Providing comprehensive solutions to ending homelessness and achieving self-sufficiency

Who we serve

- 93% of patients are homeless or insecurely housed
- 97% are below 100% FPL, many with zero income
In the population we serve …

- Alcohol and/or drug abuse is the most common primary care diagnosis (59%).
- Severe mental illness is as common as hypertension (both 32%).
- Nearly a quarter of our patients have post-traumatic stress disorder (23%) and as many have hepatitis C (22%).

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So we care a lot about patient complexity

- Effective patient care and population management:
  - How do we do diabetes management when 31% of our diabetics have drug and/or alcohol dependence?
- Resource allocation and program development:
  - When every patient has high needs, how do we focus?
- Performance management:
  - How do we hold ourselves to high standards while also adjusting for the risk of our population?

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Measuring Complexity
What do we need?

- Alignment with our patients’ needs
- Alignment with our ability to effect change
- Sufficient sensitivity to capture incremental change
- Usable by staff with different credentials

An off-the-shelf solution probably wasn’t going to work.

The MOSAIC Matrix

- Tested a variety of tools (thank you, Lindsay!)
- Found a basic framework (the Self-Sufficiency Matrix), but it needed customization
- Partnered with CareOregon, whose generosity enabled us to concentrate on this project
- Created a project workgroup:
  - 15 CCC staff from across many disciplines
  - 3 CareOregon staff
- And the really important part: came up with a catchy acronym!
  - Measurable Opportunities for Sustainable Advancement through Integrated Care (MOSAIC)

MOSAIC Basic Framework
### Future use scenario:

- **Identify and intervene with at-risk populations:**
  - The manager of the New Beginnings Employment Counseling program identifies a cohort of 15% of clients who are unable to find employment, even after extended services.
  - In analyzing this population, she realizes that this cohort’s physical health is generally poorer than other New Beginnings clients:

<table>
<thead>
<tr>
<th>Physical Health</th>
<th>Clients with Poor Outcomes</th>
<th>Clients with Good Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean score</td>
<td>3.5</td>
<td>7.2</td>
</tr>
<tr>
<td>Median score</td>
<td>4.2</td>
<td>7.0</td>
</tr>
</tbody>
</table>

- Could connecting the at-risk population with primary care make a difference in their ability to find employment?
- And, over time, could finding employment positively impact their physical health?

### Future use scenario:

- **Identify and replicate high-performing interventions:**
  - The medical director of Central Primary Care Clinic wants to know if adding health outreach workers has measurably improved patient outcomes.
  - Quality Management staff analyze pre- and post-intervention:

<table>
<thead>
<tr>
<th>Mean Domain Score</th>
<th>At Referral</th>
<th>Six Months Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical health</td>
<td>1.9</td>
<td>2.5</td>
</tr>
<tr>
<td>Mental health</td>
<td>3.2</td>
<td>3.4</td>
</tr>
<tr>
<td>A&amp;D</td>
<td>2.1</td>
<td>3.5</td>
</tr>
<tr>
<td>Employment/income</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Housing</td>
<td>1.5</td>
<td>4.1</td>
</tr>
<tr>
<td>Legal involvement</td>
<td>6.1</td>
<td>6.1</td>
</tr>
<tr>
<td>Worldview</td>
<td>1.4</td>
<td>3.0</td>
</tr>
</tbody>
</table>

- What conclusions could clinic leadership draw?
**Future use scenario:**

- Understand relative risk across programs:
  - The CFO asks why the cost per medical encounter rate is so much higher at North Clinic than at South Clinic.
  - Quality Management staff assess the two populations:

<table>
<thead>
<tr>
<th>% of patients with score ≤3</th>
<th>North Clinic</th>
<th>South Clinic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical health</td>
<td>40%</td>
<td>32%</td>
</tr>
<tr>
<td>Mental health</td>
<td>18%</td>
<td>15%</td>
</tr>
<tr>
<td>A&amp;D</td>
<td>32%</td>
<td>21%</td>
</tr>
<tr>
<td>Employment/income</td>
<td>75%</td>
<td>68%</td>
</tr>
<tr>
<td>Housing</td>
<td>58%</td>
<td>45%</td>
</tr>
<tr>
<td>Legal involvement</td>
<td>15%</td>
<td>17%</td>
</tr>
<tr>
<td>Worldview</td>
<td>24%</td>
<td>12%</td>
</tr>
</tbody>
</table>

- How could these differences inform leadership expectations about service costs and outcomes at these clinics?

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**Our Pilot**

**The pilot**

- Eight sites participated:
  - Full spectrum of CCC services
  - Variety of patient acuity
  - Diverse patient populations
  - More than 100 patients with an initial and follow-up evaluation
- Staff received 1.5 hours of training before pilot and were encouraged to consult with Quality Management staff if unsure about scoring
**Results**

- Pilot results were mixed, with room for improvement:
  - Internal reliability for all items was moderate
  - Reliability improved significantly when:
    - Mental Health domain was excluded from analysis
    - Mental Health domain was included, but individuals with severe mental illness were excluded
    - First month of the four-month pilot was excluded
  - Staff also identified Mental Health as the domain for which they were least comfortable assigning a score
- However:
  - Staff reported positive experiences and improved confidence over time

**Next steps**

- We plan to complete a second pilot:
  - Tighten scope of pilot and increase internal controls
  - More robust training of staff prior to implementation
  - Pro-active consultation about domains in which staff express low confidence:
    - Outreach and consultation by Quality Management staff at team meetings
    - Non-mental health staff can consult with a QM team member who is a mental health counselor before assigning a mental health score
    - Non-medical staff can consult with a QM team member who is an RN before assigning a physical health score
  - We will revisit the content of the tool if the more tightly controlled pilot yields similar results

**Looking Ahead**
Where do we go from here?

- Second pilot is in the planning stages
- Developing a common data collection interface to be used when MOSAIC Matrix content is finalized
- Shared electronic care plan using the MOSAIC Matrix domains:
  - Engages providers across disciplines
  - Puts care planning focus on the whole person

In the future …

- We anticipate using this data to manage more strategically:
  - Identify at-risk populations, apply resources and interventions, and determine whether the interventions had the desired results
  - Identify high-performing programs and interventions, and replicate them
- We seek to better understand programs and patients:
  - Understanding the relative risk and complexity of different programs’ populations
  - Providing a clear snapshot of patient complexity—with the ability to evolve over time—for everyone involved in care.
Thanks to:
 CareOregon, for their generous support of this project
 The CCC staff who participated in the workgroup and pilot
 The patients who shared their time and wisdom with us

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PCAM: Bringing the social determinants of health into primary care

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Who?
- Family Medicine, University of Minnesota
- General Practice, Universities of Glasgow and Aberdeen, Scotland
- Nursing, Midwives and Allied Health Professionals Research Unit, University of Stirling, Scotland

• www.PCAMonline.org

Why?
What?
Where?
• With particular thanks to Dr Mac Baird, C J Peek, Eli Coleman for permission to adapt and further develop the MCAM assessment and the INTERMED team.

- Why?

• Deprived populations have considerably higher levels of mortality from coronary heart disease (CHD). This relationship is evident for all ages, but is strongest in those aged under 75 years for whom mortality rates from CHD in the 10% most deprived areas are 3.5 times higher than in the 10% least deprived areas (Scottish Government, 2008).

• In the worst parts of Glasgow, life expectancy for a male is as low as 54 years of age.
• Across whole populations, rates of mental illness are five times higher in the most unequal compared to the least unequal societies. (Wilkinson and Pickett, 2009, The Spirit Level).

• INTERMED
• MCAM
• MECAM
• PCAM
Health and Wellbeing

Social Environment

Health literacy and communication

Service Coordination

ACTION

Implementation and Research
Keep Well Study

Aims

• To develop and establish face validity of the professional version of PCAM, specifically in its ability to identify mental health-related needs.

• Secondary aims of the research were to:
  – conduct preliminary external validity testing
  – establish how best to integrate the PCAM into existing Keep Well health checks
  – evaluate the implementation and perceived value of PCAM in a Keep Well setting

Methods

• Face validation phase
• Implementation with supporting training
• Pre and post implementation data collection
  – CARE measure
  – CSQ satisfaction measure
  – Referral patterns
• Post implementation data on SF-36v2
• Case study of known complex patient groups
External validity testing

• Good internal consistency (within role)

• Factor structure analysis showed good consistency with the theoretical constructs

• Moderate to mild convergence with SF-36

Implementation

‘I think that it helped, I suppose it’s helped me to think or to give a bit more focus to these other issues that potentially might be around…it’s improved my awareness and improved my focus during the assessment.’
Assessment, not diagnosis

The MECAM one was, it’s more meaty, you know, it’s got a lot more it’s not just a score between 1 and 10 type of thing it’s actually getting down to the nitty gritty of where people are so you can actually analyze where people have got issues.’

The Access Practice

‘I think our common approach is that we try and build on any change that they can make whatever change that is and it might not be a health change it’s just it’s; the people, I don’t know whether I’m speaking for everybody but the people we work with [have] very low self esteem, very low self efficacy, little self will, little sense of self determination. They tend to be quite fatalistic, don’t have much control of self or their environment so a lot of what we’re doing is getting people to take small steps so that they gradually work towards influencing their immediate self and things around them and at some time it’s their health and that’s I would say that’s our kind of pathway that we try and work towards that.’
### Next Steps
- Funded projects
- Partnerships
- Learning

### Long Term Conditions Management
- Improved Patient Centeredness
  - Reducing readmissions
  - Curriculum development
  - Triple aim redesign
  - Improved care transitions
  - Integrating health and social care
  - Enhancing care coordination
  - Impact on team care
  - High utilizer interventions
  - Health IT

### Thank you!
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