

Exchange and Reconciliation of Clinical Decision Support Output in a Population Health Partnership

Deaconess – Evolent for HL7 Clinical Decision Support
Workgroup

October 11, 2017



Objectives

1. Describe and collect feedback on the automated reconciliation of Clinical Decision Support Output from the Deaconess Health System electronic health record system (Epic) and Evolent's population health management platform (Identifi)
2. Discuss potential work in collaboration with HL7 CDS WG in support of exchange of CDS output between different health IT systems

Background

- Deaconess Health System, an integrated health system in Evansville, Indiana
- Evolent Health, a population health services organization in Arlington, Virginia



Care Management
and Coordination



Success in
value-based
care



A “Care Gap” is a major component addressed by care management and primary care clinicians in the model of value based care and population health management, usually intervening in different settings and involving different interventions

“Care Gaps”: automated notifications of an opportunity to provide evidence-based care

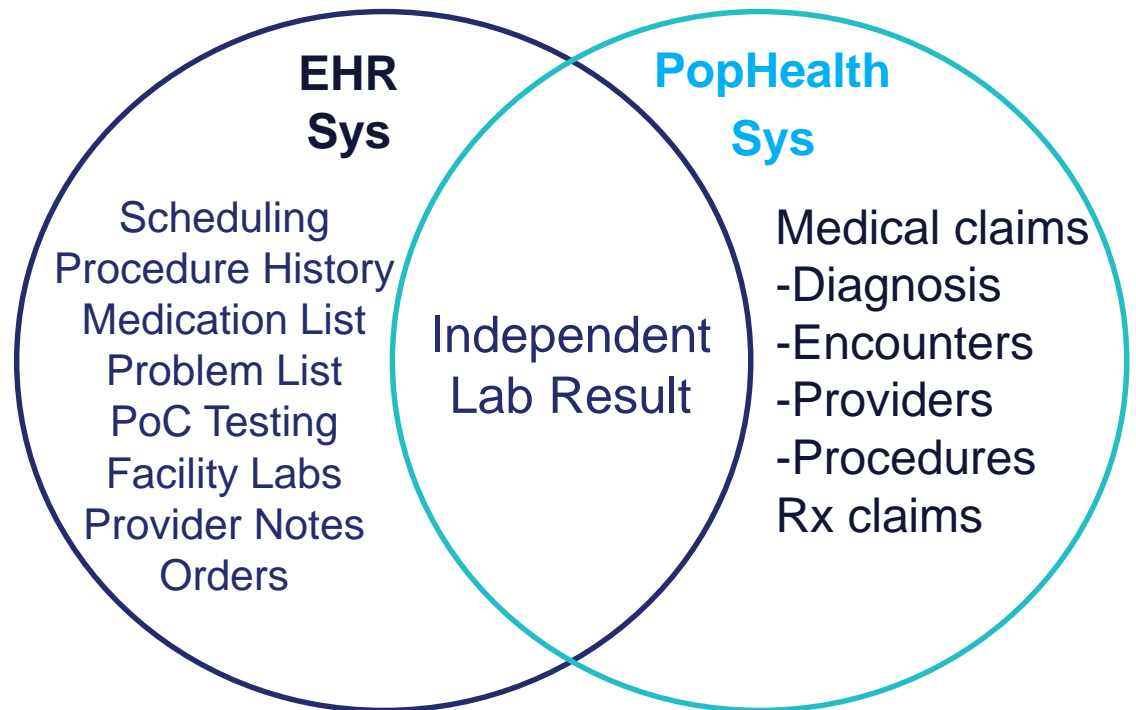
The Five Rights	Deaconess EHR System	Evolut Pop Health Platform
Right Information	Gaps derived from quality measure, calculated by EHR CDS engine using data available to the EHR	Gaps defined by quality measure, calculated by Evolut’s CDS engine using claims data and lab results
Right People	Clinicians (EHR users) Clinical practice staff	Care Managers Population Health Managers Community-based Clinicians
Right Channels	Patient-specific EHR views (Epic)	Population Health Management views (rosters, aggregate reports, and portals)
Right Intervention Formats	Alerts in Health Maintenance Module	On-screen notifications in Pop Health Management System's patient profile Patient roster
Right Points in Workflow	Point of care during face-to-face encounters Outreach	Point of outreach Between encounters (care coordination) Review by providers of patient panels

The Care Gap Notifications were Derived from Quality Measures used in National Quality Reporting Programs

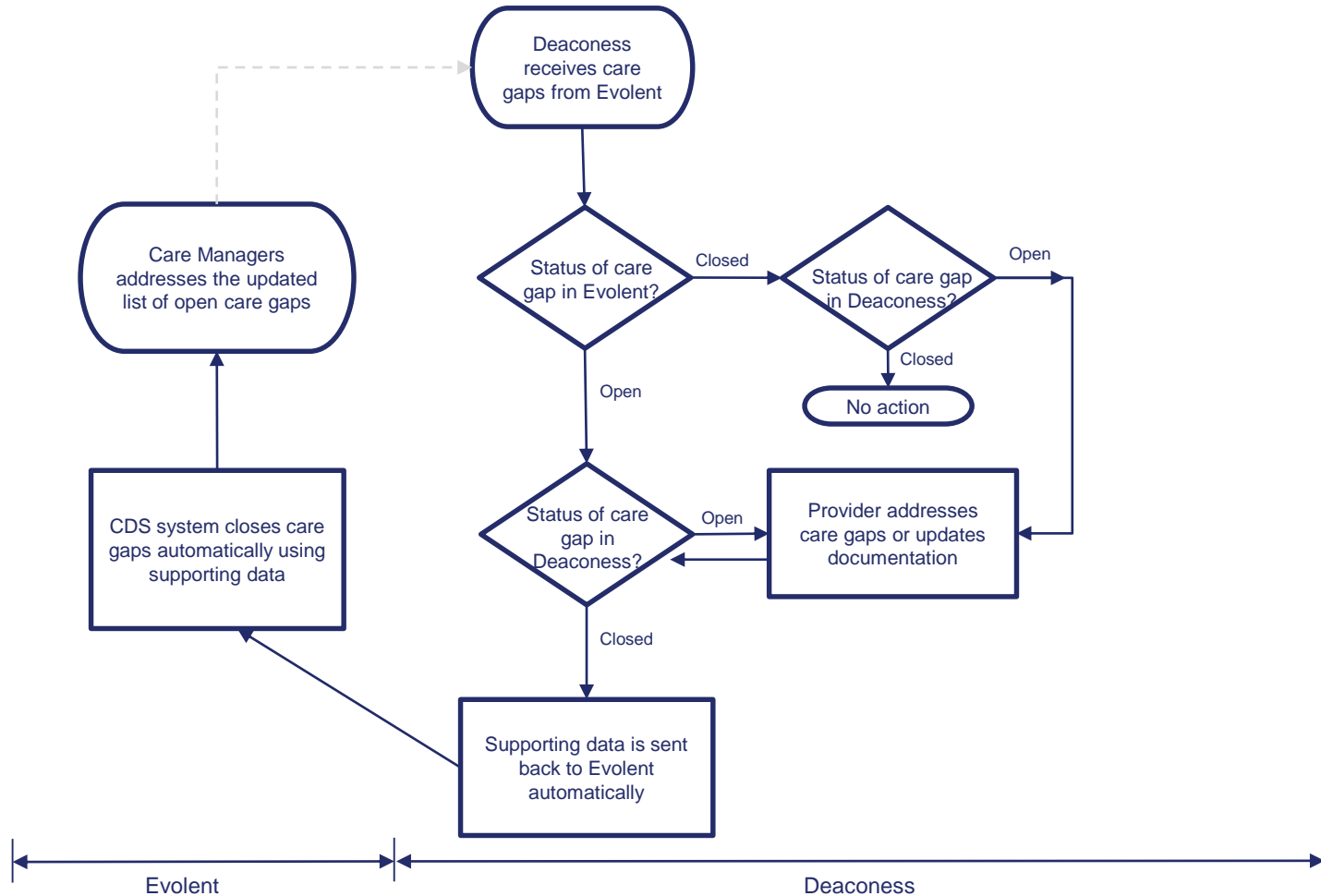
Care Gap Rules	National Identifiers of the Reference Measures
Appropriate Medications for Patients with Asthma	NQMC: 009940, or NQF:0036
Diabetes Care - HbA1c Test	NQMC: 010520, or NQF: 0057
Diabetes Care - Eye Exam	NQMC: 010524, or NQF: 0055
Diabetes Care - Nephropathy Screening	NQMC: 010525, or NQF: 0062
Breast Cancer Screening	NQMC: 009931, or NQF: 2372
Colorectal Cancer Screening	NQMC: 009933, or NQF: 0034
Cervical Cancer Screening	NQMC: 010930, or NQF: 0032
Chlamydia Screening	NQMC: 009934, or NQF: 0033
Annual Flu Vaccination	NQMC: 010565 & 010566, or NQF: 0039 & 0040
Pneumococcal Vaccination	NQMC: 010570, or NQF: 0043
Annual Monitoring for Patients on ACE/ARB	NQMC: 010542 Rate 1, or NQF: 2371 Rate 1
Annual Monitoring for Patients on Digoxin	NQMC: 010542 Rate 2, or NQF: 2371 Rate 2
Annual Monitoring for Patients on Diuretics	NQMC: 010542 Rate 3, or NQF: 2371 Rate 3
Well-Child Visits 3 to 6 years-old	NQMC: 010611, or NQF: 1516
Adolescent Well-Care Visits	NQMC: 010612

Motivation to exchange care gap information

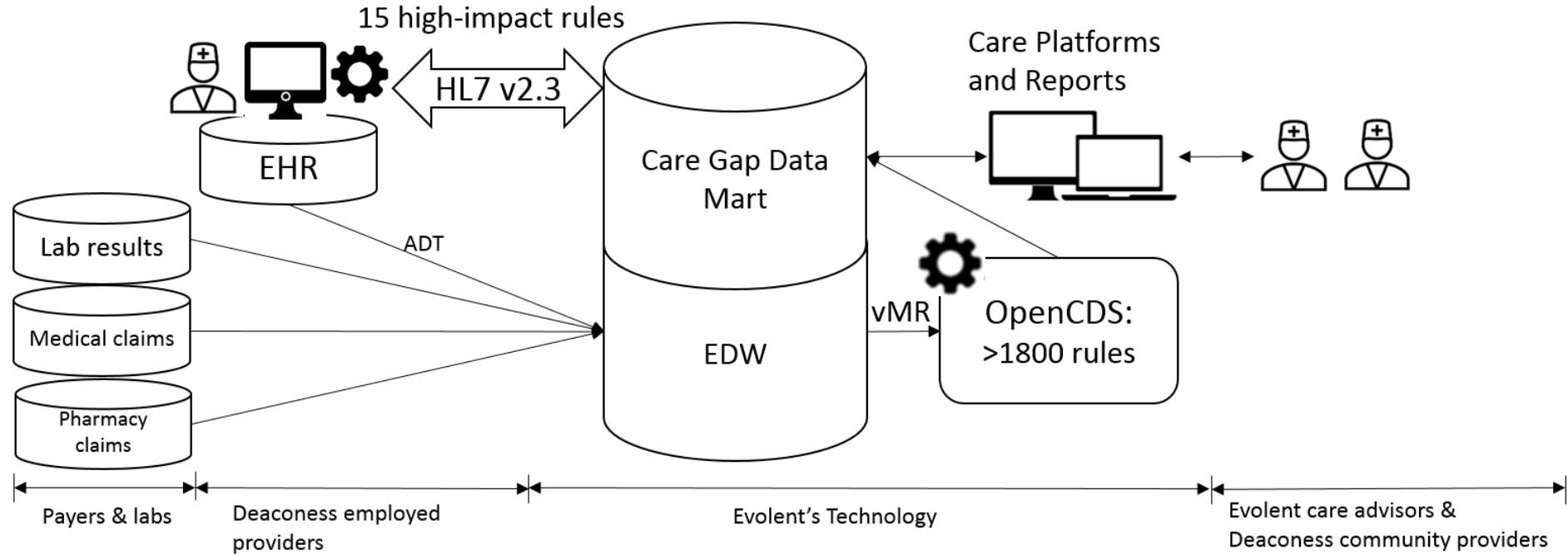
1. Different data sets
2. Different CDS engines
3. Different logic



Overview of the automated reconciliation process



Data systems involved in the exchange of CDS output



 Clinical Decision Support Engine

Data Elements Involved in Automated Reconciliation

- Patient demographics*
- Care Gap ID*
- Status*
- Open Date*
- Close Date*
- Close By [Name]
- Close By [ID]
- Close Reason
- Reason Details

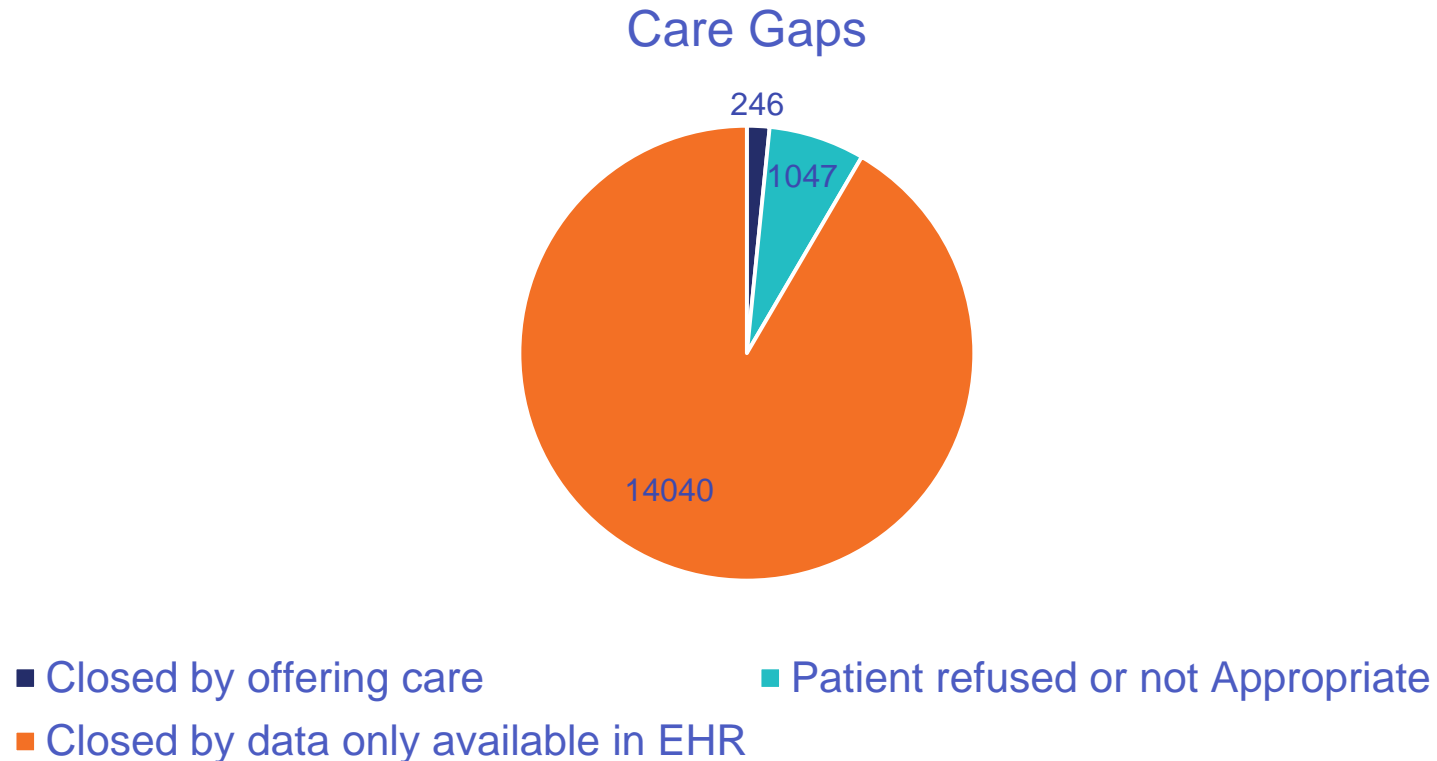
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MSH|^~\&|EvolutUpdate|EPH|EHR|EHR|20160713144101||ADT^A04|20160630144101.1|P|2.3
EVN|||||2016MMDD
PID|1||MRN||Lastname^Firstname^Minitial^||DOB|GENDER|||STREET^^CITY^STATE^ZIP||PHONE^^PH^^^|||
OBX||ST|CARE_GAP_517_STATUS||CLOSED
OBX||ST|CARE_GAP_517_RULE_ID||517
OBX||ST|CARE_GAP_517_KEY||760766
OBX||ST|CARE_GAP_517_OPEN_DATE||2016MMDD
OBX||ST|CARE_GAP_517_CLOSE_DATE||2016MMDD
OBX||ST|CARE_GAP_517_CLOSE_BY|| ProviderLastname, ProviderFirstname
OBX||ST|CARE_GAP_517_CLOSE_BY_ID||NPI NUMBER GOES HERE (if available)
OBX||ST|CARE_GAP_517_CLOSE_REASON||Lab Documented in EMR
OBX||ST|CARE_GAP_517_CLOSE_REASON_DETAIL||MICROALBUMIN: 30 MG/L
```

* Mandatory

RuleID 517 = Diabetes Care - Nephropathy Screening (Evolut)

Data found only in clinical EHR is major contributor to closure of open care gaps in the pop health system

Number of Care Gaps Received by Evolent from Deaconess Categorized by Closure Reasons;
March to May, 2017



Opportunities and Future Work: our Wishlist

- Establish a core set of data elements for care gap exchange to:
 - Enable automated reconciliation of care gap status across systems
 - Inform appropriate action based on provider roles across settings
 - Enable other use cases (such as quality measure calculation & reporting)
- Define a universal identifier system for care gaps & other CDS output
- Develop a taxonomy to classify CDS artifact's variations from reference quality measures from which care gap detection logic is defined

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