The NYSDOH OHITT/MSSNY PPSO contract (C024582) is a result of 2005 legislation directing the Department to “issue grant funding to one or more organizations broadly representative of physicians licensed in this state.” Project funding was directed “to include, but not to be limited to”:

a. efforts to incentivize electronic health record adoption;

b. interconnection of physicians through regional collaborations;

b. efforts to promote personalized health care and consumer choice;

d. efforts to enhance health care outcomes and health status generally through interoperable public health surveillance systems and streamlined quality monitoring.”

The legislation also called for a final report from the Department that includes among other requirements “the appropriateness of a broader application of the health information technology program to increase the quality and efficiency of health care across the state.”

The Medical Society of the State of New York (MSSNY) was awarded a contract in April 2009. The contract Statement of Work calls for MSSNY, along with representatives from NYS DOH and NYeC, to work with rural and solo and small group physician practices to plan, design, build, and initiate operations for Physician Practice Support Organizations or PPSOs that will focus on the following goals to improve the efficiency and effectiveness of health care consistent with the HIT vision and strategy being employed by NYS DOH and NYeC:

1. Performance reporting capabilities and interoperable HIT capacity connecting patients, clinicians, and payors and leveraging health information exchange among all stakeholders

2. Readily available evidence-based care guidelines

3. Improved access to care

4. Enhanced practice-level quality of care evaluation and reporting of health care outcomes

5. Coordination of care for patients with chronic disease

6. Physician practice change management to leverage technology and delivery models

7. A new business model with payors actively supporting physician participation through an enhanced payment system

In addition, MSSNY has been charged with assembling a Statewide Workgroup which would include representatives from various physician practices and organizations such as physician member organizations, the
the New York eHealth Collaborative, clinical quality organizations and the New York State Department of Health. The work
group will provide guidance and information to those groups of solo/small practice physician groups who are considering
development of a PPSO-like organization; and, a handbook describing the activities of the Adirondack Patient Centered Medical
Home Demonstration Pilot, PPSO Mission Statement, PPSO Quality Services, PPSO Business Entity Grid, and Comparison Grid
of Quality-driven Projects from across New York State. A list of the Statewide Work Group members appears at the end of this
introduction.

One of the overarching goals of the pilot project is to transform participating primary care practices into certified, patient
centered medical homes (PCMH), which provide primary care in a coordinated, team-based manner. The coordination of
care required within certified PCMHs is thought to be the best way to keep patients with chronic conditions healthy, as well as
to focus on preventing chronic diseases in those that do not yet have them. This focus on prevention of disease development,
avoidance of hospital admissions, and discouragement of duplication of care also results in lowered costs.

The pilot project has been underway for approximately two years. During this time, through the dedicated efforts of all involved,
significant progress has been achieved. The major activities undertaken include:

- Benchmarking of all practice operating procedures against the NCQA Patient Centered Medical Home (PCMH) certification
  standards
- Assessment of technology capabilities of each participating practices
- Identification and recruitment of organizations with capabilities or potential to become the Physician Support Organizations
  (Pods)
- Coordination of payor agreements and expectation setting
- Collaboration with the New York State Department of Health
- Establishment of the Adirondack Health Institute
- Negotiation of the per member per month payment amount
- Definition of common quality measures
- Definition of common performance measures
- Conception of the patient level data flow and access
- Creation of technology linkages to HIXNY, the EHR Data Warehouse, the Payor Data warehouse, AHI, the Pods, and
  participating practices

The pilot has a five-year window to demonstrate that these changes in the delivery of care will have transformed the delivery
of healthcare, improved the satisfaction and retention of primary care providers in the region, improved patient health, and contained costs. This booklet contains summarized information based on deliverables delivered and completed by MSSNY’s subcontractor EastPoint Health. In addition to describing the Adirondack Park Pilot, we have included information from three other quality-driven projects in New York State. They are the HealtheLink Project in Western New York Region, the Taconic Health Information Network and Community (THINC) from the Hudson Valley Region, and the Primary Care Information Project (PCIP) from New York City. Information was captured regarding the clinical and quality services that are being provided in these areas. Even though the PPSO is a name that is unique to the Adirondack Park Pilot project, these projects offer similar clinical services without the benefit of a formal name.

The full set of complete EastPoint Health deliverables is available in its’ entirety on the MSSNY web site at: http://www.mssny.org/mssnyip.cfm?c=s&nm=Health_Information_Technology. We hope that it serves other communities of solo and small practice physicians in their efforts to initiate similar clinical and quality-driven projects.

Sincerely,

John Rugge, MD
Chair of the PPSO Statewide Workgroup

Salvatore S. Volpe, MD
Vice-Chair of the PPSO Statewide Workgroup
Statewide Workgroup Members:

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Elizabeth K. Buck, MD
Eileen Clinton, MS (MSSNY)
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Salvatore Volpe, MD, (Vice Chair)
Dennis Weaver, MD (EPH)
Ms. Mary Welch
Mr. David Whitlinger (NYeC)
PURPOSE

The purpose of this deliverable was to form a PPSO Statewide Workgroup which would include representatives from various physician practices and organizations such as physician member organizations, the New York eHealth Collaborative, clinical quality organizations and the New York State Department of Health. The work group will provide:

• Guidance and information to solo/small practice physician groups who are considering development of a PPSO-like organization;

• A handbook describing the activities of the Adirondack Patient Centered Medical Home Demonstration Pilot, PPSO Mission Statement, PPSO Quality Services, PPSO Business Entity Grid, and Comparison Grid of Quality-driven Projects from across New York State.

OVERVIEW

As stated in the introduction letter, the Medical Society of the State of New York (MSSNY) was retained by the New York State Department of Health (DOH) to work with the Adirondack Park to implement a pilot program for creation of Physician Practice Support Organizations (PPSO) which will assist independent small and solo physician practices by providing certain clinical services in a collaboration of care healthcare delivery system.

These PPSOs have been created in three areas of the Adirondack Park and are described in the deliverable summaries which appear in this book. MSSNY under the guidance of the Statewide Workgroup that was formed has also provided several deliverables that include the PPSO Mission Statement, the Quality Services to be provided by the PPSO and the Business Entity structure to be used relative to the Corporate Practice of Medicine in New York State. Part of MSSNY’s engagement with the DOH is also to provide an operational framework and options for solo and small physician practices surrounding clinical services and describe how these services can assist them in the collaboration of patient healthcare. Based on a questionnaire provided by the DOH – Office of Health Information Technology Transformation, MSSNY has solicited responses from representatives of the Adirondack Park project and three additional leading projects from across New York State where quality is a major focus.

The three projects reviewed are HealtheLink, Taconic Health information Network and Community (THINC), and Primary Care Information Project (PCIP). The goals of all these projects include providing improved quality outcomes through collaborative care using evidence-based guidelines in the treatment of patients. Each project may have conducted quality services in a different manner but the overall goal is to realize
an improved healthcare delivery system while reducing overall healthcare costs based on physicians sharing data, removing the need for duplicative tests where appropriate, and reducing the number of hospital admissions.

**HEALTHeLINK™** is a collaboration among physician, hospital, and insurance organizations to share clinical information in efficient and meaningful ways to improve the delivery of care, enhance clinical outcomes, and control healthcare costs throughout the Western New York region. **HEALTHeLINK™** is a not-for-profit organization that supports and is working toward the vision of creating community-based virtual medical records and other clinical applications. Achieving that vision means:

- Medical professionals will have access to information they need to treat quickly and safely;
- Duplicate tests and procedures will be avoided;
- Medical information can speak for a patient in an emergency;
- Quality, safety, and efficiency will help control healthcare costs.

**THINC** is a not-for-profit corporation dedicated to improving the quality, safety, and efficiency of healthcare for the benefit of the people of the Hudson Valley region of New York State. **THINC**’s primary purpose is to advance the use of Health Information Technology (HIT) through the sponsorship of a secure Health Information Exchange (HIE) network, the adoption and use of interoperable Electronic Health Records (EHR), and the implementation of health improvement activities, including public health surveillance and reporting, pay for performance, and other quality improvement initiatives.

- **THINC** actively brought together the region’s payers of health care to align payment incentives for quality improvement.
- **THINC** is the convening organization that establishes research-based criteria to enhance health care quality and value in the Hudson Valley.
- **THINC** has several initiatives including: Care Coordination, Pay for performance, Electronic Health Records, and Health Information Exchange

**Primary Care Information Project** is a New York City Mayoral Initiative that seeks to improve the quality of care in underserved communities through the use of health information technology (HIT). Funded by $60 million in city, state, federal and private funds, **PCIP** aims to improve the health of New Yorkers by supporting the adoption and use of Electronic Health Records (EHRs) among the city’s primary care providers. The project focuses on the New York neighborhoods where health disparities are greatest – East and Central Harlem, the South Bronx, and Central Brooklyn.

The project, which has been called “the most ambitious government effort in the country to harness electronic data for public health goals,” proceeds from the conviction that we must make “maximizing health” the organizing principle of health care reform. In order to achieve greater health, simply adopting EHRs is not enough. For EHR implementation to be truly effective, practice workflows and reimbursement incentive schemes need to change as well. We have to reorient our technology, our care, and our billing system toward an agenda of prevention, with special emphasis on the clinical interventions that have the greatest potential to save lives.
COMPONENTS

This Deliverable includes the following documents developed by the PPSO Statewide Workgroup:

• PPSO Mission Statement;
• PPSO Recommended Quality Services/Activities List;
• PPSO Business Entity Options Grid;
• Sampling of Quality-driven Projects across New York State; grid depicting the clinical activities, stakeholders, conditions to monitor, etc. that are associated with each of the four selected quality-driven projects named above
• Clinical Quality grid summary of the four projects which discusses the clinical services and activities that are provided, data sources and the similarities which the four projects have in common.
• Project highlights
STATEWIDE PHYSICIAN PRACTICE SUPPORT ORGANIZATION (PPSO)  
WORKGROUP MISSION STATEMENT

1. To assist physician practices, primarily solo and small group practices, across New York State, primarily located in rural communities to effectuate care coordination models to enhance the delivery of primary and preventive care including chronic disease management through physician practice support organizations (PPSOs).

2. To develop appropriate governance models for PPSOs which will represent and provide operational support for physicians from multiple specialties practicing within varying business configurations of different sizes and which will:
   • employ appropriate physician representation, structure and transparency;
   • enable performance reporting capabilities and interoperable HIT capacity connecting patients, clinicians and payors;
   • make appropriate evidence-based care guidelines readily available; other issues as they arise;
   • improve access to care;
   • enhance practice level quality of care evaluation and health care outcomes reporting;
   • evaluate practice performance against evidence-based guidelines and benchmarks; and
   • coordinate care for patients with chronic disease(s).
   • advance population-based preventative care;
   • support physician participation in advanced value-based business models such as pay for performance, quality initiatives, medical home programs, accountable care organizations, care coordination, quality improvement, etc.

3. To identify legal, governance, organizational and business issues associated with the development of PPSOs and to provide recommendations for the resolution of such issues.

4. To implement a pilot including three sub-regional physician practice support organizations to address the issues of support activities such as access to care, care coordination, evidence-based guidelines, quality of care data aggregation and performance reporting. These three sub-regional solutions will also include
costs of interfaces, software and other technical costs and support services to facilitate data access/exchange and connectivity with regional health information organizations and the Statewide Health Information Network for New York (SHIN-NY).

5. To identify the lessons learned from the pilot of three sub-regional solution implementations for the purpose of making recommendations regarding implications and possible structures for the potential statewide expansion of implementation of PPSOs as needed to enable collaboration and provide connectivity of small and rural practices throughout various communities of New York State.
A PPSO should proactively and iteratively

Identify evidenced-based measures and guidelines from nationally recognized sources* for clinical care, access, coordination of care, efficiency, safety and patient experience.

1. Determine those standards and measures to be used for preventative care from available nationally recognized sources.
2. Perform quality-of-care surveillance and quality improvement activities for the PPSO membership (e.g. academic detailing, identification of best practices).
3. Work with physicians to define, generate and review quality data reports and to assure the reliability and validity of the quality reports.
4. Report quality data to the PPSO membership at the PPSO-aggregate level, participating member/group level (e.g. participating office practices, hospitals, etc.), and also at the individual participant member level (e.g. clinicians).
5. Make available PPSO quality data to appropriate regional, state and national entities subject to approval of the PPSO ruling body.
6. Provide education (e.g., toolkits) and technical resources and support to facilitate the implementation of quality improvement at PPSO practices.

*Examples of these sources are: U.S. Preventive Services Task Force, Agency for Healthcare Research and Quality, National Quality Forum, Physicians Consortium for Performance Improvement, National Institute of Health, and medical professional organizations such as the American Heart Association, National Kidney Foundation, American Diabetes Association, etc.
<table>
<thead>
<tr>
<th>PPSO Services to be Provided</th>
<th>Conflict with Corporate Practice of Medicine</th>
<th>Relevant Decisions to be Determined</th>
<th>Type of Business Entity</th>
<th>FP/NFP</th>
<th>Advantages</th>
<th>Disadvantages</th>
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<tbody>
<tr>
<td>Administrative: PPSO will engage in the management, collection, aggregation, and exchange of data; administrative services; quality assurance and quality review according to evidence-based guidelines; education; the PPSO will also provide these services in the form of professionals such as Nurses and/or Pharmacists to local physician practices for QA purposes.</td>
<td>Should a PPSO follow a For-Profit model or Not-For-Profit model?</td>
<td>NFP</td>
<td>Exempt from Federal taxes; ability to attract donations which are tax deductible to donor; exempt from NYS Real Estate taxes; exempt from Sales Taxes; fringe benefits can be deducted as business expense.</td>
<td>Prohibited from engaging in political and/or advocacy activities; full tax advantages available only to groups organized for charitable, scientific, educational, literary or religious purposes (Type B); Property transferred to corporation stays there; if corporation ends, property must go to another nonprofit; If elected Board members, can be a battle for control of the entity; Non-physician stakeholders/represenatives could be elected or appointed to the Board; Subject to Federal and State jurisdiction and laws regarding corporations; Some corporation structures are more expensive to form than others; In a GP, Partners would be personally responsible for business debts; Major stockholder can take control; Stakeholders would have to support the entity through capital investments in the entity.</td>
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<td></td>
<td>Would physicians want non-physicians in control of the governing Board?</td>
<td>501 (c) (3)</td>
<td>There are different types of Not-for-Profit corporations: Type A - civic; patriotic, political, social, fraternal, athletic, professional (member organization), etc. Type B - charitable, educational, religious, scientific, etc. Type C - public or quasi-public objective; Type D - other</td>
<td>A Business Corporation offers owners/shareholders limited personal liability for business debts; Limited Liability Company allows for protection of members from personal liability; if Partnership, partners report profit or loss on personal tax return; May provide means to raise capital through sale of stock/shares.</td>
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<td></td>
<td>Another consideration to discuss is which type of organization presents a greater opportunity to generate higher capital.</td>
<td>Consensus: seek the advice of legal counsel to decide on the appropriate model with which to operate.</td>
<td>Business Corporation, General Partnership, Limited Liability Company, Limited Liability Partnership</td>
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<td>Administrative and Clinical:</td>
<td>NYS DOH stipulations in Public Health laws regarding types of corporations, Article 28s, PLLCs</td>
<td>Consensus: seek the advice of legal counsel to decide on the appropriate model with which to operate.</td>
<td>Business Corporations other than PLLC and PLLP, Article 28 facilities (hospitals, clinics, treatment centers), PLLC and PLLP</td>
<td>FP or NFP</td>
<td>See Page 1 for FP and NFP</td>
<td>Corporations other than PLLC and PLLP are not licensed to practice medicine in NYS.</td>
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<td>Administrative and Clinical:</td>
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<td>Services under an Article 28 facility can not be provided outside of its authority off premises.</td>
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<td>Yes</td>
<td></td>
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<td></td>
<td>According to the NYS DOH, medical practices including PLLCs, PLLPs or PCs, may not exist solely to facilitate sharing of resources such as sharing of a Nurse with other medical practices. A medical practice must be primarily engaged in the treatment of patients.</td>
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<td>State legislation would be required to enable a PPSO to engage in the facilitation of sharing of services, for example: Nursing services, among physician practices.</td>
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</tbody>
</table>
PPSO Services to be Provided
Conflict with Corporate Practice of Medicine
Relevant Decisions to be Determined
Type of Business Entity
FP/NFP
Advantages
Disadvantages

Administrative and Clinical:
- PPSO will engage in the management, collection, aggregation, and exchange of data; administrative services; quality assurance and quality review according to evidence-based guidelines; and education; the PPSO will also provide these services in the form of professionals such as Nurses and/or Pharmacists to local physician practices for QA purposes.

In addition to Administrative services as described above, the PPSO will also provide clinical patient care services by Nurses and other ancillary professionals at the practice level.

**Administrative and Clinical**
- Should Article 28 status be considered?
- Would private practice physicians want to integrate practices via Article 28 regulations?

**Consensus:** seek the advice of legal counsel to decide on the appropriate model with which to operate.

*See note below pertaining to collective bargaining.*

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<tr>
<td>Administrative and Clinical</td>
<td>NO</td>
<td>Should Article 28 status be considered?</td>
<td>Article 28 facilities (Rural Health Network; Part 408, 10 NY CRR)</td>
<td>FP or NFP</td>
<td>See page 1 for FP and NFP.</td>
<td>Physician practices sharing these services would be required to direct their patients to the facility to receive the extended clinical services since the Article 28 organizations can not work at the practice sites. For Rural Area Use only; Attaining Article 28 status is difficult.</td>
</tr>
</tbody>
</table>

**Note of Caution pertaining to the providing of Collective Bargaining as indicated in the chart above:**

While it may not be the core mission of a PPSO to facilitate collective contract negotiations on behalf of physicians who are in separate medical practices, if a PPSO decides to study the feasibility of facilitating contract negotiations, it is recommended that the PPSO consult legal counsel familiar with the antitrust laws. In general, if a network of physicians or other health care professionals is interested in a role to facilitate collective negotiations, the network must involve either substantial financial risk-sharing among the physicians and/or substantial clinical integration. Another alternative may be to seek state legislation that may provide antitrust immunity under the State Action doctrine. See Medical Society of the State of New York Clinical Integration Task Force report which can be viewed at: http://www.mssny.org/mssnyip.cfm?c=i&nm=Clinical Integration
## SAMPLING OF QUALITY-DRIVEN PROJECTS ACROSS NEW YORK STATE

<table>
<thead>
<tr>
<th>Item #</th>
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<th>Primary Care Information Project (PCIP)</th>
<th>HealtheLink</th>
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</thead>
</table>
| 1.     | List current data contributors by Type (i.e. payers, hospitals, labs, pharmacies, outpatient practices, etc.) | 1) Payers  
1. NYS - Medicaid  
2. Fidelis  
3. NYS – Empire Plan  
4. iExcellus  
5. Empire Blue  
6. BSNENY - HealthNow  
7. MVP  
8. CDPHP  
9. Medicare (pending)  
  
2) Hospitals  
1. Adirondack Med Ctr  
2. Champlain Valley Physicians Hospital  
3. Glens Falls Hospital  
4. Alice Hyde Med Ctr  
5. Elizabethtown  
6. Community Hospital  
7. Inter-Lakes Health/  
8. Moses-Ludington Hospital  
  
3) Physician & Specialty Practices  
1. 33 Primary Care Practices  
2. 2 Glens Falls Hospital  
3. Specialty Practices  
   • Endocrinology  
   • Nephrology  
| 1. 6 health plans contributing to a multi-payer claims data set to support evaluation;  
2. Hospitals contributing public health reporting data (live) and integrating for transmission of clinical summary (in process)  
3. 5 Laboratories participating with closed-loop lab ordering and results delivery for eCW install base  
4. 4 EHR vendors representing 490 physicians will be undertaking with public health reporting or transmission of clinical summary (in process)  
5. 4 EHR vendors representing 300 physicians will be undertaking quality reporting (in process)  
We receive data from ambulatory physicians in small, medium and large practice environments via their electronic health records | The following data sources currently submit records to the HIE. With the exception of Quest, RxHub, and SureScripts, all data sources are also Participants.  
**Hospital Systems:**  
Kaleida Health Systems; Catholic Health Systems; ECMC; Roswell Park Cancer Institute; Niagara Falls Memorial; WCA of Jamestown; Mount St. Mary’s Hospital; UMMC/Batavia; Upper Allegheny Health System/Olean.  
Data Provided: ADTs, Radiology, Labs; Transcribed Reports from all except: CHS, NFM, UMMC; ER Reports only from NFM; None send Medication History.  
**Labs:** Quest Diagnostics.  
**Radiology:**  
Southtowns Radiology; Spectrum Radiology Assoc; Windsong Radiology Group.  
**Medication History:**  
RxHub; SureScripts.  
**Plans:** The following plans provide claims data to the P2 Collaborative: BCBS of WNY; Independent Health; Univera Healthcare; Fidelis Care |
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<td>2.</td>
<td>What payers (beyond those listed in Item 1) do you plan to receive data from and what is the associated timeline(s)? If you do not have access to payer claims data, what is your timeline for having such data available?</td>
<td>At this time, no additional payers are anticipated to provide data. Treo Solutions is the subcontractor for the Claims Data Warehouse. We anticipate starting to receive data by the 3rd quarter of 2011.</td>
<td>We are not currently planning to add more payers.</td>
<td>We do not have claims data and do not have plans to get claims data. We prefer EHR generated data for its granularity and transparency to patient care.</td>
<td>The health plans mentioned above provide access to claims data to P2 for the Quality Measures Collaboration (QMC) project. HealtheLink does not currently have access to claims data however we have the foundation to enable this as a future project (tbd). We have discussed Data Use Agreements (DUA) with the health plans but as of now we do not have DUA’s place.</td>
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<td>3.</td>
<td>Do you currently provide data (clinical and claims) aggregation services? If not, do you have plans to do so and within what timeframe? How do you envision these services to be structured?</td>
<td>Payor claims data and EHR data are currently planned to be stored in two separate data warehouses. The aggregation of the claims data and the EHR data will be completed within the PPSO’s after the deployment of the data warehouses.</td>
<td>Yes, with an outside vendor ViPS, support data aggregation for claims data. In the future, clinical summary may draw upon an aggregated view of patient but no specific timeline has been established.</td>
<td>We do not have claims data and do not have plans to get claims data. We prefer EHR generated data for its granularity and transparency to patient care.</td>
<td>The health plans provide claims data for the baseline assessments to P2. HealtheLink provides clinical data to P2 and the analysis/evaluation is performed by University of Buffalo. This is to support the Beacon project outcome measures.</td>
</tr>
<tr>
<td>4.</td>
<td>How are you making aggregated data available to physician practice users (i.e. directly into their EHRs, via a portal(s), hard-copy, etc.)?</td>
<td>Via portals (Clinical Quality Portal and Claims Portal)</td>
<td>We will be sharing quality measure performance with physicians as generated from EHR-clinical measures and claims based quality measures. Will start as hard copy and will evolve into portal over next 2 years.</td>
<td>We provide them electronic copies of their quality measure, utilization data, and syndromic surveillance data via email and via hardcopy as needed.</td>
<td>Aggregated data is not available at this time. However, P2 is conducting quality measures analysis with the data from the 3 health plans to the WNY QMC project. Also, HealtheLink enables the distribution of information to County Health Departments and allow for queries such as A1C’s over a specific value.</td>
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<td>5.</td>
<td>What metrics are you routinely reporting to your physician practices that could/is being utilized to monitor the quality (and cost) of care being provided? At what level is the data made available (i.e. individual physicians vs. practice vs. community of care)?</td>
<td>a. Pharmacy: Generic Utilization, Total Spend, Formulary Adherence, Dispense as Written Rates; ER Utilization: Total; Quality – ER Utilization: Preventable; Quality – Inpatient: Bed days in a rate such as per 1000; Preventable / Ambulatory, Sensitive Inpatient: Admits in a rate such as 1000; Quality – Re-Admissions: Days post discharge, Preventable; Utilization: Specialty Utilization, Radiology Utilization, Surgical Utilization; Financial: Total Cost, Total Spend</td>
<td>b. Data made available to Adir Hlth Institute, the PPSOs, and to each practice and provider.</td>
<td>1. Clinical quality measures will be MU measures produced by physician/hospital</td>
<td>Quality measures, utilization measures and syndromic surveillance measures are available at the provider level</td>
</tr>
</tbody>
</table>
3. The following claims based utilization measures are being studied for the PCMH project evaluation. If any of the following measures are deemed to be valid and reliable, they could be shared with physicians.

**Outpatient utilization:**
- # of office visits with the primary care physician
- # of office visits with other providers (e.g. specialists)
- # of laboratory tests
- # of radiology & other diagnostic tests
- # of ancillary services
- # of therapeutic services (e.g. PT/OT/speech)
- Generic prescribing rates

**Emergency Dept & Hospital Utilization:**
- Length of stay
- # of skilled Nursing days
- # of ancillary services
- # of therapeutic services (e.g. PT/OT/speech)

**Referral Care:**
- # of skilled home care visits
- # of custodial home care services

4. HEDIS & utilization measures can be looked at at the physician, group & community level.
<table>
<thead>
<tr>
<th>Item #</th>
<th>Items/Questions</th>
<th>Adirondack PCMH</th>
<th>Taconic Health Information Network (THINC)</th>
<th>Primary Care Information Project (PCIP)</th>
<th>HealtheLink</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.</td>
<td><strong>What strategies have you deployed to combine available data with clinical decision support tools for use by your physician practices? If none are yet available, what is your timeline for making these available and in what form will they be deployed?</strong></td>
<td>The business intelligence tools that will be used in the data warehouses contain decision support tools, thus the information presented from the data warehouses will be augmented with such tools at the time of viewing thru the portals.</td>
<td>Our strategy has been to support transmission of a clinical summary into the EHR that contains structured data. Once the EHR vendors can accept, within the application, the structured data fields (and not just a separate form to be opened), then this external data can be used within the EHR for clinical decision support.</td>
<td>We have implemented point of care decision support with our electronic health record vendors for the past 3 years that operates in real time, in physician offices. This decision support uses data within the electronic health record to display only those supports that are appropriate to that patient. Based on the aggregate data we receive, we can deploy field staff to practices to work on specific issues.</td>
<td>We provide up to 100 hours of training for clinical transformation. A main focus during implementation is the cultivation &amp; development of Clinical Decision Support (CDS). HealtheLink's ability to deliver meds history, discharge summary, and tests performed by other providers is critical in effecting health outcomes. We ensure the practice knows how to input data so the EMR optimizes what internal CDS is available such as how to use the medication/condition/drug interaction modules. Also, we assist in setting up a starter set of quality measures which extract data to drive improved outcomes by raising physician awareness at POC. These alerts remind providers of missing data items and drive evidence based guidelines thru patient level reminders.</td>
</tr>
<tr>
<td>7.</td>
<td><strong>What strategies/approaches are you utilizing to integrate these clinical decision support recommendations directly into the provider’s EHR?</strong></td>
<td>In the future, when the information is available from the data warehouses, that information will be used to improve the care delivered. Multiple methodologies will likely be utilized including leveraging the clinical decision support systems in the EHRs.</td>
<td>See response in 6 above</td>
<td>See response in 6 above</td>
<td>See response in 6 above</td>
</tr>
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</tr>
<tr>
<td>8.</td>
<td><strong>What quality programs (i.e. PCMH, P4P, etc.) are you currently supporting for your physician practice members?</strong></td>
<td>The quality programs that will be supported with the functional warehouse will include both PCMH and P4P.</td>
<td>We have supported a PCMH recognition program for 305 primary care physicians with $1.5 million of incentive payments in year 1. We are in planning stages for a small pilot of embedded care mgmt at up to six sites.</td>
<td>Our own p4p programs (eHearts, eQuits), PCMH (we currently have helped 148 sites, across 112 practices achieve PCMH recognition), Meaningful Use Incentives, ePrescribing incentives, Bridges to Excellence.</td>
<td>The PEMR program embraces quality as inherent to clinical transformation in preparation for an EMR implementation. With every implementation we ensure and coach how to use their EMR to drive a quality program. We work on setting up a basic starter set of quality measures including preventative measures such as colonoscopy, dexam scan, mammogram rate, paps etc. We then introduce more advanced quality measures through PCMH clinical guidelines. We set up measures that support their three conditions’ guidelines and the data points they want to collect to ensure quality evidence based medicine is being delivered in a consistent fashion for those diseases. We then assist them with registries, reporting, and some possible outreach programs. This set up then allows the practice to be prepared for PCMH, P4P, Meaningful Use, and HEDIS discovery.</td>
</tr>
</tbody>
</table>
The project responses reflect that there are many similarities among the four projects including the following:

The commonalities are as follows:

- Team-based care
- Quality programs and measures
- Evidence-based care to treat leading chronic conditions
- Quality services augmented with clinical resources
- Monitoring of at least one chronic condition; utilization of processes such as eRX; ER utilization; referral rates

In addition, the findings show that:

- Each project has supplemented their clinical activities by adding clinical resources to their teams. These resources were found to be in not-for-profit as well as for-profit organizations.
- Each project has leveraged financial resources such as grants from Federal and/or NYS programs, health plans and employers (most likely self-insured).
- Data sources from stakeholders or participants included or planned to include: patient data from hospitals and patient data from physicians’ electronic health records. Three of the four projects will receive data from health plan claims.
- Data is being aggregated at different stages and may not include a combination of all the above mentioned data sources at this time.
  a. Project representatives voiced concerns regarding data reliability because of early returns sample size, and lack of standardization among the vendor EHR products.

Representatives from the above projects also advised the following as important first steps to developing a similar clinical quality services project:

- Arrive at an agreed upon well-defined strategy and pursue that strategy as resources become available so as to avoid stagnancy; it is very important to have a strong physician voice and include them on various committees and involved in the decision-making processes; pursue those opportunities that make sense strategically;
- Encourage provider organizations in your community to initiate a dialogue with the health plans at the outset to discuss increased revenue in return for the transformation to a collaborative care process to improve patient healthcare and reduce overall delivery costs;
- Make certain to state the project’s intention is to provide quality of care at all levels of processes and improved results and higher revenues are expected;
• Locate assets and leadership within the community; galvanize around at least one significant financial resource; even though projects like these strive to pursue similar goals, since each community has different assets to offer, the project should build on what already exists within the community and leverage those assets; initiate outreach to the health plans and employer groups in the area and keep them engaged from the outset and throughout the project.

PROJECT HIGHLIGHTS:

Adirondack PCMH:
• Highlights of this project appear in the deliverable summaries throughout this document.

THINC:
• Recipient HEAL 1 and 5 grant awards;
• 750 EHR go-lives via the HEAL 1 Program;
• 305 small practices & 15 large group practices have achieved PCMH Level 3 Recognition;
• currently 7 hospitals participate and 5 more due by 1st qtr 2012;
• Practices participate in many clinical pilots; i.e. PCMH; some in specific pilots, some in multiple;
• Health information exchange pilot using NHIN Direct for referrals, consents, and CCDs between and among physicians; also a discharge summary transaction from hospitals to physicians;
• Selected to participate in the Geisinger Proven Health Navigator Model for Case Mgmt: Nurse Case Managers are participating in a pilot involving 125 highly acute and high utilization patients with ATF/Diabetes/Depression chronic conditions;
• Clinical data outcomes are due for release during the summer of 2012.

HealtheLink:
• Recipient of HEAL 1, 5, 10 and 17 grant awards, in addition to a Beacon Community Award;
• With a focus on practice transformation including the adoption of technology and reengineering of workflow processes, the goal is to implement 4,611 physicians and staff with electronic health records;
• Successful inclusion of physicians into the strategic planning of all phases;
• Major focus on diabetes and monitoring of extended services (eye and foot care) to these patients;
• Currently 3 major health plans and 4 major hospitals participate

PCIP:
• Recipient of HEAL 1, 5, 10 and 17 grant awards; also received awards from the NYC Mayor’s office;
• There are 150 sites that have reached NCQA recognition: 100 @ Level 1; 2 @ Level 2; and 48 @ Level 3; this includes 113 practices and 461 providers and another 4 – 7 applications in progress; there are an additional 300 – 350 practices who have implemented EHRs but are not patient centered medical home practices;
• Physician practices will be exchanging patient data (CCD), sending referrals, consults and messages to each other by 12/2011;
• Studies involving quality improvement impact on physicians and improved patient outcomes are planned for the near future;
• Conditions being monitored include: diabetes, hypertension, hypolipidemia, depression, CAD, obesity and smoking;
• Quality programs include: PCMH and P4P; new program for BTE involving 30 high performing providers sponsored by the New York State Health Foundation;
• Other samples of monitored processes: number of ‘locked’ visits, % of patients with allergy data, % of patients with cholesterol screening, mammograms, HIV screening; physician review of labs and using eRX;
• Implemented Dashboard which provides physician scoring vs. measures reports.
PURPOSE

The purpose of this deliverable was to identify existing regional physician and healthcare governance models across Warren, Hamilton, Essex, Franklin, and Clinton counties, and to complete physician practice-level readiness assessments of organizational, technological, and financial capabilities.

OVERVIEW

This deliverable includes:

a. Identification of existing organizations that could be used for local PPSOs
b. Assessment of each practice’s ability to meet the Adirondack Medical Home Demonstration participation requirements
c. Evaluation of the technological capabilities of each practice

This project places special emphasis on quality improvement. According to the Institute of Medicine, attributes of high quality care include practitioners and facilities focused on safety, timeliness, effectiveness, efficiency, equity, and patient-centeredness. Most quality improvement is typically measured along four domains: access, experience, process, and outcomes.

Nationally, many attempts have been made over the years to ensure actual medical practice patterns more closely mirror evidence-based practices. Some of the most effective strategies to modify physician behavior and improve quality of care include education, reminders, patient-mediated methods, and the use of opinion leaders. Each of these methods, as well as others, will be used by the Physician Practice Support Organization (PPSO) to support the participating practices as the project moves forward.

MEDICAL HOME DEMONSTRATION REQUIREMENTS

There are currently 33 primary care provider groups participating in the Adirondack Medical Home Demonstration. Each has committed to successful completion of:

a. Completion of NCQA PPC-PCMH self-assessment
b. Development of work plans and timeline by Feb 1, 2010
c. e-prescribing 80% of eligible prescriptions using NCQA standards starting in July 2010

d. Submission of NCQA PPC-PCMH Level II by Dec 31, 2010

e. Participation in the PPSO for quality improvement and disease management/care coordination; the
PPSO must include access to a PharmD, Licensed Clinical Social Worker (LCSW), and a nurse for disease
management

Meeting NCQA Medical Home recognition at Level II or III requires competency in nine standards and allows participating
practices to meet the requirements outlined in the Adirondack Medical Home Demonstration. These standards are illustrated
in the table below:

<table>
<thead>
<tr>
<th>Standard 1: Access and Communication</th>
<th>Pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Has written standards for patient access and patient communication</td>
<td>4</td>
</tr>
<tr>
<td>B. Uses data to show it meets its standards for a patient access and communication</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard 2: Patient Tracking and Registry Functions</th>
<th>Pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Uses data system for basic patient information (mostly non-clinical data)</td>
<td>2</td>
</tr>
<tr>
<td>B. Has clinical data system with clinical data in searchable data fields</td>
<td>3</td>
</tr>
<tr>
<td>C. Uses the clinical data system</td>
<td>3</td>
</tr>
<tr>
<td>D. Uses paper or electronic-based charting tools to organize clinical information</td>
<td>6</td>
</tr>
<tr>
<td>E. Uses data to identify important diagnoses and conditions in practice</td>
<td>4</td>
</tr>
<tr>
<td>F. Generates lists of patients and reminds patients and clinicians of services needed (population management)</td>
<td>21</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard 3: Care Management</th>
<th>Pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Adopts and implements evidence based guidelines for three conditions</td>
<td>3</td>
</tr>
<tr>
<td>B. Generates reminders about preventive services for clinicians</td>
<td>4</td>
</tr>
<tr>
<td>C. Uses non-physician staff to manage patient care</td>
<td>3</td>
</tr>
<tr>
<td>D. Conducts care management including care plans, assessing progress, addressing barriers</td>
<td>5</td>
</tr>
<tr>
<td>E. Coordinates care/follow-up for patients who receive care in inpatient and outpatient facilities</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Assesses language preference and other communication barriers</td>
<td>2</td>
</tr>
<tr>
<td>B. Actively supports patient self-management</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard 5: Electronic Prescribing</th>
<th>Pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Uses electronic system to write prescriptions</td>
<td>3</td>
</tr>
<tr>
<td>B. Has electronic prescription writer with safety checks</td>
<td>3</td>
</tr>
<tr>
<td>C. Has electronic prescription writer with cost checks</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard 6: Test Tracking</th>
<th>Pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Tracks tests and identifies abnormal results systematically</td>
<td>7</td>
</tr>
<tr>
<td>B. Uses electronic systems to order and retrieve tests and flag duplicate tests</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard 7: Referral Tracking</th>
<th>Pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Tracks referrals using paper-based or electronic system</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard 8: Performance Reporting and Improvement</th>
<th>Pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Measures clinical and or service performance by physician or across the practice</td>
<td>3</td>
</tr>
<tr>
<td>B. Survey of patients' care experience</td>
<td>3</td>
</tr>
<tr>
<td>C. Reports performance across the practice or by physician</td>
<td>3</td>
</tr>
<tr>
<td>D. Sets goals and takes action to improve performance</td>
<td>3</td>
</tr>
<tr>
<td>E. Produces reports using standardized measures</td>
<td>2</td>
</tr>
<tr>
<td>F. Transmits reports with standardized measures electronically to external entities</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard 9: Advanced Electronic Communications</th>
<th>Pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Availability of Interactive Website</td>
<td>1</td>
</tr>
<tr>
<td>B. Electronic Patient Identification</td>
<td>2</td>
</tr>
<tr>
<td>C. Electronic Care Management Support</td>
<td>1</td>
</tr>
</tbody>
</table>


There are ten “Must Pass” elements regardless of the level of NCQA Medical Home recognition sought. For any practice to obtain Level II or III recognition, they must score at least 50% on all ten “Must Pass” elements, which would provide 21.5 points. For practices striving to achieve Level II recognition, they would need to accumulate a minimum of 28.5 additional points from the other standards. For practices wishing to attain Level III, they would need to achieve a minimum of 53.5 additional points.

SUMMARY OF KEY FINDINGS

- Organizations exist that are viable candidates to become sub-regional PPSOs
- Based on self-assessment data, 22 of the 33 of the practices meet the e-Prescribing Adirondack Medical Home Demonstration criteria at the baseline assessment
- None of the organizations meet all the NCQA “Must Pass” criteria
- None of the organizations meet the NCQA criteria for Level II or III Medical Home
- 73% of participating practices have targeted Level III recognition
- 27% of participating practices have identified Level II recognition as their goal
- 9% of participating practices meet the “Must Pass” criteria for access standards and averaged only 19% of the potential points
- Only one organization reported compliance with all the quality improvement criteria, including the “Must Pass” elements
- Most participating practices scored poorly on the coordination of care standards with the average being 34% of the potential points
- HIT assessment
  a. 82% of the reporting practices have an electronic medical record
  b. 97% of the reporting practices have a practice management system
  c. 100% of practices have high speed internet access

METHODOLOGY

In order to ensure all practices fully understood all elements against which they were being measured, EastPoint Health EPH held mandatory training meetings for all participants the first week of December 2009. Practices were given an initial...
deadline for completion of their self assessments of January 2010. In addition, EPH developed an information technology assessment document that each practice was expected to complete to provide a baseline of their current information technology capacity. This is especially important in ensuring each practice can meet the requirements necessary for NCQA medical home recognition. Practices initially rated themselves very high against the medical home standards. Further investigation by EPH highlighted a need to work with the practices to refine their self assessments to provide an accurate baseline against all elements. This remediation occurred during the months of February and March 2010.

**ASSESSMENTS**

**Development of Physician Practice Support Organizations (PPSO)**

No organization during the baseline assessment was currently serving as a PPSO. Therefore, the PPSOs needed to be developed. The Adirondack Medical Home Demonstration covers a large expanse of territory, a region nearly the size of the state of Connecticut. The region’s care patterns naturally break into three distinct communities and so three PPSOs are envisioned as “sub-regional solutions” based on distinct geographies. The northern region will be called Northern Adirondack, the central region will be the Tri-Lakes, and the southern region will be Lake George.

The Northern Adirondack PPSO will service the northern tier communities of Plattsburgh, Malone, and Elizabethtown. Our assessment identified Community Providers, Inc. as an existing entity with viable organizations for the Northern Adirondack PPSO. The Lake Placid and Saranac Lake communities are a second natural geographic grouping for a “sub-regional solution.” This region is in the heart of the Adirondack Park and has chosen the name Tri-Lakes. Trudeau Health Systems (THS) is an existing Physician Hospital Organization with relationships throughout the Lake Placid and Saranac Lake communities.

In the southern geography of the Adirondack Medical Home Demonstration, Hudson Headwaters Health Network provides the majority of primary care services for this region. This region will be serviced by the Lake George PPSO with Hudson Headwaters Health Network as an existing organization and a viable candidate for the PPSO.

**Current Organizational Entities**

**Community Providers, Inc**

Community Providers, Inc (CPI) is a not-for-profit corporation with six subordinate organizations, two of which are for profit. According to CPI’s Articles of Incorporation, the purposes of the corporate and subsidiary organizations include promoting the
health of the community and conducting public programs promoting the health of the community. The most likely candidate for the PPSO in the Northern Adirondack region is Champlain Valley Health Network (CVHN), a Medical Services Organization, with the support of Champlain Valley Physicians Hospital (CVPH), an Article 28 Hospital.

**Trudeau Health Systems**

Trudeau Health Systems (THS) is a Physician Hospital Organization consisting of Adirondack Medical Center and area private practices. Trudeau Health Systems provides contracting support for the region. In addition, THS spent three years (2006-2009) creating a health exchange which provides consolidated and aggregated electronic health records for all members. This community exchange has fostered the collaboration to make the Adirondack Medical Home Demonstration successful. The most likely candidate for the PPSO in the Tri-Lakes region is Adirondack Medical Center, an Article 28 hospital.

**Hudson Headwaters Health Network**

Hudson Headwaters Health Network is an Article 28 Diagnostic and Treatment Center with multiple sites that provide primary care access and care coordination services as a Federally Qualified Health Center. Hudson Headwaters Health Network is the most likely candidate for the PPSO in the Lake George region, with a wide expanse of existing clinics and established relationships with the other practices that utilize athenahealth HIT services in Newcomb and Long Lake.

**Analysis of Participating Practices**

EPH has analyzed each practice according to the requirements of the Demonstration program and the NCQA Medical Home Recognition standards.

**E-Prescribing**

One of the requirements for participation in the Adirondack Medical Home Demonstration project is compliance with the e-prescribing standard and elements. By July 2010, 80% of eligible new prescriptions for patients seen in July must be written with an electronic prescription writer that is linked to patient-specific demographic and clinical data. This is captured in NCQA’s 5th Standard: e-Prescribing.

22 practices out of 33 participating meet the e-prescribing criteria by scoring at least 75% on Element A: Uses electronic system to write prescriptions of Standard 5. The possible score for this element is 3 points, while the average score for all participating practices is 1.98 or 66%.

48% of practices scored 50% or higher in all three e-prescribing requirements.
Meeting NCQA Level II or III Recognition

Another of the requirements of the Adirondack Medical Home Project was that participating practices must apply and obtain NCQA Medical Home Level II or III recognition within the first twelve months of the demonstration project. Baseline assessments indicated that no organization met the Level II and III requirements, which necessitate obtaining 50% in all NCQA-determined “Must Pass” elements.

Quality Improvement Standards and Elements

As stated previously, only one participating practice reported compliance with all the Quality Improvement standards and elements. Five of the nine Quality Improvement elements are considered “Must Pass.” The average self assessment score for all Quality Improvement elements was 28% of possible points.

Access Standards and Elements

- Both elements within the Access to Care Standard are “Must Pass” elements.
- Only 3 of 33 participating practices meet the score required to pass both elements.
- The average score of less than 1 for both elements results in a low 19% of potential points.

Coordination of Care Standards and Elements

- Two of the six elements within the Coordination of Care Standard are “Must Pass”.
- Only 3 of 33 participating practices reported some level of compliance with all the elements associated with Coordination of Care.
- The score for all practices against all Coordination of Care elements is 168 out of a possible 891. This translates to only 18% of potential points earned across all participating practices.

HIT Requirements

- None of the HIT requirements are NCQA “Must Pass” elements.
- None of the 33 participating practices obtained points in all the elements required.
- The average score of the HIT elements is 7.36, which represents 33% of potential points obtained.
Patient Self Management Requirements and Elements

One of the two elements of Patient Self-Management is “Must Pass”.

39% of the participating practices passed the “Must Pass” element related to patient self-management but only four of the participating practices passed both elements.

The average for element A is 17% of the potential points, while the average for the “Must Pass” element B is 31% of the possible points.

Work Plans to Address Gaps of Performance

From the data provided, no participating practice qualifies for Level II or III recognition currently. Only 11 out of 33 practices scored high enough to meet Level I recognition requirements, which requires 25 to 49 points across all standards plus a score of 50% for one-half all the Must Pass elements. However, 24 of the participating practices have set Level III recognition as their goal while nine aspire to Level II recognition.

Based on the self assessment conducted and the participating practice’s recognition level goal, each practice was given a work plan to meet the Demonstration requirements. Each work plan had two elements:

1. A Dashboard that shows Element deadlines and Transformation status
2. A Detailed Status Report (DSR) outlining targeted actions for each Element to obtain the points necessary for recognition

Technology Capabilities

In addition to assessing participating practices in terms of their ability to meet NCQA Medical Home recognition, EPH also assessed the current technology capabilities of existing practices. Highlights of our findings are as follows:

- 97% of reporting practices currently utilize a practice management (PM) system
- 82% of the reporting practices utilize an electronic medical record (EMR) system
- 100% of reporting practices have high speed internet access
  - 55% use DSL
  - 24% use cable modems
  - 21% have a T1 line
Of the practices with an EMR, there are varying levels of point-to-point HL7 interfaces.

- 74% have integrated their PM and EMR
- 44% have an interface for some lab results
- 19% have an interface for some imaging

LESSONS LEARNED

Some of the challenges included the amount of practice personnel time required to meet mandatory Adirondack Medical Home Pilot activities such as assembling patient lists for attribution and payment, as well as the effort needed to build consensus between payors and providers regarding the Pilot Terms of Participation. These challenges required practice time, and thus limited the availability of practice personnel to work on the assessments. Once practices were able to focus on the assessment, many of them struggled to understand the NCQA Level II Medical Home requirements, and as a result, initially overestimated their current status versus their ultimate goal. This overestimation required remediation to result in the final outcome.
PURPOSE

The purpose of this deliverable is to define population health care management attributes and quality measurement/performance reporting requirements for stakeholders, while simultaneously creating requirements for information exchange for all initiative stakeholders.

OVERVIEW

This deliverable includes:

The plan for PPSO care management, quality measurement and performance reporting technology component consistent with technology and policy design established by NYeC and the NYS DOH.

1. Payor / State to Provider information requirements
2. Provider to Payor/ State information performance reporting requirements

This deliverable focuses on the project’s information requirements with special emphasis on the performance measurement requirements. Performance measures are the heart of any quality improvement program and as such define the information requirements for the entire project. Prior to outlining the performance measures, the rationale for choosing the disease states and the associated measures is presented.

APPROACH TO CHOOSING DISEASES

Accepted public health and epidemiologic principles were used to select the adult and pediatric diseases targeted in this project. The criteria included:

• High disease prevalence
• Evidence of variability of care in the targeted population
• Evidence of sub-optimal care delivery in the ambulatory care setting
• Evidence of preventable ER visits
• Evidence of preventable hospital admissions
• Availability of respected, practical associated process measures
• Availability of respected, practical associated outcome measures
• Availability of utilization data
• Availability of cost data
• Availability of actionable, effective, respected evidence-based treatment guidelines
• Evidence of government public health initiatives to address disease (e.g., obesity)
• Ease of collection of measures in EMR
• Disease inclusion in NCQA medical home definition

The diseases chosen are:

• Adult
  a. Diabetes Mellitus
  b. Hypertension
  c. Coronary Artery Disease

• Pediatrics
  a. Prevention
  b. Obesity
  c. Asthma

**APPROACH TO CHOOSING MEASURES**

All measures were evaluated on the following criteria:

• **Importance**
  a. Relevance to stakeholders
  b. Health importance
  c. Applicable to measuring care distribution among various population strata
  d. Potential for improvement
  e. Susceptibility to influence by health care system

• **Scientific soundness**
  a. Clinical
  b. Explicitness of evidence
c. Strength of evidence
d. Measurement
e. Reliability
f. Validity
g. Allowance for stratification/case–mix adjustment
h. Comprehensible

• **Feasibility**
  a. Explicit specification of numerator and denominator
  b. Explicit description of inclusion & exclusion criteria
  c. Data availability
d. Accessibility, timeliness, costs

• **Face validity** - An adequate quality indicator must have sound clinical or empirical rationale for its use. It should measure an important aspect of quality that is subject to provider or health care system control.

• **Precision** - An adequate quality indicator should have relatively large variation among providers or areas that is not due to random variation or patient characteristics. This criterion measures the impact of chance on apparent provider or community health system performance.

• **Minimum bias** - The indicator should not be affected by systematic differences in patient case-mix, including disease severity and comorbidity. In cases where such systematic differences exist, an adequate risk adjustment system should be possible using available data.

• **Construct validity** - The indicator should be related to other indicators or measures intended to measure the same or related aspects of quality. For example, improved performance on measures of inpatient care (such as adherence to specific evidence-based treatment guidelines) ought to be associated with reduced patient complication rates.

• **Fosters real quality improvement** - The indicator should be robust to possible provider manipulation of the system. In other words, the indicator should be insulated from perverse incentives for providers to improve their reported performance by avoiding difficult or complex cases, or by other responses that do not improve quality of care.

• **Application** - The indicator should have been used in the past or have high potential for working well with other indicators. Sometimes looking at groups of indicators together is likely to provide a more complete picture of quality.

REASON FOR DISCARDED MEASURES

A critical approach, based on weighing the value of the measure versus the cost of collecting it, was utilized to discard measures. Measures that were determined to be costly to collect or unreliable across practices were quickly discarded. In addition, measures were evaluated as to their impact on data collection within practices. In summary, to achieve higher probabilities of a successful project, measures that did not meet high levels of ease of collection, use, and reliability were discarded.

REASON FOR STAGGERING MEASUREMENT DEPLOYMENT

Measure selection and implementation is driven by a focus on enhancing the probability of a successful project. Deploying all chosen measures at the start of the project would significantly delay the actual start of the project by greatly adding to its complexity at an early stage. Rather than overburden practices with an overabundance of new processes and complex data reporting responsibilities, measures that provide great value in measuring care for the targeted diseases but were relatively easy to deploy were chosen to be part of Phase 1 data collection.

During this Phase 1, practices will learn the processes necessary to efficiently collect and send data to the data warehouse. At the same time, project managers will learn the best practices for the collection and reporting of data. After approximately a year of collecting data, the Phase 2 measures will be re-evaluated. After re-evaluation, only those measures that will efficiently fit into the data collection processes will be deployed. It is expected that all Phase 2 measures will be deployed, but we reserve the option to modify based upon the realities of the project.

APPROACH TO REPORT DEVELOPMENT TO AFFECT CHANGE

Only through change management can we expect a positive improvement in clinical and financial outcomes from this project. To impact change in care delivery requires the following:

• Actionable, scientifically-based, targeted measures
• Accurate reporting of measures
• Regular reporting of measures
• Ease of access to measurement reports
• Easily understood measures reports
• Actionable measures reports
• Measures reports linked to best-practice guidelines
MEASUREMENT DEVELOPMENT AND EXPECTED IMPACT

Measures were chosen based upon the criteria in the section Approach to Choosing Measures. The tables describing each measure chosen and the rationale for choosing that measure appear in their entirety in the full version of the Deliverable 3 document.
PURPOSE

The purpose of this Deliverable was to ensure the currency of the technology and the policy standards, to plan the technology component to include the required hardware and software solutions, and to coordinate with stakeholders for systems interface.

A) Adirondack Medical Home Pilot Organizational Structure

The following diagram represents the overall Governing Council of the Adirondack Patient Centered Medical Home (PCMH) Pilot. Guidance will be provided by the NYS Department of Health and also consist of various stakeholders representing the physicians and the health plans or payors whose members reside in the affected area known as the Adirondack Park region of New York State. The Adirondack Health Institute (AHI) will represent the three Physician Practice Service Organizations (PPSO) and are commonly referred to as PODs. In addition to the overall Governance Council and AHI, which will provide non-clinical services such as legal and accounting services, each of the three PPSOs or PODs have their own Governance and Steering Committees.
AHI Activities

- Standard setting / Coordinating Role
- Service Contracting
- Development Activities
- New Initiatives

B) Physician Practice Support Organization (PPSO or Pod) Development

1. The PPSOs or PODs will be developed under the guidance of EastPoint Health (EPH) Consultants with help from a grant from the Medical Society of the State of New York, (MSSNY) and the participating physicians in the three POD areas, EPH will:
   - Establish three POD areas: Tri-Lakes, Plattsburgh/Malone and Lake George/Glens Falls
   - Perform a baseline assessment of practices in each POD area vs PCMH Requirements
     a. Develop a business and clinical plan for Medical Home recognition and to improve access to quality care and disease management.
     b. Provide implementation Support for reaching Medical Home recognition

EHR Information Exchange / Quality Reporting (Tech Component)

EPH will facilitate the process to incorporate a data exchange mechanism through the bidirectional connection to the region’s Regional Health Information Organization (RHIO) which is the Health Information Xchange of New York (HIXNY). This will allow patient data and quality metrics data to flow from practice EHRs through HIXNY to the Data Warehouse where the data will be aggregated and produce reports which will be available to the physicians through a portal connection.

Statewide Working Group will be formed by MSSNY and will provide:

- Guidance and information to those groups of solo/small practice physician groups who are considering development of a PPSO-like organization;

Clinical Transaction Content (Hospitals to send HL7 format; Practices to send C32 format)

The following Table represents Clinical Transaction Content and illustrates which entities will be responsible for sending/receiving data. This data, along with a separate data warehouse which will receive claims data from the participating payors, will reside in the data warehouse. This is explained in more detail in Section H to follow.
<table>
<thead>
<tr>
<th>ADT, Meds, Lab/RAD/Dept Reports (HL7 Content)</th>
<th>Hospital—to—HIXNY</th>
<th>Practice—to—HIXNY</th>
<th>HIXNY—to—Practice</th>
<th>HIXNY—to—QDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ADT</td>
<td>• NA</td>
<td>• C32 content will be available to Practice EHRs for consumption</td>
<td>• NA</td>
<td></td>
</tr>
<tr>
<td>• Lab/path/micro results</td>
<td></td>
<td>• EHR vendor consumption capabilities are vendor-specific</td>
<td></td>
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<tr>
<td>• Imaging reports</td>
<td></td>
<td>• Lab/path/micro results</td>
<td></td>
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<tr>
<td>• Current and prescribed medications</td>
<td></td>
<td>• Imaging reports</td>
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<tr>
<td>• Departmental reports (availability may vary by hospital)</td>
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<td></td>
</tr>
<tr>
<td>• Discharge summaries</td>
<td></td>
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</tr>
<tr>
<td>Clinical Summary Info (C32 Content)</td>
<td>• NA</td>
<td>• C32 content / HIXNY Patient Record</td>
<td>• C32 content / HIXNY Patient Record</td>
<td>• C32 content / HIXNY Patient Record</td>
</tr>
<tr>
<td>• Patient demographics</td>
<td></td>
<td>Available through HIXNY portal</td>
<td>Available through HIXNY portal</td>
<td>Available through HIXNY portal</td>
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<tr>
<td>• Language spoken</td>
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<tr>
<td>• Healthcare provider info</td>
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<tr>
<td>• Health insurance info</td>
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<tr>
<td>• Allergy/drug sensitivity</td>
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<td>• Problem/condition</td>
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<tr>
<td>• Medications</td>
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<td>• Pregnancy</td>
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<tr>
<td>• Information source</td>
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<td>• Advance directive</td>
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<td>• Immunizations</td>
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<tr>
<td>• Vital signs</td>
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<td>• Results</td>
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<td>• Encounter type</td>
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<td>• Procedures</td>
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<td>• Social history</td>
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<td>• Comment</td>
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<tr>
<td>• Plan of care</td>
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<td>• Family support</td>
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<td>• Advance directive</td>
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<td>• Social history</td>
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</tbody>
</table>
D) Infrastructure View

The following diagram illustrates the basic conceptual construct of the environment and connectivity/data flow architecture. Arrows represent movement of data, some bi-direction and some uni-directional to designated servers within the HIXNY network. It also depicts the data moving through HIXNY to the data warehouses. Data from the warehouses will be made available to the physicians through a Clinical Information Services Portal.

Funding for a significant amount of the expenses for these servers and bi-directional interfaces to physician practices was made possible by the MSSNY PPSO grant from the New York State Department of Health.
E) Community Health Information Technology Association (CHITA) Ambulatory EHR Implementation Support

The following CHITA Services are being managed and delivered by Massachusetts e-Health Collaborative (MAeHC) in collaboration with East Point Health (EPH):

- Assess practice readiness for EHR adoption and develop corrective actions where necessary for practice workflows.
- Work with practices to develop plans for implementation/remediation/re-implementation.
- Ensure practices are enabled for e-prescribing in order to support the PCMH model.
- Support providers in using HIE to inform clinical decisions and communicate with patients and use EHRs to support PCMH.
- Analyze and evaluate practice use of EHRs in providing care to the diabetic population and help providers develop corrective action plans where necessary.
- Evaluate the achievement of quality/performance improvement outcomes and document lessons learned from the PCMH initiative.

F) HIE: Hospital Interfaces to HIXNY

All Hospital messaging to HIXNY will be via HL7 protocols. HIXNY will transform the data into CHIxP format for all subsequent consumers. The six required hospital feeds are ADT, Laboratory Results, Radiology Results, Medication Orders, and Departmental Reports, inclusive of Discharge Summaries.

The six hospital participants are:

- Adirondack Medical Center (Tri-Lakes)
- Glens Falls Hospital (Lake George/Glens Falls)
- Inter-Lakes Health (Lake George/Glens Falls)
- Champlain Valley Physicians’ Hospital (Plattsburgh/Malone)
- Alice Hyde Medical Center (Plattsburgh/Malone)
- Elizabethtown Community Hospital (Plattsburgh/Malone)
G) HIE: Physician Practice EHR’s Interface to HIXNY (see infrastructure diagram above)

Provider Participation: There will be 6 Hospitals and 35 Practices intending to participate. The breakdown by POD is as follows:

- **POD 1:** Tri-Lakes: 3 practices; 1 hospital
- **POD 2:** Lake George/Glens Falls: 5 Practices; 2 hospitals;
  In addition, the Hudson Headwaters Community Health Network made up of 11 primary care offices will also participate within Lake George/Glens Falls POD
- **POD 3:** Plattsburgh/Malone: 27 practices; 3 hospitals

There will be various Models utilized based on the vendor EHR selected by the physician practice. These Models are ASP, Hub & Spoke, and Direct Connect w/o Hub. Details about each appear below:

**ASP : Application Service Provider** (AthenaClinicals)

- System and data are remote from practices
- Practice accesses system via secure web connection
- RHIO connectivity implemented from remote site

**Hub & Spoke:** (eCW, STI, Sage, Medent)

- System and data reside at practice
- Each practice connected to central facility (hub)
- Connection to RHIO is from hub
  - a. One RHIO connection can support many practices
  - b. Practices send data to hub for reformatting and transmission to RHIO

**Direct Connect: no Hub:** (GE, Allscripts, EncounterPro)

- System and data reside at practice
- Each practice connects directly to the RHIO
H) Data Warehouses: Clinical Information Services (CIS) – Quality Measurement and Adoption

Clinical Information Services will be comprised of 2 distinct data warehouses that will both provide clinical decision support for population health management as well as the tools necessary for practice level continuous quality improvement.

1. The Payor Data Warehouse will contain a holistic view of the patient’s experience from all the providers who have filed claims with the Adirondack Medical Home health plans for the patient.

2. The EHR Data Warehouse will include data from the primary care providers - EHRs augmented by the HIXNY patient record. These data warehouses leverage similar web based reporting tools but utilize different, yet complementary information.

The Payor Data Warehouse vendor is Treo Health Solutions. The EHR data warehouse vendor is Massachusetts eHealth Collaborative, whom will be utilizing their Quality Data Center product.

Continuous quality improvement training will be accomplished by East Point Health. The Clinical Information Services creates a more comprehensive view of the patients’ experience that neither warehouse would be able to individually provide. Continuous quality improvement training will augment the technology implementation so the practices and pods will be able to optimize their use of the Clinical Informatics Services. The physician practice support organizations (pods) will provide the resources to augment the practice’s population health management and continuous quality improvement activities.

The data set within the Payor Data Warehouse contains the broadest view of the patient’s care. The analytic engine and reporting portal will allow for quality reporting, condition tracking, and generation of patient-specific care management that highlights evidence based gaps in care.

The Payor Data Warehouse will accept enrollment, claims, and pharmacy data via secure electronic portal. Numerous data validation and quality checks will then be completed. Once the data feeds are complete, the payor data will be structured and risk adjusted to identify clinical variation and track performance. Key features include identification of gaps in care inclusive of all claims.

The breadth of information from all the providers submitting claims will not be available to the EHR-based Quality Data Center. In addition, the Payor Data Warehouse augments identification of patients with newly acquired chronic diseases as well as those patients with recent clinical deterioration or progression of disease. The Payor Data Warehouse also allows for appropriate assignment into case management by the pods as well as identification of potentially preventable admissions, readmissions and ER visits.

The EHR Data Warehouse is an analytic engine and reporting portal leveraging the primary care practices’ EHR data from HIXNY. The EHR Data Warehouse aggregates demographic data (surrogate unique patient ID, DOB and gender) and
pertinent structured clinical data elements (Problems/Diagnoses, Procedures, Medications, Allergies, Immunizations, Lab & Radiology Results, vitals and social history) from EHR source systems using HIXNY as the intermediary. Data that is shared with HIXNY will be available downstream to the EHR Data Warehouse (Quality Data Center). The data set contains clinically rich information not available in the Payor Data Warehouse. The reporting portal includes tools for quality reporting and condition reporting. Specific tools identify gaps in care, assess provider performance across peers, and monitor progress overtime.

The EHR Data Warehouse (Quality Data Center) provides complementary information to the Payor Data Warehouse. Combined, these data warehouses and their reporting tools will facilitate the practices’ and the pods’ ability to improve chronic disease care management, population health improvement and continuous quality improvement. EastPoint Health will provide continuous quality improvement training and education to the practices and the pods. Training will include the “Plan Do Study Act” (PDSA) methodology and will also include education about goal setting, data collection, report writing and process improvement.

**SUMMARY**

1. **Payor Data Warehouse:**

   **A. Purposes:**
   - Facilitate quality of care/disease management activities
   - Evaluation of Performance
   - Treo Solutions is the proposed vendor

   **B. Quality of Care/Disease Management Activities:**
   - Population level availability of information
     a. “All care available” – Hospital/Specialty/Ambulator/Pharmacy
   - Identification of evidence based gaps in care
   - Identification of patients for disease management
     a. Preventable Inpatient Admission/Re-admissions
     b. Risk adjusted patients with chronic diseases/high utilization
   - Payor Data Warehouse first available actionable information
   - Will require ongoing data feeds
C. Evaluation of Pilot Performance:
- Utilization reporting
- Transparency of Performance

EHR DATA WAREHOUSE – QUALITY DATA CENTER

A. Purposes
- Facilitate evidence based quality of care improvement activities
- Evaluation of performance
- Massachusetts eHealth Collaborative is the proposed vendor

B. Quality of Care/Disease Management Activities
- Provider level availability of information
  a. Clinically rich ‘EMR level data’ available
- Identification of evidence based gaps in care
- ‘Clinical’ identification of patients for more intensive care

C. Evaluation of Pilot Performance
- Evidence based quality of care reporting
- Transparency of performance

LESSONS LEARNED (INCLUDING ISSUES, IMPEDIMENTS/BARRIERS, CHALLENGES, ETC.)

It was quickly discovered that both EHR and Hospital vendors were not equipped to appropriately interface; ready solutions were not available in the marketplace, therefore requiring a custom-built (and thus costly and time consuming) approach to the exchange of data among stakeholders. Additionally, the sheer complexity of connecting five hospitals with nine EHR vendors proved to be a daunting task to overcome. Great strides have been made in this endeavor.

SIGNIFICANT BARRIERS AND CHALLENGES FACED DURING THIS PROJECT INCLUDE:
- Lack of common collection/reporting structures among all organizations
• Lack of standard technology protocols to allow interchange of identified data elements
• Lack of common technology framework among all organizations
• Obtaining agreement on methodology used to protect patient specific data and obtain consent
• Reaching consensus on ownership of clinical data versus cost data and establishing flow of access to both types of information and at what level of detail
• Significant time spent doing due diligence to identify vendors with industry longevity, experience, and breadth/depth of knowledge to “build” custom solutions

SOLUTION SETS HAVE BEEN IDENTIFIED AND IMPLEMENTED FOR EACH CHALLENGE AND INCLUDE:

• Monthly meetings with all stakeholders to identify common reporting measures for each hospital and participating practice regardless of which electronic system used
  — All Hospitals will report ADT(admissions, discharges, & transfers); lab/path/micro results; imagining reports; current/prescribed medications; and discharge summaries
  — All Practices will report patient demographics; primary language; provider; health insurance; allergy/drug sensitivities; problems/conditions; medications; pregnancy status; information source; advance directive status; immunizations; vital signs; results; encounter type; procedures performed; social history; comments; plan of care; and family support status
• Regardless of electronic system used, all hospital reported elements will be in HL7 format and practice elements will be C32 content
• Worked with all stakeholders to determine patient consent process and standardized use of HIXNY consent form
• Monthly meetings with payors, AHI, and vendor to establish flow of payor level data to/from Pods and practices
PURPOSE

The purpose of this milestone was to begin to frame out the actual PPSO organizations for each of the three geographically dispersed care coordination zones. The first task was to develop appropriate governance structures (organizational, managerial, and financial), and then to determine what administrative and clinical solutions these new entities could and would provide (NCQA Recognition Support, access to care, care coordination, data collection and analysis, QA/QI, performance reporting, and practice support).

OVERVIEW

Previous deliverables have provided detailed recommendations for establishing governance structures, baseline information of physician practice readiness, the technology structures needed to exchange information, and the type of quality information that is expected to be collected, monitored, and shared between practices and payors.

The goal of this deliverable is to describe the structures and services developed by the PPSOs for use by the participating practices. The descriptions include details outlining the variations and any commonalities for:

1. Organizational Structures
2. Management/Operations
3. Financial Specifications

In some instances, services are the same for all participating practices. Variations in services that occur between PODs are so noted in each section. Services considered include:

1. Access to Care
2. Care Coordination
3. Quality Reporting Programs
4. Performance Reporting

REGIONAL OVERVIEW

The practices participating in this pilot have been divided into three geographic Care Coordination Zones (CCZs) as illustrated in the graphic on the next page.

Green represents the practices in the Northern Adirondack PPSO (“Physician Practice Support Organization”) – commonly known as “PODs”), centered in Plattsburgh. Blue represents the practices
Adirondack Medical Center (AMC) was incorporated on January 1, 1991, when the General Hospital of Saranac Lake and the Placid Memorial Hospital (Lake Placid) consolidated. AMC is a non-profit, multi-discipline, multi-site, acute-care hospital licensed by the New York State Department of Health, and managed by Brim Healthcare, Inc. AMC is comprised of two acute care inpatient sites licensed to operate 97 beds; two long-term care sites licensed to operate 216 beds; three primary health clinics; a fixed dental clinic and a mobile dental clinic. Fifty physicians, board certified in 21 specialties, work with the hospital to provide a wide range of medical and surgical services.

AMC is located in the heart of the Adirondack Park in rural, upstate New York. The closest comparable medical facility is fifty miles from the main facility in Saranac Lake. AMC is a designated sole community provider hospital by the federal government and the primary and secondary service areas cover over 1,200 square miles. The Medical Center currently provides a broad range of both inpatient and outpatient services to the residents of the Tri-Lakes area that encompasses southern Franklin and northern Essex Counties. Adirondack Medical Center has two acute care hospital sites with the main site located in the Town of Harrietstown (Saranac Lake) and one in the Town of North Elba (Lake Placid), two skilled nursing facilities located in Lake Placid and Tupper Lake, as well as clinic sites in the Village of Keene, Town of North Elba (Lake Placid), and the Village of Tupper Lake. In addition, AMC is the principal provider of care for 82% of the 23,590 residents in the primary service area and for approximately 32.2% of the 13,126 residents in the secondary service area.

AMC offers some regional specialties that draw patients from an even larger geographic area; these include the Colby Center for Psychiatry, which serves the inpatient needs of adults fifty-five years of age and older from ten counties, a Sports Medicine program which treats local residents as well as Olympic-caliber athletes, and a regional Bariatric Program which treats people from across upstate New York.

GOVERNANCE

Governance and Legal Structures

TRI-LAKES (POD 1): Adirondack Medical Center (AMC) in Saranac Lake

The Article 28 organizations in each of the three aforementioned communities will assume the role of the POD; they are 1) Adirondack Medical Center (AMC) in Saranac Lake; 2) Hudson Headwaters Health Network (HHHN) in Queensbury (Glens Falls); and 3) Champlain Valley Physicians Hospital (CVPH) in Plattsburgh. While each POD resides within the same defined region, there is significant variation among the three PODs in terms of size, homogenization, community resources, and participating practices. These basic differences have driven natural variations in the formation of the governing structures, and to a smaller extent, the service offering which are discussed in the sections below.
LAKE GEORGE (POD 2): Hudson Headwaters Health Network (HHHN) in Queensbury (Glens Falls)

POD 2’s governance will be directed by the Hudson Headwaters Health Network (HHHN), which is a 501(c)3 not-for-profit system of twelve community health centers providing primary care to residents located over 3,700 square miles in the Adirondack/Lake George/Glens Falls area. HHHN is the sole medical provider in many of these communities, and the 51 physicians and 62 physician extenders render care. Approximately 60,000 beneficiaries use HHHN facilities each year, resulting in over 280,000 annual patient visits.

Due to the fact that all providers within this POD are employees of or are affiliated with HHHN, this POD is able to achieve the most standardization among participating practices.

NORTHERN ADIRONDACKS (POD 3): Champlain Valley Health Network

Champlain Valley Physicians Hospital (CVPH) Medical Center is a voluntary, not-for-profit, Article 28 organization in Plattsburgh with satellite services in Plattsburgh with seven additional locations in Plattsburgh and one in Elizabethtown, New York. A voluntary, 15-member Board of Directors provides governance to CPI. It is a subsidiary corporation of Community Providers, Inc., a section 501(c)(3) organization. According to CPI’s Articles of Incorporation, the purposes of the corporate and subsidiary organizations include promoting the health of the community and conducting public programs promoting the health of the community.

CVPH is also the sole community hospital in Clinton County and provides services for residents of Clinton, Essex, Franklin and St. Lawrence Counties. The mission of CVPH is to provide quality health care for the North Country.

Additionally, Elizabethtown Community Hospital (ECH) is a subsidiary member of CPI. ECH is a critical access facility established in 1926. They are also a not-for-profit organization focused on providing healthcare services to approximately 17,000 residents.

ORGANIZATIONAL/MANAGEMENT STRUCTURES

POD 1 - Tri-Lakes (AMC)

The Tri-Lakes POD represents three practices, comprised of 16 primary care physicians and five mid-levels. Although The POD is housed under the auspices of the Adirondack Medical Center, day-to-day oversight is provided by the POD Supervisor. In addition, there is a Medical Home Governance/Advisory Committee that has been meeting on a nearly monthly basis to determine the governance and operational functions of the POD based on the input/needs of the participating practices.
Each provider approved for participation within the Tri-Lakes POD is contractually required to fully participate in the activities of the pilot project. They are bound to meet requirements related to enhanced access to care, coordination of care/disease management, longitudinal care (post hospitalization/ER), use of evidence-based guidelines and measurements, reporting quality outcomes, and the sharing of data with AHI electronically.

Practices have indicated a desire to acquire services under a yet to be agreed-upon PMPM payment to the hospital. This method, similar to that in the Northern Adirondack Pod, will greatly reduce the complexity of transactions from an accounting and a practical perspective.

In addition, this POD has provided support and advocacy to assist each practice in preparing for submission of their NCQA certification application. POD 1 will also provide the secure portal through which patient attributions lists can be securely exchanged between each practice and payor.

**POD 2 – Lake George (HHHN)**

The Lake George POD represents three practices, comprised of forty primary care physicians. All but three of the participating providers are employed by Hudson Headwaters Health Network (HHHN) allowing for significant standardization.

In addition, there are 48 mid-level physician extenders co-located with the primary care physicians. This integrated team provides coordinated primary care to patients in the northern area of New York State.

Since there are only three providers in the Lake George POD not employed by HHHN, the work of the POD will be directed by existing HHHN organizational structures, and several HHHN key personnel with significant involvement in the operations of POD 2. Chief Executive Officer, Dr. John Rugge is also active in decision-making. On matters affecting the entire Network, the entire Board of Directors will be consulted. Each provider approved for participation within the POD is contractually required to fully participate in the activities of the pilot project. They are bound to meet requirements related to enhanced access to care, coordination of care/disease management, longitudinal care (post hospitalization/ER), use of evidenced based guidelines and measurements, reporting quality outcomes, and the sharing of data with AHI electronically. Each participating practice within this POD will be utilizing the services discussed to improve care outcomes and ensure efficient resource utilization.

The staff available for use by the participating practices includes:

- Two RN Care Management Coordinators
- Two Care Manager Support Staff
After training and education, each primary care practice was required to sign an agreement validating their understanding of the NCQA Medical Home Recognition requirements. In addition, they confirmed their commitment to work toward certification. This requirement was provided to the payors participating in the Medical Home Demonstration Pilot.

**POD 3: Northern Adirondack (CVHN)**

The Northern Adirondack POD represents 27 practices, comprised of fifty primary care physicians and 42 mid-levels. This is the largest of the PODs and the most diverse. The majority of participating practices within this POD are not employed by a single entity, which creates complexities and diversity of opinion which necessitated the establishment of a robust governance structure to ensure stakeholders were involved and progress was made in the short period of time available.

Although the POD is housed under the auspices of the CVPH, the POD hired a Director to assume responsibility for day-to-day operational decisions. Staffing and financial obligations are presented to the Northern Adirondack Executive Committee during their monthly meetings and if approved, operationalized by the Pod Director. The Finance and Services/Quality are subcommittees that also provide additional guidance.

These committees determine the governance, operational, and service provision functions of the POD and to ensure coordination of efforts between governance, finance, and service/quality.

The POD Executive Governance Committee members have identified the standard services which will be utilized by the participating practices. The services provided by the POD include:

- Support necessary to ensure all participating practices meet NCQA PCMH Level II certification
- Single point of intake/distribution of patient level data
  - Consolidation and aggregation of patient level data from all the payors
  - Repackaging data into one single per provider list for distribution to the appropriate practice
- Single point of intake of quality reporting data from all participating practices
  - Submission of data to HIXNY
  - Submission of data to NCQA
  - Tracking and trending data for submission to payors
- Access to support services to include:
  - Information technology support for all EMRs including development of templates to standardize data
  - Data collection, registry/warehousing
  - Care coordination, including access to pharmacist, social worker, nurse manager and/or staff when needed
Evidence-based guidelines for diabetes, hypertension, coronary artery disease, pediatric asthma, pediatric obesity, and prevention.

POD 3 has the largest staff, which consists of a Director and six current and one anticipated support staff. Participating practices have access to registered nurses specializing in quality management, case management, as well as social workers and clinical pharmacists.

The staff available within the POD is designed to assist each participating practice in meeting their contractual obligations to fully participate in the activities of the pilot project. They are bound to meet requirements related to enhanced access to care, coordination of care/disease management, longitudinal care (post hospitalization/ER), use of evidenced based guidelines and measurements, reporting quality outcomes, and the sharing of data with AHI electronically.

**COMMON CONTRACT RELATIONSHIPS WITH THIRD PARTIES**

Participating practices assigned to each of the PODs were required to execute a Business Associate Agreement (BAA) for EPH, MAeHC (EMR consultant), and HIXNY (health exchange). The execution of the BAA allows the exchange of patient level claims and clinical data between participating entities. The BAA also ensures all entities are HIPAA-compliant and take the necessary precautions to protect patient specific data.

In addition to BAA agreements, each participating practice with all three PODS was required to validate their understanding of the NCQA Medical Home Recognition requirements and confirm their commitment to achieve Level II (or higher) medical home certification within one year of the start of the pilot.

**FINANCIAL CONSIDERATIONS**

**POD 1 – TRI-LAKES (AMC)**

The Providers in the Tri-Lakes Pod are accruing approximately $800,000 annually in Medical Home payments. Additionally, about $400,000 per year will be paid when Medicare joins the Pilot in mid 2011. Decisions are yet to be made regarding the allocation or purchase of centralized services.

AMC has funded the Pod operational expenses incurred to date. They include the pro rata share of the portal used to exchange patient lists and other secure correspondence to the Payors, along with the salaries of Pod staff, until reimbursement from the State through the MSSNY grant.

Basic financial statements for the POD will be created using the Hospital accounting templates. The hospital CFO is prepared to provide financial oversight.
POD 2 - Lake George (HHHN)

The Providers in the Lake George Pod are accruing approximately $2.2 million annually through the Medical Home Pilot; when Medicare payments begin, an additional $1.0 million annually will be realized. As HHHN accounts for the majority of the providers in the Pod, most of the revenue from enhanced payments will be utilized towards four budgeted Care Managers, three support staff, an Assistant Nursing Director, and educational materials. The application of Pharmacist services is being contemplated as well, as is a new compensation plan for HHHN providers that will measure and reward clinical outcome improvement.

POD 3 - Northern Adirondack (CVHN)

It is anticipated that the practices in the Northern Adirondack Pod will receive approximately $3,500,000 in enhanced Medical Home payments annually; this figure will rise to about $4,500,000 annually when Medicare joins the Pilot in mid 2011. Per Executive Committee direction, 50% of these receipts will be paid to the Pod for ongoing services.

The accounting system of Champlain Valley Health Network (CVHN) is being utilized for all Pod Receivable and Payable functions. A separate cost center and bank account have been established, with CVHN financial oversight policies and procedures (signatory responsibilities and limits, expense approval, etc.) applied.

CVPH has accrued the operational expenses of the Pod until Account Receivables can be collected. Examples include salaries and benefits, office space, furniture, computers, meeting expenses, and the pro rata portion of the portal which allows for patient list exchange and other secure communication between the Pod and participating payors.

SCOPE OF SERVICES

POD 1 – AMC

Standard services which will be offered to and utilized by the participating practices within POD 1 include:

- Support for each practice to obtain NCQA recognition, including remediation when appropriate
- Access to a secure portal to allow exchange of patient attribution lists between each practice and each payor
- Providing access to fractional portions of support staff needed to meet PCMH requirements, including pharmacy, care management, social work, and quality assurance
- Dedicated staff to allow continued evolution of PCMH concept
- Advocacy for each participating practice
The participating practices have discussed the POD offering additional services on a longer term basis, including:

• Single point of intake of patient level data from all participating payors and the data warehouse
  o Consolidation and aggregation of patient level data from all the payors
  o Repackaging data into one single per provider list for distribution to the appropriate practice
  o Packaging data at the aggregate level for all providers to enable benchmarking

• Single point of intake of quality reporting data from all participating practices
  o Submission of data to HIXNY
  o Coaching practices for successful NCQA submission of data
  o Tracking and trending data for submission to payors benchmarking; coordination of patient/clinical data against financial/claims data
  o Benchmarking against peers

• Access to support services to include:
  o Assist practices in standardizing where possible and exploiting data registry capabilities with individual EMRs to identify and stratify patient
  o Care coordination, including access to pharmacist, social worker, nurse manager and/or staff when needed
  o Evidence based guidelines for diabetes, hypertension, coronary artery disease, pediatric asthma, pediatric obesity, and pediatric hyperactivity

Each POD is required to deliver on clinical and financial outcomes and reporting requirements for this project.

**POD 2 – Tri-Lakes (HHHN)**

Within the Tri-Lakes POD, each practice will focus on implementing the clinical guidelines established for the identified disease states. The POD will provide coordinated access to the evidence-based care guidelines, assist in referral management, data analysis, and care coordination services to the participating practices. To assist in Patient Outreach, the available community resources within the Tri-Lakes POD include access to the following:

- Pharmacists
- Social Workers
- Nurse coordinators
- EMR/IT support
The POD will provide the following data exchange support to participating practices as well:

- Collection and aggregation of patient level data from each payor into single listing for each practice
- Distribution and submission of required reporting information
- Reporting of quality measures/outcomes to AHI and HIXNY
- Submission of NCQA PCMH certification data

To assist in Patient Outreach, the available community resources within the HHHN POD have been grouped by disease type into easy to read handouts. These handouts provide valuable “self management” support information, pertinent websites, and educational resources. Copies of these resources are included in the following pages and address:

- Pediatric asthma
- Diabetes
- Hypertension and coronary artery disease
- Pediatric obesity

**POD 3 – Northern Adirondack (CVHN)**

Within the CVHN POD, each practice will focus on implementing the clinical guidelines established for the identified disease states. The POD will provide coordinated access to the evidenced based care guidelines, assist in referral management, data analysis, and care coordination services to the participating practices. To assist in supplementing care through non-physician encounters, the CVHN POD has a number of community resources available for use which will be utilized when appropriate.

**ACCESS TO CARE**

The highest quality care is not effective if patients cannot adequately access it. An additional area of emphasis within the demonstration project is enhanced access through appropriate triage, same day appointments, expanded hours, and innovative methods of allowing patients to communicate with their personal physician in a timely manner and in a language which is most comfortable for the patient. Each participating practice is required to meet the Access to Care standards and elements required by the NCQA PCMH certification.
CARE COORDINATION

Participating practices within all PODs are utilizing an innovative and collaborative process entitled “The Care Management Program,” which manages an individual’s health needs through assessment, planning, and coordination and monitoring in an effort to best meet an individual’s health needs and to promote quality and cost efficient care.

The Care Management Program’s primary focus is to improve the care for individuals that meet specific criteria. This is accomplished both through new processes and through improved and coordinated dialogue between providers and patients to help guide patients through a continuum of services, rather than to compartmentalize their care. The Care Management Program is proactive and is designed to identify patients at risk, and subsequently intervening with the goal of improving the patient’s outcomes. The Program focuses on the continuum of care (ideally from the time the patient/provider relationship is started), addressing the needs of a defined patient population at a higher-than-average level of coordination and management. The goal of this approach is to maintain the patient at the most appropriate level of care, which should result in both improved outcomes and reduced costs.

In order to achieve the clinical and financial outcomes for this project, new processes must be established to first effectively identify patients needing managed care and then to proactively manage these patients to ensure that they can successfully meet the desired outcomes. These new processes must be patient-centric and coordinate care at the hospital, in the community, and most importantly, the transition in between. Some of these new processes will require technology, some of them will require new personnel, but all of them will re-orient how medical care is provided from purely an episodic delivery model to a model that provides care coordination and active management.

DIFFERENT POPULATIONS REQUIRING MODIFICATION TO STANDARDIZED APPROACH

As each POD must deliver care to communities which are unique from each other, the strategy and processes used to reach each POD’s goals will be different. The variability among the PODs is due to the uniqueness of each patient population, the availability of resources internal to the POD, the availability of resources external to the POD, and the capabilities of clinicians and their supporting healthcare information technology infrastructure. Although standard processes overall deliver better outcomes, the uniqueness of each POD prevents total standardization to occur across all three PODs. When possible, the PODs should work to standardize processes internal to the POD.

PATIENT POPULATIONS

Six different patient populations have been identified for this Care Management Project with the thought that these would be the starting populations that would most benefit most from this new model of care. Presuming that care can be better coordinated in a more cost effective manner with improved outcomes for these populations, it should be assumed that the scope of this project will be expanded to include other at risk populations.
The six initial patient populations are:
1. Adult - Hypertension
2. Adult - Diabetes
3. Adult - Coronary Artery Disease
4. Pediatrics – Preventive Services (primarily focused on immunizations)
5. Pediatrics – Obesity
6. Pediatrics - Asthma

OVERVIEW OF NEW PROCESSES TO MANAGE PATIENTS

The new processes to manage patients fall into five specific categories: 1) Patient Identification and Stratification, 2) Patient Outreach, 3) Clinical Encounter (Physician and Non-physician), 4) Patient Follow-up, and 5) Patient Monitoring. Each of these steps is illustrated in the diagram below, and detailed descriptions follow. Additionally, outlined are the questions posed to each POD to guide them in their development of POD-specific approaches to delivering on the agreed clinical and financial outcomes.

PATIENT IDENTIFICATION AND STRATIFICATION

Patient identification is the process used to identify those patients with the targeted disease or condition (see list above). Stratification is the process by which these targeted patients are categorized on a variety of factors to help each POD prioritize outreach to these patients.
Factors used for stratification include but are not limited to:

1) Severity of illness
2) Date of most recent visit
3) Willingness to change behavior
4) Does patient’s social/family environment support change? This is extremely important for pediatric patients as the parent’s ability or desire to change can be a much better predictor of success than a patient’s ability or desire to change.
5) Constraints that might prevent access to care or ability to change behavior, such as financial, scheduling, or transportation limitations.

The first step in the identification of patients is to isolate the specific clinical criteria (ICD codes {or range}, CPT codes, or lab values) and other specific criteria (such as age) that meet the criteria for each patient population. These criteria should be consistent among all the PODs.

Identification of patients to be included in this project can occur in one of three different ways:

1. Patient is identified from physician practice’s population as already having met the clinical and other appropriate criteria. 
   The following steps should be taken to best accomplish identifying these patients:
   a. Pre-Visit Planning Reports
   b. Disease Registry Monitoring
   c. Preventive Screening/Services Reports
   d. Ad Hoc reporting should be available to create as needed reports to supplement those mentioned above.
   e. Collaboration with Insurance companies.
2. Patient is identified when seeing physician (PCP or specialist) that he/she newly meets criteria.
3. Patient is identified upon discharge from the hospital (inpatient or ER) that he/she newly meets criteria.

**Technical Considerations**

In order to effectively coordinate the process for identification and stratification, the functionality of a patient registry would be required. However, this functionality can be accomplished through different mechanisms, and each POD may find that their approach will be somewhat unique.

An HIE (health information exchange) could also perform registry functions or the HIE could feed the registry, partly depending on whether the community wanted a federated or centralized approach to data sharing. Other issues to consider are
that whatever tool is used for the registry function, it must have access to lab data, including not only hospital labs but also reference labs if they are prevalent in that community. The registry should have access to hospital discharge (inpatient and ER) reports – this is especially important to manage asthmatic patients, and as mentioned above, the hospital personnel should have access to the registry as well. Lastly, while it is feasible to have multiple registries, one per different condition, it would be best to have one system that shared clinical information on all patients, as this would more easily enable co-morbid patients that fit the requirements for more than one condition.

**PATIENT OUTREACH**

Once patients have been identified and stratified, an efficient and effective process must be utilized to contact these patients and engage them in an evidence-based longitudinal care process. It is expected that a number of patients will decline participation in this proactive care delivery effort and will only seek care on an emergency basis, a result consistent with previous disease management efforts. However, it is critical to not exclude patients from this project just because they have not shown compliant behavior in the past. Lack of compliance is oftentimes misinterpreted as lack of desire or interest in properly caring for themselves or their family.

For those patients willing and able to participate in a project that can improve their overall health and quality of life, outreach to these patients must be broad-based, consistent, and effective in achieving regular participation. Such participation includes scheduling and completion of necessary clinical visits (e.g., physicians, educators, therapists, pharmacists) to create, deliver, monitor, and adjust the prescribed therapeutic plan. Such a plan encompasses evaluation, education, and specific therapies (e.g., pharmaceuticals, diet, and exercise). Each plan is also developing a community based communication plan to raise the awareness of the project and its benefits to those who participate.

**METHODS OF COMMUNICATION**

There will be three primary components to the communication strategy for this program: 1) Automated outbound communication; 2) Inbound communication; and 3) Easy access to Patient Education.

The automated outbound communications could take the form of email, telephone call, text message, or even postal mail. The choice should be decided primarily by the urgency of the communication and the likelihood that the patient (or family) will respond in the desired manner, providing that the system selected supports this level of variability. The other factor that must be considered is the feasibility of such communication – if a patient does not currently have phone service at home due to financial constraints, then outbound calling would not be appropriate.

A centralized call center can be most beneficial to deal with after-hours patient support, such as help in scheduling appointments or requesting refills or referrals. This will require access to at least a centralized scheduling system and preferably the office’s
EMR. Alternatively, the POD could offer a patient portal which could provide for most of these functions but depending on the population, this might not be pragmatic.

When creating the outreach strategy, one must consider the availability of resources in the population and how the community can support those patients that do not have readily available options, such as internet access. In many cases, patients in these populations will not have computer access from home and many that are working will not be able to access a computer from work. However, many communities do provide alternatives, such as computers in libraries or in other accessible locations. As part of the outreach process, it should be identified for each patient or caregiver for pediatric patients, what methods of communications are available to them.

Lastly, the POD should be able to prescribe easy accessed educational information. In general, the best solution would be to provide this through a patient portal so the patient, or their family, can access from a home, work, or community based computer, such as one in a library. However, if computer access is limited, another alternative is to deliver the education through postal mail, although this is much harder to track compliance this way. It is also important that all patient education be readily available during an office visit, so the patient can leave the office with the printed materials in hand. Lastly, as much of the education could be related to medication management, community pharmacists and hospital discharge planners should also have access to deliver the same educational information to the patients. This is especially important when discharging a patient from a hospital on a new medicine.

**CARE DELIVERY AND COORDINATION**

Care delivery and coordination encompasses all clinical activities including those provided by physicians, nurses, pharmacists, social workers, nutritionists, educators, and others. All clinical interventions represent activities that work toward improving and maintaining patient health while offering a comprehensive, holistic view of the patient and the interventions required to keep the patient well. This represents a team approach to disease management rather than a disconnected, episodic approach to correcting acute problems.

**COORDINATION/STRUCTURE OF CARE INTERVENTIONS**

There are multiple touch points to ensure care is coordinated across the continuum. True coordination has rarely occurred in traditional care delivery. In the “gold standard” coordination occurs within the hospital setting AND continues as patients seek care in the home or outpatient setting as appropriate. Care coordination involves hospital, community, and office personnel, and must consider the role of the following: hospital care management, hospital provider, home care, case manager, office provider, provider, clinical pharmacist, and clinical social worker.
PATIENT MONITORING AND FOLLOW-UP – ACUTE PHASE

After patients receive care through clinical encounters, the results of those interventions require monitoring and follow-up as appropriate. There are two phases of this follow up, an acute phase and a longitudinal monitoring phase. The goal of the acute phase is to get the patient to a treatment plan that is stable whereas the goal of the longitudinal phase is to continue evaluating the patient’s status on a periodic basis, such as every 6 months, and adjust the plan as necessary.

During the acute phase, frequent monitoring must occur until a stable care plan can be established. As such, this process can be iterative. During this phase, results include laboratory tests, completion of referral visits (e.g., podiatrist, diabetes educator, pharmacist, social worker) and participation in community-based programs (e.g., diet program, exercise classes) will be evaluated. Only through follow-up of results will patients be more likely to complete the necessary treatment program prescribed by their physician. These activities assist patients in managing their chronic disease, an often difficult burden for anyone irrespective of their socioeconomic status. This phase will continue until meds, if appropriate, are no longer being adjusted and tests are no longer being ordered on a routine basis.

CARE DELIVERY MONITORING – LONGITUDINAL

Upon completion of care delivery and follow up of results, patients require longitudinal monitoring to ensure they receive the proper interventions at the required intervals. Examples of such interventions include regular blood pressure testing for patients with hypertension, HbA1c testing at guideline prescribed intervals for diabetics; and regular weigh-ins and review of food diaries of patients struggling with obesity.

Additionally, during this phase of the program, patients are monitored for continued behavior that should be decreased if the interventions are working properly, such as:

• Frequent preventable hospital admissions
• Frequent use of the hospital Emergency Department
• Poor medication compliance
• Missed lab tests
• Missed appointments
• Lab tests trending in the wrong direction

While the goal is to monitor the patient’s progress towards healthier behavior and better management of their chronic condition, it is necessary to realize that some patients will slide back into their old habits and others will find compliance with their prescribed treatment too difficult. For others who are compliant, the treatment will be deemed ineffective. Therefore, it is important to not only look for progress, but to monitor for problems and concerns so these can be addressed immediately.
In addition, standard, actionable reports are required to monitor the impact of the delivered interventions for each disease so that the program can be modified if deemed to be falling short of targeted outcomes. Physicians and other clinical care providers must be given a summary report of the effectiveness of their interventions in an effort to encourage the continuation of effective practices or the modification of less satisfactory ones. Each POD should develop a communication strategy, including the formulation of required reports, to engage clinical team members in a process of continuous improvement of processes and workflows that can deliver targeted outcomes.

The reporting methodology should be as follows:

• Quality care and evaluation program to be developed
  1. Data Collection: what types of information to be included?
     a. Disease type, intervention(s), age, clinical results, weight, lab results, medications, subjective assessment
  2. Business intelligence tool to be developed
     a. Standard actionable reports available on a weekly and monthly basis
     b. Ad-hoc reporting capability
  3. Population Health Management reports
     a. Ability to trend changes in overall population based on disease state and intervention approach
     b. Identification of protocols that worked vs. those that need enhancement

• Who are reports to be shared with?
  4. All PCPs in POD, hospital personnel, specialists in POD, other members of the care coordination team

• Distribution approach for reports
  5. All reports to be available via centralized reporting tool – preferably via the web
  6. For those individuals not able to access the reporting tool (or if this is not yet in place), reports to be faxed on an periodic basis
     a. Timeline for reports to be created

**QUALITY OF CARE PROGRAMS**

In addition to utilizing a standardized process to guide activities, all three PODS will be utilizing the same evidence-based guidelines to provide care to those participating in the program.
OBESITY SCREENING AND MANAGEMENT IN PEDIATRIC PATIENTS

This evidence-based treatment plan is based on clinical guidelines from the following: Prevention and Treatment of Pediatric Obesity: An Endocrine Society Clinical Practice Guideline Based on Expert Opinion; Gilbert P. August, Sonia Caprio, Ilene Fennoy, Michael Freemark, Francine R. Kaufman, Robert H. Lustig, Janet H. Silverstein, Phyllis W. Speiser, Dennis M. Styne, and Victor M. Montori. This was originally published in the Journal of Clinical Endocrinology and Metabolism 2008 93:4576-4599 and originally published online Sept. 9, 2008; doi:10.1210/jc.2007-2458.

The goals of treating this population of patients include:
1. Identify and categorize patients at risk and with obesity
2. Decrease the percentage of children entering categories of at risk for obesity, obese, and severely obese.

ASTHMA MANAGEMENT IN PEDIATRIC PATIENTS

This evidence-based treatment plan is based on clinical guidelines from the following: NHLBI Clinical Guidelines Expert Panel Report 3 (EPR3): Guidelines for the Diagnosis and Management of Asthma http://www.nhlbi.nih.gov/guidelines/asthma/asthgdln.htm

Each participating practice across all PODs will identify, treat, and standardize care for all children diagnosed with asthma will receive standard treatment plan to ensure optimized care. Patients with asthma will be diagnosed by history and direct assessment. The direct assessment may include tools such as a physical exam, peak flow meter assessment, and pulmonary function tests. Pediatric patients between 5 and 18 years old with a diagnosis of asthma will be identified on an annual basis.

The goals of treating this population of patients include:
• Reduce hospitalizations caused by acute asthma exacerbations
• Reduce emergency department visits caused by acute asthma exacerbations
• Decrease use of systemic steroids in children with asthma

PREVENTIVE CARE IN PEDIATRIC PATIENTS

This evidence-based treatment plan is based on clinical guidelines outlined in the MMWR January 8, 2010 / 58(51&52); 1-4, http://aapredbook.aappublications.org/resources/IZSchedule0-6yrs.pdf http://www.health.state.ny.us/publications/2378.pdf

Preventive care guidelines in pediatrics encompass a broad range of healthcare topics. For purposes of this program, focus will be on the following areas:
1. Immunizations
2. Obesity screening
3. Lead and anemia testing

Each participating pediatric patients across all PODs will receive preventive care as recommended by the American Academy of Pediatrics, the ACIP, and the New York State Department of Health.

HYPERTENSION MANAGEMENT IN ADULT PATIENTS

This evidence-based treatment plan is based on clinical guidelines from the following:

Each participating practice across all PODs will identify and report standardized measures for all adults diagnosed with chronic, stable coronary artery disease. When determined appropriate by the treating physician, patients will receive standard treatment plan to ensure optimized care. Patients with hypertension will be diagnosed by history and direct assessment.

The goals of treating these patients include:
1. Blood Pressure Control
   • 75% of patients will have blood pressure <140/90 mm Hg on their most current reading
2. Lipid Control
   • 80% of patients will have a complete lipid profile completed annually
   • At least 50% of patients have an LDL <100 mg/dl
3. Lifestyle modification
   • At least 80% of patients have documentation of weight and BMI and appropriate counseling if BMI > 25Kg/m²
   • At least 80% of patients have documentation of their smoking status and receive cessation advice or treatment if they are a smoker

DIABETES MANAGEMENT IN ADULT PATIENTS

This evidence-based treatment plan is based on clinical guidelines outlined in “Randomized Trial of a telephone Care-Mangement Strategy” conducted by David E. Wennberg, M.D., M.P.H., Amy Marr, PhD., Lance Lang, M.D., Stephen O’ Mailley, M.Sc., George Bennett, PhD and “Management of Blood Glucose in Type 2 Diabetes Mellitus” by Cynthia M. Ripsin, MD, MS, MPH; Helen Kang, MD; and Randall J. Urban, MD, University of Texas Medical Branch, Galveston, Texas published in Am
Adult diabetic patients are the focus, so only patients with a diagnosis of Diabetes – 250.xx or Glucose intolerance (fasting glucose above 110) – 290.71 and over the age of 18 will be included. This criteria specifically attempts to identify those patients not yet carrying the diagnosis code 250.xx but who are becoming insulin resistant and thus at risk of developing DM. They will require further testing and clinical evaluation.

The goals of treating these patients include:
1. Reduction in number of hospital admissions related to DM
2. Reduction in number of ER visits related to DM
3. Reduction in number of lower extremity amputations (e.g., toes, foot, lower leg)
4. Reduction in incidence of patients with diabetic retinopathy
5. Reduction in incidence of patients with diabetes related coronary artery disease (e.g., myocardial infarction)
6. Reduction in incidence of patients with diabetes related nephropathy

Patients identified for inclusion will be stratified into the following three categories:
1. Low risk: At least 2 HGBA1C<8 in the last 12 months.
2. Moderate risk: At least one HGBA1C above 8 but less than 9 in the past 12 months.
3. High risk: At least one HGBA1C over 9 in the past 12 months.

A. Patient Outreach

Once patients are identified and stratified by the POD, that list will be sent to the PCP for verification. From that point on, the PCP should review the list and confirm that all his/her diabetics/glucose intolerant patients are listed and properly stratified. If not, he/she should make the appropriate deletion/additions/corrections and share those with the POD.

From the corrected list, and using the stratification criteria, the POD would provide support in between clinical encounters. Understandably, low risk patients will not get as intense POD follow-up as higher risk patients. A protocol will specifically describe to POD personnel the intensity of service to provide each strata of patients. The POD will function as a bridge to ensure patients remain compliant with prescribed treatments and reinforce basic self-management skills. Most importantly, the POD might play a pivotal role in ensuring patients comply with daily monitoring and recording of fingersticks. Daily glucose monitoring allow patients to assess their control in real time and aid providers in adjusting therapies at follow-up visits.

B. Clinical Encounter/Patient follow-up:

These are grouped together as they complement each other. With each patient contact, the PCP needs to review recent clinical data (i.e. relevant blood work, glycemic journal, consult note) and reinforce basic principle of good diabetic care.
CHRONIC, STABLE CORONARY ARTERY DISEASE (CAD)

This evidence-based treatment plan is based on clinical guidelines from the following: American College of Cardiology (ACC)/American Heart Association (AHA) Physician Consortium for Performance Improvement (The Consortium). For more information and updates visit The Consortium’s Web site www.ama-assn.org/go/quality

Each participating practice across all PODs will identify, treat, and standardize care for all adults diagnosed with coronary artery disease and will deliver standard treatment plans to ensure optimized care. Patients with CAD will be diagnosed by history and direct assessment. For inclusion in the measurement aspect of this guideline the patient must meet all of the following criteria:

1. Patient is age 35 or older;
2. Patient must have had a history of coronary artery disease for at least 12 months; and the patient must have been under the care of the physician or physician group for at least 12 months.

The goals of treating these patients include:

1. Blood Pressure Control: 75% of patients will have blood pressure < 140/90 mm Hg on their most current reading
2. Lipid Control:
   - 80% of patients will have a complete lipid profile completed annually
   - At least 50% of patients have an LDL < 100 mg/dl
3. Use of Aspirin or other Antithrombotic: 80% of patients will be prescribed antiplatelet therapy (patients are excluded from this goal if antiplatelet therapy is contraindicated)
4. Smoking Status and Cessation Advice
   - At least 80% of patients have documentation of their smoking status and receive cessation advice or treatment if they are a smoker

QUALITY MEASURES

Solely improving clinical measures is not sufficient to obtain the full potential benefits from implementing a medical home and associated disease management practices in a primary care practice. Additional benefit must come from cost savings generated from the efforts of the medical home. These benefits are evaluated in the following ways:

- Utilization of professional services
- Utilization of services provided by medical facilities
- Utilization of appropriate pharmaceuticals
To appropriately measure these savings, clinical outcomes must remain at baseline or higher levels to ensure that savings are not due to the withholding of necessary clinical services.

To choose the measures to be used by participating practices within all PODs, the following criteria was used: importance, scientific soundness, feasibility, face validity, precision, minimum bias, construct validity, fosters real quality improvement, and application.

Additionally, comparative baselines will be constructed to provide evaluation of the effect of the project on both measures and the diseases targeted. As most practices are not currently designated as medical homes nor do they have the health information technology in place to efficiently collect comparative baseline data, a comparative baseline will be developed utilizing a sampling process that leverages effective processes already utilized in the collection of HEDIS measures. A comparative baseline will not be collected for all measures due to the difficulty (i.e., expense, inaccessibility) of a particular measure. This approach only applies to clinical measures. Comparative databases for both utilization and cost measures will be developed initially as the data is already available from existing data collection activities.

Once all practices have achieved medical home status and the health information technology is in place, a comparative baseline database will be constructed that includes all the clinical measures. This baseline database will be used to track trends over time for the physicians, practices, and pods. Trending of the clinical, utilization, and cost measures will be reported on a regular basis to provide feedback to project participants. Performance regarding care provided for the targeted diseases will be submitted by each participating practice regardless of POD affiliation:

**PERFORMANCE REPORTING**

The Adirondack project requires physicians, practices, and pods to achieve advances in clinical and financial outcomes, and Level II Medical Home status, in return for a payment of $7 PM. Clinical and financial measures were developed for the following adult diseases – diabetes, hypertension, CAD – and the following pediatric diseases – prevention, obesity, asthma. Simply recording and monitoring trends in these metrics is not enough to achieve a level of change that justifies the additional PMPM payment. Therefore, an overarching clinical strategy is needed to guide the physicians, practices, and pods in their effort to achieve these clinical and financial outcomes’ improvements. In addition, a comprehensive work plan is required to offer the various providers a roadmap for change. The work plan requires the following:

- Clinical measures
  a. Description
  b. Meaning
  c. Explanation of trending
    1. Summary of reporting
d. Impact on clinical outcomes for the disease

e. Impact on financial outcomes for the disease

f. Relationship to other clinical outcomes

g. Explanation on how the clinical measure can be improved
   1. Process
   2. Workflow

• Financial measures
   a. Description
   b. Meaning
   c. Explanation of trending
      1. Summary of reporting
   d. Impact on clinical outcomes for the disease
   e. Impact on financial outcomes for the disease
   f. Relationship to clinical outcomes
   g. Explanation on how the financial measure can be improved
      1. Process
      2. Workflow

• Impacting measures – process and workflow
   a. Identify best practices in impacting clinical and financial measures
      1. Describe in detail as per targeted diseases
   b. Inventory of available resources
      1. Clinicians – pharmacists, home health aides, nutritionists, etc.
   c. Evaluate available resources with those required for best practices
   d. Develop possible “interventions” that can impact clinical and financial outcomes
      1. Create multiple paths to accommodate varied capabilities of practices
         i. Prioritize these paths
• Develop comprehensive project plan for improving clinical and financial outcomes
  a. Link activities to specific outcomes
  b. Create timeline for implementation
     1. Include milestones, points of evaluation
        i. Plan for interventions for “course corrections”
  c. Include disease management principles
     1. Activities done by practices and/or pods
  d. Create simple reporting mechanism for practices/pods to signal their process changes
  e. Create process for practices to obtain assistance with change management

Ultimately, all three PODs will feed quality improvement and clinical data into HIXNY. Clinical data will be housed into a data warehouse. Financial data will be fed from participating payors into a separate data warehouse, which will allow practices to identify patients that are responsible for high resource utilization. Each POD will then be able to obtain patient-level clinical quality data and associated financial data from each payor. The tracking and reporting of data will ultimately flow seamlessly. Unfortunately, each of these data repositories will not be available until late 2011. Until that time, each POD will be using substitutions to identify high resource utilizing patients.

Initial review reveals that within the sample POD, there are substantial opportunities for improvement in many reporting areas. Most practices have not yet begun to submit data on pediatrics preventative measures and there are also adult measures that are not consistently reported. However, each practice is in the first few months of reporting and this is to be expected. This will be a continuing focus area.
PURPOSE

The purpose of this milestone was to begin to implement the technology architecture as established in Deliverable 4, and to identify outstanding issues and a corresponding plan for resolution.

OVERVIEW

It is well known that the major health IT building blocks (organizational, clinical/quality, and technical specifications) must be developed simultaneously to realize full value for end users. All health technology, whether electronic health records (EHR) at a practice level or regional products such as information exchanges, should be applied with the intention of improving clinical quality and performance data for clinicians. Additionally, ensuring cross functional interoperability through the use of common health information exchange protocol (CHIxP) is vital. The technology developed and implemented throughout this project is designed to provide the mechanism by which the quality of care rendered to patients can be measured and ultimately improved. The overall technology design is to ensure collection of standardized data from disparate systems (both hospital and provider) and to promote interoperability through homogenous data elements that will be submitted to HIXNY. This Deliverable details the implementation plan and identifies outstanding issues to successful deployment of the technology component of the pilot program.

The planned technology is designed to improve the level of population health information available, assist in identifying gaps in care against evidence-based guidelines, effectively identify patients that will benefit from disease management activities to appropriately prevent admissions/re-admissions, and successfully manage high-utilizers.

IMPLEMENTATION OF TECHNOLOGY SOLUTIONS

One of the challenges in implementing technology designed to standardize quality and performance reporting was the disparity between the participating practitioners’ and associated hospitals’ electronic health record (EHR) capabilities. One of the first steps was to determine which EHR’s and accompanying functionalities were being used within each Pod.

All practices within Pod 1 (AMC) and Pod 2 (HHHN) utilize e-Clinical Works (eCW) and Athena Health, respectively. Pod 3 (CVPH) had the most diversity with practices utilizing Intergy (Sage), Medent, eCW,
Allscripts, GE, STI, and Encounter Pro.

Once the baseline assessment was completed, work was undertaken to assess the level of use of technology and to work with practices to develop corrective actions/remediation where necessary for practice workflows. Special emphasis was given to:

- Ensure practices were enabled for e-prescribing in order to support the PCMH model.
- Encourage providers to apply HIE to order to inform clinical decisions and to communicate with patients, plus to utilize EHR’s to support PCMH.
- Analyze and evaluate practices’ use of EHR’s in providing care to the chronic disease population and to help providers develop corrective action plans where necessary.
- Measure the achievement of quality/performance improvement outcomes and document lessons learned from the PCMH initiative.

**Overview**

The implementation plan creates capabilities to enable secure data exchanges between each of the participating practices and hospitals and the Health Information Exchange of New York (HIXNY), the regional health exchange serving northern New York. HIXNY will then have the capability to securely send clinical data to the clinical data warehouse, the Quality Data Center (QDC). Participating health plans will submit financial data, by patient, to a separate payor data warehouse. Information from both the payor and EHR warehouses will ultimately be available to participating practices.

The EHR Data Warehouse, QDC and the Payor Data Warehouse are designed to provide complementary information. Combined, these data warehouses and their reporting tools will facilitate the practices’ and the Pods’ ability to improve chronic disease care management on a patient and a population basis. The implementation plan includes additional training for all participating practices and Pods on continuous quality improvement processes via the “Plan Do Study Act” (PDSA) methodology. Training will also include education about goal setting, data collection, report writing and process improvement.

**Hospital Interfaces to HIXNY**

To ensure standardization, common data elements for hospitals and participating practices were identified for submission to HIXNY. All hospitals will submit ADT, laboratory results, imaging reports, medications, and departmental reports such as a discharge summary. In addition, HIXNY will provide support to enable the hospital-to- HIXNY data exchange, and to ensure interoperability through project management, integration consulting, quality assurance testing, and maintenance.
**Tri-Lakes Pod 1**

Adirondack Medical Center (AMC) will utilize their preferred interface vendor (IATRIC) to complete the five required feeds from their hospital inpatient MediTech system to HIXNY. A locally hosted HIXNY edge server will be utilized.

**Lake George Pod 2**

Glens Falls Hospital (GFH) is connected today to the Adirondack Regional Community Health Information Exchange (ARCHIE) and provides clinical data to that entity. As part of the HEAL 5 grant initiative, HIXNY and ARCHIE have agreed to share data. GFH data is anticipated to be available through HIXNY in the future.

Inter-Lakes Health will utilize their preferred interface vendor (HMS) to complete the five required feeds from their Hospital Inpatient system (HMS) to HIXNY. HMS will be extracting all required data elements from its own system supporting Inter Lakes, translating these data elements in the HIXNY standard HL7 format, and transmitting these to the HIXNY InterSystems platform. A centrally hosted HIXNY edge server will be utilized.

**Plattsburg Pod 3**

Champlain Valley Physicians Hospital (CVPH) will utilize internal resources to complete the five required feeds from their hospital inpatient Siemens’s system to HIXNY. CVPH has engaged a full-time interface resource, and is in the process of internally developing all interfaces required for both grants (HEAL 5 and HEAL 10). The HEAL 5 development efforts are underway, with some interfaces completed, and the HEAL 10 interfaces will be developed upon completion of those for HEAL 5. The result will be a full set of interfaces and a complete set of CVPH data in the HIXNY exchange. A locally hosted HIXNY edge server will be utilized.

Alice Hyde Medical Center will utilize their preferred interface vendor (Summit) to complete the five required feeds from their hospital inpatient system (MediTech), translate the data elements into HIXNY standard format and transmit them to the HIXNY InterSystems platform. A centrally hosted HIXNY edge server will be utilized.

Elizabethtown Community Hospital (ECH) contracted with their interface vendor (CPSI) prior to the beginning of this project to deliver both of the required interfaces and other functionality needed to support and utilize the HIXNY system. This will provide a full set of data elements to HIXNY in standard format, and the required RHIO consent logic in CPSI. A locally hosted HIXNY edge server shared with CVPH will be utilized. Elizabethtown will utilize their preferred interface vendor (CPSI) to complete the five required feeds from their hospital inpatient system (CPSI) to HIXNY. This was an internally funded project, as no HEAL 10 match dollars have been captured in the budget.
Participating Practice Interfaces with HIXNY

Each participating practice will submit a data set to HIXNY. To accommodate the variations and capabilities of the EHRs being utilized, several approaches are planned. Some will connect using an application service provider (ASP); some a hub and spoke structure; and some will utilize direct connect.

Tri-Lakes Pod 1

In Pod 1 (AMC), all practices utilize e-Clinical Works (eCW). eCW integrates data for submission to third party organizations using CHIxP compliant electronic health exchange (eEHX) platform. eEHX can be implemented in a number of ways, but AMC has already deployed a local eEHX platform to support their community exchange. The local exchange will need to be upgraded to allow integration with the statewide Health Information Exchange New York (HIXNY). eCW supports the XDS.B protocol and is capable of both producing and consuming HITSP C32 CCD.

Great Lakes Pod 2

In Pod 2 (Hudson Headwater Health Network), all participating practices have implemented Athenahealth’s EHR. Athenahealth deploys the Athena Clinicals, an application service provider (ASP) platform utilizing Software as a Services (SaaS) cloud computing technology. The web service approach to health information exchange (HIE) is to have a single point of integration (interface) between their cloud and each third party organization which can then be used by all client practices exchanging data with that third party. Athenahealth is currently building and will soon be testing (with HIXNY) their CHIxP compliant interface; they support the XDS.B protocol and are capable of both producing and consuming HITSP C32 CCD. They do not require any additional software or hardware.

Plattsburg Pod 3

As mentioned previously, Pod 3 (Champlain Valley Physicians Hospital) utilizes the most diverse technology, as practices within this Pod apply a wide variety of platforms.

• Intergy’s (Sage) approach to interoperability is through a hub and spoke architecture. The hub is a hosted interface service that is exposed to the third party (HIXNY) and any common configurations can be used across multiple participating Sage practices. Sage is in the process of developing a CHIxP compliant version with a couple of RHIOs in NY; it will be available in 2011. They support the XDS.B protocol and are capable of both producing and consuming HITSP C32 CCD.

• Medent is in the final stages of development to become CHIxP compliant. Their web services architecture supports IHE PIX, PDQ and XDS.B profiles. Medent is capable of both producing and consuming HITSP C32 CCD documents; no additional hardware will be required.
• EncounterPro is committed to an aggressive development schedule to insure that they have the capability to establish a CHIxP compliant interface with HIXNY as part of this project. They have significant experience in establishing other interfaces using a wide range of transports and protocols. They are confident that they will be ready within the specified timeframe. No additional hardware is anticipated.

• GE currently expects to be CHIxP compliant in approximately 6-12 months (mid 2011). Their next release of Centricity v9.2 will have core functionality that enables users to be ready for MU; this will include the ability to produce and consume a HITSP C32 CCD, using XDS.B, and PIX/PDQ. Each practice will be able to establish a direct and secure (TLS) connection to HIXNY from their upgraded Centricity EMR. No additional hardware is anticipated.

• STI has established interfaces with NYS RHIOS; their February 2011 release of Chartmaker EHR will be capable of producing and consuming HITSP C32 CCD. Their integration architecture is a secure hub and spoke through their centralized “health portal”. They provide a single point of interface for third parties (e.g. HIE/RHIO) to connect to all STI clients. STI is active in NYS and will meet SHIN-NY requirements. No additional hardware is anticipated.

HIXNY To Data Warehouse

Standardized data will be extracted from the EHRs and sent through HIXNY and then submitted securely to the clinical data warehouse (QDC).

The implementation plan is to establish the standard ability to populate data from the practices to the QDC. Clinical Information Services will be comprised of two distinct data warehouses that will both provide clinical decision support for population health management as well as the tools necessary for practice level continuous quality improvement. The EHR Data Warehouse will include data from the primary care providers’ EHRs. These data warehouses leverage similar web based reporting tools but utilize different, yet complementary information. The EHR data warehouse vendor is Massachusetts eHealth Collaborative, who will be utilizing their Quality Data Center product.

The data warehouses create a more comprehensive view of the patients’ experience that neither warehouse would be able to individually provide. The EHR Data Warehouse is designed to be an analytic engine and reporting portal leveraging the primary care practices’ EHR data. The EHR Data Warehouse aggregates demographic data (surrogate unique patient ID, DOB and gender) and pertinent structured clinical data elements (Problems/Diagnoses, Procedures, Medications, Allergies, Immunizations, Lab & Radiology Results, vitals and social history) from EHR source systems using HIXNY as the intermediary. The data set contains clinically rich information not available in the Payor Data Warehouse. The reporting portal will include tools for quality reporting and condition reporting. Specific tools will identify gaps in care, assess provider performance across peers, and monitor progress over time.
Payor Data Warehouse

The data set within the Payor Data Warehouse contains the broadest view of the patient’s care. The analytic engine and reporting portal will allow for quality reporting, condition tracking, and generation of patient specific care management that highlights evidence-based gaps in care.

The Payor Data Warehouse will accept enrollment, claims, and pharmacy data via secure electronic portal. Numerous data validation and quality checks will be then be completed. Once the data feeds are complete, the payor data will be structured and risk adjusted to identify clinical variation and track performance. Key features will include identification of gaps in care inclusive of all claims. The breadth of information from all the providers submitting claims will not be available to the EHR-based Quality Data Center. In addition, the Payor Data Warehouse augments identification of patients with newly acquired chronic diseases as well as those patients with recent clinical deterioration or progression of disease. The Payor Data Warehouse also allows for appropriate assignment into case management by the pods as well as identification of potentially preventable admissions, readmissions and ER visits.

Choosing an appropriate payor data warehouse vendor who could construct the appropriate data warehouse generating the necessary project information was critical to delivering the intended cost savings from this project. In choosing a vendor the following capabilities were evaluated:

• Ability to collect cost, utilization, and pharmacy data from all payors on a timely basis
• Ability to build a stable, flexible data warehouse that stores this cost, utilization, and pharmacy data on a timely basis
• Understanding and application of widely accepted risk adjustment methodologies that allow for meaningful comparative analysis
• Ability to provide access to the data warehouse with user-friendly interface tools
• Ability to offer easily configurable reports to provide flexibility to meet project initiatives
• Use of predictive modeling methodologies to identify patients that might require pro-active interventions
• Flexibility to assist a variety of entities and users to meet the needs of the project
• Utilization of generally accepted standards of reporting of population-based data
• Experience working with payors and payor data

As noted above, the payor data warehouse will be used to measure cost and utilization of professional services, medical facilities, and pharmaceuticals. Examples of the types of reports required from the payor data warehouse include:
• Pharmacy
  a. Generic/Brand utilization
  b. Total spending
  c. Formulary adherence
  d. Dispense as written rates
• Inpatient Utilization
  a. Bed days in a rate per 1000
  b. Admissions in a rate per 1000
  c. Preventable/Ambulatory Sensitive
• Emergency Department Utilization
  a. PKPY utilization rate
  b. Preventable
• Ancillary Utilization
  a. Specialty utilization
  b. Radiology utilization
  c. Surgical utilization
• Readmissions
  a. Days post discharge
  b. Preventable
• Cost of Care
  a. Total Cost
  b. Total Spend

Based on a careful analysis of vendor’s abilities to build and manage the payor data warehouse, expertise in risk adjustment of reporting measures, and ease of use for associated analytical tools, TREO Solutions was chosen to develop and support the payor data warehouse. TREO Solutions has been working aggressively with all the payors, in addition to developing the platform for the payor data warehouse.
RISKS AND RISK MITIGATION

The major risk associated with this plan is one of funding. Technology design, development, and implementation take significant financial resources. This project is no exception. While the budget for the technology portion of the pilot is substantial at $4.6M (from HEAL 10, the MSSNY pilot program, and grant-match funding from participants), there is always a risk that unforeseen contingencies might render the amount insufficient to meet the complete needs of the project.

Another risk is HIXNY’s capacity to meet its entire member needs in 2011. HIXNY was heavily committed in 2010 to bringing the rest of its existing members on to the exchange with significant financial impact. HIXNY is committed to meeting the project requirements of completing the hospital to HIXNY interfaces, the EHR to HIXNY interfaces, and the HIXNY to QDC interface in 2011.

A final risk is the ability for EHR vendors to meet their commitments to the interfaces as they also comply with the Meaningful Use requirements. The majority of the EHR vendors have contractually committed to meeting the interface specification within the project timelines. The mitigation strategy for each of these risks is intense program management with constant milestone tracking to ensure compliance with the requirements and timelines. The goal is to identify issues quickly and rapidly work to their resolution in an effort to maintain milestone compliance and reduce financial and personnel resource consumption.
PURPOSE

The purpose of this deliverable is to create a work plan for PPSO ('Pod') implementation, to identify the critical success factors needed to complete implementation, to coordinate necessary resources, to anticipate and document deployment risks, to identify risk mitigation strategies to address such risks, and to begin Pod implementation.

OVERVIEW

This deliverable describes the further development and implementation of the three PODs, specifically focusing on critical success factors and the identification of common risks and mitigation strategies.

DEVELOPMENT PLANS

During the initial baseline assessment, it was determined that no organization was currently serving as the envisioned physician support organization (Pod). The goal was to develop Pods that facilitated full participation of solo, rural, and small group practices in the value-based healthcare envisioned by health reform. An additional component of Pod development was to ensure standardized quality improvement efforts were integrated. Most quality improvement activity is typically measured along four domains: access, experience, process, and outcomes. Providers participating in this pilot must exhibit progress in each of these domains as measured by NCQA recognition at the Level II or III levels. Success is detailed for each area and includes:

1. Assignment of patients to a personal clinician who is available 24/7;
2. Establishment of dedicated care coordination teams to actively manage those with chronic conditions across the continuum of care;
3. Implementation and adherence to evidence-based guidelines;
4. Reporting outcomes to measure success and to identify continued opportunities for improvement in care delivery.

Ultimately, the role of each Pod is to assist the rural, solo, and small physician practices augment their capacity to deliver improved care. As such, the Pods are also responsible for planning, designing, and building new quality and performance reporting requirements.
Specifically, the Pods will help participating practices by providing:

1. Assistance in implementing needed technology platforms;
2. Assistance to ensure participating practices submit NCQA certification applications;
3. Standardized evidence-based guidelines;
4. Quality care evaluation, reporting, and surveillance processes;
5. Requirements for access to care;
6. Performance reporting at the aggregate, group, and individual levels;
7. Education and technical resources to support the implementation of quality improvements;
8. Performance and compliance reporting to appropriate oversight organizations.

CRITICAL SUCCESS FACTORS

As the Pod concept was being framed and operating processes developed, several critical success factors were identified to ensure improvements in overall health care systems:

Open Communication

As with any change, open communication is a key to success. By actively engaging all stakeholders, it becomes easier to transform processes in a standardized methodology. Transparency is essential. Each Pod developed a governance committee with representatives from the participating providers involved. This ensured buy-in and a clear understanding among the practitioners of NCQA Medical Home criteria, future services to be offered by the Pod, evidence-based guidelines to be used and measured across the Pods, and reporting requirements. Monthly meetings were held with participating practices within each of the Pods, and regular communication with State-level stakeholders including legal, Department of Health, and payors was elemental to successful implementation. These meetings encouraged all participants to move towards the same goal and not get derailed by “assumptions” or competing motives.

Technology

Technology implementation/utilization was another critical success factor to promote the transformation of primary care and the success of the Pods. During the baseline assessment, it was discovered that 28% of the participating practices did not yet have an electronic medical record. Selection and implementation of EHRs was critical to guarantee future goals could be
met and that clinical information would be available to all providers in real time. This was also a requirement to give patients the information to empower them to exercise a degree of control over their individual health care decisions. For the 72% of practices that had an EHR, a significant percentage was not utilizing the tool to identify at-risk patients or manage their care.

**Scalability**

Another identified critical success factor for the Pods was the ability to scale services to meet the needs of their providers and the associated communities. Each community has varying depth and breadth of programs available to supplement services, and participating providers within each of the Pods have differing levels of need for access to support services (including appropriate staff). Pods must have the ability to obtain accurate performance data from each practice which, in turn, allows the Pods to identify the staffing levels required for adequate support services such as administrative oversight, care management nurses, pharmacists, and social workers.

**Quality Improvement and Coordination of Care**

Transformed primary care ensures the care decisions are evidence-based and consistently applied. It also coordinates care among multiple providers, ensures transitions across care settings are actively managed, and information is appropriately exchanged. These efforts are dually designed not only to improve patient care, but to minimize waste or overlap.

**IMPLEMENTATION RISKS**

As with any large scale change, there were risks to success:

**Potential Inability to Develop Infrastructure**

The organizations with established leadership structures, management teams, and capital (hospitals and the large Federally Qualified Health Center [FQHC]), out of necessity were forced to champion the process and to provide guidance and capital as none of the primary care practices had the ballast, capability, or time to organize and develop Pod structures. Additionally, these organizations were required (and able) to leverage all aspects of their leadership teams including clinical (Medical Directors, VPMAs and CMOs), IT, Finance, and their current care management assets (Diabetic education centers, Discharge planning departments, Social Worker and Case managers).

**Organizational Culture**

The need to transition from “volume” to “value” was counterintuitive. The primary care practices were so engrained in the concept that they must generate visits to maximize revenue that it was difficult for them to create unfilled appointments for
open access, or to take time in their schedules for team huddles, care management meetings, and quality improvement sessions.

**Lack of funding**

As discussed above, the hospitals and the FQHC were required to fund the initial establishment of the Pods. Development of the Pods required significant financial investment to deploy support services and technology platforms. While funding was anticipated through the Adirondack Health Institute, significant resource expenditure was required for implementation prior to the development of perpetuating funding streams. Without the willingness of Adirondack Medical Center (AMC) in Saranac Lake; Hudson Headwaters Health Network (HHHN) in Queensbury (Glens Falls); and Champlain Valley Physicians Hospital to advance the financial and human resources necessary for continued development, Pod development would have been slowed, if not stopped completely. Those costs will be eventually paid by medical home reimbursements, but cash flow was a problem initially.

**Inability to measure quality or performance**

Significant effort to develop support infrastructure and the needed technology infrastructure has been expended. Without adequate organizational structures and electronic health records, it would be impossible to collect, measure, and report the patient data needed to transform health. In addition, the ability to share quality, patient care, and payment data across multiple organizations while ensuring privacy and data security is vitally important. Inability to adequately address privacy and security issues would negatively impact the ability to successfully meet the program goals.

**History**

The historical method of healthcare delivery was identified as a significant risk to successful development of the Pod structure. Healthcare delivery for years has been considered an autonomous effort rather than a team-based, integrated effort. This autonomous viewpoint contributed to competition for patients and associated reimbursements. Additionally, legal requirements made it difficult to transform and collaborate. Failure to recognize and address these historical and legal restrictions could be fatal to successful implementation.

**RISK MITIGATION STRATEGIES**

Communication among all participating stakeholders was identified as the single, biggest mechanism to mitigate risks and ensure success. Strategic communication was imperative to ensure a common definition of success for this multi-year, multi-phased project was defined and communicated. This was accomplished through structured, regular meetings at the State level. These
meetings included representatives from legal, political, participating payors, Adirondack Health Institute (AHI), Pods, participating practices, and contracted vendors; they frequently addressed obstacles and created solution sets with buy-in from all stakeholders. Ultimately, the goals and measures of success for the pilot project were established and distributed.

On the operational level, tactical communication translating the strategic goals to action were accomplished at the Pod level. Additionally, at the Pod level, communication through regular meetings to address governance, service offering, and technology needs ensured consistent application and practice compliance.

One of the first common requirements established by all three Pods was mandatory, monthly meetings between each participating practice and EastPoint Health. One non-negotiable strategic goal was the requirement of each practice to complete the activities necessary to obtain NCQA certification. By requiring mandatory meetings, communication of these requirements and assistance in interpreting these requirements was assured.

Additionally, leveraging technology to effectively facilitate the exchange of practice performance data and to promote the subsequent linkage to outcomes improvement is imperative. As processes are refined and correlated to best practices and workflows, robust communication strategies across the three Pods will encourage providers in all areas to learn from each other.

On a parallel track, meetings defined technology requirements to standardize data submission elements, data security, and data flow across and between organizations.

Flexibility, along with a willingness to create a “medical neighborhood” honoring the variations among the three Pods, was also important. Each Pod has uniquely-tailored community resources to supplement clinical services, and the ability to finesse these and yet-to-be determined additional initiatives will be vital to the evolution of each “medical neighborhood” to meet the goals of the Pilot program, with the ultimate success of long term sustainability.
PURPOSE

The purpose of this deliverable is to finalize the implementation of the technology architecture as established in Deliverable 4, and to begin to operate technology components.

OVERVIEW

One of the basic tenants of a patient-centered medical home is the requirement to enhance quality and improved safety through appropriately utilized information technology (IT). Additionally, IT is leveraged to support evidence-based medicine and clinical decision support tools to provide optimal patient care, performance measurement, patient education, and enhanced communication/coordination.

Ultimately, coordination and integration of healthcare crosses all elements of a complex health care system (e.g., primary care, specialty care, inpatient, pharmacies, home health agencies and nursing homes) and the patient’s community (i.e., family, public and private community-based services). The consistent use of electronic health records at the practice level, including e-prescribing and the development of health information exchanges, ensures the ability to coordinate care, and if leveraged, encourages patients to get the indicated care when and where they need and want it in a culturally and linguistically appropriate manner.

This deliverable provides details of the technology operating plan designed to support the Adirondack Region Patient Centered Medical Home Pilot (APCMHP) program. Well-designed and well-implemented information technology (IT)—including electronic health record (EHR) systems, and patient data registries are a critical component to the APCMHP operating plan. The overarching goal during the design phase was to promote collection of standardized data and system interoperability. Standardization and interoperability were key to ensure participants have access to and are able to share important patient information amongst care coordination teams, Pods, participating providers, payors, and to support provider-patient communication and by encouraging patient engagement.

Previous deliverables described the design and implementation plans for the supporting technology. The operating plan is designed to leverage the technology to continuously improve the quality of care provided across the region. In addition, the technology augments the amount of population health information available, assists in identifying gaps in care against evidence-based guidelines, effectively identifies patients that will benefit from disease management activities to appropriately prevent admissions re-admissions, and successfully manages high utilizers.
TECHNOLOGY OVERVIEW

The technology plan creates capabilities to enable secure data exchanges for clinical and payor data. Clinical data will be exchanged between each of the participating practices and hospitals and the Health Information Exchange of New York (HIXNY), the regional health exchange serving northern New York. HIXNY is then capable of securely sending clinical data to the quality data center (QDC). The payor data will be submitted by participating health plans, by patient, to a separate, secure payor data warehouse. Information from both the payor and EHR warehouses will ultimately be available to participating practices, and both will provide the tools necessary for practice-level continuous quality improvement as well as clinical decision support for population health management. The patient Data Warehouse will include data from the primary care providers’ EHRs augmented by the HIXNY patient record, while the Payor Data Warehouse will contain a holistic view of the patient’s experience from all the providers who have filed claims with the Adirondack Medical Home health plans for the patient. These data warehouses leverage similar web-based reporting tools but utilize different, yet complementary information. Combined, these two warehouses create a more comprehensive view of the patients’ experience that neither warehouse would be able to individually provide. In addition, the three Pods were designed to enable practices to leverage the clinical decision informatics now available, including population health management and continuous quality improvement activities. Additionally, the use of the information contained in these data warehouses will facilitate the practices’ and the Pods’ ability to improve chronic disease care management, population health improvement and continuous quality improvement, utilizing the “Plan Do Study Act” (PDSA) methodology.

Quality Data Center (Clinical Patient Data Warehouse)

The Quality Data Center is an analytic engine and reporting portal leveraging the primary care practices’ electronic health records (EHR) data from HIXNY. The QDC is a data warehouse that aggregates demographic data (surrogate unique patient ID, DOB and gender) and pertinent structured clinical data elements (Problems/Diagnoses, Procedures, Medications, Allergies, Immunizations, Lab & Radiology Results, vitals and social history) from EHR source systems using HIXNY as the intermediary. Patient consent is obtained at the practice/hospital level using the HIXNY Patient consent form.

With patient consent documented, data that is shared with HIXNY will be available downstream to the practice’s EHR. The EHR data is then made available to the QDC. The data set contains clinically rich information which is not available in the Payor Data Warehouse. The reporting portal includes tools for quality reporting and condition reporting. Specific tools identify gaps in care, assess provider performance across peers, and monitor progress over time. The use of the information available in the QDC is ultimately to be used to facilitate the improvement of care and support disease management activities.
By leveraging the provider level data available within the QDC, practitioners can make evidence-based quality of care improvements, and Pods can evaluate practitioners’ performance against the standards implemented for the six identified conditions, pinpoint evidence-based gaps in care, and identify patients that require more intensive interventions/care management.

**Payor Data Warehouse**

The data set within the Payor Data Warehouse contains the broadest view of the patient’s care. The analytic engine and reporting portal will allow for quality reporting, condition tracking, and generation of patient specific care management that highlights evidence-based gaps in care.

The Payor Data Warehouse accepts enrollment, claims, and pharmacy data via a secure electronic portal. The payor data will be structured and risk adjusted to identify clinical variation and track performance. The ultimate purpose is to facilitate quality of care/disease management activities by providing population level availability of information for “all care available,” including hospital, specialty, ambulatory, and pharmacy expenditures. A key feature will be the ability to identify evidence-based gaps in care and identify patients with preventable hospital admissions/re-admissions.

The data within this data warehouse will also be used to evaluate performance of participating practices within the Adirondack Patient Centered Medical Home Pilot (APCMHP), specifically the ability to save more than the $7 per member per month payment funded by the payors.

In addition, the Payor Data Warehouse augments identification of patients with newly acquired chronic diseases as well as those patients with recent clinical deterioration or progression of disease. The Payor Data Warehouse also allows for an appropriate assignment into case management by the pods as well as identification of potentially preventable admissions, readmissions and ER visits.

Data from the Payor Data Warehouse will be reported from each participating payor in a number of different permutations. Patient level data will be reported to each provider and to each Pod for the providers assigned to their Pod. They will receive patient level data by payor and aggregate data by disease type across payors. Aggregate-only level data will be reported by payor across all Pods and providers. Providers in each Pod will obtain patient level data for his/her patients by payor, and de-identified aggregate data to compare for all other providers across the Pilot.

At the governance level, patient specific data will be made available to each payor for their specific patients. Additionally, each payor and Pod will receive de-identified aggregated data to monitor pilot performance.

The approved Quality Data Center Patient Consent and the Data Use Agreement forms appear in their entirety in the original and full version of this deliverable.
Lessons Learned (including Issues, Impediments/Barriers, Challenges, etc.) during Deliverable Activities up through Completion:

For this specific Deliverable, there are two significant risks. The first is the reluctance of the EHR vendors to commit development resources to meet the CHIXPY/HIXNY technical specifications; instead, they are focused on retooling their platforms for Meaningful Use. The second are the legal and data use issues in the Payor Data Warehouse; the commercial payors are unwilling to provide their specific pricing data (unlike Medicare and Medicaid), which obviously limits the ability to create financial performance benchmarks and to measure results (such as return on investment).
PURPOSE

The purpose of this deliverable is to identify outstanding project issues, plan for issue resolution, provide an overview of the major activities of the implementation phase, and identify future activities.

OVERVIEW

This deliverable provides a final progress update, specifically focusing on outstanding issues, the plan to resolve the issues, major and future activities.

OUTSTANDING OPERATIONAL ISSUES

Overall, the pilot program and Pod development has progressed as expected. Setbacks were overcome with constant communication, and obstacles surmounted through diligent, creative cooperation. There were two operational issues, however, worth discussing in depth. Both of these issues, while currently “on track,” could reemerge without continued monitoring.

Patient Attribution

One of the fundamental issues that arose during the initial phases of development was how to determine functional patient attribution lists. These lists were essential to determining which patients were included in the pilot and to which practitioner they should be assigned. In addition, the development of the $7 per patient per month was calculated on specific patient populations. Spirited discussions arose among payors, participating practices, and Pods questioning the following:

- The number of visits a patient must have had with a practitioner to be assigned;
- The timeframe to be used to determine the assignable patient population;
- The inclusion/exclusion of part-time residents.

Developing a common understanding of which patients were included and the rationale for patient exclusion was the basis for participating practices knowing the patient populations for which they were responsible and allowed for financial planning since patient attribution lists were important for determining the per member/per month payments.

After significant discussion the stakeholders reached agreement on reasons for excluding a patient from an attribution list. This list was agreed upon and communicated to all stakeholders in mid-March, 2010.
The reasons for patient exclusion include:

- The patient’s insurance plan type is not in the demonstration;
- The patient is no longer a plan member;
- The patient has had no qualifying visits in the date range;
- The patient has had only non-qualifying visits, such as urgent care;
- The agreed upon attribution methodology assigns patient to different provider/practice;
- The member resides out of area;
- Non-contracted or non-credentialed provider.

In addition to the collaborative dialogue, most practices had to learn how to utilize the capabilities of their electronic health records to manage specific patient populations. Developing the processes to enter the necessary data and then being able to identify patients by insurance plan and participation status took significant training and effort. These system capabilities allowed the practices to negotiate and validate patient attribution lists as developed by the payor participants. While the groups have defined common exclusion criteria, on-going communication and validation is required.

**Lack of Trust**

Another significant issue encountered was the fundamental lack of trust between and among stakeholders, which significantly slowed the change management efforts designed to smooth the transformation of care. Traditionally, each participant has a different goal and a different relationship with the patient. Payors organizations are typically entities whose priority is to make a profit by managing the distribution of risks. Their relationship with patients is removed and they generally view patients as risk-stratified groups rather than individuals. Their relationship with a patient is usually dictated by the patient’s employer rather than a selection by the patient. Hospitals’ relationships with patients are primarily through the patient’s physician, who sends the patient to the facilities for procedures, imaging services, and inpatient services; these relationships are typically short-term and episodic. In contrast, physicians’ relationships with patients are the most personalized, and the priority is to treat patients using their medical judgment. Their relationships with patients are long term and deeply personal on both sides. These differing relationships and priorities created fundamental trust issues among the major stakeholders of this pilot.

Inaccurate attribution lists created tension that was exacerbated by the lack of trust.

**Change Fatigue**

The final issue to be recognized is the mental and physical fatigue that occurs when transformations of this magnitude occur. The factors contributing to this fatigue include:
• Rapid rate of change
• Technology
• Process changes
• Fundamental mindset changes

This project was condensed into roughly a twelve month timeframe. Significant changes in workflow, patient management, organizational relationships, and technology utilization were required to accomplish the transformation. The timeframe in which practices were forced to adapt and accept the changes can be likened to the path of an avalanche and not the traditionally glacial pace of healthcare change. Many practices were forced to identify electronic health record vendors, select a system, and implement the system during this timeframe. Daily processes were required to be modified to allow the transition from treating episodically to comprehensively. Accurate, timely information about patients now must cross organizational boundaries and each entity is being persuaded out of their silo.

Participants were forced to change their basic mindset about the delivery of healthcare from autonomous to collaborative. The requirement for collaboration was multiplied across all organizations – each entity needing to work together versus against each other. In short, participants had to change their world view from one in which they were the “top dog” to one in which they are an important part of a team.

ISSUE RESOLUTION

Two facts contributed to the resolution of the issues discussed above, as well as the many other opportunities for conflict that arose. The first was the significant leadership of the New York State Department of Health, and the second was using program management to recognize the need for delayed deadlines without sacrificing the overall project timeline.

Leadership of the New York State Department of Health

The New York State Department of Health (NYSDOH) should be recognized for the leadership and guidance throughout this project. The NYSDOH set the tone for the project by including all participating stakeholders from the beginning. They developed impartial, collaborative relationships with all and provided mandatory, regularly scheduled meetings at which all stakeholders could voice concerns, discuss solutions, and reach consensus. They also leveraged their governance oversight position to ensure resolution and forward progression on contentious issues rather than allowing the project to languish due to competing interests. When patient attribution lists became an obstacle to continued progress, the NYSDOH forced JOINT meetings between the participating providers and payors. The issues were brought to the joint governance meeting and they facilitated a resolution.
The NYSDOH also facilitated constant communication among all stakeholders. They enforced a key requirement of regular meetings and transparent, timely communication on all issues. This prevented the formation of erroneous assumptions and ensured everyone remained focused on the ultimate goal: health care delivery improvement for the region.

**Delayed Deadlines**

EastPoint Health used project management tools to keep the day-to-day activities of the participating practices moving forward despite the fatigue resulting from near constant change. The original program plan established aggressive performance timelines. The NYSDOH worked closely to ensure the original project milestones were adjusted when necessary to ensure stakeholder success. The original program plan identified the goal for all participating practices to submit their NCQA certification applications by December 2010. However, as the initial assessment and gap analysis of capabilities was completed, it became apparent that significant time and effort was needed to ensure the technology foundation was solidly in place to guarantee successful performance improvement and reporting. This recognition resulted in the NYSDOH allowing a two month delay for NCQA medical home certification submission, with a new deadline of February 2011 being communicated to all stakeholders. Each practice successfully met the new deadline. Additionally, they established a new milestone for EMR measurement reporting of 3rd quarter 2011 to ensure success.

As discussed previously, the NYSDOH also worked with participants to establish a new deadline for patient attribution lists to be finalized.

As deadlines were adjusted, all stakeholders were notified and included in the decision. This constant communication is a theme of success and a key risk mitigation factor at all levels and stages of this pilot.

**HISTORICAL OVERVIEW OF MAJOR IMPLEMENTATION ACTIVITIES**

Major implementation activities completed include the establishment of governance structure, legal contract, operational Pods, and successful NCQA certification submissions.

**Governance Structure**

The NYSDOH has established the Governance Committee to provide ongoing oversight for this pilot. They have identified representatives from each stakeholder group, identified routine meeting frequency, and communicated reporting requirements to all participants. The establishment of the overarching governing body is essential to continued progress and reporting.

**Legal Contracts**

After many months of discussion, legal contracts are almost in place outlining the exchange of patient-level clinical and
financial data. The contracts were instrumental in defining how patient information would be reported and who could access the data. The finalization and implementation of these legal contracts was a key activity to ensuring successful performance reporting, measurement, and improvement.

**Operational Pods**

Thanks to the commitment of the Article 28 organization within each CCZ, three functioning Pods have been established and are fully operational. Each Pod has hired a dedicated manager to coordinate the functions of the Pod. In addition, all three have hired the additional staff needed to assist participating providers with continuous quality improvement, care coordination, pharmaceutical management, technology support, and other identified services. Having operational Pods takes significant pressure off participating practices and increases provider commitment to the ongoing performance measurement and reporting requirements.

**Successful NCQA Certification**

One of the major goals required of all participating providers is the successful submission of a complete NCQA patient centered medical home certification application. Although the submission deadline was delayed, each practice has at this point successfully completed and submitted their application.

**FUTURE ACTIVITIES**

**Financial**

Despite the significant amount of agreement/standardization, there are still some areas driving continued dialogue. The major issues of disagreement revolve around the distribution of the enhanced payment. It is understood that the participating practices will be required to share a portion of the enhanced per member per month or “plus up” payment to operate each Pod. This “assessment” will enable the Pods to provide the agreed-upon services including data aggregation and access to advanced practice support practitioners. While acknowledging the need for the Pod structure and subsequent support, there is significant variation among the participating practices as to what a reasonable assessment will be. In the Lake George and Northern Adirondack Pods, the practices have explored multiple options and are currently utilizing a 50-50 split of the potential $7 per member per month enhanced payment. In the other Tri-Lakes Pod, discussions have resulted in methodology that leverages the services utilized on an ‘as needed’ hourly basis with payment then made retrospectively for the services utilized.
In addition, while the majority of participating practices have agreed to the services being offered by the Pods, there are a few practices still expressing disagreement with the need for some of the services offered. Some practices believe they already meet the standards of a fully operational PCMH and do not need any support services. Other practices believe their needs encompass the entire menu of options. Determining the standard expectations for all practices will be an ongoing process.

Participants have begun utilizing evidence-based guidelines and developing the capability to coordinate care across the continuum regardless of location. These changes are designed to deliver financial and care improvements. However, the comprehensive transition of healthcare from one where funding is based on volume (fee for service) to one based on value (outcomes) must be ongoing. Future activities must include working within each Pod to enhance the collaborative relationship between the hospitals and the practices. This collaboration will be elemental to meeting the goals of preventing hospital admissions/readmissions and emergency department utilization. Responsible reduction in the inappropriate usage of these resource intensive activities will be essential to meeting the financial goals of the participating payors.

**Quality**

Quality enhancements have been integrated at all levels of the participating organizations. Each practice has been trained and will follow the same evidence-based care guidelines. Participating practices have also been trained to utilize the Plan Do Act Study (PDSA) process. Future activities must ensure participants use the information collected to improve care and ultimately healthcare outcomes. They must also utilize the PDSA cycle to continuously improve their operations and collaborative management of populations of patients.

**Operational**

Perhaps the most challenging future activities will be sustaining the changes in the operational culture. Ensuring all participants institutionalize the view of healthcare delivery as an interconnected system rather than autonomous, revolving “parts” is imperative. Without constant care it can be expected that each organization will slowly revert to their previous autonomous sphere of influence. Failing to replicate a “systemness” world view will compromise the ability to improve care and ultimately reduce costs which can result from interconnected relationships.
PURPOSE

The purpose of these deliverables is to describe the implemented Sub-regional solutions, implement lessons learned, and recommend future steps. The sub-regional solutions have been broken down by deliverable and discussed in detail throughout this guidebook.

OVERVIEW

Like many rural areas of the United States, the Adirondack region faced a healthcare delivery crisis. In the two years prior to the start of this pilot project, almost one-third of all the primary care providers in this region had left. Many cited long hours, low pay, and the lack of adequate resources and support to make a difference in the lives of their patients. The majority of the 200,000+ patients in this region are elderly who survive in a rural, economically depressed environment. Healthcare resources are clustered and significant areas of the region do not have primary care providers. The State of New York, along with other stakeholders, recognized the crises and worked together to develop pilot program. The pilot began in 2010 and will operate through 2014.

The New York Department of Health and the Medical Society of the State of New York (MSSNY) has undertaken a large scale project to transform the delivery of primary care services to the people living in the Adirondack Region of New York State.

The DOH OHITT/MSSNY Physician Practice Support Organization (PPSO) contract is a result of 2005 legislation directing the Department to “issue grant funding to one or more organizations broadly representative of physicians licensed in this state.” Project funding was directed “to include, but not to be limited to”:

- efforts to incentivize electronic health record adoption;
- interconnection of physicians through regional collaborations;
- efforts to promote personalized health care and consumer choice;
- efforts to enhance health care outcomes and health status generally through interoperable public health surveillance systems and streamlined quality monitoring.”

The MSSNY PPSO contract was comprised of three components with eleven deliverables. An overview of each of the components is provided.
Component 1: Statewide Work Group

A Statewide Work Group was formed by MSSNY in order to provide guidance and information to those groups of solo/small practice physician groups who are considering development of a PPSO-like organization. Dr. John Rugge is the Chair of the working group and Dr. Salvatore Volpe is the Vice Chair. The group includes experts from across New York as well as representatives from the Adirondacks. This handbook is a direct result of the Statewide Work Group and describes the activities of the Adirondack Patient Centered Medical Home Demonstration Pilot and includes the PPSO Mission Statement, PPSO Quality Services, PPSO Business Entity Grid, and Comparison Grid of Quality-driven Projects in NYS. NYeC along with other stakeholders will be provided with a copy of this handbook which will also be available on-line.

Component 2: Implementation of 3 Sub regional Solutions in the Adirondacks

The contract calls for implementation of the 3 sub-regional solutions “to address the issues of access to care, care coordination, evidence based guidelines, quality of care, and performance reporting.” This component includes discussions of the following:

- A baseline Pilot readiness assessment of the practices (Deliverable 2)
- A description of the PPSOs to be implemented (Deliverable 3)
- An initial description of the governance structures and overall scopes of service for the PPSOs (Deliverable 5)
- Interim progress report on PPSO development (Deliverables 7 & 9)
- Final report on PPSO development (Deliverable 10)

Component 3: Technology Project

The technology project within the contract is “for the costs of interfaces, software and other technical costs and support services to facilitate data access / exchange and connectivity with RHIO’s and the SHIN-NY.” Prior to HEAL 10, the technology project was planned to be the only health information technology for a large majority of the practices within the Adirondack Medical Home Multi-Payor Demonstration. Since the award of the HEAL 10 grant, DOH has directed the technology hardware and software funds to be directed to HIXNY, the local RHIO, for interconnectivity. This component includes information regarding:

- A technology design (Deliverable 4)
- A plan for performance reporting (Deliverable 6)
- A technology implementation plan (Deliverable 6)
- A technology operating plan (Deliverable 8)
Finally the project concluded with the re-convening of the Statewide Workgroup to make recommendations regarding implications for statewide expansion as needed for connectivity for small and rural practices throughout New York State. The legislation also called for a final report from the Department that includes (among other requirements) “the appropriateness of a broader application of the health information technology program to increase the quality and efficiency of health care across the state.” This document discusses the findings and processes believed to have statewide applicability which would encourage the reproducible transformation of primary care throughout the State of New York.

**CARE DELIVERY PROCESS IMPROVEMENTS**

**Access to care**

Enhancements include appropriate triage, same-day appointments, expanded hours, and innovative methods of allowing patients to communicate with their personal physician in a timely manner and in a language which is most comfortable for the patient. In the NCQA PCMH, there is one Standard and two Elements related to Access to Care, both of which are “Must Pass” criteria. Consistent and perpetual measurement and reporting is key to continued improvement.

**Care Coordination and Patient Management**

Enhancements in care coordination and standardized delivery are the foundation of transforming primary care. This project identified Hudson Headwaters Health Network’s “Blue Print for the Patient Centered Medical Home” as a “best in practice” that could be used in all areas. In addition, the standardized approach to patient management, including processes related to Stratification, Outreach, Encounter, Follow-Up, and Monitoring is easily implemented in any location.

**Performance measurement**

Standardization of care coordination and management, as well as the accompanying technology are key to developing and measuring performance. However, it is not enough to “think” care has been improved or cost reduced. Any successful replication must include the ability to objectively measure performance outcomes and compare performance across or between regions. The ability to extract standardized data elements and standardized performance data out of electronic systems is elemental to successful replication.

**Quality of care**

The homogenous identification, selection, and application of evidence-based guidelines is critical to improving the quality of care in a financially beneficial manner. This project selected five conditions, two for the pediatric population
and three for adults. The conditions selected for pediatrics were related to obesity and asthma management. The three conditions identified for the adult population were hypertension, diabetes, and chronic coronary artery disease. These five were chosen to provide the biggest impact in terms of improvements in health outcomes, as well as the potentially biggest reduction in cost. Once the conditions were identified, the optimal course of treatment will be derived from evidence-based research followed by the adoption of treatment “pathways” across the region. This deliberative process will be essential if other facilities or regions desire to transform the delivery of care.

**CRITICAL SUCCESS FACTORS**

**Communication of change management**

A cornerstone to the success of this project was the dedication of participants at all levels to communicate frequently, transparently, and honestly about all aspects of the project. Failure to keep all participants engaged and informed of timeline adjustments could limit success in other areas.

**Technology**

The significant investment made in developing and implementing electronic health records is a foundational requirement of expanding this project to other regions. Without electronic health records and disease registries feeding standardized data into RHIOs/HIEs, providers will not be able to measure performance OR identify if the dual objectives of clinical care improvement and reduction of cost are met. Any region wishing to transform care must be aware of the critical role technology plays.

**Scale to create “Systemness”**

One of the most challenging aspects of replicating these efforts to other areas is to recognize and actively work to change the overall culture of healthcare delivery. Ensuring all participants begin to view healthcare delivery as an interconnected system rather than autonomous revolving “parts” is imperative. Without conscious effort, participants will continue to only adjust autonomous spheres of influence. Failing to replicate a “systemness” world view will compromise the ability to improve care and ultimately reduce costs which result from interconnected relationships.

**Continuous quality improvement**

Initial training and focus will ensure participants practice patterns are changed. Participants must also be trained on a continuous improvement model to ensure they have the tools to aggressively continue to evolve to meet the future needs of patients. Without an emphasis on continuous process improvement, ensuring it becomes an integral part of
how each practice operates, it is easy to lose improvements. This project used the Plan Do Study Act (PDSA) process. However, we believe any recognized, standardized process to address continuous process improvement could be used.

**Payment reform**

Any consideration of State-wide replication must include fundamental changes from current reimbursement methodologies used by all third party payors. The traditional fee-for-service mechanisms reward the volume of patients seen or procedures performed. There is currently no, or very limited, financial value placed on the “value added” activities required in a Patient Centered Medical Home (PCMH) organization. In PCMHs, care is to be managed and duplication eliminated. To accomplish these goals, significant financial investments must be made to upgrade infrastructure and enable the technology needed to measure and monitor care. In addition, significant financial investments are needed to enable the operational and staffing changes required to coordinate care. The current expectation for these investments to be paid for in advance of payment reforms is unrealistic.

**IMPLEMENTATION RISKS**

**Operational infrastructure development**

Significant time and energy has been spent in identifying organizations with the breadth and depth of resources to serve as Physician Practice Support Organizations (PPSOs). These organizations were willing to provide the funding and staff to begin this transformation before funding occurred. These organizations also committed significant time and energy to participating in routine meetings during all phases of the process. It would be imperative to find Article 28 organizations in other regions wishing to replicate the success of this project.

**Delivery system reform**

As discussed, a critical success factor is comprehensive payment reform. However, one of the major implementation risks is working to successfully embed a change in the healthcare culture. Healthcare delivery functions as autonomous silos with each participating provider receiving reimbursement for the number of patients seen; the number of tests run; or the number of procedures performed. One of the objectives of any replication will be to reduce the overall cost of healthcare delivery. Failure to work with participants to change their view of healthcare from a “solo sport” to a team-based endeavor would be fatal. Any participants must be able to see the delivery of care along a continuum and as being delivered from interconnected systems rather than autonomous, revolving “parts.”
**Funding**

As is the case with most efforts, the lack of adequate funding would be a limiting factor to replication. Significant funding is needed for technology development and application, staffing, performance reporting, and loss of productivity necessary to develop and deliver Patient Centered Medical Homes.

**Construction of measurement systems for continuous quality improvement**

Bringing all participants to agreement on performance measurement is required. The diversity of organizations needed to successfully participate is a challenge in replicating this project. Agreeing on the conditions with the greatest return on investment in terms of both cost and healthcare outcomes is the first step. Perhaps more difficult is the need to obtain consensus from payors, hospitals, physicians, and governmental entities and develop the technology to support:

- What to measure
- How to measure
- How to report
- Who is granted access to the information
- How it will be stored

**RISK MITIGATION STRATEGIES**

**Communication**

Communication across all participating stakeholders has been identified as the single biggest element to mitigate risks and ensure success. Strategic communication is imperative to ensure a common definition of success is defined; this can be accomplished through structured, regular meetings at the State level. These meetings should include all stakeholders representing legal, government, participating payors, participating practices, and contractor organizations. Tactical communication is needed to translate strategy into operationally achievable actions and should address governance, service offerings, and technology needs.

**Change management**

Using a structured approach to manage the significant changes necessary for transformation is required for successful replication. This project used thoughtful planning and solicited input from all stakeholders. The implementation was sensitive to the concerns of all involved and recognized the need to develop a realistic timeline. Experts agree that for long-
term change to occur, goals must be realistic, achievable and measurable. One of the key risk mitigation strategies is to ensure all participants fully understand the strategic, operational, and financial imperatives driving the transformation of care throughout the State.

**Program management**

Intense program management with constant milestone tracking to ensure compliance with the requirements and timelines should be undertaken during replication. An initial goal should be to develop realistic timelines with achievable milestones which are supported by all involved. Structured program management should then be used to communicate timelines and assign responsibilities, identify issues quickly, and rapidly work to their resolution in an effort to maintain compliance and reduce financial and personnel resource consumption.

**Data and information standardization**

Creating a standard agreement as to what will be measured, how it will be documented, how it will be measured, how it will be reported is very important. It is also critical to discuss and agree to which organizations will provide information, which organizations can access the information, and how the information will be utilized by all organizations to improve care and reduce costs.

**Leadership dyads**

To successfully replicate this project, it will be imperative to develop governance structures that provide a voice to pertinent stakeholders. It is also important to ensure those serving in leadership positions have sufficient breadth and depth of influence to ensure gridlock doesn’t occur when organizations that are traditionally mistrustful of each other attempt to collaborate.

**OUTSTANDING OPERATIONAL ISSUES**

**Patient attribution**

One of the fundamental issues that arose during the initial phases of development was how to determine functional patient attribution lists. These lists were key to determining which patients were included in the pilot and to which practitioner they should be assigned. In addition, the development of the $7 per patient/per month was calculated on specific patient populations. Developing a common understanding of which patients are included and the rationale for patient exclusion is fundamental for participating practices to know the patient populations for which they are responsible. It also allows for financial planning, since patient attribution lists are important for determining the per member/per month payments.
It is important to ensure practices know how to utilize the capabilities of their electronic health records to manage specific patient populations. Developing the processes to enter the necessary data and then being able to identify patients by insurance plan and participation status may take significant training and effort. While the groups in the pilot project have defined common exclusion criteria, on-going communication and validation is required.

**Lack of trust**

Another significant issue encountered during the project was the fundamental lack of trust between and among stakeholders, which significantly slowed the change management efforts designed to smooth the transformation of care. Traditionally, participants have different goals and different relationships with the patient. Payors typically view patients as stratified risk groups; hospitals view patients as short term relationships, and physicians’ relationships with patients are personal and long-term. Data inaccuracy can also contribute to a lack of trust among participants, even if innocent in nature.

Realizing these differing relationships and priorities create fundamental trust issues among the major stakeholders is important when replicating to other areas. Constant vigilance is necessary because trust is extremely hard to establish and easily lost. Each set back slows the change management process and slows the ultimate transformation toward Patient Centered Medical Homes.

**Change fatigue**

The rapid rate of change necessitated by this project, as well as the comprehensive nature of change, created significant mental and physical fatigue. Transformational changes in workflow, patient management, organizational relationships, and technology utilization were required. The pace of change was accelerated and contributed to the fatigue. Participants were forced to change their basic mindset about the delivery of healthcare and change their world view from one in which they were the “top dog” to one in which they are an important part of a team. For replication to succeed, the fatigue created must be accounted for and factored into the overall project plan.

**ISSUE RESOLUTION**

**New York State Department of Health (NYSDOH) Leadership**

NYSDOH provided the leadership and guidance throughout this project. They set the tone for the project by including all participating stakeholders from the beginning. They developed impartial, collaborative relationships with all and provided mandatory, regularly scheduled meetings at which all stakeholders could voice concerns, discuss solutions, and reach consensus. They also leveraged their governance oversight position to ensure resolution and forward progression on
contentious issues, rather than allowing the project to languish due to competing interests. The NYSDOH also facilitated constant communication among all stakeholders. They enforced a key requirement of regular meetings and transparent, timely communication on all issues. This prevented the formation of erroneous assumptions, and it fostered trust as everyone remained focused on the ultimate goal: health care delivery improvement for the region. Leadership also ensured program management skills were applied to this project. Program management differs from project management by strategy and scope. Program management ensures the correct projects are selected, coordinated, and completed to deliver long-term improved performance. The NYSDOH ensured the efforts of this project, the HEAL 10 grants, and HIXNY project all supported the transformation and improvement of healthcare delivery through the development of technology, performance improvement, and required reporting.

For any replication of this project to be successful, the continued vision, leadership, and guidance of the NYSDOH will be critical.

Delayed deadlines

Transformation on this scale requires training and performance coaching to minimize the dissonance that occurs when expected patterns and processes are disrupted. The original program plan established aggressive performance timelines. The NYSDOH worked closely to ensure the original project milestones were adjusted when necessary to ensure stakeholder success. This insight and flexibility was essential in mitigating the change fatigue and helped break down some of the inherent lack of trust. Several key deadlines were adjusted, including the submission requesting NCQA certification, to ensure participants were successful. As deadlines were adjusted, all stakeholders were notified and included in the decision. Constant communication is a theme of success and a key risk mitigation factor at all levels and stages of this pilot. While it is imperative in any attempt to replicate this project to establish timelines and meet aggressive change goals, it is just as important to remain flexible during the execution of transformational activities. Strict adherence to initial milestones can result in resentment and lack of enthusiastic participation.

LESSONS LEARNED

Recognizing and managing significant learning curve

The transformation of the delivery of primary care services required by the Patient Centered Medical Home is a complete change in every facet of delivery. There is a significant learning curve for all involved stakeholders from the primary care provider, to the insurance company, to the governmental/legal rules. The effort and time needed to learn to embrace and work effectively in this new structure should not be underestimated. In PCMHs, care is delivered through effective,
integrated care teams leveraging technology to focus on providing the best patient care regardless of site of service. A focus on standardized care through the use of evidence-based guidelines is also a change from traditional methods. In the new model required in the pilot program, providers must seek out evidence-based medicine and adhere to definitive care methodologies.

The payor community is also required to embrace significant changes in mindset. Historical reimbursement relationships have been based purely on volume. Working with providers and providing reimbursement for “value added” management and care coordination activities is a significant operating change and takes time for the payor community to modify payment, administrative, and financial models.

The current federal and state legal restrictions designed to prevent collusion and price fixing also make the full implementation of PCMH a complex undertaking. Significant education and discussion between multiple governmental and legal entities including the New York State Department of Health, the New York State Department of Insurance, the New York State Attorney General, the Medical Society of the State of New York, as well as the other stakeholders is required for replication. Understanding the existing barriers to implementation take significant time, energy, and commitment.

**Recognizing and managing significant time investment**

Overcoming the historic, legal, financial, operational, and practical barriers on any massive change takes significant time. The overall complexity of the pilot project should not be underestimated, and it is important to acknowledge and design a plan to ensure the long term commitment and focus of all stakeholders. Additionally, overcoming the historical relationship between the necessary stakeholders will take significant time investment. As an example, most provider organizations and payor organizations are traditionally on opposite sides of the healthcare equation. Transforming this relationship into a collaborative one rather than the competitive one will require significant investments in time to develop and maintain trust.

**Understanding and developing necessary technology**

It is important to understand the lack of nationally standardized technology infrastructure or data exchange elements create complexity that must be recognized for any effort at replication to succeed. Significant time and effort was spent to reach agreement on how to ensure standardization despite the various electronic systems utilized by participating organizations. The level of interoperability needed from complex, disparate systems for this project is groundbreaking. At the beginning of the project no one understood the effort and time involved in identifying common measurements, and then determining how these measurements could be extricated from each system to ensure comparability of data. Without leveraging information technology, it might be possible to meet the patient improvement goals of this project, but it would not be feasible to measure and report clinical or financial performance improvements. Additionally, a significant amount of time
and effort was spent examining how to protect patient health information, obtain appropriate consents, and building the flow of the right level of information to the right participating organization.

**FUTURE STEPS**

**Fully leverage technology**

Interactive technology is the bedrock for successfully managing health outcomes and accurately measuring the financial impact of improvements. It is imperative that practices, hospitals, and payors use the data derived from their systems to create useful information and ensure continuous improvements for the benefit of patients. Information should be used to improve health outcomes through the use of data tracking and trending, accurate stratification of patients, and coordination of care to ensure treatment in the most appropriate setting. Used continuously, these tools have the potential to significantly improve healthcare and significantly reduce costs associated with rendering care. Failure to fully leverage the time and financial investment in technology will reduce the impact of the pilot project and would be fatal to any attempt to replicate the process.

**Continued common vision**

There are many organizations that must participate to transform healthcare delivery and reduce costs. Each of these organizations have diametrically opposing financial goals. Payors wish to keep costs low, physicians wish to treat patients as they see fit with limited interference, the State of New York wishes to ensure healthcare is locally available to all citizens, and patients just want to receive coordinated care from someone they trust while someone else pays for it! Aligning stakeholders is only possible through trust in a shared vision. A shared vision based on trust and common purposes can be created through facilitated meetings, as was done in this pilot project. These activities must be nurtured into the future through constant, open communication that is accurate and transparent. All stakeholders should be included without any groups “boxing out” or marginalizing any other group. This is another key to future replication.

**Funding transition**

A significant transformation during this pilot program is the commitment made by the major payors to provide a per member/per month management fee to each participating provider obtaining NCQA PCMH recognition. This is the beginning step to help transition healthcare from one based on volume of services provided to one based on the value of services provided. Payors recognize the increased time needed by providers to engage their patients, ensure patient buy-in, and coordinate healthcare – all activities to which no incentive was linked in the old reimbursement model. Payors in this pilot project hope to be financially rewarded by healthier patients who prevent illness and obtain care in the most appropriate, cost effective setting. Providers are excited that foundational services are now financially valued.
To ensure continued progress in this project, payors and providers will need to continue to work together to monitor financial performance for participating patients against baseline data. While the pilot project will attempt to reduce emergency room visits and avoidable hospitalizations, future considerations could include a shift to a shared savings model providing additional reimbursement for those that significantly improve health outcomes. Accurate, timely monitoring of patient level financial data in conjunction with clinical outcome data is key to ensuring stakeholders remain committed for the duration of the five year pilot and beyond.

Any replication effort must include training physicians to fully understand the new funding models and continued support by the payor community.

This document and the complete set of EastPoint Health deliverables are available in their entirety on the MSSNY web site at http://www.mssny.org/mssnyip.cfm?c=s&nm=Health_Information_Technology.

For additional information on Patient Center Medical Home visit http://www.ncqa.org/tabid/631/default.aspx

**Acknowledgment**

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