**Background and Introduction**

**Objective:**
The purpose of this community health assessment is to identify and evaluate the health needs of the community in Nogales, AZ.

**Community Description**

**Geography and History**

Nogales, AZ is located just across the Mexican-American border from its "twin city," Nogales, Sonora, Mexico. With the Gadsden Purchase in 1854, the border between Arizona and Mexico were defined, bisecting Nogales, AZ and Nogales, Mexico.

**Demographics**

- Population estimate (July 1, 2015): 20,252 people
- Race/Ethnicity:
  - White: 62%
  - Hispanic: 28%
  - Black: 9%
  - Asian: 2%
  - Other: 0.5%

**Education:**
Nogales has 8 elementary schools, 2 middle schools, 2 high schools, and 1 community college.

**Access to Healthcare:**
- 1 community health center
- 1 hospital (49 beds)
- 4 community pharmacies
- 1 health center

**Employment:**
- Most citizens in Nogales have lower median household income, higher rates of poverty, and higher rates of unemployment compared to the average person living in Arizona.

**Methods**

The community health assessment was conducted between June 2016 and July 2016. Information about Nogales, AZ was obtained through:

- Windshield surveys
- Interviews with community members and healthcare providers in a local community health center
- City and county health reports accessed online
- US Census Bureau reports accessed online

**Results**

**Healthcare Facilities:**
- 1 community health center
- 1 hospital (49 beds)
- 4 community pharmacies

**Table 1: High School Education and Beyond**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>High school or higher, current</td>
<td>54%</td>
</tr>
<tr>
<td>High school or higher, previous</td>
<td>65%</td>
</tr>
<tr>
<td>Some college</td>
<td>18%</td>
</tr>
<tr>
<td>2 years college</td>
<td>13%</td>
</tr>
<tr>
<td>4 years college</td>
<td>29%</td>
</tr>
</tbody>
</table>

**Healthcare Services:**
Some of the many health services provided by the Mariposa Community Health Center are:
- Mental Health Services
- Immunizations
- Maternal and Child Health
- STD/HIV Prevention and Control
- Tuberculosis Prevention and Control
- Diabetes Control
- Diet and Exercise
- Home visits for medication reconciliation

**Table 3: Median Income, Poverty Levels, and Unemployment Rates**

<table>
<thead>
<tr>
<th>Year</th>
<th>Median Household Income ($)</th>
<th>Percent in Poverty</th>
<th>Unemployment Rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>$34,876</td>
<td>20%</td>
<td>12%</td>
</tr>
<tr>
<td>2015</td>
<td>$36,576</td>
<td>19%</td>
<td>12%</td>
</tr>
</tbody>
</table>

**Table 4: Percentage of People Without Insurance**

<table>
<thead>
<tr>
<th>Year</th>
<th>Health Insurance Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>36%</td>
</tr>
<tr>
<td>2016</td>
<td>36%</td>
</tr>
</tbody>
</table>

**Table 5: Morbidity and Mortality in Santa Cruz County**

<table>
<thead>
<tr>
<th>Cause</th>
<th>Rate per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>1,200</td>
</tr>
<tr>
<td>Stroke</td>
<td>220</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>1,000</td>
</tr>
<tr>
<td>Diabetes</td>
<td>900</td>
</tr>
<tr>
<td>Respiratory Disease</td>
<td>600</td>
</tr>
</tbody>
</table>

**Table 6: Percentage of Substance Abuse**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>12%</td>
</tr>
<tr>
<td>Tobacco</td>
<td>9%</td>
</tr>
</tbody>
</table>

**Table 7: Teen Birth Rates**

<table>
<thead>
<tr>
<th>Year</th>
<th>Teen Birth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>9.5</td>
</tr>
<tr>
<td>2016</td>
<td>9.2</td>
</tr>
</tbody>
</table>

**Community Health Concerns and Potential Causes**

**Priority of Health Concerns Ranked by Community Members**

1. Diabetes
2. High Blood Pressure
3. Obesity/sedentary lifestyle
4. Skin Cancer/Cancer in general
5. Asthma
6. Behavioral Health

**Potential Causes of Health Concerns**

- Community/family beliefs
- Inadequate infrastructure (for older adults)
- Lack of exercise
- Inadequate access to transportation
- Inadequate number of healthcare providers, possibly due to negative media coverage of the border town as well as difficulty to retain healthcare providers in a rural area

**Intervention Opportunities**

- Early education on nutrition and disease state
- Follow up calls for nutrition classes and changing lifestyle
- More funding for transportation to clinics/hospitals
- Need more physicians, nurses, dentists, and behavioral health specialists
- More jobs to boost economy
- Improve “walkability” with better sidewalks and bike paths
- Advertising resources and Community events like 5k runs

**Community Health Concerns**

- Early education on nutrition and disease state
- Follow up calls for nutrition classes and changing lifestyle
- More funding for transportation to clinics/hospitals
- Need more physicians, nurses, dentists, and behavioral health specialists
- More jobs to boost economy
- Improve “walkability” with better sidewalks and bike paths
- Advertising resources and Community events like 5k runs

**References**

5. City and County Health Reports accessed online
6. Nogales, Arizona - City Data. 2016 - City-data.com
8. City and County Health Reports accessed online
9. Nogales, Arizona - City Data. 2016 - City-data.com
11. Substance Health Ratings in Nogales, Arizona - Goodlife.org
12. 10 Best Places to Live in Arizona - Nogales: City Data. 2016 - City-data.com

**Acknowledgements**

I would like to thank the Nogales community and healthcare providers at the Mariposa Community Health Center who participated in the key informant interviews and helped me complete this project.

For more information, please contact: Cindy Cho, ccho@pharmacy.arizona.edu

**Cindy Cho, PharmD Candidate Class of 2019**

University of Arizona College of Pharmacy