

DEVELOPED BY THE PHARMACY HEALTH INFORMATION TECHNOLOGY COLLABORATIVE





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The Roadmap provides guidance to integrate pharmacy HIT into the national HIT infrastructure.

1. Executive summary

About the Roadmap

The Roadmap for Pharmacy Health Information Technology Integration in U.S. Health Care 2011–2015 (Roadmap) was the first pharmacy health information technology (HIT) strategic plan. This plan was developed by national pharmacy associations and other key stakeholders that comprise the Pharmacy Health Information Technology Collaborative (Collaborative). Formed in the fall of 2010, the Collaborative's founding organizations represent pharmacists in all patient care settings and other facets of pharmacy, including pharmacy education and pharmacy education accreditation. The Collaborative's Associate Members represent e-prescribing networks, a standards development organization, transaction processing networks, pharmacy companies, system vendors, and other organizations that support pharmacists' services. The Collaborative was founded by nine pharmacy professional associations representing more than 250,000 members and includes seven associate members from other pharmacy-related organizations. For additional information, visit www.pharmacyhit.org.

The Roadmap provides guidance to provider organizations, policymakers, vendors, payers, and other stakeholders striving to integrate pharmacy HIT into the national (U.S.) HIT infrastructure. The Roadmap outlines the goals and strategies related to the pharmacy profession's HIT objectives. The goals listed in this document are numbered by process and not by priority. The Pharmacy HIT Collaborative contributes to specific aspects within the Roadmap that are aligned with the scope, goals, objectives, and strategies of the Collaborative. Areas outside the scope of the Collaborative will be addressed by others.

In 2014, the Collaborative redefined its strategic plan through 2017. The Collaborative vision and mission is for the U.S. health care system to be supported by meaningful use of health IT and the integration of pharmacists for the provision of quality patient care; an additional goal is to advocate and educate key stakeholders regarding the meaningful use of health IT and the inclusion of pharmacists within a technology-enabled integrated health care system. The Collaborative's goals seek to ensure that HIT supports pharmacists in health care service delivery, achieves pharmacists' integration within health information exchange, and supports national quality initiatives enabled by health IT.

The purpose of this document is to align the first Roadmap to the vision, mission, goals and objectives of the Collaborative's 2014–2017 Strategic Plan. The document also identifies the goals in the first Roadmap related to the status, importance, and relevance to the industry of the objectives and strategies. The Roadmap will be updated to reflect the areas the pharmacy industry needs to focus on and the areas mapped to the Collaborative's 2014–2017 Strategic Plan.



2. Purpose

The purpose of this document is to align the first Roadmap to the vision, mission, goals and objectives of the Collaborative's 2014–2017 Strategic Plan. The document also identifies the goals in the first Roadmap related to the status, importance, and relevance to the industry of the objectives and strategies. The Roadmap will be updated to reflect the areas the pharmacy industry needs to focus on and the areas mapped to the Collaborative's 2014–2017 Strategic Plan.

Update Goals

- Define areas the pharmacy industry needs to continue to work on related to pharmacists' integration into the national health IT infrastructure.
- Define the areas the Collaborative should focus on related to the Collaborative's 2014–2017 Strategic Plan.

Recommendations for Action

- Continue to garner support among policymakers and regulators at all levels to recognize pharmacists as health care providers.
- Ensure that electronic health information is accessible to pharmacists in order to optimize patient care.
- Ensure that electronic health information contributed by pharmacists gets documented, captured, and integrated for use by all patient care providers.
- Promote and support the effective integration and bidirectional exchange of electronic clinical information and medication order/prescription information for pharmacists and pharmacies across the continuum of care.
- Promote and support the effective integration and bidirectional exchange of electronic prescription information and clinical information for pharmacists and pharmacies across the continuum of care.
- Encourage the use of standardized electronic documentation of medication therapy management (MTM) services through the adoption of the pharmacist-provider electronic health record (PP-EHR).
- Ensure that pharmacists have access to an EHR system to perform MTM services and that they can electronically exchange MTM service information with patients, providers, and payers.
- Enhance the ability of pharmacists to electronically determine the need for, document the administration of, and share information into registries about immunizations.
- Ensure that system vendors understand the necessity of including immunization-related capabilities in pharmacy practice management systems.
- Ensure that pharmacists' immunization activities are captured at a registry; the immunization information needs query capabilities, and, where required or clinically appropriate, the pharmacists' immunization activity should be shared with other providers and with the patients.
- Ensure that pharmacists' immunization activities are captured as a meaningful use of the EHR measurement goal.



HIT must enable pharmacists
to improve public health
by assuring safe and
effective medication use
and supporting patientcentered team-based care.





Pharmacists must be involved in the bidirectional exchange of health information to improve the care of patients.

- Ensure that pharmacists who provide patient care information can consent to share patient information following privacy and security standards.
- Promote practice models in which pharmacists participate in the support or enhancement of the meaningful use of EHR, including quality measures.
- Educate pharmacists about the meaningful use of EHR and how their role supports patient care delivery to improve quality measures in all practice settings.
- Educate other health care practitioners on the role of the pharmacist in the meaningful use of the EHR measurement concepts and how pharmacists can assist in attaining their meaningful use goals.
- Assist in defining PP-EHR conformance criteria leading to certification of pharmacy management system vendors or through partnerships with EHR vendors to expedite the creation of certifiable PP-EHRs.
- Support efforts to encourage voluntary PP-EHR certification.
- For patient safety purposes, ensure that pharmacists using EHRs have the ability to report adverse drug events
- Help pharmacists understand the value of pharmacy management system vendors adopting certified PP-EHR functionality.
- Educate payers, prescribers, and patients about the evidence supporting the value of pharmacists using HIT solutions.
- Promote support among policymakers and regulators for the value of pharmacists using HIT solutions.
- Promote research on how the PP-EHR and HIT can be used to advance best practices among pharmacists, prescribers, payers, and patients.
- Encourage pharmacists' active participation in local, state, and regional health information exchanges (HIEs).
- Promote pharmacists as meaningful users of the EHR.
- Promote the contribution of pharmacists in assisting all eligible providers with meeting meaningful use objectives.
- Disseminate information about research and advocate for the development and use of quality measures that demonstrate the value of the pharmacist's role in
- Incorporate quality measures and research outcomes demonstrating the value of pharmacists into HIT processes used by all health care providers in all practice settings.



3. Overview

The Roadmap document outlined 10 goals and recommendations for action by the pharmacy industry. The 10 goals are listed as follows:

- Goal 1: Ensure That HIT Supports Pharmacists in Health Care Service Delivery
- Goal 2: Achieve Integration of Clinical Data With Electronic Prescription (e-prescribing) Information
- Goal 3: Advocate for Pharmacist Recognition in Existing Programs and Policies
- Goal 4: Ensure That HIT Infrastructure Includes and Supports MTM Services
- Goal 5: Integrate Pharmacist-Delivered Immunizations into the EHR
- Goal 6: Achieve Recognition of Pharmacists as Meaningful Users of EHR Quality Measures
- Goal 7: Advance System Vendor EHR Certification
- Goal 8: Promote Pharmacist Adoption and Use of HIT and EHRs
- Goal 9: Achieve Integration of Pharmacies and Pharmacists into Health Information Exchanges
- Goal 10: Establish the Value and Effective Use of HIT Solutions by Pharmacists

In 2013, the Collaborative Council members reviewed the 10 goals and 92 strategies determining status, importance, industry relevance and discussed whether the Collaborative should continue to work on the strategies. The results of this review are outlined in sections 4.1 and 4.2. In 2014, the Collaborative convened pharmacy leader representatives from various practice settings to comment on the evaluation of the Roadmap strategies.

These pharmacy leader representatives reviewed the findings outlined in sections 4.1 and 4.2. They identified a subset of the strategies and recommendations from the original Roadmap document. The leaders identified the strategies and recommendations the Collaborative should continue to focus on to fit the 2014–2017 Pharmacy HIT Collaborative's Strategic Plan.



4. Discussion

4.1. Discuss the status, importance, and relevance to the Industry of the objectives and strategies outlined in the first Roadmap document

The Roadmap document outlined 10 goals and recommendations for action by the pharmacy industry. The 10 goals are listed as follows:

- Goal 1: Ensure That HIT Supports Pharmacists in Health Care Service Delivery (9 strategies)
- Goal 2: Achieve Integration of Clinical Data With Electronic Prescription (e-prescribing) Information (9 strategies)
- Goal 3: Advocate for Pharmacist Recognition in Existing Programs and Policies (9 strategies)
- Goal 4: Ensure That HIT Infrastructure Includes and Supports MTM Services (5 strategies)
- Goal 5: Integrate Pharmacist-Delivered Immunizations into the EHR (9 strategies)
- Goal 6: Achieve Recognition of Pharmacists as Meaningful Users of EHR Quality Measures (11 strategies)
- Goal 7: Advance System Vendor EHR Certification (11 strategies)
- Goal 8: Promote Pharmacist Adoption and Use of HIT and EHRs (15 strategies)
- Goal 9: Achieve Integration of Pharmacies and Pharmacists into Health Information Exchanges (5 strategies)
- Goal 10: Establish the Value and Effective Use of HIT Solutions by Pharmacists (9 strategies)

In 2013, the Collaborative Council members reviewed 10 goals and 92 strategies determining status, importance and industry relevance. The results of this review are outlined in this section. Of the 92 strategies reviewed, 3 percent were completed, 67 percent were partially completed, and 30 percent were not worked on. In terms of importance, 36 percent were rated none to low importance, and 64 percent were rated moderate to high importance. Of the 92 strategies, the review determined that 9 percent are no longer relevant to the industry while 91 percent are still relevant. The majority of the strategies outlined are ongoing and would explain the low and partially complete rates. The detail is outlined in Appendix A.

In 2014, the Collaborative convened pharmacy leader representatives from various practice settings to comment on the evaluation of the Roadmap strategies. During the review process, the pharmacy leaders agreed with all the assessments noted by the Collaborative members.



4.2 Reflect on the areas on which the pharmacy industry needs to work

The Roadmap document outlined 10 goals and recommendations for action by the pharmacy industry. The 10 goals are listed as follows:

- Goal 1: Ensure That HIT Supports Pharmacists in Health Care Service Delivery (9 strategies)
- Goal 2: Achieve Integration of Clinical Data With Electronic Prescription(eprescribing) Information (9 strategies)
- Goal 3: Advocate Pharmacist Recognition in Existing Programs and Policies (9 strategies)
- Goal 4: Ensure That HIT Infrastructure Includes and Supports MTM Services (5 strategies)
- Goal 5: Integrate Pharmacist-Delivered Immunizations into the EHR (9 strategies)
- Goal 6: Achieve Recognition of Pharmacists as Meaningful Users of EHR Quality Measures (11 strategies)
- Goal 7: Advance System Vendor EHR Certification (11 strategies)
- Goal 8: Promote Pharmacist Adoption and Use of HIT and EHRs (15 strategies)
- Goal 9: Achieve Integration of Pharmacies and Pharmacists into Health Information Exchanges (5 strategies)
- Goal 10: Establish the Value and Effective Use of HIT Solutions by Pharmacists (9 strategies)

In 2013, the Collaborative Council members reviewed 10 goals and 92 strategies determining whether the Collaborative should continue to work on these strategies. The results of this review are outlined in this section. Of the 92 strategies, 44 strategies or 48 percent of the strategies should be a continued focus of the Collaborative. The other 48 percent or 52 strategies will either be worked by others in the pharmacy industry or are not currently relevant to pharmacy. The detail is outlined in Appendix B.

In 2014, the Collaborative convened pharmacy leader representatives from various practice settings to comment on the evaluation of the Roadmap strategies. During the review process, the pharmacy leaders agreed with all the assessments noted by the Collaborative members.



4.3 Define what the collaborative should focus on through 2017 Based on the Collaborative's 2014-2017 Strategic Plan

Pharmacy leader representatives from various practice settings reviewed 44 strategies or 48 percent of the strategies and 24 recommendations from the original Roadmap document that were identified as a continued focus of the Collaborative. The pharmacy leaders revised the recommendation and strategies to fit the 2014–2017 Pharmacy HIT Collaborative's Strategic Plan.

2014-2017 Pharmacy HIT Collaborative's Strategic Plan

Vision

The U.S. health care system is supported by meaningful use of health information technology and the integration of pharmacists for the provision of quality patient care.

To advocate and educate key stakeholders regarding the meaningful use of HIT and the inclusion of pharmacists within a technology-enabled integrated health care system.

Goals

ACCESS: Ensure that HIT supports pharmacists in health care service delivery. **CONNECTIVITY:** Achieve pharmacists' integration within health information exchange. **QUALITY:** Support national quality initiatives enabled by HIT.

Pharmacy HIT Collaborative's Key Points

Access-Connectivity-Quality

4.4 Consolidated recommendations and strategies

Goal 1: ACCESS—Ensure that HIT supports pharmacists in health care service delivery.

Objective 1: Increase pharmacists' awareness regarding the role and importance of HIT in patient care delivery and the role of the Collaborative.

Objective 2: Promote pharmacists' use of HIT needed for patient care provision in all care settings to support their work as a patient care provider.

Objective 3: Provide guidance to standards development organizations about electronic documentation of pharmacy services.

Strategies

- Develop an iterative policy framework and strategies for the inclusion of pharmacists' patient care services information in health information exchange activities to support electronic quality measures. (G101,G303)
- Educate pharmacists on meaningful use of the EHR quality measures. (G101)
- Create educational resources to assist pharmacists with the meaningful use of the EHR quality measures and other patient care delivery processes. (G101)
- Recommend pharmacists' involvement in the determination and adoption of the meaningful use of the EHR quality measures pertaining to medications and medication-related activities. (G101)
- Work with and through the Collaborative, its member organizations, and professional partnerships to develop guidance documents on certified PP-EHRs and interoperability. These efforts will be focused on creating pharmacists' adoption demand. (G101)
- Develop guidance documents of PP-EHRs and HIT adoption, including certified technologies. These guidance documents will focus on e-prescribing, medication reconciliation (MR), MTM, medication adherence, immunization, quality improvement monitoring, and other topics. (G101)
- Educate stakeholders regarding the value of pharmacists' use of certified PP-EHR functionality in areas such as antibiotic stewardship, decreased hospital readmissions, smoking cessation programs, and other meaningful use of EHR quality measures. (G101)
- Educate pharmacists on the value of adopting the PP-EHR functionality in their practice management systems using the Collaborative member organizations to help distribute guidance about these HIT solutions. (G101)
- Engage and participate in standards-setting organizations, task forces, and work groups to improve e-prescribing-related electronic exchanges. (G103)
- Work with organizations defining the pharmacist's MTM role in HIT, such
 as pharmacy associations, MTM intermediaries, and National Council for
 Prescription Drug Programs (NCPDP), to ensure that MTM principles and
 guidelines are incorporated into the national HIT infrastructure. (G103)
- Participate in standards organizations for future meaningful use of the



EHR quality measures and other patient care deliver processes using the PP-EHR. (G103)

Goal 2: CONNECTIVITY—Achieve pharmacists' integration within health information exchanges.

Objective 1: Provide direction about pharmacists' requirement to access and submit clinical information through electronic health records fosters more effective and efficient care.

Objective 2: Increase participation by pharmacists in all practice settings in local, state, and regional health information exchanges.

Objective 3: Enhance the ability of pharmacists to electronically document the administration of, share information about, and determine the need for population health interventions.

Strategies

- Develop guidance documents describing the appropriate flow of critical electronic information among health care providers, including pharmacists, to provide medical information needed for decision making for optimal therapy. (G201)
- Support organizations in demonstrating the market demand for electronically exchanging MTM service data with other providers and payers to EHR and pharmacy management system vendors. (G201)
- Support and disseminate awareness campaigns about the use of standardized electronic MTM processes for pharmacy management system and EHR vendors. (G201)
- Work with EHR and personal health record (PHR) vendors to incorporate medication-optimized MTM service documentation into their systems. (G201)
- Be a resource for information about PP-EHR certification activities through contact with certification bodies. (G201)
- Promote PP-EHR certification requirements to pharmacy management system vendors, (G201)
- Identify workflow and process change considerations associated with the meaningful use of the PP-EHR in the pharmacy and with prescribers, payers, and patients. (G201)
- Define use cases promoting the value of certification and strategies for participation in HIEs. (G201)
- Work with states and state affiliates to encourage the inclusion of pharmacists in their plans for HIT/HIE programs as a requirement so that true interoperability and interconnectivity can be achieved in all practice settings. (G2O2)
- Expand the awareness of documentation requirements within a pharmacy practice for pharmacist administration of injectable medications on a stateby-state basis; expand awareness of ways that adoption of the PP-EHR would enhance pharmacist involvement and access to care by patients. (G2O2)



- Educate policymakers at federal levels and through the Collaborative members for state and local levels regarding pharmacists' readiness to be included in key public policy activities, including supporting public health reporting and expanded HIE capabilities. (G202)
- Work through the Collaborative members to encourage pharmacist involvement in HIE in all practice settings. (G202)
- Work through the Collaborative members to promote the importance of pharmacist participation in HIEs through state Medicaid/public health agencies, the Office of the National Coordinator of HIT (ONC), the Centers for Medicare & Medicaid Services (CMS), Department of Health and Human Services (HHS), and other members of the health care industry. (G202)
- Connect with pharmacy professional associations to identify opportunities for continuing education related to the use of e-prescribing technology and other networking opportunities where the bidirectional exchange of information with peers results in practical solutions during the transition to e-prescribing. (G203)
- Participate in networking opportunities to exchange information with peers on the effective bidirectional implementation of e-prescribing. (G2O3)
- Create forums to share information on bidirectional solutions that have been
 developed to better integrate e-prescribing into the end-to-end medication
 management workflow, including pharmacists' review of electronic prescriptions
 at the time of order entry. (G203)
- Enhance the ability of pharmacists to electronically document, share, and evaluate patient immunization therapy. (G203)
- Encourage capturing pharmacist-provided immunization data to be shared among pharmacists, other health care providers, and public health organizations. (G203)

Goal 3: QUALITY—Support national quality initiatives enabled by HIT.

Objective 1: Advance the pharmacist's role in meaningful use of the electronic health record.

Objective 2: Develop value sets of standard codes for patient care documentation.

Objective 3: Support the implementation of clinical quality measures to improve patient care.

Strategies

- Advance policy framework and recommendations to ONC HIT Policy and Standards committees, CMS, and other decision-making bodies. (G301)
- Ensure that the processes for pharmacists' patient care services outline how the quality of the services will benefit HIT adoption and the meaningful use of the EHR. (G301)
- Support activities demonstrating that meaningful use of the EHR medicationrelated and disease state measurement concepts can be met by adding pharmacist-provided MTM service documentation into EHR and PHR systems. (G301)



- Request support and recommendations for voluntary certification to the ONC for incorporation of PP-EHR use into national HIT policy. (G301)
- Meet with the ONC and other HHS officials to educate and encourage support of NCPDP/Health Level 7 (HL7) Functional Profile for PP-EHRs. Include key messages about how certified PP-EHR use will support national HIT policy activities and goals. (G301)
- Meet with the ONC to ensure that standards-based interoperability is incorporated into the PP-EHR certification criteria to allow meaningful data exchange across all care settings. (G301)
- Meet with the ONC to ensure that e-prescribing, MR, MTM, medication quality requirements, and adverse drug event prevention needed for pharmacists are incorporated into the PP-EHR certification criteria to advance pharmacists toward a more robust and interactive patient care model. (G301)
- Meet with the ONC to ensure that certification requirements for PP-EHRs include the ability to share the continuity of care document (CCD) during transitions of care. (G301)
- Meet with the ONC to ensure that the functionality required for capturing and reporting meaningful use quality measures is part of certification requirements. (G301)
- Educate pharmacists and system vendors about incorporating the quality measures and research outcomes demonstrating the value of pharmacists into the HIT processes used by all health care providers in all practice settings. (G303)

Recommendations for Action

- Continue to garner support among policymakers and regulators at all levels to recognize pharmacists as health care providers.
- Ensure that electronic health information is accessible to pharmacists in order to optimize patient care.
- Ensure that electronic health information contributed by pharmacists' gets documented, captured, and integrated for use by all patient care providers.
- Promote and support the effective integration and bidirectional exchange of electronic clinical information and medication order/prescription information for pharmacists and pharmacies across the continuum of care.
- · Promote and support the effective integration and bidirectional exchange of electronic prescription information and clinical information for pharmacists and pharmacies across the continuum of care.
- Encourage the use of standardized electronic documentation of MTM services through the adoption of the PP-EHR.
- Ensure that pharmacists have access to an EHR system to perform MTM services and that they can electronically exchange MTM service information with patients, providers, and payers.
- Enhance the ability of pharmacists to electronically determine the need, document the administration of, and share information into registries about immunizations.



- Ensure that system vendors understand the necessity of including immunizationrelated capabilities in pharmacy practice management systems.
- Ensure that pharmacists' immunization activities are captured at a registry; the registry should have querying capabilities. Where required or clinically appropriate, the pharmacists' immunization activity should be shared with other providers and the patients.
- Pharmacists' immunization activities should be captured as a meaningful use of EHR measurement goal.
- Ensure that pharmacists who provide patient care information can consent to share patient information following privacy and security standards.
- Promote practice models in which pharmacists participate in the support or enhancement of the meaningful use of EHR, including quality measures.
- Educate pharmacists about the meaningful use of EHR and how their role supports patient care delivery to improve quality measures in all practice settings.
- Educate other health care practitioners on the role of the pharmacist in the meaningful use of the EHR measurement concepts and how pharmacists can assist in attaining their meaningful use goals.
- Assist in the definition of PP-EHR conformance criteria leading to certification
 of pharmacy management system vendors or through partnerships with EHR
 vendors to expedite the creation of certifiable PP-EHRs.
- Support efforts to encourage voluntary PP-EHR certification.
- For patient safety purposes, ensure that pharmacists using EHRs have the ability to report adverse drug events.
- Help pharmacists understand the value of pharmacy management system vendors adopting certified PP-EHR functionality.
- Educate payers, prescribers, and patients about the evidence supporting the value of pharmacists using HIT solutions.
- Promote support among policymakers and regulators for the value of pharmacists using HIT solutions.
- Promote research on how the PP-EHR and HIT can be used to advance best practices among pharmacists, prescribers, payers, and patients.
- Encourage pharmacists' active participation in local, state, and regional HIEs.
- Promote pharmacists as meaningful users of the EHR.
- Promote the contribution of pharmacists in assisting all eligible providers with meeting meaningful use objectives.
- Disseminate information about research and advocate for the development and use of quality measures that demonstrate the value of the pharmacist's role in health care.
- Incorporate quality measures and research outcomes demonstrating the value of pharmacists into HIT processes used by all health care providers in all practice settings.



5. ONC'S 10-Year Vision to Achieve an Interoperable Health IT Infrastructure

Over the past 10 years, the government has been working on building a HIT foundation. The Pharmacy HIT Collaborative has worked with ONC to ensure that pharmacists are recognized as an integral part of the HIT infrastructure. Through the meaningful use

Connecting Health and Care for the Nation: A 10-Year Vision to Achieve an Interoperable Health IT Infrastructure: Guiding Principles

Build upon existing health IT infrastructure One size does not fit all Empower individuals Leverage the market Simplify Maintain modularity Consider the current environment and support multiple levels of advancement Focus on value Protect privacy and security in all aspects of interoperability

program, eligible hospitals and professionals have adopted HIT in a meaningful way. In the "Connecting Health and Care for the Nation: A 10-Year Vision to Achieve an Interoperable Health IT Infrastructure" document (Source: http://www.healthit.gov/sites/default/files/ ONC10yearInteroperabilityConceptPaper.pdf, accessed October 10, 2014), ONC states, "there is much work to do to see that every individual and their care providers can get the health information they need in an electronic format when and how they need it to make care convenient and well-coordinated and allow for improvements in overall health."In 10 years (by 2024), care providers including pharmacists will be part of an interoperable HIT infrastructure where "the right data [are] available to the right people at the right time across products and organizations in a way that can be relied upon and

meaningfully used by recipients. As we work toward this vision for the future interoperable health IT ecosystem, we will plan and execute our work to align with a set of guiding principles." Building on ONC's 10-year vision and proposed to be completed by March 2015, ONC is working on the development of a shared, nationwide interoperability roadmap.

- Build on the existing health IT infrastructure. Significant investments have been made in health IT across the care delivery system and in other relevant sectors that need to exchange information with individuals and care providers. To the extent possible, we will encourage stakeholders to build from existing health IT infrastructure, increasing interoperability and functionality as needed.
- **One size does not fit all.** Interoperability requires technical and policy conformance among networks, technical systems and their components. It also requires behavior and culture change on the part of users. We will strive for baseline interoperability across health IT infrastructure, while allowing innovators and technologists to vary the user experience (the feel and function of tools) in order to best meet the user's needs based on the scenario at hand, technology available, workflow design, personal preferences, and other factors.
- **Empower individuals**. Members of the public are rapidly adopting technology to manage numerous aspects of their lives, including health and wellness. However, many of these tools do not yet integrate information from the health care delivery system. Health information from the care delivery system should be easily accessible to individuals and empower them to become more active partners in their health just as other kinds of data are empowering them in other aspects of their lives.



- Leverage the market. Demand for interoperability from health IT users is a powerful driver to advance our vision. As payment and care delivery reform increase demand for interoperability, we will work with and support these efforts.
- **Simplify**. Where possible, simpler solutions should be implemented first, with allowance for more complex methods in the future.
- Maintain modularity. Complex systems are more resilient to change when they
 are divided into independent components that can be connected together. Because
 medicine and technology will change over time, we must preserve systems' abilities
 to evolve and take advantage of the best of technology and health care delivery.
 Modularity creates flexibility that allows innovation and adoption of new, more efficient
 approaches over time without overhauling entire systems.
- Consider the current environment and support multiple levels of advancement.

 Not every clinical practice will incorporate health information technology into their work in the next 3-10 years, and not every practice will adopt health IT at the same level of sophistication. We must therefore account for a range of capabilities among information sources and information users, including EHR and non-EHR users, as we advance interoperability. Individuals and caregivers have an ongoing need to find, send, receive, and use their own health information both within and outside the care delivery system and interoperable infrastructure should enable this.
- Focus on value. We will strive to make sure our interoperability efforts yield the greatest value to individuals and care providers; improved health, health care, and lower costs should be measurable over time and at a minimum, offset the resource investment.
- Protect privacy and security in all aspects of interoperability. It is essential to maintain public trust that health information is safe and secure. To better establish and maintain that trust, we will strive to ensure that appropriate, strong, and effective safeguards for health information are in place as interoperability increases across the industry. We will also support greater transparency for individuals regarding the business practices of entities that use their data, particularly those that are not covered by the HIPAA Privacy and Security Rules.

(Source: http://www.healthit.gov/sites/default/files/ONC10yearInteroperabilityConceptPaper.pdf, accessed October 10, 2014)6.



6. Conclusion

The purpose of this document is to align the first Roadmap to the vision, mission, goals and objectives of the Collaborative's 2014–2017 Strategic Plan. In addition, identify the goals in the first Roadmap related to the status, importance, and relevance of the objectives and strategies to the industry. The Roadmap will be updated to reflect the areas the pharmacy industry needs to focus on and the areas mapped to the Collaborative's 2014–2017 Strategic Plan.

Over the past 10 years, the government has been working on building a HIT foundation. The Pharmacy HIT Collaborative has worked with ONC to ensure that pharmacists are recognized as an integral part of the HIT infrastructure. Through the meaningful use program, eligible hospitals and professional providers have adopted HIT in a meaningful way and have outlined guiding principles to assist care providers, including pharmacists, to be part of an interoperable HIT infrastructure by 2024.

This 3-year addendum to the Roadmap for Pharmacy Health Information Technology Integration in U.S. Health Care 2011–2015 will give guidance to the pharmacy profession in advocating and educating key stakeholders regarding the meaningful use of HIT and the inclusion of pharmacists within a technology-enabled integrated health care system.



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8. Acknowledgements

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9. Appendix A

Charts Related to 4.1. Discuss the status, importance, and relevance to the industry of the objectives and strategies outlined in the first Roadmap document

Goal 1: Ensure That HIT Supports Pharmacists in Health Care Service **Delivery**

- Garner support among policymakers and regulators at all levels to include pharmacists as health professionals who provide patient care.
- Ensure that electronic health information is available to support the pharmacist's optimized role in health care delivery.

| Strategies | Status (Done- Partial-Complete) | Importance (rank 1-3, with 3 being most important) | Relevant to Industry (Yes/No) |
|--|------------------------------------|--|----------------------------------|
| Develop and identify funding opportunities at the state level for pharmacist-related demonstration projects, such as collaborative drug therapy management (CDTM) demonstration projects assessing operational models, HIEs, payment structures, and HIT-related outcome measures. | None | 2 | Yes |
| Leverage existing research to advocate for expanding the role of pharmacists in health care delivery through accessibility to HIEs. | Partial | 3 | Yes |
| Organize statewide public relations and media outreach campaigns to improve public awareness of the role of pharmacists in HIEs and the patient care capabilities of pharmacists among health care professionals, health executives, public policymakers, and the public. | Partial | 2 | Yes |
| Work with pharmacy state associations and state and federal representatives to coordinate legislative days to demonstrate and discuss the expanding role of pharmacists in HIT in all practice settings. | Partial | 1 | Yes |
| Advocate for equitable compensation for pharmacists providing patient care services and their recognition as meaningful users of EHRs. | Partial | 1 | No |
| Develop a policy framework for pharmacists' access to critical patient health care information, such as diagnosis and laboratory values, to be provided through an interoperable EHR system, including e-prescribing, that supports bidirectional communication among multiple health care providers and settings. | Partial | 3 | Yes |
| Establish state and federal grants for pharmacists that support the continued growth of an interoperable electronic health care system. | None | 1 | Yes |
| Develop white papers describing the appropriate flow of critical electronic information among health care providers, including pharmacists. This information flow protects patient privacy while providing medical information needed for decision making for optimal therapy. | Partial | 3 | Yes |
| Collaborate with state boards of pharmacy and other regulatory agencies on changes needed in education and state practice acts, including the expanding role of technicians and greater use of HIT, to implement patient-focused pharmacy services while maintaining public safety. | Partial | 3 | Yes |

Goal 2: Achieve Integration of Clinical Data With Electronic Prescription

Recommendation

• Promote and support the effective integration and bidirectional exchange of electronic prescription information and clinical information for pharmacists and pharmacies across the continuum of care.

| Strategies | Status (Done- Partial-Complete) | Importance (rank 1-3, with 3 being most important) | Relevant to Industry (Yes/No) |
|---|------------------------------------|--|----------------------------------|
| Network with peers to share lessons learned and engage professional pharmacy associations in identifying best practices and common concerns related to e-prescribing. | Partial | 3 | Yes |
| Engage and participate in standards-setting organizations, task forces, and work groups to improve electronic exchanges related to e-prescribing. | Partial | 3 | Yes |
| Effectively train support staff on the use of e-prescribing technologies and establish clear workflow processes to improve efficiencies. | None | 1 | Yes |
| Connect with pharmacy professional associations to identify opportunities for continuing education related to the use of e-prescribing technology and other networking opportunities where the exchange of information with peers results in practical solutions during the transition to e-prescribing. | Partial | 3 | Yes |
| Encourage e-prescribing users to report their experiences to the portal for pharmacy and prescriber e-pre-scribing experience, available at http://www.pqc.net/eprescribe/disclaimer.html. The experiences reported to this site will be used to identify trends and systems issues that might need to be addressed or mitigated in order to improve the overall quality and operation of the e-prescribing infrastructure. | Partial | 2 | Yes |
| Work with pharmacy and prescriber professional organizations, including state boards of pharmacy, to identify model policies and procedures for e-prescribing. | Partial | 2 | Yes |
| Participate in networking opportunities to exchange information with peers on the effective implementation of e-prescribing. | Partial | 2 | Yes |
| Collectively communicate e-prescribing-related concerns to other stakeholder organizations and state e-health affiliates to build understanding and work toward common resolutions. | None | 3 | Yes |
| Create forums to share information on solutions that have been developed to better integrate e-prescribing into the pharmacy workflow. | Partial | 3 | Yes |



Goal 3: Advocate Pharmacist Recognition in Existing Programs and Policies

Recommendation

· Promote and support the effective integration and bidirectional exchange of electronic prescription information and clinical information for pharmacists and pharmacies across the continuum of care.

| Strategies | Status (Done- Partial-Complete) | Importance (rank 1-3, with 3 being most important) | Relevant to Industry (Yes/No) |
|---|------------------------------------|--|----------------------------------|
| Develop an iterative policy framework and strategies for the inclusion of pharmacists' patient care services information in national HIE activities and electronic quality measures. | Partial | 3 | Yes |
| Advance policy framework and recommendations to HIT Policy and Standards committees, CMS, and other decision-making bodies. | Partial | 3 | Yes |
| Work with states and state affiliates to encourage the inclusion of pharmacists in their plans for HIT/HIE programs as a requirement, so that true interoperability and interconnectivity can be achieved in all practice settings. | Partial | 3 | Yes |
| Leverage resources from regional extension centers to support pharmacists providing patient care services. | None | 0 | No |
| Advocate for the expansion of regional extension centers to support pharmacists providing patient care services. | None | 0 | No |
| Advocate for the inclusion of pharmacists' provision of patient care services to beacon community grant recipient programs. | Done | 0 | No |
| Develop a white paper that documents the role of pharmacists providing patient care services in the flow of health information/data and the potential impact of failing to include pharmacists in the HIE. | Done | 0 | No |
| Leverage research to emphasize the need for pharmacists to be included in HIEs to reduce overall health care costs while improving quality of care. | None | 0 | No |
| Ensure that the processes for pharmacists' patient care services outline how the quality of the services will benefit HIT adoption and the meaningful use of EHR. | Partial | 1 | Yes |

Goal 4: Ensure That HIT Infrastructure Includes and Supports MTM Services

- Encourage the use of standardized electronic documentation of MTM services through the adoption of the PP-EHR.
- Ensure that pharmacists have access to the EHR to perform MTM services and that they can electronically exchange MTM service information with patients, providers, and payers.

| Strategies | Status (Done- Partial-Complete) | Importance (rank 1-3, with 3 being most important) | Relevant to Industry (Yes/No) |
|---|------------------------------------|--|----------------------------------|
| Work with organizations defining the pharmacist's MTM role in HIT, such as pharmacy associations, Pharmacist Services Technical Advisory Coalition (PSTAC), MTM intermediaries, and NCPDP, to ensure that MTM principles and guidelines defined by pharmacists are incorporated into the national HIT infrastructure. | Partial | 3 | Yes |
| Demonstrate the market demand for electronically exchanging MTM service data with other providers and payers to pharmacy management system vendors. | Partial | 3 | Yes |
| Educate and conduct awareness campaigns about the use of standardized electronic MTM processes for pharmacy management system vendors. | Partial | 3 | Yes |
| Work with other EHR and PHR vendors to incorporate medication-optimized MTM service documentation into their systems. | Partial | 3 | Yes |
| Demonstrate that the meaningful use of the EHR medication-related and disease state measurement concepts can be met by adding pharmacist-provided MTM service documentation into EHR and PHR systems. | Partial | 3 | Yes |



Goal 5: Integrate Pharmacist-Delivered Immunizations into the EHR

- Enhance the ability of pharmacists to electronically document the administration of, share information about, and determine the need for immunizations.
- Ensure that system vendors understand the necessity of including immunizationrelated capabilities in pharmacy practice management systems.
- Ensure that pharmacists' immunization activities are included in the meaningful use of EHR measurement goals and that the immunization information is exchanged with other meaningful users of the EHR.

| Strategies | Status (Done- Partial-Complete) | Importance (rank 1-3, with 3 being most important) | Relevant to Industry (Yes/No) |
|--|------------------------------------|--|----------------------------------|
| Enhance the ability of pharmacists to electronically document, share, and evaluate patient immunization therapy. | Partial | 3 | Yes |
| Evaluate the status of state Immunization Information System (IIS) procedures and their goals for transition to the PP-EHR model. | None | 2 | Yes |
| Partner with state and national pharmacist organizations to educate pharmacists concerning electronic immunization documentation systems available for adoption. | Partial | 3 | Yes |
| Ensure that system vendors understand the necessity of the inclusion of immunization-related capabilities in pharmacy practice management systems and the adoption of the PP-EHR functionality for exchange of immunization information. | Partial | 2 | Yes |
| Assist organizations in adopting the PP-EHR as the standard for collecting and evaluating public health strategies. | None | 1 | Yes |
| Demonstrate the market demand for immunization data to be shared among pharmacists, other health care providers, and public health organizations. | Partial | 3 | Yes |
| Illustrate the impact that centralizing pharmacist-administered immunization data into the EHR can have on the efforts of immunization registry programs among government entities. | None | 1 | Yes |
| Demonstrate the benefit of access to pharmacist-administered immunization information through the EHR for travel requirements. | None | 1 | Yes |
| On a state-by-state basis, expand the awareness of documentation requirements within a pharmacy practice for pharmacist administration of injectable medications, as well as ways that adoption of the PP-EHR would enhance pharmacist involvement and access to care by patients. | Partial | 1 | Yes |

Goal 6: Achieve Recognition of Pharmacists as Meaningful Users of EHR Quality Measures

- Identify and promote practice models in which pharmacists participate in the support or enhancement of the meaningful use of EHR quality measures.
- Educate pharmacists about the meaningful use of EHR quality measures and how their role supports improvement in quality measures in all practice settings.
- Educate other health care practitioners on the role of the pharmacist in the meaningful use of the EHR measurement concepts and how pharmacists may assist in attaining their meaningful use goals.

| Strategies | Status (Done- Partial-Complete) | Importance (rank 1-3, with 3 being most important) | Relevant to Industry (Yes/No) |
|--|------------------------------------|--|----------------------------------|
| Educate pharmacists on meaningful use of the EHR quality measures. | Partial | 3 | Yes |
| Create educational resources to assist pharmacists with the meaningful use of the EHR quality measures. | Partial | 3 | Yes |
| Promote demonstration projects where the pharmacist's involvement in HIEs affects outcomes related to the meaningful use of the EHR quality measures. | None | 1 | Yes |
| Promote demonstration projects where the pharmacist's involvement in HIEs affects improvement in process steps of the meaningful use of the EHR quality measures. | None | 1 | Yes |
| Create education programs to educate all health care providers on the pharmacist's role in the meaningful use of the EHR quality measures outcome improvements. | Partial | 2 | Yes |
| Educate the public on the pharmacist's role in assisting patients with self-monitoring and documentation of HIT information. | None | 1 | Yes |
| Educate the public on the pharmacist's role in the exchange of medication-related information using HIEs and e-prescribing networks. | None | 1 | Yes |
| Create pharmacy continuing education programs to educate pharmacists about the practice models used to support the meaningful use of the EHR quality measures. | Partial | 2 | Yes |
| Create internship programs to teach students about the pharmacist's role in the support of the meaningful use of the EHR quality measures and work to integrate those concepts into the pharmacy curriculum. | Partial | 2 | Yes |
| Participate in standards organizations for future meaningful use of the EHR quality measures using the PP-EHR, especially as those measures relate to MTM. | Partial | 3 | Yes |
| Ensure that pharmacists are involved in the determination and adoption of the meaningful use of the EHR quality measures pertaining to medications and medication-related activities. | Partial | 3 | Yes |



Goal 7: Advance System Vendor EHR Certification

- Develop certifiable PP-EHR functionalities by pharmacy management system vendors or through partnerships with EHR vendors to expedite creation of certifiable PP-EHRs.
- Facilitate efforts to ensure the launch of CMS-defined certified PP-EHRs.

| Strategies | Status (Done- Partial-Complete) | Importance (rank 1-3, with 3 being most important) | Relevant to Industry (Yes/No) |
|---|------------------------------------|--|----------------------------------|
| Meet with HIT policy committee and the HIT standards committee to outline the NCPDP/HL7 Functional Profile for PP-EHRs. | Partial | 3 | Yes |
| Request support and recommendations from both groups to the ONC for incorporation of PP-EHR use into national HIT policy. | Partial | 3 | Yes |
| Meet with the ONC and other HHS officials to educate and encourage support of NCPDP/HL7 Functional Profile for PP-EHRs. Include key messages about how certified PP-EHR use will support national HIT policy activities and goals. | Partial | 3 | Yes |
| Meet with the ONC to ensure that standards-based interoperability is incorporated into the PP-EHR certification criteria to allow meaningful data exchange across all care settings. | Partial | 1 | Yes |
| Meet with the ONC to ensure that e-prescribing, MR, MTM, and medication quality requirements needed for pharmacists are incorporated into the PP-EHR certification criteria to advance pharmacists toward a more robust and interactive patient care model. | Partial | 1 | Yes |
| Meet with the ONC to ensure that certification requirements for PP-EHRs include the ability to share the CCD during transitions of care. | Partial | 2 | Yes |
| Meet with the ONC to ensure that the functionality required for capturing and reporting meaningful use quality measures is part of certification requirements. | Partial | 2 | Yes |
| Monitor all PP-EHR certification activities through contact with certification bodies. | Partial | 3 | Yes |
| Promote PP-EHR certification requirements to pharmacy management system vendors. | Partial | 3 | Yes |
| Monitor efforts of pharmacy system vendors to gain certification. | Partial | 3 | Yes |
| Encourage pharmacist HIT thought-leader representation on appropriate certification committees and task forces involved in developing and implementing PP-EHR certification. | Partial | 3 | Yes |



Goal 8: Promote the Adoption and Use of HIT and EHRs

Recommendations

- Create pharmacists' demand for certified PP-EHR functionality and encourage PP-EHR development by pharmacy management system vendors.
- Educate payers, prescribers, and patients and provide evidence of the value of pharmacists using HIT solutions.
- Promote support among policymakers and regulators for the value of pharmacists using HIT solutions.
- Promote and support research on how the PP-EHR and HIT can be used to advance best practices among pharmacists, prescribers, payers, and patients.

| Strategies | Status (Done- Partial-Complete) | Importance (rank 1-3, with 3 being most important) | Relevant to Industry (Yes/No) |
|---|------------------------------------|--|----------------------------------|
| Widely disseminate "The Roadmap for Pharmacy Health Information Technology Integration in U.S. Health Care" and its updates. | Done | 0 | No |
| Educate policymakers at federal, state, and local levels regarding pharmacists' readiness to be included in key public policy activities, including state grants supporting public health reporting and expanded HIE capabilities. | Partial | 3 | Yes |
| Encourage the inclusion of and participation by pharmacists in state grants to promote the use of PP-EHR and HIT. | None | 1 | Yes |
| Develop a business case for distribution to pharmacists, prescribers, and payers that supports the use of the PP-EHR. | None | 2 | Yes |
| Work with and through the Collaborative, its member organizations, and professional partnerships to develop and promote educational programs and tools on certified PP-EHRs and interoperability at federal, state, and local levels. These efforts will focus on creating pharmacists' adoption demand. | Partial | 2 | Yes |
| Develop and share educational tools, such as webinars and PowerPoint presentations, that address the various stages of the adoption of PP-EHRs and HIT, including certified technologies. These tools will focus on e-prescribing, MR, MTM, medication adherence, immunization, quality improvement monitoring, and other topics. | Partial | 2 | Yes |
| Develop practical tools to guide providers through the justification, budgeting, selection, contracting, implementation, and ongoing monitoring required for PP-EHR use. These efforts will focus on creating pharmacists' adoption demand. | None | 1 | Yes |
| Disseminate information on the costs and benefits of using PP-EHRs and HIT in pharmacy practice, current policies advancing the use of HIT, as well as barriers to the implementation of PP-EHRs and HIT, on behalf of patients receiving pharmacist-provided patient care services. | None | 1 | Yes |
| Identify workflow and process change considerations associated with the meaningful use of the PP-EHR in the pharmacy and with prescribers, payers, and patients. | Partial | 1 | Yes |
| Develop and implement a strategy to educate pharmacists, vendors, and policymakers about preparing for HIE through the use of PP-EHR technologies. | None | 0 | Yes |
| Prioritize focus areas and questions to be addressed in ongoing and concluded pilot studies. | None | 0 | Yes |
| Encourage the presentation of results in the form of practical implementation guides usable by pharmacists. | None | 0 | Yes |

continues >>



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| Strategies | Status (Done- Partial-Complete) | Importance (rank 1-3, with 3 being most important) | Relevant to Industry (Yes/No) |
|--|------------------------------------|--|----------------------------------|
| Support "best practice" studies, including defining the return-on-investment business case, the value of certification, and successful strategies for participation in HIEs. | None | 1 | Yes |
| Encourage a focus on pharmacists, vendors, and policymakers in the HIT extension program at the national research center and in the regional extension centers. | None | 0 | Yes |
| Educate and provide quantifiable evidence to payers, prescribers, and patients regarding the value of pharmacists' use of certified PP-EHR functionality in areas such as antibiotic stewardship, decreased hospital readmissions, smoking cessation programs, and other meaningful of EHR quality measures. | Partial | 1 | Yes |

Goal 9: Achieve Integration of Pharmacies and Pharmacists Into Health Information Exchanges

Recommendation

• Ensure that pharmacists in all practice settings are active participants in local, state, and regional HIEs.

| Strategies | Status (Done- Partial-Complete) | Importance (rank 1-3, with 3 being most important) | Relevant to Industry (Yes/No) |
|---|------------------------------------|--|----------------------------------|
| Contact existing HIEs to encourage involvement of pharmacists in all practice settings. | Partial | 3 | Yes |
| Work with policymakers, including state Medicaid agencies, ONC, CMS, HHS, and members of the health care industry, to promote the importance of pharmacist participation in HIEs. | Partial | 3 | Yes |
| Work with other members of the health care community to encourage recognition of the importance of pharmacist involvement in HIEs. | Partial | 3 | Yes |
| Leverage existing relationships with other health care and consumer organizations to recognize the importance of having pharmacists engaged in HIEs. | Partial | 3 | Yes |
| Assist with the demonstration and documentation of the value that pharmacist participation brings to HIEs. | None | 3 | Yes |



Goal 10: Establish the Value and Effective Use of HIT Solutions by **Pharmacists**

- Promote the adoption of the PP-EHR and demonstrate the value and effective use of HIT solutions by pharmacists.
- Promote pharmacists as meaningful users of the EHR following the stage-2 and stage-3 meaningful use of EHR concepts.
- Promote the contribution of pharmacists in assisting all eligible providers with meeting meaningful use objectives.
- Promote research and the development of quality measures that demonstrate the value of the pharmacist's role in health care.
- Incorporate the quality measures and research outcomes demonstrating the value of pharmacists into the HIT processes used by all health care providers in all practice settings.

| Strategies | Status (Done- Partial-Complete) | Importance (rank 1-3, with 3 being most important) | Relevant to Industry (Yes/No) |
|--|------------------------------------|--|----------------------------------|
| Ensure that pharmacists are recognized as providers of patient care services by payers, providers and policymakers, such as the ONC, CMS, and accountable care organizations (ACOs). | Partial | 3 | Yes |
| To define MTM, use an MTM value such as SNOMED-CT codes for aggregate quality reporting. | Done | 0 | No |
| Ensure that performance measures track the quality of pharmacist-provided patient care and reduction of overall health care costs. | Partial | 3 | Yes |
| Support the standardization and adoption of plans for measuring and reporting performance information related to medications, such as the Pharmacy Quality Alliance's (PQA's) quality metrics, and integrate those plans into HIT solutions. | Partial | 3 | Yes |
| Ensure that pharmacists use HIT within models of care delivery, such as the medical home, community health teams, and care transition teams. | Partial | 3 | Yes |
| Work with system vendors to certify PP-EHR functionality in pharmacy practice management systems. | Partial | 3 | Yes |
| Work with pharmacists to adopt the PP-EHR functionality in their practice management systems using the Collaborative member organizations to help educate them about these HIT solutions. | Partial | 3 | Yes |
| Identify adequate funding sources for quality research demonstrating the value of the pharmacist's role in HIT. | None | 1 | Yes |
| Work with pharmacists and system vendors to incorporate the quality measures and research outcomes demonstrating the value of pharmacists into the HIT processes used by all health care providers in all practice settings. | Partial | 2 | Yes |



10. Appendix B

Charts Related to 4.2. Reflect on the areas on which the pharmacy industry needs to continue to work

Goal 1: Ensure That HIT Supports Pharmacists in Health Care Service Delivery

- Garner support among policymakers and regulators at all levels to include pharmacists as health professionals who provide patient care.
- Ensure that electronic health information is available to support the pharmacist's optimized role in health care delivery.

| Strategies | Collaborative Continued work in this area (Yes/No)) | Comments |
|---|--|---|
| Develop and identify funding opportunities at the state level for pharmacist-related demonstration projects, such as CDTM demonstration projects assessing operational models, HIEs, payment structures, and HIT-related outcome measures. | No | |
| Leverage existing research to advocate expanding the role of pharmacists in health care delivery through accessibility to HIEs. | No | |
| Organize statewide public relations and media outreach campaigns to improve public awareness of the role of pharmacists in HIEs and the patient care capabilities of pharmacists among health care professionals, health executives, public policymakers, and the public. | No | |
| Work with pharmacy state associations and state and federal representatives to coordinate legislative days to demonstrate and discuss the expanding role of pharmacists in HIT in all practice settings. | No | |
| Advocate equitable compensation for pharmacists providing patient care services and their recognition as meaningful users of EHRs. | No | |
| Develop a policy framework for pharmacists' access to critical patient health care information, such as diagnosis and laboratory values, to be provided through an interoperable EHR system including e-prescribing; this framework will support bidirectional communication among multiple health care providers and settings. | No | |
| Establish state and federal grants for pharmacists that support the continued growth of an interoperable electronic health care system. | No | |
| Develop white papers describing the appropriate flow of critical electronic information among health care providers, including pharmacists, that protects patient privacy while providing medical information needed for decision making for optimal therapy. | Yes | Being worked on by Pharmacy HIT Collaborative WG3 |
| Collaborate with state boards of pharmacy and other regulatory agencies on changes needed in education and state practice acts, including the expanding role of technicians and greater use of HIT, to implement patient-focused pharmacy services while maintaining public safety. | No | ASHP has a guid- ance document |



Goal 2: Achieve Integration of Clinical Data With Electronic Prescription

Recommendation

• Promote and support the effective integration and bidirectional exchange of electronic prescription information and clinical information for pharmacists and pharmacies across the continuum of care.

| Strategies | Collaborative Continued work in this area (Yes/No)) | Comments |
|---|--|--|
| Network with peers to share lessons learned and engage professional pharmacy associations in identifying best practices and common concerns related to e-prescribing. | No | Still have work to do on hospital eRX |
| Engage and participate in standards-setting organizations, task forces, and work groups to improve electronic exchanges related to e-prescribing. | Yes | |
| Effectively train support staff on the use of e-prescribing technologies and establish clear workflow processes to improve efficiencies. | No | |
| Connect with pharmacy professional associations to identify opportunities for continuing education related to the use of e-prescribing technology and other networking opportunities where the exchange of information with peers results in practical solutions during the transition to e-prescribing. | Yes | |
| Encourage e-prescribing users to report their experiences to the portal for pharmacy and prescriber e-prescribing experiences, available at http://www.pqc.net/eprescribe/disclaimer.html. The experiences reported to this site will be used to identify trends and systems issues that might need to be addressed or mitigated in order to improve the overall quality and operation of the e-prescribing infrastructure. | No | National Alliance of State Pharmacy As- sociations (NASPA) is working on this |
| Work with pharmacy and prescriber professional organizations, including state boards of pharmacy, to identify model policies and procedures for e-prescribing. | No | Surescripts and other eRX networks |
| Participate in networking opportunities to exchange information with peers on the effective implementation of e-prescribing. | Yes | |
| Collectively communicate e-prescribing-related concerns to other stakeholder organizations and state e-health affiliates to build understanding and work toward common resolutions. | No | |
| Create forums to share information on solutions that have been developed to better integrate e-prescribing into the pharmacy workflow. | Yes | |

Goal 3: Advocate Pharmacist Recognition in Existing Programs and Policies

Recommendation

 Promote and support the effective integration and bidirectional exchange of electronic prescription information and clinical information for pharmacists and pharmacies across the continuum of care.

| Strategies | Collaborative Continued work in this area (Yes/No)) | Comments |
|--|--|---|
| Develop an iterative policy framework and strategies for the inclusion of pharmacists' patient care services information in national HIE activities and electronic quality measures. | Yes | |
| Advance policy framework and recommendations to HIT Policy and Standards committees, CMS, and other decision-making bodies. | Yes | |
| Work with states and state affiliates to encourage the inclusion of pharmacists in their plans for HIT/HIE programs as a requirement so that true interoperability and interconnectivity can be achieved in all practice settings. | Yes | |
| Leverage resources from regional extension centers to support pharmacists providing patient care services. | No | |
| Advocate for the expansion of regional extension centers to support pharmacists providing patient care services. | No | |
| Advocate for the inclusion of pharmacists' provision of patient care services to beacon community grant recipient programs. | No | Beacon work is almost complete |
| Develop a white paper that documents the role of pharmacists providing patient care services in the flow of health information/data and the potential impact of failing to include pharmacists in the HIE. | No | Pharmacy HIT Collaborative WG3 completed white paper on this topic |
| Leverage research to emphasize the need for pharmacists to be included in HIEs to reduce overall health care costs while improving quality of care. | No | |
| Ensure that the processes for pharmacists' patient care services outline how the quality of the services will benefit HIT adoption and the meaningful use of the EHR. | Yes | |



Goal 4: Ensure That HIT Infrastructure Includes and Supports MTM Services

- Encourage the use of standardized electronic documentation of MTM services through the adoption of the PP-EHR.
- Ensure that pharmacists have access to the EHR to perform MTM services and that they can electronically exchange MTM service information with patients, providers, and payers.

| Strategies | Collaborative Continued work in this area (Yes/No)) | Comments |
|--|--|----------|
| Work with organizations defining the pharmacist's MTM role in HIT, such as pharmacy associations, PSTAC, MTM intermediaries, and NCPDP, to ensure that MTM principles and guidelines defined by pharmacists are incorporated into the national HIT infrastructure. | Yes | |
| Demonstrate to pharmacy management system vendors the market demand for electronically exchanging MTM service data with other providers and payers. | Yes | |
| Educate and conduct awareness campaigns about the use of standardized electronic MTM processes for pharmacy management system vendors. | Yes | |
| Work with other EHR and personal PHR vendors to incorporate medication-optimized MTM service documentation into their systems. | Yes | |
| Demonstrate that the meaningful use of the EHR medication-related and disease state measurement concepts can be met by adding pharmacist-provided MTM service documentation into EHR and PHR systems. | Yes | |

Goal 5: Integrate Pharmacist-Delivered Immunizations into the EHR

- Enhance the ability of pharmacists to electronically document the administration of, share information about, and determine the need for immunizations.
- Ensure that system vendors understand the necessity of including immunizationrelated capabilities in pharmacy practice management systems.
- Ensure that pharmacists' immunization activities are included in the meaningful use of EHR measurement goals and that the immunization information is exchanged with other meaningful users of the EHR.

| Strategies | Collaborative Continued work in this area (Yes/No)) | Comments |
|---|--|--|
| Enhance the ability of pharmacists to electronically document, share, and evaluate patient immunization therapy. | Yes | |
| Evaluate the status of state IIS procedures and their goals for transition to the PP-EHR model. | No | |
| Partner with state and national pharmacist organizations to educate pharmacists concerning electronic immunization documentation systems available for adoption. | No | |
| Ensure that system vendors understand the necessity of the inclusion of immunization-related capabilities in pharmacy practice management systems and the adoption of the PP-EHR functionality for exchange of immunization information. | No | |
| Assist organizations in adopting the PP-EHR as the standard for collecting and evaluating public health strategies. | No | |
| Demonstrate the market demand for immunization data to be shared among pharmacists, other health care providers, and public health organizations. | Yes | |
| Illustrate the impact that centralizing pharmacist-administered immunization data into the EHR can have on the efforts of immunization registry programs among government entities. | No | Surescripts and RelayHealth are working on this. |
| Demonstrate the benefit of access to pharmacist-administered immunization information through the EHR for travel requirements. | No | |
| On a state-by-state basis, expand the awareness of documentation requirements within a pharmacy practice for pharmacist administration of injectable medications; expand awareness of ways that adoption of the PP-EHR would enhance pharmacist involvement and access to care by patients. | Yes | |



Goal 6: Achieve Recognition of Pharmacists as Meaningful Users of EHR **Quality Measures**

- Identify and promote practice models in which pharmacists participate in the support or enhancement of the MU of EHR quality measures.
- Educate pharmacists about the MU of EHR quality measures and how their role supports improvement in quality measures in all practice settings.
- Educate other health care practitioners on the role of the pharmacist in the MU of the EHR measurement concepts and how pharmacists may assist in attaining their MU goals.

| Strategies | Collaborative Continued work in this area (Yes/No)) | Comments |
|--|--|---------------------|
| Educate pharmacists on meaningful use of the EHR quality measures. | Yes | |
| Create educational resources to assist pharmacists with the meaningful use of the EHR quality measures. | Yes | ASHP has resources |
| Promote demonstration projects where the pharmacist's involvement in HIEs affects outcomes related to the meaningful use of the EHR quality measures. | No | |
| Promote demonstration projects where the pharmacist's involvement in HIEs affects improvement in process steps of the meaningful use of the EHR quality measures. | No | |
| Create education programs to educate all health care providers on the pharmacist's role in the meaningful use of the EHR quality measures outcome improvements. | No | ASHP has resourcess |
| Educate the public on the pharmacist's role in assisting patients with self- monitoring and documentation of HIT information. | No | |
| Educate the public on the pharmacist's role in the exchange of medication-related information using HIEs and e-prescribing networks. | No | |
| Create pharmacy continuing education programs to educate pharmacists about the practice models used to support the meaningful use of the EHR quality measures. | No | ASHP has resources |
| Create internship programs to teach students about the pharmacist's role in the support of the meaningful use of the EHR quality measures and work to integrate those concepts into the pharmacy curriculum. | No | ASHP has resources |
| Participate in standards organizations for future meaningful use of the EHR quality measures using the PP-EHR, especially as those measures relate to MTM. | Yes | |
| Ensure that pharmacists are involved in the determination and adoption of the meaningful use of the EHR quality measures pertaining to medications and medication-related activities. | Yes | |



Goal 7: Advance System Vendor EHR Certification

- Develop certifiable PP-EHR functionalities by pharmacy management system vendors or through partnerships with EHR vendors to expedite creation of certifiable PP-EHRs.
- Facilitate efforts to ensure the launch of CMS-defined certified PP-EHRs.

| Strategies | Collaborative Continued work in this area (Yes/No)) | Comments |
|---|--|---|
| Meet with HIT policy committee and the HIT Standards committee to outline the NCPDP/HL7 Functional Profile for PP-EHRs. | Yes | |
| Request support and recommendations from both groups to the ONC for incorporation of PP-EHR use into national HIT policy. | Yes | |
| Meet with the ONC and other HHS officials to educate and encourage support of NCPDP/HL7 Functional Profile for PP-EHRs. Include key messages about how certified PP-EHR use will support national HIT policy activities and goals. | Yes | |
| Meet with the ONC to ensure that standards-based interoperability is incorporated into the PP-EHR certification criteria to allow meaningful data exchange across all care settings. | Yes | |
| Meet with the ONC to ensure that e-prescribing, MR, MTM, and medication quality requirements needed for pharmacists are incorporated into the PP-EHR certification criteria to advance pharmacists toward a more robust and interactive patient care model. | Yes | Collaborative meeting with ONC members on August 1, 2013 |
| Meet with the ONC to ensure certification requirements for PP-EHRs include the ability to share the CCD during transitions of care. | Yes | |
| Meet with the ONC to ensure that the functionality required for capturing and reporting meaningful use quality measures is part of certification requirements. | Yes | Pharmacy HIT Collaborative's ED participation in CMS MU Stage 3 Technical Expert Panel |
| Monitor all PP-EHR certification activities through contact with certification bodies. | Yes | |
| Promote PP-EHR certification requirements to pharmacy management system vendors. | Yes | Pharmacy HIT Collaborative WG4 activity |
| Monitor efforts of pharmacy system vendors to gain certification. | Yes | Pharmacy HIT Collaborative WG4 activity |
| Encourage pharmacist HIT thought-leader representation on appropriate certification committees and task forces involved in developing and implementing PP-EHR certification. | No | Need more Phar- macy HIT Col- laborative Council Member input |



Goal 8: Promote the Adoption and Use of HIT and EHRs

- Create pharmacists' demand for certified PP-EHR functionality and encourage PP-EHR development by pharmacy management system vendors.
- Educate payers, prescribers, and patients and provide evidence of the value of pharmacists using HIT solutions.
- Promote support among policymakers and regulators for the value of pharmacists using HIT solutions.
- Promote and support research on how the PP-EHR and HIT can be used to advance best practices among pharmacists, prescribers, payers, and patients.

| Strategies | Collaborative Continued work in this area (Yes/No)) | Comments |
|---|--|---|
| Widely disseminate "The Roadmap for Pharmacy Health Information Technology Integration in U.S. Health Care" and its updates. | No | |
| Educate policymakers at federal, state, and local levels regarding pharmacists' readiness to be included in key public policy activities, including state grants supporting public health reporting and expanded HIE capabilities. | Yes | |
| Encourage the inclusion of and participation by pharmacists in state grants to promote the use of PP-EHR and HIT. | No | NASPA will help with this initiative |
| Develop a business case for distribution to pharmacists, prescribers, and payers that supports the use of the PP-EHR. | No | |
| Work with and through the Collaborative, its member organizations, and professional partnerships to develop and promote educational programs and tools on certified PP-EHRs and interoperability at the federal, state, and local levels. These efforts will focus on creating pharmacists' adoption demand. | Yes | |
| Develop and share educational tools, such as webinars and PowerPoint presentations, that address the various stages of the adoption of PP-EHRs and HIT, including certified technologies. These tools will focus on e-prescribing, MR, MTM, medication adherence, immunization, quality improvement monitoring, and other topics. | Yes | Share Pharmacy HIT Collaborative ED's Presentations |
| Develop practical tools to guide providers through the justification, budgeting, selection, contracting, implementation, and ongoing monitoring required for PP-EHR use. These efforts will focus on creating pharmacists' adoption demand. | No | |
| Disseminate information on the costs and benefits of using PP-EHRs and HIT in pharmacy practice, current policies advancing the use of HIT, as well as barriers to the implementation of PP-EHRs and HIT, on behalf of patients receiving pharmacist-provided patient care services. | No | |
| Identify workflow and process change considerations associated with the meaningful use of the PP-EHR in the pharmacy and with prescribers, payers, and patients. | Yes | Pharmacy HIT Collaborative WG3 |
| Develop and implement a strategy to educate pharmacists, vendors, and policymakers about preparing for HIE through the use of PP-EHR technologies. | No | |
| Prioritize focus areas and questions to be addressed in ongoing and concluded pilot studies. | No | |
| Encourage the presentation of results in the form of practical implementation guides usable by pharmacists. | No | |

Goal 9: Achieve Integration of Pharmacies and Pharmacists Into Health Information Exchanges

Recommendation

• Ensure that pharmacists in all practice settings are active participants in local, state, and regional HIEs.

| Strategies | Collaborative Continued work in this area (Yes/No)) | Comments |
|---|--|----------|
| Contact existing HIEs to encourage involvement of pharmacists in all practice settings. | Yes | |
| Work with policymakers, including state Medicaid agencies, ONC, CMS, HHS, and other members of the health care industry, to promote the importance of pharmacist participation in HIEs. | Yes | |
| Work with other members of the health care community to encourage recognition of the importance of pharmacist involvement in HIEs. | Yes | |
| Leverage existing relationships with other health care and consumer organizations to recognize the importance of having pharmacists engaged in HIEs. | Yes | |
| Assist with the demonstration and documentation of the value that pharmacist participation brings to HIEs. | No | |



Goal 10: Establish the Value and Effective Use of HIT Solutions by **Pharmacists**

- Promote the adoption of the PP-EHR and demonstrate the value and effective use of HIT solutions by pharmacists.
- Promote pharmacists as meaningful users of the EHR following the stage-2 and stage-3 meaningful use of EHR concepts.
- Promote the contribution of pharmacists in assisting all eligible providers with meeting meaningful use objectives.
- Promote research and the development of quality measures that demonstrate the value of the pharmacist's role in health care.
- Incorporate the quality measures and research outcomes demonstrating the value of pharmacists into the HIT processes used by all health care providers in all practice settings.

| Strategies | Collaborative Continued work in this area (Yes/No)) | Comments |
|--|--|---|
| Ensure that pharmacists are recognized as providers of patient care services by payers, providers and policymakers, such as the ONC, CMS, and ACOs. | No | |
| Use an MTM value set to define MTM, such as Systematized Nomenclature of Medicine—Clinical Terms (SNOMED-CT) codes for aggregate quality reporting. | No | Need to submit the MTM SNOMED- CT codes to the National Library of Medicine Value Set Authority Center |
| Ensure that performance measures track the quality of pharmacist-provided patient care and reduction of overall health care costs. | No | Work with PQA |
| Support the standardization and adoption of plans for measuring and reporting performance information related to medications, such as PQA's quality metrics, and integrate those plans into HIT solutions. | No | Work with PQA |
| Ensure that pharmacists use HIT within models of care delivery, such as the medical home, community health teams, and care transition teams. | No | All Pharmacy HIT Collaborative Council Members should work on this |
| Work with system vendors to certify PP-EHR functionality in pharmacy practice management systems. | Yes | |
| Work with pharmacists to adopt the PP-EHR functionality in their practice management systems using the Collaborative member organizations to help educate them about these HIT solutions. | Yes | |







