Data, Insights, and Actions

Addressing At-Risk Populations in Real-Time

Alan Moore
Software-as-a-Service (SaaS) company founded in 2009

Focusing on value-based care enabled through collaboration across the care continuum

Our solutions encompass retrospective, real-time and predictive analytics

Everything we do is within a continuous learning loop
- Super utilizer program administered in partnership with the Meadows Mental Health Policy Institute, hospitals, the Dallas County Jail, and North Texas Behavioral Health Authority
- Reduce the burden on Dallas law enforcement to respond to people with severe psychiatric needs and reduce jail recidivism and avoidable ED visits
- Focused on timely patient intervention and follow-up programs through real-time participant data integration
- RIGHT Care providing tech-enabled embedded clinicians with first responders to divert behavioral health crisis events from ED and jails
- Initial funding through $7 million Caruth Foundation grant
Law Enforcement / First Responders

- 15,593 behavioral health calls a year in Dallas
- Since 2012, an increase of 18% overall and 59% needing an ambulance

Super-Utilizers

- More than 6,000 “super-utilizers” in Dallas, with 4,000 living in poverty
- Less than 1 in 7 are in care
- 75% use jail repeatedly
- Need ongoing intensive care, housing, and supervision

Criminal Justice Population

- 21% receive psychotropic medication
- 25% have past/current mental health system contact
- 58% rearrested
A Year In the Life...

12 Month Summary

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Systems</td>
<td>6</td>
</tr>
<tr>
<td>Hospital Locations</td>
<td>16</td>
</tr>
<tr>
<td>Total Encounters</td>
<td>154</td>
</tr>
<tr>
<td>Approximate Cost</td>
<td>$250K</td>
</tr>
</tbody>
</table>

- Recurring diagnoses
  - Unspecified pain
  - Hep C
- Bipolar disorder comorbidity noted in many encounters

22 instances of 2+ ED encounters in 1 day sometimes traveling 30-50 miles between ED encounters
Operational Impacts
- Patient Flow
- Wait Time
- Safety

Economic Impacts
- Boarding
- Duplicative Charges
- Bed Utilization

Time Period: 4/13/2018 – 9/27/2018
We now have tools to operate outside of the silos

Secure and Compliant Shared Data

Rapid Identification of Targeted Populations

Rapid Engagement into Community-Based Intensive Services

System Processes Aligned for Care Continuity
Hospital
Admit
Discharge
Transfer

Criminal
Justice

Outpatient
Mental
Health

Network-wide
Master Person
Identifier
Generated

Patients in Cohorts
Identified and
Matched to
Interventions

Proactive
Notification
Sent to Care
Providers

Measure
recidivism,
ER visits, and
mental health
encounters

4 Cohorts: ACT/FACT, Mental Health Consumer, High Utilizer, Super Utilizer

Interventions: ACT/FACT (LOC 4), Transitional Services (LOC5)
The cohort(s) the consumer is attributed to: MHP Consumer, ACT/FACT, High Utilizer, Super Utilizer

Action to be taken based on cohort the consumer is attributed to

Summary of Key Information, including most recent DX, OP BH DX, and medication

Integrated Health Patient Summary
This patient has a history of contact with the behavioral health system. Please review to ensure the patient receives the most appropriate care path.

John Doe
Cohort(s): Mental Health Consumer
DOB: 1/1/1990 Gender: Male

Actions
If the consumer is not part of the ACT Cohort, please proceed with current procedure. If consumer is part of the ACT Cohort, please contact one of the following provider numbers:

ACT contact information not available. Please proceed with current procedure.

Summary of Key Information
<table>
<thead>
<tr>
<th>Last Known Event</th>
<th>Diagnosis / Medication</th>
<th>Date of Diagnosis / Fill Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED Diagnosis &amp; Date</td>
<td>Unknown</td>
<td>1/1/2019</td>
</tr>
<tr>
<td>Outpatient BH Diagnosis &amp; Date</td>
<td>Alcohol Intoxication With mild use disorder</td>
<td>5/30/2017</td>
</tr>
<tr>
<td>RX Filled by NTEHA &amp; Fill Date</td>
<td>GARAPENTIN CAP 300MG</td>
<td>10/1/2017</td>
</tr>
</tbody>
</table>
### Outpatient Behavioral Health Services Received

<table>
<thead>
<tr>
<th>Service Date</th>
<th>Provider</th>
<th>Provider Type</th>
<th>Location</th>
<th>Services</th>
<th>Primary Diagnosis</th>
<th>Crisis</th>
</tr>
</thead>
<tbody>
<tr>
<td>06/30/2017</td>
<td>BH Provider</td>
<td>Residential Facility</td>
<td>Service Facility</td>
<td>Observation for the evaluation of a client includes coordination of care with other providers or agencies - low severity - up to 48 hours</td>
<td>Alcohol intoxication - With mild use disorder</td>
<td>Y</td>
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<td>Y</td>
</tr>
</tbody>
</table>

### Recent Hospital Visits

<table>
<thead>
<tr>
<th>Facility - Stay Type</th>
<th>Admit Date</th>
<th>Admitting Complaint</th>
<th>Primary Diagnosis</th>
<th>Discharge Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demo Hospital - Dallas</td>
<td>1/1/2015</td>
<td></td>
<td></td>
<td>Home</td>
</tr>
</tbody>
</table>

* Information not provided by organization

### Medication History

<table>
<thead>
<tr>
<th>Medication</th>
<th>Fill Date</th>
<th>Days Supply</th>
<th>Prescriber</th>
<th>Pharmacy Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mirtazapine 30mg</td>
<td>10/1/2017</td>
<td>30</td>
<td>Dr. A</td>
<td>Pharmacy A</td>
</tr>
<tr>
<td>Gabapentin 100mg</td>
<td>10/1/2017</td>
<td>30</td>
<td>Dr. A</td>
<td>Pharmacy A</td>
</tr>
<tr>
<td>Fluoxetine 20mg</td>
<td>10/1/2017</td>
<td>30</td>
<td>Dr. A</td>
<td>Pharmacy A</td>
</tr>
</tbody>
</table>

The most recent hospital visits based on the data received from the live hospital data feeds.
The most recent Outpatient Behavioral Health Services the consumer has received.
The most recent medication data based on the medications that NTHA provides.
## Notification Criteria

<table>
<thead>
<tr>
<th>Diagnoses</th>
<th>Crisis Events</th>
<th>Payor</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Depressive</td>
<td>• 3+ in last 90 days including criminal justice</td>
<td>• Uninsured, unable to pay, Medicare</td>
<td>• Not currently authorized in any LOC</td>
</tr>
<tr>
<td>• Psychosis</td>
<td></td>
<td>• Excludes Medicaid and commercial</td>
<td>• Eligible for ongoing services in service area</td>
</tr>
<tr>
<td>• SUD</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Process

1. **Individual presents at ED**
   - Potentially Eligible LOC5 Criteria Met
   - Notification Generated to ED
   - Evaluate Patient Per Normal ED Procedure
   - Determine LOC Recommendation
   - Update Worklist / Inform NTBHA, Patient
   - Authorize / Assign to MHP
   - Connect with Patient in ED (within 1-2 hours)

### Metrics

#### Process
- Count of Potentially Eligible LOC5
  - Identified
  - Referred
  - Authorized
  - Enrolled
- % connections within 2 hours of referral

#### Outcomes
- Reduced ED encounters
- Reduced ED dwell time
- Reduced inpatient psychiatric admissions and hospital days
- % completion of LOC5 treatment plan
- % LOC5 consumers transitioned to new LOC
Housing Insecurity
- Explicit: ICD-10 Diagnosis, HL7 IN2 Living Arrangement
- Implicit: Shelter/Church/Hospital Address, Frequent Address Change

Food Insecurity
- Implicit: Address in USDA Low Income/Low Access Zip
- Implicit: Nutrition-Sensitive Condition

Medication Access / Adherence
- Explicit: ICD-10 Diagnosis
- Implicit: Medication-Sensitive Condition
- Implicit: Distance From Home Address to Pharmacy
**Current Participants**
- Parkland
- Texas Health Resources
- Methodist
- Baylor Scott & White
- NTBHA
- Dallas County Jail

**2019 Discussions**
- UT Southwestern
- John Peter Smith
- Medical City
- Denton, Collin and Tarrant Mental Health Authorities
- County Jails/Police Depts
- Medicaid MCOs
THANK YOU

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