



NEW YORK eHEALTH
COLLABORATIVE



Draft SHIN-NY Multi-Year Roadmap Version 1.0

Val Grey
Executive Director

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State of the SHIN-NY

Highlights

SHIN-NY = The Network of Networks

8 Qualified Entities (QEs) + NYeC

Sharing Clinical Information Across The State

QEs provide core services, including:

- secure messaging
- notifications & alerts
- results delivery
- patient record look-up & clinical viewer
- consent management
- public health access

QEs offer different value-added services (for a charge)



QE	% of Patients Overlapping Other QEs
HEALTHeLINK	13
Rochester	12
HealtheConnections	20
Hixny	11
HealthlinkNY	32
Bronx	40
Healthix	13
NYCIG	53

Statewide Patient Record Lookup (SPRL) is operating
Cross QE Alerts are being fully phased-in

Core Services Delivery and Participation



OVER 6.5 MILLION
Alerts Delivered



OVER 4.9 MILLION
Patient Record Returns
(Via EHR & Clinical Viewer)



OVER 33.1 MILLION
Results Delivered

95% of FQHC

98% of Hospitals*

79% of Public Health Departments

55% of Long-Term Care Facilities

47% of Home Care Agencies**

57% of Physicians



We need to
focus on
increasing
participation

New
expanded
DEIP
program
designed
to help

All data above as of May 5 ... data is continuously being updated, improved, & refined

New Minimum Data Set

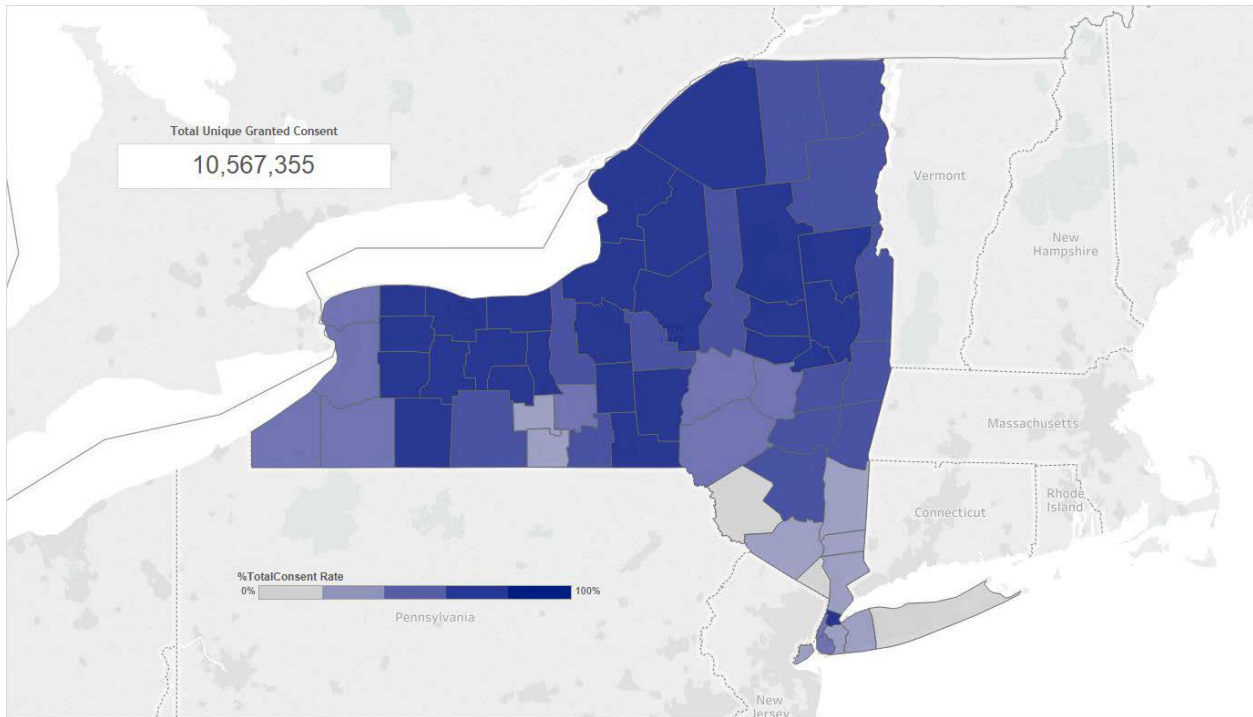
Contribution Requirements

- Common Clinical Data Set

- Patient Name
- Sex
- DOC
- Race
- Ethnicity
- Preferred Language
- Smoking Status
- Problems
- Medications
- Medication Allergies
- Laboratory test(s)
- Laboratory value(s)/result(s)
- Vital signs – height, weight, blood pressure, BMI
- Care plan field(s), including goals and instructions
- Procedures
- Care team member(s)
- Encounter Diagnosis
- Immunizations
- Functional and Cognitive Status
- Discharge Instructions

Consent

Only about ½ of New Yorkers have provided written consent



Updated: April 31, 2017

NYeC's Memo regarding Consent

Recommendations:

<http://www.nyehealth.org/nyec16/wp-content/uploads/2016/04/SHIN-NY-Proposed-Consent-Recommendations Board-Memo-003.pdf>

NYeC's Consent White Paper:

<http://www.nyehealth.org/nyec16/wp-content/uploads/2017/02/SHIN-NY consent white paper 022817.pdf>

NYeC Public Comment Period:

<http://www.nyehealth.org/nyec16/wp-content/uploads/2017/04/Notice-and-Comment-Policy-Changes-003 final.pdf>

SHIN-NY Strong Governance & Oversight

SHIN-NY Regulation Adopted March 2016 10 NYCRR Part 300 Detailed policy guidance



- Hospitals with certified EHRs were required to connect by 3/9/17
- Health care facilities* with certified EHRs required to connect by 3/9/18
- SHIN-NY connections voluntary for other providers

QEs must go through rigorous review to obtain certification

*ambulatory surgery centers, diagnostic and treatment centers, clinics, nursing homes, home care services agencies, hospices, health maintenance organizations that are health care providers, and shared health facilities.

Value-Based Care (VBC)

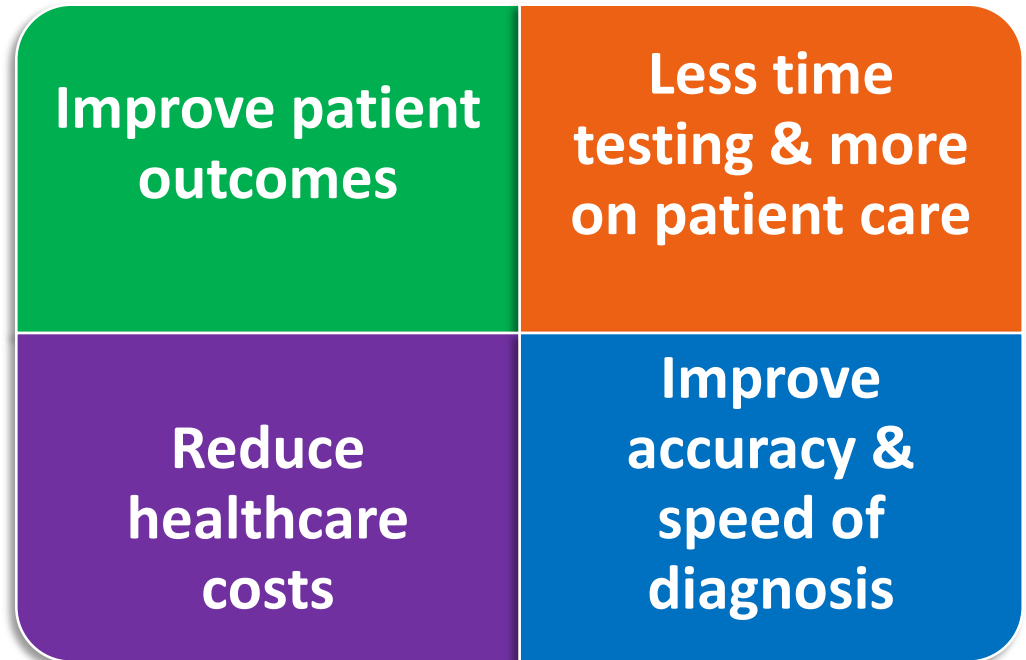
SHIN-NY as a Critical Tool

SHIN-NY: Enables & Supports Value-Based Care

Leads To Better Care And Lower Costs

Use of the SHIN-NY to access patient information is associated with:

- 57% reduction in patient readmissions within 30-days after hospital discharge
- 30% fewer emergency department admissions
- 52% reduction in laboratory tests & a 36% reduction in the estimated number of radiology exams
- 25% fewer repeat images within 90-days of first imaging procedure

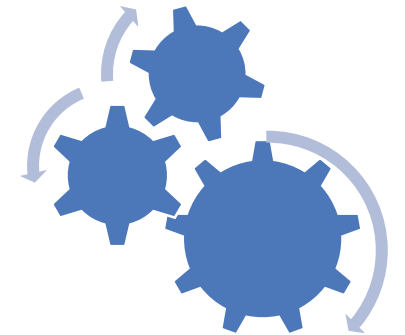


<http://www.nyehealth.org/shin-ny/value-of-hie/>


SHIN-NY Supports Value-Based Care

(Medicaid, Medicare & Commercial)

- **DSRIP:** QEs are connecting PPSs and helping facilitate formation of integrated delivery systems (Project 2.a.i, and others)
- **SHIP:** SHIN-NY services align with certain APC milestones (e.g., increasing public health department adoption for provider collaboration, using alerts to improve care, eMolst, etc.)
- **MACRA/MIPS:** Increasing number of clinical transactions in the SHIN-NY supports providers in MIPS and APMs as a tool to improve care, lower cost, and advance care information
- **Commercial/General:** On average, integrated delivery systems (including ACOs, PPSs, and other risk arrangements) experience about 30% leakage outside their system or health plan, this can be a challenge SHIN-NY helps with by providing information about care outside of the network



Key Components of VBC & Population Health



HEALTH CARE & POPULATION HEALTH
By Laura Gottlieb, Rachel Tobey, Jeremy Cantor, Danielle Hessler, and Nancy E. Adler

Integrating Social And Medical Data To Improve Population Health: Opportunities And Barriers

Social Determinants of Health Information



HealthAffairs

Physicians, Prescription Drugs, ACOs & More

Physicians Spend \$15.4 Billion On Quality Reporting
Lawrence P. Casalino et al.

Low Use Of Standard Care Processes For Depression
Tara F. Bishop et al.

401 394

Quality Measurement Reporting



Unleashing the power of

BIG DATA

Tara F. Bishop et al.

Data Integration



iMedicine: Medical Apps for your iPhone

Patient Engagement

Interoperability is almost universally seen as a major obstacle to effectively using and meeting the potential of health IT.

Interoperability & Standards

Other Dynamics & Developments

Industry, Technology, Security, and Expectations

EHR Vendor Landscape – Factors to Consider

- EHR vendors and national HIE groups have developed interoperability solutions and networks:
 - CommonWell, Carequality, Epic Care Everywhere
- Vendor adherence to interoperability standards including:
 - CCD/C-CDA & common clinical data set
- Certification status:
 - Vendors in newer priority areas like long-term care and behavioral health are often not certified
 - Balancing security and affordable solutions for providers
- Statewide EHR vendor challenges include:
 - Vendor prioritization of QE support on behalf of participants
 - Vendor responsiveness to demand for HIE connections
 - Development of hubs/gateways to QEs
 - Pricing models for HIE connections

CommonWell Health Alliance Expands Interoperability Services, Signs Up New EHR Vendors
Nov 25, 2014 | Posted by admin | Homepage Content

**Epic, Carequality Challenge
CommonWell on EHR Interoperability**



Highest Security Remains a Top Priority



Your medical record is worth more to hackers than your credit card



Massive 'WannaCry' cyberattack hits countries around world, cripples British health system

COSTAS PITAS AND CARLOS RUANO

LONDON and MADRID — Reuters

Published Friday, May 12, 2017 11:23AM EDT

Last updated Saturday, May 13, 2017 5:17PM EDT

HITRUST
Health Information Trust Alliance

New York Financial Regulator Rolls Out Cybersecurity Proposals

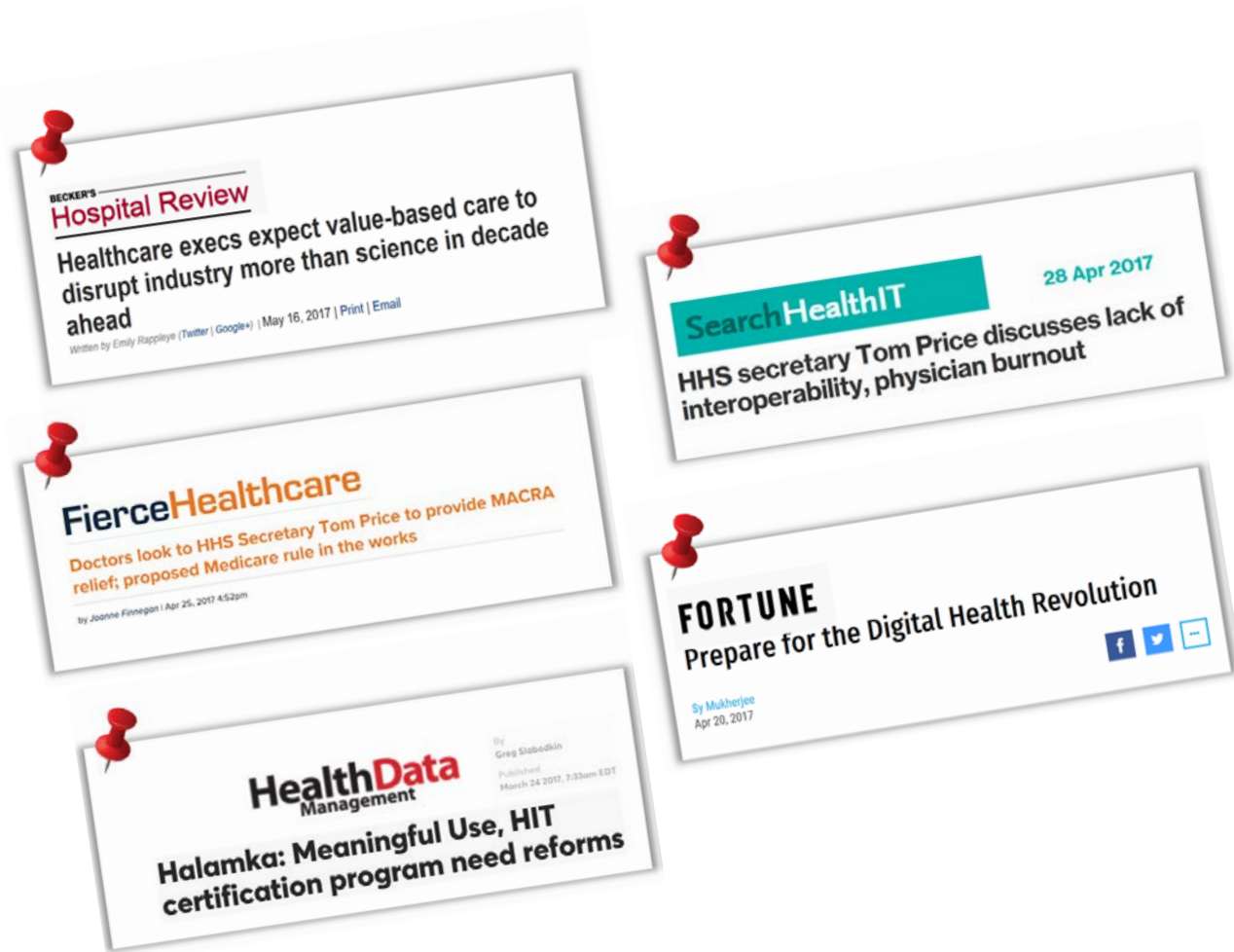
Continuous Technological Change



Growing interest in accessing discrete data rather than lengthy comprehensive files - many seeking ability to search and exchange targeted information

Federal HIT Policy Landscape

Changes Expected



- Value-Based Care likely to continue
- MACRA/MIPS likely to continue
- Meaningful Use Stage 3 will change
- Interoperability is a focus
- Transparency and patient engagement interest

Stakeholder Input & Priorities

Listening Tour, Focus Groups, and Other Messages Heard

Listening Tour High-Level Take-Aways

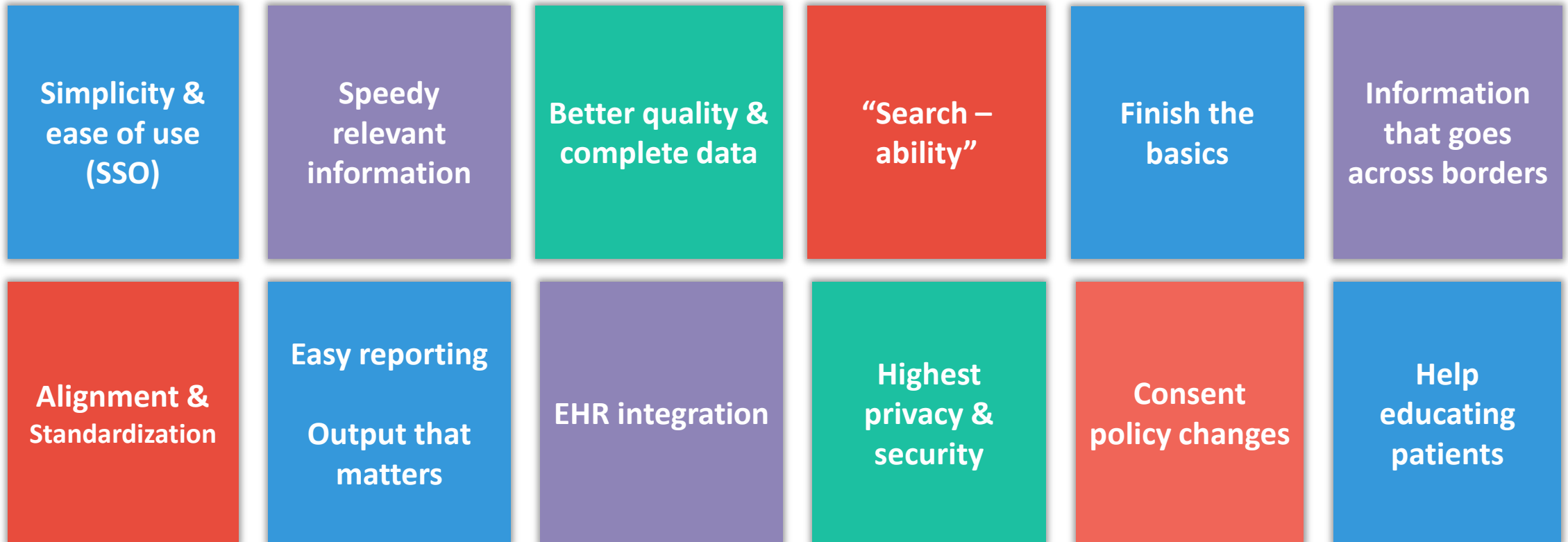
- Generally strong support for SHIN-NY
- Potential of SHIN-NY recognized
- Key component for VBC
- Varying views on SHIN-NY priorities
- Each QE/region in different places
- Overall enthusiasm to re-evaluate
- Everyone agrees on need to integrate
- Overlapping boundaries
- Significant investment in private HIE
- Need to further rebuild trust & confidence
- Conflict of interest concerns
- Some desire for more voices
- Need for more frequent and meaningful communication
- Should focus on customer needs
- Some believe focus needs to move back to basics
- Need for more consumer education
- Some see inefficiencies in current system

Physician Frustrations



Provider Focus Groups

What Are We Hearing They Want?



What Are We Hearing From The QEs?

- Finish the building of the infrastructure but recognize challenges & resource needs
- Promote trust & understanding (NYeC/DOH outreach)
- Sharing best practices & collaborative learning
- Foundation for technology requires high-quality data
- Some agreement on functionality enhancements like single sign-on
- Need to provide more meaningful, action-oriented & proactive data to providers



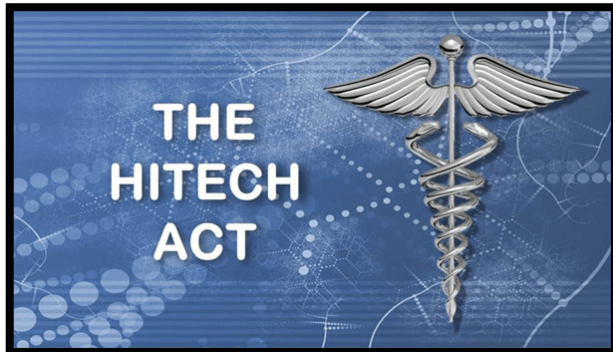
- Integration with other types of data very important
- More meaningful metrics are needed & assistance with connections to VBC
- Population health broadens the participants (i.e., CBOs)
- Efficiency possible with shared services, but need to maintain agility & flexibility at local level
- Some interest in leveraging QE expertise and specialization
- Unified approach with vendors
- Explore creative funding opportunities

SHIN-NY Funding

History: Current & Future

Potential “Perfect Storm”

Funding Challenges



Moving to lower Medicaid match
HITECH Enhanced match expires 2021



Federal ACHA could cost NYS billions



SHIN-NY (NYeC with QEs) will
advocate for maximum funding

But current funding levels
cannot be maintained
long term



Tremendous potential pressure on
NYS Budget, especially 2020-21

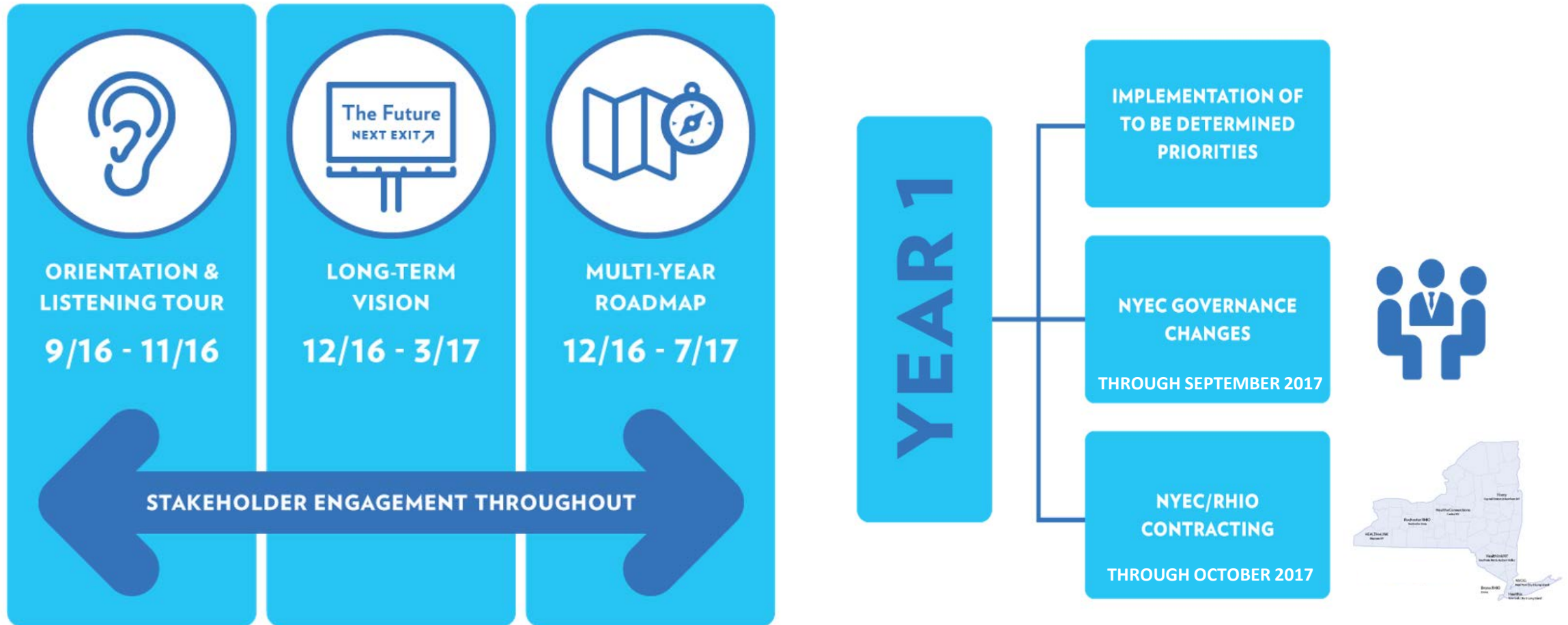


Up for Re-authorization in 2020

Draft SHIN-NY Multi-Year Roadmap Framework Version 1.0

For Discussion

Strategic Planning Timeline



From November 2016 NYeC Board Meeting

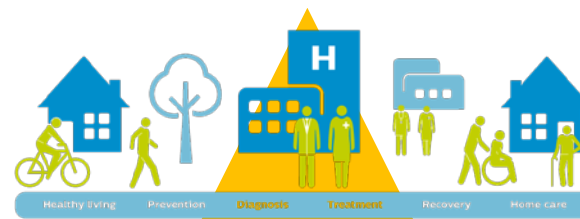
Strategic Planning Guiding Principles

- Patient-centered
- Public benefit
- Support reform initiatives
- Stakeholder inclusive
- Consensus building
- Customer-focused
- Regional markets
- Statewide good transcends individual interests
- Operational excellence
- Trust, security & transparency
- Efficiency--value engineering
- Leverage private investment
- Highest quality, integrated data
- Leading technology
- Standardization
- Influence & alignment with federal standards

Strong advocacy & using all levers at federal, state & local level to promote the SHIN-NY

SHIN-NY & NYeC Mission And Vision

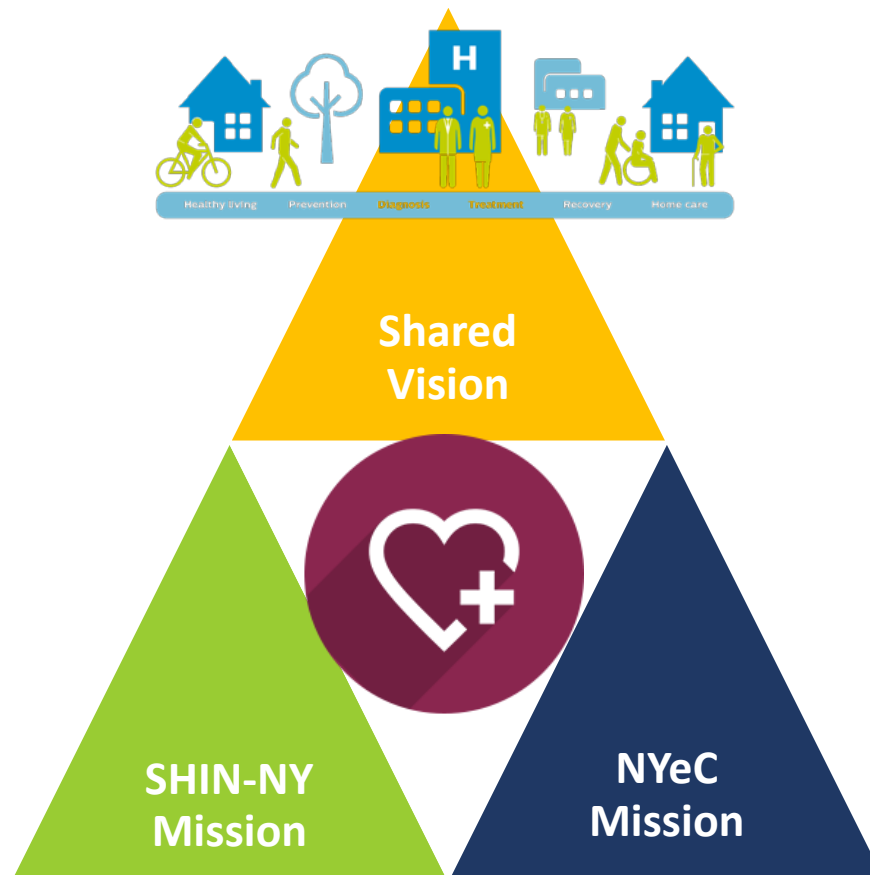
Our **shared vision** is a dramatically transformed healthcare system where health information exchange is universally used as a tool to make lives better



SHIN-NY mission is to improve healthcare through the exchange of health information whenever & wherever needed



NYeC mission is to improve healthcare by collaboratively leading, connecting & integrating health information exchange across the State



Approved by DOH and NYeC Board March 2017

SHIN-NY Primary Roles And Responsibilities

DOH

- Exercise overall authority for the SHIN-NY (funding, regulation, laws, policy guidance, QE certification requirements, etc.)
- Serve as a partner with the private sector
- Utilize state levers to promote SHIN-NY

NYeC

- Provide global thought leadership to advance SHIN-NY, align, integrate, and advocate
- Facilitate and propose statewide SHIN-NY policy, technical standards, functionality, and business operations
- Oversee delivery of QE core SHIN-NY services through performance-based contracts
- Connect QEs statewide and meet performance goals

QEs

- Deliver core SHIN-NY services
- Meet performance goals and comply with state requirements
- Directly support healthcare reform initiatives and community-based care models
- Foster innovation in service delivery
- If desired, offer enhanced services for additional fee

The 4 Year Roadmap Goal: Optimizing & Integrating

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Getting Ready for 2021 and Beyond

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- Top goal and priority is improving patient care and the health of our communities
- Government has made historic significant investments in building SHIN-NY
- This level of funding is not expected to continue indefinitely
- System will need to be ready to become less reliant on government funding

This 4 Year Roadmap is about:

- ❖ Ensuring top-notch infrastructure and platform to increase value & diversify funding to include user fees and other revenue
- ❖ Healthcare and technology are dynamic and will change but the need for pipes/highways and robust/reliable data will not
- ❖ Directly supporting State VBC goals

What Are The SHIN-NY Infrastructure Goals?

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2020 SHIN-NY Roadmap

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Strategies and Themes

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- Ambitious targets
- Emphasis on standards
- Performance-based contracting
 - Incentivizes achievement
 - Balance of collaboration and competition
 - Experimentation--try before we buy
 - Deliverables-based approach with some flexibility*
- Consistent, data-driven decision-making
- Continuous feedback loop from all
- Promoting partnerships and learning
- Roadmap that can be calibrated given uncertainties
- Strong education and advocacy for SHIN-NY funding and policy

What Does Success Look Like In 2020?

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The Basic Foundation

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All metrics must have clear definitions followed by all consistently

Component	Goal
Participating hospitals	100%
Participating providers (physicians + non-hospital facilities)	70%
Hospitals contributing full minimum dataset	100%
Providers contributing full minimum dataset	70%
Consent	95%
Elevate security	HITRUST certification
Highest quality data	New measurement TBD
Usage of core services	New measurement TBD
SHIN-NY enterprise system availability	New measurement TBD
Customer and stakeholder satisfaction	New measurement TBD

Other metrics will also be regularly monitored & reported

SHIN-NY Integral To Triple Aim & Value-Based Care

Component	Examples include:	Measured by:
Enhanced functionality	Single Sign On for Health Commerce System (I-STOP, others), smarter alerts, MACRA/MIPs compliance, care plans, common data elements, data quality measurement, exploration of patient centered data home	Availability and meaningful usage metrics to be determined
Additional important non-clinical data	Claims, eMOLST, Rx, EDRS, registries, Social Determinants of Health	Availability and meaningful usage metrics to be determined
Innovation experiments to identify highest value investments	Quality measurement reporting, smarter alerts, FHIR, Blockchain, AI, machine learning, patient engagement	Relevant milestones developed for each project with outcomes and work shared across the SHIN-NY enterprise

SHIN-NY Continuous Feedback: Value & Satisfaction & Usage

Component	Actions
Demonstrating SHIN-NY value	Continued academic studies of SHIN-NY, use cases, healthcare improvement dashboard
Informing functionality & customer satisfaction	Conduct statewide independent assessments of functionality & workflow barriers, provider & plan satisfaction
Consistent SHIN-NY messaging	Coordinated communication about the SHIN-NY system for both providers and policymakers, new consumer education campaign
Continuous feedback loop	Regular feedback from newly-created broad-based Provider Advisory Group, Consumer Advisory Group, and Technology Advisory Group
Informing sustainability	Longer-term; understanding of what services providers and plans are willing to pay user fees via independent assessment statewide

Above measured by system usage, newly-developed metrics, and stakeholder & patient engagement

What Does Success Look Like?

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Efficiency & Affordability

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Value-engineer the SHIN-NY system on a voluntary basis through the use of core infrastructure payments, to promote:

Component	Examples include:
Group purchasing	Data quality, quality reporting, software & systems, HITRUST
QE specialization	Leveraging QE demonstrated experience and excellence
Standardization	Based on state policies and QE best practices
Shared services	Training, legal, testing, monitoring, EHR interfaces, marketing
Potential QE mergers	Past mergers have included eHNLI + Interboro > NYCIG; STHL + THINKC > HealthlinkNY; LIPIX + NYCLIX + BHIX > Healthix
“Wire once” policy	One connection instead of multiple - national HIEs, EHRs, statewide datasets, etc.

Success measured by system-wide savings and ability to continue to add SHIN-NY participants and other activities within budget

What are the High Level Tools & Levers?

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To Execute Roadmap

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Government Funding

2017-18 ... A Transition Year

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DOH Contracts with QEs

Base Funding

Traditional budget-based approach*
NYeC serves as DOH SDE

Additional reporting & data
collection

Consistent rules on allowable
membership fees

DOH manages, administers and
processes payments with NYeC
assistance

Performance

Continued
SHIN-NY
Dashboard
performance
metrics
monitoring

NYeC Contracts with QEs

Additional Funding Pool

Investments in process or technology
innovations via competitive applications:

- To directly increase SHIN-NY connections, complete data contributions, or data quality
- Work & results shared w/ QEs
- QE partnerships encouraged
- QE must be in satisfactory standing

NYeC manages competitive applications
and makes funding awards

Government Funding

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2018-19+ Performance-Based Contracts

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NYeC Serves as New York's State Designated Entity

Core Infrastructure Funding

Reasonable payment for*:

- Patient identity management
- HIE Platform
- Security
- EHR connectivity
- Data availability (standardized)
- Consent management

NYeC determines payments and encourages efficiencies

*Certain multi-year IAPD projects may be continued

Performance Payments

Gap-to-Goal payments on:

- Some current metrics
- New metrics (including data quality and others)*

Bonus payment for all QEs if enterprise hits overall statewide targets

NYeC monitors real-time & audits
Defined escalation process for under-performance

*Note: Year 1 is pay-for-reporting

Innovation Pool

Investments in process or technology innovations via competitive applications:

- Must align w/ statewide goals
- Work & results shared statewide
- Only high-performing QEs eligible
- QE partnerships encouraged
- Local match required

NYeC manages competitive applications & makes funding awards

An Example Assuming Even Progression Over 3 Years

Performance Metric	% Improvement Gap to Goal
Provider Participation	33%

100% divided by 3 years

Performance Goal (%)	QE Result Last Year (%)	Gap Amount	Annual Increment	Improvement Target (%) This Year
70.0	50.0	20.0	6.6	56.6

Statewide goal has been established for each performance measure

The previous year's measurement result is used to calculate this year's improvement target

The gap amount is the performance goal minus the previous year's result

Annual increments are calculated from 33% of the gap amount

Improvement targets are set by adding the annual increment & previous year's measurement result

Policy

Laws, Rules, Guidance, Policies, Certification, etc.

- Set clear standards & definitions
- Implement regulatory requirements for regulated facilities to connect
- Continue support for SHIN-NY inclusion in reforms like DSRIP, APC & others
- Update certification requirements to include HITRUST & re-examine core services including which public health services are provided
- Evolve & modernize SHIN-NY policies
 - Short-term & longer-term consent
 - Data governance/access/usage
 - Wire once policy
 - Other changes related to market developments
- Promote interoperability & standards

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Advocacy & Education

State, Federal, Stakeholders, and General Public

- Raise awareness and visibility of SHIN-NY, QEs, and NYeC to showcase achievements
- Promote continued funding
- Advance new statutory, regulatory, or policy changes, as needed
- Create unified voice statewide, national if possible, to address vendor issues
- Work together to advance better federal policies on interoperability
- SHIN-NY consistent messaging & new consumer education campaign

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Best Practices

Additional Learning Forums

- Share & promote best practices among QEs
- Ensure learning and sharing of SHIN-NY pilots among QEs
- Work with SHIEC and other groups to share across the country
- Provider Advisory Group
- Consumer Advisory Group

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Longer-Term Plan 2021+

Focused First On 2020 Roadmap



Future Sustainability Models Workgroup would be created in later 2018, after:

- start of performance-based contracting
- results of planned studies are available (workflow, satisfaction, market)
- availability of more data
- work underway on data governance, usage, fees



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