Enhancement of Diabetes Prevention Awareness in Adolescents

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• Increase understanding of the magnitude of the adolescent diabetes epidemic in South Carolina
• Facilitate prevention of diabetes and its complications in South Carolinians

SPECIFIC AIMS

Aim 1
• Develop and implement a diabetes education and prevention program for high school students
Aim 2
• Organize a diabetes prevention student group at MUSC, which will continue to work on diabetes prevention in the Charleston area
Aim 3
• Lobby our elected officials and Department of Education to include diabetes in the statewide educational standards and make prevention a priority statewide

BACKGROUND

What is diabetes?
Diabetes: chronic disease in which the body does not properly control the amount of sugar in the blood.
- Risk Factors: obesity, physical inactivity, unhealthy diet, family history, race/ethnicity (African American or Hispanic), older age
- Complications:
  • Stroke
  • End-stage renal disease
  • Cardiovascular disease
  • Blindness
  • Peripheral neuropathies
  • Amputations
  • Periodontal disease

Why is diabetes important to South Carolinians?
- Diabetes is an epidemic in South Carolina affecting 10% of African Americans and 7% of Caucasians in the state
- Diabetes causes serious complications:
  • 257,000-342,800 people are estimated to be affected by diabetic complications in South Carolina
  • Diabetes costs the state millions of dollars:
    • 1 in 3 African Americans hospitalized in SC has diabetes
    • 1 in 5 Caucasians hospitalized in SC has diabetes
  • In one year, the bill for the 8,800 patients seen with diabetes as their primary reason for admission was $104 million.
  • Tax payers cover 73% of this amount

METHODS

1. High School Diabetes Prevention Education:
   • Visited a Burke High School health class three times to furthering the students’ education regarding diabetes prevention
   • Pre-test: 42% correct
   • Post-test: 59% correct
   • Evaluations indicated a desire for more knowledge from teacher and students

2. ADAPT: Adolescent Diabetes Awareness and Prevention Team
   • University-wide, student-run organization
   • Open to all MUSC students in good academic standing
   • Executive board composed of 6 members—one from each college encourages inter-professional team skills
   • Objectives:
     • Emphasizing inter-professional teamwork
     • Increasing the awareness and understanding of diabetes mellitus among South Carolinians
   • Aims:
     • Community outreach through projects such as community health fairs, education sessions at local schools
     • Work to make legislative changes regarding healthy lifestyles to decrease the burden of diabetes in South Carolina

3. Legislative Interests
   • Identified current South Carolina curriculum standards regarding Diabetes education were vague:
     • Content Area 1, Standard 1: “By the end of 12th grade students should be able to:
       • evaluate risk relationships between healthy lifestyle behaviors and disease prevention
       • analyze strategies for detection and treatment of chronic and communicable disease
       • Evaluate the risks and benefits of personal health practices”
     • Sent a letter to the Director of Office of Curriculum and Standards: Helena Tillar
     • Suggested revision of South Carolina Health and Safety Education Standards to include diabetes education
     • Proposed the important concept of preventing diabetes rather than treating the disease
     • Increased awareness of diabetes in South Carolina’s high school students
     • Increased awareness of the Medical University of South Carolina Presidential Scholars Program
     • Traveled to Columbia to meet state legislators and discuss our concerns as students

RESULTS

• Diabetes is an enormous health problem in South Carolina
• Diabetes can be prevented by healthy lifestyle choices, especially when started early
• Poor performance on the pre-test indicates the need for diabetes education in local schools
• Despite some selection bias, the 17% increase in scores on the post-test after only 3 sessions suggests that incorporating diabetes education into the curriculum would be beneficial to the students

CONCLUSIONS

• Diabetics costs the state millions of dollars
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• Tax payers cover 73% of this amount

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