Primary Care, Population Health, and Practice-Based Research Networks

Jen DeVoe
What is primary care?

Barbara Starfield (1932-2011), a primary care physician and researcher, is internationally known for her books defining primary care.

"In its most highly developed form, primary care is the point of entry into the health services system and the locus of responsibility for organizing care for patients and populations over time."

—Barbara Starfield, MD, MPH
Tenets of Primary Care

- **Accessibility** as 1st contact with the health care system
- **Comprehensiveness** - ability to provide for majority of healthcare needs, whole person care
- **Coordination & integration** of care across settings, acute & chronic illnesses, mental health & prevention
- **Continuity** - relationships over time in a family & community context
The Patient-Centered Medical Home

Builds on the fundamental tenets of primary care:

- First **Contact** Access, Accessibility
- A **Comprehensive**, whole person approach
- Integration & **Coordination** of care
- **Continuity** - Relationships over time, sustained partnerships

Provides an enhanced definition and guiding principles for:

- Organizing primary care clinics to be more patient-centered
- Expanding capabilities of primary care clinics (e.g., technology, teams)
- Encourages paying for primary care services in new ways


What do the tenets of primary care mean to patients?

- **First Contact Access**: “Health care team, be there when we need you.”

- **Comprehensiveness**: “Provide or help us get the health care, information, and services we need.”

- **Coordination & integration**: “Help us navigate the health care system to get the care we need in a safe and timely way.”

- **Continuity**: “Be our partner over time in caring for us.”

**More recent focus on patient-centered and family-centered care**: “Recognize that we are the most important part of the care team—and that we are ultimately responsible for our overall health and wellness.”

When we talk about population health in primary care, what population do we mean? Whose health are we impacting and measuring?

1000 persons

- 800 report symptoms
- 327 consider seeking medical care
  - (113 visit a primary care clinician)
- 217 visit a physician’s office
- 65 visit a complementary or alternative medical care provider
- 21 visit a hospital outpatient clinic
- 14 receive home health care
- 13 visit an emergency department
- 8 are hospitalized
- <1 is hospitalized in an academic medical center

Population health has many different meanings.

• **Population Health**
  • A framework for addressing why some populations are healthier than others, based on health outcomes

• **Public Health**
  • Activities that a society undertakes to assure the conditions in which people can be healthy
    – May include formal governmental structures

• **Community Health**
  • Assumes community to be an essential ingredient for effective public health practice
    – Community oriented primary care

• **Clinical Population Medicine**
  • The “conscientious, explicit and judicious application of population health approaches to care for individual patients and to design health care systems”
## Different populations?

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Rozier M. “When Populations Become the Patient”; Providence Grand Rounds 2015
How do we in primary care contribute to population health? Well, communities with higher primary care physician availability have healthier populations.

**Diagram:**
- X-axis: General practitioners per 10,000
- Y-axis: Quality rank
- Data points for different states represent the relationship between primary care physician availability and population health quality.

**Sources:** Medicare claims data; and Area Resource File, 2003.
**Notes:** For quality ranking, smaller values equal higher quality. Total physicians held constant.
Maybe we just need to see more patients? Some would argue that is not enough...

- The Triple Aim
  - we are falling short

  “The one-on-one visit and clinician-patient dyad will always be important, [but] that limited scope cannot address the larger concerns of the nation’s overall health.”

Different populations?

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A key element of improving our population health efforts is using data effectively.

- **Current deficiencies in the landscape include:**
  - inability to extract and aggregate data from the records
  - gaps in sharing data
  - challenges in adopting advanced data functions, particularly those related to timely reporting of performance data

- **Potential solutions include:**
  - facilitating peer-to-peer technical assistance
  - providing tailored feedback reports to providers from data aggregators
  - using practice facilitators skilled in using data technology for quality improvement to help practices transform

A PBRN serving as an extension program can help us take our innovations to scale.

- Primary Care Extension is one approach being tested by ORPRN and other PBRNs participating in EvidenceNOW
  - Based on agricultural extension of the 1900s
  - Unfunded mandate of the Affordable Care Act
  - Emerging across the US

- Four key functions of primary care extension
  - Technology support (data extraction and use)
  - Quality improvement support (practice coaching / facilitation)
  - Capacity building
  - Linking practices with the community
Example:
ORPRN’s “Four Pillars” Model

![Diagram of ORPRN's Four Pillars Model]

Example: OCHIN’s Patient-Centered Medical Village. A network of patient-centered medical homes can allow for shared resources, best practices, and research; “village champions” can serve as research leaders and can help to spread innovation.
PBRNs are developing, testing, and sharing best practices for improving our “clinical population medicine” approaches.
In addition to the clinical data work, PBRNs are discovering how best to identify and address social determinants of health in primary care settings.

PBRNs are the laboratories for discovering the best “Precision Community Health” approaches: Does bringing “community vital signs” into a patient’s chart improve care and health? How?

“Community Vital Signs”: Incorporating geocoded social determinants into electronic records to promote patient and population health

Andrew W Bazemore¹, Erika K Cattrell²,³, Rachel Gold²,⁴, Lauren S Hughes⁵, Robert L Phillips⁶, Heather Angier³, Timothy E Burdick³,⁷, Mark A Carrozza⁸, Jennifer E DeVoe²,³

ABSTRACT

Social determinants of health significantly impact morbidity and mortality; however, physicians lack ready access to this information in patient care and population management. Just as traditional vital signs guide physicians in making biometric assessments of any patient, “community vital signs” (Community VS) can provide an aggregated overview of the social and environmental factors impacting patient health. Knowing Community VS could inform clinical recommendations for individual patients, facilitate referrals to community services, and expand the understanding of factors impacting treatment adherence and health outcomes. This information could also help care teams target disease prevention initiatives and other health improvement efforts for clinic panels and populations. Given the proliferation of big data, geospatial technologies, and democratization of data, the time has come to integrate Community VS into the electronic health record (EHR). Here, the authors describe (i) historical precedent for this concept, (ii) opportunities to expand upon these historical foundations, and (iii) a novel approach to EHR integration.
What about the people in our communities who are not patients in our practices?

• Should our “population health” efforts be limited to the groups of people enrolled in health plans and seen in clinics?

• “Poor health...is more likely to be found among those without a medical home and with no health insurance...and other barriers to care.”

• Insurance carriers and clinicians may miss many of the most vulnerable people.

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PBRNs can inform and support communities to become learning systems for health.
Communities as Learning Systems for Health. Enhanced opportunities to share complementary expertise, data, learning.

PBRNs are demonstrating how to use geospatial tools to aggregate clinical and community data to strengthen partnerships with community organizations.

Percent of children without insurance: 0-18 years of age with at least one visit to an OCHIN PBRN clinic in 2011

Areas with high rates of children without insurance in OCHIN and median household income rates by Oregon county (Lincoln, Polk, Benton, Marion)

The State of Health in Klamath Falls

Klamath County Snapshot

- Population Estimate: 66,910
- Life Expectancy at Birth, male: 74.5
- Life Expectancy at Birth, female: 79.3
- Years of Potential Life Lost (YPLL), age-adjusted, per 100,000: 8,696
- Low Birth Weight Rate, per 1,000: 81.1
- Infant Mortality Rate, per 1,000: 6.4
- Chronic Absenteeism %: 16.8

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<tr>
<th>Indicator</th>
<th>Year(s)</th>
<th>Klamath</th>
<th>Oregon</th>
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<tr>
<td>Population Estimate (Certified)</td>
<td>2014</td>
<td>66,910</td>
<td>3,962,710</td>
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<tr>
<td><strong>Socioeconomic Status/Social Determinants</strong></td>
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<tr>
<td>Income Inequality: Gini Coefficients</td>
<td>2009-2013</td>
<td>0.44</td>
<td>0.45</td>
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<tr>
<td>Minority Income as % of White Income</td>
<td>2009-2013</td>
<td>56.9</td>
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<tr>
<td>Children in Poverty %</td>
<td>2013</td>
<td>26.8</td>
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<tr>
<td></td>
<td>2012</td>
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<tr>
<td>Violent Crime per 100,000</td>
<td>2010-2012</td>
<td>234</td>
<td>249</td>
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<tr>
<td></td>
<td>2009-2011</td>
<td>248</td>
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Community in the fullest sense is the smallest unit of health ... to speak of the health of an isolated individual is a contradiction of terms.

-Wendell Berry