Current Progress - Improving Care Outcomes

2.A.III : HH at Risk

<table>
<thead>
<tr>
<th></th>
<th>DY1</th>
<th>DY2Q1</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-Day ER Util. Rate</td>
<td>14.00%</td>
<td>6.30%</td>
</tr>
<tr>
<td>Total AE Patients</td>
<td>607</td>
<td>1,064</td>
</tr>
</tbody>
</table>

3.C.I : Diabetes Management

<table>
<thead>
<tr>
<th></th>
<th>DY1</th>
<th>DY2Q1</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-Day ER Util. Rate</td>
<td>6.40%</td>
<td>3.70%</td>
</tr>
<tr>
<td>Total AE Patients</td>
<td>2,944</td>
<td>3,443</td>
</tr>
</tbody>
</table>

3.A.I

<table>
<thead>
<tr>
<th></th>
<th>DY1</th>
<th>DY2Q1</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-Day ER Util. Rate</td>
<td>7.40%</td>
<td>5.00%</td>
</tr>
<tr>
<td>Total AE Patients</td>
<td>9,922</td>
<td>6,851</td>
</tr>
</tbody>
</table>

3.A.IV

<table>
<thead>
<tr>
<th></th>
<th>DY1</th>
<th>DY2Q1</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-Day ER Util. Rate</td>
<td>14.40%</td>
<td>9.70%</td>
</tr>
<tr>
<td>Total AE Patients</td>
<td>327</td>
<td>269</td>
</tr>
</tbody>
</table>

Key Findings:

Significant improvement in 30-day ER Utilization Rate (DY1 vs. DY2Q1)

- **2.A.III**: 55% improvement, decreased from 14% to 6.3%.
- **3.C.I**: 42% improvement, decreased from 6.4% to 3.7%.
- **3.A.I**: 32% improvement, decreased from 7.4% to 5.0%.
- **3.A.IV**: 33% improvement, decreased from 14.4% to 9.7%.
Public Health Data Defines Targeted DSRIP Programs

- Identification of health disparities on Staten Island driven by community needs assessment and public health data
- CBO and partner engagement critical for engaging underserved populations affected by social determinants of health
- Use of MAPP and comprehensive data sources enhances PPS analytics
- Data drives DSRIP projects, Population Health Improvement Projects and informs Cultural Competency and Health Literacy strategy
- New York State Prevention Agenda informs DSRIP goals and initiatives
- Innovative program development on Staten Island includes multi-disciplinary pilots
- DSRIP Year 2 data suggests outcome improvements
- Recommendations to facilitate further project implementation
Health Disparities on Staten Island

NYC Mortality Rates per 100,000, 2014

<table>
<thead>
<tr>
<th>County</th>
<th>NYC per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bronx</td>
<td>627.5</td>
</tr>
<tr>
<td>Brooklyn</td>
<td>586.6</td>
</tr>
<tr>
<td>Manhattan</td>
<td>592.9</td>
</tr>
<tr>
<td>Queens</td>
<td>608.5</td>
</tr>
<tr>
<td>Staten Island</td>
<td>733.6</td>
</tr>
<tr>
<td>NYC</td>
<td>608.9</td>
</tr>
</tbody>
</table>

Selected Causes of Death - Staten Island Compared to NYC, 2014

<table>
<thead>
<tr>
<th>Cause</th>
<th>Staten Island per 100,000</th>
<th>NYC per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diseases of the Heart</td>
<td>275.3</td>
<td>192.1</td>
</tr>
<tr>
<td>Malignant Neoplasms</td>
<td>176.2</td>
<td>147.8</td>
</tr>
<tr>
<td>Lower Respiratory Disease</td>
<td>33.4</td>
<td>25.6</td>
</tr>
<tr>
<td>Diabetes Mellitus</td>
<td>21.8</td>
<td>20.2</td>
</tr>
</tbody>
</table>

New York State Prevention Agenda Informs DSRIP Goals & Initiatives

Prevention Agenda

- Improve the health status of New Yorkers
- Reduce exposure to outdoor air pollutants
- Improve the built environment to promote healthy lifestyles
- Reduce obesity
- Increase access to chronic disease preventive care
- Reduce dental caries
- Strengthen infrastructure for behavioral health

DSRIP Initiatives Align with New York State Prevention Agenda

- Prevent hospitalizations, reduce disparities and increase the number of adults who have a regular health care provider
- Asthma project
- Healthy Communities initiative
- Population Health Improvement Program & partnerships with school health
- Pilot for CKD risk with CHASI
- Oral health promotion program
- Behavioral Health Improvement Program Pilots
Engagement and Collaboration with CBOs Informs Program Development

- Cultural Competency training partnerships for partner staff
- Diversity and inclusion for all Staten Islanders via language access services, Health Literacy campaigns and health education
- Patient Administering Patient Activation Measure® surveys
- Addressing social determinants by partnering with food banks, DOE, housing and immigrant agencies
- Promote Healthy Neighborhoods Initiatives
- Population Health Improvement Program Small Physician practices
Using Public Health Data to Develop DSRIP Programs

MAPP Dashboard

Healthcare Hotspotting

Population-based Registry 1.0

Performance Management Dashboard

Strategic Planning

Performance Improvement

Population Health Management
Population Health View

1. Key Statistics

- Total Visits: 139,488
- Unique Patients: 2,609
- Average F: 42.74751
- Average M: 42.80918
- ED Visits: 49,308
- Unique Patients: 2,544
- Inpatient Visits: 12,356
- Unique Patients: 2,150
- Outpatient Visits: 77,824
- Unique Patients: 1,695

2. Utilization by Population

3. Patient Demographics

4. Hospital Utilization Trend

Use Case: Diabetes w/chronic Comorbid Conditions

Population: Attributed Members with at least one of the chronic comorbid conditions: Diabetes, BH, COPD and CHF
The Impact of Top 500 High Risk Patients (HRP)

Staten Island PPS Risk profile algorithm identified the top 500 High Risk Patients (HRP) from 63,605 Staten Island PPS Medicaid Enrollees.

- 44% of HRP were engaged in Integrated Delivery (Health Home or HHR).
- 22% of HRP took PAM survey as of 09-09-2016.
- 47% of HRP were engaged in Care Coordination (2.b.iv, 2.b.vii, 2.b.viii).
- 20% of HRP were engaged in Behavioral Health (3.a.i, 3.a.iv).

That population drives 20% of preventable ED Visits (PPV) of Staten Island PPS Medicaid enrollees.

- Avg. PPV /HRP: 8.29
- Min PPV /HRP: 4
- Max PPV /HRP: 140
- Avg. PPR/HRP: 1.54
- Min PPR /HRP: 1
- Max PPR /HRP: 6

100% HRP had one or more Chronic conditions:
- Diabetes: 12%
- Schizophrenia: 7%
- Other Mental Health: 2%
- Depression: 1%
- Asthma, Hypertension, CVD: 31%
- Other: 47%

That population drives 20% of preventable readmissions.

<1% of Staten Island PPS Medicaid Enrollees are defined as High Risk Patients (HRP).

Average spending per Super Utilizer recipient is 3.1X greater.

$75K

Cost per Medicaid

Cost per Super Utilizer

$24K
Use Case: Diabetes Management
Overlaying data to target key hot spots and develop programs

Improving Diabetes Management

- PPS gathers and evaluates baseline data for this population
- Population Health Improvement Program (PHIP) target Small Practices
- City Harvest Program w PHIP to give a “Healthy Food Prescription” & nutrition/cooking classes
- Fund Stanford Model – Chronic Disease Self-Management Program and Diabetes Self-Management Program
- Expansion to other healthcare providers and community groups

Source: (1) Salient Interactive Miner (2) DOH Member roster
Data Period: FY2015
Use Case: Asthma Analytics and Program Development

Improving Asthma Management

- PPS gathers and evaluates baseline data for this population
- Incorporated Asthma as a VBP component of our PHIP Program
- Introduced Asthma Home Visits by CBO Partner for at risk patients
- Utilize School Health data to hotspot lost days and monitor progress
- PPS shares analysis with clinical partners to improve follow-up and outcomes for asthma patients

Source: (1) Salient Interactive Miner  (2) DOH Member roster  Data Period: FY2015
Obesity Prevalence among NYC public school students by zip code, grades K-8, during the 2012-13 school year

Program Development

- Incorporated Childhood Obesity as a VBP component of our PHIP Program
- Introduced Nutrition education/cooking classes, Food Prescription program by City Harvest for at risk patients
- Utilize School Health data to hotspot and monitor progress
- PPS shares analysis with clinical partners to improve follow-up and outcomes for at-risk patients

Race / Ethnicity (%)

<table>
<thead>
<tr>
<th>Grade</th>
<th>North Shore</th>
<th>Mid Island</th>
<th>South Shore</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>19.5</td>
<td>21.4</td>
<td>15.2</td>
</tr>
<tr>
<td>Hispanic</td>
<td>27</td>
<td>24.9</td>
<td>22.5</td>
</tr>
<tr>
<td>Black*</td>
<td>21.3</td>
<td>23.4</td>
<td>13.2</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>13.2</td>
<td>15.3</td>
<td>13.2</td>
</tr>
</tbody>
</table>

Note: * Indicates that N<100. This estimate is unstable and has been suppressed.

Data Source: NYC FITNESSGRAM
Use Case: Substance Abuse Epidemic

Geomapping: Nation of Origin Overlay

Unintentional overdose deaths involving heroin by borough of residence, New York City, 2000–2014*

Source: (1) Salient Interactive Miner (2) DOH Member roster Data Period: FY2015
## Innovative Programs: Behavioral Health Pilots

<table>
<thead>
<tr>
<th><strong>ED Warm Handoff Pilot</strong></th>
<th><strong>EMS HealthLink Pilot</strong></th>
<th><strong>RCDA Pre-Arraignment Diversion Program (PDP)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce avoidable SUD-related ED visits by connecting ED patients with substance use disorder needs to timely and appropriate treatment and services</td>
<td>Reduce inappropriate ED and EMS utilization by engaging Staten Islanders in longitudinal relationships with multidisciplinary care teams that address their comprehensive healthcare needs</td>
<td>Reduce overdose deaths, non-fatal ODs, and improve health outcomes by diverting individuals to treatment/service providers post-arrest and pre-arraignment</td>
</tr>
</tbody>
</table>

- **BH Specialists in ED**
- **Peer Counselors in ED**
- **24/7 call center**
- **Provider Directory**
- **SUD Treatment Providers**
- **24/7 Crisis Stabilization Centers**

- **Mobile crisis / Outreach Team**
- **EMS Support**
- **NYC Support**
- **24/7 call center**
- **Provider Directory**
- **SUD & MH Treatment Providers**
- **24/7 Crisis Stabilization Centers**

- **RCDA Coordinator**
- **Peer Counselor**
- **24/7 call center**
- **Provider Directory**
- **Treatment / Service Providers**
- **24/7 Resource / Stabilization Centers**
Staten Island PPS Super Utilizer EMS Call Analysis

**EMS Super Utilizers (SU)**

**Description**
- **SU Definition**: Patients made 3 or more 911 calls to RUMC or SIUH EMS in 24 months
- **Data Period**: 1/1/2014 – 12/31/2015
- **Data Source**: RUMC and SIUH EMS tracking systems
- **Results Set**: 1441 unique patients; 6605 calls identified.

**Descriptive Statistics**
- 82% SUs made 3 to 5 calls
- 13% SUs made 6 to 10 calls
- 5% SUs made 11 or more calls, and contribute 40% of the total call volume

- **Average 911 calls per patient**: 4.6
- **Max Calls per Patient**: 197

**Graph**

- **3 to 5**: 82%
- **6 to 10**: 13%
- **11 to 15**: 2%
- **16 +**: 3%

- **% Unique SUs**
- **% Calls**
EMS Diversion Program with NYC Support

- Promote alternate 911 call model in collaboration with PPS partners, law enforcement, and other public agencies utilizing NYC Support and 24/7 Call Center to link individuals to community services in Staten Island
- Utilize SUD Warm Hand-Off and RCDA Pre-Arraignment Diversion programs for at-risk population management
- Identify frequent callers and engage them proactively for care management and outreach via Health Home teams
- Identify locations with high volumes of calls and integrate outreach teams to actively engage people with unmet, emerging needs
- Dispatch mobile outreach teams to high demand locations at key times
Current Progress - Improving Care Outcomes

Key Findings:
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Recommendations

- Greater RHIO/SHIN-NY functionality to enhance practitioner use
- Support from major EHR vendors on addressing Population Health metrics
- Encourage relationships with MCOs to focus on Population Health initiatives
- More favorable regulatory and reimbursement process, support co-location, integrated care and SUD practices
- Expand telemedicine capacity in multiple settings
- Create a state-wide program that permits local EMS to redirect non-emergency care to alternate service locations (i.e. for individuals experiencing Behavioral Health crises, ETOH, SUD, minor medical complaints)