



Dietary Behaviors, Perceptions, and Barriers for Patients At-Risk for Type 2 Diabetes Mellitus at the Frank Bryant Health Center

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Introduction

- 14% of San Antonio's population is diabetic
- Ethnicity plays a role: Hispanics and African-Americans are 2x more likely to develop Type 2 Diabetes Mellitus (T2DM) than Caucasians
- What other factors contribute to the development of T2DM?
- **Diet** and Physical Activity



Background

- Lack of **Availability** of healthy foods in low-income neighborhoods
- High **Cost** of healthy foods
- Unhealthy **Social Environment**
 - unhealthy dietary behavior of friends and family members
 - household taste preferences
- Difficulty in food **Preparation**
 - lack of time
 - lack of skill



Methodology

- Survey instrument
 - Free response
 - Yes or No questions
 - Likert scale questions
- Timeline
 - Week 1: background research and survey creation
 - Weeks 2 & 3: survey collection
 - Weeks 4 through 6: data analysis and completion of paper
- Surveys collected: 44
- Population
 - Adult patients at the primary care clinics at the Frank Bryant Health Center
 - Stratified into at-risk for T2DM and non at-risk for T2DM
 - At-risk: history of gestational diabetes or family history of diabetes

Results

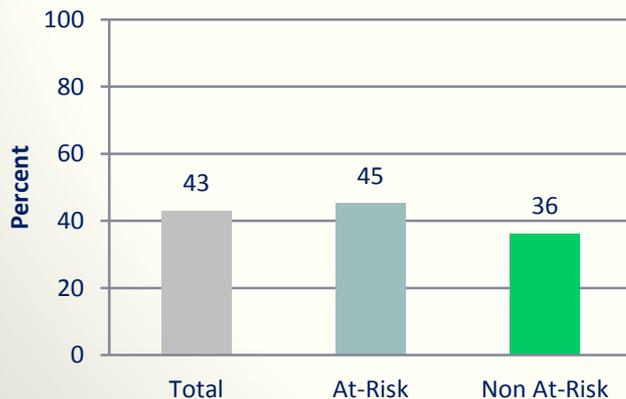
Demographics

- 36% men, 64% women
- average age: 45
- 47% Hispanic, 41% African-American, 7% Caucasian, 5% Asian
- 58% obese, 26% overweight, 14% normal, 2% underweight

Diabetes History

- 75% at-risk for T2DM, 25% non at-risk for T2DM

% Patients Who Received Diabetes Education



| Please rate your understanding of diabetes. | At-Risk (n = 32) | Non At-Risk (n = 10) |
|---|------------------|----------------------|
| Good | 28% | 50% |
| Fair | 63% | 30% |
| Poor | 9% | 20% |

Results, continued

| External Barriers Statement | At-Risk “Yes” Responses | Non At-Risk “Yes” Responses |
|--|-------------------------------|-----------------------------------|
| 2: There are enough healthy food options where I live. | 88% | 100% |
| 3: Healthy food is too expensive. | 58% | 18% |
| 4: Healthy food is hard to prepare. | 27% | 0% |
| 5: My family and friends usually eat healthy food. | 36% | 36% |
| 8: I have a support system to help me eat healthier. | 58% | 55% |
| Values Questions | At-Risk Majority responses | Non At-Risk Majority responses |
| 9: How important is it for me to eat healthy? (1=not, 5=very) | 5 (91%) | 5 (73%) |
| 10: How important is it for me to eat on a budget? (1=not, 5=very) | 5 (58%) | 4 (55%) |

Results, continued

| Self-Perception Statements | At-Risk “Yes” Responses | Non At-Risk “Yes” Responses |
|--|----------------------------|--------------------------------|
| 1: I believe that I eat healthy. | 58% | 73% |
| 6: I am afraid my current diet will increase my risk for diabetes. | 45% | 36% |
| 7: I am actively trying to eat healthier. | 88% | 82% |

Of those who said they ate healthy:

- 56% did not include fresh fruit as part of their typical daily diet
- 22% did not include at least one full serving of vegetables as part of their typical daily diet



Discussion

- Significant portion of CommuniCare patients are overweight or obese, yet only 54-68% have a weight goal
- At-risk group not receiving adequate diabetes education from primary care provider
- Greatest external barriers for at-risk group:
 - high **cost** of healthy food
 - difficulty in healthy food **preparation**
- Greatest (unseen) external barrier for both groups:
 - **social environment:** unhealthy dietary behaviors and preferences in friends and family members
- Patient health literacy seems lacking, especially because many patients who believe they eat healthy are lacking in daily fruit and vegetable intake



Recommendations

- Emphasis on weight loss: set a specific weight loss goal for overweight/obese patients
- Proper nutrition education, especially for patients at-risk for T2DM
- Involve friends and family members in changing their eating habits as well
 - Train youth to eat fruits and vegetables
- Partner with Texas Diabetes Institute to provide more cooking classes that teach culturally-relevant and inexpensive food preparation
- Partner with local diabetes prevention programs to create more widespread attention to, and practice of, healthier lifestyle choices



Conclusion

- Focus on improving patient health literacy
- Barriers exist: cost is possibly the greatest
- Promote healthy lifestyle behavior in a broader context: involve schools, workplaces, churches, etc.
- Directions for Future Research:
 - Which factor is the greatest barrier to healthy eating?
 - Patients potentially live in a food desert, but do not have the health literacy to understand this
 - Ask about external barriers in a different way
 - Internal barriers: cultural and taste preference considerations, current eating habits, personality types