Comprehensive Refugee Health Surveillance in Philadelphia: A Combined Resettlement and Clinical Patient Registry

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June 14, 2016
Background

• Philadelphia receives ~800 newly arrived refugees annually
  • Philadelphia Refugee Health Collaborative:
    • 3 resettlement agencies and 10 health clinics
• Coordination of healthcare and social services is important for refugee resettlement success\(^1\)
• Systematic data collection enables outcomes measurement
Goal

To improve the success of refugee resettlement and health outcomes in Philadelphia by establishing a multi-agency registry with social services and clinical measures.
Methods - Data Timeline and Collection

Secure web application for building and managing online databases

- Merges resettlement and clinical data
- Separate modules with privacy settings
Resettlement and Clinical Data

**Resettlement Data**
- Demographics
- Screening appointment
- Health orientation
- Health insurance enrollment
- School enrollment
- WIC enrollment
- Specialists appointments
- Follow-up tests
- Dental care
- Eye care
- Significant medical needs
- Pregnancy
- Employment

**Clinical Data**
- Demographics
- IOM form
- Immunizations and titers
- Chronic disease: HTN and diabetes
- BMI
- Smoking
- Infectious disease
- Lead screening
- Pregnancy
- Cancer screening
- Specialists
- Geriatric
- Dental health
- Mental health
Philadelphia Refugee Health Collaborative
Longitudinal Patient Registry

Registry Fast Facts
• 2007 - Present
• N = 2,709
• Both clinical and resettlement = 598
## Results

### Patient Characteristics

<table>
<thead>
<tr>
<th>Country of Origin</th>
<th>Frequency</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country of Origin</td>
<td>2,709</td>
<td>(100)</td>
</tr>
<tr>
<td>Iraq</td>
<td>703</td>
<td>(26)</td>
</tr>
<tr>
<td>Bhutan/Nepal</td>
<td>673</td>
<td>(25)</td>
</tr>
<tr>
<td>Myanmar/Burma</td>
<td>392</td>
<td>(14)</td>
</tr>
<tr>
<td>Democratic Republic of Congo</td>
<td>204</td>
<td>(8)</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>155</td>
<td>(6)</td>
</tr>
<tr>
<td>Eritrea/Ethiopia</td>
<td>107</td>
<td>(4)</td>
</tr>
<tr>
<td>Syria</td>
<td>37</td>
<td>(1)</td>
</tr>
<tr>
<td>Other*</td>
<td>438</td>
<td>(16)</td>
</tr>
</tbody>
</table>

**Population Pyramid**

- **80 years and over**
- **75 to 79 years**
- **70 to 74 years**
- **65 to 69 years**
- **60 to 64 years**
- **55 to 59 years**
- **50 to 54 years**
- **45 to 49 years**
- **40 to 44 years**
- **35 to 39 years**
- **30 to 34 years**
- **25 to 29 years**
- **20 to 24 years**
- **15 to 19 years**
- **10 to 14 years**
- **5 to 9 years**
- **Under 5 years**

**Age Range**

**Population (%)**

**Male**

**Female**
Resettlement Outcomes:
Time to Health Insurance, Medical Screening, School, Employment

*p < 0.05; **p < 0.01
Clinical Outcomes: LTBI Treatment Completion

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent Completed After Treatment Initiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>0.0%</td>
</tr>
<tr>
<td>2008</td>
<td>33.3%</td>
</tr>
<tr>
<td>2009</td>
<td>69.2%</td>
</tr>
<tr>
<td>2010</td>
<td>65.5%</td>
</tr>
<tr>
<td>2011</td>
<td>59.3%</td>
</tr>
<tr>
<td>2012</td>
<td>61.4%</td>
</tr>
<tr>
<td>2013</td>
<td>67.3%</td>
</tr>
<tr>
<td>2014</td>
<td>50.0%*</td>
</tr>
</tbody>
</table>

*Data from January 1, 2014 - September 30, 2014

Healthy People 2020
- Target = 79.0%
- Baseline = 68.1%
Clinical Outcomes: Hypertension Management

Hypertension (n = 149)

- 55% diagnosed abroad
- 45% diagnosed at clinic
Clinical Outcomes: Hypertension Management

Blood Pressure Control

HP2020 Target = 61.2%
HP2020 Baseline = 43.7%

Percent blood pressure < 140/90

33%

Refugee Overseas

64%

Refugee at Most Recent Visit

60%

JFMA (Clinical Comparison in Philadelphia)
Combined Resettlement and Clinical Outcomes

<table>
<thead>
<tr>
<th>Number of Days Until Employment (Adults in Employment Program)</th>
<th>Adults Diagnosed With Chronic Conditions</th>
<th>Adults Without Chronic Conditions</th>
<th>Association Between Chronic Conditions and Number of Days (r)</th>
<th>Association Between Number of Chronic Conditions and Number of Days (r)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>70.00 (39.98)</strong> [n = 49]</td>
<td><strong>67.10 (30.13)</strong> [n = 107]</td>
<td>0.04</td>
<td>0.04</td>
</tr>
<tr>
<td>Number of Specialists Escorts</td>
<td><strong>0.84 (1.52)</strong> [n = 45]</td>
<td><strong>0.28 (0.57)</strong> [n = 99]</td>
<td>0.26</td>
<td>0.38</td>
</tr>
</tbody>
</table>

Chronic Conditions Included in Analysis:
Hypertension, Diabetes, Asthma, COPD, Arthritis, Mental Health (Anxiety, Depression, PTSD), HIV, Chronic Hepatitis, Chronic Renal Disease, Chronic Kidney Disease, Stroke, Cancer, High Cholesterol, Cardiovascular Disease
Improved Data to Improved Outcomes

- **Success Stories:**
  - Improved medication completion for latent TB
  - Improved access to hearing loss services
  - Health education around labor and delivery
Conclusions

Collaborative Data Surveillance Led To:

• A regularly updated registry of over 2,700 patients
• Changes in coordinated activities between healthcare providers and resettlement agencies
• Increased knowledge in healthcare providers and community partners
Future Directions

• Data collection and community work should expand:
  • Other resettlement agencies and clinical sites
  • Key community stakeholders: public health departments, community organizations, pharmacies, other health and public welfare services
• Strive towards a community centered health home model
• More research is needed to explore the process and outcomes related to implementing formal data sharing efforts among organizations working with refugees
Acknowledgement

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References


Questions?

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