Data Analytics & Population Health Management
Through the Lens of Behavioral Health

Presentation to The Indiana Council

July 29, 2016
Agenda

• Trends Driving Population Health Management
• Setting the Stage: How Analytics Data Can Bring Value to Indiana Council Members
• Translating the Theory into Practice
• CMT: The Power of *ProAct*
• Status of Indiana FSSA Project
Trends Driving Population Health Management
The Future of Healthcare Paradigm Shift

Today:
Reactive and Volume-based

The Future:
Proactive and Value-based

Health System
Population health management provides comprehensive authoritative strategies for improving the systems and policies that affect health care quality, access, and outcomes, ultimately improving the health of an entire population.

Encourage me!
Educate me!
Treat me holistically!
I will pay you!
Medicaid is the 2nd Top Health Insurance Program

Over half of states have adopted the ACA Medicaid expansion.

<table>
<thead>
<tr>
<th>Program Name</th>
<th>Total Enrollment (In Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Insurance</td>
<td>172.7</td>
</tr>
<tr>
<td>Medicaid</td>
<td>54.9</td>
</tr>
<tr>
<td>Medicare, 65 +</td>
<td>43.3</td>
</tr>
<tr>
<td>Medicare, Duals</td>
<td>9.6</td>
</tr>
<tr>
<td>Military Insurance</td>
<td>6.3</td>
</tr>
</tbody>
</table>

NOTES: *AR, IA, IN and MI have approved Section 1115 waivers for Medicaid expansion. WI covers adults up to 100% FPL in Medicaid, but did not adopt the expansion. **Montana has passed legislation adopting the expansion; it requires federal approval.

Narrowing the Field: Focus on Superutilizers

- 66% of U.S. healthcare spending focused on chronic illness
- 5% of U.S. population account for 49% of healthcare spending ($43,212 average PMPY)
Behavioral Health Impact on Medicaid Cost

• Behavioral health is a key component:
  ✓ Contributes to high cost and prolonged care needs
  ✓ Not only exacerbates but leads to chronic physical health disorders

• When co-occurring chronic conditions present alongside mental illness & substance use disorders, annual Medicaid costs increase by 200% or more

<table>
<thead>
<tr>
<th>Condition</th>
<th>No Behavioral Health Disorder</th>
<th>With Mental Illness &amp; Substance Use Disorder¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma/COPD</td>
<td>$8,000</td>
<td>$24,598</td>
</tr>
<tr>
<td>Congestive Heart Failure</td>
<td>$9,488</td>
<td>$24,927</td>
</tr>
<tr>
<td>Coronary Heart Disease</td>
<td>$8,788</td>
<td>$24,443</td>
</tr>
<tr>
<td>Diabetes</td>
<td>$9,498</td>
<td>$36,730</td>
</tr>
<tr>
<td>Hypertension</td>
<td>$15,691</td>
<td>$35,840</td>
</tr>
</tbody>
</table>


• The prevalence of a major depressive disorder for people with chronic health conditions ranges from 10% to over 50%
• Only 30% of people being treated for a serious mental illness are screened for diabetes despite that being recognized as a major side effect of treatment
• Up to 45% of the people visiting an emergency room have a behavioral health diagnosis
Medicaid Indicators—Emerging Care Integration and Coordination Models

Medicaid ACO States--8
Setting the Stage: How Data Can Bring Value in a Value Based World
CMT’s Strengths

Data Analytics/Decision Support

• Actionable clinical insights
• Whole person 360 care view
• Recognized thought leader:
  ✓ Developed an Opioid Risk Stratification and associated Tiered Intervention Strategy
  ✓ Created Blood Lead Level Test Algorithm for Children under Age of 18
  ✓ Created data capture for Risk of Lead Exposure
  ✓ Developed an ID/D Registry CMT can provide
• Comparative analyses of ICEs/HH performance
• Unparalleled experience & expertise with Medicaid Health Homes
Outcomes | Metabolic Syndrome Screening

3.5 years

<table>
<thead>
<tr>
<th>Time</th>
<th>Screening Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb'12</td>
<td>12%</td>
</tr>
<tr>
<td>Feb'13</td>
<td>46%</td>
</tr>
<tr>
<td>June'13</td>
<td>61%</td>
</tr>
<tr>
<td>Jan'14</td>
<td>80%</td>
</tr>
<tr>
<td>June'14</td>
<td>88%</td>
</tr>
<tr>
<td>Aug'15</td>
<td>97%</td>
</tr>
</tbody>
</table>

Metabolic Syndrome Screening (All HCH Enrollees)
## Case Study #1: Missouri Outcomes

<table>
<thead>
<tr>
<th>COST SAVINGS</th>
<th>HEALTH IMPROVEMENTS (Feb 2012 – Jan 2014)</th>
<th>REDUCTIONS IN HOSPITALIZATIONS IN THE FIRST YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missouri Health Homes have saved an estimated $36.3 million.</td>
<td><strong>Cholesterol</strong> 37%</td>
<td>9.1%</td>
</tr>
<tr>
<td></td>
<td><strong>Blood Pressure</strong> 42%</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Blood Sugar</strong> 46%</td>
<td></td>
</tr>
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</table>
Translating the Theory into Practice
CMT Clinical Leadership Team

Carol Clayton, PhD
CMT CEO
25 years of MH/DD/SA experience in the public and private sector; previously with Magellan Health Services

Leigh Steiner, PhD
CMT Director of Clinical Applications
30 years state government experience; former Commissioner of Mental Health for the State of Illinois

George Oestreich, PharmD, MPA
G. L. O. and Associates – key strategic consulting on Medicaid issues; former Deputy Division Director, Clinical Services for MO HealthNet (MHD); also served as Director of Pharmacy

Nicholas Genes, MD, PhD
Associate Professor
Department of Emergency Medicine; Associate Professor
Department of Genetics and Genomic Sciences, Mount Sinai School of Medicine

Chris Reist, MD MBA
Associate Professor (with tenure) in the Dept. of Psychiatry and Human Behavior at the University of California, Irvine and Assistant Dean in the College of Medicine and the Director of Medical Research for the Long Beach Veterans Affairs Healthcare System
CMT Customer Base
ProAct Conceptual Data Flow
CMT ProAct Solution: Actionable Insights

- A child triggers the measure when they have been diagnosed with having been exposed to lead and have not had a lead screening test in the last 12 months.
- Data used in this measure's algorithm is derived from claims.
Currently, there are no codes that can be billed on a claim to identify a patient’s lead risk level or the blood lead level (BLL) test results.

The timeframes recommended to complete the BLL tests depend on knowing if the patient had been assessed as having high risk to lead exposure or if their BLL test results exceeded 5 µg/dL.

CMT has created the ability to capture additional lead data in ProAct.

- **Risk of Lead Exposure**
  - Yes / No selection

- **Blood Lead Level**
  - Value of the blood lead level results can be recorded
How We Do It: The Power of ProAct
The Reactive Model - Starting with the Individual
The Proactive Model - Starting with the Population
Population Health Cycle: Step 1

Define Population:

- Choose a population of interest.
- Refine by criteria such as diagnosis, service utilization or cost.
- Ideally, data is organized in a registry type system that can be easily manipulated.
Population Health Cycle: Step 1
Population Health Cycle: Step 2

Identify Care Gaps:

- Once a population has been identified, further analytics are applied to characterize gaps in guideline based care.
- Must have method of translating guideline based care into measureable units.
- Your data is then analyzed against these rules.
Translating the Evidence into Algorithms

Examples of General Preventive Care Indicators

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Annual Flu shot</td>
</tr>
<tr>
<td>• No evidence of annual <strong>comprehensive preventive care assessment including physical examination.</strong></td>
</tr>
<tr>
<td>• On psychotropic medication with <strong>no evidence of psychiatric evaluation in the past year.</strong></td>
</tr>
<tr>
<td>• Dx of COPD/asthma and no record of annual pneumovax</td>
</tr>
</tbody>
</table>

Behavioral Pharmacy Indicators

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Use of an antipsychotic at a higher than recommended dose for 45 or more days</td>
</tr>
<tr>
<td>• Multiple prescribers of any antipsychotic for 45 or more days</td>
</tr>
<tr>
<td>• Failure to refill/fill a medication in a patient with multiple recent emergency department (ED) visits</td>
</tr>
<tr>
<td>• Use of benzodiazepines at a higher than recommended dose for 60 or more days</td>
</tr>
<tr>
<td>• No evidence of follow-up appointment or psychosocial intervention in a patient who has failed to refill/fill medication</td>
</tr>
</tbody>
</table>
## Chronic Disease Management Indicators

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Diabetic with no evidence of annual foot exam</td>
</tr>
<tr>
<td>• Diabetic with no evidence of annual urine test for protein/creatinine</td>
</tr>
<tr>
<td>• Diabetic with no evidence of lipid monitoring</td>
</tr>
<tr>
<td>• Diabetic with no evidence of HbA1c level in the last 6 months.</td>
</tr>
<tr>
<td>• Diabetic with no evidence of statin if patient &gt; age 40</td>
</tr>
<tr>
<td>• Diabetic with no evidence of annual eye exam</td>
</tr>
<tr>
<td>• On atypical antipsychotic medication with no evidence of metabolic monitoring.</td>
</tr>
<tr>
<td>• Dx of Cardiovascular Disease and no evidence of statin</td>
</tr>
<tr>
<td>• Diabetic with use of high risk antipsychotics (clozapine, olanzapine, quetiapine)</td>
</tr>
</tbody>
</table>
Consider:

- High frequency
- High cost
- Critical element

Stratify Risks:

- Stratify the identified care gaps based on criteria that can include high risk or prevalence.
- Strategies are then developed to address the most important care gaps.
Poor Adherence Drill Down
Service Utilization at Individual Level

- Use data analytics to drill down for more information.
- Are there indicators that reflect increased utilization of services?
  - Hospitalizations
  - ER visits
- Have prior efforts been made to address poor adherence?

Implement Tiered Interventions
Engage Patients:

- Successful strategies to remedy care gaps include motivating and collaborating with patients to help them understand care plans and the importance of complying with recommended guidelines:
  - Social media
  - Text messaging
  - Mobile phone apps
  - Support groups
  - One-on-one coaching
Population Health Cycle: Step 5

Manage Care:

- Assignment of health team roles and responsibilities are made as the strategy is implemented.
  - Care Coordination
  - Provide tools for care team
- One care gap does not mean the same approach for all.
- Tiered Interventions:
  - Conceptualizing interventions for sub-populations based on stratification of need.
Population Health Cycle: Step 6

Measure Outcomes:

• Analyze
  ➢ ROI
  ➢ Cost Avoidance
  ➢ Savings

• Determine “sweet spot” of investment

• Track movement of patients between risk categories
5

Status of the FSSA Project
ProAct Implementation Project Phases
IN FSSA ProAct Implementation

CMT is excited to be working with the IN FSSA team led by Dr. Debbie Herrmann.

The project is currently in the Analysis phase:
- Reviewing all data elements being provided by IN FSSA
- Reviewing test files with these data elements

CMT will begin the database build in early August.

After that, CMT will conduct a rigorous Quality Assurance review.

ProAct deployment and training will be complete by the end of September.
IN FSSA *ProAct* Implementation

Key IN FSSA Implementation Team Members

- Debbie Herrmann, Deputy Director, DMHA Medicaid Initiatives
- Regina Smith, Program Director, IPCBHI
- Ralph Jones, FSSA Data & Analytics
- Kelly Johnson, CMT Implementation Manager
- Michele Schoen, CMT VP Customer Solutions

The team began meeting weekly on April 21\textsuperscript{st} and will continue to work together through deployment in late September.

The project initially concentrates on 3 CMHCs (TBD) certified as CCBHCs.
Thank you

Carol Clayton, Translational Neuroscientist Strategist

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919-491-0819

CMT.KNOW MORE.CARE WISELY.