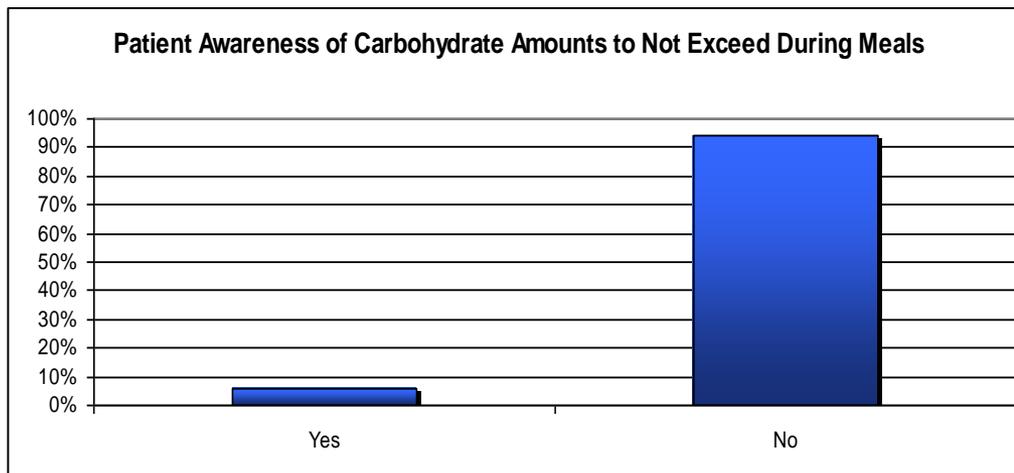NATIONAL MEDICAL FELLOWSHIPS
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Results

Patient Surveys

Patient awareness regarding the contraindication of alcohol consumption

Yes	No

All **16** patients were aware of the need to avoid alcohol as a diabetic patient

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Results

Patient Surveys

Accurate Interpretation of a Nutrition Label

81.3% of patients did not know how to accurately interpret a nutrition label.

Patient Awareness of Carbohydrate Amounts to Not Exceed During Meals

Only **1 patient** could report the number of carbohydrates that should not be exceeded in each meal.

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Discussion

Findings:

- Most patients accurately cited appropriate responses corresponding with understanding hypo/hyperglycemia, alcohol consumption, and diabetic management during sick days.

- Wide discrepancy in the level of knowledge concerning information related to nutritional education.

Questions Raised:

- What is the diabetic health literacy level of Hispanic patients at Clinton Family Health Center?

Further Research Possibilities:

- Find the most effective method of teaching to address diabetic education for the Hispanic population given the time constraints that clinicians must work under.

Possible tangible results of findings:

- Clinicians can focus their education with the incorporation of culturally appropriate visual images.

Recommendations

- Continue providing reinforcement regarding signs, symptoms, and treatment management of hypo/hyperglycemia, sick day management, the contraindication of alcohol consumption.

- Incorporate culturally sensitive visual images and animations as a means of addressing topics that prove to be vital in maintaining the wellbeing and livelihood of the diabetic patients.

- Utilize visual images that offer size comparisons to allow patients to understand portion sizes.

- Re-establish monthly nutritional classes to provide the basics on appropriate amounts of carbohydrates per meal and how to interpret a nutrition label for the purposes of focusing attention to carbohydrates.

Conclusion

- Having an adequate level of health literacy plays a vital role in maintaining proper and effective self care of diabetes.

- Primary care providers are pivotal in their role as educators and motivators of change for this vulnerable population.

- Utilizing resources that are culturally appropriate with the use of visual images can allow patients to achieve portion control in a ways that is low in complexity and is feasible for those with low literacy to comprehend.

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