

Department of Health and Human Services

Office of Consumer Information and Insurance Oversight

Centers for Medicare & Medicaid Services

**Guidance for Exchange and
Medicaid Information Technology (IT) Systems**

Version 1.0

November 3, 2010

Table of Contents

1. Introduction	1
1.1 Purpose and Scope	1
1.2 Collaborative IT Development Approach	2
1.3 Document Organization	2
2. Governance	3
3. Business Architecture	3
4. Cost Allocation	4
5. Technical Architecture	4
5.1 Standards	4
5.1.1 HIPAA Transaction Standards	5
5.1.2 Additional Transaction Standards in the Affordable Care Act	5
5.1.3 Standards for Accessibility	5
5.1.4 Security and Privacy	6
5.1.5 Other Standards	6
5.2 Architecture Guidance	6
5.2.1 System Integration	6
5.2.2 Service-Oriented Architecture	7
5.2.3 Isolation of Business Rules	7
5.2.4 Security and Privacy	7
5.2.5 Efficient and Scalable Infrastructure	7
5.2.6 Transparency, Accountability and Evaluation	7
5.2.7 System Performance	7
Acronyms	9

1. Introduction

1.1 Purpose and Scope

The purpose of this document is to assist states as they design, develop, implement, and operate technology and systems projects in support of the Affordable Care Act relating to the establishment and operation of Health Insurance Exchanges (“Exchanges”) as well as coverage expansions and improvements under Medicaid and the Children’s Health Insurance Program (CHIP), and premium tax credits and cost-sharing reductions under the Affordable Care Act. This guidance seeks to help states achieve the necessary degree of interoperability between IT components in the federal and state entities that work together to provide health insurance coverage through the Exchange, Medicaid or CHIP programs. IT systems should be simple and seamless in identifying people who qualify for tax credits, cost-sharing reductions, Medicaid, and CHIP.

Starting in 2014, Exchanges will help individuals and small employers shop for, select and pay for high-quality, affordable private health plans that fit their individual needs at competitive prices. By providing a place for one-stop shopping, Exchanges will make purchasing health insurance easier and more understandable. As with other industries, having a sophisticated, consumer-friendly IT infrastructure will be critical to success.

This *Guidance for Exchange and Medicaid IT Systems*, Version 1.0 (hereafter referred to as IT Guidance), will be iterative, updated, and expanded over time. Version 1.0 establishes a framework and approach for developing IT systems, focusing primarily on those components and functions that are the subject of the Exchange IT Grant Funding Opportunity Announcement (FOA) issued by the Office of Consumer Information and Insurance Oversight (OCIIO) on October 29, 2010, and the Notice of Proposed Rulemaking on Federal Funding for Medicaid Eligibility Determination and Enrollment Activities displayed in the Federal Register on November 3, 2010. (Additional rulemaking will occur in 2011 and beyond.) If, in establishing final policies via rulemaking, the framework and approach for developing IT systems is revised, this guidance will be revised as well. This IT Guidance is a joint issuance of OCIIO and the Centers for Medicare & Medicaid Services (CMS).

In the future, we expect to expand, as well as deepen, our discussion of the subjects addressed in Version 1.0. Further guidance will be based on best IT practices, future policy decisions and regulations; ongoing feedback from states, vendors, and other stakeholders; lessons learned from early IT development projects; and further development and evolution of standards. States receiving funding under a Cooperative Agreement for Exchange development or under an Advance Planning Document (APD) under Medicaid for eligibility system development should pay close attention to and comply with this guidance. To ensure that they remain on target with their IT development projects, these states must review and comply with this guidance and well as review future iterations carefully. Although OCIIO and CMS will use additional avenues for communication and guidance to assist and oversee states as they request and utilize federal funds for Exchanges and Medicaid IT development, this document and its future iterations, including any iterations that incorporate final policies described in any Final Rule, should be considered a critical source of information to states. OCIIO and CMS will use this guidance in reviewing state applications for funding under Exchange grants and federal match under Medicaid.

The IT Guidance provides national direction on how IT systems should support and enable business operations and the processes for health care coverage through Exchanges and Medicaid as required by the Affordable Care Act. We do not intend to impose a single IT solution on individual states and will actively ensure the development of solutions and approaches that will work in all states to meet key business objectives. The way in which states choose to construct and assemble the components necessary to create their Exchange, Medicaid and CHIP systems will vary depending on a number of factors, including the level of maturity of current systems, current and planned governance and business models, size, and other factors.

1.2 Collaborative IT Development Approach

The vision to improve the availability of high-quality health care coverage to families and individuals will be achieved through a collaborative, intensive partnership between CMS, OCIIO, and states responsible for implementation of the Exchanges and Affordable Care Act Medicaid and CHIP provisions. This collaboration must occur within states (between the Exchanges and Medicaid, and CHIP as well as stakeholders more generally). We further encourage states to work together and with federal agencies to develop and deploy shared services to minimize the expense and reduce the risks associated with individual state, end-to-end IT development and implementation. This collaboration must also occur within the Federal government to ensure effective and efficient data exchange between the health system and sources of authoritative data for such elements as income, citizenship and immigration status. Finally, a high degree of collaboration must occur between the private and public sectors to ensure appropriate coverage and financial support for employers and employees.

We intend to promote and foster the development of IT components and models that will drive the delivery of intended business results. We will promote standards and foster the development of shared business process models, requirements, specifications, technical architecture, and programming to the maximum extent feasible. We also intend to communicate and provide access to, at the earliest possible point, those IT capabilities or components developed and maintained at the Federal level on which the states will rely. We expect that, in this highly collaborative atmosphere, the best and most efficient solutions will emerge from the efforts of private-sector vendors, business partners, and governmental projects funded at both the state and federal levels. Because of the demanding timelines for development, testing, deployment, and operation of IT systems for Exchanges and Medicaid agencies to extend coverage as required by the Affordable Care Act, we want to support and identify those promising solutions early in the their life cycle. We also want to ensure that state development approaches are sufficiently flexible to integrate successful components as they become available.

1.3 Document Organization

This document is organized as follows:

- **Section 2, Governance.** Defines responsibilities for this Guidance within the federal government.
- **Section 3, Business Architecture.** Defines the key business assumptions and goals for Exchanges, Medicaid, CHIP, and state health subsidy programs.

- **Section 4, Cost Allocation.** Describes the mechanisms and considerations for funding and coordinating between sources of funding for responsibilities shared among Exchanges and Medicaid.
- **Section 5, Technical Architecture.** Identifies initial standards and high-level architectural guidance for use in implementing provisions of the Affordable Care Act relating to Exchanges, Medicaid and CHIP.

2. Governance

This IT Guidance provides guidance to States on the implementation of expanded health insurance coverage under Exchanges, Medicaid, and CHIP.

This IT Guidance is the product of a joint development and review process within the U.S. Department of Health and Human Services (HHS), involving both OCIIO and CMS. It is envisioned that the IT Guidance and the health insurance Exchange core functions will be governed through a System Development Life Cycle (SDLC)-type model that includes life-cycle phases and transition stage gate reviews for such items as business service descriptions/definitions, requirements specifications, system design specifications, data models, interface control documents, and integration test cases.

Future versions of this IT Guidance will be developed with additional input from and consultation with the states. States are invited to provide comments and ask questions relating to this guidance by contacting either OCIIO or CMS.

This IT Guidance will not supplant or override statutory or regulatory direction or requirements previously established by the Secretary of Health and Human Services. States who plan or implement IT systems under the Affordable Care Act should consult existing law, regulations, and policy guidance as well as this document.

3. Business Architecture

We expect IT systems to support a first-class customer experience, as well as seamless coordination between the Medicaid and CHIP programs and the Exchanges and between the Exchanges and plans, employers, and navigators. We also expect these systems to generate robust data in support of program evaluation efforts and ongoing improvements in program delivery and outcomes. In addition to reviewing the statutory requirements contained in the Affordable Care Act, states should use the following assumptions and goals in their IT roadmaps:

- States should aim to provide the same customer experience to all individuals seeking coverage, regardless of source or amount of subsidy for which they may qualify or whether they enter the process through the Exchange, Medicaid, or CHIP. States should aim to make it easy for individuals to explore information on their health coverage options, and should quickly and accurately enroll individuals into coverage.
- For most people, this routing and enrollment in the Exchange, Medicaid or CHIP will happen in real time. Some people may experience discrepancies between the

information they provide and the information obtained through authoritative sources, which affects their eligibility. For those individuals, we expect a timely and responsive resolution process as required by the Affordable Care Act. Other individuals may seek a specific determination by Medicaid (because of disability, for example), that may require more information and processing time.

- Customers should experience this process as representing the highest level of service, support, and ease of use, similar to that experienced by customers of leading service and retail companies and organizations doing business in the United States.
- States should aim to replicate this customer experience with other stakeholders and business partners, including plans, employers, and navigators.
- Most individuals will be evaluated for eligibility in the Exchange, Medicaid and CHIP using a coordinated set of rules; as a result, we expect common systems and high levels of integration to avoid duplication of costs, processes, data, and effort on the part of either the state or the beneficiary. Such systems will support Exchanges as they execute responsibilities for Medicaid and CHIP eligibility determinations and Medicaid and CHIP agencies that interact with Exchange-eligible individuals.
- For the purposes of the Affordable Care Act, HHS is developing a Federal approach to verification from Federal agencies such as the Internal Revenue Service, so states will not have to independently establish their own interfaces and connections.
- IT systems should be able to generate data in support of performance management, public transparency, policy analysis, and program evaluation.

4. Cost Allocation

The high degree of interaction and seamlessness required particularly between Exchanges and Medicaid necessitates highly integrated systems. There are, at present, opportunities for significant leverage between Exchanges and Medicaid. As described below, States should use cost allocation appropriately (in accordance with Office of Management and Budget (OMB) Circular A-87), between the federal grants made available for Exchanges under the Affordable Care Act and federal match available through Medicaid or other federal programs for IT support.

Federal grant funding made available to Exchanges under the Affordable Care Act cannot be used as the state share for claiming federal matching funds.

States will need to allocate the costs of their IT systems proposals, considering OMB Circular A-87, between the Exchanges and Medicaid for those activities in which Medicaid programs are likely to benefit. Cost allocation with CHIP programs may also be needed. Some of the functions that we anticipate will need cost-allocation include but may not be limited to eligibility, enrollment, and possibly, consumer assistance. The administration of Exchanges and qualified health plans are examples where it might be less likely that costs must be allocated between the two sources of funding.

5. Technical Architecture

5.1 Standards

Standards help achieve and sustain secure interoperability among state and federal health programs and with providers and community organizations delivering care and promoting and organizing access to coverage and benefits. It is our intent to ensure that any IT system development projects supported through Exchanges, Medicaid or CHIP funding comply to the fullest extent possible with standards in wide use within the U.S. health system and with standards endorsed or adopted by the Secretary of Health and Human Services. These include Health Insurance Portability and Accountability Act of 1996 (HIPAA) transaction standards, standards and protocols adopted by the Secretary pursuant to Sections 1104 and 1561 of Affordable Care Act, standards to ensure accessibility as well as security and privacy standards consistent with federal law. The following paragraphs provide information relating to these and other standards.

5.1.1 HIPAA Transaction Standards

To improve the efficiency and effectiveness of the health care system, HIPAA included administrative simplification provisions that required HHS to adopt national standards for electronic health care transactions and code sets, unique employee and provider identifiers, and protection of security and privacy. IT projects undertaken by states in support of the Affordable Care Act should comply with all relevant HIPAA standards, including protection of personal health information.

5.1.2 Additional Transaction Standards in the Affordable Care Act

Section 1104 of the Affordable Care Act requires HHS to adopt a single set of operating rules for each HIPAA transaction. Section 1561 of the Act calls upon the Secretary, in consultation with the HIT Policy Committee and the HIT Standards Committee, to develop interoperable and secure standards and protocols for enrollment. These standards were approved by Secretary Sebelius on September 17th, 2010 and are accessible at: <http://healthit.hhs.gov/portal/server.pt?open=512&mode=2&objID=3161>. One of the chief recommendations from the Committees is that states collaborate using the National Information Exchange Model (NIEM) and unified form to facilitate the enrollment process and common data exchange.

Any additional standards, protocols, or approaches adopted by the Secretary pursuant to these two sections of the Affordable Care Act should be considered and integrated into the IT development life cycle undertaken by states.

5.1.3 Standards for Accessibility

Enrollment and eligibility systems should be designed to meet the diverse needs of users (e.g., consumers, state personnel, other third-party assisters) without barriers or diminished function or quality.

Systems shall include usability features or functions that accommodate the needs of persons with disabilities, including those who use assistive technology. State enrollment and eligibility

systems are subject to the program accessibility provisions of Section 504 of the Rehabilitation Act, which include an obligation to provide individuals with disabilities an equal and effective opportunity to benefit from or participate in a program, including those offered through electronic and information technology. At this time, the Department will consider a recipient's websites, interactive kiosks, and other information systems addressed by Section 508 Standards as being in compliance with Section 504 if such technologies meet those Standards. We encourage states to follow either the 508 guidelines or guidelines that provide greater accessibility to individuals with disabilities. States may wish to consult the latest Section 508 guidelines issued by the US Access Board or W3C's Web Content Accessibility Guidelines (WCAG) 2.0 (see <http://www.access-board.gov/sec508/guide/index.htm>).

States should also take reasonable steps to provide meaningful access by persons with limited English proficiency.

5.1.4 Security and Privacy

Information systems containing individually identifiable information and/or protected health information (PHI) are required to implement adequate protections to ensure the protection of sensitive data. The HIPAA Privacy and Security Rules specify privacy and security requirements that HIPAA covered entities must follow. In designing their information systems, agencies should also be aware of State laws that impose additional restrictions on the sharing of sensitive health information.

The National Institute of Standards and Technology (NIST) has published a series of documents that provide guidance to Chief Information Security Officers (CISO). While the NIST special publications on security are compulsory only at the federal level, the special publications can serve as useful guidance to non-federal agency CISOs in the implementation of a security program aimed at the protection of both individually identifiable information and PHI.

See the link to NIST's special publications: <http://csrc.nist.gov/publications/PubsSPs.html>; additionally, a guide to implementing the HIPAA Security Rule can be found here: <http://csrc.nist.gov/publications/PubsFIPS.html>

Finally, information systems containing tax return information must comply with the taxpayer privacy and safeguards requirements of Section 6103 of the Internal Revenue Code.

5.1.5 Other Standards

Under the Information Technology Management Reform Act (Public Law 104-106), the Secretary of Commerce approves standards and guidelines developed by NIST for federal computer systems that extend beyond security and privacy. IT development projects should consider and apply NIST standards as appropriate.

5.2 Architecture Guidance

This subsection provides initial, broad guidance for developing IT system architectures that support the Health Insurance Exchanges and Medicaid and CHIP provisions contained in the Affordable Care Act. Over time, the depth and breadth of these architectural standards will expand, providing technical reference architectural guidance for secure and interoperable IT health care solutions to support Exchanges and Medicaid as required by the Affordable Care Act.

Systems developed or enhanced to support functions of the Exchange should adhere to the following architectural principles when possible.

5.2.1 System Integration

- Provide high-level integration of process flow and information flow with such business partners as navigator, health plans, small businesses, brokers, employers, and others.
- Apply a modular, flexible approach to systems development, including the use of open interfaces and exposed application programming interfaces, and the separation of business rules from core programming, available in both human and machine-readable formats.
- Ensure seamless coordination between Medicaid, CHIP and the Exchange, and allow interoperability with health information exchanges, public health agencies, human services programs, and community organizations providing outreach and enrollment assistance services.

5.2.2 Service-Oriented Architecture

- Employ Web Services Architecture/Service-Oriented Architecture methodologies for system design and development and to ensure standards-based interfaces to link partners and information at both federal and state levels.
- Employ common authoritative data sources and data exchange services, such as but not limited to, federal and state agencies or other commercial entities.
- Employ open architecture standards (non-proprietary) for ease of information exchanges.

5.2.3 Isolation of Business Rules

- Use standards-based business rules and a technology-neutral business rule repository.
- Enable the business rules to be accessible and adaptable by other states.

5.2.4 Security and Privacy

- Support the application of appropriate controls to provide security and protection of enrollee and patient privacy.

5.2.5 Efficient and Scalable Infrastructure

- Leverage the concept of a shared pool of configurable, secure computing resources (e.g., Cloud Computing).

5.2.6 Transparency, Accountability and Evaluation

- Produce transaction data and reports in support of performance management, public transparency, policy analysis and program evaluation.
- Leverage Commercial Off-the-Shelf business intelligence functionality to support the development of new reports and respond to queries.

5.2.7 System Performance

- Ensure quality, integrity, accuracy, and usefulness of functionality and information.
- Provide timely information transaction processing, including maximizing real-time determinations and decisions.
- Ensure systems are highly available and respond in a timely manner to customer requests.

Acronyms

APD	Advance Planning Document
CHIP	Children's Health Insurance Program
CISO	Chief Information Security Officer
CMS	Centers for Medicare & Medicaid Services
FOA	Funding Opportunity Announcement
HHS	U.S. Department of Health and Human Services
HIPAA	Health Insurance Portability and Accountability Act of 1996
IRS	Internal Revenue Service
IT	Information Technology
NIEM	National Information Exchange Model
NIST	National Institute of Standards and Technology
OCIO	Office of Consumer Information and Insurance Oversight
PHI	Protected Health Information
SDLC	System Development Life Cycle
WCAG	Web Content Accessibility Guidelines