Delivering Value at the Population Level
Creating a Data Driven Culture
Transitioning From Volume to Value

- Healthcare is a capital intensive business
- Inherent conflict past investments and move to value
- Mitigating risk requires creativity and developing effective payer relationships so gains can be shared
- Identifying which initiatives to focus on and what value is associated with them requires comprehensive analytics
- Integrated care means care throughout the continuum
Staten Island Performing Provider System

**PARTNERS**

- 13 Behavioral health providers
- 4 Home care agencies
- 3 Federally qualified health centers
- 10 Skilled nursing facilities
- 2 Hospitals
- 17 Population Health Practices
- 2 Hospice providers
- Managed care organizations
- Primary care physicians & Specialists
- Community based organizations, Schools/Universities
- 7 Health home care management agencies

**DATA & ANALYTICS**

- Patient medical
- Patient care
- Data
- Care
- SUD/BH
- Management
- Network

**WORKFORCE TRANSFORMATION**

- Multi-sector partners & governmental agencies

**DSRIP Goal:**

Improve quality of care, transform the health care delivery system on Staten Island, and reduce preventable ER use and hospitalizations by 25%

**Financial:**

Invested $130 million to date to transform and innovate the SI Healthcare Ecosystem

**Partners:**

- Over 75 fully engaged organizations
- 22 Population Health practices
- 20+ Community-Based Organizations
- 3,600+ Primary Care Practitioners in Staten Island PPS provider roster

**Impact:**

- Care Outcomes Already Doubled Expected
- 4 out of 10 Staten Island residents impacted
<table>
<thead>
<tr>
<th>Source</th>
<th>DY1</th>
<th>DY2</th>
<th>DY3</th>
<th>Total $ Earned to Date</th>
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<tr>
<td>DSRIP Waiver</td>
<td>$33,021,929</td>
<td>$37,827,906</td>
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<td>High Performance Fund</td>
<td>$603,865</td>
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<td>Additional High Performance Payment</td>
<td>$721,545</td>
<td>$3,068,264</td>
<td>$1,257,122</td>
<td>$5,046,931</td>
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<tr>
<td>Total</td>
<td>$33,743,474</td>
<td>$41,500,035</td>
<td>$54,046,718</td>
<td>$129,290,227</td>
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</table>

High performance fund dollars earned by exceeding performance targets for 10 of 60 pay for performance measures

Additional High Performance Payment (AHPP) Program dollars are distributed by a PPSs associated health plan for meeting 50% of 7 select measures
# PPS Partner Distributions

## $ Distributed to Partners

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitals</td>
<td>$31,290,803</td>
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<tr>
<td>Project Implementation</td>
<td>$9,390,191</td>
</tr>
<tr>
<td>Nursing Home</td>
<td>$9,330,732</td>
</tr>
<tr>
<td>Case Management / Health Home</td>
<td>$7,724,300</td>
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<tr>
<td>Substance Use/Mental Health</td>
<td>$6,725,533</td>
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<tr>
<td>Community Based Organizations</td>
<td>$4,711,389</td>
</tr>
<tr>
<td>Primary Care Practices</td>
<td>$4,263,750</td>
</tr>
<tr>
<td>FQHCs</td>
<td>$3,995,451</td>
</tr>
<tr>
<td>Home Care</td>
<td>$2,430,000</td>
</tr>
<tr>
<td>Hospice</td>
<td>$1,183,771</td>
</tr>
<tr>
<td>Total $ Distributed to Date</td>
<td>$81,045,920</td>
</tr>
</tbody>
</table>

## Fund Distribution by Partner Type

- Hospitals: 39%
- Project Implementation: 5%
- Nursing Home: 5%
- Case Management / Health Home: 11%
- Substance Use/Mental Health: 12%
- Community Based Organizations: 11%
- Primary Care Practices: 8%
- FQHCs: 6%
- Home Care: 6%
- Hospice: 3%

Total fund distributed to partners: $81,045,920
Outcomes & Cost Savings

- **62%** reduction in preventable ED visits, resulting in a $15M savings.
- **61%** reduction in preventable BH ED visits, resulting in a $6.2M savings.
- **52%** reduction in preventable readmissions, resulting in a $6.5M savings.
- **68%** reduction in hospitalizations for diabetes complications, resulting in a $12M savings.
- **17%** improvement in MH follow up visits within 7 days of discharge.
- **3.13%** cost savings in Depression & Anxiety related episodes.
- **8.7%** cost savings in SUD related episodes.

*Reductions compare current results to baseline measures – Cost savings are estimates based on proxy price data (2016).*
Impact & Outcomes

**Workforce Investments**

- **$13.2M** spent in PPS partner staff training & redeployment
- **35,000 hours** of employee training across 50 organizations

**CBO Investments**

- **$12,032,033**
- **$6,446,136**
- **Projected spend by 2020**

**Behavioral Health**

- 70+ certified Peer Recovery coaches trained
- **$6.2M** savings in preventable BH visits
- 2000+ clients received MAT services
- 1,049 peer engagements with clients in ED
- 17% improvement in mental health follow up

**Bridge Home Pilot**

Using Roster Mapping to relocate families from shelter to permanent housing

**Asthma Home Visit Impact**

Since the start of the Asthma Home Visit Program:

- 123 Home Visits
- 108 Families

**City Harvest Nutritionist**

- 220 patients engaged in nutrition services in 4 primary care offices since 2016
- 47 follow-up appointments

**Heroin Overdose Prevention & Education (HOPE)**

- 528 individuals meaningfully impacted since HOPE program inception
Creating a Data Driven Culture
Turning Data Into Business Intelligence

- Program design, resource allocation and performance measurement all based on business intelligence
- Strategic analytics requires advanced data integration, warehousing, predictive analytics and visualization
- Multiple sources of data create a rich environment for analytics but great complexity
- Successful solutions demand integration of multiple data sources, capability of projecting clinical and business risk & implementing solutions in real time
SI PPS Analytics: Tool Portfolio

**Turn Data into Actionable Insights**

Program Areas

- Strategic Planning
- Performance Management
- VBP Management
- Population Health Management
- Substance Abuse MH Treatment

**Outcomes Dashboard - VBP**

- Attributions as of February 28th, 2016
  - Member County
  - Geographic Location

- Characteristics
  - Member Identification Category

- Condition of Attributed Members Over 65

- Member Distribution
  - Managed Care (MC) Plan

- Member Distribution by Risk Category

**Population Health Management**

- Diabetes: 19-44 years - Unique Medicaid Claims per 1000 Beneficiaries in 2014

**Healthcare Hotspotting**

- Diabetes: 19-44 years - Unique Medicaid Claims per 1000 Beneficiaries in 2014

**Partner P4P Dashboard**

- Project Overview
  - PERCENT ACHIEVED: 80%
  - TOTAL EARNED: 12
  - TOTAL POSSIBLE: 15

- Measure Summary
  - Measure ID: 1
    - Measure Name: Adult Access to Preventive or Ambulatory Care - 20 to 44 years
    - Measure Performance Result: 2%
    - Annual Improvement Goal: 3%
    - Score: 76%
    - Earned: 0.03
    - Possible: 0.03

- Measure ID: 2
  - Measure Name: Adult Access to Preventive or Ambulatory Care - 45 to 64 years
  - Measure Performance Result: 8%
  - Annual Improvement Goal: 3%
  - Score: 88%
  - Earned: 0.03
  - Possible: 0.03

- Measure ID: 3
  - Measure Name: Adult Access to Preventive or Ambulatory Care - 65 and older
  - Measure Performance Result: 8%
  - Annual Improvement Goal: 3%
  - Score: 86%
  - Earned: 0.03
  - Possible: 0.03

**Client Mapping**

- Prepared in accordance with the Public Health Law Section 2805 j through m and Education Law Section 6527

Privileged and Confidential
Staten Island PPS IT Infrastructure - SaaS Cloud Platform

- Care Coordination
- PSYCKES
- OASAS
- NYS DOH Medicaid EDW
- EMS

Partner Clinical Integration

- BH EHRs
- Health Home EHRs

EDW
Secure Hosting Site

- HL7, SFTP, Web Service
- CEN, CCDA
- HL7, SFTP, Web Service

SI PPS PMO Office
- Provider & Executives
- Data Analysts
- Care Team

SI PPS Partners
- Health Home Providers
- Medical Providers
- BH Providers
- Hospitals

MCO Data Feeds

- healthfirst
- Fidelis Care
- UnitedHealthcare
- EmblemHealth

RHIO includes Correctional Health

CHESS
Finding and Executing - Value Opportunities

Value-Based Care Analytics

- **MONITORING**
  - “What is happening now?”

- **FEES FOR SERVICE ANALYTICS**

- **REPORTING**
  - “What happened?”

- **PRESCRIPTION**
  - “To whom will it happen?”

- **PREDICTION**
  - “What will happen?”

- **EVALUATION**
  - “Why did it happen?”

---

Adapted from Gartner’s 4 Types of Advanced Analytics
Population Health View

Key Statistics

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Total Visits</td>
<td>139,488</td>
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<tr>
<td>Unique Patients</td>
<td>2,609</td>
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<tr>
<td>Average Age</td>
<td>42.74751</td>
</tr>
<tr>
<td>F</td>
<td>42.80918</td>
</tr>
<tr>
<td>M</td>
<td>2,544</td>
</tr>
<tr>
<td>ED Visits</td>
<td>49,308</td>
</tr>
<tr>
<td>Unique Patients</td>
<td>2,150</td>
</tr>
<tr>
<td>Inpatient Visit</td>
<td>12,356</td>
</tr>
<tr>
<td>Unique Patients</td>
<td>1,695</td>
</tr>
<tr>
<td>Outpatient Visits</td>
<td>77,824</td>
</tr>
</tbody>
</table>

Utilization by Population

Patient Demographics

Hospital Utilization Trend

Population: Attributed Members with at least one of the chronic comorbid conditions:

- Diabetes
- BH
- COPD
- CHF

Use Case: Diabetes w/ chronic conditions

Tool: Population-based Patient Registry

Ver. 1.0
Live Demo from Data Warehouse
SI PPS Population Health Initiatives

Staten Island PPS has laid a solid foundation in the Staten Island Market through its DSRIP efforts which can be built upon as it considers its option to enter into the environment of Value-Based Care.

**SI PPS Goals:**
- Improving access to high quality, culturally sensitive care
- Improving population health and health literacy
- 25% reduction in avoidable emergency room visits
- Reducing preventable hospital admissions and readmissions

### DSRIP Projects
- Health Home At-Risk Intervention Program
- Care Transitions Intervention Model to Reduce 30-day Readmissions for Chronic Health Conditions
- Implementing the INTERACT Project
- Hospital-Home Care Collaboration Solutions
- Implementation of Patient Activation Activities
- Integration of Primary Care and Behavioral Health Services
- Development of Withdrawal Management Capabilities and Appropriate Enhanced Abstinence Services within Community-Based Addiction Treatment Programs
- Evidence based strategies for disease management in high risk/affected populations
- Integration of Palliative Care into Nursing Homes
- Strengthen Mental Health and Substance Abuse Infrastructure across Systems
- Increase Access to High Quality Chronic Disease Preventative Care and Management in Clinical and Community Settings

<table>
<thead>
<tr>
<th>Initiatives</th>
<th>HEALTHi</th>
</tr>
</thead>
<tbody>
<tr>
<td>SI CARES</td>
<td>Asthma Coalition</td>
</tr>
<tr>
<td>Wellth</td>
<td>Diabetes Self Management Program</td>
</tr>
<tr>
<td>Sepsis Protocol</td>
<td>CHW Training Pipeline</td>
</tr>
<tr>
<td>Project HOPE</td>
<td>A-CHESS</td>
</tr>
<tr>
<td>Asthma Home Visit Program</td>
<td>Registered Apprentice Program</td>
</tr>
<tr>
<td>911 Diversion Program</td>
<td>Health + NYCHA Collaboration</td>
</tr>
<tr>
<td>Staten Island Rehousing Program</td>
<td>Warm Handoff Program</td>
</tr>
<tr>
<td>SDOH Assessment Tool &amp; Resource Guide</td>
<td>Primary Care Gift Card Program</td>
</tr>
<tr>
<td></td>
<td>AllazoHealth</td>
</tr>
</tbody>
</table>
Expanding Primary Care & Care Management Capacity

Patient-centered Medical Home
Provided technical assistance for 2014 PCMH Level 3 recognition
- Engaged 25 practices and 100+ PCPs in obtaining PCMH recognition
- Connecting practices with NYS funded Technical Assistance vendor
- Promote PCMH standards

Clinical Interoperability
- All 9 ambulatory care project partners and 8 of 14 PHIP practices are 2014 Level 3 PCMH recognized
- Direct data feeds
- Care Plan Exchange
- DSRIP dashboard for tracking population health measures

Care Coordination & Care Management
4,000 individuals receiving intense care management services
- SI Cares Health Home At-Risk includes 8 community partners
- Health Coaches/Care Managers embedded in ambulatory and inpatient sites
- Referrals for pediatrics asthmatic patients for home visit assessments
- Medication adherence programs for managing patients better
- Working with MCOs to reduce barriers to Primary Care Integration
- Collaboration with SIPCW to build buprenorphine prescriber capacity
- All primary care sites in PPS network co-located with Behavioral Health specialists for screening & assessments
- Connecting partners to Mental Health Service Corps

Promote PCMH standards

Co-location

Co-location

MHSC
Mental Health Service Corps

15

SI Cares Health Home At-Risk includes 8 community partners

Referrals for pediatrics asthmatic patients for home visit assessments

Medication adherence programs for managing patients better

Collaboration with SIPCW to build buprenorphine prescriber capacity

Connecting partners to Mental Health Service Corps

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Direct data feeds

DSRIP dashboard for tracking population health measures

Care Plan Exchange

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All 9 ambulatory care project partners and 8 of 14 PHIP practices are 2014 Level 3 PCMH recognized

SI Cares Health Home At-Risk includes 8 community partners

Referrals for pediatrics asthmatic patients for home visit assessments

Medication adherence programs for managing patients better
Use Cases Delivering Value via Cost Effective Population Health Initiatives

- Diversion Programs
- Care Coordination Hi-risk Individuals
- Asthma
- Sepsis in Nursing Homes
- Addiction/Substance Use Disorder
Actionable Data Drives Targeted Initiatives

Condition Specific Hotspotting and Geomapping

Performance Data & EMS Superutilizer Data
SI PPS EMS Dashboard

SI PPS EMS Super Utilizer (SU) Dashboard: Jan. 2016 - Dec. 2018

<table>
<thead>
<tr>
<th>Patient Id</th>
<th>Incidence Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>(N/A)</td>
<td>(N/A)</td>
</tr>
</tbody>
</table>

### Top Callers (By # of Calls)

Top 10 Callers (By # of Calls) Shown on the map

<table>
<thead>
<tr>
<th>Caller Location</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Beach Psychiatric Center</td>
<td>126</td>
<td>141</td>
<td>118</td>
<td>385</td>
</tr>
<tr>
<td>FERRY TERMINAL</td>
<td>108</td>
<td>120</td>
<td>108</td>
<td>336</td>
</tr>
<tr>
<td>NIVO 120 Percent</td>
<td>96</td>
<td>113</td>
<td>106</td>
<td>315</td>
</tr>
<tr>
<td>91 TAMPA AVENUE</td>
<td>98</td>
<td>107</td>
<td>103</td>
<td>308</td>
</tr>
<tr>
<td>53 CENTRAL AVE</td>
<td>93</td>
<td>104</td>
<td>98</td>
<td>295</td>
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<tr>
<td>797 BRIGHTON AV</td>
<td>88</td>
<td>105</td>
<td>96</td>
<td>289</td>
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<tr>
<td>202 LA RAMA AVE</td>
<td>81</td>
<td>98</td>
<td>93</td>
<td>272</td>
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<tr>
<td>75 VANDERbilt AVE</td>
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<td>92</td>
<td>91</td>
<td>265</td>
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<tr>
<td>BAY VICTORY BLVD</td>
<td>81</td>
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<td>258</td>
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<tr>
<td>GB JSY ST</td>
<td>83</td>
<td>92</td>
<td>89</td>
<td>264</td>
</tr>
<tr>
<td>253 SEGUIN AVE</td>
<td>89</td>
<td>91</td>
<td>86</td>
<td>266</td>
</tr>
<tr>
<td>61 BORDOugh PL</td>
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<td>91</td>
<td>86</td>
<td>266</td>
</tr>
<tr>
<td>155 VANDERbilt AVE</td>
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<td>266</td>
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<tr>
<td>200 OLD TOWN RD</td>
<td>89</td>
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<td>86</td>
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</tr>
<tr>
<td>209 FORREST AVE</td>
<td>89</td>
<td>91</td>
<td>86</td>
<td>266</td>
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<tr>
<td>1111 44 EAST AVE</td>
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<td>91</td>
<td>86</td>
<td>266</td>
</tr>
</tbody>
</table>

### Incidence Locations (By #Calls)

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<th>2016</th>
<th>2017</th>
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<th>Grand Total</th>
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<td>86</td>
<td>266</td>
</tr>
</tbody>
</table>

### Chief Compliant (By #Calls)

- Chief Pain
  - Malignant Fracture
  - Trauma Injury
  - Dizziness
  - Anxiety
  - Seizures
  - Back Pain
  - Head Pain
  - Nausea
  - Respiratory

### Dispatch Codes (By #Calls)

- EMT: En Route Trauma Injury
  - Dizziness
  - Anxiety
  - Seizures
  - Back Pain
  - Head Pain
  - Nausea
  - Respiratory
  - Poisoning
  - Other
  - Unspecified

### Estimated Total Cost

- $11,206,500
Staten Island 911 Diversion Pilot

- Launched July 2018
- Pilot redirects eligible 911 callers with low-risk mental health concerns through revised triage algorithm to New York City’s 24/7 call center (NYC Well) for assessment by a counselor
- If clients consent, further connection made to Staten Island 24/7 call center (SI Connect) for transportation and direct appointment scheduling
Opportunities

**Before Pilot**

<table>
<thead>
<tr>
<th>Individual calls 911, NYPD and ambulance mandated to respond = TRAUMA, ESCALATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals in crisis brought to jail or ER = MORE TRAUMA, ↑ COSTS</td>
</tr>
<tr>
<td>No connection to community services = RECIDIVISM</td>
</tr>
</tbody>
</table>
Staten Island 911 Diversion Program

- Improve care for low acuity behavioral health clients
- Reduce burden of inappropriate EMS utilization
- Promote use of behavioral health resources

Right care, right time, right place

- Improve EMS response to medical emergencies
- Improve relationships and community awareness of behavioral health providers
HEALTHHi is an intensive care management program that utilizes an interdisciplinary on the ground team approach to provide a safety net of resources to individuals with complex chronic conditions who are also affected by social determinants of health.

**Goal:** Engage 125 individuals over 18 months to achieve target quality outcomes.

**Target Population**
- Persistent high needs
- High resource utilization resulting in potentially avoidable costs
- High ED, IP, and/or EMS services utilization
- At-risk of failing P4P outcome measures

**Staffing**
- Multi-specialty team: Nurse, Social Worker, CASAC, and Case Manager
- High touch, in-person engagements
- Ensure patient’s needs and P4P gaps in care are closed
- Ensure appropriate transfer of care to community providers

**Operational Model:**
1. SI PPS selects eligible individuals
2. HEALTHHi team engages cohort and collaborates with providers
3. HEALTHHi team completes 6-month intervention and transfers care
4. SI PPS evaluates cohort outcomes
Program Differentiators & Evaluation

Program Differentiators

- 360 degree view of members supported by data, technology, and analytics
- Interdisciplinary team of clinicians and non-clinicians
- Boots on the ground
- Meet members where they are
- 24/7 telephone access to staff
- Wrap-around support services
- Outcomes evaluation
- Shared-risk funding arrangement

Evaluation Metrics

1. Potentially Avoidable ER Visits (including people with behavioral health diagnosis)
2. Access to Preventive or Ambulatory / Primary Care
3. Follow up after hospitalization for mental illness within 7 / 30 days
4. Comprehensive Diabetes Care – Comprehensive Screening
5. Comprehensive Diabetes Care- Hemoglobin A1c (HbA1c) Poor Control (>9.0%) +/-
6. Diabetes Monitoring (A1C and LDL test) for People with Diabetes and Schizophrenia
7. Diabetes Screening for People on Antipsychotic Meds
8. CVD Monitoring (LDL-C test) for People with CVD and Schizophrenia
9. Adherence to Antipsychotic Meds for People with Schizophrenia
10. Antidepressant Medication Management (acute and continuation phases)
11. Initiation and Engagement of Alcohol/Other Drug Treatment
12. Medication Management for People with Asthma (5 – 64 Years) – 75% of Treatment Days Covered
Enrolled: 73
Completed primary care visits: 98%
Completed with diabetes had annual screening: 70%
Had ED visits: <20%
Adequate adherence to antidepressant Rx: 91%
Adequate adherence to antipsychotic Rx: 89%
Filled Asthma Rx: 64%
Connected to SDOH services: >30%
**Pediatric Asthma Patients Super Utilizers – 3ED or 1IP in 24 months**

<table>
<thead>
<tr>
<th>Chronic Condition</th>
<th>Race</th>
<th>Age Group</th>
<th>Gender</th>
<th>Total Visits Unique Patients</th>
<th>Average Age</th>
<th>ED Visits Unique Patients</th>
<th>Inpatient Visit Unique Patients</th>
<th>Outpt Visits Unique Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ (All) ]</td>
<td>[ (All) ]</td>
<td>[ 0-5 ]</td>
<td>[ F ]</td>
<td>982</td>
<td>8.288</td>
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<td>281</td>
<td>189</td>
</tr>
<tr>
<td>Asthma</td>
<td>ASIAN</td>
<td>6-12</td>
<td></td>
<td>270</td>
<td>6.874</td>
<td>211</td>
<td>238</td>
<td>42</td>
</tr>
<tr>
<td>[ BLACK ]</td>
<td>[ HISPANIC ]</td>
<td>[ 14-19 ]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[ NATIVE AMERICAN ]</td>
<td>[ OTHER ]</td>
<td>[ UNKNOWN ]</td>
<td>[ M ]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Utilization Trend by Visit Type (Visits Per 100 Patients)**

<table>
<thead>
<tr>
<th>Quarter</th>
<th>ED</th>
<th>Inpatient</th>
<th>Outpatient</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014 Q1</td>
<td>110.0</td>
<td>104.3</td>
<td>150.0</td>
</tr>
<tr>
<td>2014 Q2</td>
<td>120.0</td>
<td>105.6</td>
<td>150.0</td>
</tr>
<tr>
<td>2014 Q3</td>
<td>127.3</td>
<td>110.0</td>
<td>168.8</td>
</tr>
<tr>
<td>2014 Q4</td>
<td>117.5</td>
<td>105.3</td>
<td>168.2</td>
</tr>
<tr>
<td>2015 Q1</td>
<td>117.9</td>
<td>100.0</td>
<td>176.9</td>
</tr>
<tr>
<td>2015 Q2</td>
<td>113.0</td>
<td>105.5</td>
<td>138.4</td>
</tr>
<tr>
<td>2015 Q3</td>
<td>121.6</td>
<td>104.3</td>
<td>166.7</td>
</tr>
<tr>
<td>2015 Q4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**City of Billing Address**
- [ (AL) ]
- [ BRONX ]
- [ BROOKLYN ]
- [ COXSACKIE ]
- [ HOLLES ]
- [ HOWARD BEACH ]
- [ MACON ]
- [ MANHATTAN ]
- [ NEW YORK ]
- [ NULL ]
- [ QUEENS ]
- [ STATEN ISLAND ]
- [ TOBIHANA ]

**Zip Code of Billing Address**
[ (AL) ]

Privileged and Confidential
Prepared in accordance with the Public Health Law Section 2805 j through m and Education Law Section 6527
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
Program Impact: Asthma Home Visit Program

Since the beginning of the Asthma Home Visit Program:

- **123** Home Visits
- **108** Families
- 45 patients referred to IPM services
- **53% of IPM services completed**
- **400** Individuals reached at community workshops and events

We have been able to purchase vacuums for clients who only have brooms to clean their rugs and give mattress covers to families, which helps them improve their asthma at home.
Following Super-Utilizer Hospitalization Trends

Inpatient Hospitalizations

<table>
<thead>
<tr>
<th>COHORT 1</th>
<th>COHORT 2</th>
<th>COHORT 3</th>
<th>COHORT 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>174</td>
<td>137</td>
<td>207</td>
<td>197</td>
</tr>
<tr>
<td>43</td>
<td>54</td>
<td>54</td>
<td>51</td>
</tr>
</tbody>
</table>

Original Cohort
Follow-up (18 Months Later)
Following Super-Utilizer ED Trends

ED Utilization (SU Only)

<table>
<thead>
<tr>
<th>COHORT 1</th>
<th>COHORT 2</th>
<th>COHORT 3</th>
<th>COHORT 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>263</td>
<td>236</td>
<td>267</td>
<td>283</td>
</tr>
<tr>
<td>224</td>
<td>137</td>
<td>151</td>
<td>138</td>
</tr>
</tbody>
</table>

Original Cohort | Follow-Up (18 Months)
Improving Outcomes of Patient Transfer
The Sepsis in Nursing Home Initiative
Implementing a Sepsis Protocol in 10 Skilled Nursing Facilities To Reduce Sepsis Readmissions

- On Staten Island, there are 10 skilled nursing facilities (SNFs) with 3,114 certified beds. Across the 10 SNFs, trend analysis revealed an increase in hospital admissions with a primary diagnosis of sepsis or septicemia. Root causes identified: slow reaction to clinical changes, MDs’ reluctance to take call off hours, nurses were not certified any longer for IV starts.

- All ten skilled nursing facilities have implemented the sepsis protocol based on the Systemic Inflammatory Response Syndrome (SIRS) criteria. All the nursing homes had full implementation in January 2018.

SI PPS provided IV certification training and phlebotomy training classes throughout 2018. Since January 2018, 156 nurses completed IV certification training and 54 nurses completed phlebotomy training. Standing orders passed by Med Boards.

SI PPS provided implementation funds for SNFs to purchase materials for a sepsis kit containing all of the necessary supplies to initiate the protocol, less than $2500 per facility.
The sepsis protocol was fully implemented in January 2018 across all ten skilled nursing facilities on Staten Island. The trend shows a steady decrease in sepsis admissions for skilled nursing facility residents with Medicaid.

Organizations that hit target reductions earned incentive payments

**Sepsis Transfer Rate**

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Total Patients</th>
<th>Total Transfers</th>
<th>Transfer Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan-17</td>
<td>1745</td>
<td>81</td>
<td>5%</td>
</tr>
<tr>
<td>Feb-17</td>
<td>1744</td>
<td>63</td>
<td>4%</td>
</tr>
<tr>
<td>Mar-17</td>
<td>1767</td>
<td>91</td>
<td>5%</td>
</tr>
<tr>
<td>Apr-17</td>
<td>1734</td>
<td>71</td>
<td>4%</td>
</tr>
<tr>
<td>May-17</td>
<td>1765</td>
<td>78</td>
<td>4%</td>
</tr>
<tr>
<td>Jun-17</td>
<td>1773</td>
<td>83</td>
<td>5%</td>
</tr>
<tr>
<td>Jul-17</td>
<td>1758</td>
<td>71</td>
<td>4%</td>
</tr>
<tr>
<td>Aug-17</td>
<td>1752</td>
<td>74</td>
<td>4%</td>
</tr>
<tr>
<td>Sep-17</td>
<td>1772</td>
<td>60</td>
<td>3%</td>
</tr>
<tr>
<td>Oct-17</td>
<td>1819</td>
<td>85</td>
<td>5%</td>
</tr>
<tr>
<td>Nov-17</td>
<td>1828</td>
<td>62</td>
<td>3%</td>
</tr>
<tr>
<td>Dec-17</td>
<td>1861</td>
<td>66</td>
<td>4%</td>
</tr>
<tr>
<td>Jan-18</td>
<td>1859</td>
<td>84</td>
<td>5%</td>
</tr>
<tr>
<td>Feb-18</td>
<td>1856</td>
<td>52</td>
<td>3%</td>
</tr>
<tr>
<td>Mar-18</td>
<td>1855</td>
<td>61</td>
<td>3%</td>
</tr>
<tr>
<td>Apr-18</td>
<td>1911</td>
<td>59</td>
<td>3%</td>
</tr>
<tr>
<td>May-18</td>
<td>1979</td>
<td>69</td>
<td>3%</td>
</tr>
<tr>
<td>Jun-18</td>
<td>2002</td>
<td>49</td>
<td>2%</td>
</tr>
<tr>
<td>Jul-18</td>
<td>1989</td>
<td>62</td>
<td>3%</td>
</tr>
<tr>
<td>Aug-18</td>
<td>2026</td>
<td>56</td>
<td>3%</td>
</tr>
<tr>
<td>Sep-18</td>
<td>2036</td>
<td>62</td>
<td>3%</td>
</tr>
<tr>
<td>Oct-18</td>
<td>2092</td>
<td>45</td>
<td>2%</td>
</tr>
<tr>
<td>Nov-18</td>
<td>2120</td>
<td>48</td>
<td>2%</td>
</tr>
<tr>
<td>Dec-18</td>
<td>2237</td>
<td>48</td>
<td>2%</td>
</tr>
</tbody>
</table>
Strengthening the Behavioral Health Infrastructure
Establishing and sustaining resources & partnerships to improve access and care

Improving Capacity and Linkages to BH Services

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer Recovery Network</td>
<td>Staffing in clinical &amp; criminal justice sites, Training/Certification with DSRIP funds, Long-term training program, Friendship Benches</td>
</tr>
<tr>
<td>24/7 SI Connect Call Center</td>
<td>Appointments, Transportation</td>
</tr>
<tr>
<td>24/7 Crisis Stabilization &amp; Respite Centers</td>
<td></td>
</tr>
<tr>
<td>Online Provider Directory Search App and Resource Guides</td>
<td></td>
</tr>
<tr>
<td>ED Warm Handoff Program</td>
<td>Reduce avoidable SUD-related ED visits, Peer support, Level of care assessment, Expedited linkages to SUD treatment providers, Linkage to care coordination and other support services</td>
</tr>
<tr>
<td>HOPE (Heroin Overdose Prevention and Education) Program</td>
<td>Post-arrest &amp; pre-arraignment diversion, Peer support, naloxone training, assessments, Linkage to services, provider meaningful engagement</td>
</tr>
</tbody>
</table>

Integrative Treatment

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborative Care Support</td>
<td>Coaching and technical assistance to medical practices to integrate BH clinicians &amp; services (Bupe Detailing, Behavioral Health Detailing)</td>
</tr>
<tr>
<td>Clinical Detailing</td>
<td>Outreach to medical providers with various key messages and resources</td>
</tr>
</tbody>
</table>

Shifting Community Norms

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Media Campaigns</td>
<td>Holiday Blues, New Year’s Resolution, Watch Your Words</td>
</tr>
<tr>
<td>Behavioral Health Stigma Training</td>
<td>Training provides overview of behavioral health stigma in language and workplace</td>
</tr>
</tbody>
</table>

Supporting System Change

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expansion of Treatment Provider Availability</td>
<td></td>
</tr>
<tr>
<td>24/7 Resource &amp; Recovery Centers</td>
<td></td>
</tr>
<tr>
<td>24/7 SI Connect Call Center</td>
<td></td>
</tr>
<tr>
<td>Online Provider Directory Search App and Resource Guides</td>
<td></td>
</tr>
<tr>
<td>Work with state and city partners to address regulatory issues</td>
<td></td>
</tr>
<tr>
<td>Trainings, education and workshop opportunities</td>
<td></td>
</tr>
<tr>
<td>Workforce development</td>
<td></td>
</tr>
<tr>
<td>Expansion of NYPD training &amp; Naloxone distribution</td>
<td></td>
</tr>
</tbody>
</table>

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Responding to the Behavioral Health Care Provider Needs

- Preparing for Value Based Purchasing (VBP) and creation partner networks huge challenge for BH providers
- Many are not tech-savvy and data “naïve” with poor grasp of sophisticated measurement - threat to reimbursement
- EHR options complicate data aggregation
- The organizations need a plan for data exchange and indicator measurement that aligns w VBP realities
- SI PPS created a solution to support the entities as an enterprise solution for these networks
Use Case: Substance Abuse Epidemic

Geomapping: Substance Abuse & Nation of Origin Overlay

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

* Data for 2014 are preliminary and subject to change

Source: NYC Office of the Chief Medical Examiner and NYC DOHMH Bureau of Vital Statistics
System-Wide Response

**Prevention**
- Proactive identification of individuals at risk
- Naloxone distribution and training
- School-based initiatives
- Community/family involvement
- PSAs

**Treatment**
- Safe prescribing guidelines
- SBIRT screening
- Intensive recovery model and follow up post OD
- Respite beds
- Expanded MAT waivered providers

**Technology**
- CHESS Health Addiction Treatment Platform
- Screening tools
- Data sharing/RHIO/Consent
- Web-based dashboards
- OD surveillance and predictive analytics

**Workforce**
- Educate and certify peer recovery coaches
- MH/EAP workers
- CASACs
- Motivational Interviewing training

**Law Enforcement**
- Local and state police
- Drug courts
- Cut-off supply
- Community Justice Center
- HOPE expansions
Heroin Overdose Prevention & Education (HOPE) Program
Local Government & Public Health Collaboration

Committed to
• Promoting HOPE program
• Connecting clients to resources and services

Engagement with local government agencies

24/7 access to peers, resources & services

Harm reduction strategies to prevent fatal overdoses

Avoiding a criminal record positively impacts an individual's opportunities for education, jobs and housing

Public health focus addressing social determinants of health

Peer mentors engage clients at precincts, provide naloxone training and distribute kits

PPS funding and support for
• Peer network
• 24/7 resource & recovery centers
• SUD treatment provider access
## Heroin Overdose Prevention & Education (HOPE) Program

**Current Statistics**

<table>
<thead>
<tr>
<th>Program Requirements</th>
<th>2017-2018 Statistics</th>
<th>Program to Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligible participants</td>
<td>307</td>
<td>641</td>
</tr>
<tr>
<td>Peer engagements</td>
<td>293</td>
<td>605</td>
</tr>
<tr>
<td>Received naloxone training</td>
<td>242</td>
<td>513</td>
</tr>
<tr>
<td>Naloxone kits distributed</td>
<td>242</td>
<td>496</td>
</tr>
<tr>
<td>Completed assessment at Resource &amp; Recovery Center</td>
<td>268</td>
<td>563</td>
</tr>
<tr>
<td>Meaningful engagement, case DP &amp; sealed</td>
<td>237 (96%)</td>
<td>504 (95%)</td>
</tr>
<tr>
<td>Did not complete program</td>
<td>11 (4%)</td>
<td>29 (5%)</td>
</tr>
</tbody>
</table>
**Goal**

Connect clients with substance use disorder needs to treatment and support services by:

- Establishing a 24/7 call center
- Placing certified recovery coaches/peer advocates in the ED
- Expanding treatment providers’ hours of operation
- Conducting SUD level-of-care in the ED

**Workflow**

- Patient Arrival & Medical Assessment
- Psychosocial & Level of Care Assessment
- Peer Engagement
- Appointment/Transportation Scheduling
- Handoff/Escort
- Follow-up

**Project Oversight**

- Staten Island Performing Provider System
- Staten Island Partnership for Community Wellness
- Richmond University Medical Center
- The Resource Training Center
Improved Engagement Outcomes

*Quadrupled patient engagement between DY1 & DY3*

>2,016 received MAT services since April 2015

52% reduction in ED utilization

**Total Actively Engaged Patients**

- **DY 1**: 318
- **DY 2**: 655
- **DY 3**: 1183
- **DY 4 YTD**: 596

**DY 1** | **DY 2** | **DY 3** | **DY 4 YTD**
--- | --- | --- | ---
318 | 655 | 1183 | 596
Workforce Training & Investments

- Over 30,000 staff training hours across 50+ staff types
- $13,000,000 spent on workforce transformation
- 25 Community Health Worker (CHW) graduates of CSI

Workforce investments support project implementation, population health initiatives and impact educational and income based social determinants of health.
Workforce Transformation: Creating common curriculum and training to meet the changing skills of health workers

• Based upon a partner survey in 2015 we have built a partnership between employers, higher education, organized labor, governmental agencies, to deliver more than 35,000 hours of skills based training, for more than 10,000 partner employees – we create one common best in class curriculum to promote improve learning and break down the old single employer silo approach.

• That training includes certificate programs with stackable college credits for emerging job titles: Community Health Worker, Case Manager, Certified Peer Recovery Advocate, a new Master’s Degree in Healthcare Administration; more than 100 staff have received training for these programs.

• Our next step is the design and implementation of Federal and State approved Registered Apprentice learning programs for Certified Nursing Assistants to improve the hiring pipeline, reduce turnover, improve employee morale and upskill incumbent staff.

• A new partnership with the New York City Housing Authority (NYCHA) will lead the PPS and College of Staten Island training 10 residents of public housing in Community Health Worker skills to serve as healthcare resource contacts for their fellow residents.
Workforce Transformation: Scholarships and Job Pipeline Building

- SI PPS also has provided scholarships to more than 80 students (from low income families) studying Social Work and Certified Mental Health Counseling at the College of Staten Island – to ease the financial burden of college and create hiring pipelines for local partners.

- These scholarship students are interning in more than 24 partner organizations across Staten Island.

- Of the most recent graduating class, 17 of 20 graduates are employed with partner organizations, a true recognition that hiring pipeline development is working.
Closing Thoughts

Transitioning From Volume to Value

- Inherent conflict between past capital investments in bricks and mortar and move to value
- New partnerships and blurring of lines between partners roles and responsibilities is challenging
- Mitigating risk requires creativity and developing effective payer relationships so gains can be shared
- Identifying which initiatives to focus resources on and what value is associated with them requires comprehensive analytics and evolving partnerships
Thank you!

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