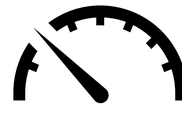
Promoting the Use of Health Information Exchange (HIE) in Action to Address Hypertension

Ian Brissette, PhD
Bureau of Chronic Disease Evaluation and Research
October 29, 2021

Outline

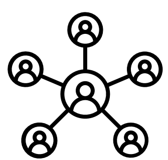
- Review CDC recommendations for state and local public health action to address hypertension
- Describe Health Information Exchange (HIE) infrastructure in New York including the Qualified Entities (QEs) and the Statewide Health Information Network for New York (SHIN-NY)
- Describe progress achieved 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

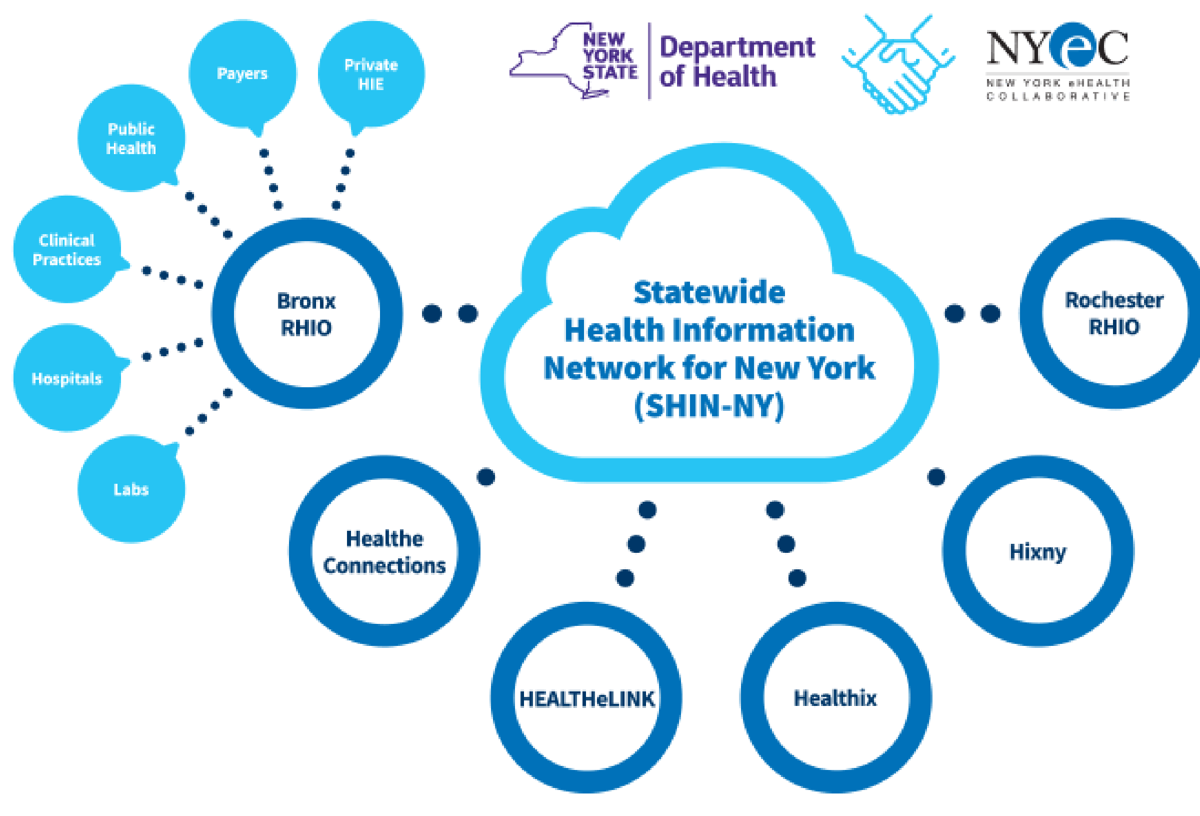
Health Information Exchange Infrastructure in New York

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?

Community Hospital

Home Care Agency

Medical Center

KEY

•••••••• = Transmission of Clinical Patient Information

QE

Reference Laboratory

Specialists/Other Provider Types

Nursing Home

Primary Doctor's Office

- 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

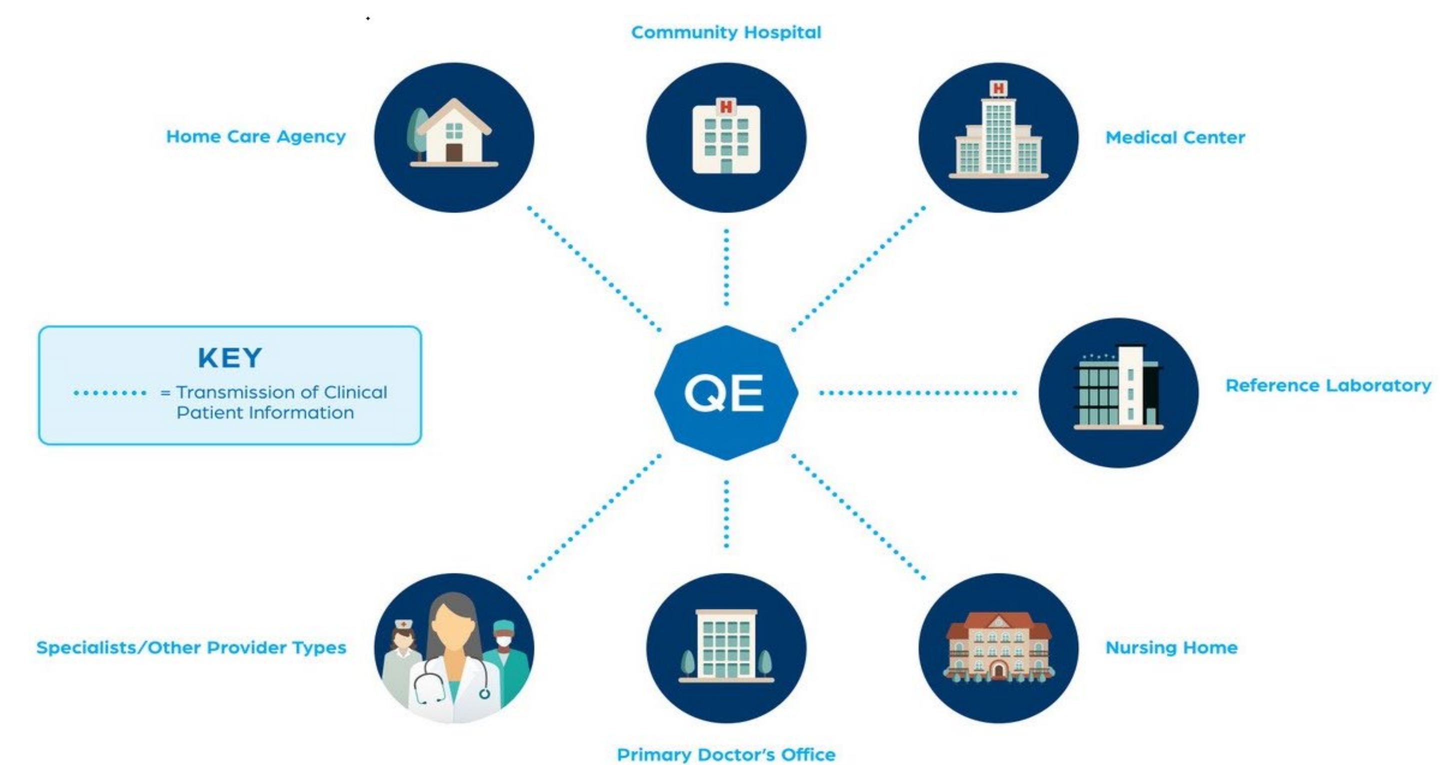
1. **QE Clinical Viewer website** to search for patients and see clinical data
2. **Statewide Direct Secure Messaging** to exchange patient data with a specific provider (like secure email)
3. **Notifications** to receive patient event alerts (e.g., hospital admit)
4. **Lab Results Delivery** to receive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

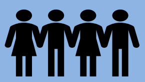
Using Health Information Exchange to Address Hypertension

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

Measurement and Self-Service Reporting
To support clinical quality improvement, populate registries, enable population measurement, track performance and promote data quality



Registries and Alerts
To identify and track patients, promote best practices, initiate referrals, support team-based care and direct patients to appropriate evidence-based care pathways

Bi-directional Referral Capabilities
To support referrals and bi-directional communication between clinical providers and community lifestyle and self-management programs

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.

Assess → Build → Pilot → Promote

Refine

Progress to Date Collaborating with NY QEs on Hypertension Measures and Tools

Qualified Entity	Measurement	Registries or Alerts	Self-Service Reporting	Referral Tools
HealtheConnections	✓	✓	✓	✓
Hixny	✓	✓	✓	
Bronx RHIO	✓	✓	✓	
Rochester RHIO	In process			
HealtheLink	In process			
Healthix	Planning			

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!

ian.brissette@health.ny.gov

Hixny®

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

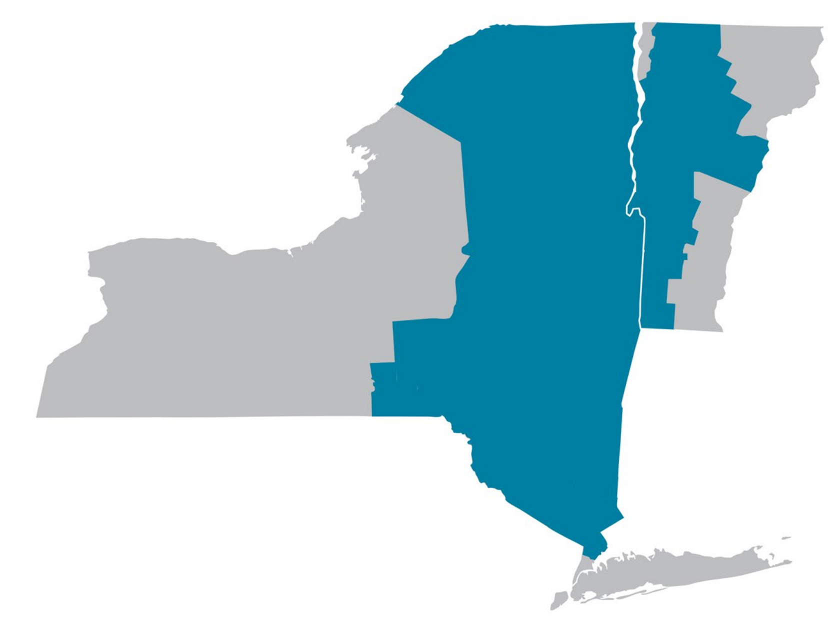
Tessia Bekelja
Product Development Coordinator
Shannon Vigars
Manager of Data Quality and Analytics

October 29th, 2021

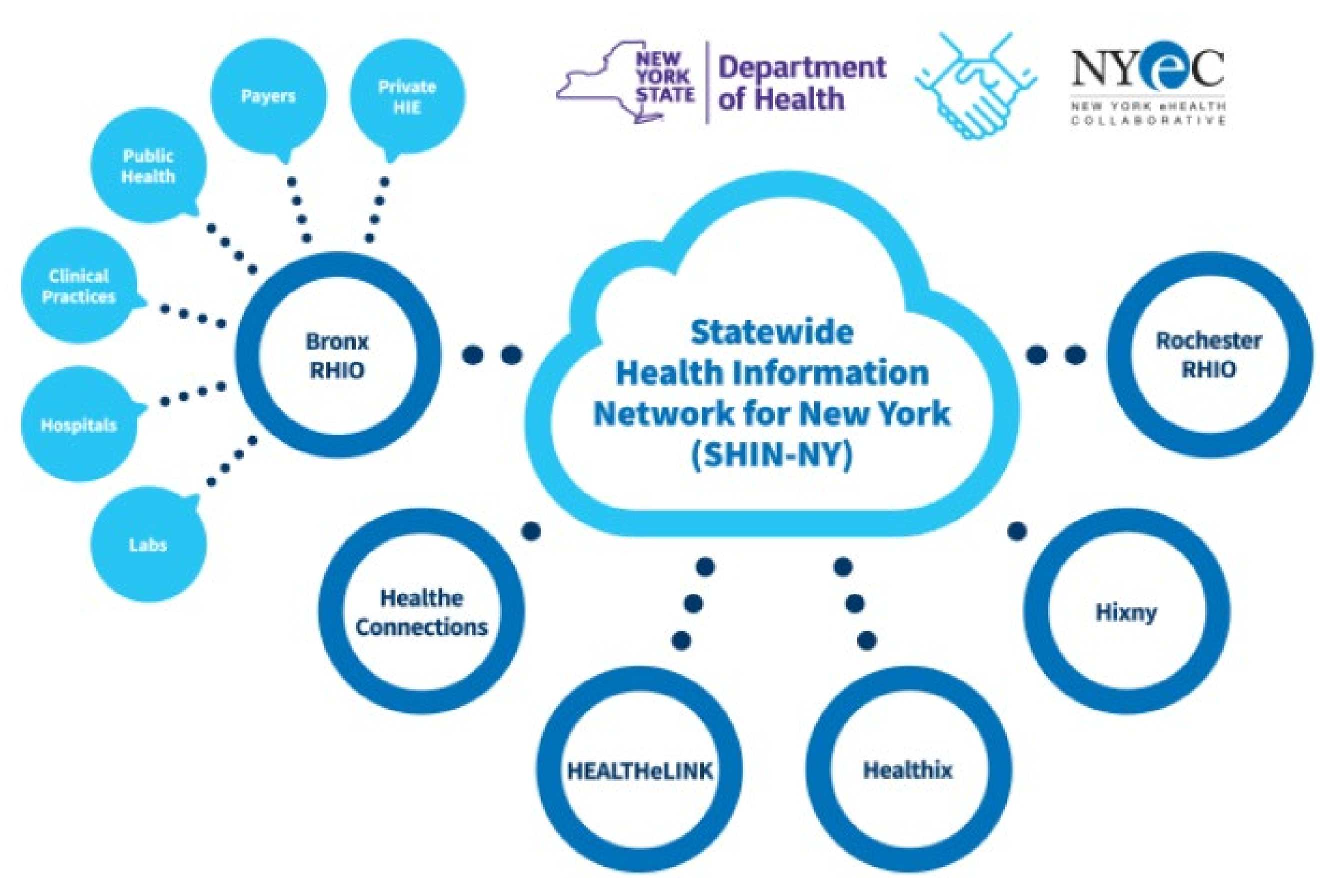
Hixny Data

- 44 hospitals (100%)
- 78% of physicians
- 87% of other regulated entities

- 6.4 million patient records
- 5.3 million consents

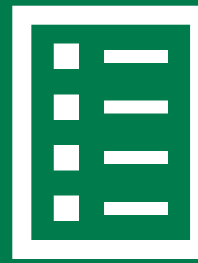


The Statewide Health Information Network of New York



Types of Data

Clinical

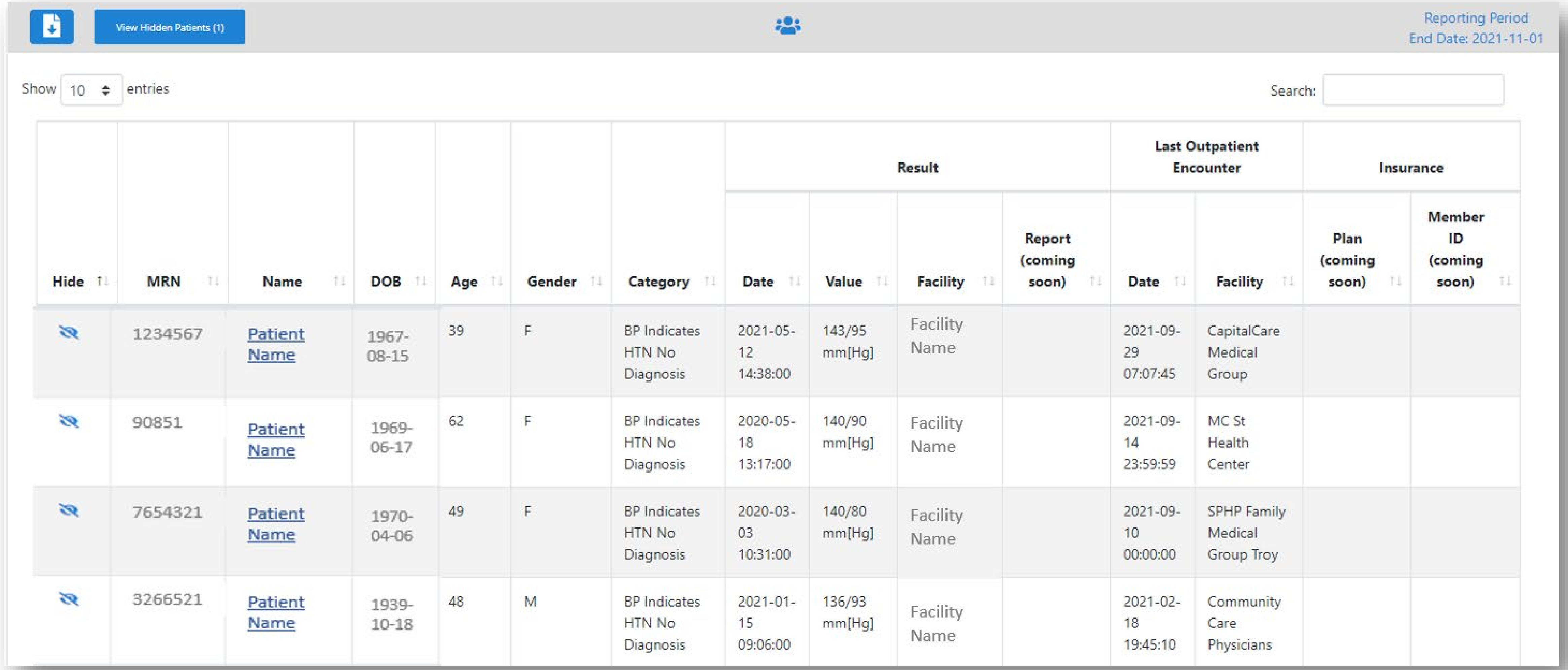


Administrative

Social Determinants of Health

Patient Self-Reported

Hixny Hypertension Reports



View Hidden Patients (1)

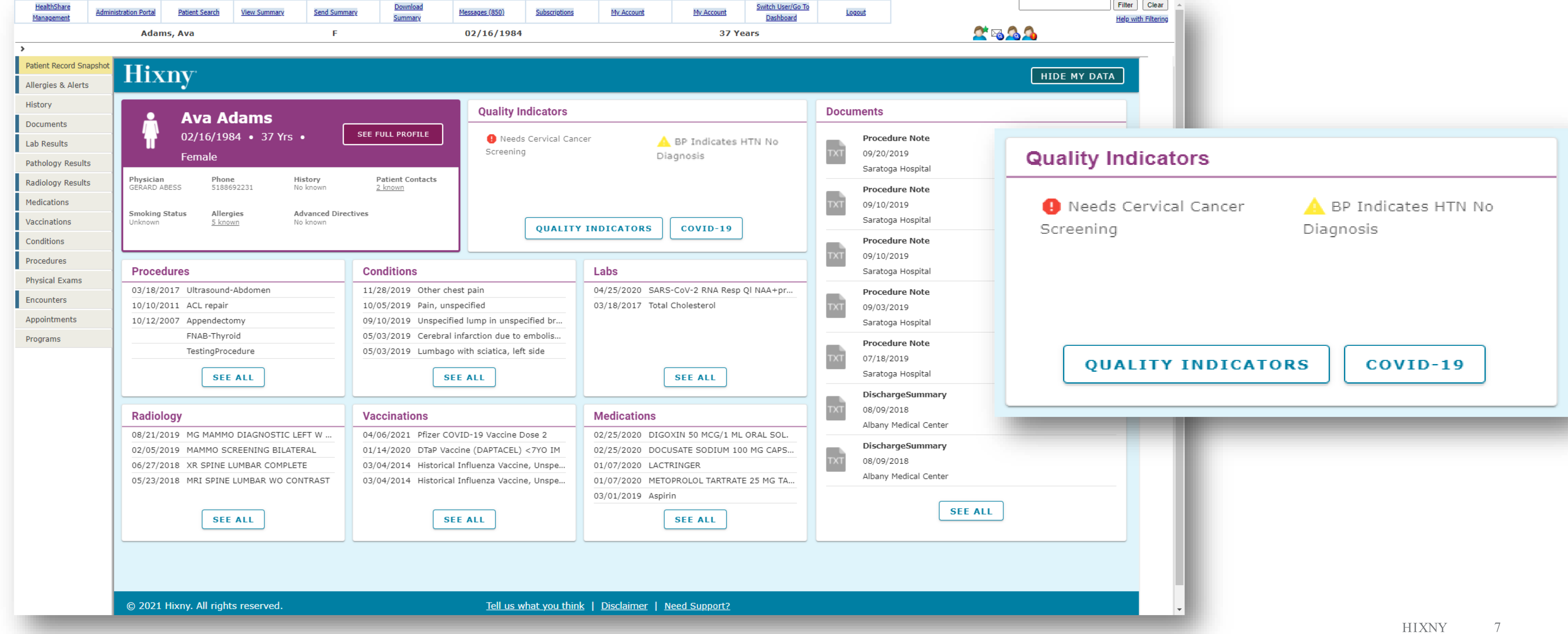
Reporting Period End Date: 2021-11-01

Show 10 entries

Search:

Hide	MRN	Name	DOB	Age	Gender	Category	Result				Last Outpatient Encounter		Insurance	
							Date	Value	Facility	Report (coming soon)	Date	Facility	Plan (coming soon)	Member ID (coming soon)
	1234567	Patient Name	1967-08-15	39	F	BP Indicates HTN No Diagnosis	2021-05-12 14:38:00	143/95 mm[Hg]	Facility Name		2021-09-29 07:07:45	CapitalCare Medical Group		
	90851	Patient Name	1969-06-17	62	F	BP Indicates HTN No Diagnosis	2020-05-18 13:17:00	140/90 mm[Hg]	Facility Name		2021-09-14 23:59:59	MC St Health Center		
	7654321	Patient Name	1970-04-06	49	F	BP Indicates HTN No Diagnosis	2020-03-03 10:31:00	140/80 mm[Hg]	Facility Name		2021-09-10 00:00:00	SPHP Family Medical Group Troy		
	3266521	Patient Name	1939-10-18	48	M	BP Indicates HTN No Diagnosis	2021-01-15 09:06:00	136/93 mm[Hg]	Facility Name		2021-02-18 19:45:10	Community Care Physicians		

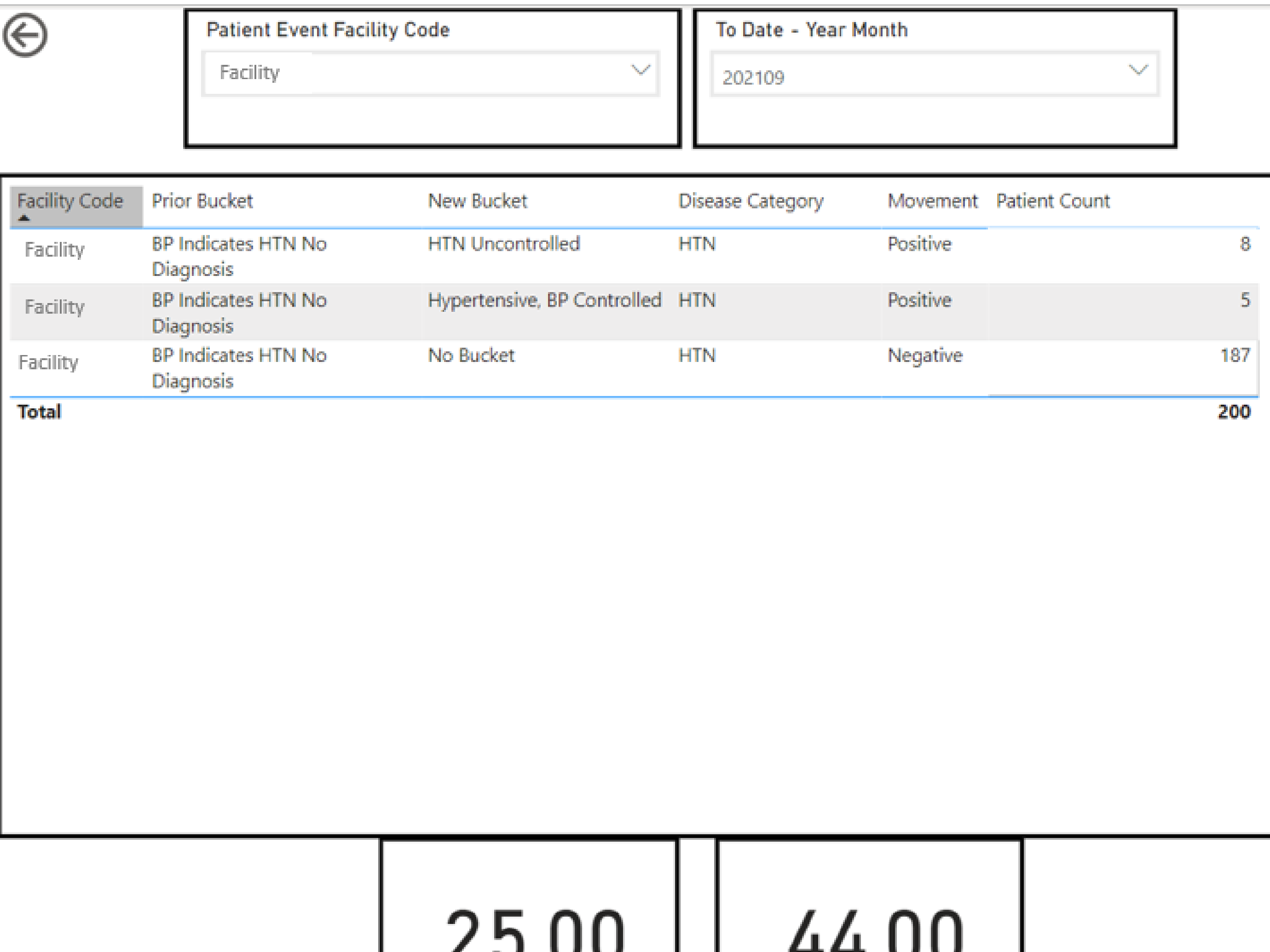
Hypertension Quality Indicator



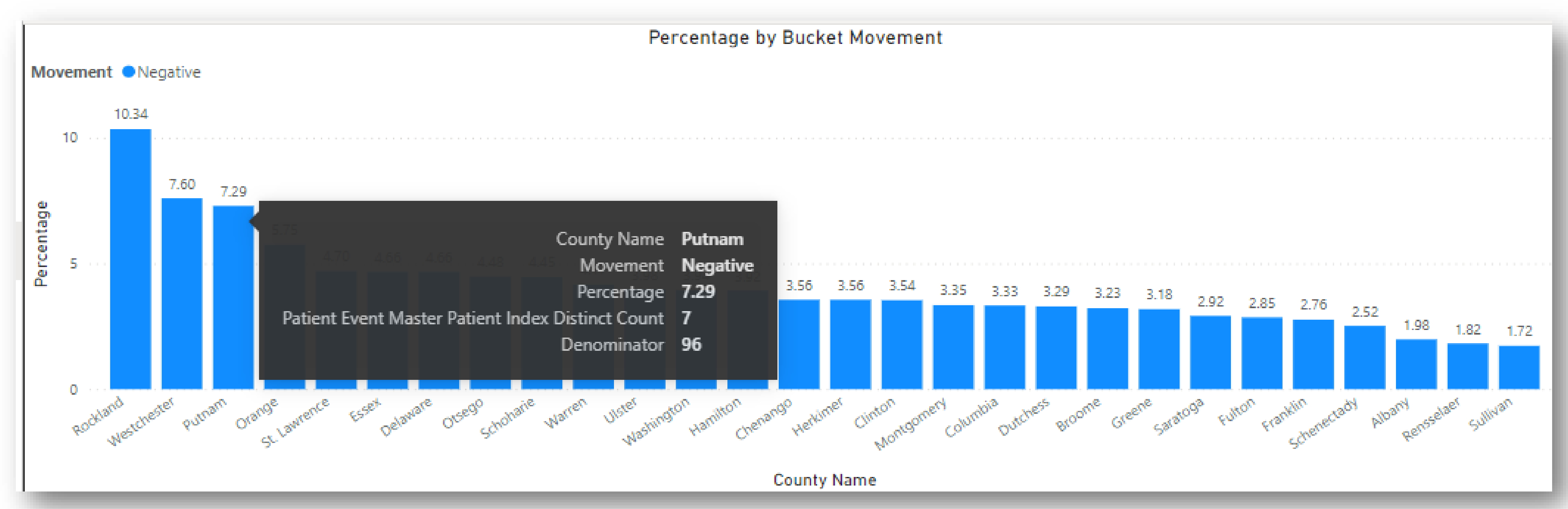
Hixny's Patient Tracker Tool

- 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

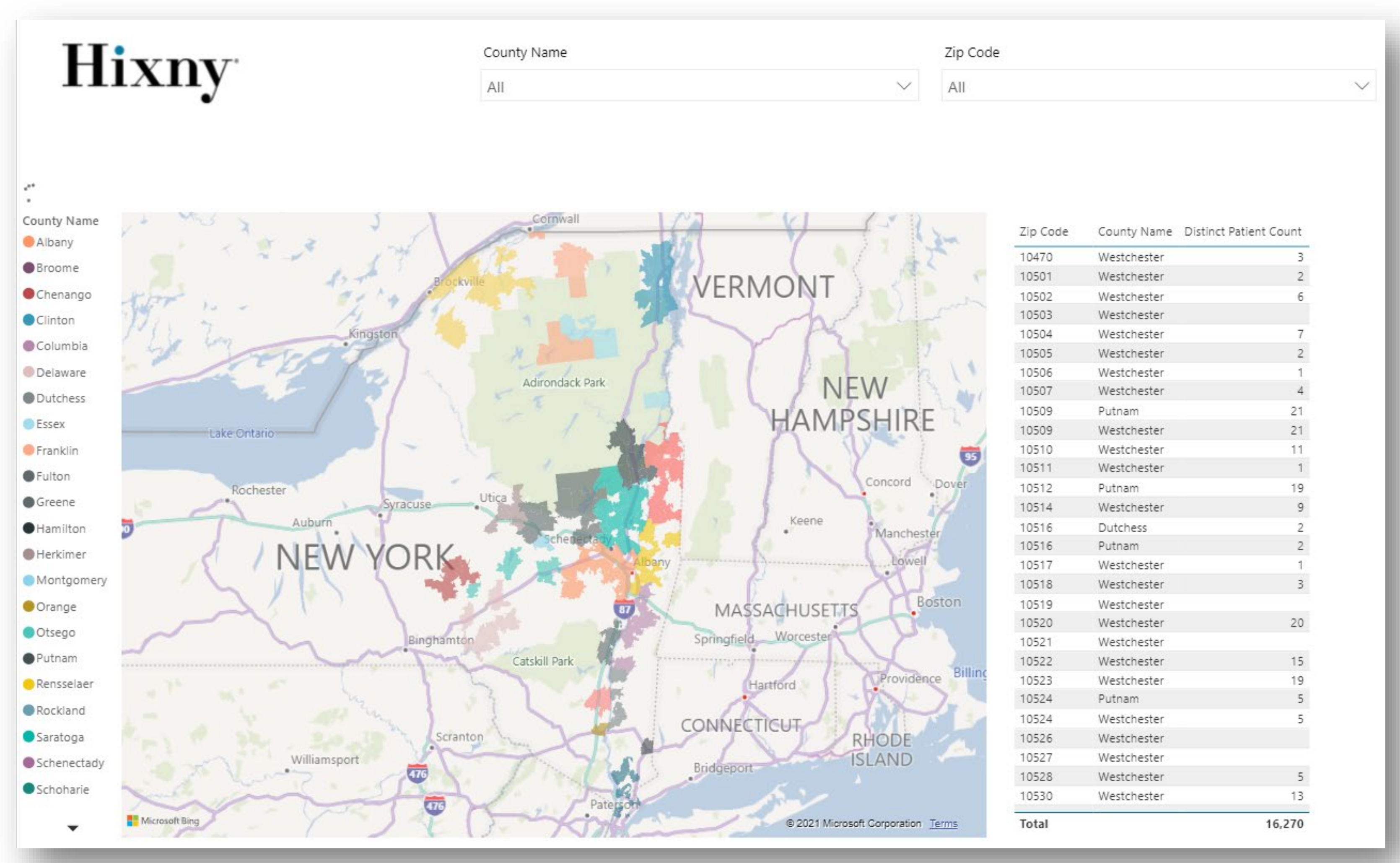


Patient Tracker Tool – County View



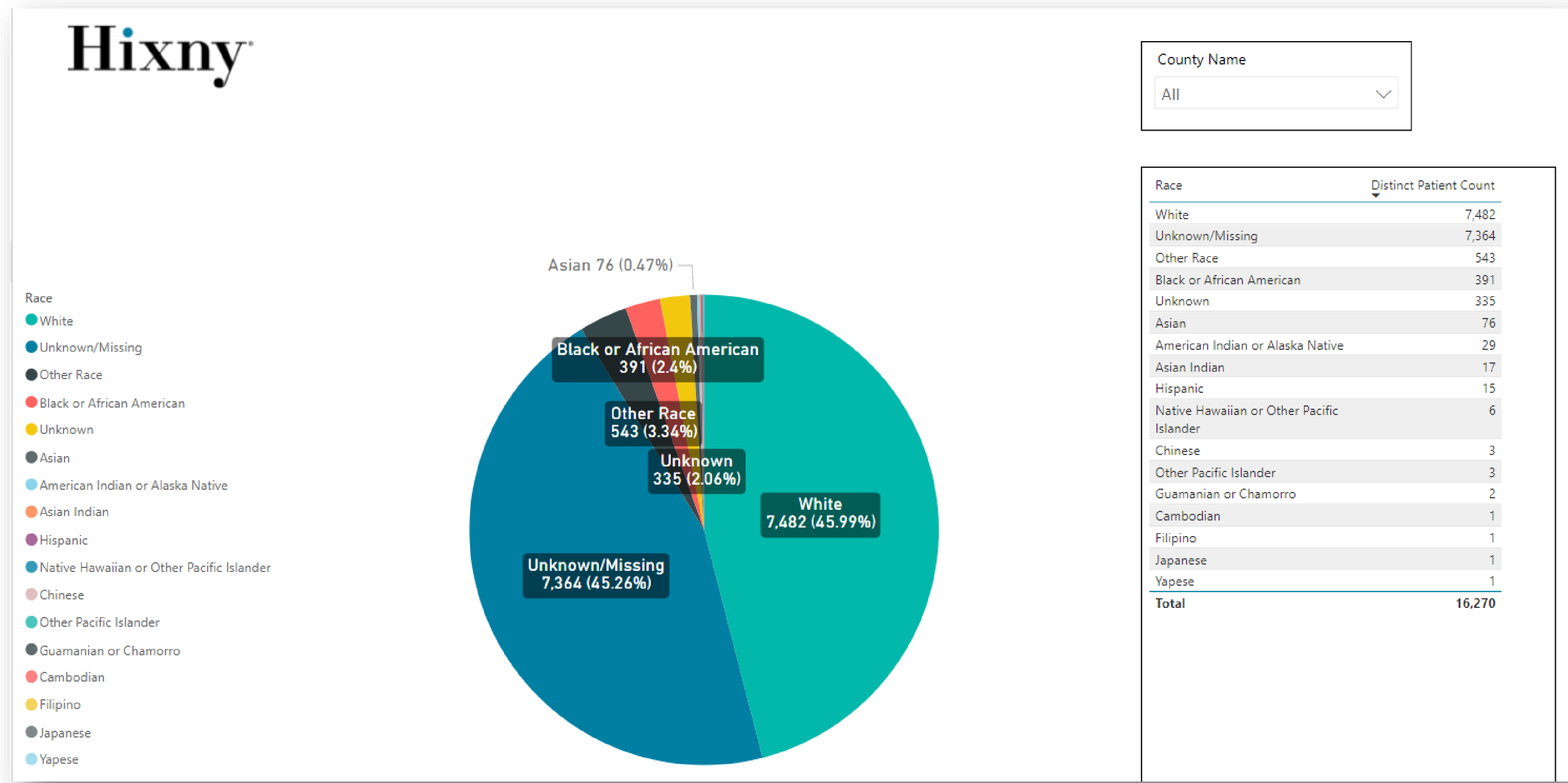
Hixny's Public Health Hypertension Reports

Hixny's Public Health Hypertension Reports



Zip Code	County Name	Distinct Patient Count
10470	Westchester	3
10501	Westchester	2
10502	Westchester	6
10503	Westchester	
10504	Westchester	7
10505	Westchester	2
10506	Westchester	1
10507	Westchester	4
10509	Putnam	21
10509	Westchester	21
10510	Westchester	11
10511	Westchester	1
10512	Putnam	19
10514	Westchester	9
10516	Dutchess	2
10516	Putnam	2
10517	Westchester	1
10518	Westchester	3
10519	Westchester	
10520	Westchester	20
10521	Westchester	
10522	Westchester	15
10523	Westchester	19
10524	Putnam	5
10524	Westchester	5
10526	Westchester	
10527	Westchester	
10528	Westchester	5
10530	Westchester	13
Total		**16,270**

Hixny's Public Health Hypertension Reports



Race	Distinct Patient Count
White	7,482
Unknown/Missing	7,364
Other Race	543
Black or African American	391
Unknown	335
Asian	76
American Indian or Alaska Native	29
Asian Indian	17
Hispanic	15
Native Hawaiian or Other Pacific Islander	6
Chinese	3
Other Pacific Islander	3
Guamanian or Chamorro	2
Cambodian	1
Filipino	1
Japanese	1
Yapese	1
Total	**16,270**

Questions

Thank You

healtheconnections®
health information exchange:
addressing hypertension

HIE participants and data sources

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

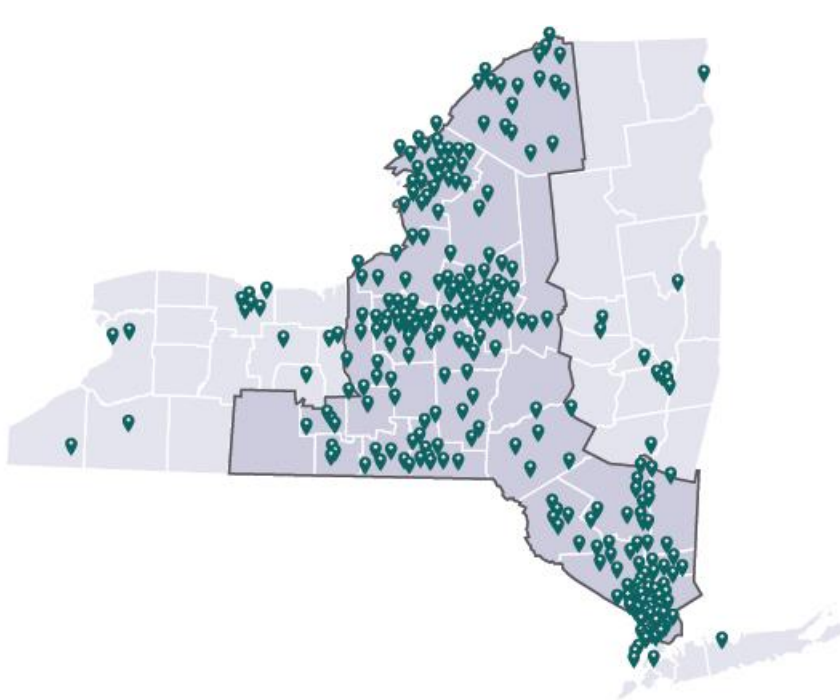
6 million patients are able to receive better care

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



healtheconnections 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

CDC innovative grant activities

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**)

myPopHealth

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

County | ZIP Code | Definitions

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

Prevalence of Hypertension

+
−

Ottawa
Montreal
VERMONT
TORONTO
NEW HAMPSHI
Hamilton
Rochester
Buffalo
Albany
MASSACHUSET
leveland
CONNECTICUT
Bridgeport
NEW YORK
NEW JERSEY
ericton
Map tiles b

n the percentage of condition f

Filters Reset Apply

ZIPCODE

Find...

- (Select All)
- 12922
- 12927
- 12949
- 12965
- 12967
- 12973
- 13020

SUBREGION

- (Select All)
- CAYUGA
- CORTLAND
- HERKIMER
- JEFFERSON
- LEWIS
- MADISON
- ONEIDA

RACE

- (Select All)
- AFRICAN AMERICAN
- AMERICAN INDIAN
- ASIAN / PACIFIC ISLANDER
- HISPANIC
- OTHER
- UNKNOWN
- WHITE

GENDER

- (Select All)
- Female
- Male
- Unknown/Missing

AGE RANGE

- (Select All)
- 18-24
- 25-34
- 35-44
- 45-54
- 55-64

Total Hypertension Distribution

Undiagnosed | Uncontrolled | Controlled

Percentage

100, 90, 80, 70, 60, 50, 40, 30, 20, 10, 0

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

Community Referrals DEMO

Rachel Kramer HealtheConnections

HealtheConnections

- My Referrals
- Reporting
- Referral Forms

Social Determinants of Health

- SDoH: Food Insecurity
- SDoH: Transportation
- SDoH: Health Insurance Enrollment

Substance Use Services

- Substance Use Treatment Referral (from Onondaga County EDs only)

Chronic Disease Evidence Based Programs

- Arthritis Support Programs
- Blood Pressure Self-Monitoring Program
- Chronic Disease Self-Management Program
- Diabetes Prevention Program
- Diabetes Self-Management Program

Blood Pressure Self-Monitoring Program

Print

1 PROGRAM 2 PATIENT 3 PROVIDER 4 REVIEW

Program

Please select a referral organization and provide any additional details required for the program (marked by an asterisk).

County

Select a county to see which referral organizations are available.

Referral Organization*

This is the organization that will receive the referral.

Patient is being referred because of Hypertension*

YMCA Blood Pressure Self-Monitoring Program

The YMCA's Blood Pressure Self-Monitoring program assists helps adults with hypertension lower and manage their blood techniques, individualized support and nutrition education in

- Trained Healthy Heart ambassadors work with participa
- This program is part of the YMCA's suite of evidence ba
- Participants have been diagnosed with high blood press
- No participants with recent cardiac events or that have

Participants are encouraged to:

SF Susan Fox (HealtheConnections) Tue 11/24/2020 11:20 AM

patient started class jan 1

Send Group Message

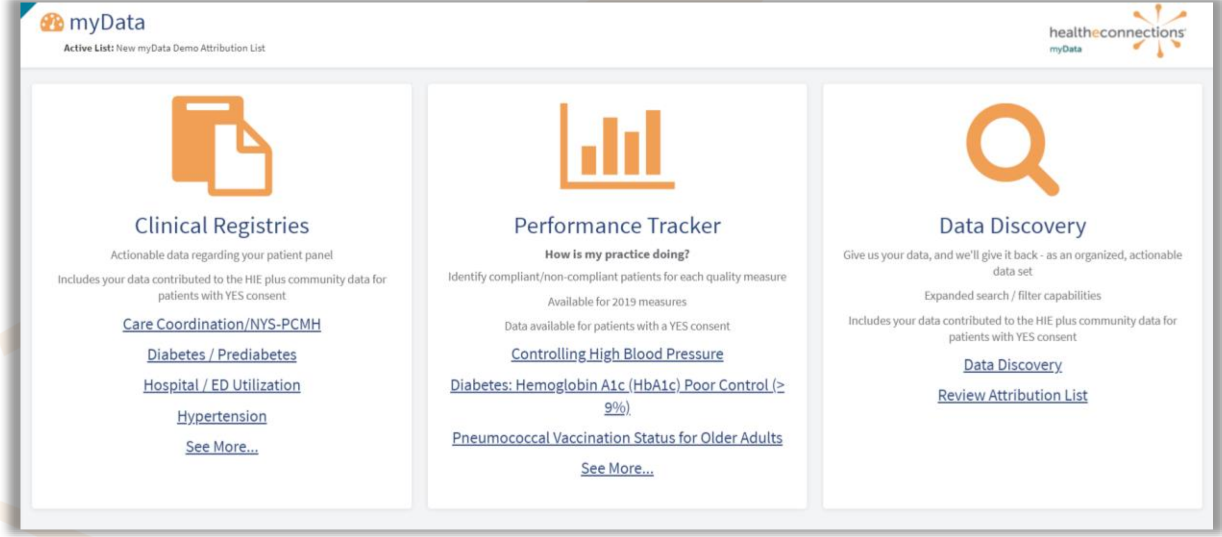
Attach File to Message Browse Reset Send

Accepted formats: PDF, DOC, DOCX, JPG, or PNG. Size limit: 30 Mb

myData

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

DEMO

Hypertension

Active List: New myData Demo Attribution List **Last Updated:** 10/18/2021

healtheconnections myData

Patient List Size	Diagnosed Hypertension	Undiagnosed Hypertension	At-Risk
536	174	10	352

Diagnosed Hypertension - By Stage
Normal, Elevated, Stage 1, Stage 2, Hypertensive Crisis

Undiagnosed Hypertension - By Stage
Stage 1, Stage 2

At-Risk - By Stage
Elevated, Stage 1

Diagnosed Hypertension - BP Measurement last 2 years?
Yes, No

Diagnosed Hypertension - BP Measurement last 1 year?
Yes, No

Filters Reset Apply

Search

HTN: CATEGORY
- (Select All)
- At-Risk
- Diagnosed Hypertension
- Undiagnosed

HTN: STAGE
- (Select All)
- Elevated
- Hypertensive Crisis
- Stage 1
- Stage 2

HAS BP MEASUREMENT LAST 2 YEARS
- (Select All)
- No
- Yes

HAS BP MEASUREMENT LAST 1 YEAR
- (Select All)
- No
- Yes

BP MOST RECENT DATE

Start: mm/dd/yyyy

End:

R

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

DEMO

Controlling High Blood Pressure 165V6

Active List: New myData Demo Attribution List

healtheconnections
myData

0
61
67
100

63.0%

Ranges based on statewide average for given measure (Reference)

Compliant	Initial Population
294	467

Non-Compliant	Non-Consented Patients IN INITIAL POPULATION
173	0

Filters Reset Apply

Search

MEASURE VALUE
- (Select All)
- Compliant
- Non-Compliant

AGE
to

GENDER
- (Select All)
- F
- M

RACE
- (Select All)
- AFRICAN AMERICAN
- ASIAN
- HISPANIC
- UNKNOWN
- WHITE

CONSENTED
- (Select All)
- Yes

467 Results

Download

HIE	Last Name	First Name	MI	DOB	Age	Gender	Race	Consented	Measure Value	Last Updated
	myData_Abernathy524	Delaine470		06/11/1985	36	F	WHITE	Yes	Compliant	10/02/2021
	myData_Abernathy524	Shaun461		02/02/1953	68	F	WHITE	Yes	Non-Compliant	10/02/2021
	myData_Abshire638	Dia700		05/19/1996	25	F	WHITE	Yes	Compliant	10/02/2021
	myData_Adams676	Debera99		07/17/1984	37	F	WHITE	Yes	Compliant	10/02/2021
	myData_Adorno791	Gabriel934		09/12/2000	21	M	HISPANIC	Yes	Compliant	10/02/2021

R

[Homepage - HealtheConnections]

Thank you!

rkramer@healtheconnections.org

315-671-2241 x5
healtheconnections.org