Population and High Risk Strategies to Improve Population Health

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What Shapes Population Health?

Prevention Paradox

“A large number of people at small risk may give rise to more cases of disease than a small number who are at high risk.”

Two strategies of prevention
- Population
- High risk

The High Risk Strategy of Prevention

90 mmHg

DBP

Courtesy of I.Kawachi
The Population Strategy of Prevention

Courtesy of I.Kawachi

Population Strategy
The population strategy of prevention is informed by the social determinants of health.

How can we shift the distribution and prevent individuals from becoming high risk?

Social Determinants of Health

“The social determinants of health are the circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics.”

(WHO)
Social Determinants of Health

- Economic Stability
- Neighborhood and Built Environment
- Social and Community Context
- Education
- Health and Health Care

Healthy People 2020

Economic Stability

- Poverty
- Employment status
- Housing stability

Healthy People 2020
Neighborhood and Built Environment

- Housing
- Crime and violence
- Exposure to physical and environmental hazards
- Access to healthy foods
- Other physical determinants

Social and Community Context

- Family structure
- Social support
- Social capital
- Discrimination and Equity
- Civic participation

Healthy People 2020
Education

- School policies that support health promotion
- Safe school environment

Health and Health Care

- Access to preventative care
- Access to primary care
How to Target the Population?

- Education
- Changing incentives for healthy behavior
- Policy and regulations

Limitations of Population Strategy

- Not applicable to every public health problem.
- Can be difficult and expensive - but very effective.
- Unintended consequences
High Risk Strategy

Concentration of Spending

Figure 5: Concentration of Health Care Spending in the U.S. Population, 2009

Percent of Population, Ranked by Health Care Spending:

- Top 2%: 21.8%
- Top 5%: 40.8%
- Top 10%: 65.2%
- Top 25%: 76.0%
- Top 50%: 83.3%
- Bottom 50%: 2.0%

Note: Dollar amounts in parentheses are the annual expenses per person in each percentile. Population is the civilian noninstitutionalized population, including those without any health care spending. Health care spending is total payments from all sources including direct payments from individuals and families, private insurance,Medicaid,Medicare, and out-of-pocket expenses other sources (e.g., hospitals, physicians, other providers (including dental care), and pharmacies). Health insurance premiums are not included.

Aim

Patients with complex health needs function successfully in the community without the need for frequent hospitalizations or ED visits.

Framework for High Risk, High Cost Patients

- Step 1: Understand the population

- Step 2: Engage and activate the population

- Step 3: Design a care model to improve health and cost outcomes
Step 1: Understand the Population

- Define what “high risk/high cost” means for your setting
- Identify high-risk/high-cost patients
  - Threshold Approach
  - Clinical knowledge
  - Predictive modeling
- Information sources
  - Data systems – utilization, diagnoses, costs
  - Clinic staff
  - Patient interviews
  - Third party data (i.e. claims, health department)
  - Consider GIS mapping

Step 2: Engage and Activate

- Understand patient goals, preferences, resources, and system barriers from patient perspective.
  - What really matters to the patient?
  - Include family members in discussions
- Co-create care plan that incorporates life and health goals.
Step 3: Design a Care Model

- Highly engaged primary care provides holistic care with community partnerships.
  - Focus on prevention and care management
- Care manager or community health worker provides wrap around care.
- Align social, community, and health care resources.
- Consider smaller caseloads for intensive support

Comparing the Population and High Risk Strategies
Population vs. High Risk Strategies

<table>
<thead>
<tr>
<th></th>
<th>Population Strategy</th>
<th>High Risk Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addresses Root Causes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Potential to Reduce Disparities</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Individual Benefit</td>
<td>Small</td>
<td>Big</td>
</tr>
<tr>
<td>Individual Motivation</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Population Benefit</td>
<td>Big (from many small, individual changes)</td>
<td>Small</td>
</tr>
<tr>
<td>Feasibility</td>
<td>Difficult to change social norms and policies</td>
<td>Moderate</td>
</tr>
<tr>
<td>Cost</td>
<td>High cost, delayed benefit</td>
<td>Cost-effective</td>
</tr>
</tbody>
</table>

Cross-Community System of Care

- Address social determinants of health
  - Population strategies
  - Payment mechanisms to fund needed services

- Build coalitions including patients and families to identify and advocate for policies to support high-risk patients.

- Use stories and narrative to build will for policy change.
Conclusions

- Need both population and high-risk strategies to improve population health!
- Addressing social determinants of health is necessary to achieve Triple Aim.
- Need to understand and engage population before re-designing care.
- Design community-based, coordinated care for the whole person, not individual diseases.