Introductions
Dimitri Cavathas, LCSW-C

- CEO, Lower Shore Clinic, Inc. (November 2015 - present)
- Awarded CCBHC Planning & Development Grant
- Responsible for all operations
  - integrated outpatient mental health
  - addictions
  - primary care clinic
  - psychosocial and residential rehabilitation
  - supported employment
  - health home services
Melanie Elliott, PhD

- Vice President, Analytics Strategy, Afia, Inc.
- Over 2 decades of experience in Behavioral Health
- Building standardized, flexible multi-source data warehouses
- Measuring outcomes & evaluating progress
- Answering critical industry questions with data
The Lower Shore Clinic
Integrated Care Model
The High Cost of Healthcare

- A Milliman study of 21 million insured lives (Davenport, Gray, & Melek, 2020) pointed out:
  - 10% of the population accounts for 70% of the healthcare spend
  - 57% of this high-cost group has both physical and behavioral health conditions
Integrated Care that Prioritizes SDoH

Primary Care
Mental Health Care
Substance Use Care
Population Health Management
Crisis Stabilization
Community Integration
Medication Adherence

Housing
Transportation
Food Security
Employment/Education
Financial Security
Flexible Funding
# Population Health Standards of Care

## Preventive Care
- Immunizations
- Cancer Screenings (Breast, Cervical, Colorectal)
- STI Screening
- Prenatal Care

## General Care
- Regular Vitals (Weight/BMI, Blood Pressure)
- Annual Physical (Weight/BMI, Blood Pressure, hbA1C, Lipid Panel)
- Annual Physical Health Screenings (Dental, Skin, Hearing, Vision)
- Annual Behavioral Health Screenings (Tobacco, Alcohol, Depression)

## Interventions
- Crisis Stabilization
- Mental Health Therapy
- Substance Use Therapy
- Medication
- Education
- Training
- Community Support

## Outcomes
- Weight-related Health Concerns
- Diabetes
- Hypertension
- Tobacco Use
- Alcohol Use
- Depression
- Inpatient/ED Visits
### Population Health Standards of Care

#### Preventive Care
- **Immunizations**
- **Cancer Screenings** *(Breast, Cervical, Colorectal)*
- **STI Screening**
- **Prenatal Care**

#### General Care
- **Regular Vitals** *(Weight/BMI, Blood Pressure)*
- **Annual Physical** *(Weight/BMI, Blood Pressure, hbA1C, Lipid Panel)*
- **Annual Physical Health Screenings** *(Dental, Skin, Hearing, Vision)*
- **Annual Behavioral Health Screenings** *(Tobacco, Alcohol, Depression)*

#### SDoH Supports
- **Food Security**
- **Stable Housing**
- **Safe Neighborhood**
- **Employment**
- **Financial Security**
- **Transportation**
- **Social Support**

#### Interventions
- **Crisis Stabilization**
- **MH Therapy**
- **Substance Use Therapy**
- **Medication**
- **Education/Training**
- **Community Support**

#### Outcomes
- **Weight-related Health Concerns**
  - **Diabetes**
  - **Hypertension**
  - **Tobacco Use**
  - **Alcohol Use**
  - **Depression**
  - **Inpatient/ED Visits**
Goals of the Lower Shore Integrated Care Model

- 95% of agency housing will be occupied
- 100% of housing will pass safety & occupancy inspections
- 95% of supportive housing clients will have a positive home inspection
- 100% of clients will have potable water in their home
- 25% reduction in preventable ER visits
- 30% reduction in Inpatient admissions
- 100% reduction in suicide attempts
- 80% of members enrolled in medication adherence services
- 15 or fewer medication errors in RRP & RCS
- 40% or more graduation rate from Substance Use treatment programs
- 0 overdoses
- 75% adherence to Vivitrol injections
- 25% of tobacco users will participate in cessation interventions
- 35% of Supportive Employment clients are employed
- 90% of clients have increased income
- 15% of clients will use agency financial management services (rep payee)
- 40% of clients participate in group activities
- 90% of clients have reliable transportation
- 2% or fewer incident reports due to violence
- 100,000 nutritionally balanced meals provided annually
- 50% of Diabetic clients have an hBα1C reduction of at least 2 points
- 35% of Obese clients have a decreased BMI
- 10% of STI screenings will be positive
- 50% of clients have blood pressure below 140/90
Using Business Intelligence To Guide Clinical Decision Making
Putting the Data To Work To Improve Outcomes

- Monitoring of data collection
  - Who needs to be assessed?
  - When are they coming in next?
  - Did we get the assessment when they came in?

- Monitoring progress by Service Providers, not just Program Directors
  - What is the client’s current status?
  - How is that compared to Baseline
  - How is that compared to last visit?
  - Are they getting better?

- What needs to be done to improve/maintain client’s well-being?
  - Data-informed clinical decision making
  - Person-centered intervention effectiveness
Progress & Lessons Learned At Lower Shore Clinic
Monitoring the Most In Need Populations

- Residential Rehabilitation (RRP)
- Psychiatric Rehabilitation (PRP)
- Assertive Community Treatment (ACT)
- Health Homes (HH)
Hypertension/Diabetes/BMI Interventions

● Monitoring vitals & hbA1C since 2017

● 2017 - 2020:
  ○ Saw improvement by 2nd post-Baseline checkpoint
  ○ But, also saw rebounding by 4th post-baseline checkpoint

● 2021-2022
  ○ Same findings
  ○ Better compliance with checkpoint data due to in house A1C machine

● Hard to evidence stable outcomes over time
**Depression Intervention**

- Monitoring Depression since 2017

**Treatment as Usual**

**2017 - 2020**

<table>
<thead>
<tr>
<th>Depression Status @ Baseline</th>
<th>Depression Status @ 2nd Checkpoint</th>
</tr>
</thead>
<tbody>
<tr>
<td>40% Severe</td>
<td>25% Severe</td>
</tr>
<tr>
<td>25% Moderate</td>
<td>25% Moderate</td>
</tr>
<tr>
<td>10% Non/Minimal</td>
<td>10% Non/Minimal</td>
</tr>
<tr>
<td>10% Moderately Severe</td>
<td>17% Moderately Severe</td>
</tr>
</tbody>
</table>

Little to No Change by 2nd Post-Baseline Checkpoint

No Meaningful Results until 4th Checkpoint
Depression Intervention

- Monitoring Depression since 2017

**Treatment as Usual**
2017 - 2020

- Little to No Change by 2nd Post-Baseline Checkpoint

No Meaningful Results until 4th Checkpoint

**Integrated Care with SDoH**
2021 - 2022

- By 2nd Checkpoint:
  - 30% Increase in Mild/No Depression
  - 50% Decrease in Severe/Mod. Severe Depression
Behavioral & Physical Health are Inextricably Linked

- **SDoH improvements needed** to make early & meaningful change
- Expect to see **follow on improvements in Physical Health** now that Depression has been reduced
Behavioral & Physical Health Care Issues Drive Cost
SDoH Lessons Learned

- Housing First
  - Permanent supported housing (affordable housing)
- Employment
  - Reduce poverty & increase social connectedness
- Healthy Food
  - Must be easy and quick to prepare
- Clinic-administered labs
  - hbA1C machine & program-administered blood draws with processing by local lab
- Transportation
  - 91 vehicles & bus passes
- Flex Funding
  - Copays, first month rent, utilities, furniture, clothing, etc.
- Harm Reduction
  - Stagewise approach to Substance Use & other unhealthy habits
- Rapid Access to Primary Care
  - Primary Care practitioners employed by the agency
- On-site Pharmacy Integration
  - Pre-packaging to increase self management & improve adherence
Measuring Progress

CCBHC Measures

- Preventive Care & Screening: Body Mass Index (BMI) Screening & Follow-Up (BMI-SF)
- Weight Assessment for Children/Adolescents: Body Mass Index for Children/Adolescents (WCC-BH)
- Controlling High Blood Pressure (CBP-BH)
- Preventive Care & Screening: Tobacco Use: Screening & Cessation Intervention (TSC)
- Preventive Care & Screening: Unhealthy Alcohol Use: Screening & Brief Counseling (ASC)
- Child and Adolescent Major Depressive Disorder (MDD): Suicide Risk Assessment (SRA-BH-C)
- Adult Major Depressive Disorder (MDD): Suicide Risk Assessment (SRA-A)
- Screening for Clinical Depression and Follow-Up Plan (CDF-BH)
- Depression Remission at Twelve Months (DEP-REM-12)
- Follow-up after Hospitalization for Mental Illness (FUH)
- Follow-up after Emergency Department Visit for Mental Illness (FUM)
- Follow-up after Emergency Department Visit for Substance or Alcohol Use (FUA)
Statewide Monitoring
State Data Aggregation

External Data (e.g., HIE, Claims data, etc.)

Provider 1

Provider 2

Provider 3

Smart Connectors

Daily Data Flow

Aggregation Engine

Aggregated and De-Identified Client Data

Member Databases

Aggregate Dashboards

Direct-Access Provider Dashboards
ED Follow-up Monitored at the State Level

Maryland Aggregate Dashboard
MH/SUD ED Discharge Follow-up

The goal of the measure is to calculate the percent of ED discharges with a MH/SUD diagnosis that receive a subsequent follow-up service.

Note: A MH/SUD ED Discharge Follow-up pathway episode is created for a client if the client has a qualifying ED discharge.

Clients with a MH/SUD ED Discharge
525
Inpatient Follow-up Monitored at the State Level

Maryland Aggregate Dashboard
MH/SUD Inpatient Discharge Follow-up

The goal of the measure is to calculate the percent of Inpatient Discharges with a MH/SUD diagnosis that receive a subsequent follow-up service. Note: A MH/SUD ED Discharge Follow-up pathway episode is created for a client if the client has a qualifying inpatient discharge.

Clients with a MH/SUD Inpatient Discharge

381

Number of Days Between MH/SUD ED Discharge & Follow-up

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Inpatient Readmission Monitored at the State Level

Maryland Aggregate Dashboard
MH/SUD Readmission

The goal of the measure is to calculate the percent of Inpatient Admissions with a MH/SUD diagnosis that occur after previous MH/SUD Inpatient Discharge (i.e., the client was readmitted to an Inpatient stay). Note: A MH/SUD ED Discharge Follow-up pathway episode is created for a client if the client has a qualifying inpatient discharge.

Clients with a MH/SUD Inpatient Discharge
250

Clients with at least one MH/SUD Inpatient Readmission
12
Percent of Clients with at least one MH/SUD Readmission 4.80%

Number of Days Between MH/SUD Inpatient Discharge & Subsequent MH/SUD Inpatient Admission

Number of Days Between MH/SUD Inpatient Discharge & Subsequent MH/SUD Inpatient Admission

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Value-Based Care
Widely Varied Value-based Payment Definitions

- Agencies should take control of the definition
- Negotiate reasonable rates & payment structures
- Lack of a model for SMI & high Cost/high utilization populations
Value-based Care =

\[ X \text{ Care} \]

Over \( Y \) Timeline

To Produce \( Z \) Outcome

For \( A \) Population

At \( B \) Cost
Thank you!

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