

Geographic Exploration of Lehigh Valley Health - Diabetes

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Published In/Presented At

Davis, A. Shaak, K. Topmiller, M. Kieber-Emmons, A. Johnson, M. B., Careyva, B. Banerjee, E. Burgess, N. M. (2019, August). *Geographic Exploration of Lehigh Valley Health - Diabetes*. Poster Presented at: LVHN Research Scholar Program Poster Session, Lehigh Valley Health Network, Allentown, PA.

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BACKGROUND

- 30.3 million people suffer from diabetes in the United States [1]
- For those who are diagnosed with diabetes, the financial burden was \$245 billion in 2012 [1]
- Geographic Information Systems (GIS) can assist in identifying populations which suffer from health disparities [2]
- Areas with high levels of diabetes along with areas where it is highly uncontrolled are labeled as “priority neighborhoods”
- Positive deviance can highlight “bright spots”

The purpose of this study is to use GIS in order to identify priority neighborhoods and bright spots. Focus groups in priority neighborhoods and bright spots will be utilized to learn about local barriers and facilitators to diabetes care.

METHODS

1: Determine local diabetes prevalence and guideline adherence rates

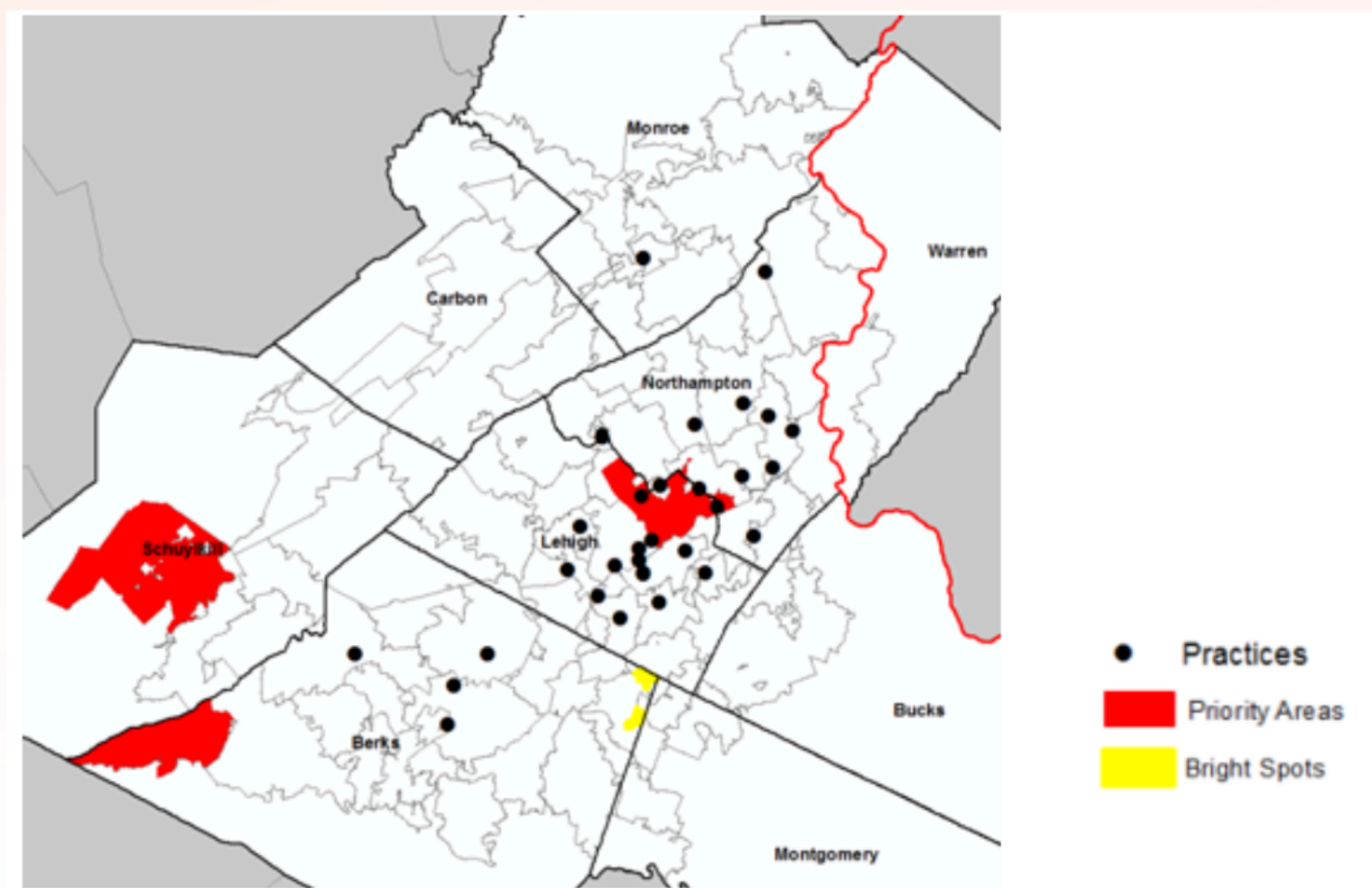
2: Identify priority neighborhoods and bright spots using GIS software

3: Conduct focus groups in order to identify barriers leading to disparities in diabetes care

RESULTS

Phase 1: Geospatial Analysis

- 24 total Zip Code Tabulation Areas (ZCTAs) identified based on prevalence of diabetes, ten were chosen for this study



Phase 2: Focus Group Data

Access to Information

“Who’s gonna tell me the truth? If I don’t look myself, no one’s gonna tell me.”
“Everybody tells you to drink water, but they don’t tell you how much water.”

Clinical Care

“I feel like maybe prevention could be implemented before we’re diagnosed...”
“...I think they shouldn’t make it so nonchalant...”

Family Influence

“So whatever the kids eat I eat because it’s not fair to make her cook twice.”
“They bring foods around that, like, I’m not allowed to have.”

Costs

“If it wasn’t for [the gift card], I’d be eating rice for the rest of the month til I get my next Social Security check, nothing but rice.”
“My doctor sometimes will prescribe something and I’ll come back to him and say, “I cannot afford this. Give me something else.””

DISCUSSION

Barriers to Managing Diabetes

- Access to Information
 - Information is available but may not always be correct
 - Many patients had unanswered questions or lacked knowledge about how to best manage their disease
- Clinical Care
 - Prevention should be implemented more strongly, especially if a family history exists
 - Clinicians are not making it clear to patients how serious the disease can be upon diagnosis
- Family Influence
 - Family members often don’t understand the needs of their relative and can negatively influence food choices
- Costs
 - Healthy foods are more expensive than processed foods
 - Patients lack the financial means to eat the way that would be best for their condition

FUTURE IMPLICATIONS

- 1 • Finish conducting focus groups in order to gain information from those who are managing their diabetes well versus those who are struggling
- 2 • A retrospective chart review will be completed looking at the patients’ adherence to guidelines from LVHN and the American Diabetes Association
- 3 • The qualitative results from focus groups and quantitative results from the chart review will be analyzed together in order to clarify main themes of strong versus weak diabetes management and how that is impacted by zip code
- 4 • Use the information gained from the study to strategize ways to make an impact on patients that are struggling to manage their diabetes

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