Leveraging HIT to Improve ePrescribing, Adherence and Medication Management

Pre-Conference Workshop – 9:00 – 12:00 • WORKSHOP A

September 28, 2010

POINT-OF-CARE PARTNERS
HIT Strategy & Management Consultants

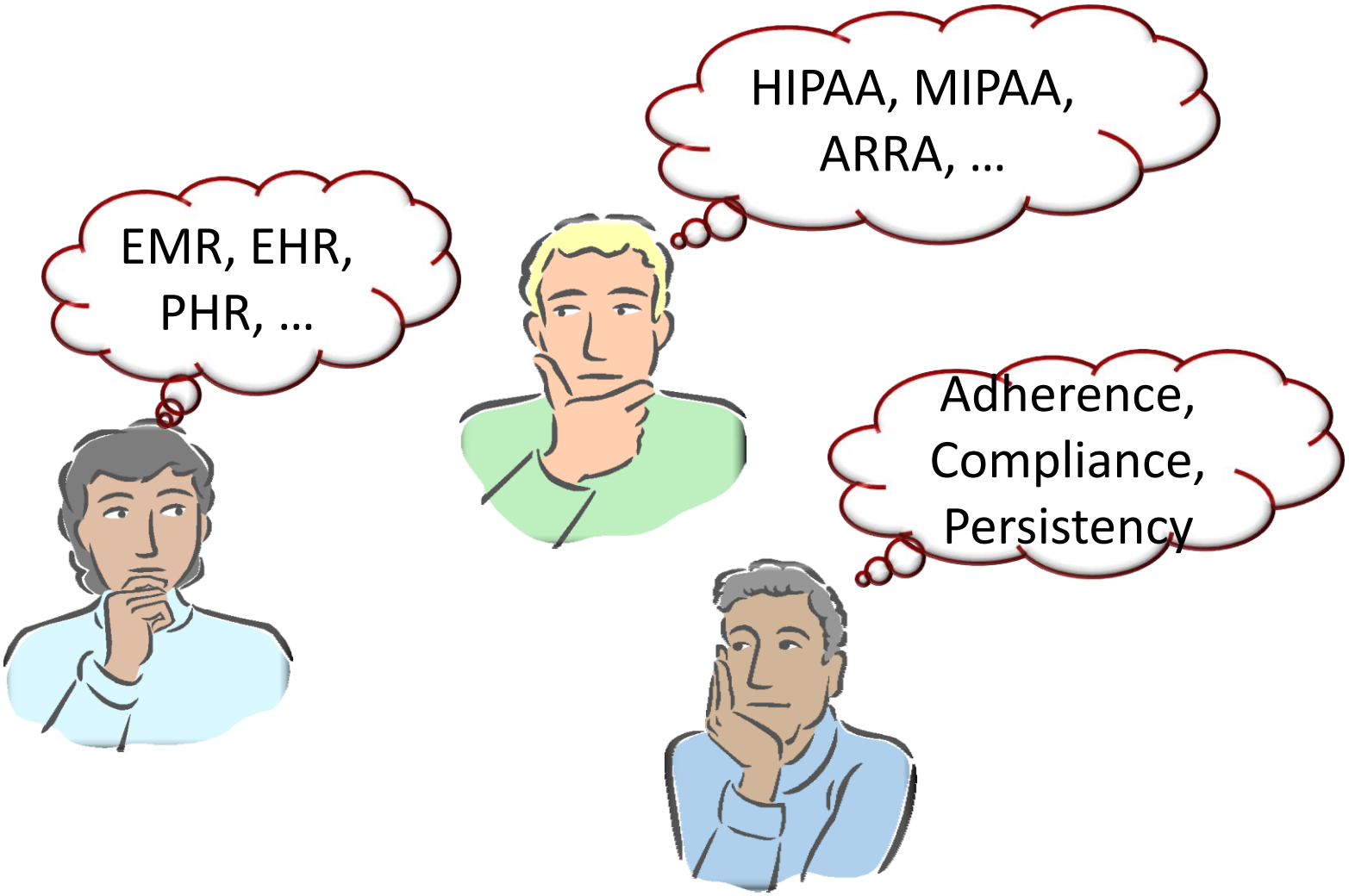
Tony Schueth | CEO & Managing Partner

Agenda

- Preliminaries
- eMedication Management Landscape
- eMedication Management Trends and Drivers
- Medication Adherence & eMedication Management
- Voice of the Market
- General Discussion

Health Care Technology Revolution

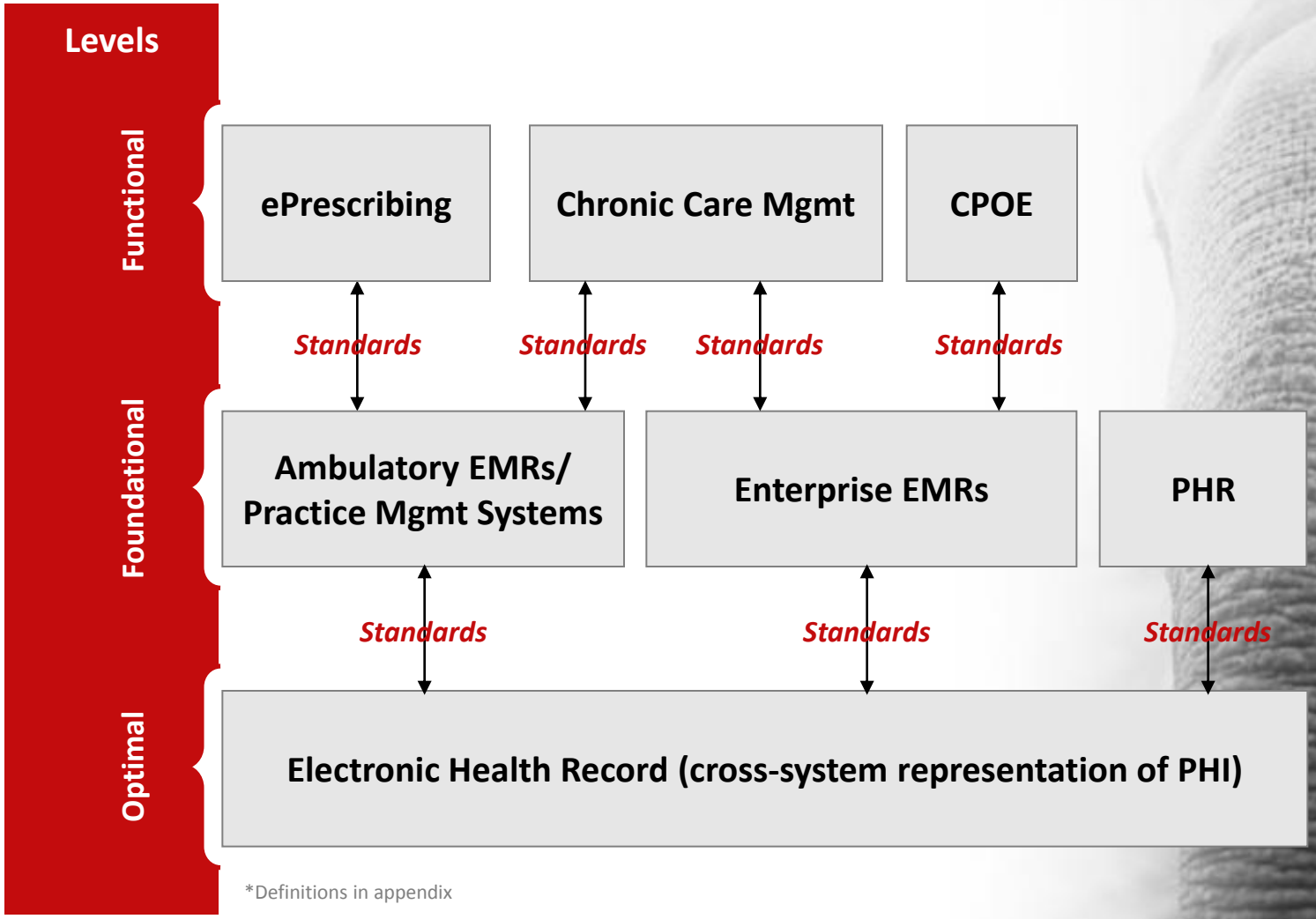
“It’s on everyone’s mind.”



Agenda

- Preliminaries
- eMedication Management Overview
- eMedication Management Trends and Drivers
- Medication Adherence & eMedication Management
- Voice of the Market
- General Discussion

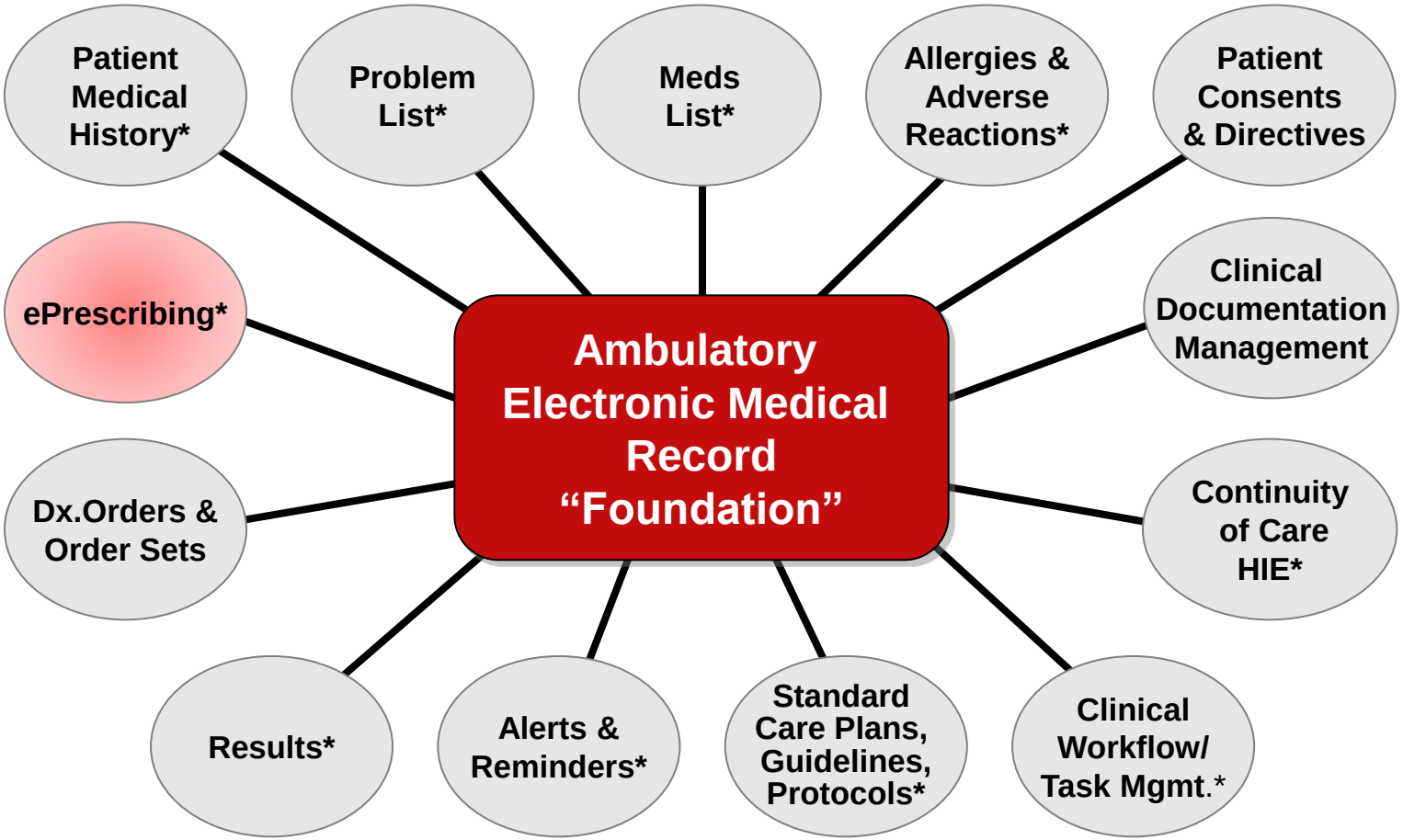
Health Information Technology



*Definitions in appendix

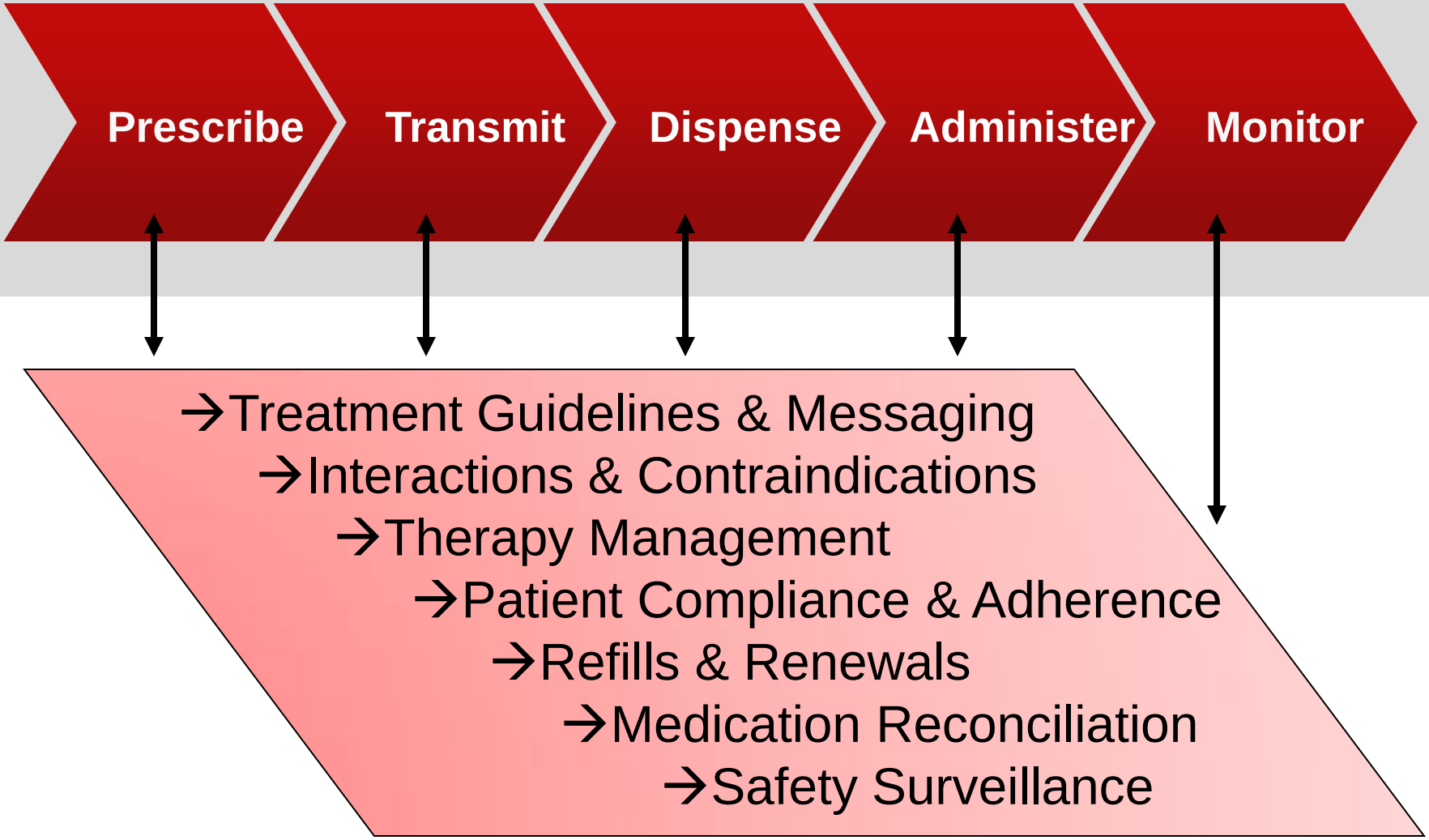
Elephant is reference to "The Blind Men and The Elephant," by John Godfrey Sax

EMR Scope & Components



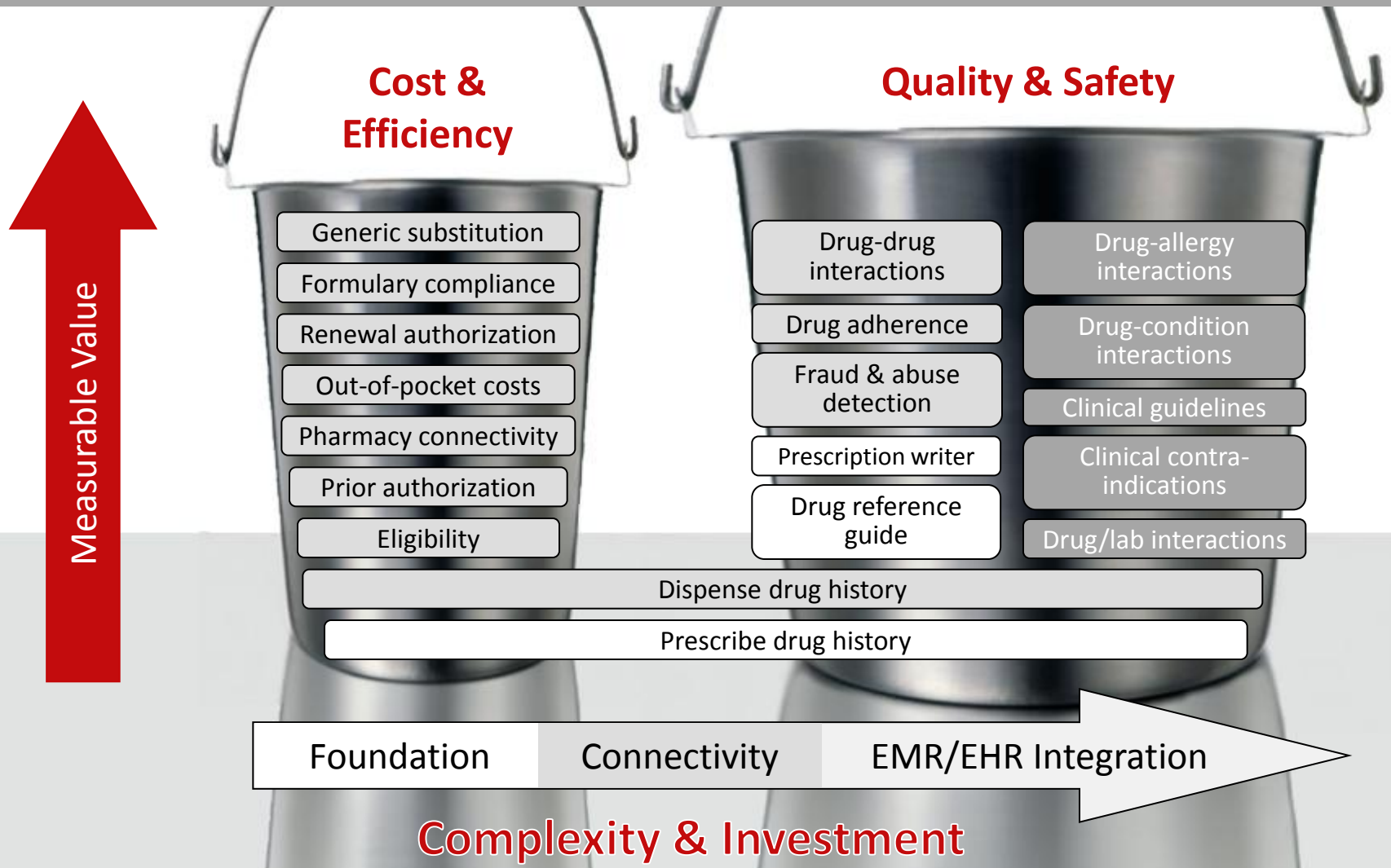
* Key to medication adherence management
Sources: CCHIT, POCP primary research

eMedication Management's Role in Quality, Safety & Efficiency



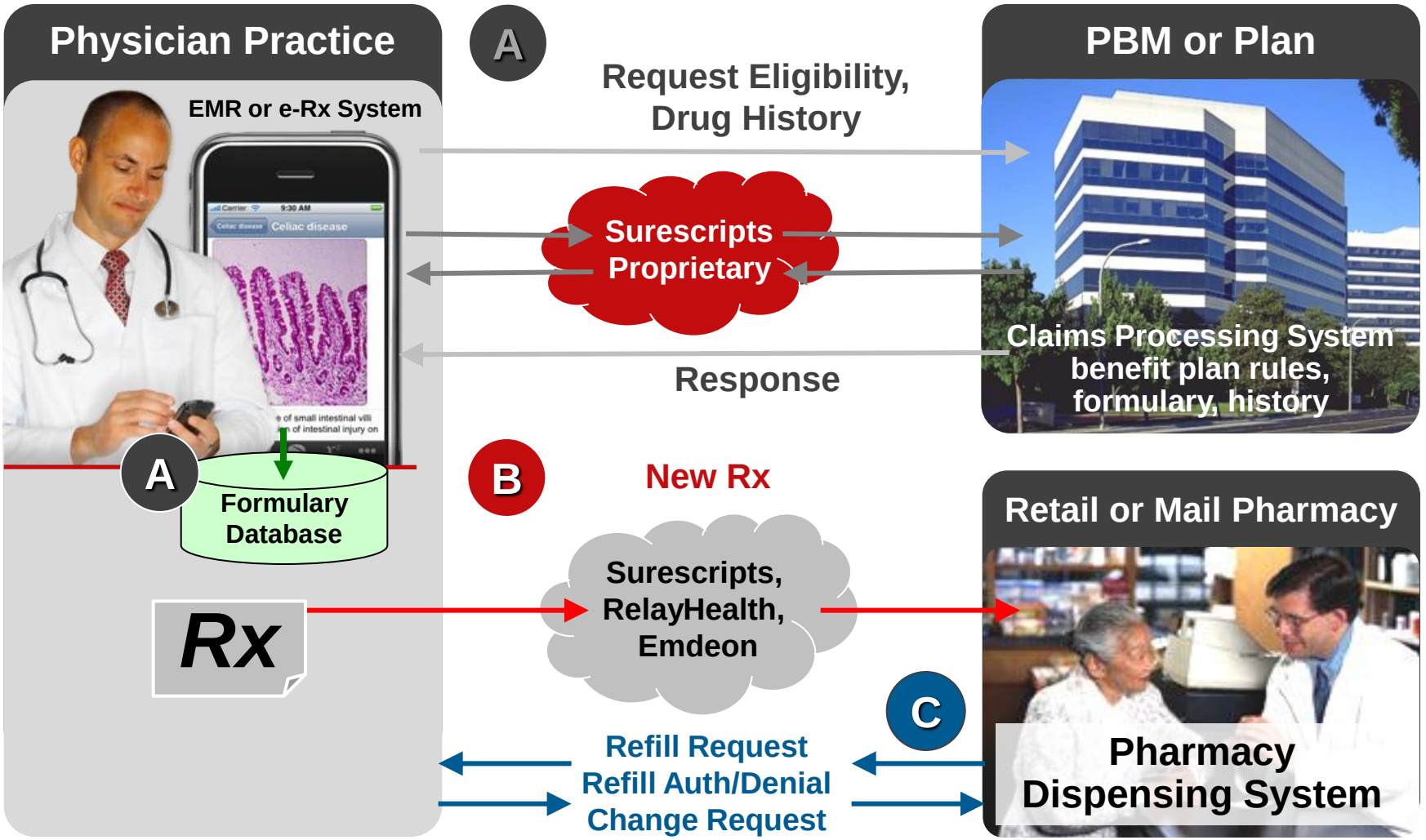
Adapted from Bell et al 2004

ePrescribing Components and Value



Copyright © 2010 Point-of-Care Partners, LLC

ePrescribing Interoperability



Checkpoint and Questions

- Understanding discussed definitions and terms
- Other terms that may need to be defined
- Further clarification/discussion

ePrescribing Stakeholders

Benefits: Prescribers

Reduce cost

- Reduce phone calls
- Reduce chart pulls
- Streamline prior authorization process
- More time for patient care
- Low impact to existing workflow

Improve quality of care

- Increased quality of care by enabling easy access to computerized medication history
- Decreases potential medication errors due to illegible prescriptions
- Avoid potential adverse drug events

Improve patient satisfaction

- Reduced waiting time at pharmacy
- Aura of high tech

Research: Practice Efficiency

Study	Results
Health Alliance Plan / Henry Ford Medical Group (2006)	57% of physicians believe there is a reduction in time spent by support staff.
Rand/NJEPAC (2006)	80% reduction in callbacks related to coverage issues; majority of ePrescribers found the system to be easy to use (79% strongly agreed or agreed).
Surescripts/Brown Univ/ Midwestern Univ (2006)	90% of physicians noted improved care efficiency; 50% reduction in time consumed to manage refill requests and pharmacy callbacks.
Health Management Technology (2003)	$48,000 saved per year with automated refills.
Medco (2003)	42% reduction in pharmacy calls to practice; 84% reduction in calls related to formulary.
Tufts Healthplan (2002)	2 hours per day saved per physician; 30% reduction in phone calls.

Research: Practice Quality & Safety

Study	Results
Surescripts/Brown Univ/ Midwestern Univ (2006)	75% of physicians believed patient safety & quality of care improved; 50% of physicians perceived communication with patients improved.
Rand/NJEPAC (2006)	Medication history perceived as very useful & worth the effort; ePrescribers were more likely to perceive that they have enough clinically relevant information to make a decision than non-ePrescribers.
Health Alliance Plan / Henry Ford Medical Group (2006)	85% of physicians believe ePrescribing has improved the practice of medicine at their clinic; 77% of physicians believe ePrescribing improves the safety of patient care; 70% of physicians believe ePrescribing improves patient satisfaction.

Research: Miscellaneous

Study	Results
SEMI (2006)	Mail service claims increased 5.8%
Surescripts/Walgreens (2006)	11% improvement in new prescriptions filled by patients 3 months after ePrescribing implemented
Rand/NJEPAC (2006)	Successful installs had appropriate expectations: "anything you start new (is going) to cause problems up-front (but) within two weeks that will be sorted out."
Rand/NJEPAC (2006)	Discontinuation of ePrescribing: •poor communication between the physician and staff •office disorganization •lack of time physician time to learn new process

Benefits: Pharmacy

Reduce cost*

- Reduces potential medication errors due to illegible prescriptions
- Allows for more patient consultation
- Less delay in getting prescription approved/adjudicated

* Pharmacies currently incur cost of ~$0.22 per new or renewal e-Rx (no fee for refill)

Improve quality of care

- Less clarification phone calls to the prescriber
- More efficient use of time
- Less reversals – cleaner scripts from the prescriber
- Potential to handle more scripts/day

Improve patient satisfaction

- Reduces pharmacy wait times
- More predictable co-payment
- Improved sense of quality & modernity in getting prescriptions from their pharmacists

Benefits: Patients

Reduce cost

- Reduces potential medication errors due to illegible prescriptions
- Facilitates improved medication compliance
- Contributes to improved self-management performance

Improve quality of care

- Reduced out of pocket costs
- Better utilization of cost-effective alternatives

Improve patient satisfaction

- Reduces pharmacy wait times
- More predictable co-payment
- Improved sense of quality & modernity in getting prescriptions from their physicians

Research: Patient Perceptions

Study	Results
Journal of the American Geriatric Society (August 2007)	Patients who had been ePrescribed a drug said they preferred e-prescriptions over paper prescriptions. Patients who had been ePrescribed drugs were also more likely to say they talked to their doctors about medication use most of the time or often.
Brigham & Women's MMA e-Rx Pilot (2006)	Physicians reported that ePrescribing is generally well-perceived by patients
Kokomo Family Care (2000)	Awareness of ePrescribing was high (86%) Majority of the patients agreed that ePrescribing was helpful in: • Facilitating MD and pharmacist working together • Assisting their physician in drug interaction ID • Allowing the pharmacist to read the prescription • Alerting their physician as to what's on formulary

Benefits: Health Plans/PBMs

Reduce cost

- Decreases potential medication errors due to illegible prescriptions
- Facilitates improved care management (e.g. detection of adherence issues)

Improve quality of care

- Reduced phone calls & administrative costs
- Better utilization of cost-effective alternatives
- Increased generic prescribing
- Reduced medication errors

Improve patient satisfaction

- Employers: lower premium growth due to reduced drug spend
- Prescribers: Fewer hassles over coverage and prior authorization
- Consumer: Reduced wait time at pharmacy

Formulary and Safety Benefits

33% to 50%	Formulary compliance warnings resulting in a change or cancellation
33%+	Drug/drug interaction alerts resulting in a change or cancellation
33% to 50%	Drug/allergy interaction alerts resulting in a change or cancellation
99%+	Generic substitutions allowed
1% – 5%	Improvement in generic dispensing rate

Research: Financial Benefits

Study	Results
Brigham and Women's (2008)	ePrescribing claim costs ↓ $0.70 PMPM; implementation costs offset with 355 patients
SEMI (2006)	Avg costs ↓ $7.44 for mail ePrescribing, ↓ $2.11 for retail ePrescribing; Generic dispensing rate ↑2.6%
Affinity Health (2005)	Avg costs ↓ $4.12 for new Rx; PMPM ↓ 57¢ vs control; target drugs were 17.5% lower
Univ. of VA. (2003)	Annual drug cost savings in a PCP academic group = 2%; Estimated ADE cost reduction of 62%
Tufts Healthplan (2002)	Wide-spread deployment of ePrescribing could mitigate rising pharma costs by 2% or more
Allscripts (2000)	Aggregate impact by plan varied, ranging from 75¢ to $3.20/Rx

Research: Medicare

- More than 70% of potential drug spend is controlled by PCPs
- ePrescribing has the potential to:
  - **Reduce drug spend trend by 1%**
  - **Decrease customer service issues up to 32% for highly restrictive formularies**
- ePrescribing can lower patient drug spend
  - Up to 15% on minimally restrictive formulary
  - Up to 8% on moderately restrictive formulary

Source: "Potential Impact of Electronic Prescribing on Medicare Prescription Drug Spend," October 25, 2005, Milliman, courtesy of RxHub

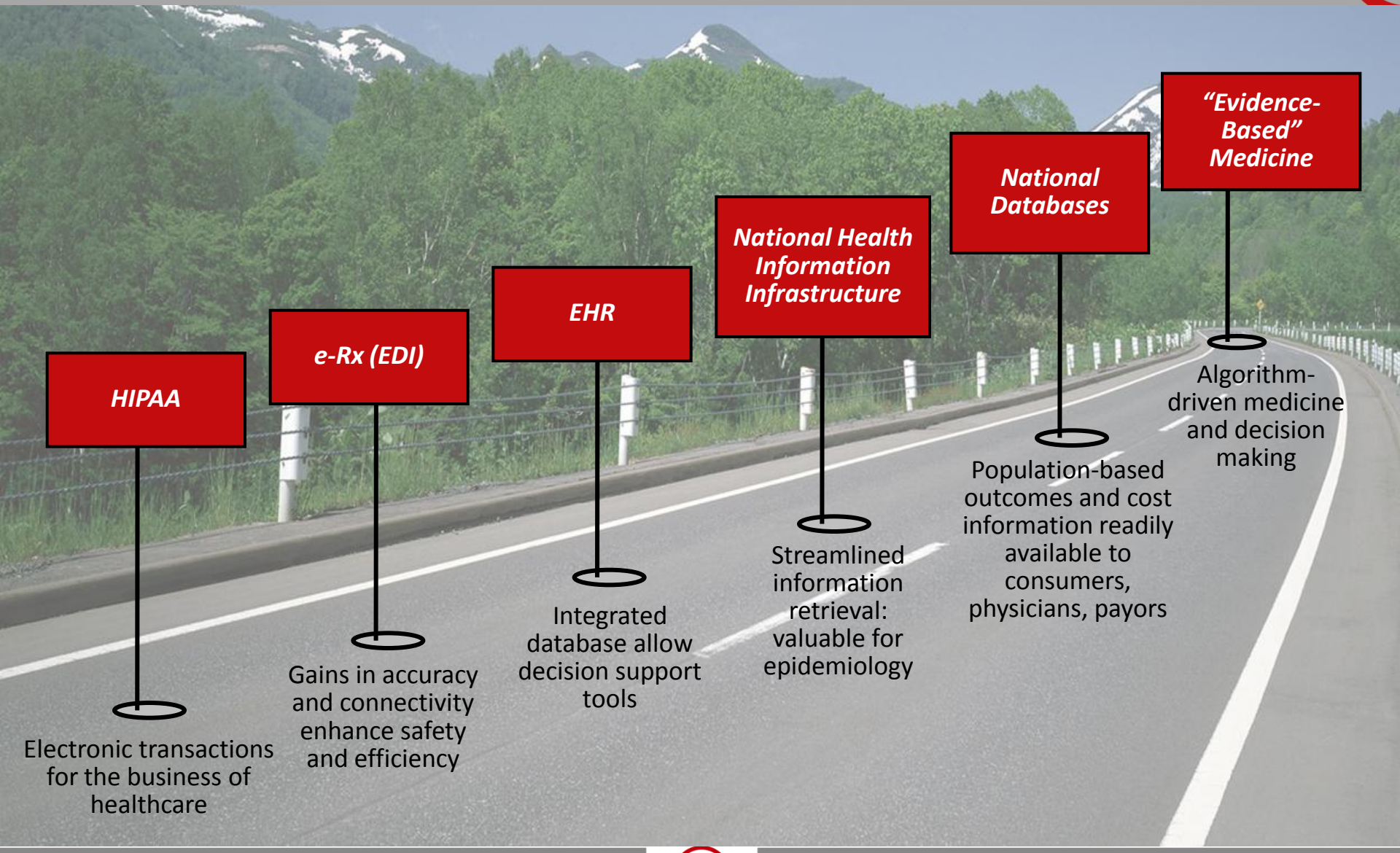
Checkpoint and Questions

- Importance of ePrescribing
- Has ePrescribing impacted your organization?
  - How?
- Will it in the future?
  - Why?

Agenda

- Preliminaries
- eMedication Management Overview
- eMedication Management Trends and Drivers
- Medication Adherence & eMedication Management
- Voice of the Market
- General Discussion

The Connectivity Roadmap



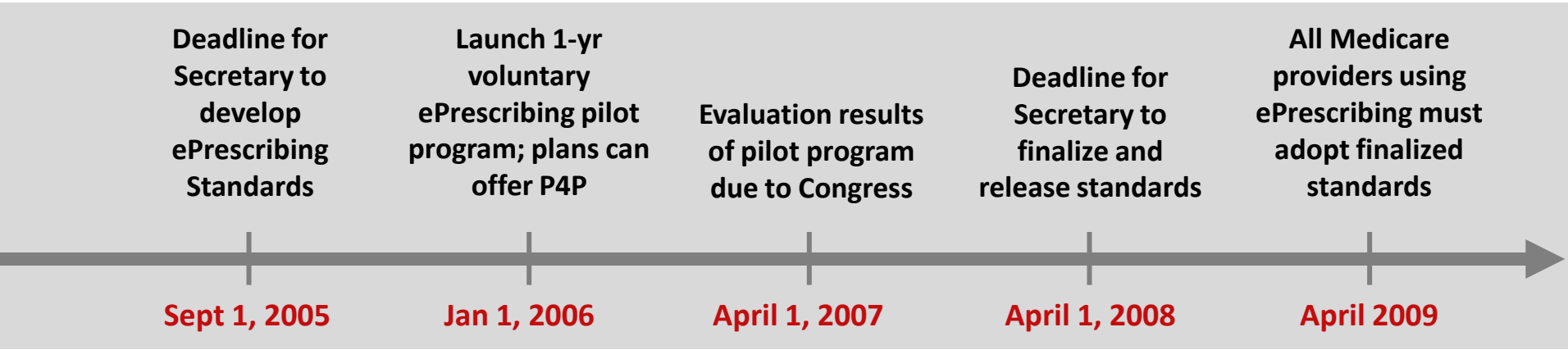
Impact of MMA (Medicare Part D)

Overview

- Landmark legislation required e-Rx, if the clinician was ePrescribing. In that case, had to use standards.
- Called for hearings and pilots, which were held in '06.
- Initially named NCPDP Script, as the standard for era.
- Relaxed Stark and Safe Harbor laws to permit hospitals to provide MDs with software.
- Process continued along timeline set out by the MMA, as indicated below.
- Work continues on standards not deemed ready for implementation.

2006 Pilot Recommendations

Standards	Description	Pilot Recommendation
Medication History (NCPDP SCRIPT)	Dispensed/Claims Hx fx of NCPDP SCRIPT	Ready for Implementation
Formulary & Benefit (NCPDP v.1.0)	Form status & alternative drugs, copay	Ready for Implementation
Fill Status Notification (Fxn of NCPDP SCRIPT)	Informs when Rx filled, not filled or partially filled	Ready for Implementation
Structured & Codified SIG	Patient instructions incl. dose, route, freq., etc.	Needs More Work
RxNorm Clinical Drug Terminology	Std drug nomenclature meant to be intralingua	Needs More Work
Electronic **Prior Authorization** Messages	Provider request, payer response to PA criteria	Needs More Work



Medicare Improvements for Patients and Providers Act of 2008 (MIPPA)

- MIPPA provides both carrots and sticks to prescribers around ePrescribing.
- Physicians qualify by having ePrescribing functionality and writing 50% of their Rxs electronically
- Criteria is self-reported to CMS.

Incentive*	Year	Penalty*
+2%	2009	None
+2%	2010	None
+1%	2011	None
+1%	2012	-1%
+.5%	2013	-1.5%
None	Beyond	-2%

* Increase or decrease in Medicare Part B revenue

ePrescribing Forecast Model (2009, 2010)	
Patients per day	24
% of Practice Medicare	**33%**
Medicare Patient Per Day	8
Revenue per Medicare Patient	$85
Days per year	250
Medicare Revenue Per Year	$168,300
Potential % Increase	2%
Incremental Revenue per MD per Yr	**$3,366**

Source: Allscripts

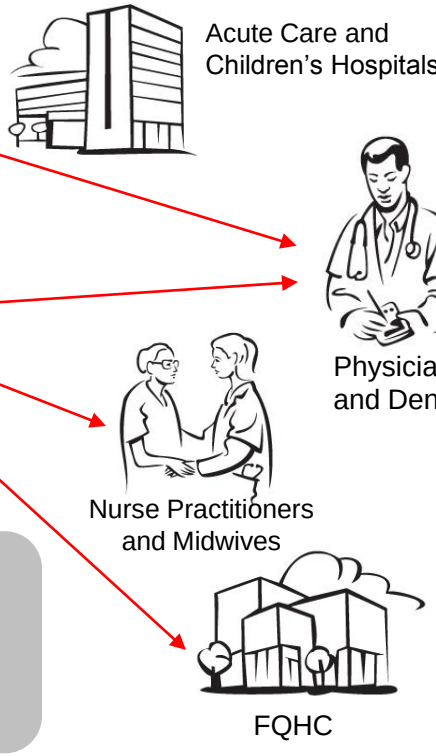
ARRA and the HIT Advocate-in-Chief

- **"In the economic recovery plan … we'll make sure that every doctor's office and hospital … is using cutting edge technology and electronic medical records."** *– remarks by President-elect Barak Obama Radio Address, December 6, 2008*
- In January, 2009, signed into law the American Reinvestment and Recovery Act of 2009 (ARRA). The HITECH component:
  - Set aside a potential ~$29 billion in funds to encourage adoption and use of electronic health records (EHRs)
  - Final rules published on July 13, 2010 addressing meaningful use, incentive payments, and certification of EHRs.

$27 billion for providers 1) using certified electronic health records 2) that are "meaningful users"

$27 billion in gross outlays

Program	Distribution	Use of Funds	Recipients
Medicare Payment Incentives	CMS	Incentive Payments through Carriers	Acute Care and Children's Hospitals; Physicians and Dentists; Nurse Practitioners and Midwives; FQHC
Medicaid Payment Incentives	CMS and States	Incentive Payments through State Agencies	Acute Care and Children's Hospitals; Physicians and Dentists; Nurse Practitioners and Midwives; FQHC



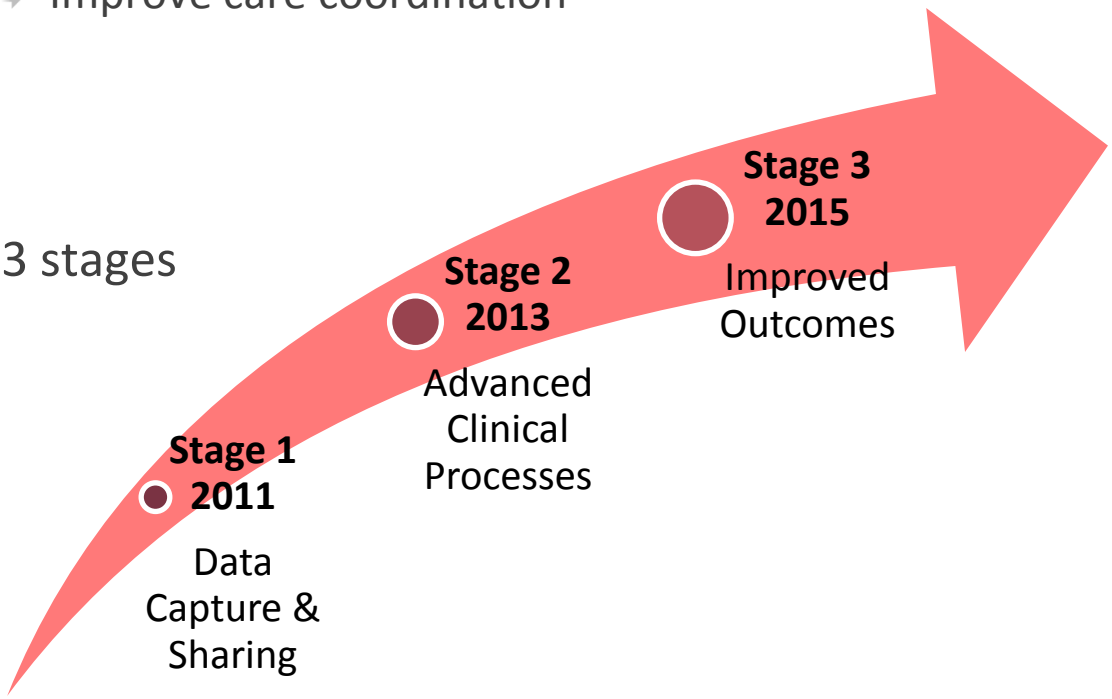
Eligible professionals (EPs) can receive up to $44,000 from Medicare, $63,750 from Medicaid.
Eligible Hospitals (EHs) can receive millions.

Adapted from California HealthCare Foundation 2009

Meaningful Use started with 5 public policy priorities and a focus for each stage

- 5 public policy priorities for Meaningful Use
  - Improve quality, safety, efficiency and reduce health disparities
  - Improve population and public health
  - Ensure adequate privacy and security protections for PHI
  - Engage patients and families
  - Improve care coordination

- 3 stages



the "goal of meaningful use of an EHR is to enable significant and measurable improvements in population health through a transformed health care delivery system."

ePrescribing will be required for Meaningful Use

- Key ePrescribing related meaningful use criteria
  - 40% ePrescribing rate for eligible professionals, 10% for eligible hospitals
    - Two choices for transaction standards: the National Council for Prescription Drug Programs (NCPDP) Prescriber/Pharmacist Interface SCRIPT standard, Implementation Guide Version 8, Release 1 (Version 8.1) October 2005 or NCPDP SCRIPT Standard, Implementation Guide, Version 10.6.
    - Any source vocabulary that is included in RxNorm, a standardized nomenclature for clinical drugs produced by the United States National Library of Medicine, may be used
  - Maintain active medication list
  - Maintain active medication allergy list
- Some related features were delayed until Stage 2 (2013 or later)
  - Drug formulary check (changed from core to menu criteria)
  - Insurance eligibility check
- Controlled substances not currently part of Meaningful Use

Implications

- Meaningful use could boost ePrescribers and ePrescriptions, to 50% in 2015.
- Full advantages of ePrescribing may not be realized for some time

Patient-Centered Medical Home is gaining momentum

Goal

- Continuous access to primary care
- Coordinate patient care across various settings & specialties
- Manage care with integrated health records and evidence-based care guidelines

Performance Measures

- Improved patient satisfaction
- Better clinical outcomes
- Reduced utilization of urgent care, emergency services

2-Tier Model of Capabilities

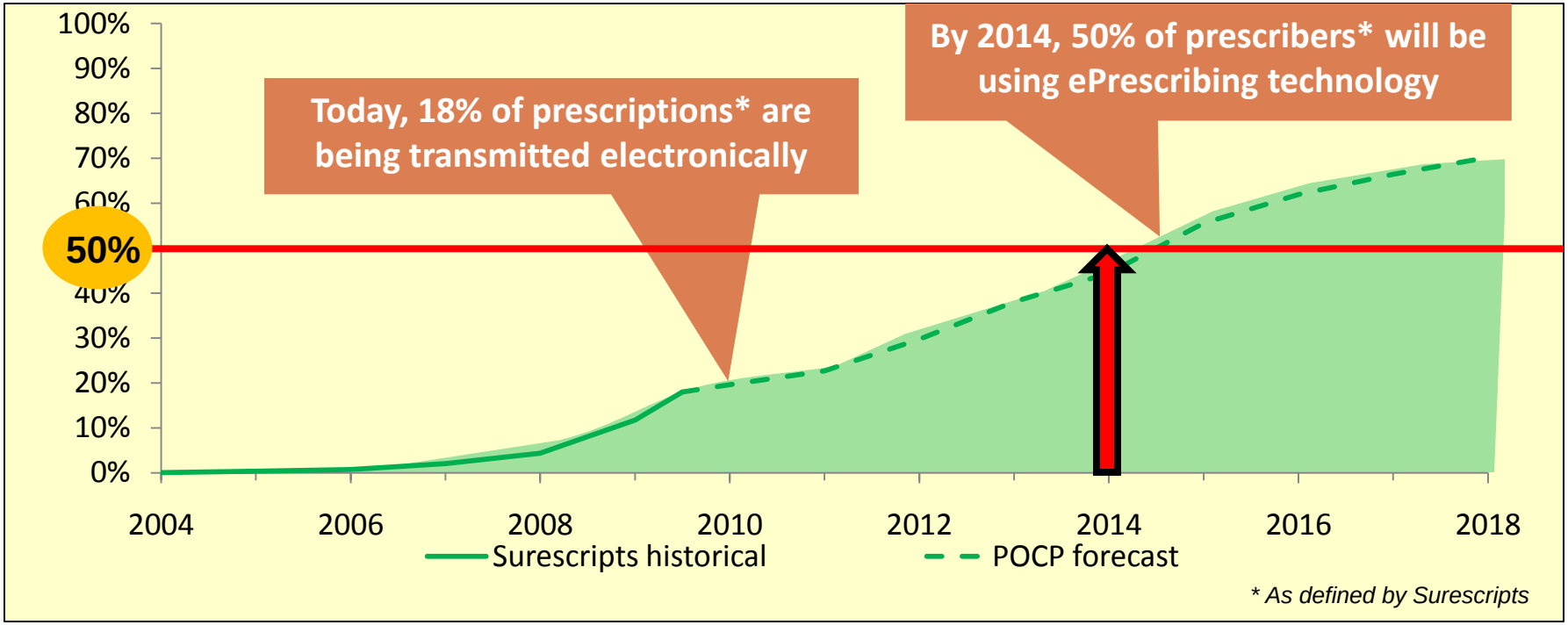
- Tier 1: Track tests, follow-up, referrals; 24x7 access; Integrated care planning, Medication reconciliation; Patient self-management
- Tier 2: EMR; Coordination of care; performance measurement & reporting

Health IT is a core enabler to all PCMH capabilities defined in both tiers

20+ Initiatives including:

- **BCBS Michigan**
- **Geisinger Health System**
- **Group Health**
- **Taconic (NY) IPA**
- **Medicare & Medicaid Demonstrations**

ePrescribing Can No Longer Be Ignored



Eligibility Transactions in 2009[1]		Successful Hits (Surescripts[2])		Encounters		Average Rxs /Encounter		Rxs Impacted by Surescripts		Total Scripts (that can be transmitted[2])		**Rxs Impacted by Surescripts formulary**
303,000,000	x	.85	=	206,040,000	x	3	=	618,120,000	÷	1,591,000,000	=	**39%**

1 *Center for Information Technology Leadership, 2004*
2 *Surescripts, National Progress Report on ePrescribing, April 2010*

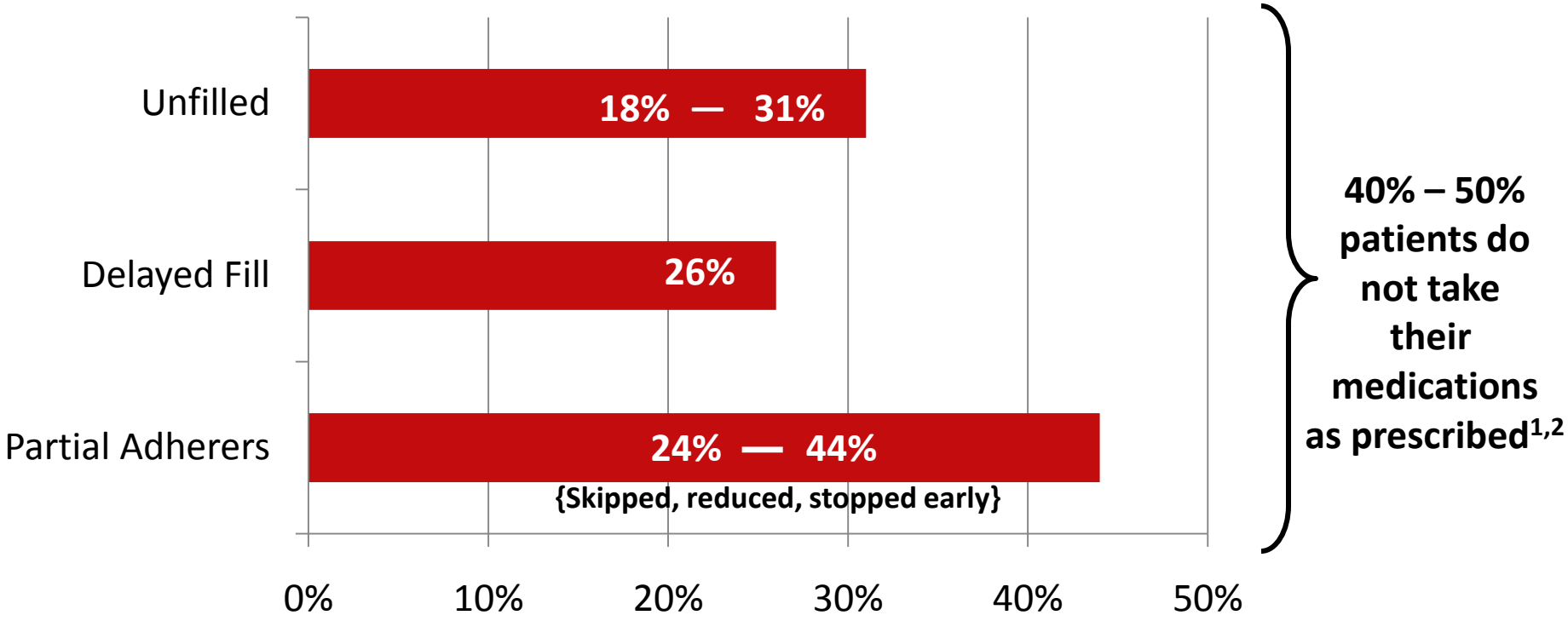
Checkpoint and Questions

- Do you agree with these ePrescribing drivers?
- Are you seeing evidence of increasing volume?

Agenda

- Preliminaries
- eMedication Management Overview
- eMedication Management Trends and Drivers
- Medication Adherence & eMedication Management
- Voice of the Market
- General Discussion

The Adherence Problem



- 800 million+ prescriptions in the US could be impacted by non-adherence[3]
- The total direct and indirect costs to U.S. society from prescription drug non-adherence are ~$177+ billion annually [4]

Definition of Key Terms

- **Compliance[2]**
  - The extent to which a patient acts in accordance with the prescribed interval, and dose of a dosing regimen. Advocates of a patient-centered model of care view compliance as implying the patient assumes a passive role in the patient-physician relationship.
- **Adherence[1]**
  - Following a medicine treatment plan developed and agreed on by the patient and his/her health professional(s). In contrast to compliance, the patient is the active agent in deciding if a medication will be taken.
- **Persistence[2]**
  - The duration of time from initiation to discontinuation of therapy.
- **Concordance[3]**
  - Concept of shared decision-making as an approach to help patients to get the most from their medicines.
- **Primary Adherence[4]**
  - The rate at which patients fill new prescriptions.

Measuring Adherence

- **Proportion of Days Covered (PDC)[1]**
  - The number of days with drug on-hand divided by the number of days in the specified time interval.
  - The most prevalent measure of adherence.

- **Medication Possession Ratio (MPR)[1]**
  - The sum of the days' supply of medication divided by the number of days between the first fill and the last refill plus the days' supply of the last refill.
  - When this ratio is calculated across multiple refills, it may also be called the continuous measure of adherence (CMA).

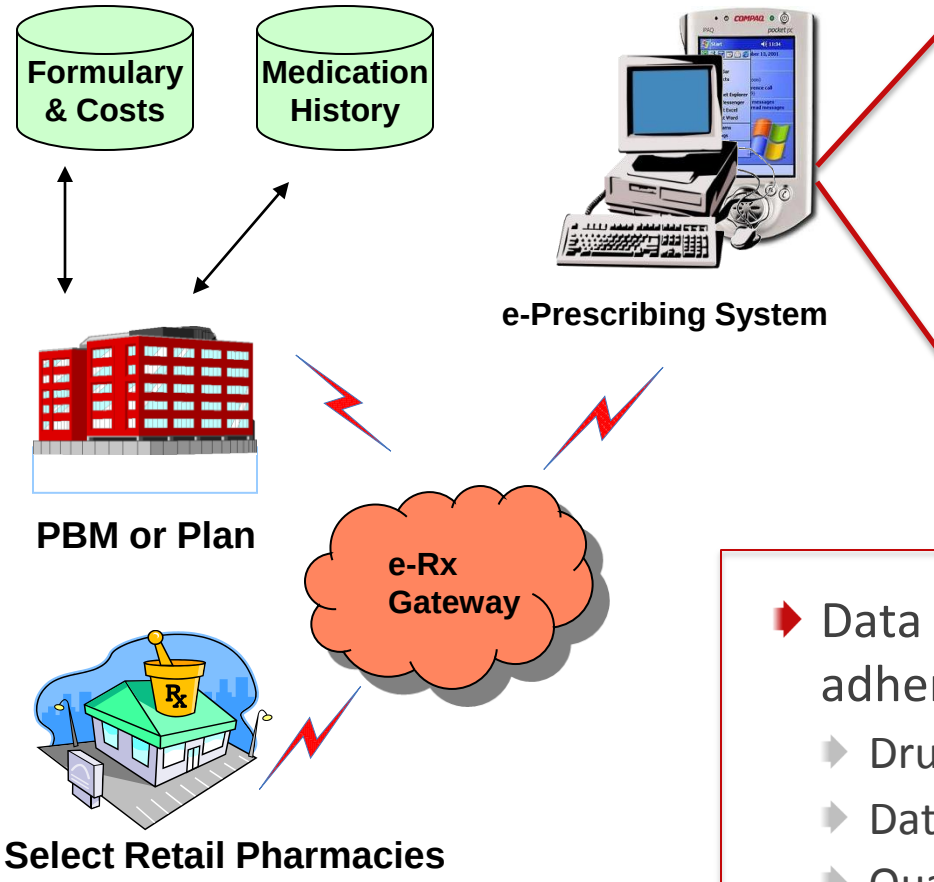
- **Continuous measure of medication gaps (CMG)[1]**
  - The sum of the days in the gaps between refills in the observation period divided by time between the first and last fills.
  - Provides an indication of the percentage of time the patient does not have the medication available for use.

- **Number of days to discontinuation[1]**
  - Count of days from the index prescription to the date of the final dispensing

"While MPR is a likely choice, EMR system designers will canvass their top customers to develop a set of adherence measures"

– *Executive at a large global EMR company*

Medication History to Support Medication Adherence Monitoring



Basic Medication History

- Data fields currently used to detect possible adherence issues:
  - Drug name
  - Date of last fill
  - Quantity
  - Prescriber
  - Pharmacy

Data Limitations Inhibit Accurate Detection of Medication Adherence in ePrescribing and EMR systems

- Directions / SIG
  - crucial to identify adherence issues associated with patients not taking medications as directed
  - crucial to identify adherence issues for drugs not available in tablet/capsule form (i.e. injectables, eye drops, topicals)
- Accurate days supply
- Lack of industry use of Fill Status Indicator
- Inconsistent use of NDC codes among different systems
- Duplicate medication histories due to multiple requests and health plan changes
- Filtering of sensitive medication histories (e.g. mental health, HIV)
- Data capture of medication events:
  - Prescriptions paid for in cash (e.g. low-cost generics)
  - Drug claims from non-connected plans/Medicaid
  - Claims filled using coupons/vouchers
  - Samples
  - Over the Counter drugs
- Linking scripts prescribed electronically but changed verbally
- Capturing reasons for non-adherence
  - forgetfulness, too expensive, complicated dosing, side effects, asymptomatic, education

Adherence and ePrescribing is Used

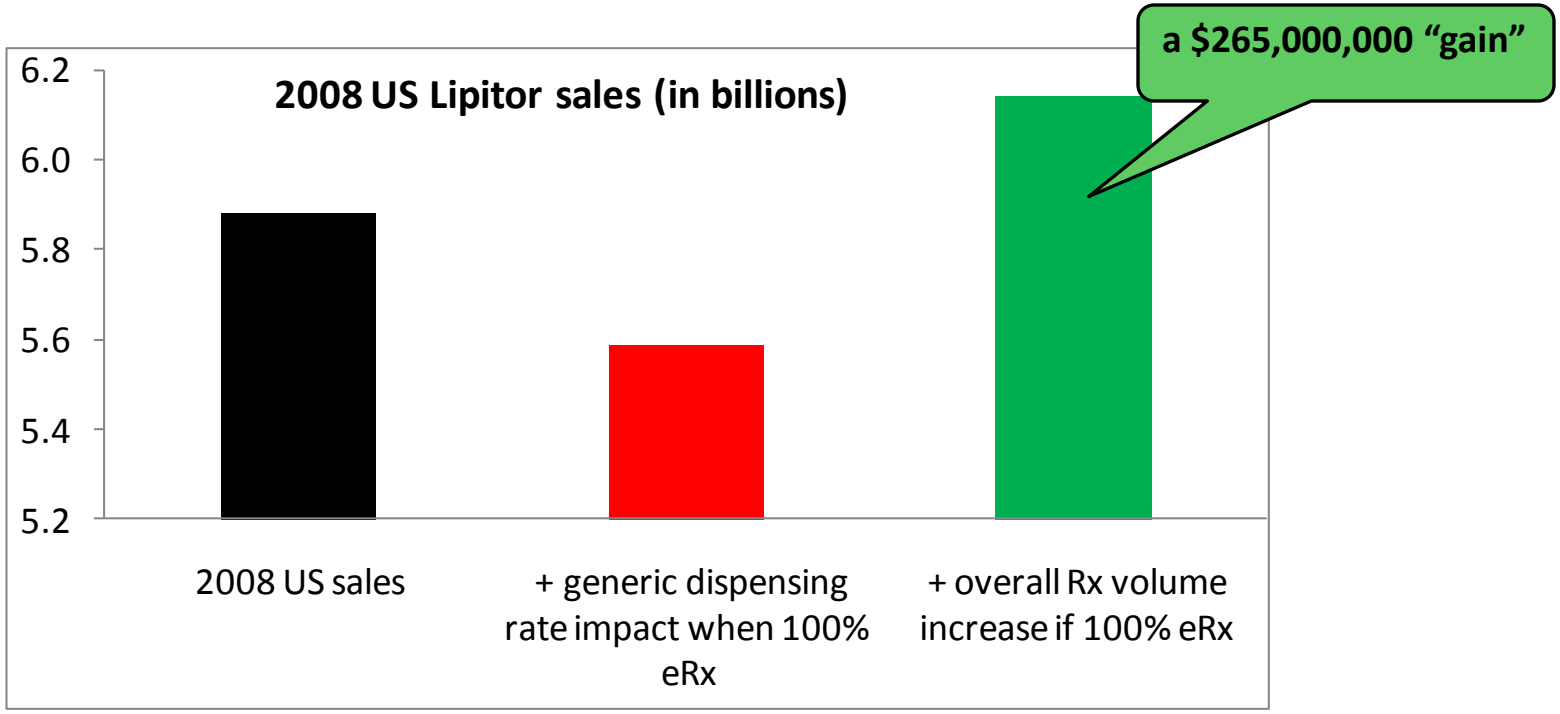
Study	Results
Medco 2005[1]	A net reduction in disease-related medical costs was associated with higher levels of medication adherence [General, not ePrescribing-specific]
GHI 2006[2]	15% of electronic prescriptions unfilled; Almost ½ doctors preferred to address the issue on the next visit
Surescripts/Walgreens 2007[5]	11% increase in prescriptions filled after doctors began using electronic prescribing; study not published in peer-reviewed journal
CVS Caremark 2008[3]	28% of electronic prescriptions unfilled after 60 days; Significant improvement in patient compliance when doctors were provided with patient-specific messages
Brigham 2010[4]	22% - 28% of electronic prescriptions not picked up at the pharmacy; Age of data (2005) and analytical methods used make validity of study questionable

When ePrescribing is used, non-adherence can be quantified and tracked, therefore allowing targeted interventions.

Copyright © 2010 Point-of-Care Partners, LLC

ePrescribing May Have a Net Positive Impact

- Studies show that ePrescribing may increase total prescription volume by 11%
  - Various reasons, including better patient compliance
  - Branded drugs without generic competition will benefit the most



In 2007, IMS, Surescripts, and Walgreens collaborated on a study that found Rx volume increased 11.21% .

eMedication Management as an Enabler of Concordance & Adherence

Study	Results
HFHS 2003[1]	Physicians with access to medication history (i.e. pharmacy claims) detected significantly higher incidence of non-adherence (30%) in their patients
Bennett 2003[7]	Use of a decision support application linked to ePrescribing for generation of patient-specific medication information/dosage schedule to provide to patients during the visit did not result in a significant improvement in adherence. **Providing patients with medication information by itself at point of care is insufficient.** RCT limited by adherence measure used.
Lapane et al. 2007[8]	Significant divergence in perceptions of patients vs. providers of provider-patient communications regarding medication-related issues in practices using ePrescribing. Most patients reported not informing providers of intent to fill prescription whereas providers reported patients informed them of intent. **Although ePrescribing provides clinicians with more information to act on medication-related issues, providers need training on how to incorporate these applications into their clinical practice.**
Tufts 2010[9]	Doctors access to a report of patient adherence patterns (self-reported and MEMS) in advance of patient visits did not result in a significant improvement of antiretroviral therapy adherence. **Researchers concluded access to timely and accurate information on adherence is insufficient; Providers need training in patient-centered adherence counseling.**

Mounting evidence suggests improving adherence requires eMedication Management as part of a patient-centered model of care, which includes shared decision-making and adherence counseling interventions.

Adherence Challenges & Health IT Strategies for Change

Adherence Challenges

- Concern about side effects
- Affordability
- Asymptomatic
- Discordance with doctor's decision
- Forgetfulness
- Lack of information
- Other Priorities

Strategies to Improve Adherence Using HIT

- Detect potential and probable adherence problems
  - Calculate adherence (e.g. MPR, PDC) using longitudinal medication history from EHR
  - Identify patients likely to experience adherence problems based on drug prescribed, indications of polypharmacy, patient's past adherence history
- Provide clinicians with patient-specific information about possible adherence problems and support for engaging with patient in problem-solving
  - Alert clinician at the point of care or prior to patient visit
  - Track/report reasons for non-adherence (drug- and patient-specific)
  - Guidelines for changing dosage and streamlined ePrescribing functions to change prescriptions (revise dosing schedules)
  - Predict likelihood of non-adherence based on behavioral factors
- Improve provider-patient communications
  - Provide clinician access to "guidelines" for coaching patient on better self-management of medication
    - Facilitate gaining insights into patient's health beliefs and concerns for patient-centered problem-solving
    - Patient messaging specific medication class and newness of medication
  - Encourage patient use of secure messaging with templates for asking questions about medications and reporting adherence challenges
- Aid patients in improving self-management capabilities
  - Provide patents with online access to:
    - Interactive health education resources specific to condition(s) and meds
    - Electronic reminders, diaries, MEMS-type devices

Checkpoint and Questions

- Are the definitions consistent with what your organizations use?
- Do you agree with the assertion that adherence is critical to the patient-centered model?

Agenda

- Preliminaries
- eMedication Management Overview
- eMedication Management Trends and Drivers
- Medication Adherence & eMedication Management
- Voice of the Market
- General Discussion

Enabling Medication Adherence with HIT: Value to Key Stakeholders

- Improve quality of information for decision-making
- Increase effectiveness of drug therapy
- Prevent adverse events (using care guidelines)
- Improve doctor-patient relationship

Doctors

Patients

- Aid in achieving optimal health status
- Increase confidence in medication adherence
- Help prevent adverse reaction
- Facilitate a medication regimen that is affordable
- Improve doctor-patient relationship

- Reduce overall medical costs
- Reduce costs due to adverse events
- Improve adherence to care guidelines
- Improve formulary adherence

Payers/Health Plans

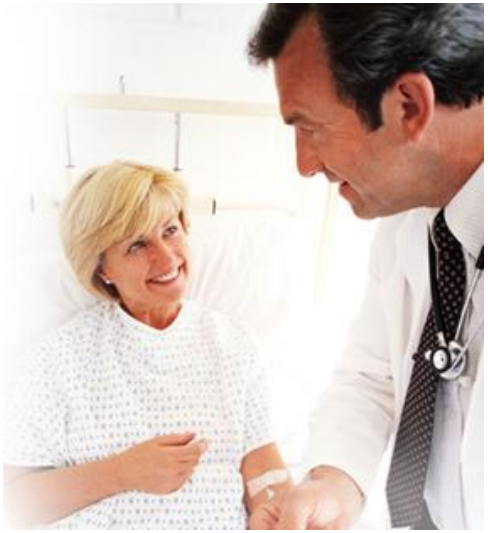
Pharmaceutical Companies

- Achieve better patient outcomes
- Improve business performance
- Improve adherence to care guidelines

"So, we pay for a patient to take Lipitor for one year and then they stop using – what does that get us?"
– Managed Care Organization Executive

Voice of the Doctor

- Central to Patient Adherence Improvement is the Doctor-Patient Relationship
- Most adherence challenges related to doctor-patient communications (or lack thereof):
  - Cost and lack of knowledge of lower-cost options
  - Perceptions of nature of illness; Asymptomatic
  - Undesirable side effects
  - Perceptions of potential harm
  - Lack of confidence and understanding regarding prescription regimen[2]



"Doctor-patient relationships drive compliance, not postal and telephone reminders" – *Robert Guthrie, MD[1] (PI First MI Risk Reduction Program, OSU)*

Providing doctors with tools to improve medication management capabilities at the point of care can enhance information flow and are one key element of a program designed to improve medication adherence

Voice of the Doctor

- Doctors prefer to discuss the adherence problem directly with their patients
- Patient visit is the "moment" when adherence issues should be addressed
  - Time constraints inhibit other follow-up
  - Privacy concerns best managed during visit
    - Inform patients in advance of the availability of medication history
- Alerts could help mitigate exposure to litigation that arises when information is available that could have prevented an adverse effect caused by non-adherence

Despite doctors expressing intent to engage with patients about adherence issues during encounters, they need to be motivated (e.g. via pay-for-performance), provided access to accurate, complete health information, and have the training to collaboratively problem-solve with patients on ways to improve adherence.
Bottom Line: Decision support using IT is not enough

Sources: New Jersey ePrescribing Action Coalition (2007); Point-of-Care Partners Primary Research (2007).

Voice of the Doctor

- Electronic prescribing functions viewed as particularly beneficial by doctors in aiding adherence and compliance management:
  - Electronic access to medication history by itself increases doctors' effectiveness in detecting non adherence
  - Refill compliance calculator highlighting possible adherence problems when presented in a graphical format a useful aid in the time-compressed practice environment
  - Better is an intelligent "alert" when prescription for ***significant*** drugs appears to have not been filled
    - Limit to meds where adherence is critical (e.g. anti-cholesterol, diabetic therapy) and/or problematic (e.g. depression, hypertension)

Sources: New Jersey ePrescribing Action Coalition (2007); Point-of-Care Partners Primary Research (2007), Tamblyn et al., 2006.

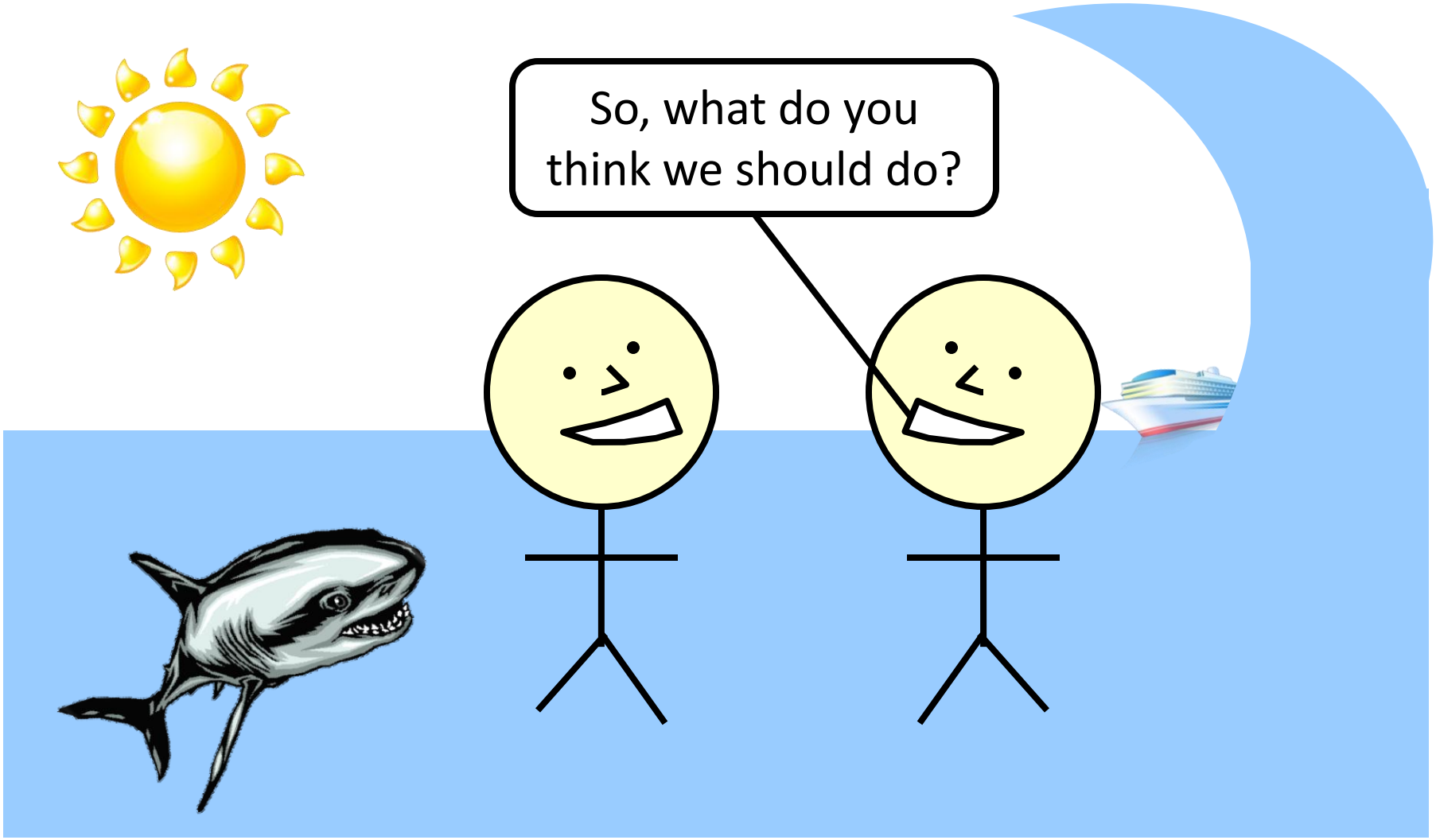
Key Takeaways

- ePrescribing/EMR adoption:
  - MIPPA and ARRA penalties may be the major inflection points
  - In terms of EHR penetration, patient mix and disparate populations' will likely be influenced by ARRA and meaningful use
- Medication adherence in general:
  - Primary adherence (vs. adherence) is not well understood in the industry; needs to be viewed distinctly
  - Difference between concordance and adherence not well understood; terms misused
  - Persistency is different from adherence; deserves to be highlighted in our work
  - If drug is ineffective, adherence doesn't matter
    - Link between outcomes, clinical decision support, and adherence is important
- Data to monitor adherence
  - Leverage gaps in adherence data as a policy issue, highlighting what is known and what is not known
  - Transaction costs associated with fill status (i.e. Surescripts fees) is a significant barrier to getting the pharmacies to sign up.

Agenda

- Preliminaries
- eMedication Management Overview
- eMedication Management Trends and Drivers
- Medication Adherence & eMedication Management
- Voice of the Market
- General Discussion

“Is it time to change my strategy?”



Thank You!

Tony Schueth, (945) 346-1999 tonys@pocp.com

POINT-OF-CARE PARTNERS
HIT Strategy & Management Consultants

References


POINT-OF-CARE PARTNERS
HIT Strategy & Management Consultants

References

The Adherence Problem:

1. BCG (2003)
2. Dimatteo (2004);
3. Osterberg & Blaschke (2005); Surescripts (2007); WHO (2003); Others.
4. Ernst FR and Grizzle AJ, "Drug-Related Morbidity and Mortality: Updating the Cost-of-Illness Model," 41Journal of the American Pharmaceutical Assn 192. March/April 2001.

Definition of key terms:

1. Enhancing Prescription Medicine Adherence: A National Action Plan. NCPIE. Aug 2007
2. Cramer J, Rosenheck R, Kirk G, et al. Medication Compliance Feedback and Monitoring in a Clinical Trial: Predictors and Outcomes. Value Health 2003;6: 566-73.
3. Marinker M, Blenkinsopp A, Bond C, et al. From Compliance to Concordance: Achieving Shared Goals in Medicine Taking. London, UK: Royal Pharmaceutical Society of Great Britain; 1997.
4. Fischer, M.A. et al (2010). Primary Medication Non-adherence: Analysis of 195,930 Electronic Prescriptions. J Gen Internal Medicine. Published online 4 February 2010

Measuring Adherence:

1. Peterson AM, Nau DP, Cramer JA, et al. A checklist for medication compliance and persistence studies using retrospective databases. *Value Health* 2007 Jan-Feb;10(1):3-12

References

Adherence and Compliance when ePrescribing is Used:

1. Sokol, M.C. et al. (2005). Impact of medication adherence on hospitalization risk and healthcare cost. Medical Care, 43(6),521-530.
2. Point-of-Care Partners (2007). Unpublished raw data on GHI ePrescribing study.
3. Hutchins, D.S. et al. (2008). Uncovering noncompliance to prescribed drugs in several therapeutic classes. Poster session presented at AMCP.
4. Fischer, M.A. et al (2010). Primary Medication Non-adherence: Analysis of 195,930 Electronic Prescriptions. J Gen Internal Medicine. Published online 4 February 2010
    - Although researchers concluded that primary non-adherence higher for newly prescribed medications, particularly for certain chronic medical conditions, results suspect do to age of data and flaws in statistical analysis.
5. Surescripts (2007, October). New research suggests that, when sent electronically, more new prescriptions make it from doctor's office to pharmacy to patient. Press release.

eMedication Management as an Enabler of Concordance & Adherence

1. Bieszk, N. et al. (2003). Detection of medication non-adherence through review of pharmacy claims data. American Journal of Health-System Pharmacists, 60(4), 360-366.
7. Bennett, J.W. wt al. (2003). A computerised prescribing decision support system to improve patient adherence with prescribing: A randomised controlled trial. Australian Family Physician, 32(8), 667-671.
8. Lapane et al. (2007). Misperceptions of patients vs. providers regarding medication-related communication issues. The American Journal of Managed Care, 13(11), 613-618.
9. Wilson et al. (2010). Provider-focused intervention increases adherence-related dialogue but does not improve antiretroviral therapy adherence in persons with HIV. Journal of Acquired Immune Deficiency Syndrome, 53(3), 338-347.

References

Voice of the Doctor

1. Guthrie, R. (2001, June). The effects of postal and telephone reminders on compliance with pravastatin therapy in a national registry: results of the First Myocardial Infarction Risk Reduction Program. Clinical Therapeutics, 23(6).
2. Medical Marketing and Media (2006, June). How will patients behave?; NCPIE (August, 2007). Enhancing prescription medication adherence: A national action plan.