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USER CONFERENCE APR 29–MAY 1 | BOSTON, MA

How Data Become DRVS

How does this thing work anyways?

PRESENTED BY:

Philip Parker
SVP, Client Analytics

ALONG WITH:

Everyone who has ever worked at Azara

Agenda – What's in the Black Box

Practice staff enter data into the EHR

Azara does something with it. We will be talking about this part today!

DRVS

DRVS Reports, Measures, and other Features are Available

Actual Agenda

CONNECTORS

What ships EHR data to Azara

DADMIN

Azara's beloved internal control tool

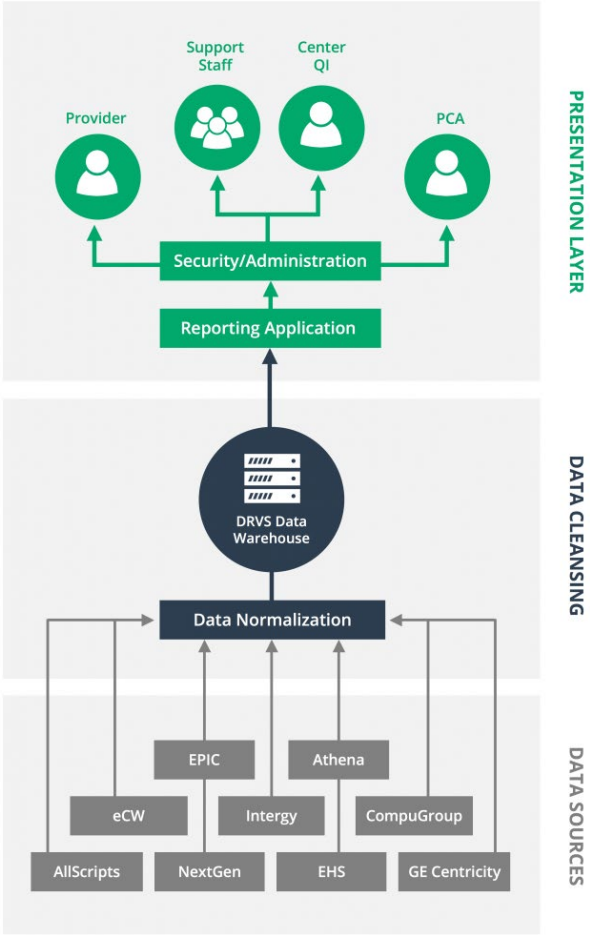
AZARA'S DATA WAREHOUSE

Where we keep all the data

MEASURES, REPORTS, ETC.

The logic that's applied to the data

THE API & FRONT END



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Connectors & How We Get Data

Azara's EHR Connections, Visualized

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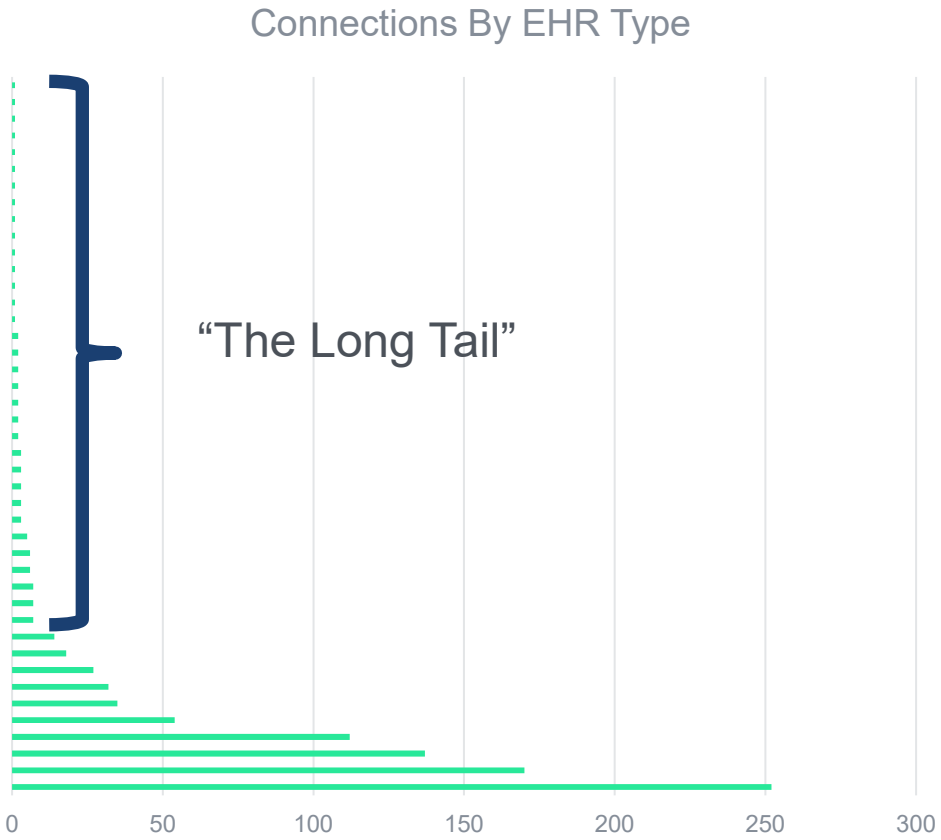
…and onwards, we connect to 30+ EHR Vendors, however the top 5-7 EHR Vendors account for 80% of the connections



The Connector

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- Lives in the source environment
- “Phones home” regularly for instructions
- Designed to pull data incrementally
- Ships data via SFTP back to Azara

Data Flow, Visualized

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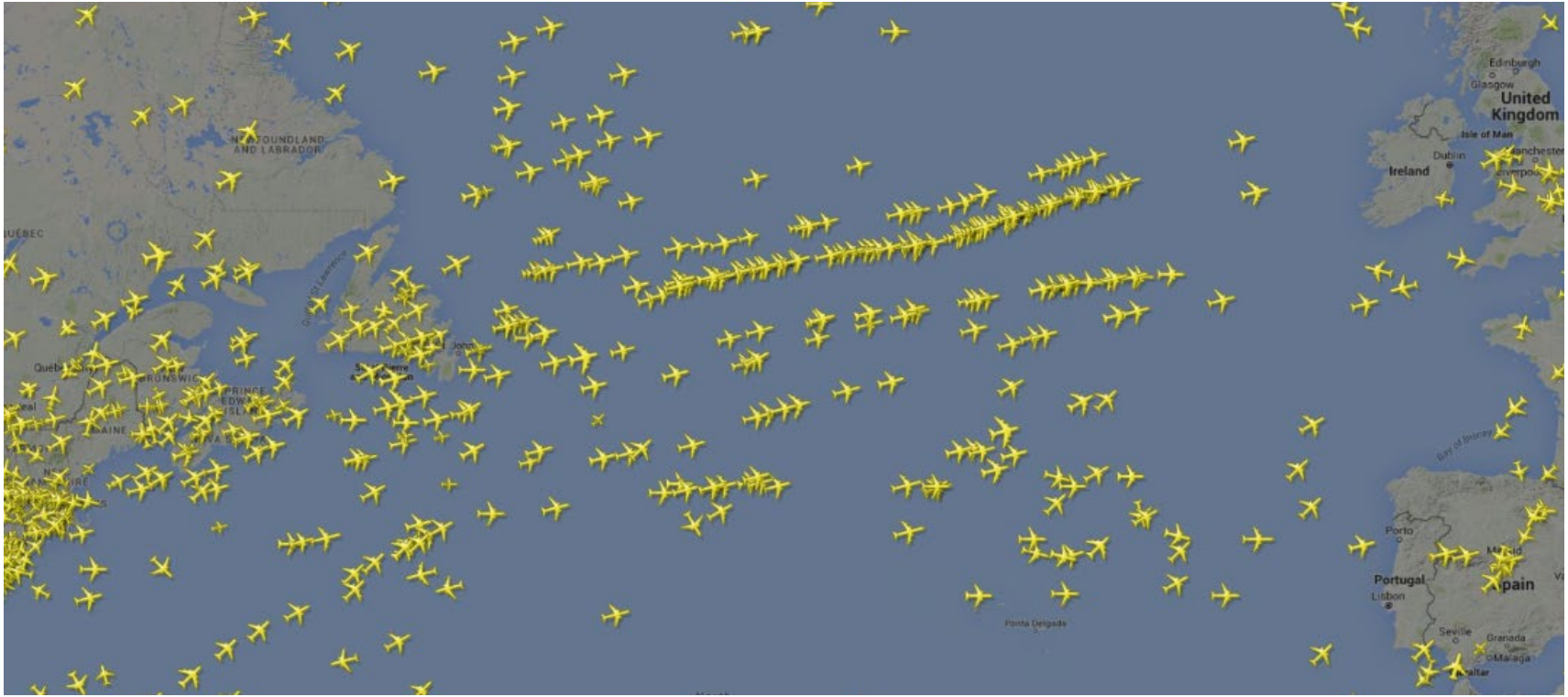

Tenant Architecture

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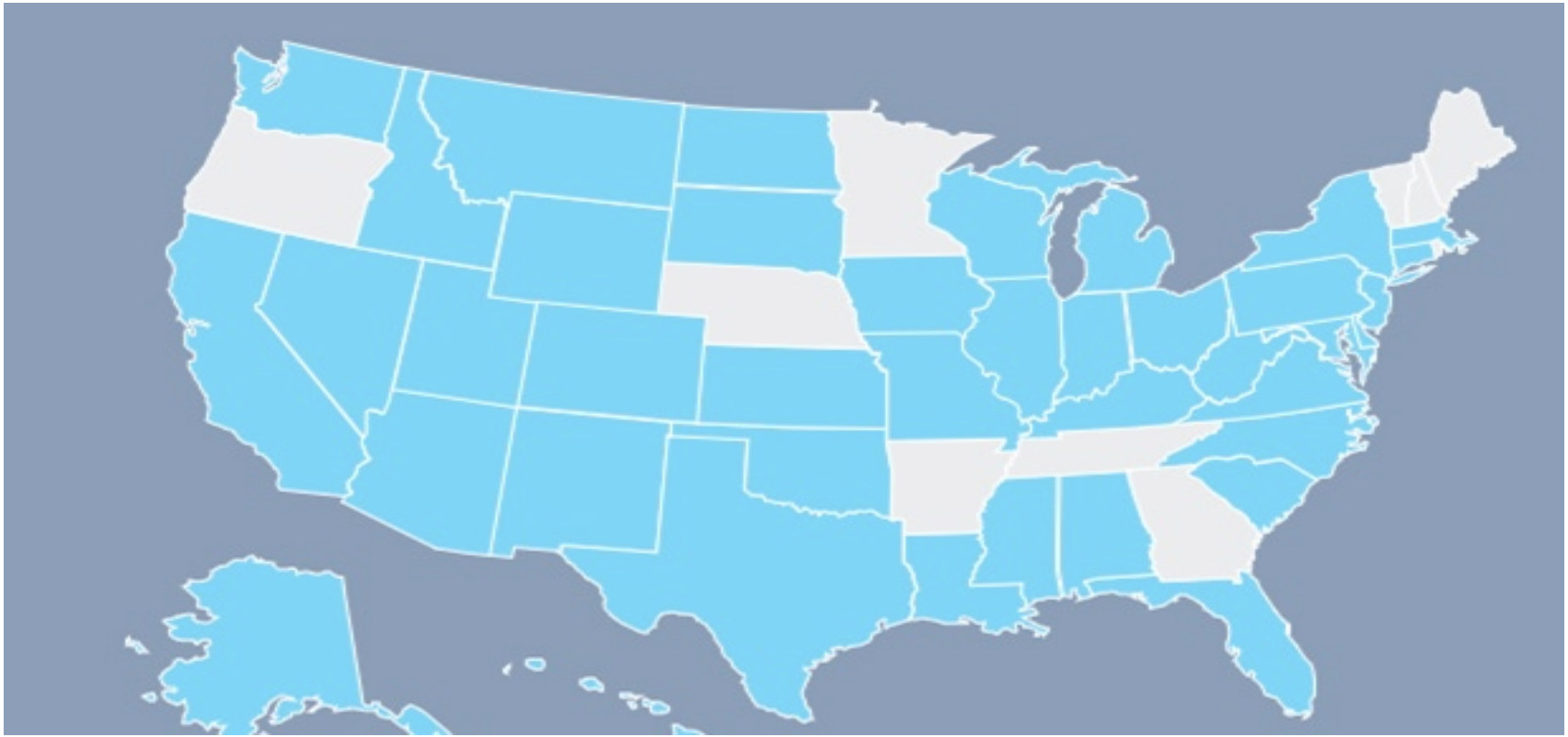

DAdmin

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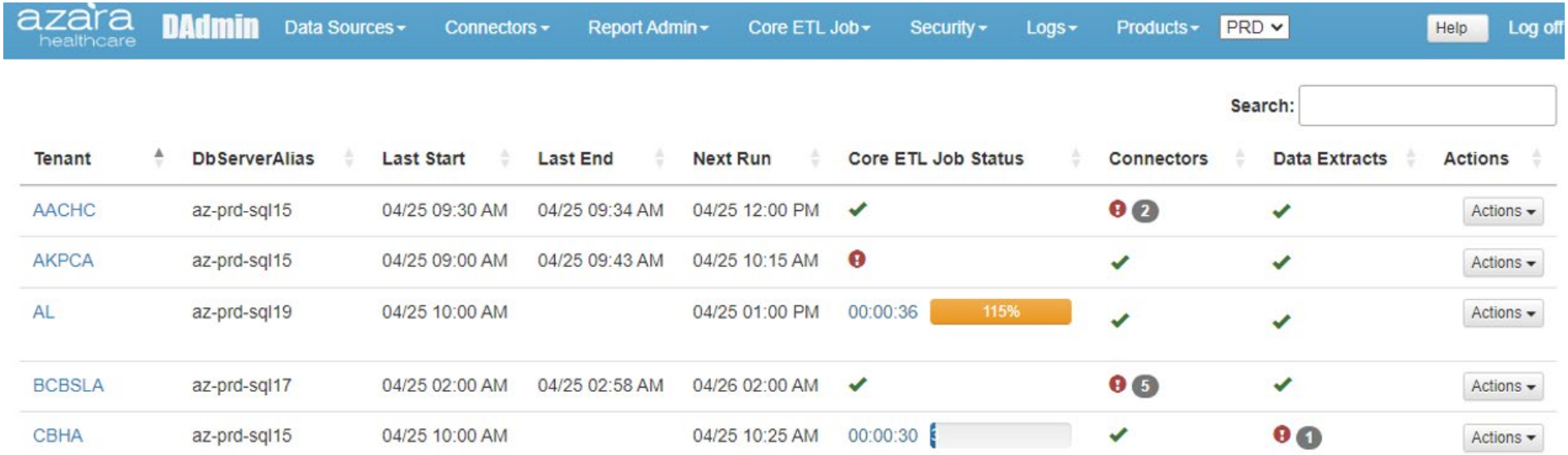

Dadmin – Core ETL Config

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Move Files ☑	Move File Pattern `^.*\.(csv|zip)$`	Load Staging ☑	Scrub* ☑
Load Warehouse* ☑	Load Report DB ☑	Purge Reporting Periods* ☐	Reprocess Mappings* ☑
Trigger Hopkins ACG Risk Model run* ☐	Load ACC Data* ☐	Load ACM Data* ☐	

PERIODS

CENTERS

All

PLANS

AZCH, Banner (VBCare), Care1st, UHC

MEASURES

Encounters_NonQualifying (Encounters - Non-Qualifying), Azara_Telehealth_Encounter_Charges (Telehealth Encounter Charges), EncounterVolume (Patient Interactions)

MPI Contexts

MPI Center Context AACHC ADELANTE, MPI Center Context AACHC Canyonlands Healthcare, MPI Center Context AACHC CCHCI, MPI Center Context AACHC CircleTheCity, MPI Center Context AACHC Desert Senita, MPI Center Context AACHC HCHC, MPI Center Context AACHC MHC, MPI Center Context AACHC Native Health, MPI Center Context AACHC North Country, MPI Center Context AACHC Sunlife, and 7 more

Incremental Load* ☑	Load Registry/PVP Visit/Patient* ☑	Custom Facts* ☐
Pregnancy Details ☑	Observations for Filters* ☑	RVU Fact* ☐
Ryan Health BHI ☐	Daily Observations* ☑	Days in AR* ☐
MICH Collab Care ☐	1st of the Month Processing* ☐	HIE Encounter Fact Tables* ☑
Observations for Measures* ☐	Alerts* ☑	Load OSHPD* ☐
Encounter Observations For Measures* ☑	Observations For Risk ☑	Load App Tables* ☑
Encounter Observations For Reports* ☐	Process Observations for Data Validation ☐	Load Member-Patient* ☐
Member Observations* ☐	Load Patient Risk For Selected Periods ☐	Refresh Map Counts* ☑
Measures* ☐	Load Patient Risk For Current Calendar Month Period ☑	Load MPI* ☑
Member Measures* ☐	Load RAFs for Current Calendar Year* ☑	Load Drug Era* ☐
Patient-Period Snapshots* ☐	Load RAFs for Selected Periods* ☐	Load Device Exposure ☐
Patient-Period Snapshots - Plan Filter* ☐	Load Member Deliveries ☐	Load Immunization Management ☑
Patient-Period Snapshots for Current Calendar Month Period(Only Financial Class, Plan, and Payer)* ☑	Medication Approximate Term Matching ☑	Process APO Campaigns ☑
Observations for Period Based Reports (eg. UDS ☐	Prescription Rx Fill Fact Table ☐	Load UDS Fact Tables (eg. 6a, 3, 4, Zipcode) ☐

The Azara Data Warehouse

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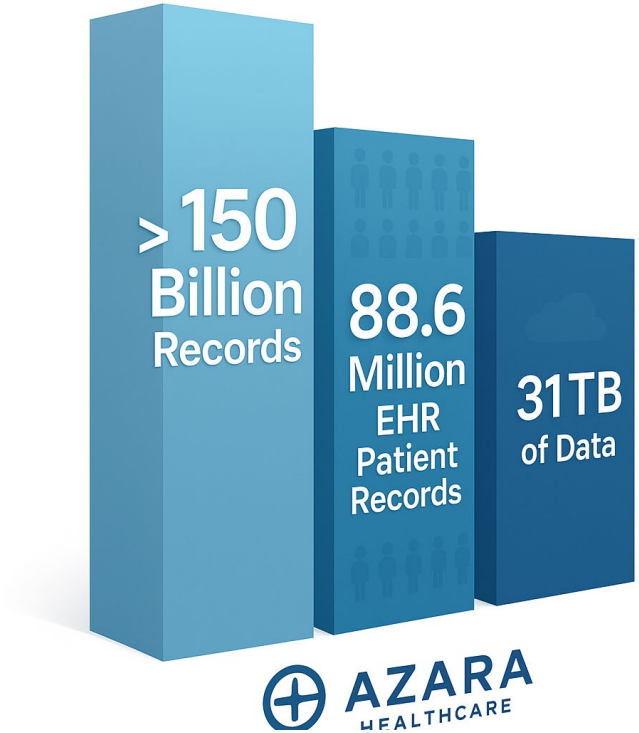

Azure

Microsoft® SQL Server®

* “patient records” likely does not represent life count. Many duplicates & other nuances here

Interfaces & Outbound Data

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- Billions of records a year sent downstream
- Millions of CCDs
- Would have been millions of FHIR Documents… (UDS+)
- NCQA Data Aggregator Validation Certified

This is not a real logo I made this up to make flat files seem cool

Mapping

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Terminology is fragmented, non-standard

- Language
- Race
- Ethnicity
- Appointment status
- Etc.

Azara maps 29 different “concepts”

- Captured at “source” level, different sources can map values differently

31.2M term mappings exist in our warehouses

LOINC Mapping

- **Lab data** is critical to population health
- Measures require codes, **LOINCs for labs** specifically
- A large segment of lab data comes over with **missing or bad codes**
- Azara uses **AI/ML technology** to assist us in mapping labs to LOINC codes

E Pluribus Unum - MPI

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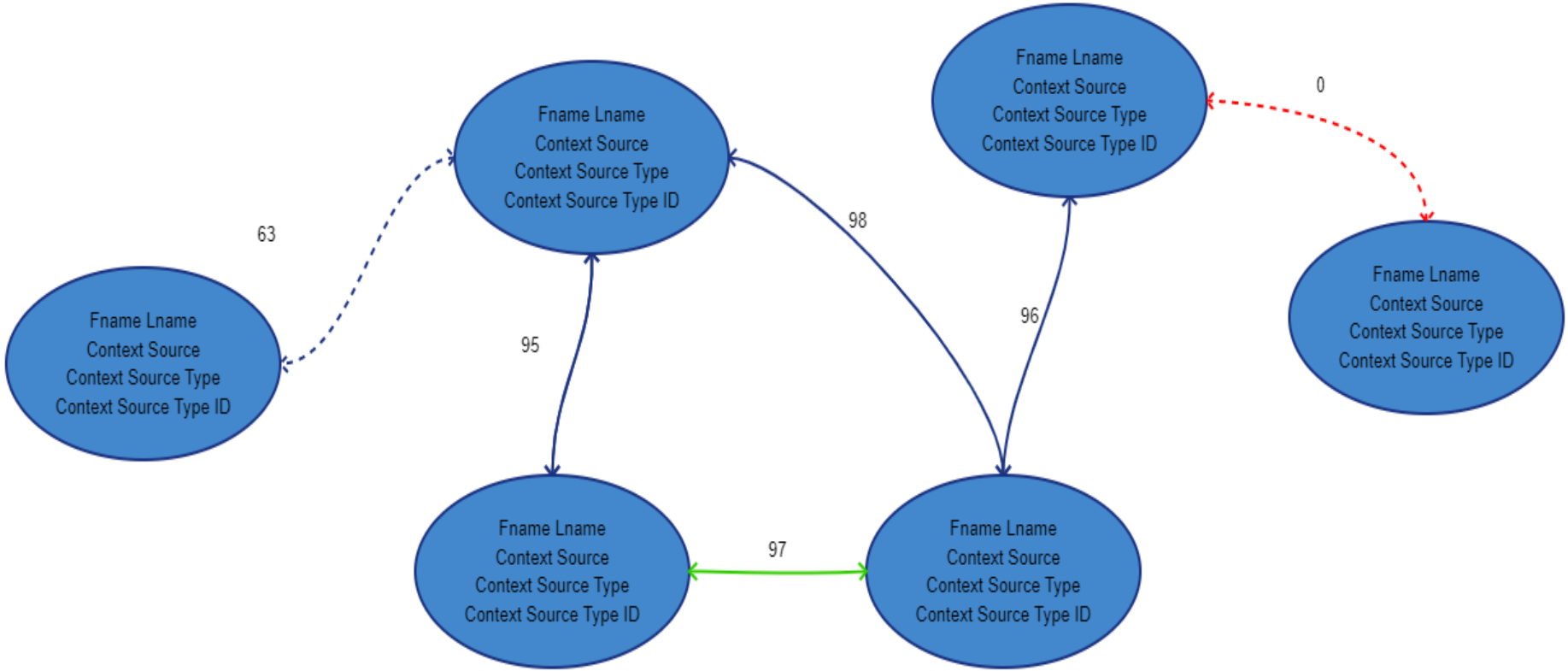

How to Build a Measure

Azara Measure Suite

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Technically, Azara has 1,000+ measures

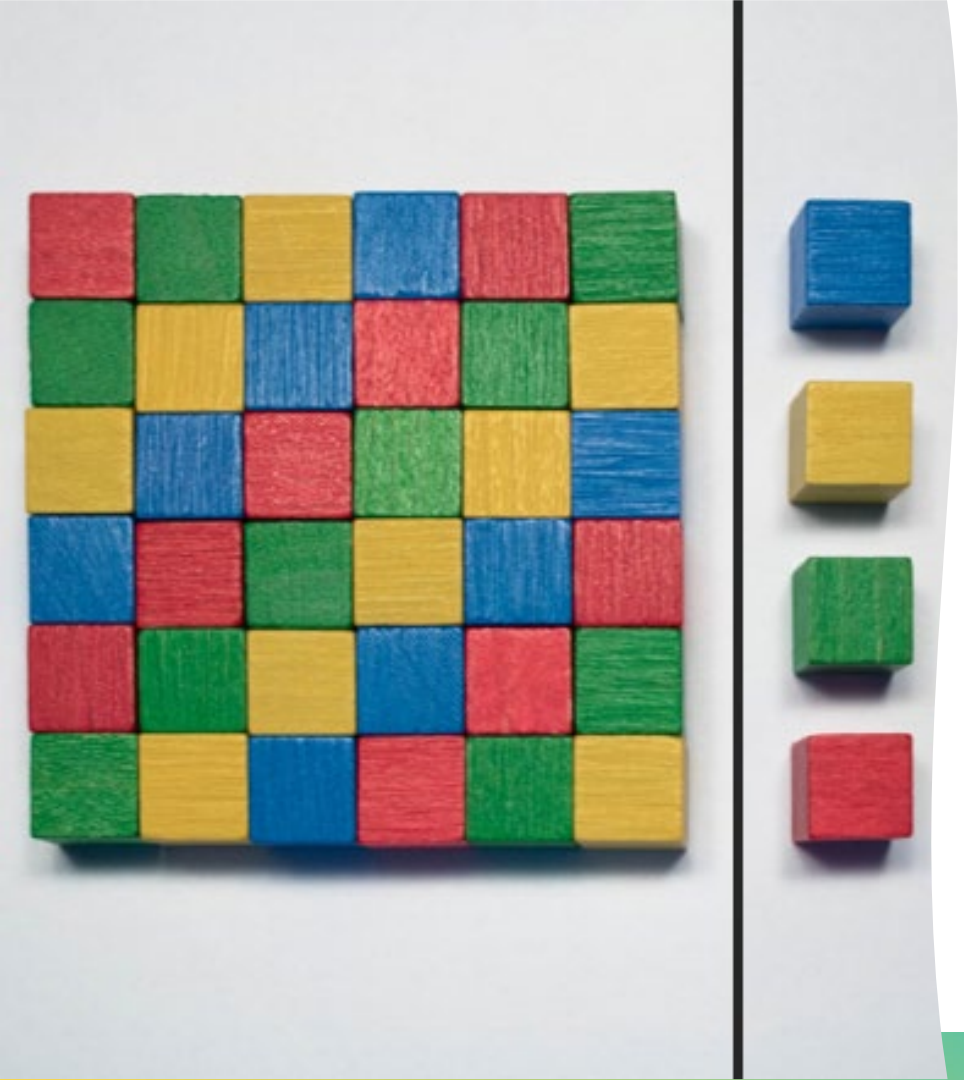
- Many versions of the same measure
- Many retired measures

Azara pre-aggregates (processes) measures

- Weekly, generally on weekends
- Some exceptions to this rule

We also process measures for dozens of period types and periods

- Years
- Quarters
- Months
- Etc.



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Building Blocks – “Observations”

Calculating all measures individually would be impossible (we tried)

Many measures share logic

- Patient must have Diabetes
- Most Recent Encounter

We can first build these “observation” building blocks, then use them in measures

Observation = curated data point

Let's Build a Measure!

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A1c Control

Diabetes A1c > 9 or Untested (CMS 122v12)

Endorser: None
Steward: NCQA

Percentage of patients 18-75 years of age with diabetes who had hemoglobin A1c > 9.0% during the measurement period

Numerator:

Patients whose most recent HbA1c level (performed during the measurement period) is >9.0% or is missing, or was not performed during the measurement period

- Most recent HbA1c laboratory result in the last 12 months is either
  - Numeric result > 9
  - OR
  - Result is missing or a non-numeric value
- OR
- No record exists of HbA1c laboratory result in the last 12 months

Denominator:

Patients 18-75 years of age by the end of the measurement period, with diabetes with a visit during the measurement period.

- Age >= 18 and < 76 at the end of the measurement period
- Active diagnosis of Diabetes during the measurement period
- Measure qualifying visit in the last 12 months (see value set tab and technical specifications for qualifying visit codes)

Exclusions:

- Hospice Care at any point in the measurement period
- Palliative Care at any point in the measurement period
- Age >= 66 by the end of the measurement period AND
  - Are living long term in a nursing home any time on or before the end of the measurement period.
  - OR
  - Evidence of frailty overlapping the measurement period, AND the following in the two years before the end of the measurement period:
    - >1 outpatient visit with different dates of service with a diagnosis of Advanced Illness
    - OR
    - >= 1 inpatient visit with a diagnosis of Advanced Illness
    - OR
    - Active medication for dementia

Let's Build a Measure!

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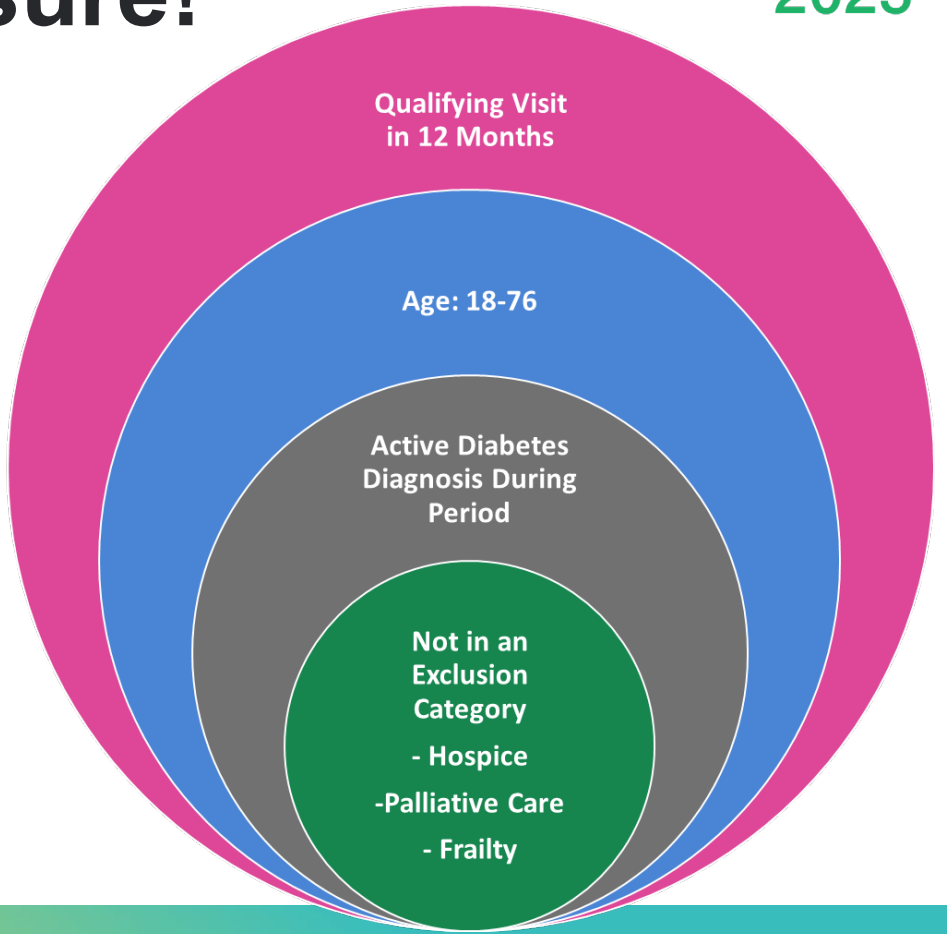
A1c Control

Denominator



Let's Build a Measure!

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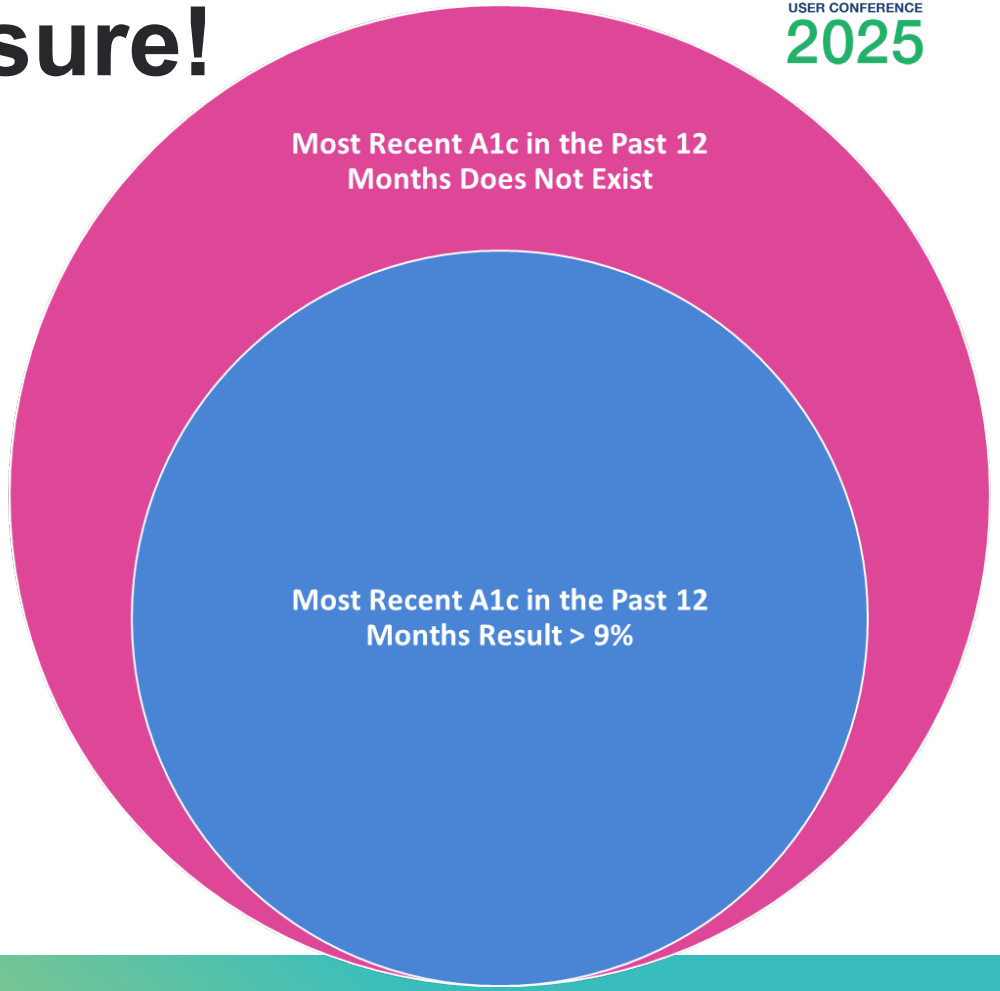
A1c Control

Numerator



Let's Build a Measure!

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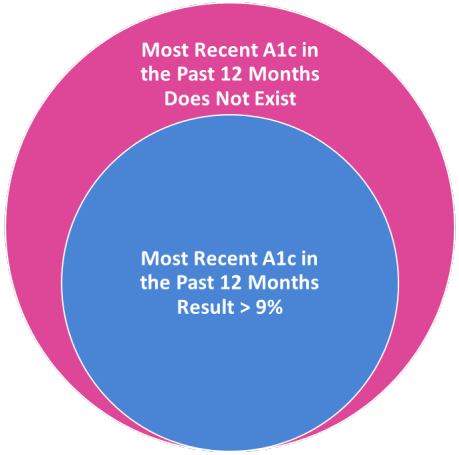
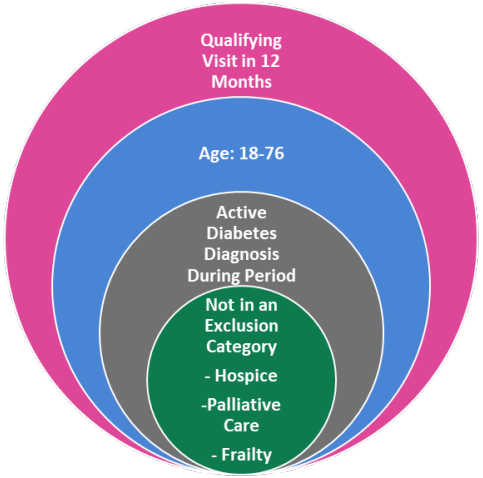
A1c Control

Result





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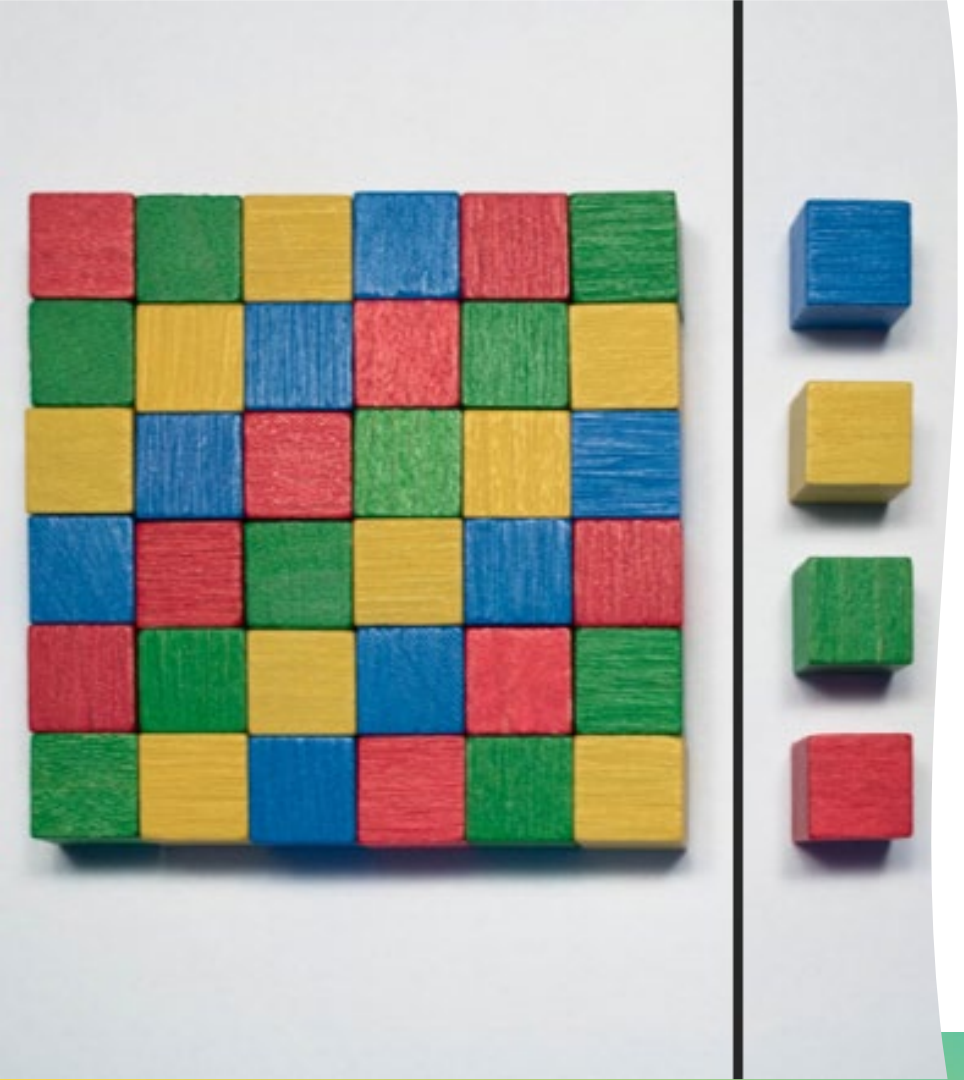
Not Just Building Blocks



Observations are useful, and power many of Azara's other features:

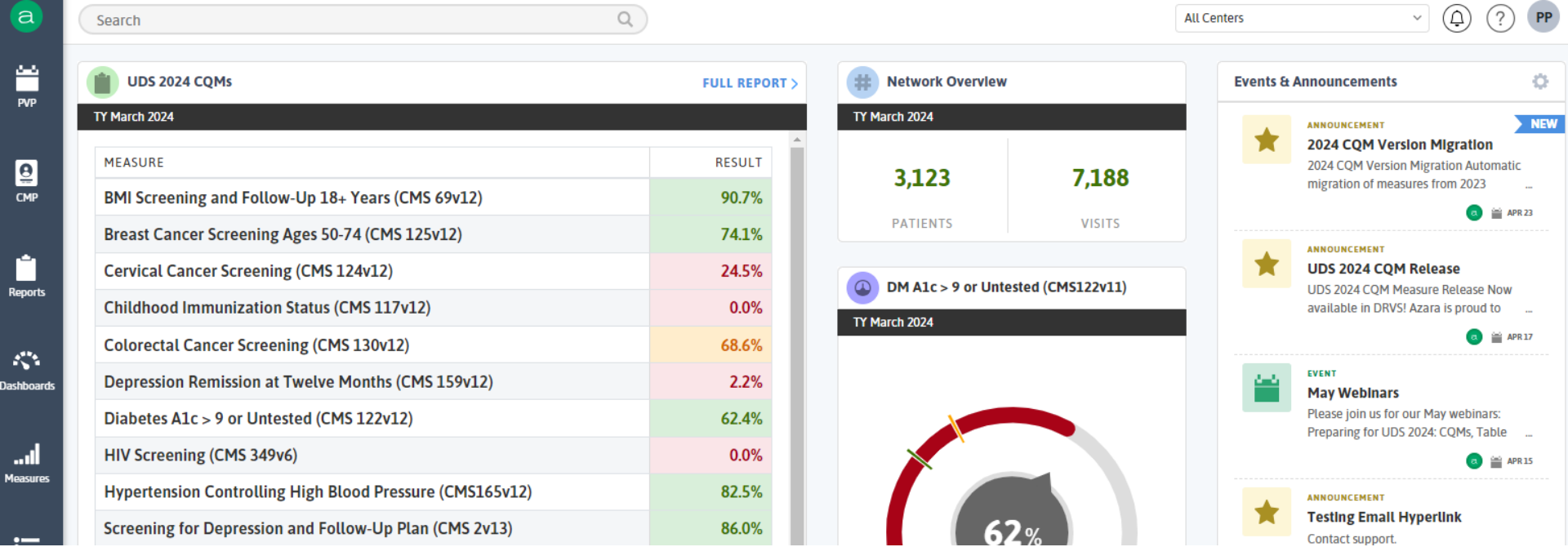
- Registries
- Alerts
- Filters
- Azara Patient Outreach (Texting)

ALERT	MESSAGE	DATE	RESULT
A1c	Overdue	3/25/2023	9.3
LDL	Overdue	3/25/2023	187
Depression Screen	Overdue	3/25/2023	Negative
Tobacco Scr	Overdue	3/25/2023	Y
BMI & FU	Overdue		
BP	Overdue	3/25/2023	135/88
Asth Severity	Overdue	1/12/2023	
Foot	Overdue	1/12/2023	Y
E/D Encounter	Occurred	4/27/2024	St. Josephs Hospital

API

- Before you ask, it is not public (maybe someday!)

- What is an API?
  - Structured method of interacting with a database



Finally, DRVS!

- Custom built front end
- ~14,000 Monthly Active Users

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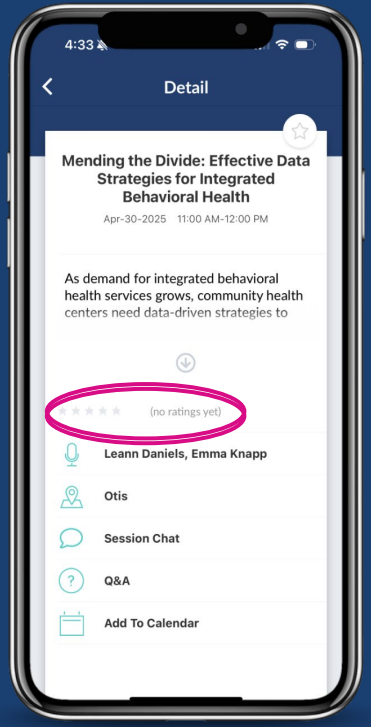
Questions?

We want to hear from you!

Click on the session from your agenda in the conference app.
Click the stars in the center of your screen to rate and provide feedback.



Quick and Easy

Provide brief feedback or ideas

Rate the session and the speaker(s)

Help us continue to improve

Achieve, Celebrate, Engage!

ACE'd it? Share your DRVS success story and become an Azara ACE!

Show your organization has used DRVS to **A**chieve measurable results, **C**elebrate improvement in patient health outcomes, and effectively **E**ngage care teams and/or patients. Stories should showcase how DRVS helped your organization overcome a challenge, the tools and solutions used to drive improvement and details of the successes that resulted from your initiatives. ACEs should be able to provide examples that quantify quality improvement, cost savings, operational efficiency or patient health improvement.

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ACE Program

Benefits:

- Azara will help tell your story and provide a client-branded version for your use
- Potential to create a 2-4 minute video or hour-long Azara-hosted webinar
- Potential to be featured at next year's Azara User Conference
- Win Azara swag!

Submit your success story by completing the form at this link.

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Thanks for attending!