**Immunization Access Through Pharmacies Located in Low Income, Medically Underserved Areas**

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**Background**

In 2012, we surveyed all licensed pharmacies (104) providing general pharmacy services in the public in the Omaha Nebraska area. Characteristics of immunizing pharmacies were identified. This and other data\(^2\) was analyzed to assess service availability based on geographic economic characteristics.

**Objectives**

1. Conduct telephone survey of Omaha area pharmacies to determine immunization service provided at facility, including whether vaccines are offered, and which vaccines are available.
2. Analyze this data in the context of economic status of the zip codes in which these pharmacies are located.
3. Determine relevant pharmacy delivery services based on poverty levels geographically across the Omaha area.

**Methods**

We assessed the number of immunizing pharmacies located in defined Medically Underserved Areas (MUAs), and in zip codes by percent of population below the Federal Poverty Level (FPL), according to 2011 U.S. census data\(^1\). Microsoft Access was utilized for data entry; statistical analysis was conducted in IBM SPSS Statistics.

**Demographics**

- **84 of 104 (81%)** licensed pharmacies in the city serving the general public provided immunization services.
- Zip codes were assigned arbitrary poverty definitions by percent of population below the Federal Poverty Level (FPL).

<table>
<thead>
<tr>
<th>% of population living below FPL</th>
<th>High poverty area (≥ 25%)</th>
<th>Moderate poverty area (10 – 24%)</th>
<th>Low poverty area (≤ 10%)</th>
</tr>
</thead>
<tbody>
<tr>
<td># of zip codes</td>
<td>9</td>
<td>13</td>
<td>16</td>
</tr>
<tr>
<td>% of pharmacies offering immunizations</td>
<td>78% (79%)</td>
<td>64% (34/46)</td>
<td>88% (43/49)</td>
</tr>
<tr>
<td>Median rate of Black/African American residents per zip code</td>
<td>17% (Range: 3 – 68%)</td>
<td>6% (Range: 0 – 22%)</td>
<td>2% (Range: 0 – 22%)</td>
</tr>
</tbody>
</table>

**Results**

- **Most immunizing pharmacies (86%)** were located in designated medically underserved areas (MUAs) for high poverty zip codes, compared to 14% and 5% in moderate and low poverty areas, respectively (Fig. 1-3).
- Immunizing pharmacy distribution was 0.37, 0.33, and 0.24 per square mile, for geographic areas with high, moderate, and low poverty levels (Fig. 4).
- The distribution was 0.81, 1.68, and 1.64 per 10,000 population, respectively, by decreasing level poverty (Fig. 4).

**Discussion**

- **Pharmacy Access Advantages**
  - Pharmacies do not charge visit fees when administering immunizations.
  - The Affordable Care Act, with first dollar immunization coverage, can reduce this barrier\(^6\).
  - Pharmacies that provide immunizations in this city’s highest poverty area may see a greater demand from their larger patient populations, who based on MUA status have reduced access to primary care medical clinics\(^4\). This can incentivize pharmacies to provide broad immunization services.
  - Other Pharmacy access advantages:
    - Pharmacies provide immunization services over extended days and hours\(^-\).
    - Pharmacies do not charge visit fees when administering immunizations.

- **Conclusions**
  - Immunization pharmacies in the high poverty area of this city were more likely to provide commonly recommended adult vaccines compared to those in the moderate or low poverty areas. Immunizations are typically available from pharmacies over extended hours, and with no added visit fees. Pharmacies constitute an excellent access point for recommended adult immunizations, with similar geographic availability in high versus lower poverty areas.

- **Limitations**
  - One limitation of pharmacy provided immunizations is the lack of credit available for those with no public or private health insurance coverage.
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