Choose the Red Pill: Leveraging data to illuminate the path to multi-stakeholder collaboration and system improvement

20th Annual Summer Institute for Applied Behavioral Health – Flagstaff, AZ: July 16-19

Margie Balfour, MD, PhD
Chief of Quality & Clinical Innovation, ConnectionsAZ
Associate Professor of Psychiatry, University of Arizona
Margie.Balfour@connections.hs.com

Johnnie Gasper
Manager of Crisis Systems, Arizona Complete Health
Johnnie.Gasper@azcompletehealth.com

Kevin Koegel, MPH
Data Analyst, Pima County
Kevin.Koegel@pima.gov

Paula Perrera, JD
Director
Pima County Behavioral Health
Paula.Perrera@pima.gov

Sgt. Jason Winsky
Supervisor, MHST Team
Tucson Police Department
Jason.Winsky@tucsonaz.gov

Panelists:
How can crisis data help improve the whole behavioral health system?

Every crisis visit is a **story** about how someone couldn't get their needs met in the community.

If we **turn the stories into data**, it can **reveal trends** about things that need improving in the overall behavioral health system.

Now that we **know** where the gaps are...

“Maybe stories are just data with a soul.”

- Brené Brown
The story ends, you wake up in your bed and believe whatever you want to believe.

You stay in Wonderland and use the data to catalyze cross-sector collaborations to FIX the gaps.
Part 1: Measuring Performance in Crisis Services

Laying the Foundation
Why care about Data...

Data lets us know whether we are living up to our core values, demonstrates value to customers and stakeholders, and helps us improve.
Defining outcome metrics for facility-based crisis services

Connections developed a measure set for its crisis facilities using a Critical to Quality (CTQ) Tree.

A Critical-To-Quality (CTQ) Tree is a quality improvement tool used to translate values into discrete measures:

- Broadly, what value are you trying to accomplish?
- Then what are the key attributes that make up that value, from the perspective of the customer?
- Then define measures that reflect each attribute

Connections developed a measure set for its crisis facilities using a Critical to Quality (CTQ) Tree.
Choosing Metrics

• **Meaningful:** Does the measure reflect a process that is *clinically important*? Is there evidence supporting the measure?

• **Feasible:** Is it *possible to collect* the data needed to provide the measure? If so, can this be done accurately, quickly, without a need for excessive manual data entry or chart audits?

• **Actionable:** Do the measures *provide direction for future quality improvement activities*? Are the factors leading to suboptimal performance within the span of control of the organization to address?

---

• **Structure Measures** refer to the environment in which care is delivered – a facility’s organization and resources.
  – *“What do you HAVE?”*
    • Is there a psychiatrist co-located in a primary health clinic
    • Staff to patient ratios

• **Process Measures** refer to the techniques and processes used to treat patients.
  – *“What do you DO?”*
    • % patients screened for depression
    • Door to balloon time for Acute MI

• **Outcome Measures** refer to the consequences of the patient’s interaction with the healthcare system.
  – *“Does it WORK?”*
    • Mortality
    • Patient Satisfaction
    • Improvement on depression rating scales
    • Readmissions

---

Outcome metrics for facility-based crisis services

- **Timely**
  - Door to Diagnostic Evaluation (Door to Doc)
  - Left Without Being Seen
  - Median Time from ED Arrival to ED Departure for ED Patients: Discharged, Admitted, Transferred
  - Admit Decision Time to ED Departure Time for ED Patients: Admitted, Transferred

- **Safe**
  - Rate of Self-directed Violence with Moderate or Severe Injury
  - Rate of Other-directed Violence with Moderate or Severe Injury
  - Incidence of Workplace Violence with Injury

- **Accessible**
  - Volume/visits
  - Denied Referrals Rate

- **Least Restrictive**
  - Community Dispositions
  - Conversion to Voluntary Status
  - Hours of Physical Restraint Use & Hours of Seclusion Use
  - Rate of Seclusion and Restraint Use

- **Effective**
  - Unscheduled Return Visits – Admitted, Not Admitted

- **Consumer Family Centered**
  - Consumer Satisfaction (Likelihood to Recommend)
  - Family Involvement

- **Partnership**
  - Law Enforcement Drop-off Interval
  - Hours on Divert
  - Provisional: Median Time From ED Referral to Acceptance for Transfer
  - Post Discharge Continuing Care Plan Transmitted to Next Level of Care Provider Upon Discharge
  - Provisional: Post Discharge Continuing Care Plan Transmitted to Primary Care Provider Upon Discharge

## Connections Crisis Facility KPIs

<table>
<thead>
<tr>
<th>Metric</th>
<th>Outcome</th>
<th>Relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urgent Care Clinic: Door-to-Door Length of Stay</td>
<td>&lt; 2 hours</td>
<td>Patients get their needs met quickly instead of going to an ED or allowing symptoms to worsen.</td>
</tr>
<tr>
<td>23-Hour Obs Unit: Door-to-Doctor Time</td>
<td>&lt; 90 min</td>
<td>Treatment is started early, which results in higher likelihood of stabilization and less likelihood of assaults, injuries and restraints.</td>
</tr>
<tr>
<td>23-Hour Obs Unit: Community Disposition Rate (diversion from inpatient)</td>
<td>60-70%</td>
<td>Most patients are able to be discharged to less restrictive and less costly community-based care instead of inpatient admission.</td>
</tr>
<tr>
<td>Law Enforcement Drop-Off Police Turnaround Time</td>
<td>&lt; 10 min</td>
<td>If jail diversion is a goal, then police are our customer too and we must be quicker and easier to access than jail.</td>
</tr>
<tr>
<td>Hours of Restraint Use per 1000 patient hours</td>
<td>&lt; 0.15</td>
<td>Despite receiving highly acute patients directly from the field, our restraint rates are 75% below the Joint Commission national average for inpatient psych units.</td>
</tr>
<tr>
<td>Patient Satisfaction Likelihood to Recommend</td>
<td>&gt; 85%</td>
<td>Even though most patients are brought via law enforcement, most would recommend our services to friends or family.</td>
</tr>
<tr>
<td>Return Visits within 72h following discharge from 23h obs</td>
<td>3%</td>
<td>People get their needs met and are connected to aftercare. A multiagency collaboration addresses the subset of people with multiple return visits.</td>
</tr>
</tbody>
</table>
Thinking bigger...
A crisis system is more than a collection of services. Crisis services must all work together as a coordinated system to achieve common goals. And be more than the sum of its parts.

Adapted from: Richard McKeon (Chief, Suicide Prevention Branch, SAMHSA). Supercharge Crisis Services, National Council for Behavioral Health Annual Conference, 2015.
3 Key Ingredients for a SYSTEM

**Accountability**
- Who is *responsible* for the system?
- Governance and financing structure
- System values and outcomes
- Holding providers accountable

**Collaboration**
- Broad inclusion of potential customers, partners, & stakeholders
- Alignment of operational processes & training towards common goals
- Culture of communication & problem solving

**Data**
- Are we achieving desired outcomes?
- Performance targets & financial incentives
- Continuous quality improvement
- Data driven decision making
Benefits of RBHA structure

- Centralized planning
- Centralized accountability
- Alignment of clinical & financial goals

Performance metrics and payment systems that promote common goals

<table>
<thead>
<tr>
<th>Decrease</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED &amp; hospital use</td>
<td>Community stabilization</td>
</tr>
<tr>
<td>Justice involvement</td>
<td>Engagement in care</td>
</tr>
</tbody>
</table>

These goals represent both good clinical care & fiscal responsibility.
Part 2: It Takes Two to Tango

A Provider – Payer Data Sharing Partnership
There was a problem at the pharmacy and I couldn't get my meds filled.

I couldn't get in to see my doctor at my clinic.

I got kicked out of my group home… AGAIN.

I missed my appointment because I don't have transportation.

My mom can't handle me at home by herself.

These meds aren't working.

I don't have a safe place to stay.

I couldn't get my case manager on the phone.

I couldn't get my case manager on the phone.

What are you in for?
The problem with claims data...

It’s **OLD**: 60-90 day claim lag.
And often doesn’t contain the data you actually want.

It’s hard to do a meaningful analysis during an actionable timeframe based only on claims data.
CRC-RBHA Data/QI Partnership

Daily Data Feed and other reports

Regional Behavioral Health Authority

Analysis

System-wide Quality Improvement

Monthly Joint Data/QI Meeting

Balfour ME, Zinn T, Cason K, Fox J, Morales M, Berdeja C, Gray J; Provider-Payer Partnerships as an Engine for Continuous Quality Improvement; *Psychiatric Services*; 2018;69(6):623-625; [https://doi.org/10.1176/appi.ps.201700533](https://doi.org/10.1176/appi.ps.201700533)
The power of collaboration: Crisis utilization by clinic

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

- CRC has the NUMERATOR
- RBHA has the DENOMINATOR

Maybe this clinic needs some help?
Operationalizing Data Sharing

- Automated feed sent daily from the CRC to RBHA
- Additional consents are not required since RBHA is the payer. (Non-RBHA patients are removed before any data is sent.)
- We try to integrate reports into our existing workflows.
- UM staff abstracts charts of patients readmitted to the subacute unit

<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>6/6/17</td>
<td>6/6/17</td>
<td>MHC Healthcare</td>
<td>6/7/17 16:56</td>
<td>Home with Comm Referrals</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6/6/17</td>
<td>6/6/17</td>
<td>Declined</td>
<td>6/7/17 16:10</td>
<td>Home with Comm Referrals</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6/6/17</td>
<td>6/6/17</td>
<td>Arizona Children Association</td>
<td>6/7/17 23:15</td>
<td>Sonora Hospital</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6/7/17</td>
<td>6/7/17</td>
<td>CODAC</td>
<td>6/7/17 3:18</td>
<td>Home with Comm Referrals</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6/6/17</td>
<td>6/6/17</td>
<td>COPE</td>
<td>6/7/17 15:25</td>
<td>Level 2 Facility</td>
<td></td>
</tr>
</tbody>
</table>

- List of all discharges (23 hour obs and inpatient)
- Key demographic and patient-level info
- Sent daily each morning to
  - RBHA for data analysis
  - Responsible clinic for QI/feedback
  - Crisis Line for followup/aftercare tracking
DATA REPORTING: The CRC sends a monthly rolling frequent utilizer report to Cenpatico.

MULTI-AGENCY TEAM MEETINGS with CRC, RBHA, clinic staff to discuss the patient’s needs and develop improved crisis and service plans. The goal is at least 3 staffings per patient regardless of whether they are at the CRC that day.

CHARTS FLAGGED at the CRC with information about the new crisis plan and who to contact so that the new plan can be implemented.
Results: Fewer “Familiar Faces”

There were 64 individuals on the original list of high utilizers. One year later, only 7 of the original 64 remain high utilizers, and only 37 meet the high utilizer definition.

Case Example: Ms. X becomes lonely during the weekend, which is a trigger for feeling overwhelmed and suicidal and coming to the CRC. She has a partner who is also enrolled in services.

PLAN:
• 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.
• The team will explore working with her partner’s team (if they consent) in order to assist both in recovery together.
• The CRC will call her case manager and Peer Support Specialist immediately upon arrival to reinforce the relationship with her outpatient team and help connect her more quickly with outpatient support.

Result: Ms. X is no longer a high utilizer. CRC visits decreased from 14 in 2016 Q1 to only 1 during the same time frame in 2017.
Results: Reduced Readmissions

A significant reduction in readmissions in all units!

*Comparison of Q1-Q3 (Oct-June) each year. YCSU \( p < 0.03 \), ACSU \( p < 0.02 \), STIU \( p < 0.01 \)

Balfour ME, Zinn T, Cason K, Fox J, Morales M, Berdeja C, Gray J; Provider-Payer Partnerships as an Engine for Continuous Quality Improvement; Psychiatric Services; 2018;69(6):623-625; [https://doi.org/10.1176/appi.ps.201700533](https://doi.org/10.1176/appi.ps.201700533)
Youth Services
Trends &
Interventions

DID YOU SAY “YROOTS”?
Monthly Data Collection and Program Innovation

- In 2017 AzCH begin to review number on school age crisis services

![Graph showing School Age Crisis Events By Month Jan-Dec 2017]

![Graph showing School Age Crisis Events by Day of the Week]
Identifying Patterns

How can we address proactively?
Pilot Program Data Tracking

• We took a deeper dive to target communities for a pilot program

• We tracked mobile team response by county in relation to number of schools

• This allowed us to highlight community outliers to target for a pilot program

Special Thanks to AzCH Outcomes Analyst Scott Stoddard
<table>
<thead>
<tr>
<th>Behavioral Health Co-Location</th>
<th>Medicaid Funding for School Service Provision</th>
<th>Youth Engagement Specialist Program Y.E.S.</th>
</tr>
</thead>
</table>
| • Outpatient Behavioral Health and School partnership  
• Block Funded | • Direct funding for the school based provision of Behavioral Health Services  
• Fee for Service | • School Resource Officer and Counselor Partnership  
• Block Funded |

Responsibilities
• Rotates between five schools 1 day per week  
• Provides outreach and engagement  
• Conducts eligibility screening  
• Coordinates enrollment

Responsibilities
• Rotates between the same five schools 1 day per week (off day)  
• Provide direct service provision  
• Therapy, Case Management, School based behavioral support

Responsibilities
• On call 8-5 to respond as a Subject Matter Expert at the request of school staff  
• Attend Individual Education Plan meetings (IEP)  
• Train on Mental Health First Aid

Goal to identify and enroll members in ongoing behavioral health support

Thank you AzCH Crisis Team member Daniel Landers
Lessons Learned/Key Ingredients

• Real-time data sharing and analysis
• Rapid cycle QI approach
• Team composition:
  – Leaders who can make decisions
  – Front-line staff who can provide context based on real-world experience
• Collaborative culture of “figure out how to say yes instead of look for reasons to say no”