

The Need for Certified Diabetes Educators and Community Health Workers in  
Community-Based Diabetes Self-Management Education for High Risk Groups

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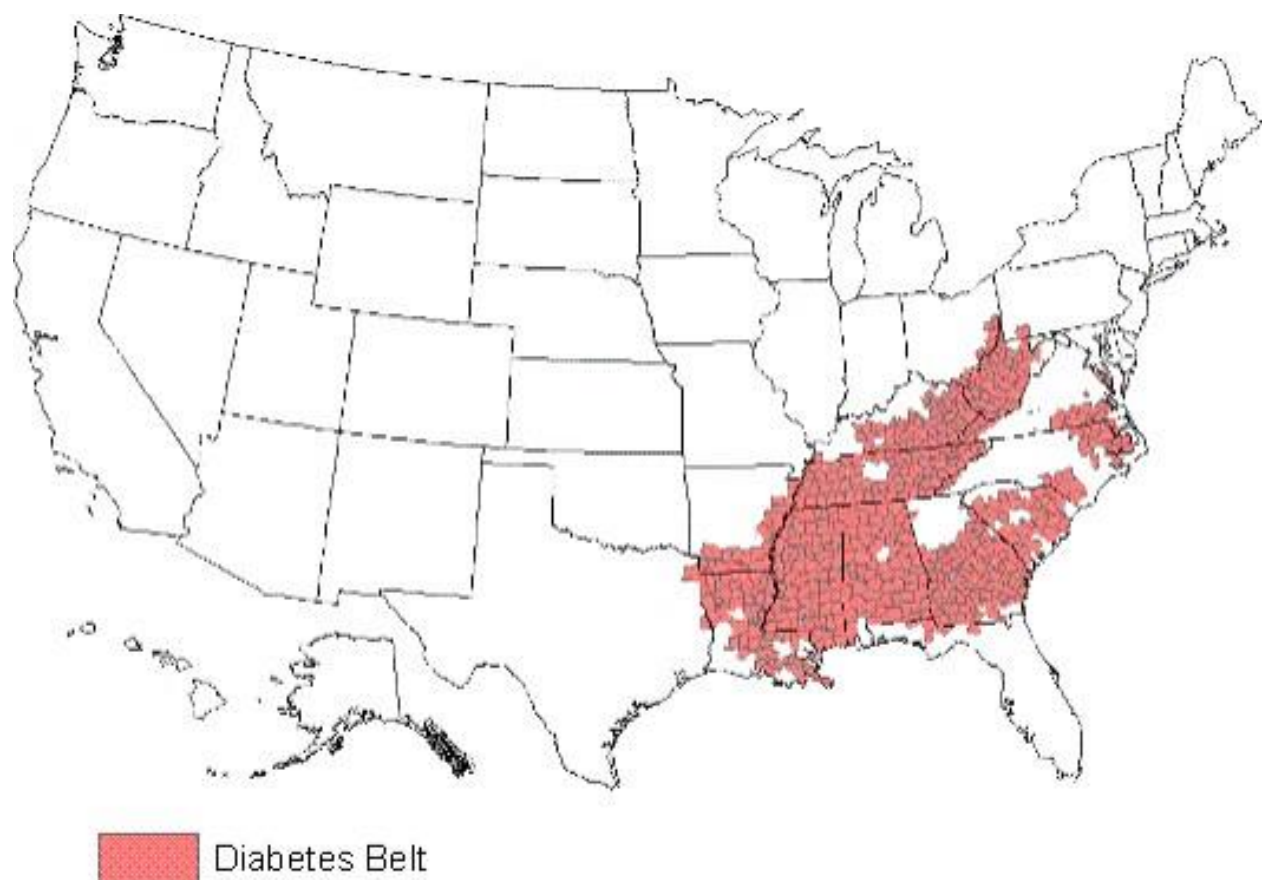
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The number of Americans with diabetes is projected to double, or triple by 2050 according to the Center for Disease Control (CDC).<sup>1</sup> The CDC reports that as many as 1 in 3 U.S. adults could have diabetes by 2050, currently 1 in 10 U.S. adults has diabetes. Longer lifespans and an older, more diverse population are considered contributing factors for the current trend. Research shows that in spite of prevention efforts and medical advances, the prevalence of diabetes will increase by 54% between 2015 and 2030; annual deaths attributed to diabetes will climb by 38%; and total annual medical and societal costs related to diabetes will increase 53% by 2030.<sup>2</sup>

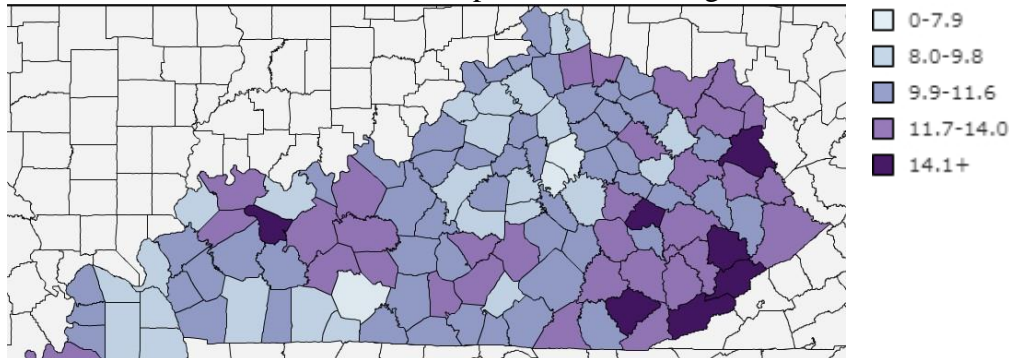
CDC scientists have identified a diabetes belt located mostly in the southern portion of the United States.<sup>3</sup> This diabetes belt consists of 644 counties in 15 states. Sixty-eight (68) of Kentucky's 120 counties are in this diabetes belt, which requires that  $\geq 11\%$  of adults aged  $\geq 20$  have been diagnosed as having type 2 diabetes.



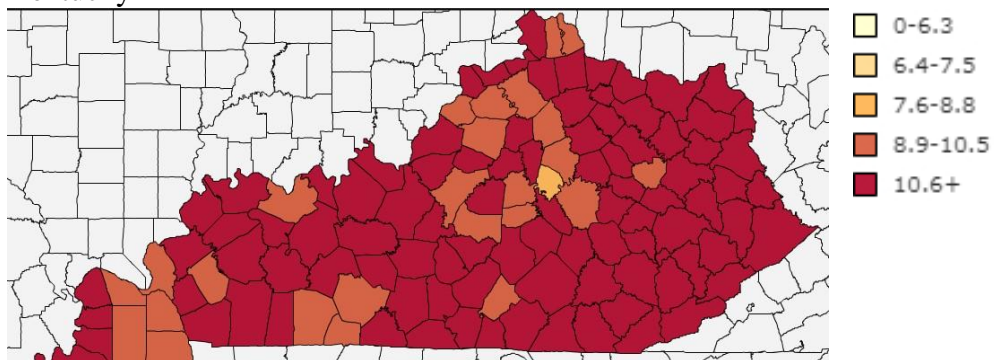
Map retrieved from: <https://www.cdc.gov/diabetes/pdfs/data/diabetesbelt.pdf>

Kentucky counties contained in the diabetes belt are concentrated in the Eastern and South Central Kentucky counties, though the rates are high throughout most of the State. These rates of diabetes are highly correlated with rates of obesity and physical inactivity as shown in the maps below:

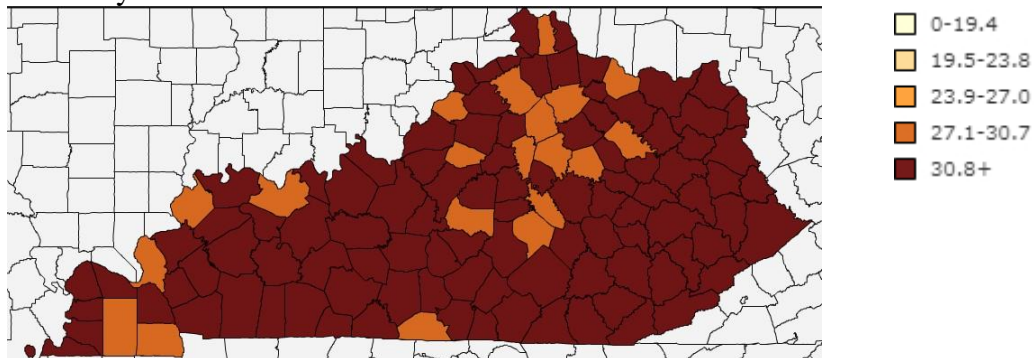
2013 Estimates of the Incident Rate per 1000 with Diagnosed Diabetes in Kentucky<sup>4</sup>



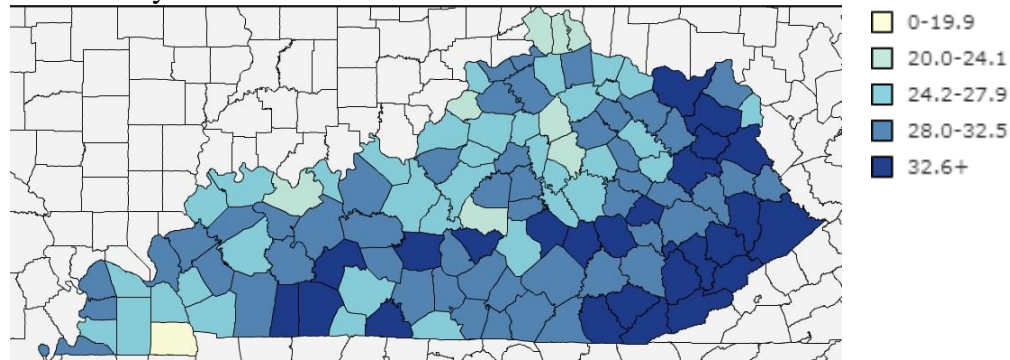
2013 Age-Adjusted Estimates of the Percentage of Adults with Diagnosed Diabetes in Kentucky<sup>4</sup>



2013 Age-Adjusted Estimates of the Percentage of Adults Who Are Obese in Kentucky<sup>4</sup>



### 2013 Age-Adjusted Estimates of the Percentage of Adults Who Are Physically Inactive in Kentucky<sup>4</sup>



Certified Diabetes Educators (CDEs) are a major resource for health campaigns to prevent type diabetes, delay its onset, and to lessen its serious negative health outcomes. Unfortunately, Kentucky has only 289 CDEs, and becoming a CDE is a long and arduous process. Further exacerbating this workforce problem is the mal-distribution of CDEs relative to the needs throughout Kentucky. Table 1 shows a much lower ratio of CDEs to adult diabetics in the 52 Non-Diabetes Belt Counties.

| Category          | Counties | Diabetics | CDEs | CDE to Diabetic Ratio |
|-------------------|----------|-----------|------|-----------------------|
| Diabetes Belt     | 68       | 146,811   | 86   | 1:1707                |
| Non-Diabetes Belt | 52       | 244,805   | 203  | 1:1206                |
| Total             | 120      | 401,530   | 289  | 1:1389                |

Table 2 shows a similar problem, with a greater concentration of CDEs in Non-Rural Counties.

| Category            | Counties | Diabetics | CDEs | CDE to Diabetic Ratio |
|---------------------|----------|-----------|------|-----------------------|
| Rural Counties      | 85       | 193,850   | 125  | 1:1551                |
| Non- Rural Counties | 35       | 244,805   | 164  | 1:1493                |
| Total               | 120      | 401,530   | 289  | 1:1389                |

Table 3 displays percentages of predictors for diabetes and the percentage of the population diagnosed with diabetes by diabetes belt counties and non-diabetes belt counties. Table 4 displays the same information broken down by rural and non-rural counties.

|                   | Counties | Diabetes | Obesity | Physical Inactivity |
|-------------------|----------|----------|---------|---------------------|
| Diabetes Belt     | 68       | 13%      | 34%     | 36%                 |
| Non-Diabetes Belt | 52       | 11%      | 33%     | 32%                 |

|            | Counties | Diabetes | Obesity | Physical Inactivity |
|------------|----------|----------|---------|---------------------|
| Rural      | 85       | 13%      | 34%     | 35%                 |
| Non- Rural | 35       | 12%      | 33%     | 31%                 |

### Filling in the Gaps

Kentucky Homeplace Community Health Workers (CHWs) are trained to deliver basic health education, which includes being lay leaders for the Diabetes Self-Management Program (DSMP), and Chronic Disease Self-Management Program (CDSMP). In a 2011 study conducted within the Kentucky Homeplace Program, IDO (Improving Diabetes Outcomes) participants showed significant increases in feelings of empowerment, self-care skills, and diabetes knowledge after receiving an intervention provided by a nurse-led CHW.<sup>7</sup>

Community Health Workers continue to offer DSMP and CDSMP, as well as, Walk with Ease which targets individuals with arthritis. A chronic disease program locator map can be accessed at <https://ruralhealth.med.uky.edu/cerh-trainings>. Information on the trainer, contact information, dates and location of scheduled workshops can all be viewed by hovering over the X on counties with current trainings scheduled to begin or in process. Community Health Workers can enhance the services provided by CDEs, physicians, and other healthcare providers by delivering diabetes education and assisting in navigating the healthcare field.

### Data sources and References

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