

STATE HEALTH POLICY

STATE HEALTH POLICY BRIEFING PROVIDES AN OVERVIEW AND ANALYSIS OF EMERGING ISSUES AND DEVELOPMENTS IN STATE HEALTH POLICY.

State, federal, and private agencies are exploring and investing in new health care delivery models—including nearly \$300 million awarded to states to support State Innovation Models (SIM), multi-payer payment and care delivery transformation initiatives. Successful care delivery transformation efforts hinge on provider and payer access to reliable and comprehensive data through robust quality measurement, reporting, and feedback infrastructure as enabled through robust health information technology (IT). This *State Health Policy Briefing* describes key elements of an aligned health IT-enabled infrastructure as identified by state, federal and private leaders involved in the HIT Trailblazers States project, a joint initiative of the NASHP and ONC. Together, these elements form a focused, achievable vision for how states and their stakeholder partners can efficiently develop and operationalize a quality measurement and reporting infrastructure that supports patient-centered, value-based care delivery.

NATIONAL ACADEMY
for STATE HEALTH POLICY

Briefing

A PUBLICATION OF THE NATIONAL ACADEMY FOR STATE HEALTH POLICY

JUNE 2013

A Vision for Quality Data Infrastructure to Support Health System Transformation

*Christina Miller
Abigail Arons*

Recent years have seen a vast shift in the health care landscape, with state, federal, and private agencies alike investing in new models to deliver and pay for health care. These investments are intended to curb rising health care costs¹ while promoting patient-centered, value-based care—care that rewards better quality and outcomes at lowered cost. Recently, for example, the Centers for Medicare and Medicaid Services (CMS) awarded nearly \$300 million to states to support State Innovation Models (SIM), multi-payer payment and care delivery transformation initiatives intended to improve health system performance.² Meanwhile, 14 states are actively pursuing implementation of various models of accountable care³—delivery systems in which providers are financially accountable to achieve higher quality care. More than 40 states have adopted policies and programs to advance the proliferation of medical homes, an enhanced model of primary care delivery emphasizing comprehensive, coordinated, and patient-centered care.⁴ Under Medicare, there are 253 Accountable Care Organizations (ACOs) participating in the Shared Savings Program and the Pioneer ACO model⁵ and nearly 500 primary care practices are participating in CMS' Comprehensive Primary Care initiative.⁶

The HIT Trailblazers Project

The HIT Trailblazers Project, a joint NASHP and ONC initiative, supports a group of eight leading states to develop and implement a statewide electronic quality measurement, reporting, and feedback infrastructure that supports multiple goals including delivery system transformation and payment reform. The HIT Trailblazers states are Arkansas, California, Maine, Massachusetts, Michigan, Minnesota, Oregon, and Rhode Island. All eight states have State Innovation Model awards and, through the HIT Trailblazers project, are developing action plans for the data infrastructure that will support their SIM work.

In January 2013, federal and state leaders gathered in Washington D.C. as part of the Trailblazers project. This brief largely reflects thoughts shared by meeting participants and thoughts shared throughout the project by Trailblazer states.

Traditional vs. E-measurement

Historically, quality measurement has “relied heavily on administrative data, particularly claims” or clinical information gathered manually from chart abstraction or insertion of codes into claims. This has limited the ability of data to spur improvement, as once reported and analyzed, these data are no longer timely or are limited in the scope of information it can provide about individual patients within and across care settings.

Electronic, or e-measurement, as enabled through enhanced health IT, promises automated data collection and reporting, near instant access to previously inaccessible information, and opportunities for data to follow patients across care settings “facilitating the measurement of quality across providers and time.”

Kristine Martin Anderson, Christina A. Marsh, Anjanette C. Fleming, et al., “An Environmental Snapshot: Quality Measurement Enabled by Health IT: Overview, Possibilities and Challenges,” Agency for Healthcare Research and Quality Pub. No. 12-0061-EF

Successful care delivery transformation efforts hinge on provider and payer access to reliable and comprehensive data on the quality and cost of care delivered. Such data:

- equip providers with information necessary to make improvements in their practices;
- enable public and private payers to hold providers accountable for improvement; and
- allow state, federal, and other health care leaders to target and evaluate care transformation policies and provide transparency to consumers.

Furthermore, data measurement and reporting should be enabled by health information technology (IT), that is, electronically captured and reported so that data can flow directly from clinical settings and give providers and stakeholders near real-time information to improve care and health outcomes (See text box, Traditional vs. E-measurement).⁷

Providers are rapidly implementing⁸ numerous health IT tools to meet this need, including electronic health records (EHRs)⁹ through which they can capture, calculate, and report data. However, efforts to use the data to measure quality are typically not aligned across payers or programs. This results in a significant cumulative burden on providers as they calculate and report numerous quality measures

and receive feedback too unfocused to drive actual quality improvements. Furthermore, data are captured, reported, stored, and distributed through a variety of vehicles, often using inconsistent or duplicative formats. The U.S. Department of Health and Human Services (HHS) alone has an inventory of more than 2,000 measures that providers in various programs report across nine of its agencies.¹⁰ In addition, state agencies and private sector entities have implemented many of their own measurement and reporting requirements for state and regional payment and care delivery initiatives. This environment fosters a “patchwork” system that does not allow for consistent capture of “necessary key data elements in consistent formats [or] exchange those elements across systems.”¹¹

Recognizing the need to address current fragmented systems, states and the federal government—along with their stakeholders—are moving to align data measurement and reporting processes and infrastructure across national, state, and local initiatives. Current federal efforts, for example, include work to improve policies to measure development across federal agencies; implementation of unified measures and reporting requirements across CMS programs; and enhanced standards for data captured through certified EHRs (see text box Federal Measure Alignment Efforts for more detail about current federal initiatives).

Federal Measure Alignment Efforts

HHS Measure Policy Council

Created in spring of 2011, the HHS Measure Policy Council is a group of federal leaders assembled from across HHS agencies, including CMS, to establish and operationalize policies for HHS-wide new measure development and implementation. The Council currently is focused on alignment and prioritization of measures in six major areas: hypertension, depression, smoking cessation, hospital-acquired conditions, care coordination, and patient experience of care. In the long-term, the Council is tasked with developing a process for reviewing strategies for measure alignment, new measure development and implementation, and measurement policy and management.

CMS Internal Alignment

Programs within CMS are planning to implement a unified set of electronic clinical quality measures (eCQMs) and e-reporting requirements to align CMS quality programs and reduce provider reporting burden. Their three part strategy is to 1) **improve quality of care** using robust quality measures, timely feedback to hospitals and physicians, and meaningful use of EHRs, 2) **minimize burden** by synchronizing performance and reporting periods and allowing providers to report eCQM data only once using the same measures and e-specifications across programs, and 3) **maximize efficiency** by utilizing eCQM reported data submitted by providers for multiple quality programs.

EHR Incentive Payment and Health IT Certification Programs

Enhanced certification standards for EHRs promoted through the CMS EHR Incentive Payment Program and the HHS Office of the National Coordinator for Health Information Technology (ONC) Health IT Certification Program¹² require EHRs to capture clinical data necessary for quality measurement as part of care delivery and calculate and report electronic clinical quality for all patients treated by individual providers. As clinical measures become more patient-centered and longitudinal, these standards and certified health IT will evolve to also enable facilitated measurement of patient outcomes and performance across teams of providers accountable for a patient's care and costs.

This brief describes key elements of an aligned health IT-enabled quality measurement infrastructure as identified by state, federal and private leaders involved in the *HIT Trailblazers States* project, a joint initiative of the National Academy for State Health Policy (NASHP) and ONC. These elements include:

1. A core set of quality measures in payment reform programs aligned to priority goals shared by private and public payers and providers;
2. Data that flows efficiently and securely;
3. Architecture that enables efficient data collection, reporting, and feedback;
4. Access to timely and actionable data; and
5. Providers motivated to improve care through the use of health IT.

Together, these elements form a focused, achievable vision for how states and their stakeholder partners can efficiently develop and operationalize a quality measurement and

reporting infrastructure that supports patient-centered, value-based care delivery.

KEY ELEMENTS OF HEALTH IT-ENABLED MEASUREMENT, REPORTING, AND FEEDBACK INFRASTRUCTURE TO SUPPORT HEALTH SYSTEM TRANSFORMATION

1. A CORE SET OF QUALITY MEASURES ALIGNED TO PRIORITY GOALS

Multiple programs require providers to report on measures that gauge the quality, process, and outcomes of care delivered. These measures proliferate across federal, state and private sector programs and result in redundant, burdensome reporting practices and disparate feedback streams that make it difficult for providers and other stakeholders to interpret and use data to enact meaningful care delivery improvement. New care and payment models being implemented across public and private payers should instead rely

Priority Areas of Focus for Core Measure Development

Measures that can drive and evaluate improvement are at various stages of development. State and federal governments have prioritized measure development for several areas that lack well-established measures including: care coordination, longitudinal patient experiences, population health, and care process changes. When developing a core measure set, the federal government, states and/or stakeholders must strike a balance between relying upon existing measures—many of which derive from claims data—and developing an evidence base for new transformative measures derived from electronic clinical data.

on an **aligned core set of e-measures** to allow for consistent, focused and effective improvements in care and outcomes.

To be included in the core set, measures should be:

- **Meaningful:** accepted by providers and other stakeholders and viewed as useful and accurate tools to gauge performance;
- **Valid:** backed by rigorous scientific evidence showing that the measure truly can be linked to improvement;
- **Parsimonious:** limited to a small number, with specific attention to measures that will lead to accomplishing priority objectives; and
- **Tied to mutual priorities:** intended to achieve explicit shared outcomes across stakeholders.

Naturally, individual programs will have different measurement goals that extend beyond the main priorities of a state or federal agency. In addition, measures—and the data collected by different parties—may serve different purposes and require that the core set be augmented with program-specific measures. For example, data needed to examine population-level improvements might be different from those needed for stakeholders to examine or report on provider performance. Ultimately, measure definitions and measurement processes should be flexible to allow for multiple uses.

2. DATA THAT FLOWS EFFICIENTLY AND SECURELY

Data should be **captured as a part of routine care delivery and flow efficiently and securely to all appropriate places to enable measure calculation and reporting.** Currently

many roadblocks exist along a typical data flow pathway, including:

- historically siloed legacy data systems that use different vocabularies or standards and require workarounds to make data decipherable to other systems;
- inefficient methods to gather clinical data, such as manual chart abstraction and interpretation of claims codes;
- mistrust among stakeholders, especially when they do not perceive any benefit to sharing or reporting data;
- for-profit entities that benefit financially from intercepting data flow; and
- real and perceived restrictions on the ways data can be identified and used, including federal and state privacy and security requirements (e.g., HIPAA privacy and security rules).

Thoughtful approaches to governance, privacy and security and identity management, or how data is linked to specific patients and providers, can mitigate these barriers to smooth information flow, as described below.

Governance. Data infrastructure, collection, and use must be appropriately controlled by a qualified organization or group of organizations that can receive quality measurement data from providers and report feedback on their performance. Governance models will be informed by federal requirements for Medicare Qualified Entities (QEs) and qualified clinical data registries,¹³ but could also vary from state to state, taking into account existing governance structures, state specific

Privacy and Security Legal Framework

While there is a great variation among state laws, HIPAA provides a federal floor of protection for patient-identifiable information. Notably, HIPAA allows use and disclosure of data between and among providers for treatment purposes and between and among providers and organizations working on their behalf (e.g. business associates) to support quality improvement efforts such as measurement, feedback, and reporting of performance information. In addition, other federal and state laws provide additional protections for specific types of patient information such as behavioral health and substance abuse information.

privacy laws, and trust, competition, and mutual priorities among stakeholders. Effective governance will require clear policies that define stakeholders' ownership and allowable use of data, supported technical safeguards that are part of the infrastructure.

Privacy and security. Protection of privacy and security of patient data and other proprietary information is crucial to ensure trust in, and appropriate use of, health IT; however, ensuring privacy and security will, by nature, limit data flow. Use and disclosure of identifiable patient information is governed by a number of federal and state laws (see text box: Privacy and Security Legal Framework). Thus, when building privacy and security safeguards, curators of health IT infrastructure must systematically address state and federal privacy and security requirements and ensure these requirements are met in ways that will least impede data flow.

Identity management. To facilitate efficient data flow, systems must have a comprehensive strategy to identify unique patients and providers. Different systems use different codes to label a patient or a provider. As a result, data coming from various systems about the same person or provider group do not automatically link to a single record for that patient or provider. The issue is further complicated by various requirements on what types of data can be linked to a specific person or provider and who or what systems can then access that data. In the short term, improved identity management processes require the development of more efficient workarounds for misaligned data management. Going forward, alignment of identities for both patients and providers across data collection and reporting systems offers great potential to expedite data flow.

Some states are currently trying to develop authoritative provider directories able to more effectively compile provider information across multiple data sources. For example, in 2012, Vermont began development of a new digital service oriented architecture (SOA) enterprise system (an electronic infrastructure system that facilitates the ability of data to be collected and used across multiple platforms) to link information about providers and patients across the state health information exchange, the Vermont health and human services enterprise platforms, the health benefits exchange, and legacy IT systems from across state agencies. The system will use both probabilistic matching, which statistically identifies records that are **likely** the same individual, as well as deterministic matching, which links records that are **actually known** to be the same individual.

3. ARCHITECTURE THAT ENABLES EFFICIENT DATA COLLECTION, REPORTING, AND FEEDBACK

To build a truly streamlined and efficient system, states and their partners must consider each element of the health IT infrastructure as a piece of an overarching systematic architecture, rather than in isolation. Such components of this technical infrastructure include:

- EHRs that support providers in capturing, calculating, and reporting quality measures;
- Technology that can accept, transform, and aggregate data into local, state, and national systems (ex. databases, registries);
- Tools to analyze data and produce actionable and consumable feedback for various stakeholders including providers and consumers; and
- Security systems that meet federal and state requirements to maintain patient privacy and protect identifiable patient information from breach or other unauthorized use or disclosure.

New technologies must weave together these components to ensure a seamless flow of data, thereby minimizing duplicative data and redundant collection and reporting efforts. Stakeholders should consider ways to align their infrastructure components to fit within the overarching system. Recognizing private-sector vendors will build much of the technology, they should also collaborate to leverage collective purchasing power when contracting for services and products.

4. ACCESS TO TIMELY AND ACTIONABLE DATA

To achieve near real-time, value-driven improvement, stakeholders must have access to data that is relevant and timely. Stakeholders must work in partnership to leverage shared data collection mechanisms. One method would be through the use of data intermediaries for increased efficiency in aggregating and reporting data collected across multiple sources (see text box: role of intermediaries). Additionally, stakeholders should optimize new standards to collaborate on creating a standardized reporting and feedback process that streamlines the way data is presented to providers and other relevant entities.

5. PROVIDERS MOTIVATED TO IMPROVE CARE THROUGH THE USE OF HEALTH IT

As the main point of contact between patients and the health care system, providers play a key role in collecting, reporting,

Role of Intermediaries

Past efforts have demonstrated that collecting and processing data at a local level through a trusted partner can be very effective. “Intermediaries” are regional or state-wide organizations whose narrower scope allows them to aggregate and standardize data while maintaining trusted relationships with providers and other stakeholders to ensure privacy and security requirements are met as well as measurement validity and reliability. They can share patient level data back with providers to drive improvement, and aggregate data to report to state and federal governments and other stakeholders. An intermediary could be within an HIE, a public-private measurement organization, or any other entity that is sustainable, well-governed, and has the capacity to collect and process multi-payer claims and clinical data.

and responding to data on the quality and efficiency of care. Using an electronic infrastructure requires changes in provider culture and practice and many providers lack the resources, tools, and motivation to report and share data electronically or incorporate data into their care delivery workflow.

To engage providers, it is important to consider first how to incentivize providers to both implement and use available technologies. Many providers, for example, have earned incentives available through the Medicaid and Medicare EHR incentive program to adopt, implement, or upgrade certified EHRs. Once providers have the necessary technology, other incentives can be strategically leveraged to promote the technology’s use. Specifically, incentives should be tailored to promote the use of health IT to promote the delivery of quality care versus a high volume of care.

In addition to technological needs, providers need education and resources to participate in and support change. For example, providers need information about effective workflow redesigns that enable effective use of health IT to improve the delivery of care. Additionally, providers need clear explanations about ways in which data collection will help them meet their improvement goals, as well as practical examples describing how to use the data to improve quality and efficiency.

CONSIDERATIONS FOR IMPLEMENTING THE KEY ELEMENTS OF HEALTH IT-ENABLED MEASUREMENT, REPORTING, AND FEEDBACK INFRASTRUCTURE

As leading states and federal partners have begun to build their quality improvement infrastructure, they have uncovered a variety of challenges, considerations, and potential solutions. While these challenges and considerations vary by state, the issues raised illustrate key overarching components necessary to achieve a shared vision for improved health and care delivery enabled through health IT.

THE ROLES OF STAKEHOLDERS IN PROMULGATING HEALTH IT AND QUALITY IMPROVEMENTS

Before building or refining quality data infrastructure, there must be a clear awareness and identification of each contributor to data collection and reporting, as well as of other stakeholders invested in data collection and reporting. Once stakeholders are identified, states and their partners should clearly assess and establish the role each should play within its broader health IT infrastructure, including the role of public and private entities in nurturing and sustaining health IT infrastructure to facilitate data sharing and use.

IDENTIFICATION OF PRIORITIES FOR QUALITY MEASUREMENT AND IMPROVEMENT

It is equally important to identify common goals for improvement, such as the Triple Aim of reducing cost, improving quality, and improving population health,¹⁴ or a disease-specific goal such as improving cardiovascular disease trends. To the extent possible, goals must then be tied to a business case, with compelling research or evidence that endorsement of goals and the activities to achieve those goals will, in fact, achieve desired improvement outcomes or cost savings. Stakeholders may then examine the process changes and infrastructure most needed to accomplish those goals, and identify efficiencies that might be created by collaborating to build, improve, and incent shared systems and infrastructure. Ultimately, this meticulous and deliberative process should lead to development of a system-wide strategy for quality improvement supported by infrastructure designed specifically to meet mutual improvement goals.

FACILITATING DATA TRANSFER ACROSS CARE SETTINGS TO PROMOTE CARE COORDINATION

In order to optimize patient-centered care, data measurement and reporting infrastructure should facilitate care coordination across settings. More advanced systems will ensure that data flows smoothly back and forth across multiple care settings—including hospitals, outpatient clinics, primary and specialty care, behavioral health, and social services—so that all providers involved in a patient’s care and treatment have facilitated access to a “complete picture” of that patient’s care.

AVOIDING LIMITATIONS OF CURRENT INFRASTRUCTURE AND PRACTICES

Existing health IT infrastructure has been developed to complement existing technologies and to meet specific needs without consideration of the future capacity needed for more advanced care delivery models.

When planning for health IT-enabled infrastructure to support new care and payment models, states and other stakeholders should consider how to leverage health IT assets and organizational competencies across a state, while also taking into account new and forthcoming initiatives and technologies such as new standards through Meaningful Use, Stage 2.¹⁵

Furthermore, while claims data currently have a prominent role in payment and quality reporting, they will play a reduced role over time as data measures move toward a more value-based model. As states and other stakeholders plan how to advance current quality improvement initiatives, infrastructure strategies must anticipate future advanced capabilities while continuing to support their current needs.

CONCLUSION

Robust, efficient quality measurement and reporting is essential for providers, state and federal government officials, and other stakeholders to improve quality and support value-based payment of health care services. While states and other entities may have differing overarching goals, there are several key components that must be part of any strategy to build and use robust health IT to achieve quality or health improvement goals and payment reform across sectors. Furthermore, stakeholders should strive to clarify their roles and align improvement goals so that infrastructure is designed to meet the challenge of achieving both short and long-term goals of improving quality in an evolving environment of health IT capabilities.

ENDNOTES

1 Micah Hartman, Anne B. Martin, Joseph Benson, et al., “National Health Spending In 2011: Overall Growth Remains Low, But Some Payers And Services Show Signs Of Acceleration,” *Health Affairs*, 32, no.1 (2013):87-99

2 For more information about SIM, please see State Innovations Models Initiative: General Information: <http://innovation.cms.gov/initiatives/state-innovations/>

3 National Academy for State Health Policy, State ‘Accountable Care’ Activity Map.” Accessed April 2, 2013, <http://www.nashp.org/state-accountable-care-activity-map>

4 National Academy for State Health Policy, “Medical Home & Patient-Centered Care” Accessed April 2, 2013 <http://www.nashp.org/med-home-map>

5 The Pioneer ACO Model is designed to allow health care organizations and providers experienced in coordinating care for patients across care settings to move more rapidly from a shared savings payment model to a population-based payment model. For more information about the Pioneer ACO program, please see: <http://innovation.cms.gov/initiatives/Pioneer-ACO-Model/index.html>

6 The Comprehensive Primary Care (CPC) initiative is a multi-payer initiative fostering collaboration between public and private health care payers to strengthen primary care by offering bonus payments and other resources to primary care doctors who better coordinate care for their patients. For more information about the Comprehensive Primary Care initiative, please see: <http://innovation.cms.gov/initiatives/Comprehensive-Primary-Care-Initiative/index.html>

7 Kristine Martin Anderson, Christina A. Marsh, Anjanette C. Flemming, et al., “An Environmental Snapshot: Quality Measurement Enabled by Health IT: Overview, Possibilities and Challenges,” Agency for Healthcare Research and Quality Pub. No. 12-0061-EF, July 2012. Accessible at: healthit.ahrq.gov/portal/server.pt/document/958168/nrcd1ptq_final_draft_background_report_07102012_508compliant_pdf

8 Chun-Ju Hsiao and Esther Hing, “Use and Characteristics of Electronic Health Record Systems Among Office-Based Physician Practices: United States, 2001-2012,” NCHS Data Brief No. 111, December 2012. Accessible at: <http://www.cdc.gov/nchs/data/databriefs/db111.htm>

9 According to the ONC Certified Health IT Product List, over 1,000 EHR products are currently certified for either 2011 or 2014 edition certification criteria for in-patient practices and over 3,100 EHR products are similarly certified for ambulatory care. More information can be found at: <http://oncchpl.force.com/ehrcert?q=chpl>

10 “U.S. Department of Health & Human Services (HHS) Measure Inventory,” Accessed on April 2, 2013, <http://www.qualitymeasures.ahrq.gov/hhs-measure-inventory/browse.aspx>

11 Robert Saunders, “A Learning Health System Activity IOM Roundtable on Value & Science-Driven Health Care,” Core Metrics for Better Care, Lower Costs, and Better Health, Institute of Medicine Workshop Briefing Book. December 2012: p23-42 Accessible at: www.iom.edu/media/Files/Activity%20Files/Quality/VSR/VSRT/Core%20Metrics%20Workshop/Briefing%20Book_Combined.pdf

12 “Certification Programs and Policy: About Certification,” Accessed on April 2, 2013. <http://www.healthit.gov/policy-researchers-implementers/about-certification>

13 Medicare Qualified Entities are organizations qualified under the Affordable Care Act aid in the evaluation of the performance of providers and suppliers and to generate public reports regarding such performance through use of Medicare claims data under parts A, B, and D. Qualified clinical data registries are qualified under the American Tax Reduction Act to provide timely performance reports and support quality improvement initiatives through the receipt of data elements from multiple payers.

14 “The IHI Triple Aim” Institute for Healthcare Improvement, Accessed April 26, 2013 <http://www.ihio.org/offerings/Initiatives/TripleAim/Pages/default.aspx>

15 The EHR Incentives Program has defined Meaningful Use (MU) as a set of EHR functions that enable improvements in the process of care delivery and ultimately health outcomes. ONC certification criteria that EHR software are tested against, specify the necessary standards and functions of EHRs including those related to the calculation and reporting of quality measures.

NATIONAL ACADEMY
for STATE HEALTH POLICY

About the National Academy for State Health Policy:

The National Academy for State Health Policy (NASHP) is an independent academy of state health policy makers working together to identify emerging issues, develop policy solutions, and improve state health policy and practice. As a non-profit, non-partisan organization dedicated to helping states achieve excellence in health policy and practice, NASHP provides a forum on critical health issues across branches and agencies of state government. NASHP resources are available at: www.nashp.org.

Acknowledgments

The authors wish to acknowledge the members of our team at NASHP who have contributed significantly to the content of this brief including Anne Gauthier, Jill Rosenthal, Barbara Wirth, and Kimm Mooney. They would also like to thank the contributions of our project partners at the Office of the National Coordinator for Health Information Technology including Kelly Cronin, Kevin Larsen, Hunt Blair, John Rancort, and Jane Thorpe, as well as Liesa Jenkins of Deloitte Consulting and Robert Bailey and Christine Carr at RTI International. The authors also thank all participants in our HIT Trailblazers project January meeting for their thoughtful insights and contributions, especially our Trailblazer states, Arkansas, California, Maine, Massachusetts, Michigan, Minnesota, Oregon, Rhode Island who have provided invaluable

work and feedback throughout the Trailblazers project. This publication was produced through a contract with the U.S. Department of Health and Human Services (DHHS), Office for the National Coordinator for Health Information Technology (ONC), Contract #HHSP23320095633WC/HHSP23337003T with Deloitte Consulting LLP, subcontracted to NASHP. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of DHHS, ONC, or Deloitte.

Citation:

Christina Miller and Abigail Arons, *A Vision for Quality Data Infrastructure to Support Health System Transformation*, 2013 (Portland, ME: National Academy for State Health Policy).

Portland, Maine Office:

10 Free Street, 2nd Floor, Portland, ME 04101
Phone: [207] 874-6524

Washington, DC Office:

1233 20th Street NW, Suite 303, Washington, DC 20036
Phone: [202] 903-0101