# HealthTRAC - Care Gaps and Automated Ordering Overview

Pete Champlin - Sr. Developer, KPCO







### Agenda

**HealthTRAC's Rules Engine - CODA** 

Care Gap Overview

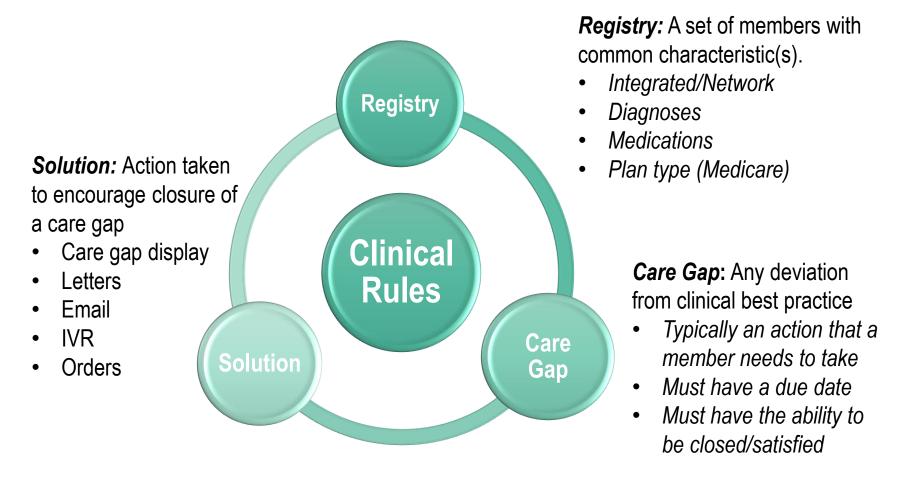
**Care Gap/CODA Details** 

**Automated Ordering** 

**Q&A** 



### Population Health Technology Architecture\*





<sup>\*</sup>Original design by Todd Trautman.

### CODA – HealthTRAC's rules engine

#### Clinical Outcomes Decision Architecture

- Database rules engine
- Calculates member populations
- Can utilize any criteria available in our clinical data
- Outputs member lists to any destination



### **Pre-CODA Challenges**

- Inconsistent care gap & gap solution calculations
  - Several technologies and platforms
- Limited or no retention of care gaps
- No gap rule transparency
  - Lack of system trust
  - High volume of Help Desk inquiries
- Limited care gap analytics
  - No care gap closure performance
  - Unknown outreach effectiveness



### **CODA Capabilities and Benefits**

- Unified, database member population calculation solution
- Calculates any member population care gaps, registries, auto orders, outreach, etc.
- Use of comprehensive set of data (HealthConnect, claims, pharmacy, membership, radiology, etc.)
- Gap Due Date calculation
- Display of Gap Reason
- Manual gap entry (Cervical cancer program only)
- Analytics and trending opportunities



### **HealthTRAC Landing Page**

#### Gaps and Due Dates calculated by CODA

| Care Team |               |                 |             |          |  |
|-----------|---------------|-----------------|-------------|----------|--|
| СРТ       | Alert         | Order<br>Status | Due<br>Date | Notified |  |
| 82274A    | Fecal Globin  | Ordered         | 06/20/14    | 05/25/15 |  |
| 80061B    | Lipid Profile | Ordered         | 05/05/15    |          |  |
| 84132C    | Potassium     | Ordered         | 03/17/15    |          |  |
| 84295A    | Sodium        | Ordered         | 05/05/15    |          |  |

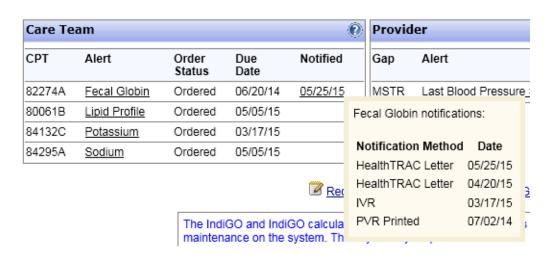
| Provid | er   |             | 0        |
|--------|--|-------------|----------|
| Gap    | Alert                                      | Due<br>Date | Notified |
| MSTR   | Last Blood Pressure >= 140/90 in Last Year | 03/27/15    |          |



### **HealthTRAC Landing Page**

#### Gap Reason and Notification History

| Care Team |               |   |             |          |  |  |
|-----------|---------------|---|-------------|----------|--|--|
| СРТ       | Alert         | Order<br>Status                                   | Due<br>Date | Notified |  |  |
| 82274A    | Fecal Globin  | Ordered   | 06/20/14    | 05/25/15 |  |  |
| 80061B    | Lipid Profile | Fecal Globin                                      | Reason:     |          |  |  |
| 84132C    | Potassium     |   |             |          |  |  |
| 84295A    | Sodium        | Age 50 - 75  AND Last Co  AND Last FI  AND NOT Hi | Γ > 1 year  | 10 years |  |  |





### **KP.org Personal Action Plan**

#### Member-facing care gaps

#### Your action plan

05/29/2015

| Action   | What should I do next?   | Why is this important?   |
|--|--|--|
| You are due for a blood<br>test called an A1C. | Please call 1-800-218-1059 to have your health care team order this test.  If you believe this is incorrect please call 303-614-1628.  | A1C is a test that tells you if your blood sugar is in the healthy range.  |
| You are due for your cholesterol blood test.   | In Denver/Boulder, please call 1-<br>800-218-1059 to have your health<br>care team order this test. In<br>Southern and Northern Colorado,<br>please call your primary care<br>provider.  | A cholesterol test measures the fats in your blood and helps assess the health of your heart, blood vessels and risk for heart attack or stroke. It can also show if medication you are taking is working.   |
| You are due for a BMD test.                    | Review Osteoporosis: Should I have a test? or talk to your health care provider to learn about your options. If you have already had this test done or have any questions, please call 1-877-847-0012.   | Identifying and treating osteoporosis helps prevent broken bones.  |
| You are due for colon cancer screening.        | You have 2 options for screening: a free at-home stool test kit or a colonoscopy. To learn about your options review Colon Cancer: Which Screening Test Should I Have? or talk to your health care provider. Call 1-877-847-0012 to have an at-home stool test kit or colonoscopy ordered for you. Or call to let us know if you were recently screened. | This test can help detect colon cancer when it is easier to treat. Kaiser Permanente recommends that adults aged 50 and over start screening. Some people should start screening before age 50, especially if they have a family history of colon cancer. You can talk to your doctor about what is right for you. |



### **Gap Suppression**

#### Manual and automated suppression

| Suppress All Gaps           | Start Date |   | End Date     |   | Suppression Reason |  |  |
|-----------------------------|------------|---|--------------|---|--------------------|--|--|
| •                           | 05/21/2015 |   | Indefinitely |   | Select A Reason ▼  |  |  |
| or Select Gaps Individually |            |   |              |   |                    |  |  |
| Gap                         | Start Date |   | End Date     |   | Suppression Reason |  |  |
| ☐ Blood Pressure            | 05/21/2015 |   | Indefinitely |   | Select A Reason ▼  |  |  |
| Creatinine                  | 05/21/2015 |   | Indefinitely |   | Select A Reason ▼  |  |  |
| Fecal Globin                | 05/21/2015 |   | Indefinitely |   | Patient Preference |  |  |
| Potassium                   | 05/21/2015 |   | Indefinitely |   | Select A Reason ▼  |  |  |
| QS Gap                      | 05/21/2015 |   | Indefinitely |   | Select A Reason ▼  |  |  |
| Schedule PAP                | 05/21/2015 | • | Indefinitely | • | Select A Reason ▼  |  |  |
| Sodium                      | 05/21/2015 |   | Indefinitely |   | Select A Reason ▼  |  |  |

### HealthTRAC Application

#### Manual Gap Entry

| Due Date: | 2015-10-31                  |   |
|-----------|-----------------------------|---|
| Gap:      | SEBX (Endometrial Biopsy) ▼ |   |
|           |                             |   |
| Comment:  |                             | _ |



Submit

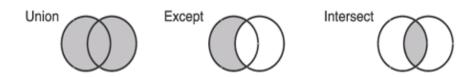
### **Demo Time**





#### **CODA Rule Details**

#### Set Theory



#### Creatinine Gap Rule

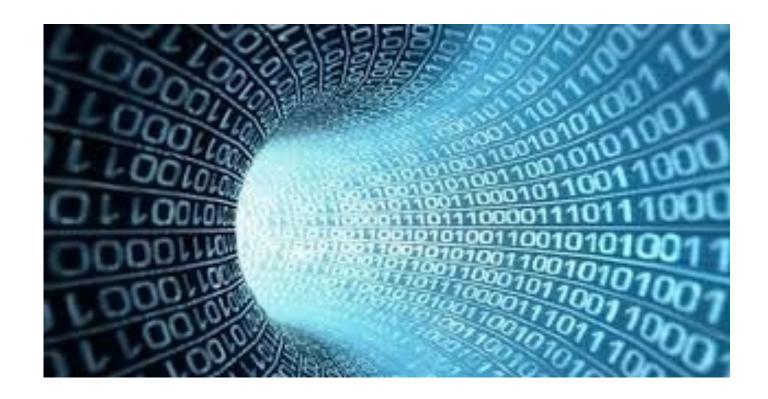
| 1 (( |           | Diabetes                          |   |
|------|-----------|-----------------------------------|---|
| 2    | UNION     | Chronic Kidney Disease            |   |
| 3    | UNION     | Heart Failure                     |   |
| 4    | UNION     | On Medication                     | ) |
| 5    | INTERSECT | Last Serum Creatinine > 12 Months | ) |

#### Serum Sodium Gap Rule

| 1(    |           | On a blood pressure medication                |    |
|-------|-----------|---|----|
| 2     | INTERSECT | Last Sodium > 12 Months                       |    |
| 3 ((( | UNION     | New Antidepressant start                      |    |
| 4     | EXCEPT    | Sodium since most recent antidepressant start | )  |
| 5(    | UNION     | New Antidepressant start                      |    |
| 6     | EXCEPT    | Sodium since most recent antidepressant start | )) |
| 7     | INTERSECT | Age >= 65                                     | )) |
| 8     | INTERSECT | An independent lab is due                     |    |



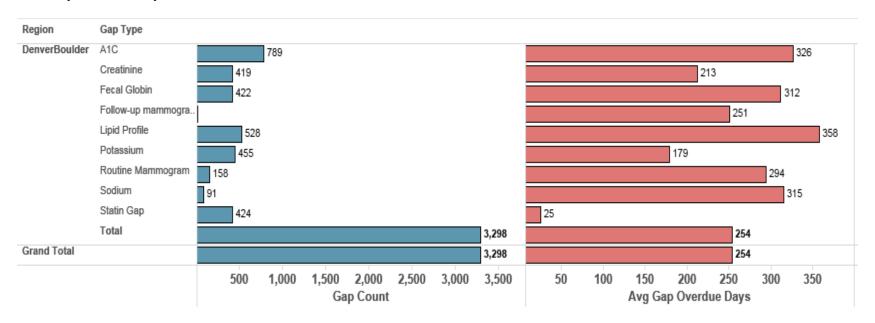
### To the database!





### **Care Gap Analytics**

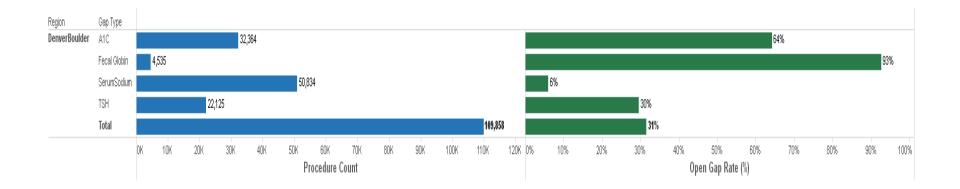
#### Open Gaps





### **Care Gap Analytics**

Inverse Gaps





### Do we need a break?





### **Automated Ordering (AO)**

- PCP AO approval One time agreement
- Member eligibility Linked to an integrated PCP (non-DTM) provider
- Member enrollment by PCP
  - Enroll one or many members at a time
  - Must be re-enrolled when PCP link changes
  - Must be re-enrolled every 5 years
- CODA AO rules Determine who should receive an order
  - Enrolled in AO
  - Gap is due (or almost due) and not suppressed
  - No existing order with same CPT code
  - Problem List entry associated to disease state needed in certain cases
  - Radiology order for Denver/Boulder only



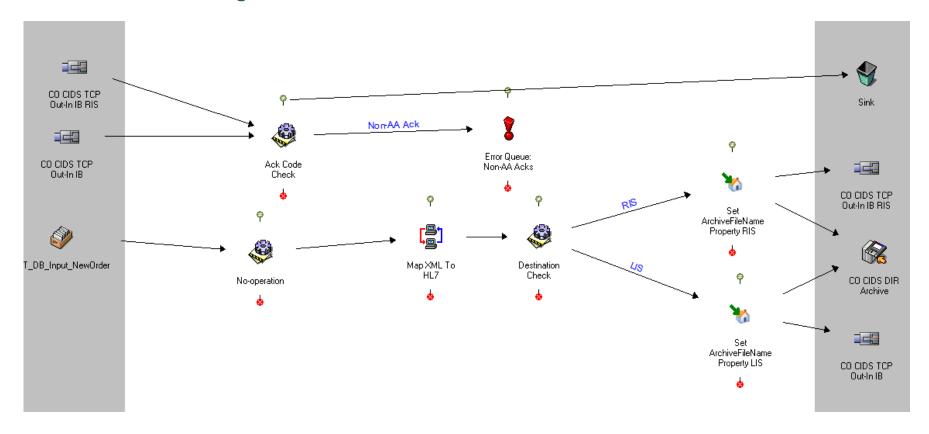
### **Automated Ordering (AO)**

- Rhapsody Routes
  - Outgoing Create New Order, Cancel Existing AO Order
  - Incoming Order number, Order status, Cancels
- All new orders must contain an appropriate diagnosis
- Batching Lab orders can be placed on existing order-only encounters
- Results routing
  - PCP default (currently)
  - CPCRS
    - Lipid profile, ALT, Creatinine
    - If member in CPCRS protocol
  - Diabetes Care Team
    - A1C, if member has diabetes and is on insulin



### Rhapsody – Outgoing Messages

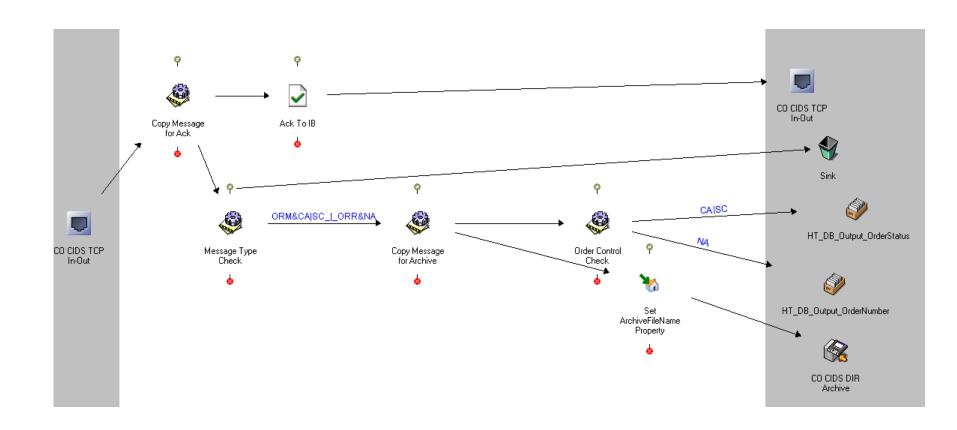
- Create New Order
- Cancel Existing AO Order





### Rhapsody – Incoming Messages

- Order number
- Order status
- Cancels





### **HL7 Order Messages**

#### **New Order**

**MSH**|^~\\&|**PPCS01**|CO|AMR15|CO|20151006012312||**ORM^O01**|HT0002807373SN01|P|2.3

PID|1||00000000^^^KP1043^MR||XXXXX^XXXXXXXI|19000101|M||||||||0

PV1|1|O|1000660007^^^100066||||018950^LEE^JONATHAN^^^^KP1045^^^^PRN|||||||||HT2807373

**ORC|SN||||||**^^^20151006012312||20151006012312|22217^**AutoOrder^HealthTRAC**||018950^LEE^JONATHAN^^^^KP1045^^^PRN

**OBR**|1|||CREA^CREATININE, SERUM^99153^^Creatinine||||||||||BLD&BLOOD| 018950^LEE^JONATHAN^^^^^KP1045^^^^PRN||||||||||||^^2015100601231

**DG1**|1|ICD-10-CM|Z51.81^Encounter for therapeutic drug level monitoring|||

#### **Cancel Order**

**MSH**|^~\\&|AMR15|CO|AMR15|CO|20151006021315||**ORM^O01**|HT0002782040CA01|P|2.3

**PID**|1||00000000^^^KP1043^MR||XXXXX^XXXXXXXX||19000101|M|||||||141365350

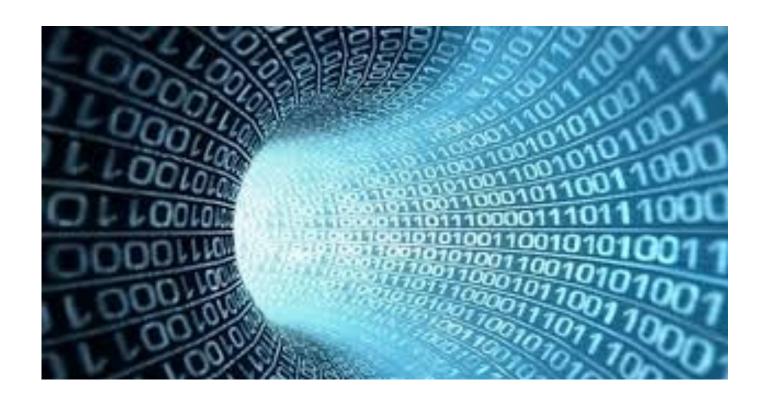
PV1|1|O|1000270012^^^100027||||019156^MILLER^JENNIFER^^^^^KP1045^^^^PRN||||||||||HT2781259

ORC|CA|158866887^KP1125|||||^^^20151006021315||20151006021315|22217^AutoOrder^HealthTRAC||019156^MILLER ^JENNIFER^^^^^KP1045^^^PRN||||OTHER^Other

**OBR**|1|158866887^KP1125||FLIPP^LIPID PANEL^99153^^Lipid Panel|||20151006021315||||||||BLD&BLOOD| 019156^MILLER^JENNIFER^^^^^^KP1045^^^^PRN||||||20151006021315|||||^^^20151006021315



### To the database!





### Gap and AO Activity

#### Gap and Auto Order rules process nightly

- Total open gaps: ~ 4.6 million
- Current open gaps: ~ 2.7 million
- Auto orders in 2014: ~ 1.2 million
- Auto orders in 2015: ~ 900,000 (as of October)





## **Questions?**

