

GE-NMF PRIMARY CARE LEADERSHIP PROGRAM

PCLP



Advancing Primary Care Through Dermatological Screening

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Introduction

- Diabetes Mellitus Type 2 increases healthcare delivery costs, while negatively impacting patient quality of life.
 - healthcare system can benefit from effective screening with the addition of counseling with evidenced based recommendations during outpatient visits.
- To investigate this belief I created a study focusing on the presence of Acanthosis Nigricans (AN) in relation to finger stick glucose testing to identify those at risk for Diabetes Type 2.
 - I sought to combine my dermatological career interests with primary care screening techniques to increase the overall well being of patients
- Personal investment in distribution of healthcare to the underserved.
 - Underserved communities undertake environmental and social issues such that their health becomes of low priority.



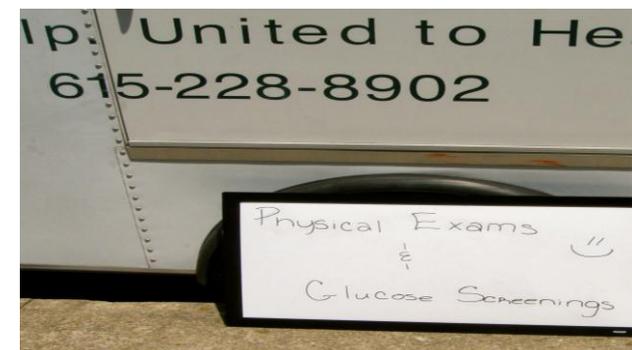
Background

- 8.3% of the population has diabetes, 12.6% are non-Hispanic blacks and 11.8% Hispanic.
- High-risk ethnic groups are population base of community health centers
- Elevated blood glucose can damage eyes, kidney, skin, nerves, and blood vessels
 - Unfortunately, patients who experience symptoms of organ damage and are not aware of it .
 - Prevention is key to decreasing morbidity, mortality, and increased health care cost.



Methodology

- Location: United Neighborhood Health Care Services Community Health-Care events
- Introduction of the improvement quality control consent forms
- Participants received a numerical value with a Diabetes fact sheet with current UPSTF recommendations
- General ten minute physical exam with focus on Acanthosis Nigricans + finger stick glucose test



Methodology

- Participants informed of their results, indications of risk reduction, and referral letters for diabetic blood glucose levels
- sample size was isolated based on elevated blood glucose levels.
- Then, the sample was evaluated for how many participants had Acanthosis Nigricans and the corresponding average blood glucose level.



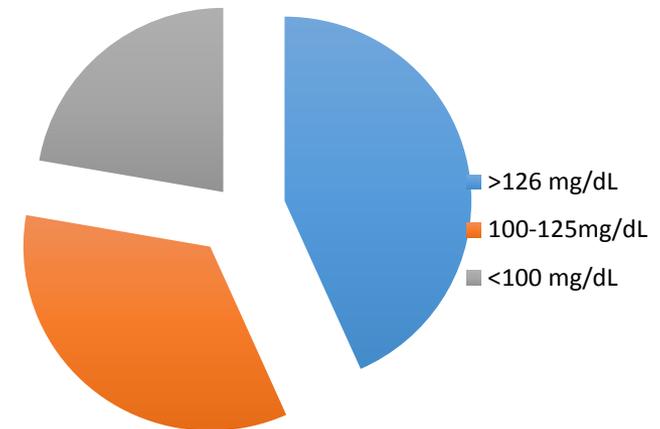
Results

20% were found to have Blood glucose levels qualifying them as Type 2 Diabetic

44% (11/25) of participants were found to have elevated Fasting blood glucose qualifying them as pre-diabetic

36% of participants were found to have normal fasting blood glucose levels.

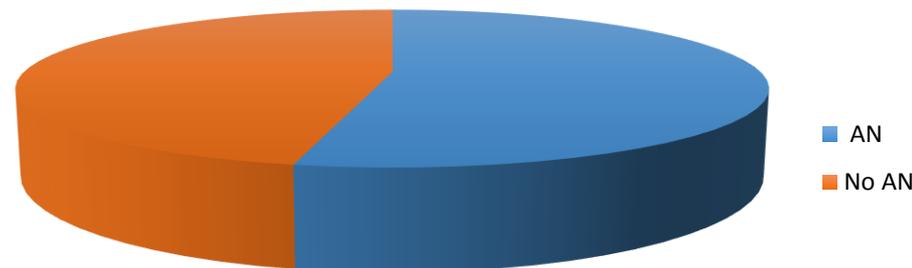
Blood Glucose Distribution of Sample Size



Results

- 11/25 Participants found to have Acanthosis Nigricans on physical exam.
- Presence of AN Average blood glucose of 124.82 mg/dL
- AN not present average blood glucose of 105.43 mg/dL.

Presence of AN in Sample Size



Discussion

- Findings support high rate of diagnosed diabetics in the United States
 - Demonstrates need for methods of early detection to retard progression of Type 2 Diabetes, its morbidity, and mortality.
- 64% identification elevated blood glucose of the sample size demonstrates screening does identify those at risk
 - 1.18 mg/dL difference between the average blood glucose level of our AN group and the 126 md/dL requirement for the diagnosis of Diabetes Type 2.
- $p = .134$ demonstrates a positive correlation between high blood sugars and the presence of Acanthosis Nigricans
 - Valid benefit in using AN as a identifier for those at risk of Diabetes Mellitus Type 2.

Discussion

- AN is easily identified due to its geographical location and its characteristic morphology.
- If CHCs take the responsibility of instituting my design study during clinic visits, they would have to institute a new infrastructure and will incur the associated cost
- Eventually lower health care cost, consequently benefiting the government.
 - Raises the question of the governments support in CHCs' effort to improve national health care



Recommendations

- Prior knowledge on the study's design will facilitate the process
- Engage participants, explain thoroughly to ease any fears associated with finger glucose sticks.
- Instead of referral letters, the ability to book follow up appointments at time of screening for a secondary confirmatory glucose value would be more concrete.
 - template of the patient encounter, so the follow up physician is aware of topics addressed at the initial visit

Conclusion

- Diabetes Mellitus Type 2 is ever prevalent in our communities causing increased consumption of healthcare resources and decreased patient quality of life
- Detecting AN on physical exam and subsequent finger stick glucose testing is associated with an elevated blood glucose level
- AN is an efficient identifier
 - early intervention to decrease concomitant morbidity, mortality and health care cost .

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