

New Jersey ePrescribing Action Coalition

Overview & Findings

AHRQ Annual Meeting 2007

Improving Healthcare, Improving Lives

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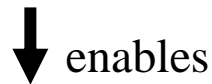
NJ ePrescribing Action Coalition

- ➔ RAND Health
- ➔ Horizon Blue Cross Blue Shield of New Jersey
- ➔ Caremark (iScribe, PBM, Mail Order)
- ➔ Allscripts
- ➔ RxHub
- ➔ SureScripts
- ➔ UMDNJ
- ➔ Point-of-Care Partners

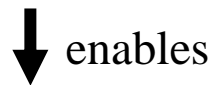


Conceptual Model

➤ Structure of the standard



➤ Information display / capture at prescriber



➤ Changes in work processes



➤ Changes in drug use

➤ Other effects

➤ Appropriateness

➤ Labor and other costs

➤ Costs

➤ Health service use

➤ Patient adherence

➤ Patient satisfaction



Methods



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Methods Overview

STANDARD	METHODOLOGY
Medication History transaction of NCPDP SCRIPT, 8.1 NCPDP Formulary and Benefit, 1.0	<ul style="list-style-type: none">• Technical expert panel• Physician, pharmacy site visits• Claims data analysis• Physician survey
Fill Status Notification transaction of NCPDP SCRIPT, 8.1	<ul style="list-style-type: none">• Technical expert panel• Focus groups with storyboard prototypes• Physician survey
<u>Prior Authorization</u> ASC X12N 278 ASC X12N 275 with HL7 attachment	<ul style="list-style-type: none">• Comparison of existing forms with HL7 attachment standard• Live pilot study• Physician web survey• Physician site visits
RxNorm (July, Nov. 2006 versions)	<ul style="list-style-type: none">• Analysis of coverage for a sample of Rx data• Expert panel
Structured and Codified Sig, 1.0 (June 2006 draft)	<ul style="list-style-type: none">• Analysis of agreement in representing a sample of Rx data



Technical Expert Panel

Category		Company	Primary Contact
Point of care software vendors	EHR	Allscripts	Jill Helm, RPh
	eRx	iScribe	Linda Schilling
	eRx	InstantDx	Krishnan Seshadri
	EHR	MedPlus	Rohit Nayak
	eRx	ZixCorp	David Robertson
Content Providers		First DataBank	Tom Bizzaro, RPh
		Wolters Kluwer	Karen Eckert, RPh
Intermediaries		RxHub	Teri Byrne
		SureScripts	Ken Whittemore, RPh
Mail Pharmacies & PBM	Mail	Caremark	Jane Niemtschk
	Mail	Medco	Michele Glynn
	Large Chain	Walgreens	Casey Handal, RPh
Pharmacies	Medium Chain	Ahold/Stop&Shop	Brad Dayton, RPh
	Independent	QS1	Tammy Devine



Prescriber & Work Process Results

➤ Site Visits

- Interviews, observations at 12 sites pre- & post-
 - 2 cancelled installation
 - 2 stopped using the system
 - 2 staff using the system for renewals only

➤ Prescriber Web Survey

- Of 395 eligible MDs recruited, 58% completed
 - 139 ePrescribers
 - 89 non ePrescribers (from eRx waiting list)



Overview of Findings



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MedHx: Technical Level

- ▶ Technically adequate standard but has shortcomings
- ▶ Technical problems hinder reconciliation of MedHx with Rxs that the POC system originated
 - ▶ No data available for many patients
 - ▶ Patient must be identified through 270/271 Eligibility
 - ▶ Prescribed drug may not be identifiable
 - ▶ Can be 100+ NDC codes for a drug; may not map
 - ▶ Many other fields are optional and often left empty
 - ▶ Prescriber ID, *Sig*, quantity dispensed, pharmacy
- ▶ Some vendors find reconciling MedHx too hard
 - ▶ Drive alerts only from prescriptions that they've originated
- ▶ All enthusiastically support enhancing RxNorm to solve NDC mapping problems



MedHx: Prescriber Level

- ▶ Many e-prescribers unfamiliar with MedHx feature
 - ▶ “It’ll (MedHx) basically have whatever we input for the patient, but patients see other doctors, and if they aren’t using the system, there’s no information... That’s huge.”
 - ▶ Of the 37% “familiar” with accessing Medication History
 - ▶ 16% use it “often” or “very often”
 - ▶ 39% agree data is complete for most patients
- ▶ “Information I have about MedHx enables me to...”

(agree or strongly agree)

	<u>eRx</u>	<u>non eRx</u>
▶ Identify clinically important DDIs	83%*	67%
▶ Prevent callbacks for safety problems	68*	54
▶ Identify medications from other MDs	65	61



Formulary & Benefit: Technical Level

- ▶ NDC a poor drug ID → huge files, mismatches
- ▶ Plan-level coverage can differ from group-level
- ▶ Of the standard's major components, only the formulary status list (FSL) is widely used
 - ▶ Other major components used much less
 - alternative suggestions (ALT)
 - coverage limitations (COV)
 - patient co-pay information (COP)
 - ▶ Cross-reference file not used at all
 - Could enable manual lookup of patient's plan, vs. rely on successful Eligibility transaction
- ▶ Bottom line: standard is technically adequate but the content leaves something to be desired



Formulary & Benefit: Prescriber Level

ePrescribers held a range of opinions about F&B

- ▶ Some perceived as accurate, others inaccurate

In survey, few expected perceived benefits of F&B:

▶ Drug coverage information...	<u>Disagree</u>	<u>Neutral</u>	<u>Agree</u>
▶ Helped me manage patient costs	23%	37%	39%
▶ Reduced need to change Rx	27	39	34
▶ Reduced calls re: coverage	30	41	29
▶ Saves me time	29	41	30
▶ Reduces costs for my office	31	50	19
▶ Overall, satisfied	25	38	37



Fill Status: Technical Expert Panel

- ▶ Originating SCRIPT reference number is an optional field
- ▶ No marketplace demand
 - “Even if a physician wants it, who is going to pay for it?”
- ▶ Burden of handling opt-in or opt-out requests
 - “The process of setting-up and maintaining the [opt-in or opt-out] indicator would be significant. Numerous interfacing systems would need to change.”
 - “That’s something that can be designed for and I think that having a patient opt in or out of this is probably something on which we should do more research.”
- ▶ Dispensed & not-dispensed messages both unreliable
 - “If patients are opting-in or opting-out ... then [if] the physician doesn’t get a ‘filled’ response what does the physician know? Maybe I opted out. They can’t really determine that it was filled, and they can’t determine that it wasn’t filled.”



Fill Status: Focus groups

- ▶ Allscripts users presented with storyboard prototypes displaying adherence alerts
- ▶ Significant concerns expressed:
 - ▶ Implied need for telephone follow up
 - ▶ New, unpaid work for physicians and staff
 - ▶ Medico-legal liability for non-adherence
- ▶ Possible mitigating factors:
 - ▶ Prescriber controls Rx's alerted, time interval
 - ▶ Deliver alerts during follow-up visit
 - ▶ Medication history data might substitute



Prior Authorization

- ▶ Strong demand for process improvements
 - 91% of MDs surveyed agreed or strongly agreed that the PA process is frustrating, both for them and for patients
 - “I hate prior authorizations... because of the time they take.”
 - “Basically, you have to say what the insurance people want to hear.” ...
 - “I frequently lie, yell or scream.”
- ▶ Developed prototype modules for iScribe, Allscripts
- ▶ Few of the data elements in the HL7 PA Attachment were useful in Horizon’s PA processes
 - ▶ Wording of PA questions → meaning of data
 - ▶ ICD-9 codes usually inadequate to capture meaning
- ▶ Very little use of ePA during 8-10 weeks of live pilot-testing



RxNorm Lab Evaluation

- ▶ FDB, MediSpan, RAND (using RxNorm dist.) independently attempted to match an semantic clinical drug (SCD) for new and renewal Rxs
- ▶ RxNorm drug identifiers were available for 99% of the 19,956 non-device prescriptions
- ▶ Non-matches
 - ▶ Already corrected
 - ▶ Multi-vitamins
 - ▶ Inconsistency in NDC codes
- ▶ Could be ready for use as an intralingua for unique drug identification in ePrescribing transactions
- ▶ Since industry experience with RxNorm remains limited, we recommended that it undergo further testing and demonstration in production



Structured and Codified Sig

- ▶ Selected 42 *Sig* text strings from 10,000 new Rx's
 - ▶ Each mapped into *Sig* standard by 3 independent reviewers
- ▶ Among the 43 key fields available, 10 (23%) were not used by any reviewer for any *Sig*.
 - ▶ Unused fields were “rate of administration,” “rate of unit text,” dose calculation fields, etc.
- ▶ No instances where reviewers agreed on the representation across all segments and fields. Reasons:
 - ▶ Field name confusion
 - ▶ Especially confusing were field names with both “unit” and “text”
- ▶ We did not recommend sig as an Initial Standard because our reviewers did not map sigs accurately or consistently
- ▶ We suggest simplifying the standard.



Conclusions

➔ Medication History, Formulary & Benefit

- ➔ Technically adequate but content not optimal
- ➔ Falling short due to NDC

➔ Fill status

- ➔ Significant concerns; promise for focused uses

➔ Prior authorization

- ➔ Needs research on representing data for PA decision

➔ RxNorm

- ➔ Needed; holds promise but requires more work

➔ Sig

- ➔ Difficult to use consistently; suggest simplifying

