Risk Stratification: Necessary Tool for Value-Based Payments

Presenters:
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Why Risk Stratification?

Population health requires concerted effort

Goal to improve outcomes across system

• Identify specific outcome
• Identify “at-risk” population
• Develop targeted intervention

Alternate payment models require knowing costs

• Understand utilization patterns
• Know who, what, when, where and why
• Analyze costs versus outcomes
The Risk of Implementing

Where to start
Identify the Risk

Making a Model

Vs

Using a Model
### Identify the Data

<table>
<thead>
<tr>
<th>Points</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Engagement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Substance, actively using, new sober, motivated to change (alcohol, narcotics, benzodiazepines, other)</td>
<td></td>
<td></td>
<td>Mental health diagnosis that is severe, persistent, and uncontrolled (schizophrenia, major depression, bipolar, debilitating anxiety)</td>
<td></td>
<td>Medication Ad</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Metric</th>
<th>2+ ED Visits in Past 6 Months</th>
<th>High Risk of IP Admit/ED visit in Next 6 Months</th>
<th>Criminal Justice Involvement</th>
<th>Y/N</th>
<th>Y/N</th>
<th>Y/N</th>
<th>Y/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Do the Work

Operationalizing

Technical Implementation
Keep Doing the Work

Analysis

Quality Assurance

New Operationalizations
Risk Stratification is Utilization Management

MARY K. DUFFY, LCSW-S
DIRECTOR, UTILIZATION MANAGEMENT
BLUEBONNET TRAILS COMMUNITY SERVICES
Risk Stratification as a clinical tool

- A small part of our population makes up a high percentage of costs to outside systems (hospitals, jails, etc.)
- Often, These are not individuals who are in our ongoing service array, but utilize crisis services
- Need to come up with a way to identify these high utilizers of other systems to target interventions
CSI: Clinically Significant Information

Developed report to identify key areas that might increase risk of utilizing other systems and assigned point values:

- More than 2 no shows in last 12 months
- No upcoming scheduled services
- Last service more than 90 days prior
- No current TRR
- Suicidal risk assessment with positive for ideation, intent, plans, means, or past ideation intent plans or means (1 point each, if average is greater than 1.5 = 1 point)
- Number of past suicide attempts (1 point for any answer)
- Number of hospitalizations in past 180 days > 1 – ANSA
- Number of hospitalization > or = 30 days in last 2 years - ANSA
- Identified supports from ANSA > 1
- Chronic pain diagnosis
- Reported Benzo or opiate usage / controlled pain meds
- Substance Use/positive UA
Identifying individuals with High CSI scores

<table>
<thead>
<tr>
<th>Program</th>
<th>Low Risk</th>
<th>Medium Risk</th>
<th>High Risk</th>
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<tbody>
<tr>
<td>1100</td>
<td>175</td>
<td>43</td>
<td>3</td>
</tr>
<tr>
<td>1200</td>
<td>94</td>
<td>18</td>
<td>3</td>
</tr>
<tr>
<td>1300</td>
<td>84</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>1400</td>
<td>63</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>1500</td>
<td>19</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>1600</td>
<td>36</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>1700</td>
<td>59</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>1800</td>
<td>459</td>
<td>78</td>
<td>2</td>
</tr>
<tr>
<td>1900</td>
<td>170</td>
<td>34</td>
<td>3</td>
</tr>
<tr>
<td>2100</td>
<td>377</td>
<td>55</td>
<td>2</td>
</tr>
<tr>
<td>2500</td>
<td>96</td>
<td>8</td>
<td></td>
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</table>

Low Risk = 1-3 points
Medium Risk = 4-6 points
High Risk = 7-9 points
<table>
<thead>
<tr>
<th>Case Number</th>
<th>Unit</th>
<th>Assign Status</th>
<th>Open Date</th>
<th>Close Date</th>
<th>No Shows</th>
<th>Schedule Appt</th>
<th>Past90Days Appt</th>
<th>Current Auth</th>
<th>Suicide Risk Score</th>
<th>Suicide Attempts</th>
<th>Hospitalization180</th>
<th>Number Hosp</th>
<th>Support Def Avg</th>
<th>Chronic Pain</th>
<th>Benzo Opiate Use</th>
<th>Ctrl Pain Meds</th>
<th>Past Substance Use</th>
<th>Positive SU</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>19</td>
<td>O</td>
<td>6/5/20</td>
<td>3/5/20</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>19</td>
<td>C</td>
<td>3/15/20</td>
<td>3/21/20</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
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<td>1</td>
<td>0</td>
<td>0</td>
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<td>0</td>
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<td>7</td>
</tr>
<tr>
<td>3</td>
<td>19</td>
<td>C</td>
<td>3/21/20</td>
<td>3/21/20</td>
<td>0</td>
<td>1</td>
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<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>8</td>
</tr>
</tbody>
</table>
Pulled the Services associated with highest risk individuals on CSI list

Looked at most recent service authorizations

Most services were provided in the crisis respite with little follow up post-admission

Highest risk individual received least amount of services and was admitted into an LOC 1S
- Services actually provided to at risk individuals (removing no shows and cancellations)
- Still primarily crisis with the highest scoring individual in 1S services receiving only tele-psychiatry.
Care Coordination as a CCBHC

- Utilizing CSI data Care coordinators can target interventions and follow up services to individuals who move the needle on metrics.
- Can further stratify populations to determine if interventions are working.
- CSI data identifies potential high utilizers of outside systems:
  - Jails, Substance use services, Emergency departments
- Identifies populations important for negotiating Alternative Payment Models with Managed Care Companies.
- Help manage the CCBHC utilization of services and costs of caseloads.
Risk Stratification for Targeted Interventions

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Assistant Director of Behavioral Health

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Lead Registered Nurse

June 22, 2018
Determine Strategy

- Know your population—what does the data show?
- Determine WHAT to stratify.....
  - variables
  - impact outcomes
  - utilization
- Population health approach
- Wagner’s Chronic Care Model
- Care Coordination/Care Management Strategy
- Create focused, targeted, impactful interventions
Risk Stratification for Care Coordination

- Began small:
  - Process began with 1115 waiver in IDD
  - Developed a Chronic Disease Registry
  - Utilized a Chronic Care screening tool
    ‣ Screening form is on slide 4

- Take-aways:
  - Learned value of care coordination
  - Learned the huge potential which happens, when care coordination is done correctly
Chronic Care Screening Form

**Minimum Screening Criteria:** Individual has **2 or more** chronic conditions (not limited to RN Care Management Protocols and including mental health/IDD conditions)

All identified conditions must be documented in IDD Database:

- Asthma
- Cerebrovascular Accident/stroke/TIA
- Coronary Artery Disease
- Heart failure
- Hyperlipidemia
- Hypertension
- Diabetes
- Epilepsy/Seizures
- Osteoarthritis/RA
- Depression
- IDD
- PTSD
- Schizophrenia
- Bi-polar disorder
- Substance Abuse
- LAI with missed appointments
- Pill boxes high risk
- Other________________

**AND** Patient is **UNSTABLE** as defined by evidence of **2 or more** of the following:

1 or more **Inpatient** admissions within the past **6** months
3 or more **ED** within the past **6** months
6 or more prescriptions currently
3 or more outpatient providers over the past **6** months
No PCP visit within the past year
2 or more ADL deficits requiring hands on assistance

**Result of Screening:** Deceased__ Defer__ Well Linked__ Does not meet Criteria__
Not Appropriate__ Proceed to Assessment__ Refused Services__ To Be Determined__
1115 is system-wide: What is next?

• Moving from 1100 IDD individuals to over 8,000 individuals is hard
• Key to integrated care quality outcomes
• First step in preparing value based payment arrangements
• Better way to target individuals in unique populations
• Alternative payment methodologies with managed care organizations
• Availability to bill Medicaid care coordination
Wagner’s Chronic Care Model
• care coordination allows our health system working with the community to improve health outcomes.

Improved care coordination
• identify high risk individuals with one or more high risk chronic conditions
• aggregate patient data - stratify into variables
• barriers to care
• implement interventions
Wagner’s Chronic Care Model and Population Health

The Chronic Care Model

Community Resources and Policies
- Self-Management Support

Health Systems Organization of Health Care
- Delivery System Design
- Decision Support
- Clinical Information Systems

Improved Outcomes
- Informed, Activated Patient
- Productive Interactions
- Prepared, Proactive Practice Team
Combination of factors help identify the data, but it is the variables within the system that are important to target:

- At a clinic location
- In a specific area (zip code or county)
- With specific chronic diagnosis (i.e. schizophrenia, use of long acting antipsychotics, increased basal metabolic rate)
- Using MH Community Health Needs Assessment
- What does data show based on sex, age or race? Is there a difference?

Stratify high, medium and low risk
Stratify High, Medium or Low Risk

- The variables in each individual’s situation determine how often they are seen.
- Instead of seeing 2000 people, once the data is reviewed it may be 50.
- Who meets the criteria before negative outcomes happen?
- “Dose response” curve of how often a person is seen to improve outcomes.
Risk stratification and Care management

Using Predictive Modeling to Assign Individuals Within the Care Management Disc

LEVEL 3
3% - High risk with multiple chronic illnesses

Intensive Care Management:
Example:
Schizophrenia, Bipolar, or MDD +
1 or more chronic diseases +
Hospitalization or missed clinic appointments

LEVEL 2
15% - Moderate risk patients with single chronic illness or risk factors

Health Coaching & Lifestyle Management:
Example:
Schizophrenia, Bipolar, or MDD +
1 chronic disease + social determinants health risks

LEVEL 1
80% - Low Risk

Health Education and Promotion
How we are using the Risk Stratification Tool and CCBHC Model of Care Coordination with our population.
Began with Schizophrenia and BMI 1115 measures

Schizophrenia questions:
• missed medications
• housing
• hospitalization
• independent living skills
• vocational rehabilitation
• increased BMI (a side effect of anti-psychotic medications)

Use data available. Don’t wait until data is gathered.

Do what you know

Evolving process – model will change as we learn
What to evaluate - Schizophrenia

<table>
<thead>
<tr>
<th>Location</th>
<th>Date Range</th>
<th>Diagnosis</th>
<th>Number Served</th>
<th>Elevated BMI %</th>
<th>Average Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult Mental Health Clinics</td>
<td>December 2017 to May 2018</td>
<td>Schizophrenia</td>
<td>2224</td>
<td>78%</td>
<td>46.5 Years</td>
</tr>
</tbody>
</table>

Demographics: Gender, Race/Ethnicity

- Male: 80%
- Female: 60%
- White: 40%
- Black: 20%
- Hispanic: 0%
- Other: 0%
Schizophrenia and Medication

- 1 in 4 (26%) are on a long acting anti-psychotic (LAI)
- Would a person on a LAI be healthier i.e. have decreased symptoms, improved quality of life, be happier and more engaged?
- Improve increased BMI because it leads to hypertension, cardiovascular disease, risk of stroke and potential diabetes complications.
- What are barriers of getting the medication:
  - level of understanding
  - anxiety
  - long waiting time
  - time commitment
### Long Acting Injectable Data

<table>
<thead>
<tr>
<th></th>
<th>14 Day Meds</th>
<th>28 Day Meds</th>
<th>90 Day Meds</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Average days per injection</strong></td>
<td>25.7</td>
<td>27.8</td>
<td>48.4</td>
<td>27.5</td>
</tr>
<tr>
<td><strong>% With timely schedule average</strong></td>
<td>13%</td>
<td>64%</td>
<td>100%</td>
<td>26%</td>
</tr>
<tr>
<td><strong>% With missed injections</strong></td>
<td>86%</td>
<td>25%</td>
<td>0%</td>
<td>72%</td>
</tr>
</tbody>
</table>
Who should be stratified as a Level 3?

- Schizophrenia + Missed injection more than one dose + increased BMI

Data to get in future:
  - Hospitalization (can it be prevented)
  - ER visits
  - Individuals NOT on an LAI having increased ER visits, hospitalizations or chronic disease
  - Chronic disease (diabetes, hypertension)
Coordination of Care Model
Potential areas to risk stratify

- PHQ9 scores
- Diagnosis + physical diagnosis
- Diagnosis + LAI (Medication adherence?)
- COPSD (by itself or + anything else)
- Hospital (more than once)
- ED (look at how often)
- Schizophrenia + social determinants of health
Care Coordination and Population Health

- Identify strengths
- Identify barriers to care
- Identify high risks

- Primary care
- Behavioral health care
- Acute care

- Right care
- Right time
- Care team

- Home and community
- Social determinants of care

Behavioral
Physical
Adherence
Social
Use Data to identify treatment and prevention opportunities

Rapid cycle improvement  PDSA

Training implements evidence based interventions

Personal interaction is the change agent

Data analytics – identify the dose response curve of personal interaction required

Training allows use of lower cost FTE to produce effective personal interaction
Resources:

1. Risk Stratification Tool User Guide: National Council for Behavioral Health:  
2. Care Coordination: Blue Print for Action for RNs: American Nurses Association Publications:  
   https://www.nursingworld.org/ana/
3. Wagner’s Chronic Care Model:  
4. Mental Health Community Health Needs Assessment (CHNA)  
   http://www.healthyntexas.org/resourcelibrary/index/view?id=129993951028073535
Contact Information

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