The Canary in the Coal Mine: Leveraging Crisis Utilization Data to Drive Improvement Across the Behavioral Health Network

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I. Crisis utilization as the canary in the coal mine for system performance

II. Real-world example of a data sharing partnership to leverage crisis data
   – ConnectionsAZ/Crisis Response Center
     Margie Balfour
   – Cenpatico Integrated Care
     Tylar Zinn & Karena Cason

III. Discussion/Q&A
Maybe stories are just data with a soul.

Brene Brown
“There was a problem at the pharmacy and I couldn’t get my meds filled.”

“I couldn’t get my case manager on the phone.”

“I missed my appointment because I don’t have transportation.”

“My mom can’t handle me at home by herself.”

“I don’t have a safe place to stay.”

“I got kicked out of my group home... AGAIN.”

“These meds aren’t working.”

“I couldn’t get in to see my doctor at my clinic.”

“What are you in for?”
The Canary in the Coal Mine

• A crisis visit is
  – A **missed opportunity** for stabilization in a less restrictive setting
  – A **mini root cause analysis** for something that didn’t work for that person in the behavioral health system
  – If aggregated, a **potentially valuable data source** to help a managed care organization guide quality improvement across the behavioral health system
Choosing Data for Quality Improvement

• **Meaningful**: Does the measure reflect a process or outcome that is clinically important?

• **Feasible**: Is it possible to collect the data needed to provide the measure?

• **Actionable**: Do the measures provide direction for future quality improvement activities?

“The goal is to turn data into information, and information into insight.”

- Carly Fiorina, CEO of HP
The problem with claims data...

- Often doesn’t contain the data you actually want.
- Old: 60-90 day claim lag

Thus, it’s hard to do a meaningful analysis during an actionable timeframe with only claims data.
Connections-Cenpatico
Data Analysis Partnership

Crisis Response Center (CRC)

Daily Data Feed
and other reports

Regional Behavioral Health Authority (Cenpatico)

Analysis

System-wide Quality Improvement

Monthly Joint Data Meeting
Example: Crisis utilization by clinic

Percent of each clinic’s adult population that had a CRC visit

Connections has the NUMERATOR
Cenpatico has the DENOMINATOR

Maybe this clinic needs some help?
The Crisis Response Center

• Built with Pima County bond funds in 2011 to provide an alternative to jail, ED, hospitals
  – 12,000 adults + 2,400 youth each year
• Law enforcement receiving center
• 24/7 urgent care, 23 hour observation, and short-term inpatient
• Space for community clinic staff
• Adjacent to
  – Crisis call center
  – Mental health court
  – Inpatient psych hospital for COE
  – Emergency Department (ED)
• Managed by Connections since 2014
• Licensed by Banner since 2015
Data Sharing with Cenpatico

• No additional consents are required since Cenpatico is the payor.

• Non-Cenpatico patients are removed before any data is sent.

• We try to integrate Cenpatico reports into our existing operations and reporting workflows.
The Daily Feed

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>DOB</th>
<th>Admit Date</th>
<th>ICC</th>
<th>CIS Client ID</th>
<th>Discharge Date</th>
<th>Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>6/6/17</td>
<td>MHC Healthcare</td>
<td></td>
<td>6/7/17 16:56</td>
<td>Home with Comm Referrals</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6/6/17</td>
<td>Declined</td>
<td></td>
<td>6/7/17 16:10</td>
<td>Home with Comm Referrals</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6/5/17</td>
<td>LA FRONTERA</td>
<td></td>
<td>6/7/17 11:20</td>
<td>Group Home</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6/6/17</td>
<td>Arizona Children Association</td>
<td></td>
<td>6/7/17 23:15</td>
<td>Sonora Hospital</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6/7/17</td>
<td>CODAC</td>
<td></td>
<td>6/7/17 3:18</td>
<td>Home with Comm Referrals</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6/6/17</td>
<td>COPE</td>
<td></td>
<td>6/7/17 15:25</td>
<td>Level 2 Facility</td>
</tr>
</tbody>
</table>

- List of all discharges (23 hour obs and inpatient)
- Report run from the electronic health record
- Sent daily each morning to
  - Cenpatico for data analysis
  - NurseWise for followup/aftercare tracking
82.8% of all visits were by individuals who had fewer than 4 visits in a 4 month period.
Rolling Frequent Utilizer Report

- Patients with 4+ visits in the past 4 months
- List is sent to Cenpatico for analysis monthly
- Multi-agency staffings are held for each individual
- CRC charts are flagged with individualized plans

<table>
<thead>
<tr>
<th>Last name</th>
<th>First name</th>
<th>dob</th>
<th>ICC</th>
<th>T19 status</th>
<th>rbha</th>
<th>payer</th>
<th>Clinic Only</th>
<th>Obs</th>
<th>Total</th>
<th>Visit this month?</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA FRONTERA</td>
<td>SMI T19</td>
<td></td>
<td>Cenpatico</td>
<td>AHCCCS only</td>
<td>9</td>
<td>10</td>
<td>19</td>
<td></td>
<td></td>
<td>Y</td>
</tr>
<tr>
<td>LA FRONTERA</td>
<td>SMI T19</td>
<td></td>
<td>Cenpatico</td>
<td>AHCCCS only</td>
<td>0</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td>Y</td>
</tr>
<tr>
<td>COPE</td>
<td>SMI T19</td>
<td></td>
<td>Cenpatico</td>
<td>AHCCCS &amp; Medicare</td>
<td>0</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td>Y</td>
</tr>
<tr>
<td>LA FRONTERA</td>
<td>SMI T19</td>
<td></td>
<td>Cenpatico</td>
<td>AHCCCS only</td>
<td>0</td>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
<td>Y</td>
</tr>
<tr>
<td>COPE</td>
<td>SMI T19</td>
<td></td>
<td>Cenpatico</td>
<td>AHCCCS only</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
<td>Y</td>
</tr>
</tbody>
</table>
Return Visits/Readmissions

• CRC UM staff reads all inpatient charts for concurrent reviews, providing an excellent opportunity to glean data for quality improvement purposes.
• Charts are abstracted each month
  – Return to CRC within 72 hours resulting in admit to inpatient
  – 30 day readmissions to inpatient unit
• Summaries are given to involved CRC staff, Cenpatico, and outpatient clinic.
Karena Cason, MA
Cenpatico Integrated Care
Program Specialist

YOUTH TRENDS
Cenpatico Integrated Care

AHCCCS: Arizona Health Care Cost Containment System (Arizona Medicaid)

Regional Behavioral Health Authorities (RBHAs)

Cenpatico Integrated Care

Providers
Tracking Youth Trends

- Daily
- Weekly
- Biweekly
- Monthly
- Quarterly
Daily Tracking

Although time consuming at first, information was input daily in order to
(1) Address immediate needs
(2) Establish baseline data
Weekly Tracking

Average member count since we began tracking data at the beginning of the year is 12.65. This week, the member count was above this average at 15 members. Members is the largest member count since the beginning of April. March had the lowest average member count at 9.75.

Recidivism rate this week was 27%, which is up from 23% last week.

Average Length of Stay: 1.85 days. (the average length of stay since we’ve been tracking in January is 2.05 days)

Range of stay: 1-4 days

Transportation to CRC:
Law Enforcement: 8
ICC: 0
Guardian: 2
ED: 0
Self Transport
CMT: 0
Ambulance: 0
Placement: 2

We are awaiting data on the mode of transportation for three more members. 67% of the members we have transportation data on were brought into the CRC by Law Enforcement this week.
Monthly Meetings

Average Members per Week from October to August
Monthly Meetings

Transportation Trends from October to August

<table>
<thead>
<tr>
<th>Mode of Transportation</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Police</td>
<td>231</td>
</tr>
<tr>
<td>ICCA</td>
<td>10</td>
</tr>
<tr>
<td>Guardian</td>
<td>159</td>
</tr>
<tr>
<td>ED</td>
<td>22</td>
</tr>
<tr>
<td>Placement</td>
<td>38</td>
</tr>
<tr>
<td>Ambulance</td>
<td>3</td>
</tr>
<tr>
<td>CMT</td>
<td>16</td>
</tr>
<tr>
<td>Self-Transport</td>
<td>1</td>
</tr>
</tbody>
</table>
Monthly Meetings

Primary Reason for Admission

<table>
<thead>
<tr>
<th>Reason</th>
<th>Member Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Danger to Self</td>
<td>143</td>
</tr>
<tr>
<td>Danger to Others</td>
<td>23</td>
</tr>
<tr>
<td>Agitated/Angry</td>
<td>8</td>
</tr>
<tr>
<td>Substance Abuse</td>
<td>1</td>
</tr>
<tr>
<td>Medications</td>
<td>1</td>
</tr>
<tr>
<td>Psychotic Symptoms</td>
<td>3</td>
</tr>
<tr>
<td>Family/Social Issues</td>
<td>1</td>
</tr>
<tr>
<td>Depression</td>
<td>6</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
</tr>
</tbody>
</table>
Leveraging the Data

I’m ready.
Internal Changes driven by Data

- Trained internal staff about processes
- Set up process for Crisis Mobile Teams to go to schools in lieu of police
- Worked with Health Home Leadership re: appropriate use of CRC
- A set time was created for each Health Home to call in regarding their members that had been admitted to the CRC
- Slotted CFT Times so a CRC staff member is available to attend each CFT
- Agency doing BIPs available after morning rounds to start facilitating placement
- CRC and Cenpatico Clinical Department talk directly regarding individual member needs
- CRC Children’s Psychiatrist and Cenpatico Medical Director talk directly regarding children with significant psychiatric needs
- CRC changed their assessment form for the Obs unit
External Changes driven by Data

• Talked with Health Home leadership and advised when to increase supports for high needs youth based on aggregate data

• Addressed Process Concerns with Health Homes monthly and at Quarterly System of Care Meetings. Health Home leadership volunteered to create a subgroup to address concerns.

• Contacting Stakeholders to address system concerns and creating new plans.

• Contracted a new post CRC in-home provider: FACT Program
Results

• Readmissions within 72 hours dropped by 50% within one year
• More appropriate admissions (homicidal and suicidal ideations)
• More appropriate Referral Source
• Smoother transition to placements
• The target is for members to discharge from the CRC within 24 hours. For the month of February 2017, the average length of stay was on target at 24 hours. This is an improvement from February 2016 when the average length of stay was 33.08 hours.
Something Need to Change?

• Unlike the Red Wedding, protocols can easily be changed with regular check ins

Perhaps I’ve made a terrible mistake.
Regular Check-Ins

• Discussions take place at monthly meeting for overall System update. COO, Medical Directors from CRC and RBHA, Care Management, and Program Development attends each meeting.
• Cenpatico attends CRC Quarterly Meetings
• CRC attends Cenpatico Quarterly Meetings with Provider Leadership
• Assess if new protocols are positively affecting the data.
• Since data is collected in real time, we are able to see effects of changes quickly and assess what is working/ not working
Tylar Zinn
Cenpatico Integrated Care
Program Specialist

ADULT TRENDS
Identifying a Problem

- As a system, are we treating high utilization of the CRC as a symptom of something lacking for members?
- Are we proactive in trying to solve that problem?

“Defining the real problem is the 1st step towards solving it.”
Analyzing High Utilization

• 2016 High Utilizer project:
  – Hypothesis: Members who are utilizing the CRC frequently would benefit from increased ART meetings, increased face to face contact with their treatment team, and increased changes to their Service Plan and Crisis Plan
  – Bringing attention to the needs of individual high utilizers
  – Increasing multi-agency staffing of individual high utilizers
  – Plan:
    • RBHA Program Specialist will track number of ART meetings, number of face to face visits, and number of changes to Service Plan and Crisis Plan alongside number of CRC visits in real time
    • RBHA, provider, and CRC will staff cases three times (approximately once a month for three months), whether member has presented or not (proactive approach)
    • Create diversion plans appropriate to the individual members in collaboration with each agency
<table>
<thead>
<tr>
<th>Weekly updates</th>
<th>MEMBER</th>
<th>MEMBER2</th>
<th>MEMBER3</th>
<th>MEMBER4</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRC/ICCA/Cenpatico Staffing dates/Notes</td>
<td>6/27/16 Hasn't been</td>
<td>6/30/16 In jail since</td>
<td>6/7/16 Presented ye</td>
<td>6/27/16 Hasn't been</td>
</tr>
<tr>
<td>First staffing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second staffing</td>
<td>8/2/2016 Hasn't had</td>
<td>7/28/16 Still in jail.</td>
<td>7/8/16 CRC on the 7t</td>
<td>8/2/16 Not since 4/2</td>
</tr>
<tr>
<td>Third staffing</td>
<td>Contact. Will probably</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week of 5/22-5/28/16</td>
<td>0- in jail</td>
<td>CSU 5/22, COT suspe</td>
<td>Added group thx and</td>
<td></td>
</tr>
<tr>
<td>CRC visits (unit) and referral source</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Changes in Service Plan/Crisis Plan</td>
<td>No contact info for</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>ART meetings</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>#/type of face-to-face services</td>
<td>Outreach to re-eng</td>
<td>None- in jail</td>
<td>None</td>
<td>RN X2</td>
</tr>
<tr>
<td>Week of 5/29-6/4/16</td>
<td>0</td>
<td>1- TPD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRC visits (unit) and referral source</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Added PSA Art Awak</td>
</tr>
<tr>
<td>Changes in Service Plan/Crisis Plan</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>ART meetings</td>
<td>None- scheduled but</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>#/type of face-to-face services</td>
<td>None-needed new</td>
<td>None-jail</td>
<td>CM X2, ASAM ass X1</td>
<td>Group X1</td>
</tr>
<tr>
<td>Week of 6/5-6/11/16</td>
<td>0</td>
<td>0</td>
<td>1- TPD</td>
<td></td>
</tr>
<tr>
<td>CRC visits (unit) and referral source</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Changes in Service Plan/Crisis Plan</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>ART meetings</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>6/9/2016</td>
</tr>
<tr>
<td>#/type of face-to-face services</td>
<td>None- see last week</td>
<td>None-jail</td>
<td>CM X1</td>
<td>CM X1, RN X2, BHMP</td>
</tr>
<tr>
<td>Week of 6/12-6/18/16</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CRC visits (unit) and referral source</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Talked about groups</td>
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<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>ART meetings</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>#/type of face-to-face services</td>
<td>CM X1 6/13</td>
<td>None-jail</td>
<td>CM X1</td>
<td>RN X1</td>
</tr>
</tbody>
</table>
Analyzing the Data

<table>
<thead>
<tr>
<th>Provider</th>
<th>Ave. CRC visit</th>
<th>Ave. plan ch</th>
<th>Ave. # ARTs</th>
<th>Ave # F2F visits</th>
<th>Plan change/CRC visit</th>
<th>ARTs/CRC visit</th>
<th>F2F/CRC visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider1</td>
<td>0.43</td>
<td>0.14</td>
<td>0.28</td>
<td>0.42</td>
<td>0.33</td>
<td>0.66</td>
<td>1</td>
</tr>
<tr>
<td>Provider2</td>
<td>0.28</td>
<td>0.11</td>
<td>0.23</td>
<td>2.8</td>
<td>0.38</td>
<td>0.8</td>
<td>9.9</td>
</tr>
<tr>
<td>Provider3</td>
<td>0.26</td>
<td>0.61</td>
<td>0.37</td>
<td>1.9</td>
<td>0.23</td>
<td>1.38</td>
<td>7.4</td>
</tr>
<tr>
<td>Provider4</td>
<td>0.03</td>
<td>0.03</td>
<td>0.03</td>
<td>0.61</td>
<td>1</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>Provider5</td>
<td>0.33</td>
<td>0.09</td>
<td>0.26</td>
<td>1.22</td>
<td>0.29</td>
<td>0.82</td>
<td>3.7</td>
</tr>
<tr>
<td>Provider6</td>
<td>0.00</td>
<td>0.07</td>
<td>0.23</td>
<td>1.3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Analyzing the Data: Example

- Of the three the biggest providers, Provider 2, Provider 3, and Provider 5, Provider 3 had fewer CRC visits associated with more Service Plan and Crisis Plan changes than the other two.
Diversion Plans: Removing Barriers and Partnering for Better Outcomes

• Example 1:
  – Member X has had declining stability since her parental rights for her child were severed a year ago, and her child’s birthday is coming up.
  – PLAN: Outpatient provider will provide increased intensive community based support through member’s child’s birthday. Team will support member’s plan to move out of her parent’s home due to instability there. CRC will contact member’s Peer Support Specialist when member presents at the CRC in order to connect her more quickly with outpatient support.
  – RESULT: Member is no longer a high utilizer and only had 1 CRC visit in the first quarter of 2017 compared to 5 during the same time frame in 2016.

• Example 2:
  – Member Y becomes bored during the weekend, which is a trigger for CRC visits. She has a partner who is also enrolled in services.
  – PLAN: A referral for a Behavioral Health Residential Facility will be completed and the CRC will call member’s case manager, case aide, and Peer Support Specialist to utilize member’s relationship with her outpatient team to help connect her more quickly with outpatient support. The team will explore working with member’s partner’s team if member and her partner are in agreement in order to assist both of them in recovery together. The outpatient provider will do welfare checks on nights and weekends to help plan for boredom and other triggers that historically result in CRC visits.
  – RESULT: Member is no longer a high utilizer and only had 1 CRC visit in the first quarter of 2017 compared to 14 during the same time frame in 2016.
Results of Project and Analysis

• Higher numbers of ART visits, face to face appointments, and changes in the Service Plan or Crisis Plan were correlated with fewer CRC visits overall in the largest three outpatient providers.

• Results were shared with outpatient providers, with both strengths and areas for growth discussed.

• CRC requested that the multiagency staffings continue regarding high utilizers and these will be transferred to our Medical Management department for coordination of individual member care to reduce CRC utilization.

• Medical Management is receiving the daily census and the high utilizer list in order to do follow up.

• In our Medical Management department, an ED utilization reduction project is being modeled after this project.
Results

- At the start of May 2016 when the 2016 High Utilizer Project began, there were 64 members on the list. At the start of May 2017, there were only 37.

- Of the 64 members on the list in May 2016, only 7 remain on the list.
Benefits of Monthly Review of Trends for Adults and Children at the CRC

• Noticing and following up as a group on trends regarding Law Enforcement drop off

March 2017 CRC Adult Trends

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Referral by Law Enforcement</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 2016</td>
<td>286</td>
</tr>
<tr>
<td>August 2016</td>
<td>238</td>
</tr>
<tr>
<td>September 2016</td>
<td>235</td>
</tr>
<tr>
<td>October 2016</td>
<td>313</td>
</tr>
<tr>
<td>November 2016</td>
<td>266 (levels out)</td>
</tr>
<tr>
<td>December 2016</td>
<td>253</td>
</tr>
<tr>
<td>January 2016</td>
<td>266</td>
</tr>
<tr>
<td>February 2016</td>
<td>269</td>
</tr>
<tr>
<td>March 2016</td>
<td>253</td>
</tr>
</tbody>
</table>

A data work group is going to be put together involving the county, the CRC, Cenpatico, and input from TPD regarding sharing data and ideas about reducing Court Ordered Evaluations and Law Enforcement calls, focused in part on looking at calls from group homes. The progress of the group will be reported in this meeting monthly.
Benefits of Monthly Review of Trends for Adults and Children at the CRC

• Continued exploration of ideas regarding improving care for members experiencing frequent utilization of the CRC

Members with High Utilization

Members with High Utilization from the project last year are going to be analyzed again to see how we did in reducing high utilization from different types of members: those who come to the CRC due to substance use, those that are SMI and may not be getting their needs met yet, and those that are in DDD and struggling in DDD group homes. Splitting the members from the project into these groups will allow us to compare results of the project for each type of member, and allow us to determine if a pilot project may be appropriate for one or more of these groups.

Additionally, the current High Utilizer list is going to be analyzed to see which members are presenting to the CRC frequently due to alcohol or opiate abuse. When those members are identified, we will loop in their Health Homes and look at a small pilot project where the CRC will utilize Vivitrol for substance use to see if this will assist in reducing utilization for these members.
Questions?

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