CSOHIMSS

ePrescribe- Removing the Barriers

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Why do HIT?

- **It has been well documented that the current paper based mechanisms for delivering care are inadequate and often dangerous**
  - IOM report suggesting that as many as 100,000 potentially avoidable deaths occur annually in hospital settings
  - This figure is felt to be much higher in the ambulatory setting
- **With HIT and HIE there are many opportunities to improve safety and quality of care while also achieving improvements in clinical efficiency, documentation and interoperability (or the ability to share information between disparate systems)**
- **Estimates of potential overall savings to the Healthcare Industry, with robust adoption of ePrescribing only, run from $30-70 billion dollars per year**

Physician Adoption of HIT

- **Majority of physicians are not electronic and not 'connected'**
- **Many barriers to adoption**
  - Cost
  - Connectivity
  - Resources
  - Workflow disruption
  - Resistance to change
  - Lack of awareness of alternatives
- **Various alternatives to physician entry into HIT**
  - ePrescribing
  - Lab results delivery with clinical viewer
  - Hospital or HIE based portals
  - EMR/EHR
  - Others

Benefits of EHR

- Provides an integrated approach to replacing the paper based record
- Enter once, use many
- Storage demands decrease (no need for numerous racks for paper charts)
- Patient information available to many users at one time

Barriers to adoption

- Cost
- Workflow- very disruptive
- Decreased efficiency for prolonged period of time resulting in loss of income +/or more time devoted to documenting visit
- Each EHR system has good and bad aspects- no one vendor features the best of all worlds
- Much easier to start from scratch than to replace an existing paper charting system

- **How to select one**
  - Significant literature on the subject- books, journal articles, etc…
  - Online sites for comparing features
  - CCHIT Certification
  - KLAS ratings
  - AAFP CHIT site (member only)
  - Evaluate your resources- physician interest and support, financial, IT support, purchasing support from local hospital or parent organization (STARK relaxation rules)
  - Do your research, narrow down to several and then do site visits and/or have demos of the products
  - Need to decide if you want an onsite or hosted solution
    - Owned systems can cost in excess of $25,000/doc with annual maintenance fees and require onsite IT support
    - ASP, or online hosted systems, are much less expensive and a good alternative
- **Do not skimp on your preparation, the poorly prepared will suffer the most**

ePrescribing

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Benefits

- Legible
- Reduced alteration
- Decreased translation errors
- Potential to track usage
- Reduced pharmacy callbacks
- Reduce duplication
- Clinical decision support
- Much less disruptive than EHRs
- Helps mitigate risk
  - Potential for Malpractice Insurance relief
- Ability to share information with others (interoperability)
  - Other physicians
  - Pharmacies/PBMs
  - Patients
  - Payers

Barriers

- Change
- Cost
- Workflow disruption
- Hardware and connectivity requirements
- Need to login w/ password
- Alert fatigue
- Lack of clear ROI- until recent
- Limitations with controlled substances
- New set of errors in electronic environment
- Limited documentation available of value to participants
  - Much of the cost savings, formulary and generic compliance studies are proprietary and not easily available to the average provider

Prescribing mechanisms

	Paper	ePrescribe	EHR-based
Digital	No	Yes	Yes
Cost	Minimal	Mid	High
Ease of use	Easy	Mid	Difficult
Workflow impact	Minimal	Mid	High
Integration	No	None to strong	Strong

Paper based prescribing

- **Benefits**
  - Doc keeps Rx pad in pocket ready to go at all times
  - Simply pulls out a pen and writes script at a moments notice
  - This is the way most docs have learned to, and have practiced, writing for medications
  - The onus is on the patient to then deliver the script to the pharmacy
- **Disadvantages**
  - Legibility
  - Must manually enter prescription into chart notes
  - Inability for risk avoidance due to lack of;
    - CDS for formulary checking, drug/disease/allergy interactions
    - Tools to prevent duplication of meds or med categories
    - Closed loop medication monitoring
    - Ability to prevent alteration of prescription
    - Compliance checking for patients obtaining their prescriptions and taking regularly

Stand alone ePrescribing solution

- **Benefits**
  - Legible
  - Easy to refill meds
  - Clinical decision support
  - Medication history obtained from SureScripts/RxHub with premium solutions
  - Can print copy to include in chart notes
  - Opportunity to have ‘closed loop’ medication management
  - Improved risk avoidance
  - Directly sends script to pharmacy
    - No opportunity for patient to alter script
    - Know the script made it to pharmacy
- **Disadvantages**
  - Must launch software and provide login and password each time accessed
  - First time the patient is seen the patient demographics must be entered
  - Must search for patient for all subsequent prescriptions
  - Dependant on vendor accessibility and connection integrity
  - Controlled substances require paper prescribing
  - Poor adoption due to these barriers

Integrated ePrescribing

- Benefits
  - All the stand alone ePrescribe benefits
  - With PMS RTI, patient demographic information uploaded at first use, linking IDs, and updates are handled on the fly
  - Medication history
    - Can be gleaned from SureScripts/RxHub
    - Some orgs will have links to payers
  - Ina Web 2.0 or similar environment (some EHRs and clinical viewers)
    - Federated login from a patient's dashboard (SSO)
    - Patient context carried to the ePrescribing application
  - Even on the first visit the physician can refill a medication with a few clicks
- Disadvantages
  - Controlled substances require paper prescribing (for now)
  - While 95% of pharmacies have software in place to facilitate ePrescribing, only about 70% have actually done so (and most only receive on occasion)
  - Potential for delays, or lack of access to system if any connectivity issues

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- **Wikipedia definition**
  - ***Web 2.0*** is a term describing changing trends in the use of World Wide Web technology and web design that aims to enhance creativity, secure information sharing, collaboration and functionality of the web. Web 2.0 concepts have led to the development and evolution of web-based communities and its hosted services, such as social-networking sites, video sharing sites, wikis, blogs, and folksonomies.

IPA Case Study

- **Large IPA- ~2000 physicians and growing**
- **Dedicated to deploying HIT**
  - Value prop to all stakeholders
  - Necessary to remain competitive
  - Able to negotiate with payers for enhanced reimbursement and P4P
- **Very limited success offering EMR**
  - Approximately 100 docs signed up, but stalled
- **Attempted stand-alone ePrescribe**
  - Limited acceptance, only 80 docs in the first year
  - Success may have been limited due to earlier issues with EMR
- **Finding success with a Web 2.0 Portal with ASP ePrescribe solution and PMS RTI**

IPA Case Study

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- Within the next year brought on 400 physicians (currently more than 600)
- #eRx went from 2000/month to 40,000/month
- Significant increases in alert modified prescriptions
- GUR increased by 7% (62-69%)
- Anticipated reduction in preventable ADEs by 50-75%

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Monetizing the value of ePrescribing

- **For the patient**
  - Self pay- difference between the average Brand vs. Generic medication- 111 - 32 = $79/prescription/month annualized at $948
  - With prescription coverage
    - *For patients on a triple tier formulary (assume Gen- $10 co-pay, FM- $20 and NF-$40) the savings per prescription would be as follows;*
      - » **Change from NF to FM- $20/month, or $240/year/rx**
      - » **Change from FM to Gen- $10/month, or $120/year/rx**
      - » **Change from NF to Gen- $30/month, or $360/year/rx**
    - *For a person on 4 medications (very common) the annual savings would run from $480 to $1440 depending on the medication type*
    - *With the ability to do mail order for a 3 month supply for the cost of 2 co-pays, and/or the ability to split pills, the savings are even greater*

Monetizing the value of ePrescribing

- **For payers and employers**
  - **Alert generated changes from non-formulary (NF) to formulary medications (FM)-** ~$30 per change
  - **Alert generated changes from Brand to Generic- ~$65/change**
    - Depends on contracts with Pharma, the extent of generic prescribing by the individual physician and the ability of ePrescrbing to alter behavior
    - Best case assumptions; If a physician prescribes 6000 meds/yr, 50% generic usage to begin, eRx causes 20% change in behavior (increasing to 60% generic usage)= ~$40k savings/physician/yr
  - **Avoidance of ADEs due to drug/drug, drug/allergy, drug/disease alerts-**
    - one estimate for inpatient costs due to an ADE is $8750/ADE.
    - Based on national statistics, each physician probably is involved in at least several ADEs each year
    - Does not address increased risk exposure and the potential litigation costs for physicians, nor the decreased productivity and quality of life issues for the patient

Monetizing value of ePrescribing

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Medicare legislation of 2008

- first widespread approach to bring ROI to physicians

Carrot and stick approach

- **Carrot- all or none**
  - 2009 + 2010- 2% of Medicare receipts for use of eRx **(~$2000/yr)**
  - 2011 + 2012- 1% of receipts **(~$1000/yr)**
  - 2013- 0.5% of receipts **(~$500/yr)**
  - 2014 and beyond- not cle4ar if any incentive
- **Stick**
  - 2009 to 2011- no penalty
  - 2012- 1% reduction in overall payment **(-$1000/yr)**
  - 2013- 1.5% reduction **(-$1500/yr)**
  - 2014 and beyond- 2% reduction **(-$2000/yr)**
- **Does not apply to Pediatrics**
- **Many physicians will qualify for significantly more**
  - Cardiology
  - Nephrology
  - Some surgeons

Medicare Legislation 2008

- **Medicare Improvements for Patients and Providers Act (MIPPA), passed in July 2008**
- **Section 132- contains the new ePrescribing provisions**
  - http://www.cms.hhs.gov/PQRI/03_EPrescribingIncentiveProgram.asp
- **Legislation refers to ePrescribing measure #125 in PQRI**
- **Will be facilitating pharmacy participation**
- **How to participate**
  - Sign up with PQRI
  - Must use a ‘qualified program’ or ePrescribe software
  - 10% of Medicare charges must be for ambulatory visits
  - Must use a G-code to report usage for all patients- 3 basic options
    - I did not prescribe at this visit
    - I prescribed but did not use ePrescribing
    - I prescribed and I did use ePrescribing
  - 50% of prescriptions must be electronic, not faxes or printed from ePrescribe software

‘Qualified’ ePrescribe system

- **Generate a medication list**
- **Selecting medications, transmitting Rx electronically and conducting safety checks**
  - Safety checks include; automated prompts that offer information on the drug being prescribed, potential inappropriate dose or route of administration of the drug, drug-drug interactions, allergy concerns, and warnings/cautions
- **Provide info on lower cost alternatives**
- **Provide info on**
  - Formulary or tiered formulary medications
  - Patient eligibility and authorization requirements received electronically from the patient’s drug plan
- **Should be compliant with Medicare Part D standards (if possible)**
- **List of vendors available on Surescripts website that meet these Part D standards**
  - www.surescripts.com/get-connected.aspx?ptype=physician

Monetizing value of ePrescribing

- Already discussions regarding Medicaid and Commercial Payers adopting similar incentives
- Malpractice premium cuts for users of HIT, particularly ePrescribing, are becoming more viable
- Marketing tool- already seeing this with Hospitals, as well as some practices
- Grants and other P4P programs with payers

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DEA recommendations

- Will allow ePrescribing of controlled substances
- Requires 2 factor authorization
- Still reviewing comments
- Final rule may yet come out this year

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Tamper Resistance

- **Copy resistance**
  - "Void," "Illegal," or "Copy" pantograph with or without Reverse "Rx"
  - Micro printing
  - Watermarking, thermochromic ink, Coin-Reactive Ink
- **Erasure/Modification resistance**
  - Erasure revealing background
  - Toner Receptor Coating / Toner Lock or Color Lock paper
  - Chemically reactive paper
  - Quantity check off boxes and refill indicator
  - Pre-printed language on prescription paper
  - Quantity and Refill Border and Fill
- **Counterfeit resistance**
  - Security features and descriptions listed
  - Thermochromic ink
  - State Approved Vendor ID or Serial Number
  - Encoding techniques (bar codes)
  - Security thread

Tamper Resistance- examples

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Void or Copy Pantograph: displays "VOID" or "ILLEGAL" on a color copy of an Rx. It will appear on a wide range of copier settings. (Cat. 1)

Chemically-Protected Paper: Invisible coating causes "VOID" or a stain to appear on a handwritten Rx when altered by a wide range of chemicals. Toner receptor coating protects laser-printed Rx data from being removed or altered. (Cat. 2) Recommended for use with Preprinted Text Fields

SPRINGHAVEN MEDICAL PRACTICE
1234 HEALTH CENTER DRIVE
DAYTON, OH 45408
PHONE 1-937-221-1234 • FAX 1-937- 434-5678

JOHN R. SMITH, M.D.
Lic: 123456 • DEA: XX1234567
NPI: 2222222222

HELEN C. DOE, M.D.
Lic: 123456 • DEA: XX1234567
NPI: 2222222222

PATIENT'S FULL NAME | SEX | DATE OF BIRTH / /
ADDRESS | DATE / /

Rx 00000001
☐ 1-24
☐ 25-49
☐ 50-74
☐ 75-100
☐ 101-150
☐ 151 and over

PRESCRIBER'S SIGNATURE

TEST AREA Refills 1 2 3 4 ______ DEA #: ______
No Refills Void After ______ VALID FOR CONTROLLED SUBSTANCES

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Preprinted Text Fields: Quantity check boxes, refill indicators, and preprinted limitations or guidelines make the Rx harder to modify. (Cat.2)

Heat-sensitive Image: An Rx, logo, or other symbol printed with Thermochromic ink, so the image changes color or disappears when it is rubbed briskly or exposed to warm breath. (Cat. 1 and 3)

Tamper Resistance- examples

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Lic: 123456 • DEA: XX1234567
NPI: 2222222222

PATIENT'S FULL NAME	SEX	DATE OF BIRTH / /
ADDRESS		DATE / /

00000001

℞

- ☐ 1-24
- ☐ 25-49
- ☐ 50-74
- ☐ 75-100
- ☐ 101-150
- ☐ 151 and over

PRESCRIBER'S SIGNATURE

TEST AREA Refills 1 2 3 4 ______ DEA #: ______

No Refills Void After ____ VALID FOR CONTROLLED SUBSTANCES

Hollow Pantograph: VOID or ILLEGAL is designed to not obscure or block vital information. Often showing strongest intensity at the "top" or the document. These pantographs generally do not "pop" on a black and white fax

Tamper Resistance- examples

Washington Medical Group
555 Pennsylvania Ave, Washington DC 20001
202-222-2222 (Fax) 202-222-1111

Name Jane Q Public
Addr 123 Main Street
City Washington, DC 20001

Date 06/29/2008
DOB 07/04/1960
Ph: 202-555-5555

HYDROCHLOROTHIAZIDE 12.5 MG CAPS One (1) tab by mouth each morning
Generic: HYDROCHLOROTHIAZIDE

Disp ***30*** THIRTY (2)
Refill ***3*** THREE

Security features: (*) bound & spelled quantities, microprint signature line visible at 5x or > magnification that must show 'THIS IS AN ORIGINAL PRESCRIPTION' & this description of features (3)

(1) John Smith, MD
NPI# 1111111111

- Category #1 – Copy Resistance: Microprint signature line*
- Category #2 – Modification / Erasure Resistance: Border characteristics (dispense and refill # bordered by asterisks AND spelled out)
- Category #2 – Modification / Erasure Resistance: Printed on "toner-lock" paper
- Category #3 – Counterfeit Resistance: Listing of security features
  - *Microprint Line viewed at 5x magnification
    - THIS IS AN ORIGINAL PRESCRIPTION-THIS IS AN ORIGINAL PRESCRIPTION-THIS IS AN ORIGINAL PRESCRIPTION-THIS IS AN ORIGINAL PRESCRIPTION

Thank you

Questions?

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