Promoting the Use of Health Information Exchange (HIE) in Action to Address Hypertension

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Bureau of Chronic Disease Evaluation and Research
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Outline

• Review CDC recommendations for state and local public health action to address hypertension

• Describe Health Information Exchange (HIE) infrastructure in New York including the Qualified Entities (QEs) and the Statewide Health Information Network for New York (SHIN-NY)

• Describe progress achieved implementing CDC Innovation Grant addressing hypertension and next steps
CDC Strategies for Public Health Action to Prevent and Control Hypertension

Track and Monitor Clinical Measures shown to improve healthcare quality and identify patients with high blood pressure and high blood cholesterol

Implement Team-Based Care for patients with high blood pressure and high blood cholesterol

Link Community Resources and Clinical Services that support bi-directional referrals, self-management, and lifestyle change for patients with high blood pressure, high blood cholesterol, and/or who have had a cardiac event
Health Information Exchange Infrastructure in New York

SHIN-NY
The SHIN-NY is the Statewide Health Information Network for New York. It enables interoperable data exchange to promote coordination of care to improve patient outcomes, reduce unnecessary and avoidable tests and procedures and reduce costs.

Qualified Entities (QE)
A Qualified Entity is a regional network where electronic health information is stored and shared. QEs enroll participants within their community, providing core services so they can access and exchange electronic health information with participants in their region.
Which Providers Share Clinical Data with QEs?

- Home Health Agencies
- Community Hospitals
- Medical Centers
- Reference Laboratories
- Nursing Homes
- Primary Care Offices
- Specialty Care Offices

Source: New York eHealth Collaborative
SHIN-NY Services For Accessing Clinical Data

1. QE Clinical Viewer website to search for patients and see clinical data
2. Statewide Direct Secure Messaging to exchange patient data with a specific provider (like secure email)
3. Notifications to receive patient event alerts (e.g., hospital admit)
4. Lab Results Delivery to receive diagnostic results and summary reports for labs ordered

SHIN-NY value studies, whitepapers, videos and other resources: http://www.nyehealth.org/shin-ny/value-of-hie/

Source: New York eHealth Collaborative
Using Health Information Exchange to Address Hypertension

Because of their position within health care communities and their capabilities, New York’s QEs are in a strong position to support action to address hypertension.
# Key Capacities within QEs to Support Identification and Control of Hypertension

<table>
<thead>
<tr>
<th>Capacities</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Measurement and Self-Service Reporting</strong></td>
<td>To support clinical quality improvement, populate registries, enable population measurement, track performance and promote data quality</td>
</tr>
<tr>
<td><strong>Registries and Alerts</strong></td>
<td>To identify and track patients, promote best practices, initiate referrals, support team-based care and direct patients to appropriate evidence-based care pathways</td>
</tr>
<tr>
<td><strong>Bi-directional Referral Capabilities</strong></td>
<td>To support referrals and bi-directional communication between clinical providers and community lifestyle and self-management programs</td>
</tr>
</tbody>
</table>
## Key Measures to Support Clinical Quality Improvement

### Cardiovascular Disease (CVD)
- Undiagnosed Hypertension
- Hypertension Prevalence
- Hypertension Control
- Statin Therapy for ↑ Cholesterol*
- Atherosclerotic CVD Prevalence*

### Diabetes and Prediabetes
- Undiagnosed Diabetes
- Diagnosed Diabetes
- Undiagnosed Prediabetes
- Diagnosed Prediabetes

*in development

Measure definitions are based on existing quality measures (NFQ, HEDIS) and use standard code sets identified by QEs.
Approach to Collaboration with QEs

We have followed a common process to work with QEs on the development of measures and clinical and population health tools based on the measures.
Progress to Date Collaborating with NY QEs on Hypertension Measures and Tools

<table>
<thead>
<tr>
<th>Qualified Entity</th>
<th>Measurement</th>
<th>Registries or Alerts</th>
<th>Self-Service Reporting</th>
<th>Referral Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>HealtheConnections</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Hixny</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>Bronx RHIO</td>
<td>✔</td>
<td></td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>Rochester RHIO</td>
<td>In process</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HealtheLink</td>
<td>In process</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Healthix</td>
<td>Planning</td>
<td></td>
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</table>
Next Steps

• Build capacity to calculate HTN measures across all 6 QEs in the SHIN-NY.

• Promote the use of QE data and decision supports for measuring HTN and informing action (focusing on primary care practices, health plans and local health departments).

• Collect data and document successes to make the case for sustaining and expanding this work.
Thank You!

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Promoting the Use of Health Information Exchange (HIE) to Support Action to Address Hypertension

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October 29th, 2021
Hixny Data

- 44 hospitals (100%)
- 78% of physicians
- 87% of other regulated entities
- 6.4 million patient records
- 5.3 million consents
The Statewide Health Information Network of New York
Types of Data

Clinical

Administrative

Social Determinants of Health

Patient Self-Reported
# Hixny Hypertension Reports

## Table of Hypertension Reports

<table>
<thead>
<tr>
<th>Hide</th>
<th>MRN</th>
<th>Name</th>
<th>DOB</th>
<th>Age</th>
<th>Gender</th>
<th>Category</th>
<th>Date</th>
<th>Value</th>
<th>Facility</th>
<th>Report (coming soon)</th>
<th>Last Outpatient Encounter</th>
<th>Insurance</th>
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<tbody>
<tr>
<td>1</td>
<td>1234567</td>
<td><strong>Patient Name</strong></td>
<td>1967-08-15</td>
<td>39</td>
<td>F</td>
<td>BP Indicates HTN No Diagnosis</td>
<td>2021-05-12</td>
<td>143/95 mm[Hg]</td>
<td>Facility Name</td>
<td>2021-09-29 07:07:45</td>
<td>CapitalCare Medical Group</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>90851</td>
<td><strong>Patient Name</strong></td>
<td>1969-06-17</td>
<td>62</td>
<td>F</td>
<td>BP Indicates HTN No Diagnosis</td>
<td>2020-05-18</td>
<td>140/90 mm[Hg]</td>
<td>Facility Name</td>
<td>2021-09-14 23:59:59</td>
<td>MC St Health Center</td>
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<tr>
<td>3</td>
<td>7654521</td>
<td><strong>Patient Name</strong></td>
<td>1970-04-06</td>
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<td>F</td>
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<td>2020-07-03</td>
<td>140/90 mm[Hg]</td>
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<td>2021-09-10 00:00:00</td>
<td>SPHP Family Medical Group Troy</td>
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<tr>
<td>4</td>
<td>3266521</td>
<td><strong>Patient Name</strong></td>
<td>1989-10-18</td>
<td>48</td>
<td>M</td>
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<td>2021-01-15</td>
<td>136/93 mm[Hg]</td>
<td>Facility Name</td>
<td>2021-02-18 19:45:10</td>
<td>Community Care Physicians</td>
<td></td>
</tr>
</tbody>
</table>
Hypertension Quality Indicator
Hixny’s Patient Tracker Tool

- Hixny created the Patient Tracker Tool as part of our work with DOH

- The Patient Tracker Tool allows users to see the numbers of patients moving across chronic disease states in a specific time frame, including hypertension

- The Patient Tracker Tool also characterizes movement patterns as negative, positive, or neutral

- This data can be displayed at different levels:
  - Facility/multi-facility
  - County/multi-county
  - Patient
## Hypertension in Patient Tracker Tool

<table>
<thead>
<tr>
<th>Facility Code</th>
<th>Prior Bucket</th>
<th>New Bucket</th>
<th>Disease Category</th>
<th>Movement</th>
<th>Patient Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility</td>
<td>BP Indicates HTN No Diagnosis</td>
<td>HTN Uncontrolled</td>
<td>HTN</td>
<td>Positive</td>
<td>8</td>
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<tr>
<td>Facility</td>
<td>BP Indicates HTN No Diagnosis</td>
<td>Hypertensive, BP Controlled</td>
<td>HTN</td>
<td>Positive</td>
<td>5</td>
</tr>
<tr>
<td>Facility</td>
<td>BP Indicates HTN No Diagnosis</td>
<td>No Bucket</td>
<td>HTN</td>
<td>Negative</td>
<td>187</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>200</strong></td>
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</tbody>
</table>

**Pull Count:** 25.00

**Push Count:** 44.00
Patient Tracker Tool – County View
Hixny’s Public Health Hypertension Reports
Hixny’s Public Health Hypertension Reports

Counties and Zip Codes with Hypertension Data

<table>
<thead>
<tr>
<th>Zip Code</th>
<th>County Name</th>
<th>District Patient Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>10070</td>
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<td>10053</td>
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<td>Putnam</td>
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<td>10010</td>
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<tr>
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<td>Westchester</td>
<td>1</td>
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<tr>
<td>10012</td>
<td>Putnam</td>
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</tr>
<tr>
<td>10014</td>
<td>Westchester</td>
<td>5</td>
</tr>
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<td>Dutchess</td>
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<tr>
<td>10016</td>
<td>Putnam</td>
<td>2</td>
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<tr>
<td>10017</td>
<td>Westchester</td>
<td>1</td>
</tr>
<tr>
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<tr>
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<td>9</td>
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<tr>
<td>10024</td>
<td>Westchester</td>
<td>5</td>
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<tr>
<td>10027</td>
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<td>10028</td>
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<td>5</td>
</tr>
<tr>
<td>10030</td>
<td>Westchester</td>
<td>15</td>
</tr>
</tbody>
</table>

Total: 16,279
Hixny’s Public Health Hypertension Reports
Questions
Thank You
health information exchange: addressing hypertension
HIE participants and data sources

More than 1,600 organizations across 4,200 locations are connected!

- 6 million patients are able to receive better care
- 26-county service area
- 440,000 unique patients accessed per month
- 3.4 million clinical summary documents received each month
- More than 600 organizations providing data
healthconnections services

Patient Lookup
Real-time patient records at the touch of a button

Image Exchange
Real-time patient records at the touch of a button

Query-Based Exchange
Access information in state and from national databases

myResults
Labs, rads, and reports easily accessed or delivered directly

Community Referrals
HIPAA-compliant bi-directional referrals to community programs

myAlerts
Clinical alerts for hospital and ED admits, discharges and transfers

Results Delivery
Labs, rads, and reports easily access or delivered directly

Direct Mail
HIPAA-compliant secure mail & national provider directory

myData
Dashboards that allow users to better understand their patient profiles

myPopHealth
Self-service reports for health departments to estimate disease prevalence
HealtheConnections’ Tools for Action to

Support Identification and Control of Hypertension

• Population measurement (myPopHealth)

• Bi-directional referrals (Community Referrals)

• Registries, quality measures and alerts (myData)
Self-Service Reports for Population-level Measurements

- CVD Measures Include:
  - Hypertension prevalence
  - Hypertension control
  - Undiagnosed hypertension
  - ASCVD prevalence
  - Statin therapy for cholesterol (in development)

- Filters for:
  - Geography (county, zip codes)
  - Demographics (age, gender, race/ethnicity)

- **Audience** – NYSDOH and Local Health Departments
  - Aggregated/Deidentified data

- **Actions** – focus interventions on high need areas and monitor trends in prevalence
myPopHealth self-service reports

Hypertension

<table>
<thead>
<tr>
<th>County</th>
<th>ZIP Code</th>
<th>Definitions</th>
</tr>
</thead>
</table>

Displaying previous 2 years of data. Last updated Sun 10/10/2021 10:10 PM.

Prevalence of Hypertension

Total Hypertension Distribution

![Graph showing distribution of hypertension](image)
community referrals

• Bi-directional referrals
  • Safe and secure way for providers to send patient referrals for community-based services and programs
  • HIE embedded, HIPAA-compliant, bi-directional communication method – with messaging
  • HeC has promoted, recruited and trained practices to use Community Referrals
  • Referrals to BP Self-monitoring, SNAP services at Food Bank, NDPP, Chronic Disease self-management classes and others
• Audience - Healthcare providers and CBOs
• Actions – connect patients to services offered outside of healthcare setting, to improve health outcomes
community referrals
myData allows a user to easily organize and understand their patient profiles, identify gaps, and test for quality measurement requirements.

- Clinical Registries
- Quality Measures
- Data Discovery
- Alerts
clinical registries

• View community-wide data vs. just information in EHRs
• Adheres to AHA/ACC clinical guidelines
• Helps support organization for PCMH accreditation
• Filters for:
  • HTN stage
  • Undiagnosed Hypertension
  • Last BP measurements
  • Co-occurring diabetes
  • Geography (county, zip codes)
  • Demographics (age, gender, race/ethnicity)

• **Audience** – healthcare providers
• **Actions** – target patient needs; follow up with patients needing BP measurement, not under control or undiagnosed; refer to services in community
clinical registries
provider alerts

• Built off of patient registry
• Identification of patients undiagnosed or uncontrolled hypertension
• **Audience** – healthcare providers
• **Actions** – target patient needs; follow up with patients not under control or undiagnosed
quality measures

Hypertension Control

- Track practice performance against commonly used performance measures
- View community-wide data vs. just information in EHRs
- Data are timely, and the measurements are built into the reports as charts and graphs for easy visualization
- **Audience** – healthcare providers
- **Actions** – take action to improve performance; follow up with patients needing BP measurement, not under control or undiagnosed
controlling high blood pressure

### Controlling High Blood Pressure

- **Compliant**: 294
- **Initial Population**: 467
- **Non-Compliant**: 173
- **Non-Consented Patients in Initial Population**: 0

Ranges based on statewide average for given measure (Reference)

### 467 Results

<table>
<thead>
<tr>
<th>HIE</th>
<th>Last Name</th>
<th>First Name</th>
<th>MI</th>
<th>DOB</th>
<th>Age</th>
<th>Gender</th>
<th>Race</th>
<th>Consented</th>
<th>Measure Value</th>
<th>Last Updated</th>
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<td>M</td>
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<td>Yes</td>
<td>Compliant</td>
<td>10/02/2021</td>
</tr>
</tbody>
</table>

**Homepage - HealtheConnections**
Thank you!

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315-671-2241 x5

healtheconnections.org