The MMA ePrescribing Pilot Projects

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The Medicare Modernization Act

- The MMA specifically directs the Secretary of HHS to "conduct a pilot project to test the initial standards…in order to provide for efficient implementation of the information requirements…" for an electronic prescription drug program, set out in section 1860D-4(e)(2); e.g. information on the drug being prescribed, possible interactions and warnings with respect to other drugs in patient medication history, as well as information on eligibility and benefits, such as drugs included in a formulary or tiered formulary structure.

Foundation Standards

- NCPDP SCRIPT Standard Version 5, Release 0 (Version 5.0), May 12, 2004
- NCPDP Telecommunication Standard Guide, Version 5, Release 1 (Version 5.1), September 1999, and equivalent NCPDP Batch Implementation Guide, Version 1, Release 1 (Version 1.1) for the NCPDP Data Record in the Detail Data Record
- ASC X12N 270/271 – Health Care Eligibility Benefit Inquiry and Response, Version 4010, May 2000, Washington Publishing Company, 004010X092 and Addenda to Health Care Eligibility Benefit Inquiry and Response, Version 4010, October 2002, Washington Publishing Company, 004010X092A1

Initial Standards

- Formulary and benefit information - NCPDP is developing a standard using RxHub protocol, and pilots should determine if it should be adopted as a standard
- Exchange of medication history – Pilots should determine readiness of the NCPDP's standard medication history message
- NCPDP SCRIPT (fill status notification function) – Pilots need to assess the business value and clinical utility
- NCPDP SCRIPT (cancellation and change functions)
- Structured and Codified Sig – Pilots should test structured and codified SIGs (patient instructions) developed through standards development organization efforts
- Clinical drug terminology – Pilots should determine whether RxNorm terminology translates to NDC for new prescriptions, renewals and changes
- Prior authorization messages – Pilots should determine functionality of new versions of the ASC X12N 278; evaluate economic impact of automation and impact on quality of care; Support standards development organizations development of work flow scenarios

The Pilot Projects : Research Objectives

- Determine whether vocabularies and code sets are unequivocal and can communicate needed information
- Determine how the initial standards to be tested interoperate with the foundation standards.
- Consider how information is transported
- Consider the suitability and the impact of particular e-prescribing standards with respect to the work flow of the participants.
- In other words, are the right data being sent the right way and are they usable and useful to recipients.
- Public-private partnerships that will result in interoperable, standards-based data sharing across multiple care sites and lead to measurable, generalizable and sustainable improvements in patient safety and quality of care.

Core Evaluation Questions

- Are the right data being sent?
- Are the data usable and accurate?
- Are the data well-understood at all points of the transaction?
- Are all of the above listed initial e-prescribing data communications standards included in the pilot working? For example, can they effectively and unequivocally communicate the necessary information from sender to receiver to support the electronic prescribing functions? Are the data for the patient and the prescription transmitted accurately among all participants in the transaction, such as the pharmacy, pharmacy benefits manager (PBM), router, plan and prescriber?
- Do the initial standards work well together and with the foundation standards? If not, why not and what workarounds were used?
- How can the initial standards be improved to address workarounds?
- How long does it take to conduct each transaction using the initial standards?
- Can all appropriate drugs and other therapies be ordered via electronic prescribing?

Outcomes To Be Reported

- Use of on-formulary medications and generics
- Changes in the rate of potential inappropriate prescribing (e.g. Beers criteria)
- Changes in the rate of hospital and emergency department use overall
- Medication errors
- Adverse drug events
- Rates of hospitalizations and emergency department visits associated with adverse drug events (e.g., bleeding while anticoagulated, ACE inhibitor-caused acute renal failure, anaphylaxis, rash, etc.)
- Workflow changes in prescriber offices (fewer interactions with pharmacies, freeing up support staff time for other functions, more time available for patient interaction)
- Workflow changes relating to verbal orders
- Prescriber uptake and dropout rates
- Changes in prescription renewal rates
- Changes in new prescription rates
- Changes in fill status rates
- Patient satisfaction

The Piloteers

- Achieve Healthcare
- Brigham and Womens Hospital, MA-SHARE
- RAND – BCBS of NJ
- SureScripts – Brown University

- NEO – Ohio KePRO, UHC

The Standards

- NCPDP Formulary Benefit 1.0
- NCPDP SCRIPT 8.1 – RXHREQ/RXHRES, RXFILL, CANRX/CANRES, RXCHG/CHGRES, REFREQ/REFRES
- NCPDP Structured and Codified SIG
- RXNORM - Clinical drug terminology
- ASC X12N 278 Health Care Services Review Standard – Prior Authorization Request and Response (initial standard)
- ASC X12N 275 Claims Attachment Standard – Prior Authorization Request and Response (initial standard)

Final Report: Standards

- Discussion of implementation by standard
- Do all of the initial standards included in the pilot work?
- Do the standards work well together?
- How can the initial standards be improved?
- How do the initial standards work with the foundation standards?
- Are the right data being sent?
- Are the data usable?
- What is missing?
- What should be changed to improve functionality?
- Barriers to the adoption of initial standards
- Critical success factors for adoption of initial standards
- List of techniques for making standards work
- Other suggestions for improvement (of standards and of future pilots)

Final Report: Impact

- Effect on Functionality—integration with practice management and Electronic Health Record and Decision Support Systems
- Standards effect on quality and patient safety
- Does the use of initial standards increase efficiency of prescribing?
- How the use of an electronic prescribing system improved care from prescriber perspective
- Effect on adverse drug events
- Changes to medication error rates
- Participants by type by month for the duration of the pilot
- Reasons for changes (+/-) participation and retention rates
- Patient experience with health care; e.g. the CAHPS instrument
- Impact on beneficiaries
- Other information as specified by the project officer

The Path Forward

- "Evaluation" contractor work awarded to NRC
- Quarterly report due October 10th 2006
- Pilot work ends December 31, 2006
- Report to Congress on April 1st, 2007
- Secretary to adopt standards by April 2008
- Standards in effect 2009

Thank You!

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