

Taking Clinical Decision Support to the Next Level: A Standards-Based Approach

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Agenda

1. Clinical Decision Support Overview

- CDS Defined
- Common types of CDS
- Effective Strategies for CDS

2. Integration Strategies

3. Understanding Drivers of CDS

- Direct
- Indirect

4. Real-Life Example and Lessons learned from current CDS integration

5. What's Next?

- How standards can help advance CDS within EHRs

Learning Objectives

1. **Better understand** the current landscape of CDS in EHRs and Pharmacy Systems
2. **Describe**, in general terms, current implementation and integration strategies around CDS used by EHRs Pharmacy Systems, and gaps in current implementation strategies
3. **Understand** implications of MU3 regulations for CDS
4. **Review and Analyze** lessons learned from current clinical messaging integration strategy from an ePrescribing vendor and Payer
5. **Describe** options to leverage existing HIT standards to help advance CDS within EHRs

Clinical Decision Support Overview

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What is Clinical Decision Support?

Drug-Drug Alerts

Drug-Allergy Alerts

Protocols



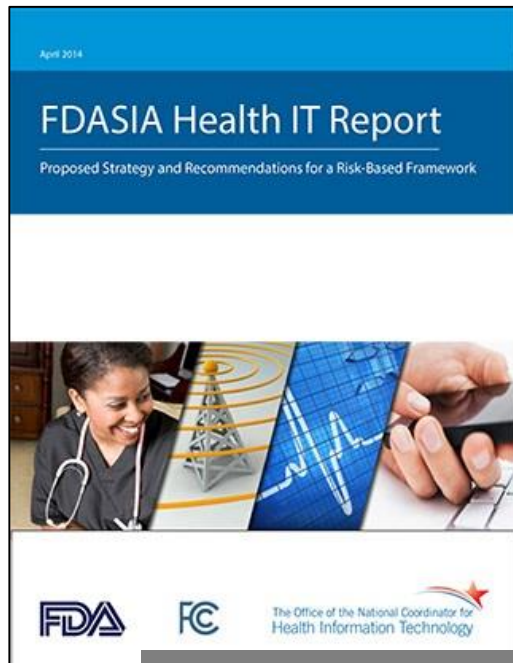
Reminders

Care Plans

No comprehensive list of
what can constitute CDS

Clinical Care Guidelines

Clinical Decision Support Broadly Defined



“HIT functionality that builds on upon the foundation of an EHR chart to provide persons involved in healthcare processes with general and person specific information, intelligently filtered and organize, at appropriate times, to enhance health and health care”

“Clinical decision support is a key functionality of health information technology. CDS is not intended to replace clinicians’ judgment, but rather to assist clinicians in making timely, informed, higher quality decisions.¹”

HealthIT.gov
Advancing America's Health Care

Clinical Decision Support Defined

When CDS is applied effectively it:

- Increases **quality of care**
- Enhances **health outcomes**
- Helps **avoid errors and adverse events**
- Improves **efficiency**
- Reduces **costs**
- Boosts **provider and patient satisfaction**



1. FDASIA Health IT Report Proposed Strategy and Recommendations for a Risk-Based Framework, April 2014

Factors driving CDS Adoption

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Factors Driving Clinical Decision Support Adoption

As EHRs have become more widely used, adoption of CDS has grown in commensurate. A number of factors contribute to this growth

Direct Market Drivers

- Meaningful Use requirement for CDS

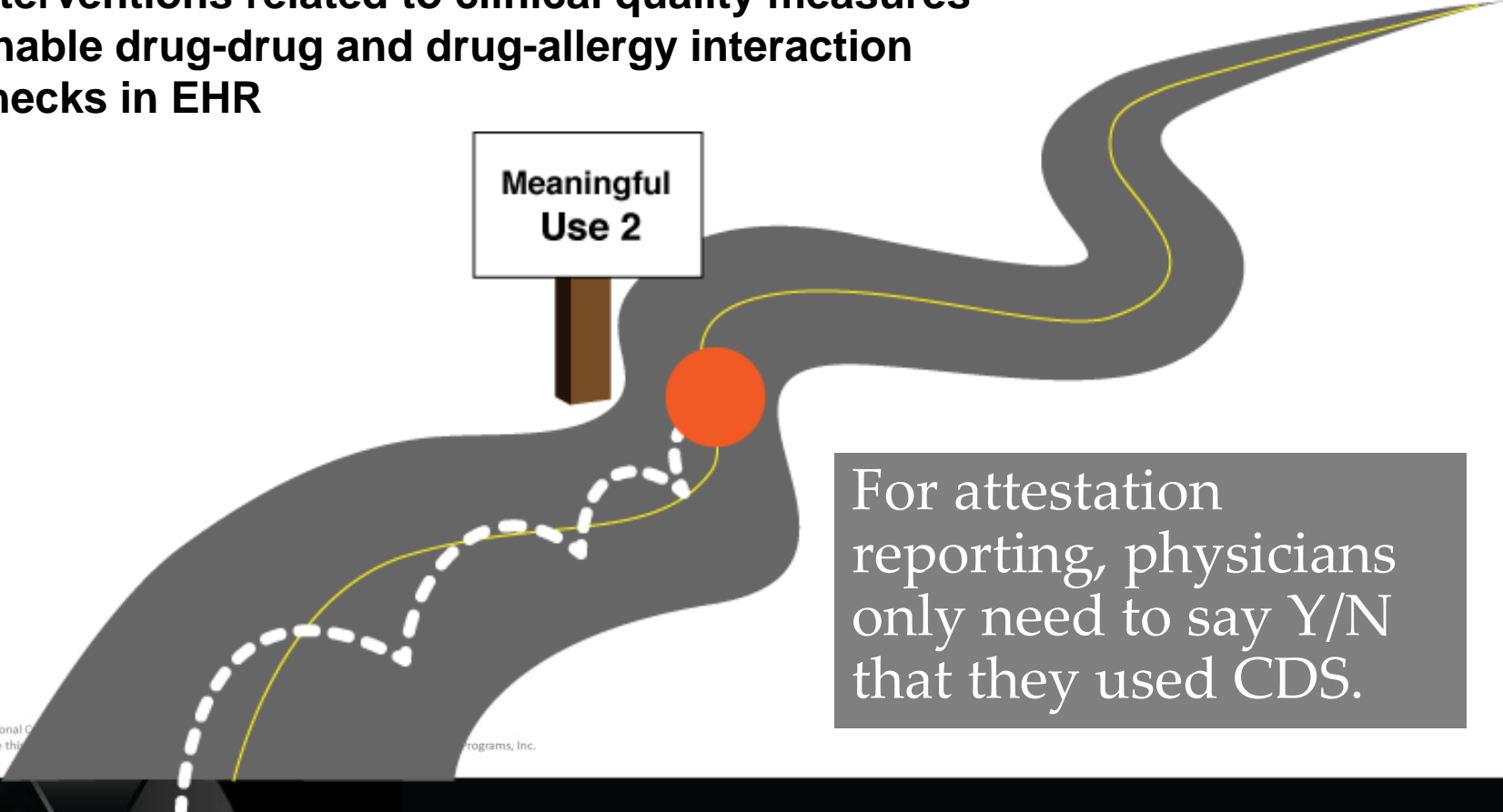
Indirect Market Drivers

- Clinical Quality Measures
- Payment-related attention to clinical quality measures
- Capitated Payments/Shared Risk (ACOs)

Meaningful Use 2: Does it go far enough?

MU Stage 2 Requirements:

1. Implement 5 clinical decision support interventions related to clinical quality measures
2. Enable drug-drug and drug-allergy interaction checks in EHR



Meaningful
Use 2

For attestation reporting, physicians only need to say Y/N that they used CDS.

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Meaningful Use 3: Tying CDS to outcomes

The rule replaces the term "clinical decision support rule" with "clinical decision support intervention" to better align with, and allow for, the variety of decision support mechanisms available to help improve clinical performance and outcomes.⁹

CDS is often an integrated part of the provider's EHR system, but may also present in a variety of other mechanisms, **including but not limited to:**

- Pharmacy systems
- Patients' personal health records (PHRs)
- Patient portals provided by the practice



Some providers use certified EHR technology to drive, receive or trigger CDS in an external system – for example, sending data to a registry or immunization forecaster which provides CDS. To achieve meaningful use, such systems must interact with certified EHR technology in the normal course of the care delivery workflow, ensuring that decision support interventions are delivered at the right point in the workflow, based on relevant patient information, even if the appropriate point in workflow is not during a patient encounter.

MU Stage 3: Using clinical decision support to improve performance on high priority health conditions. As EHRs mature, reliance and impact of CDS increases.

Indirect CDS Adoption Drivers

- **Major thrust of healthcare is moving towards use of clinical quality measures**
 - Attempts to measure outcomes, not services
 - Focus on wellness, not illness
- **Payers are providing incentives for reports on clinical quality measures**
 - Provider Quality Reporting System (PQRS)
 - Pay for Performance
 - ACOs

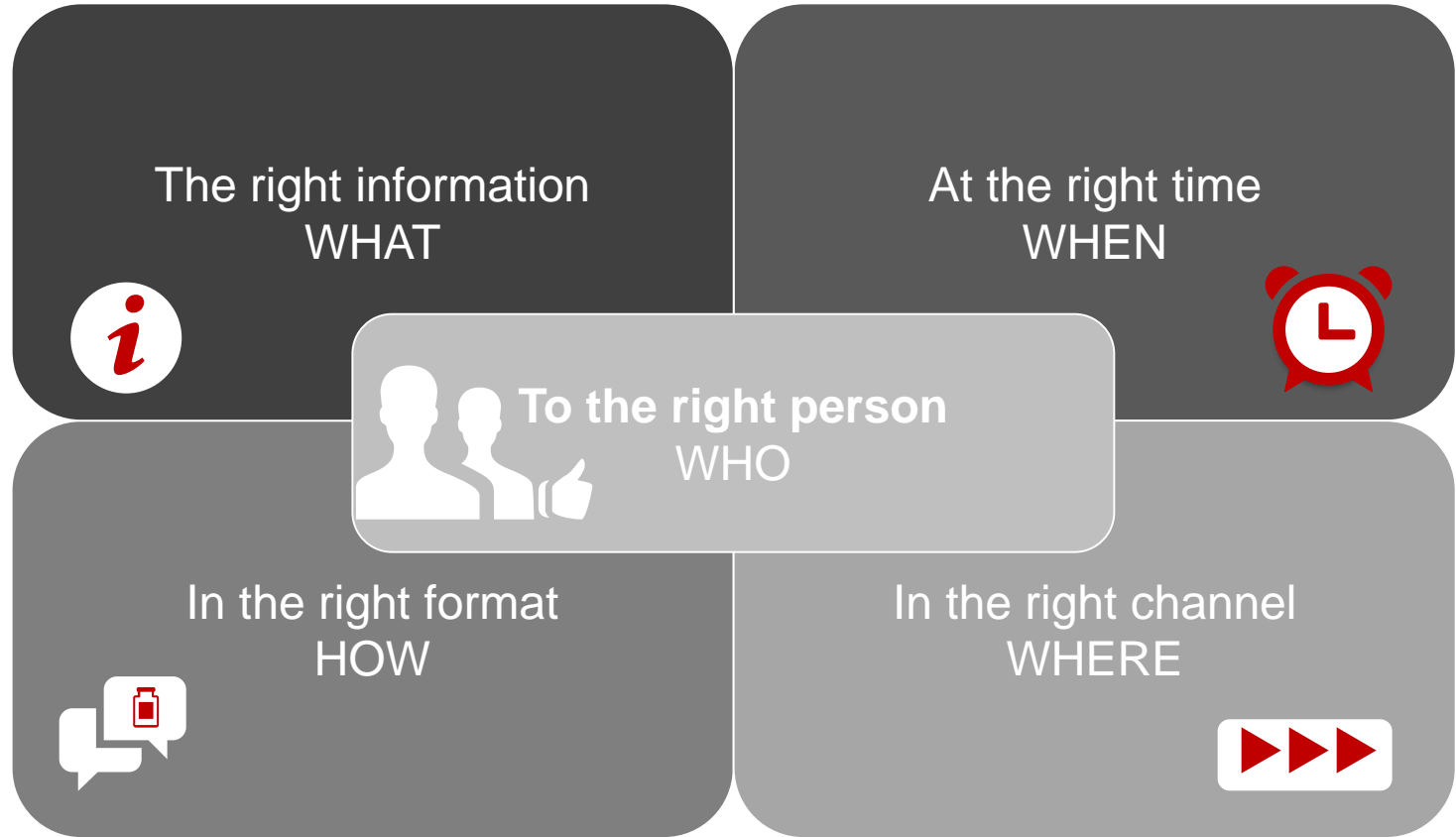
Clinical Quality Measures:

OUTCOMES / WELLNESS



~~SERVICES / ILLNESS~~

Clinical Decision Support: Five “Rights”



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Common Challenges with CDS

- **Effective alerts and reminders:**
Inability to incorporate patient information
- **Too much information or incorrect information:**
Alert Fatigue
- **Passive Design:**
Forcing the provider to answer questions for information



Common Challenges: Effective Alerts and Reminders

- Based upon Clinical Quality Measures
- Effective (actionable)

Snapshot

Smith, John

Health Maintenance ⚠ Late 📅 Due 🕒 Soon 🔒 Hold

Topic	Due	Most Recent Outreach
⚠ URINE ALBUMIN	10/4/12	
⚠ DILATED RETINAL EXAM	3/30/13	
⚠ HBA1C	4/10/13	
⚠ INFLUENZA	9/1/13	
⚠ LDL	10/24/13	
⚠ COLORECTAL CANCER SCREENING, see Modifier	10/24/16	
⚠ TETANUS	10/4/21	
⚠ Pneumovax	Completed	

Update all

- Not patient specific

ALERTS ⏵

- No record of Eye Exam

Common Challenges: Alert Fatigue



- **Alert fatigue:** Provider clicks through alerts without reading/acting on them or the same alert appears multiple times for a given patient or situation
- **Wrong content:** Directs providers to do the wrong thing
 - Out of date guidelines: Baseline EKG for a 40 y/o no longer necessary. CDS looking for presence of baseline EKG is no longer clinically relevant
- **Wrong person:** Rules ‘fire’ for someone lacking the authority/knowledge to act
- Providers don’t understand why the rule is there

Common Challenges: Passive CDS

“Active” CDS

- **EHR products read clinical content contained in the patient record and use this information to cause CDS Rules to activate or de-activate**
 - Eg: Providers will *not* see an alert for those patients with a current HgA1c score <9; however, for those patients with no HgA1c lab, or a value >9, the alert will present

“Passive” CDS

- **Other EHR systems maintain a CDS functionality that records provider responses.**
 - Eg: CDS will ask if an HgA1c lab has been ordered until a provider clicks a checkbox, regardless of whether the record shows a completed HgA1c lab

In most cases passive design is a residual from hurriedly adding a CDS feature to meet Stage 1 MU minimum requirements

Integration Strategies

- **Hosted Rules:** CDS rules stored and hosted at a central location and pushed to practice/EHR; no customization allowed
- **Customizable Rules:** Standard rules available through EHR; can be modified/customized locally at practice
- **Bolt-on Engine:** Separate rules engine and editor that runs along side main components of EHR; typically provided by third-party vendor
- **Web-Services:** Web-hosted rules engine stored and hosted at a central location; can be modified/customized locally at a practice

CDS Example: Real-Time Benefit Inquiry

DrFirst and Humana

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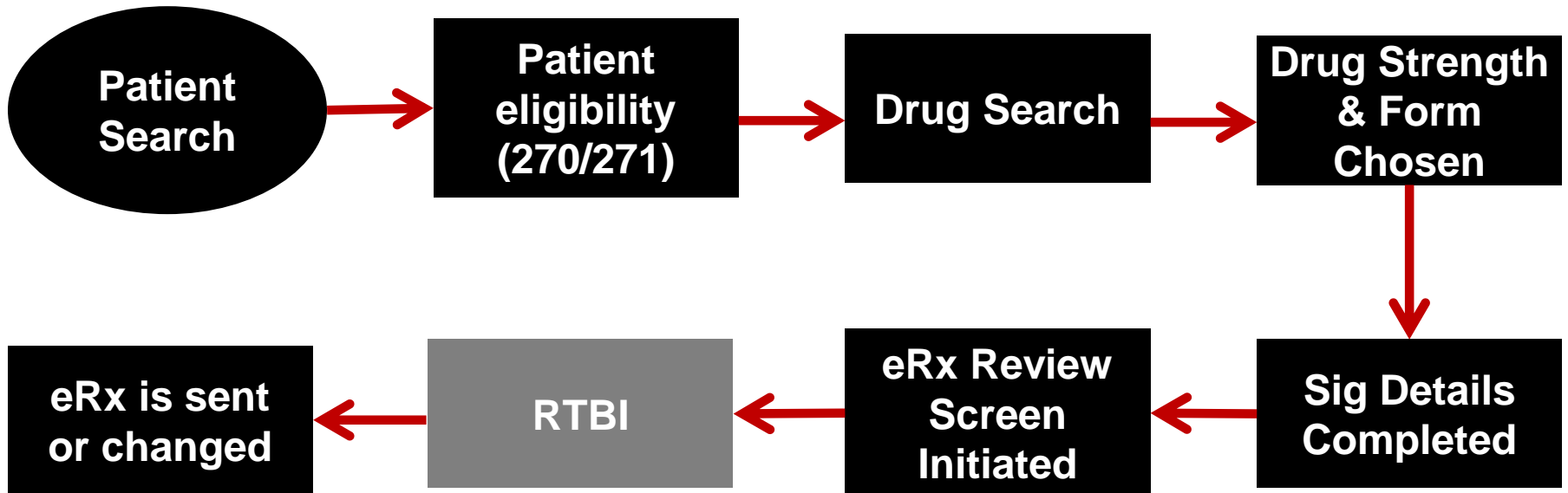


- **In October 2015, Humana launched new service with DrFirst for Real-time Benefit Inquiry**
 - First to market with such capabilities
 - DrFirst branded product as myBenefitCheck
 - Fully integrated with electronic Prior Authorization
- **Service based on NCPDP Telecomm Standard D.0**
 - D1 - Predetermination of Benefits

What is Real-time Benefit Inquiry?

- DrFirst sends RTBI request to Humana
- Humana adjudicates request in pharmacy claims system and returns response
- **myBenefitCheck presents the following:**
 - Patient-specific drug coverage and pricing
 - Formulary alternatives
 - Alternative pharmacy pricing (90-day)
 - Payer DUR information

RTBI in e-Prescribing Workflow



What is presented via RTBI?

- Main message that explains Coverage Status
- Pricing of Prescribed Drug at Prescribed Pharmacy (if covered)
- Pricing at one Alternative Pharmacy*
- Pricing of up to Three Alternative Drugs*
- ePA workflow (if ePA eligible)

**if available*

The value of RTBI

- **Transparency**

- Provides benefit information to make informed decisions
- Identifies cost barriers before patient arrives at pharmacy

- **Clinical Outcomes**

- Improves formulary adherence by knowing drug coverage
- Ensures Patient Safety by presenting DUR information

- **Consumer Experience**

- Reduces prescription delays and claim denials
- Prevents bad experience at the pharmacy

Early RTBI feedback

“We will use the heck out of this. myBenefitCheck is what we have been waiting for!”
Dr. Haydel

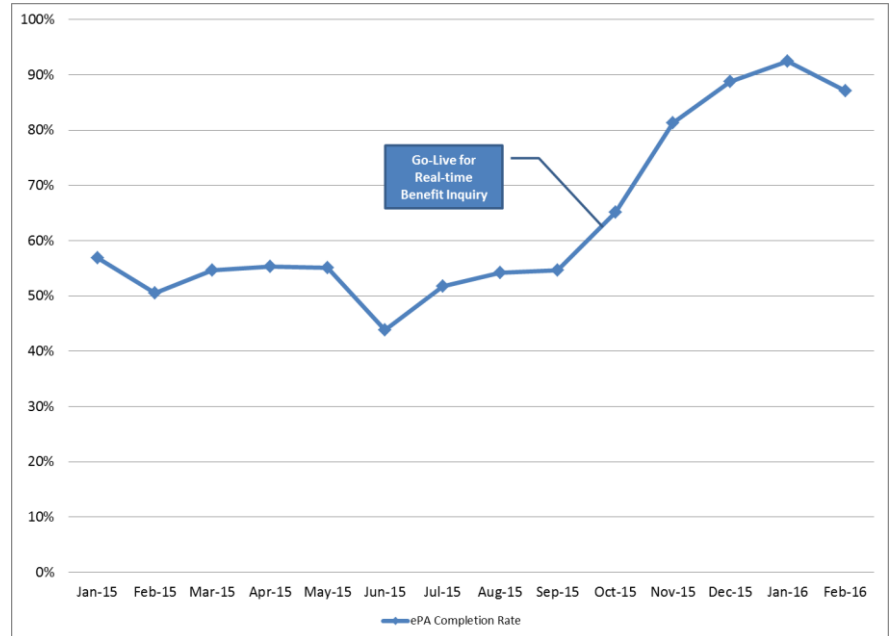
“myBenefitCheck is a great tool, a really great tool. We will be active users of this”
Dr. Jorge

“Wow. This is exactly what we need! When will we have it for more insurance plans?”
Dr. Fernandez

Early results

- Prescriber behavior changes when drug isn't covered
- Increased adoption of ePA

ePA Completion Rate



What's Next?

How standards can help advance CDS within EHRs

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Using Standards to increase adoption of CDS

- Standards have historically helped improve adoption of HIT
- False assumptions that vendors can not work with certain standards
- Starting with standard can help increase dialogue among stakeholders



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