Healthy People 2030

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Healthy People 2030 Objective

Increase the proportion of people with diabetes who get formal diabetes education

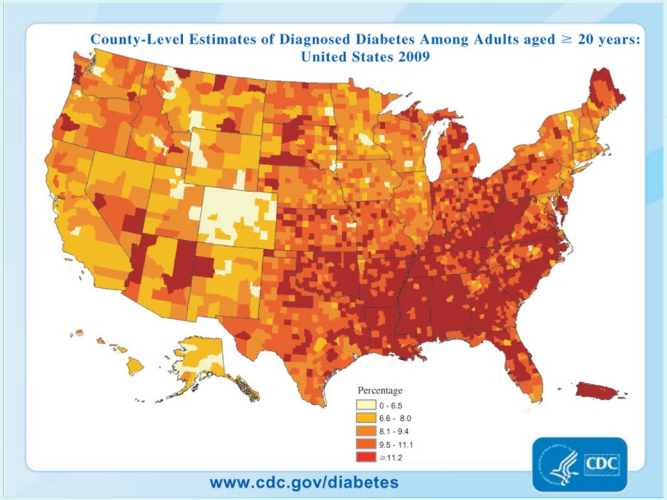
- Describe the health status for Virginia and the United States
- Describe the health status problem for Hampton Roads (Norfolk)
- Discuss the national and local trends over the last 10 years
- Assess two current research articles related to formal diabetes teaching
- Identify and discuss successful programs
- Assess gaps in service of proper health teaching
- Assess and suggest improvements needs
- Discuss additional research needed related to recommendation improvement
- Discuss the nurses role in addressing formal diabetes education




Health Status for the United States

Diabetes

- **Prevalence:** In 2019, 37.3 million Americans, or 11.3% of the population, had diabetes.
- **Diagnosed:** 28.7 million people, including 28.5 million adults.
- **Undiagnosed:** 8.5 million people (23.0% of adults are undiagnosed).
- **New cases:** 1.4 million Americans are diagnosed with diabetes every year (Center for Disease Control and Prevention, 2022).
- **Diabetes by race and ethnicity:**
    - 14.5% of American Indians/Alaskan Natives
    - 12.1% of non-Hispanic blacks
    - 11.8% of Hispanics
    - 9.5% of Asian Americans
    - 7.4% of non-Hispanic whites
- **Deaths:** Seventh leading cause of death in the United States in 2019 based on the 87,647 death certificates in which diabetes was listed as the underlying cause of death (American Diabetes Association, 2022).

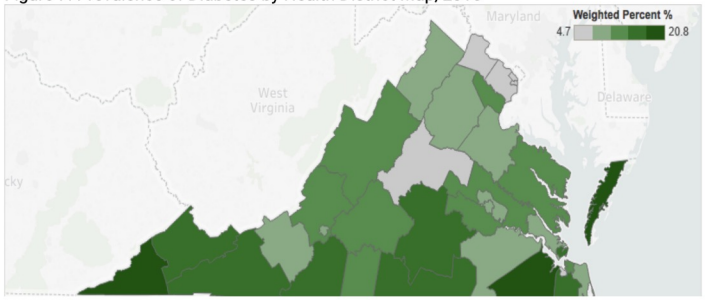


Health Status for Virginia

Virginia's diabetes epidemic:

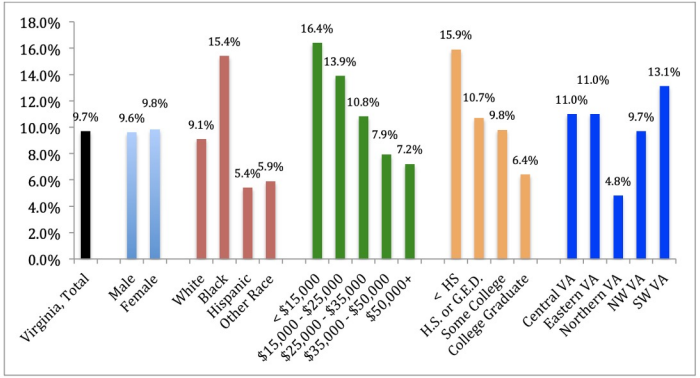
- Approximately 701,793 people in Virginia, or 10.4% of the adult population, have diagnosed diabetes.
- Every year an estimated 59,557 people in Virginia are diagnosed with diabetes.
- There are 2,208,000 people in Virginia, 33.3% of the adult population, who have prediabetes with blood glucose levels that are higher than normal but not yet high enough to be diagnosed as diabetes (American Diabetes Association, 2022).
- **Gender:** Women have slightly higher rates of diabetes than men.
- **Race:** African Americans have almost three times the amount of diabetes other race/ethnicity groups.
- **Income:** An important factor with those in poverty having more than double the prevalence as people in the higher income range.
- **Education level:** Those who have not graduated from high school have more than twice the prevalence of diabetes compared to those who graduated from college (Virginia Department of Health, 2017).

Figure 7. Prevalence of Diabetes by Health District Map, 2015



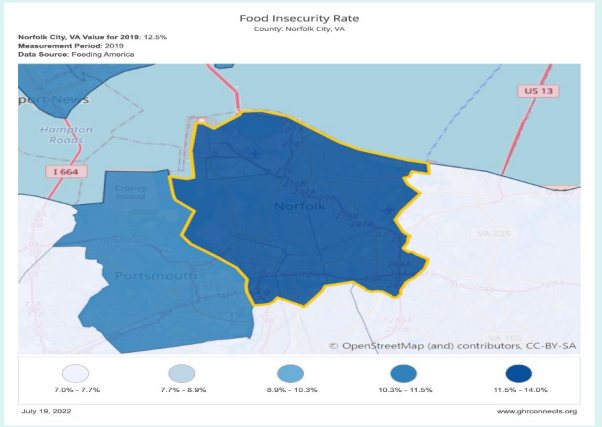
Source: VDH, Data Portal. Chronic Disease. Chronic Disease Prevalence, Diabetes, 2015

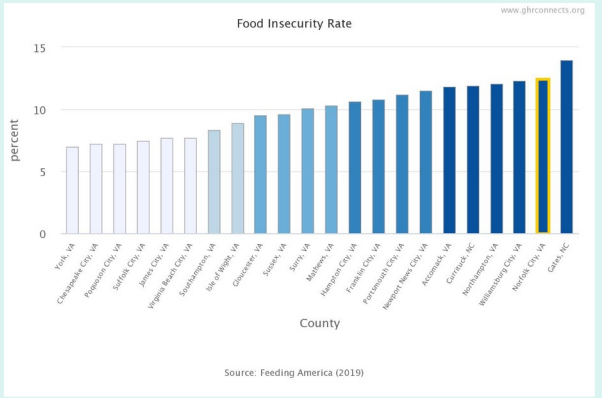
Figure 6. Prevalence of Diabetes in Virginia by socio-demographics, 2014



Health Status Problem for Hampton Roads (Norfolk)

- As of 2019, 15.7% of Norfolk residents were diagnosed with diabetes. Norfolk has a higher diabetes mortality rate of 24.8 (rate per 100,000) compared to the overall Virginia rate of 18.3.
- Knowledge Deficit: More than 45% of Virginians with diabetes have never taken a class on how to better manage their diabetes (Virginia Department of Health, 2017).
- Food insecurity is defined by the United States Department of Agriculture as the lack of access, at times, to enough food for an active, healthy life. Food insecurity is associated with numerous adverse social and health outcomes and is increasingly considered a critical public health issue. Key drivers of food insecurity include unemployment and poverty, which can prevent adequate access to food.
- The United States Department of Agriculture has identified many of these Norfolk neighborhoods as food deserts or as having low access to fresh foods (Feeding America, n.d.).





Norfolk Trend over 10 Years

2010

9.7% of residents diagnosed with diabetes

2019

15.7% of residents were diagnosed with diabetes

Current

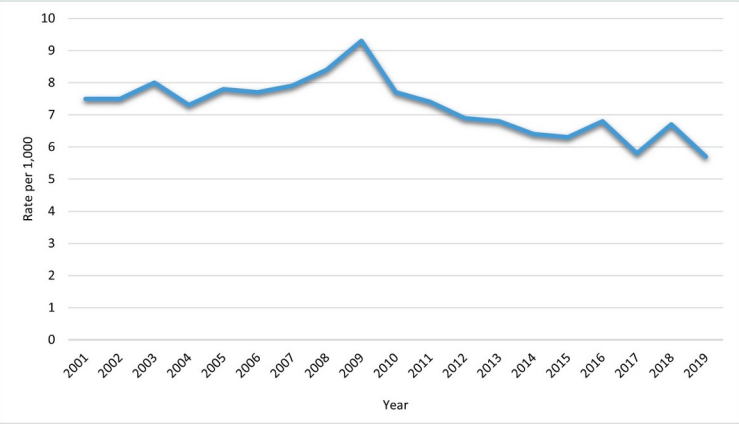
Norfolk's has a high diabetes mortality rate as compared to surrounding cities

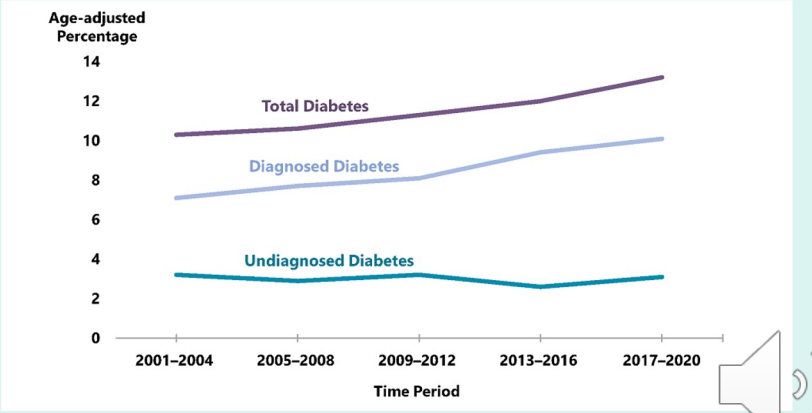





National Trend Over 10 Years

- During the 2001-2020 the prevalence of diabetes significantly increased among adults over 18
- Estimates are that total diabetes was 10.3% in 2001-2004 and 13.2% in 2017-2020
- No significant change in undiagnosed diabetes prevalence was detected
- In 2010 18.8 million people had diabetes; 7 million had undiagnosed diabetes
- In 2019 28.7 million had diagnosed diabetes; 8.5 million had undiagnosed diabetes





Current Research

A Coordinated Population Health Approach to Diabetes Education in Primary Care

Goal Use diabetes educators in the primary care setting to adjust the structure of care delivery for diabetic patients at high risk for complications.

Methods

- Intervention: Two diabetes educators provided DSMES (Diabetes Self Management Education and Support) to primary care offices
- 220 participants, 106 had data at 6 months and 80 had data at 12 months
- Demographic and Baseline HgA1c, LDL, BMI checked again at 3, 6, 9 and 12 months

Results

- HgA1c decreases shown at 6 months and 12 month
- LDL decreases shown at 6 months but not sustained to 12 months
- No changes in BMI

Limitations No control group

Implications More research to be done on Diabetes Educators and the role they can play in various interdisciplinary settings
(Zupa, et al., 2019)

Diabetes Self-Management Education and Support (DSMES)

Program provided to patients by their physicians or by a diabetes educator

Teaching points

1. Balance diet
2. Staying Active
3. Taking medicines
4. Monitoring blood glucose and activity level and nutrition
5. Risk reduction
6. Healthy coping
7. Problem solving

(Center for Disease Control and Prevention, 2022)

Empowering Diabetes Self-Management Through Technology and Nurse Health Coaching

Goal Explore influence of mobile health technology and nurse health coaching on patients with diabetes.

Methods

- 24 patients, met with a nurse were given an activity tracker and nutrition application tracker for phone
- Every 2 weeks nurse followed up with patient for a total of 6 sessions, nurses utilized motivational interviewing
- Focus group conducted for qualitative thematic analysis

Identified Themes and Results

1. Enhanced perspectives about living with diabetes
2. Increased awareness of health behaviors
3. Improved support
4. Increased ownership of health

Implications

- Technology and self management

(Miyamoto et al., 2019)

Diabetes Self-Management Program (DSMP)

Developed by Stanford University

Goal

Improve diabetes management

Course

6-weeks
2 trained facilitators

Face-to-face

2.5 hrs per-week
Community center
10-15 participants

Web-Based

20-35 minutes
3x weekly
25-30 participants

Education

Ways to deal with symptoms of diabetes

Exercise regimes

Healthy eating

Proper medication use

Working with your healthcare provider

(Lorig et al., 2016)

Recommendations

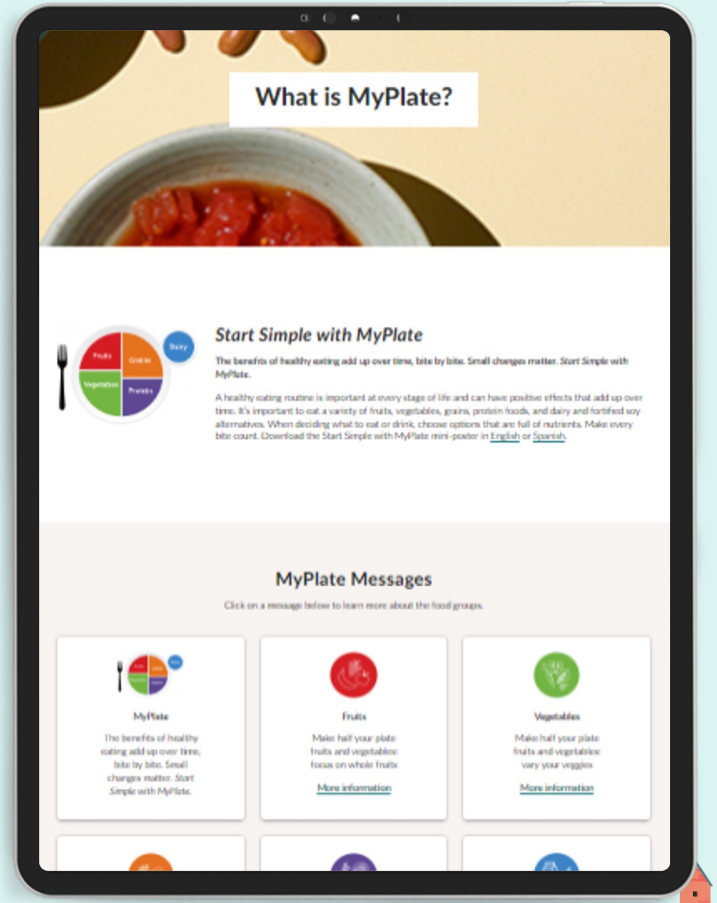
Goal: To find resources to develop programs that prevent diabetes

Program improvement:

- Organizational system created and moved online into a database to reduce the amount of paper records that are stored in the large pantry
- Dietary logs used and assessed each week to track the patients food consumption for quality and quantity to create an avenue for personalized nutritional advice
- Implementing SNAP education and application process to enhance access to food and decrease food disparities https://www.fns.usda.gov/snap/supplemental-nutrition-assistance-program
- Implementing HbA1c testing on site for participants to monitor their levels; create cards for them to track their levels
- Using relative resources such as *The Diabetes Prevention Lifestyle Change Program Booklet* https://www.cdc.gov/diabetes/prevention/pdf/MDPP_Overview_Flipbook.pdf (National Diabetes Prevention Program, 2020)

Program Improvement Continued

- Patients can use MyPlate to get personalized resources and guidelines on nutritional foods while creating goals, having resources, tools, and recipes for free https://www.myplate.gov/



Recommendations

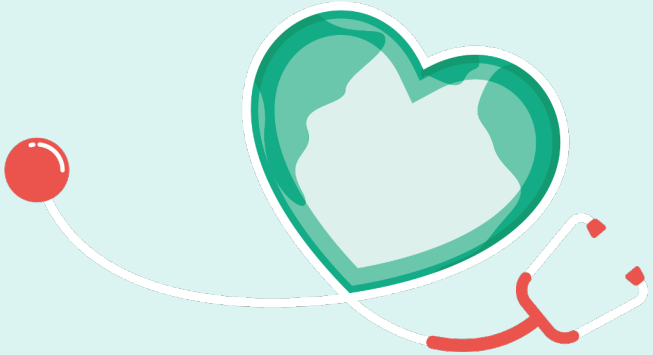
Gaps in Service:

- Frequency of testing HbA1c: <7% (2x annually)
- Serum creatinine, BUN, microalbuminuria drawn (annually)
- Foot assessment (annually)
- BP checks, (every visit)
- Cholesterol control: LDL <100 mg/dl (annually or more often to achieve goals)
- Attain a nonsmoking status (Ba-Essa, 2018)
- Patients who do not show up to the class or refuse to take the recommended program

Additional Research Needed:

- More data needs to be collected on individuals to provide evidence of change over a period of time for those who have taken the classes at the HLC
- Gaps in service and barriers throughout the community needs to be addressed
- Assessment of baseline knowledge through testing can provide additional research to prove educational growth

The Nurses Role in Addressing Formal Diabetic Education



Provide Diabetic Education Classes information

- Virginiadiabetes.org
- Diabeteseducator.org

Get Them in Contact with the Right Resources

- Certified Diabetic educators
- Social workers or Case managers

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