Cleveland Clinic

More Than ePrescribing: Deploying Effective Medication Management

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Disclosures

Cleveland Clinic

Point of Care Partners

Outline

- Prescribing before EHR
- What is eMedication Management?
- Stakeholder value
- How eMedication Management has been implemented at Cleveland Clinic
- Future opportunities to improve pharmacotherapy using health IT

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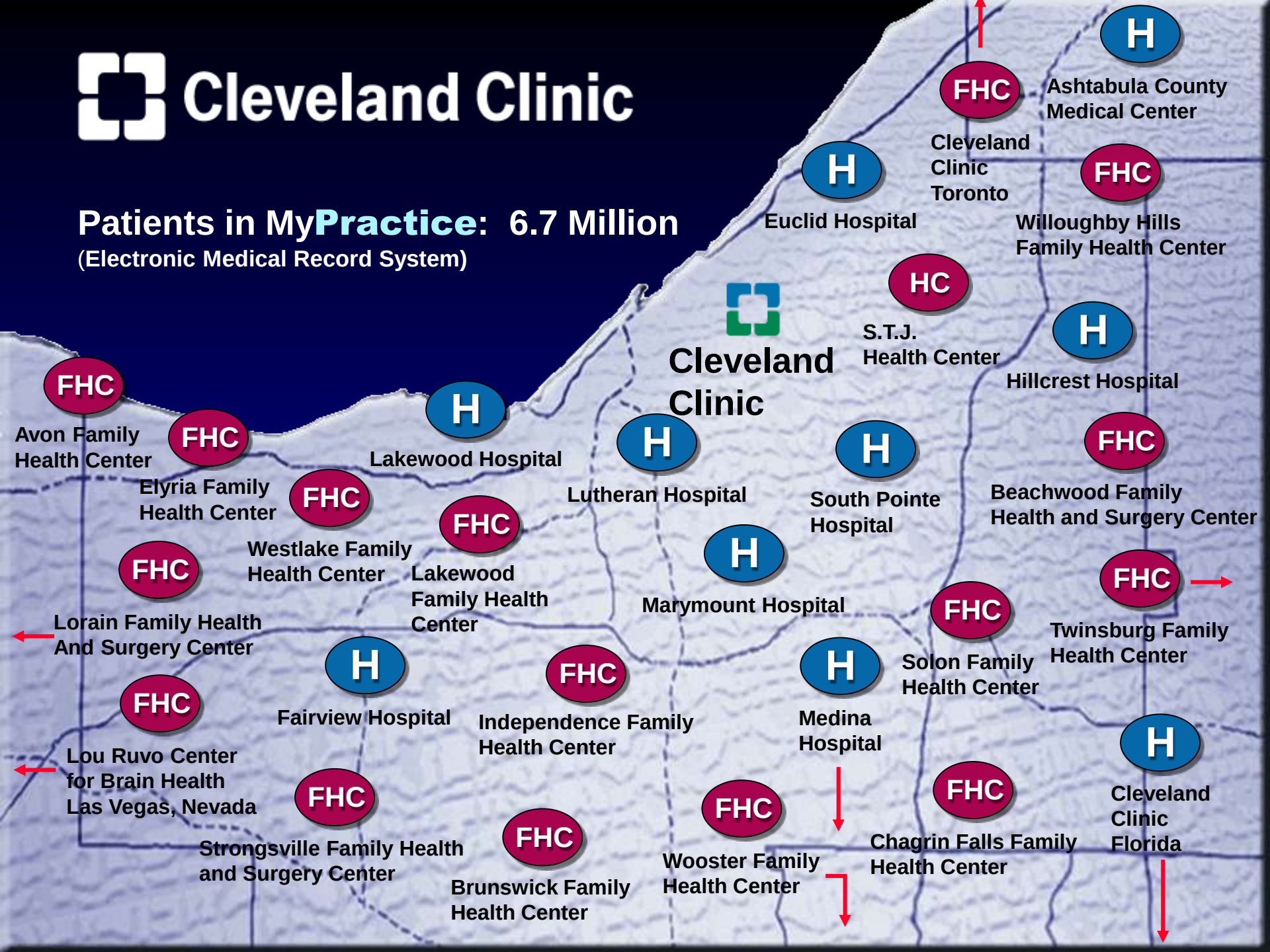
Cleveland Clinic
Patients in MyPractice: 6.7 Million
(Electronic Medical Record System)
FHC
Ashtabula County Medical Center
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Cleveland Clinic Toronto
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Euclid Hospital
FHC
Willoughby Hills Family Health Center
HC
S.T.J. Health Center
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Hillcrest Hospital
Cleveland Clinic
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Avon Family Health Center
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Elyria Family Health Center
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Lakewood Hospital
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Westlake Family Health Center
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Lutheran Hospital
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South Pointe Hospital
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Beachwood Family Health and Surgery Center
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Marymount Hospital
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Lorain Family Health And Surgery Center
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Twinsburg Family Health Center
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Solon Family Health Center
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Fairview Hospital
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Independence Family Health Center
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Medina Hospital
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Lou Ruvo Center for Brain Health Las Vegas, Nevada
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Cleveland Clinic Florida
FHC
Strongsville Family Health and Surgery Center
FHC
Brunswick Family Health Center
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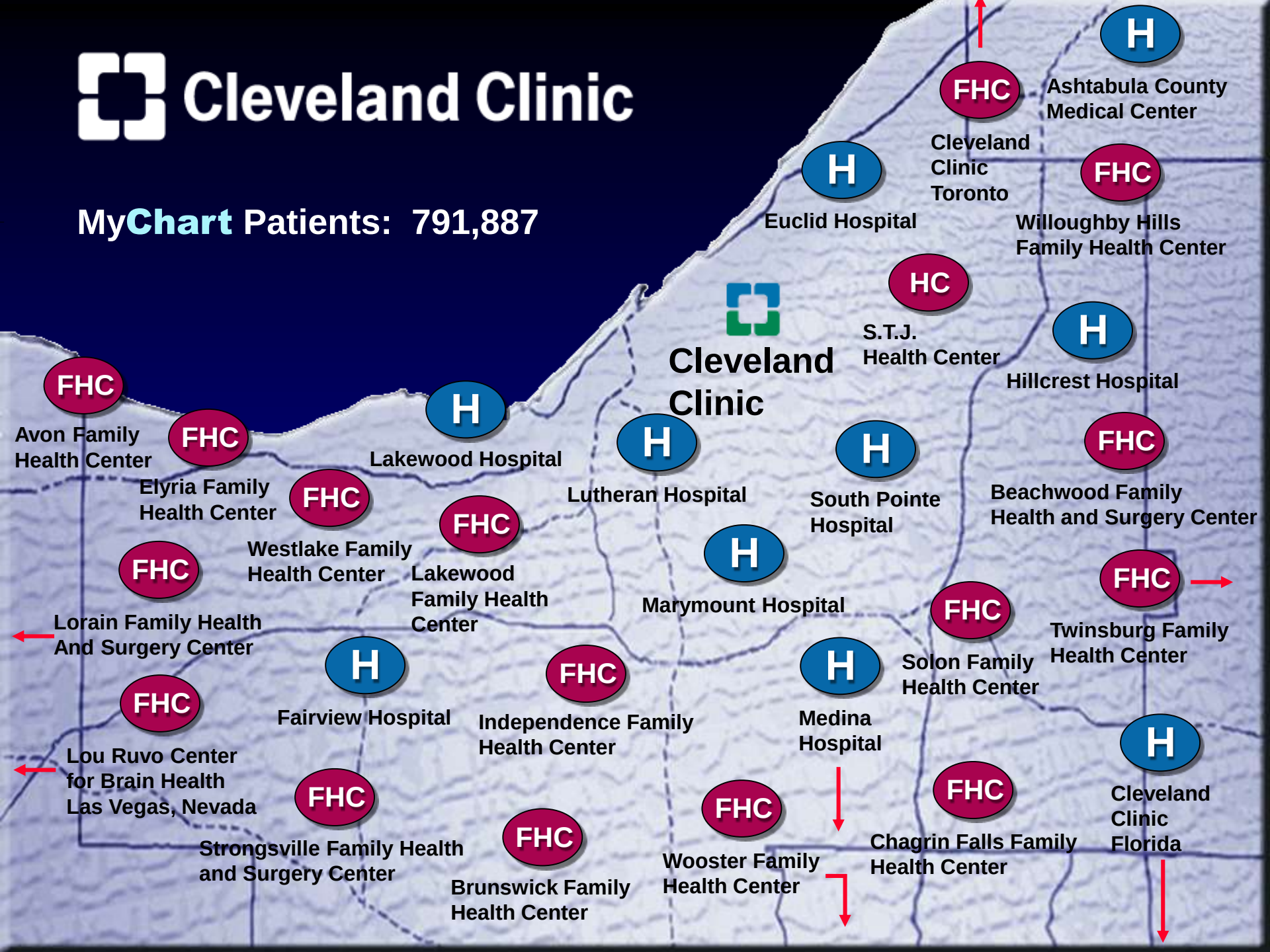
Wooster Family Health Center
FHC
Chagrin Falls Family Health Center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MyPractice Electronic Medical Record

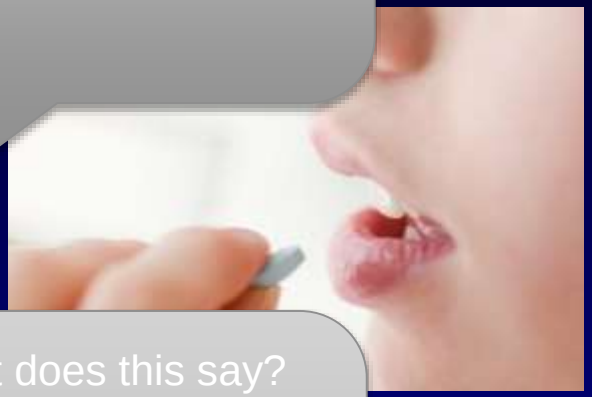
Cleveland Clinic User and Encounter Statistics
Through July, 2013

Physicians:	**7,849**
Residents / Fellows:	**2,761**
Pharmacists:	**472**
Other End Users:	**45,958**
Patients in the EMR:	**6,700,529**
Encounters:	**48,733,322**
Prescriptions:	**102,618,073**
Orders:	**316,506,687**
Total Results:	**968,571,042**

Rx befo

Is she taking the medication?
Is she on any other medications?

What is this medication and why am I taking it?
How do I take this medication?



Do I really need to take this medication?

How much does the medication cost?

Is it going to cause me more harm?

What does this say?
Is this the right dose?

Any drug interactions or allergies?
Is it on the formulary?

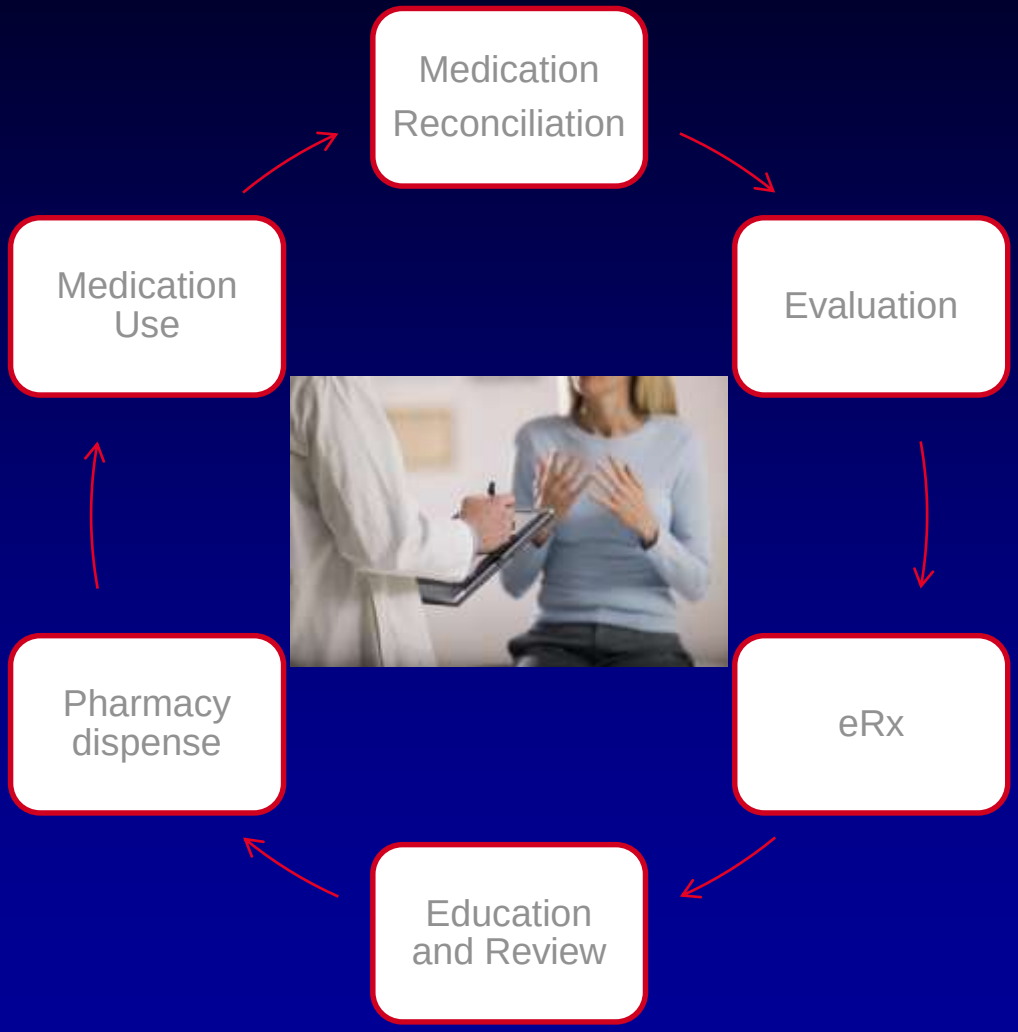
Gaps in Rx before eRx

- No decision support
  - Allergy, duplicate, interaction
- Lost paper prescriptions
- Misleading abbreviations
- Transcription Errors
- No compliance checking
- No benefit checking

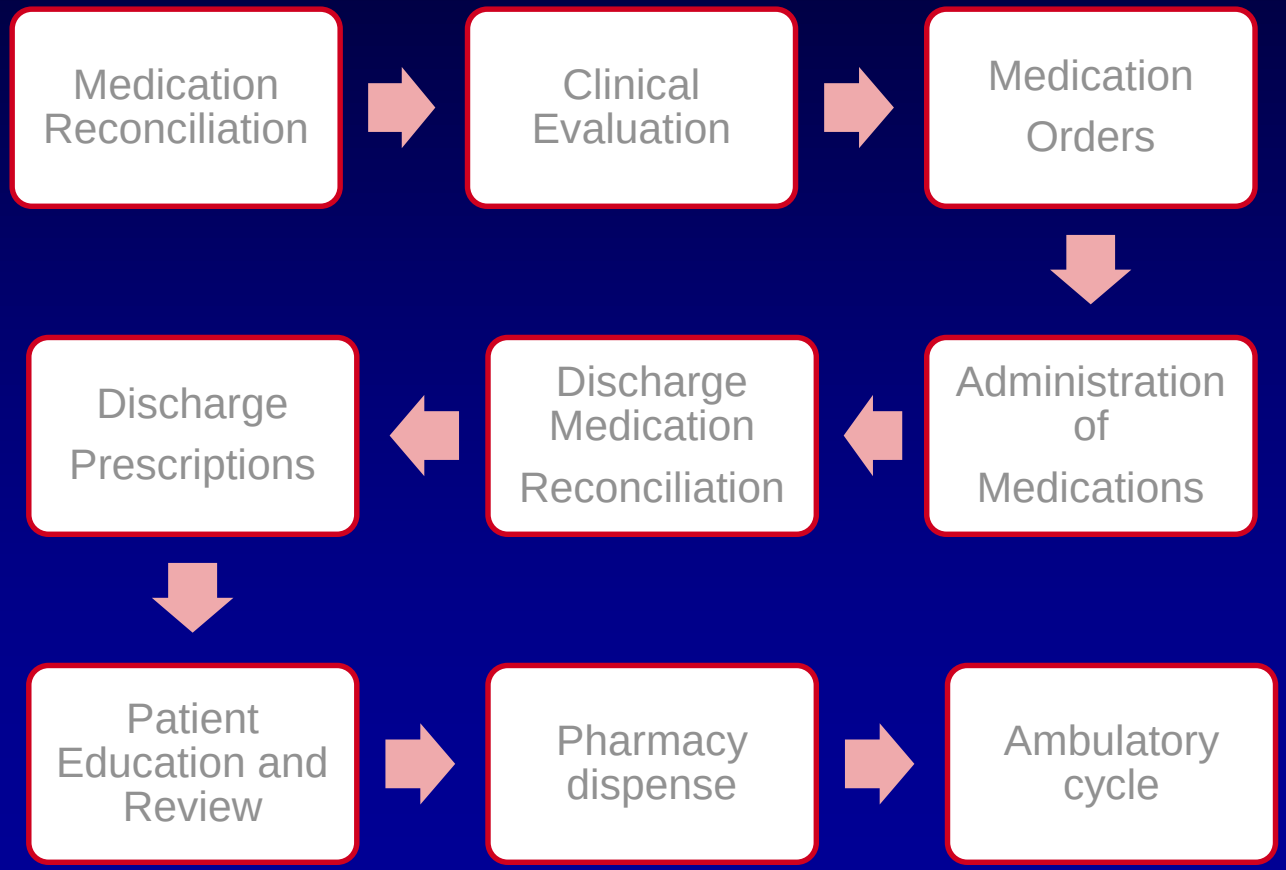
Stakeholder Value

Stakeholder	Role	Benefit to Stakeholder
Patients	Consumers	Outcomes; Quality of Life; Less Time Spent on Health Management, Lower OOP costs
Physicians: Primary Care & Specialists	Provider of primary or specialty care	Medication List; Enhanced Collaboration Between Providers; Better Patient Care/Communication; Reduced Medication Errors & Readmission Rates
Pharmacy/ Pharmacist	Provider of CMR/ Medication Summary Data	Improved workflow; Medication List; Sharing Collected Medication Summary Data
HIE(s)	Receiver of data; facilitate sharing	Contribute to EHR; Longitudinal View of Patient
Hospital	Receiver of data; sharing data on discharge	Medication List; Better Care Delivery to Patients; Reduce Hospital Readmission Rate
Employer	Provider of data	Premium Expense; Absenteeism/Presenteeism; Productivity; Employee Satisfaction
Health Plan	Provider of data	Medication List; Shared Data; Identify Trends in Utilization

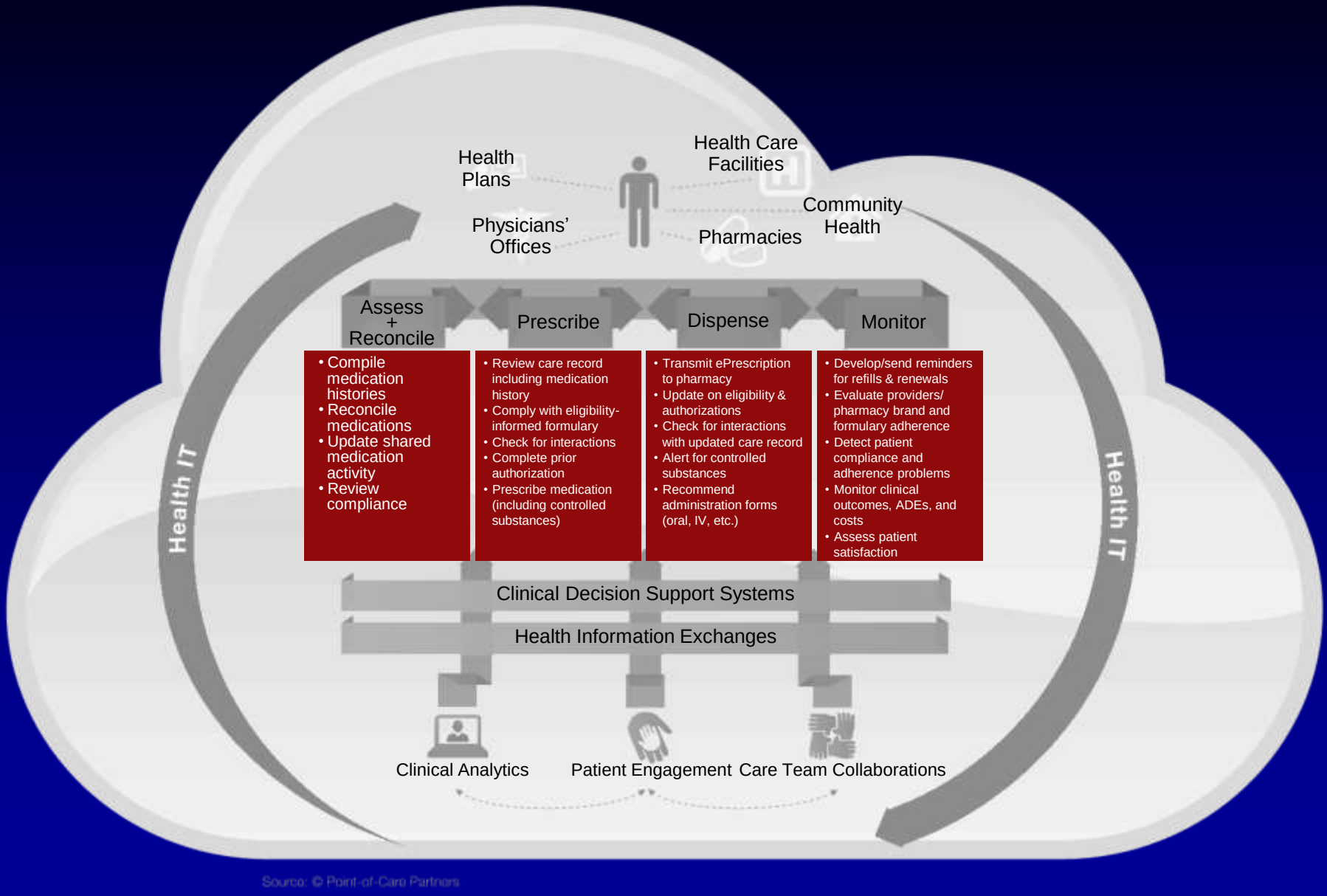
Ambulatory Cycle



Inpatient Cycle



eMedication Management



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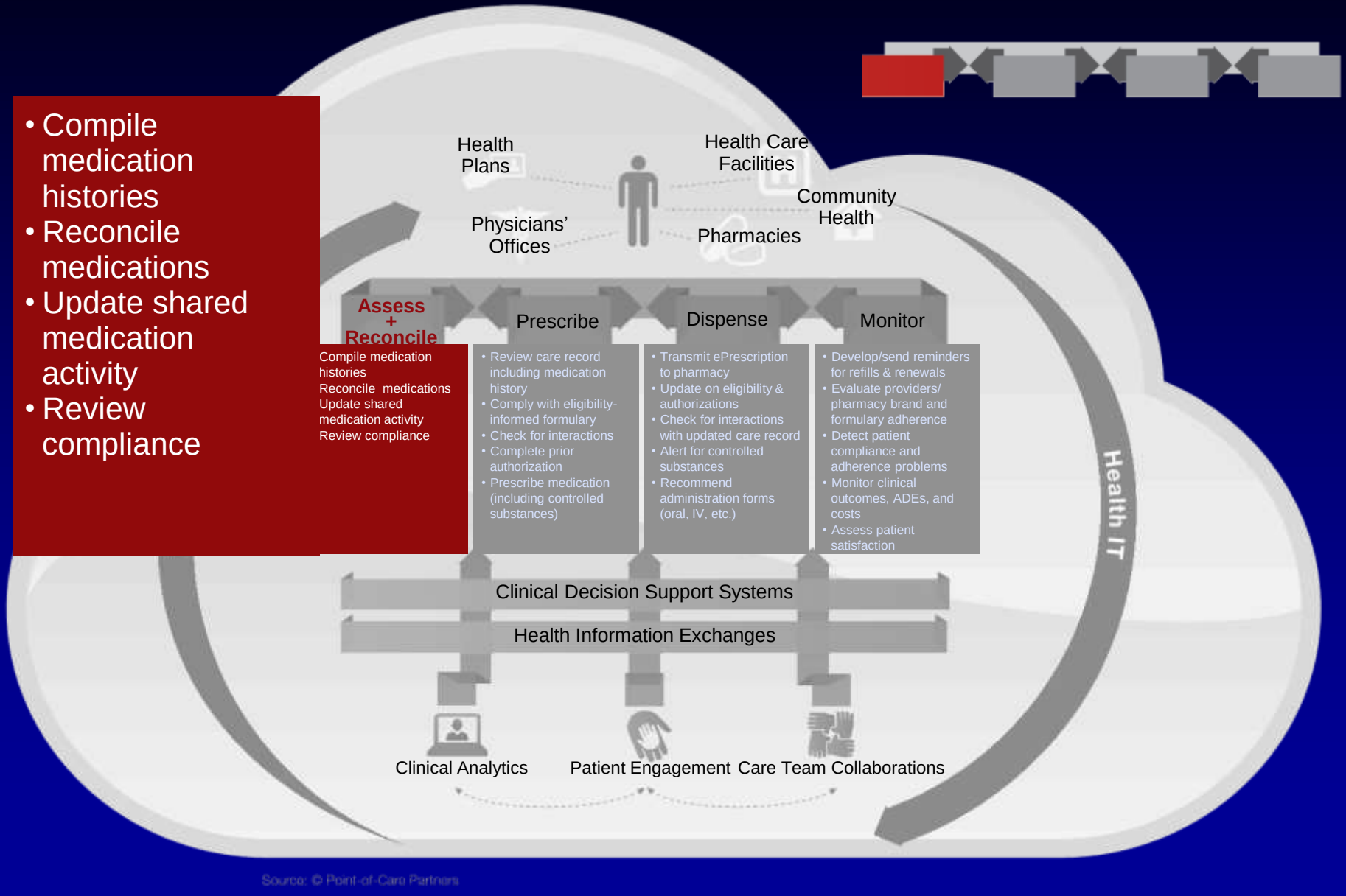
eMedication Management

- Compile medication histories
- Reconcile medications
- Update shared medication activity
- Review compliance



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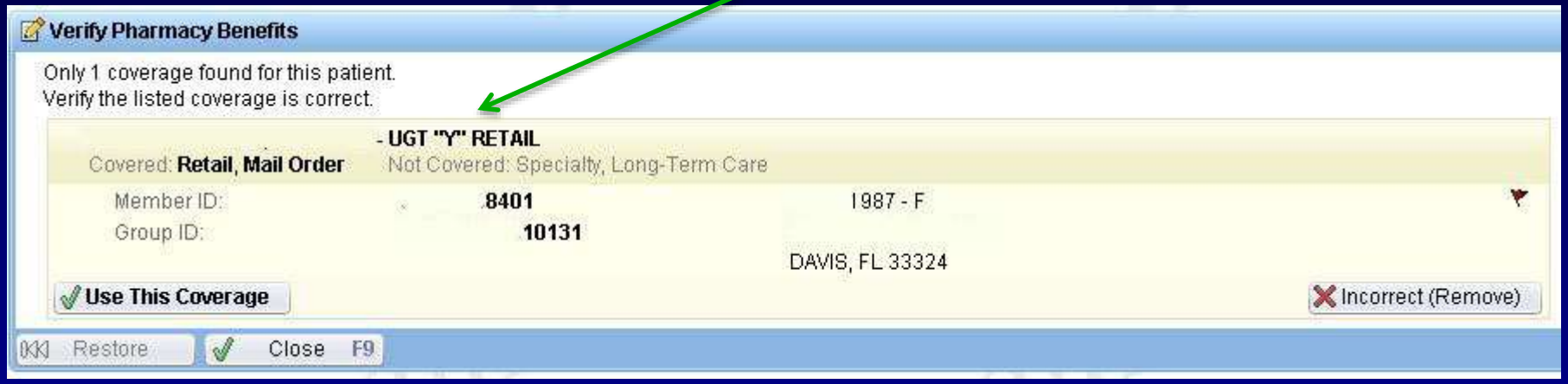
Pharmacy Benefit

Coverage found

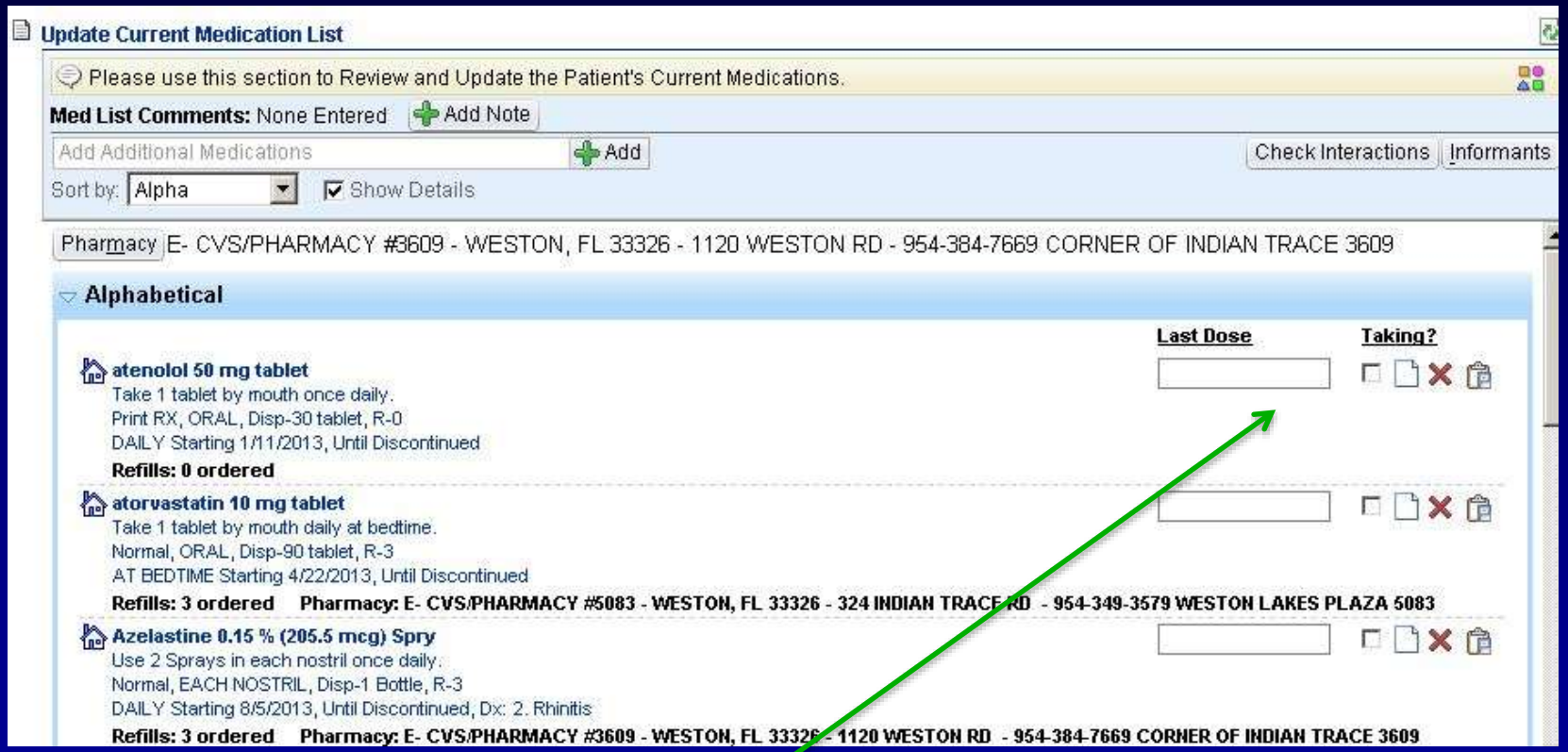


Medication Reconciliation

Can assess compliance

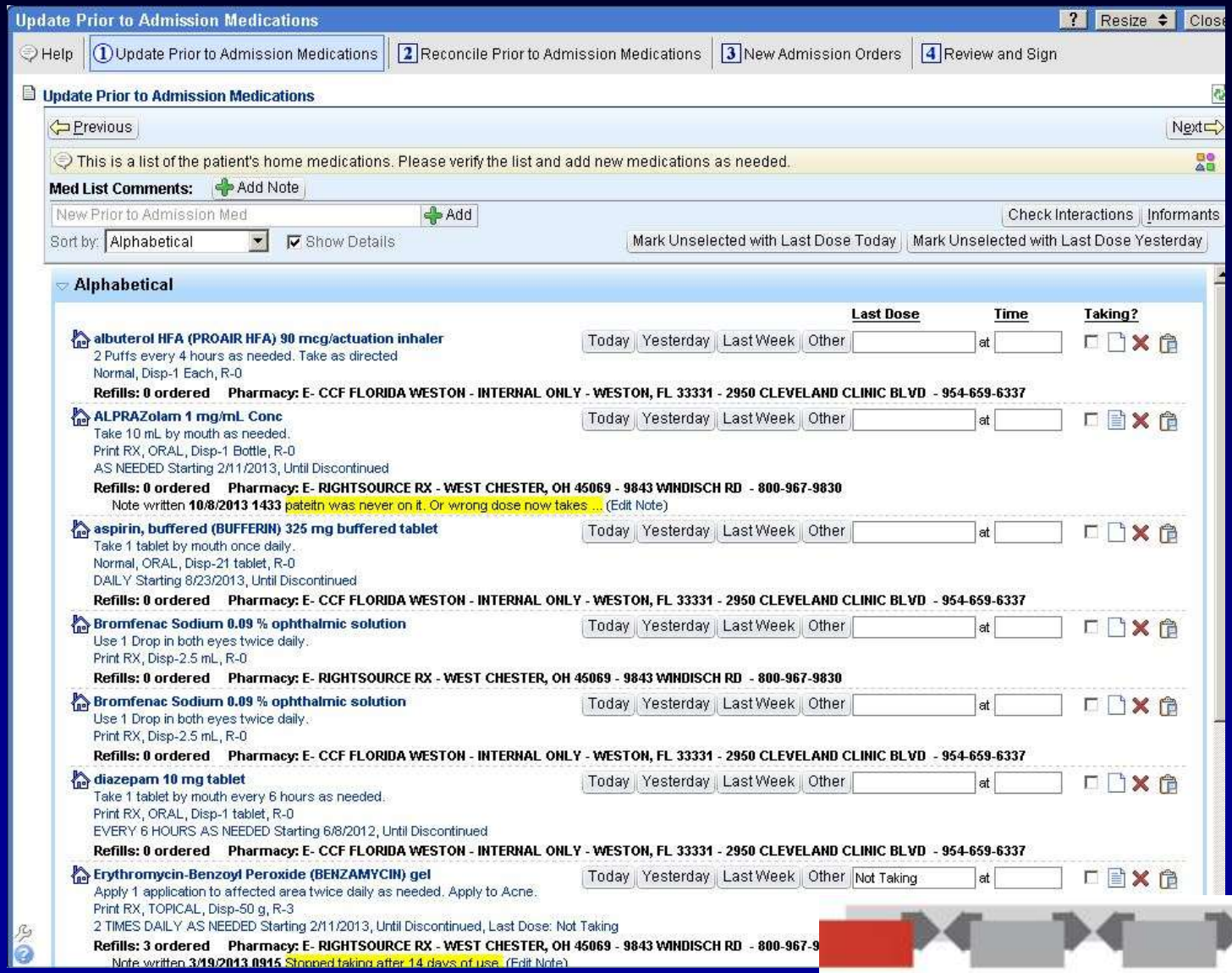
Option to add new meds

Medication update



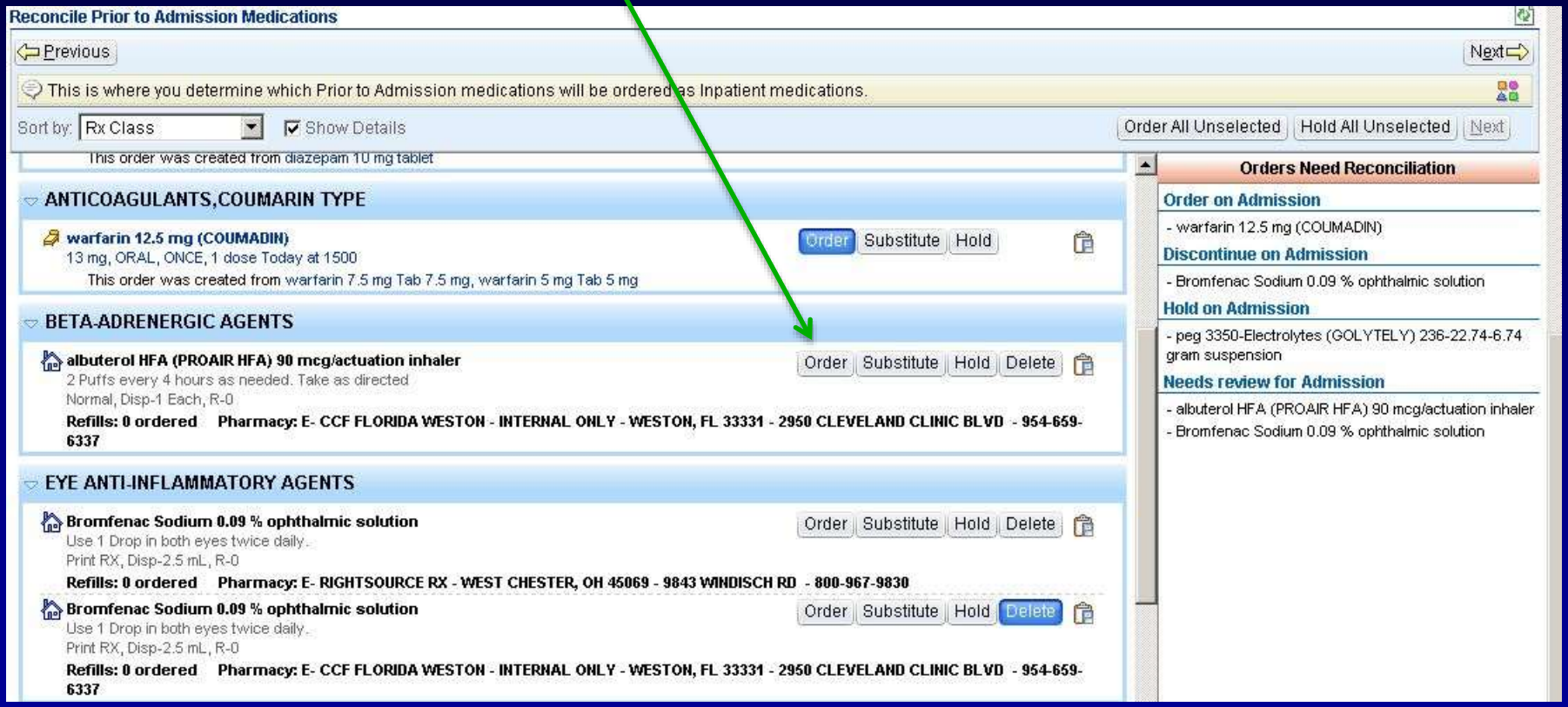
Document compliance

Inpatient MedRec



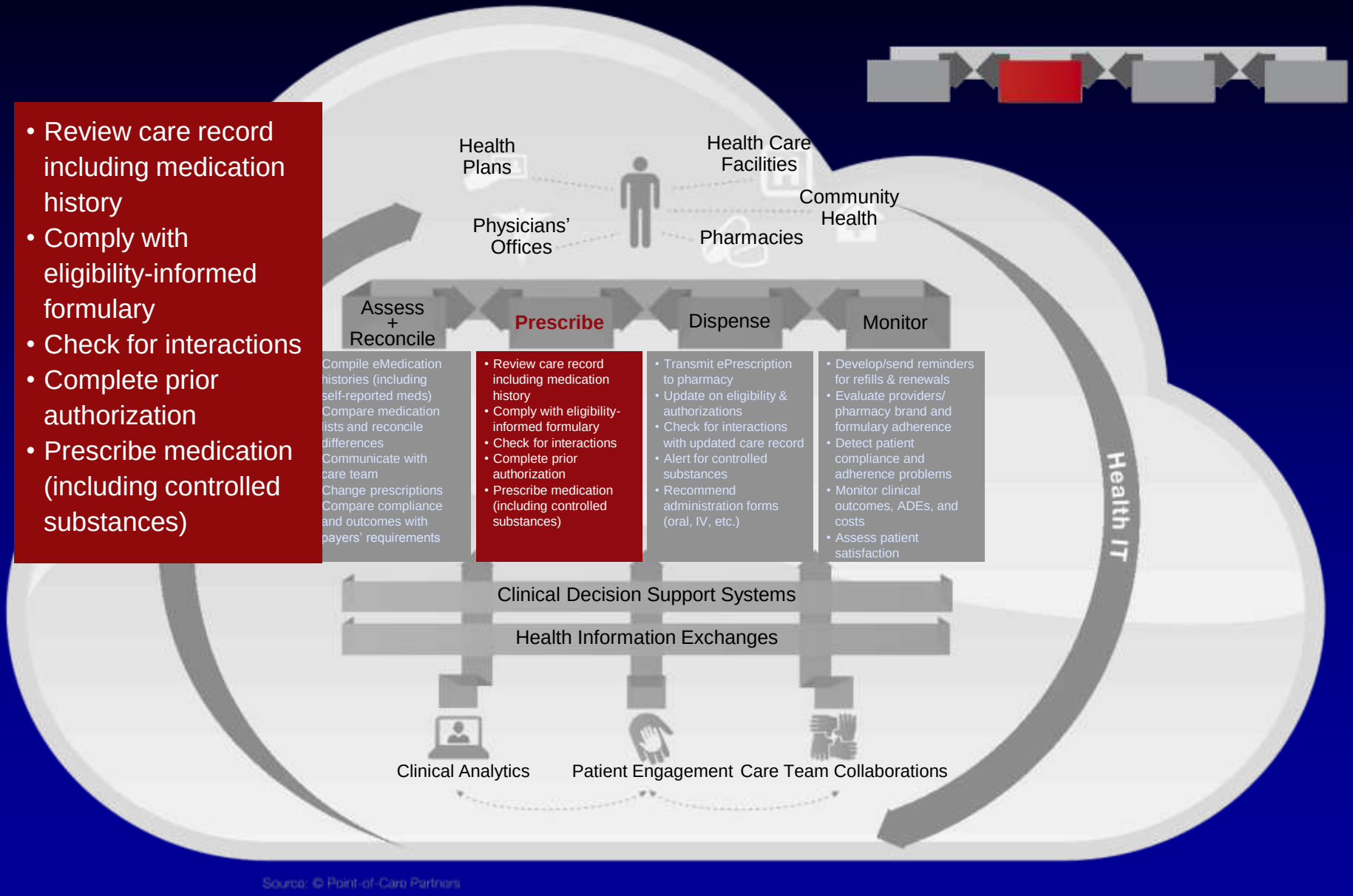
Inpatient MedRec

Decision point



eMedication Management

- Review care record including medication history
- Comply with eligibility-informed formulary
- Check for interactions
- Complete prior authorization
- Prescribe medication (including controlled substances)



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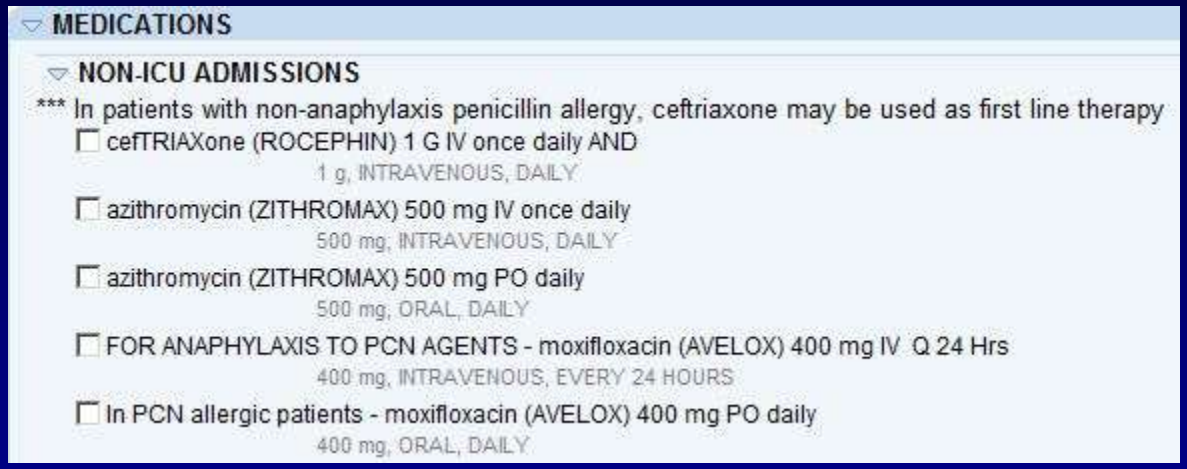
Preference Lists

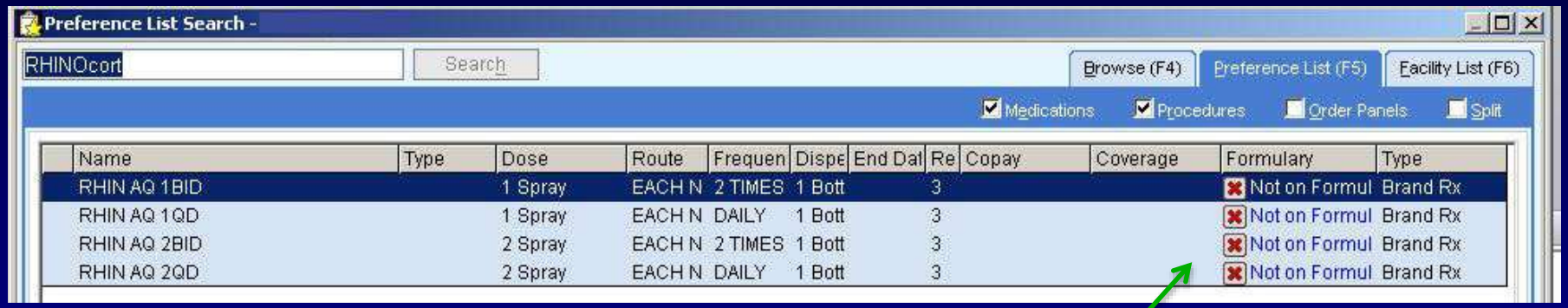
lcs/laba (Medications : Respiratory)

- ☐ ADVAIR DISKUS 100
- ☐ ADVAIR DISKUS 250
- ☐ ADVAIR DISKUS 500
- ☐ ADVAIR HFA 115 MCG-21 MCG/ACTUATION AEROSOL INHALER
- ☐ ADVAIR HFA 230 MCG-21 MCG/ACTUATION AEROSOL INHALER
- ☐ ADVAIR HFA 45 MCG-21 MCG/ACTUATION AEROSOL INHALER
- ☐ SYMBICORT 160
- ☐ SYMBICORT 80
- ☐ DULERA 100
- ☐ DULERA 200

Ordersets

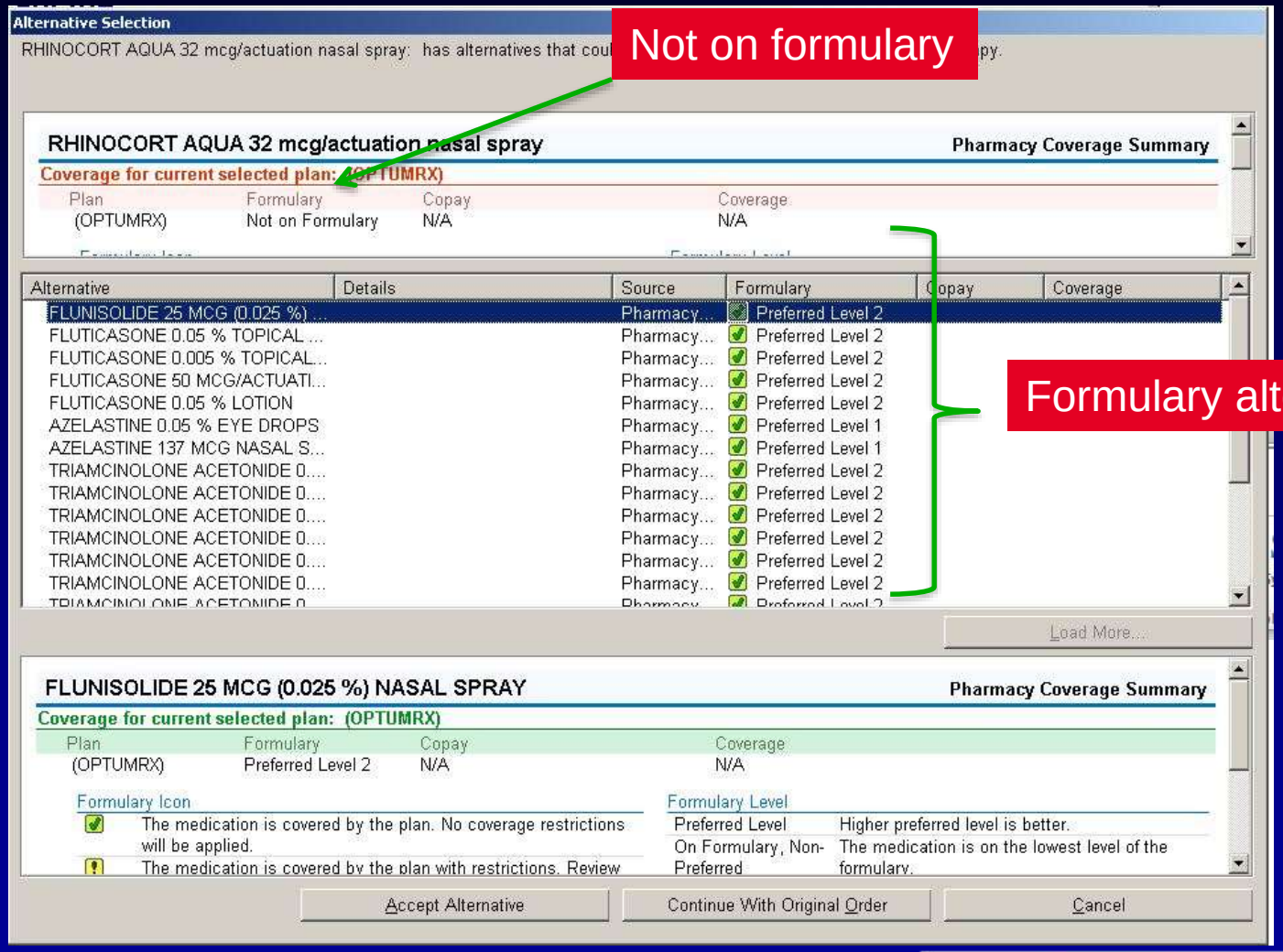

MEDICATIONS
NON-ICU ADMISSIONS
*** In patients with non-anaphylaxis penicillin allergy, ceftriaxone may be used as first line therapy
cefTRIAXone (ROCEPHIN) 1 G IV once daily AND
1 g, INTRAVENOUS, DAILY
azithromycin (ZITHROMAX) 500 mg IV once daily
500 mg, INTRAVENOUS, DAILY
azithromycin (ZITHROMAX) 500 mg PO daily
500 mg, ORAL, DAILY
FOR ANAPHYLAXIS TO PCN AGENTS - moxifloxacin (AVELOX) 400 mg IV Q 24 Hrs
400 mg, INTRAVENOUS, EVERY 24 HOURS
In PCN allergic patients - moxifloxacin (AVELOX) 400 mg PO daily
400 mg, ORAL, DAILY

Formulary Checking



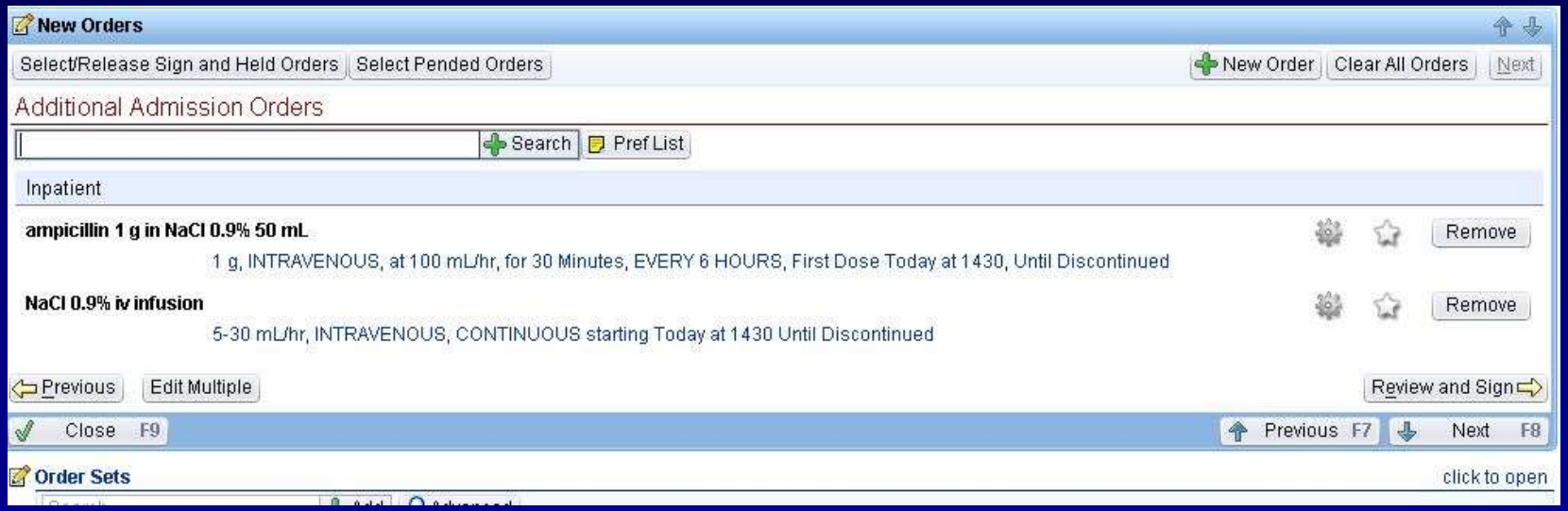
Not on formulary

Formulary Check with Alternatives

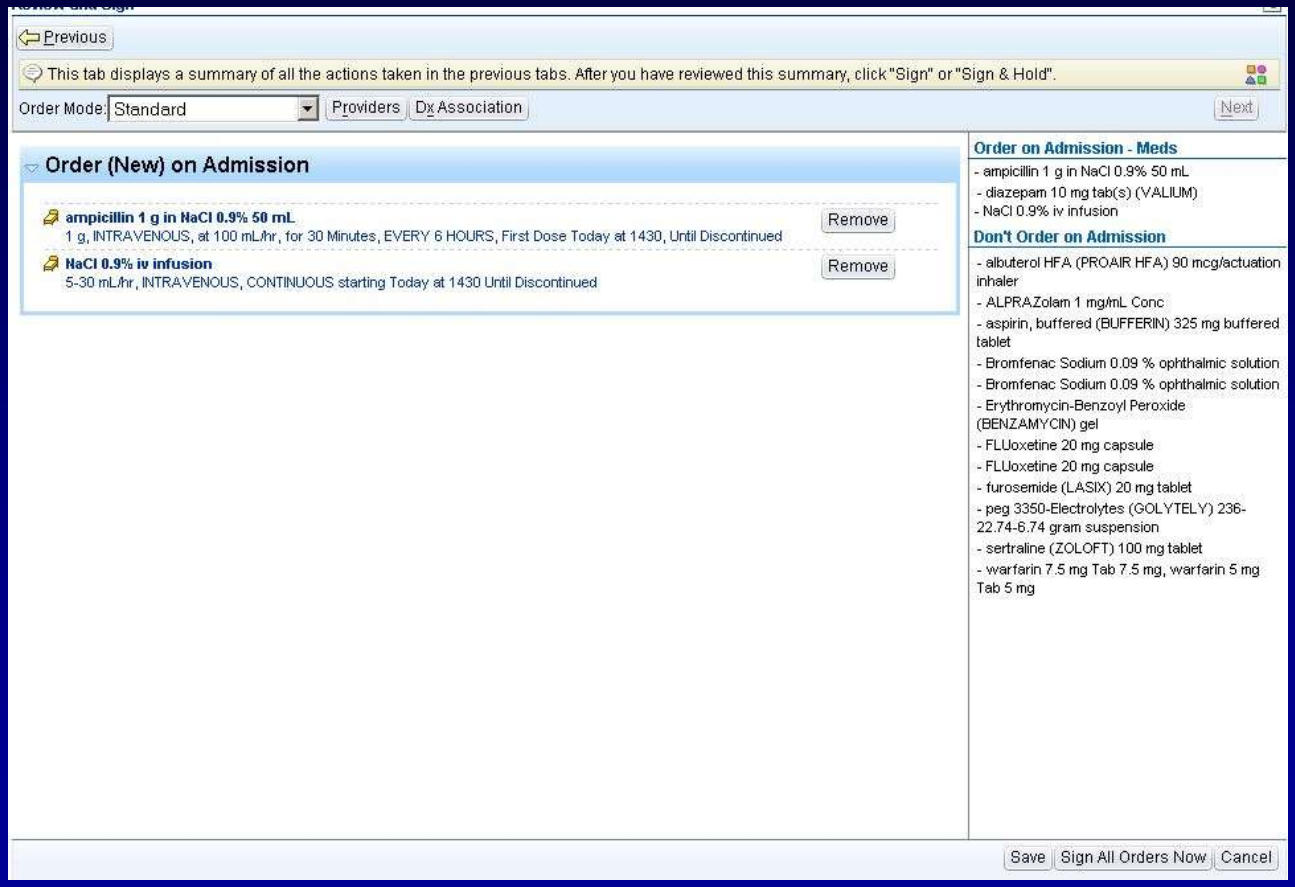


Allergy Checking
Level 1

Inpatient MedRec



Inpatient MedRec

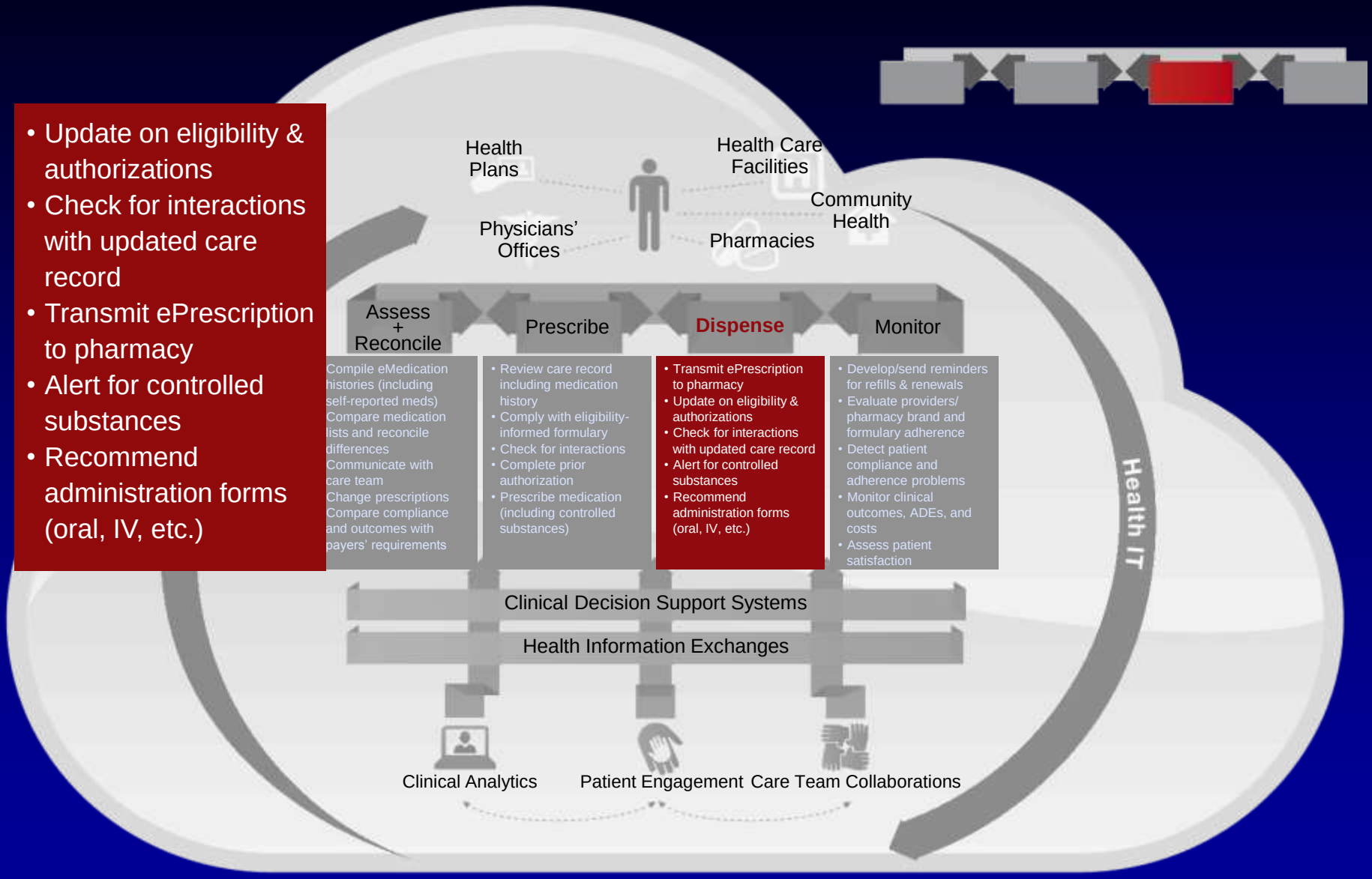


Gaps

- Prior authorization
- Controlled substances (limited)
- Biologics/Specialty pharmacy
- Home care/infusion

eMedication Management

- Update on eligibility & authorizations
- Check for interactions with updated care record
- Transmit ePrescription to pharmacy
- Alert for controlled substances
- Recommend administration forms (oral, IV, etc.)



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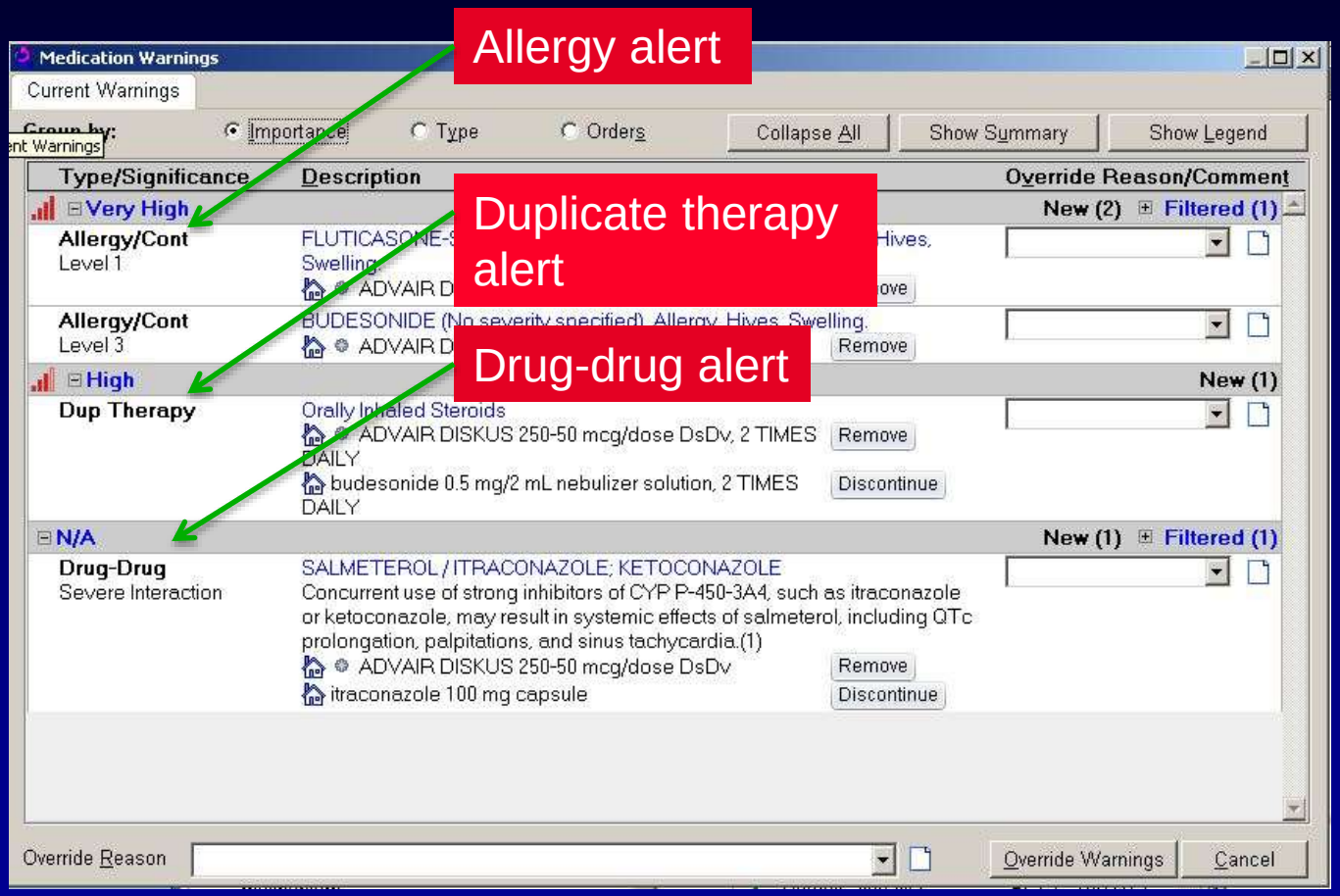
Decision Support Alerts



Gaps in decision Support

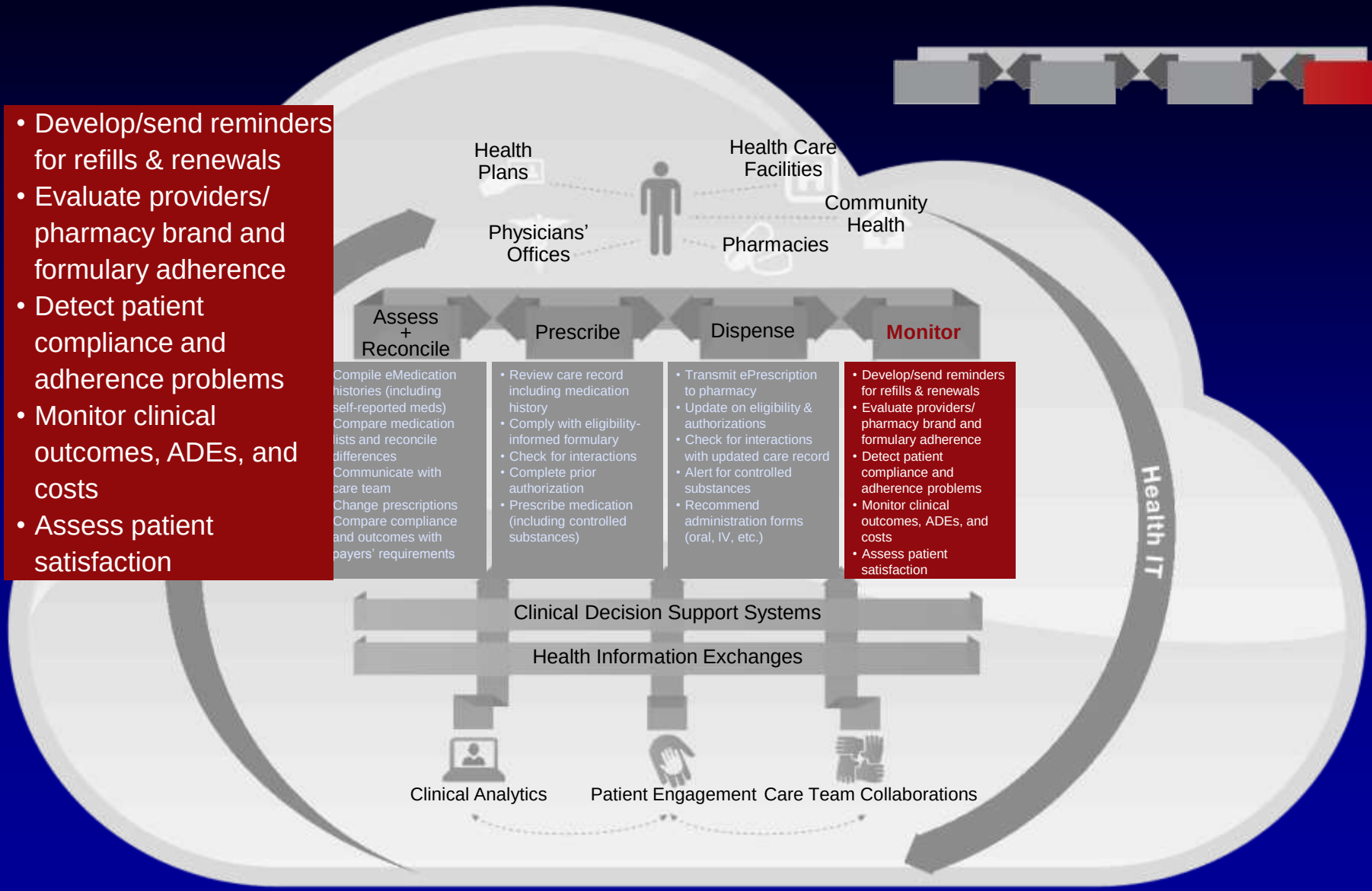
- Incomplete information
  - Patient data missing
  - Vendor rules missing/erroneous
- Clinically insignificant alerts
  - Alert fatigue

Opportunities

- Pharmacogenomics
  - Abacavir and HLA B*57:01

eMedication Management

- Develop/send reminders for refills & renewals
- Evaluate providers/ pharmacy brand and formulary adherence
- Detect patient compliance and adherence problems
- Monitor clinical outcomes, ADEs, and costs
- Assess patient satisfaction



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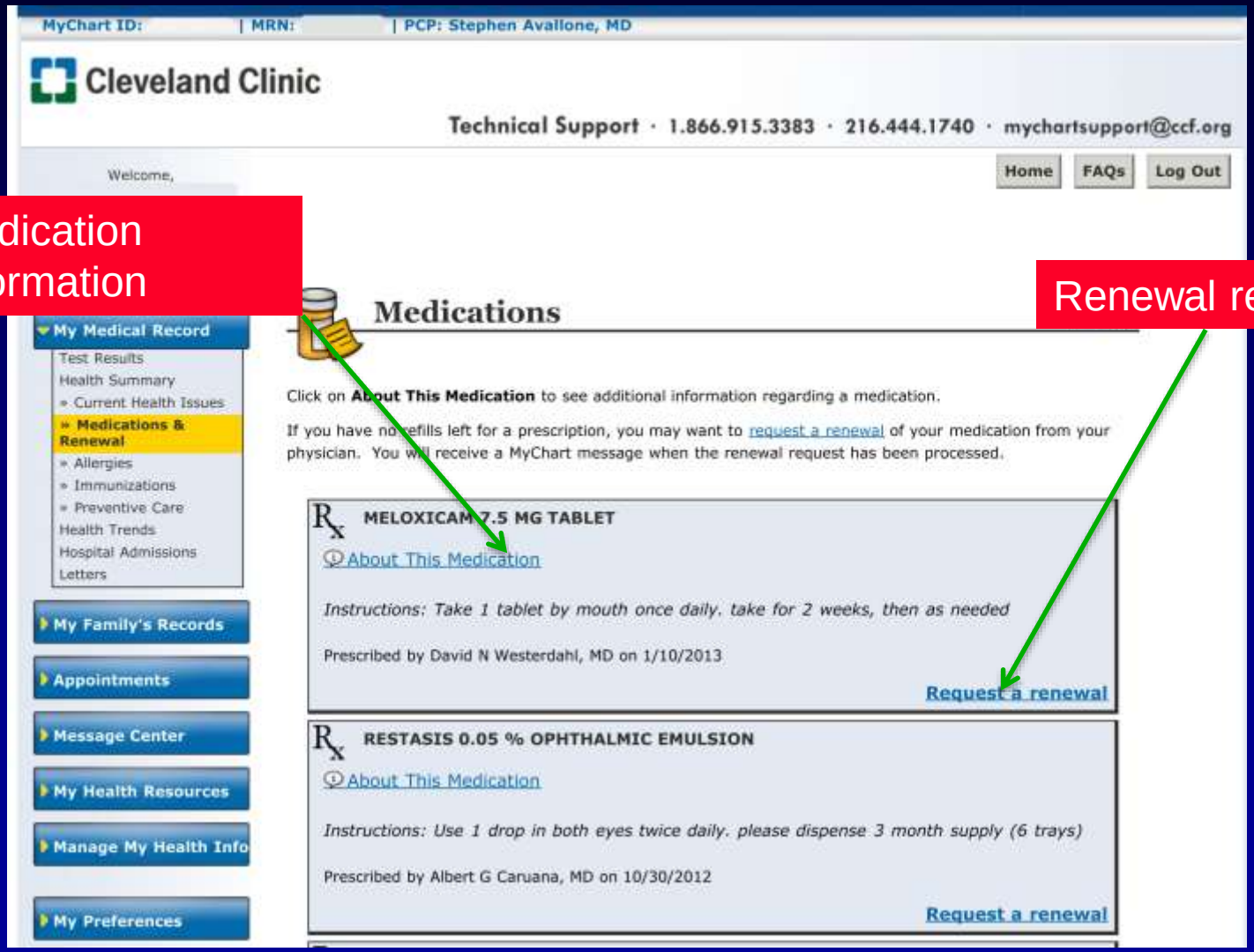
Patient Portal



Opportunities

- Patient engagement
- Adherence reminders
- Prior authorization

with eM
Manag

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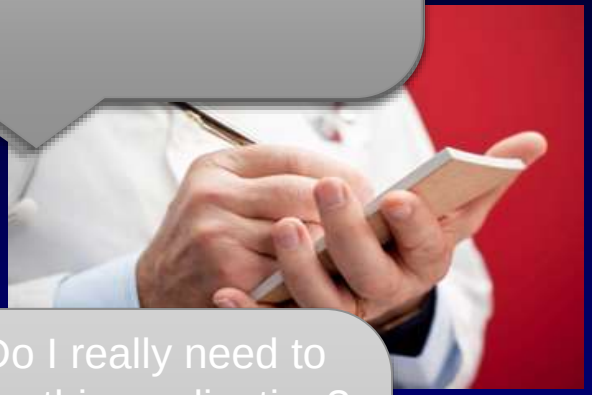
- Is she on any other medications?



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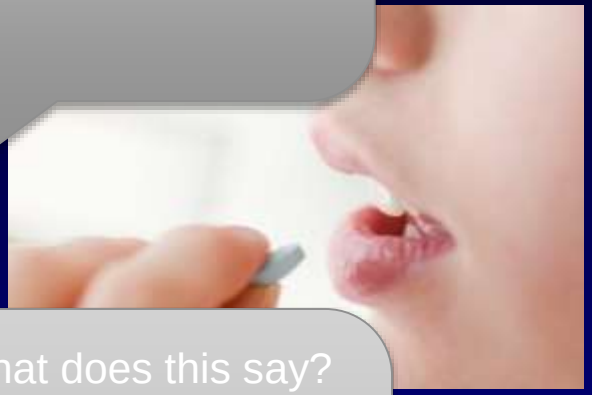
- How do I take this medication?



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- How much does the medication cost?
- Is it going to cause me more harm?

- What does this say?
- Is this the right dose?
- Any drug interactions or allergies?
- Is it on the formulary?

Summary

- eMedication Management bridges many of the paper prescription gaps
  - Decision support
  - Improved accuracy
  - Formulary information at the POS
  - Engages patient with a patient portal

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Every life deserves world class care.