DATA ACCESS

- Juan/Alejandro/Rohit/Suzanne
  Stanford EHR
- Gautham
  Claims Blue C.
- Joel/Chris/Ajit/Pat
  Optum - EHR
  Truven - claim
- MARK
  Truven - Medica "
- Christoph
- URVI/Christian
  Quintiles IMS
  FRANCE → Germany

- HANIH/Charlie   Peds Net
- SARAH
  [- CPRD
    - Humedica] CDM
    - Truven] V4
  George
- Columbia
  Columbia EHR

SQL

*

R

Juan
Joel
Christoph
Charlie
Christine
Jason
Alejandro
Rohit

Clinical

- Gautham
- Anasthasia
- Charlie
- Jyoti
- Joel
- Ana
- Richee
- Sunny

- Christian (oncology)
- George (Int Med)

(Psych)
(Ped / Oncology)
(mental health)
(C.V.s)
Pulmonology
Clin. Pharm.
Medicine.

Has Done Phenotype

- George - Endometriosis
- Juan - FH / Diabetes / MI
- Joel - Heart F. / Afib /
- Anasthesia
- Jyoti - Depression / CHF / MI
- Christoph — Bipolar, Soicide
- Will — R.A. Heart dis.
- Charlie — < 18
- Christian — Diabetes
- Rohit — "

- Yong Hui   Smoking status
- Alejandro

    Hypertension

At Least 50

king oup

(Severe) Asthma

	JnT	St Sch	cure	Columb.	IMS
① Aortic Aneurism →	✓			✓	
② eMerge's Peripheral Arterial Disease (PAD) →	✓	✓	✓	✓	✓
HEART (ALL) FAILURE →	✓				
④ Heart failure Reduced Ejection frac →	✓				
⑤ Obesity		✓	✓		
		+A			
⑥ Seizure					
⑦ T2D		✓			✓
⑧ Heart failure Preserved ejection fraction	✓				
⑨					

WANT TO BUILD

In PROCESS

purr

VTE

Anxiety

T2DM IN KIDS

CHRONIC KIDNEY DX

Anaphylaxis

(Severe) Asthma

99269
99267
99270
99271

DONE!

At Least 50

= labeling heuristic
= model predictions
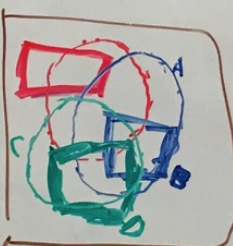
heuristic 1
heuristic 2
heuristic 3

Training Prtn   Test

ansel   pred   pred

K(C,B)
pred T F
fold T
      F

K(C,D)
K(A,B)

	JnT	St.	CHOP	Columb.	JHS
99276 ① AORTIC ANEURISM →	✓			✓	
99131 ② eMerge's Peripheral Arterial Disease (PAD) →	✓	✓	✓	✓	✓
99265 ③ HEART (ALL) FAILURE ID 99265 →	✓				
99266 ④ Heart failure Reduced Ejection frac ID 99266 →	✓				
99279 ⑤ Obesity ID 99279	✓			✓	
		+A		✓	
99170 ⑥ Seizure				✓	
99277 ⑦ T2D			✓	✓	
		✓			
		✓			
99278 ⑧ Heart failure Preserved ejection fraction ID 9118	✓			✓	
99273 ⑨ Glaucoma					✓

WANT TO BUILD

- Anxiety
- **T2DM IN KIDS**
- Anaphylaxis
- CHRONIC KIDNEY DX

In Process

DONE!

(Severe) Asthma

99269
99267
99270
99271

At Least 50

	JnT	1st St	CHOP	Columb.	IMS
99276 ① Aortic Aneurism →	✓			✓	
99131 ② eMerge's Peripheral Arterial Disease (PAD) →	✓	✓ ✓		✓	✓
③					
99265 HEART (ALL) FAILURE ID 99265 →	✓			✓	
99266 ④ Heart failure Reduced Ejecta frac ID 99266 →	✓			✓	
99279 ⑤ Obesity ID 99279		✓		✓	
	+A				
99170 ⑥ Seizure				✓	✓
99277 ⑦ T2D		✓		✓	
		✓			
99278 ⑧ Heart failure Preserved ejecta fraction ID 9978		✓		✓	
99273 ⑨ Glaucoma				✓	
99280 VTE ID 99280					

(Severe) Asthma

99282
99269
99267
99270
99271

DONE!

At Least 50

ID	Condition	JnT	Sk	CHOP	Columb.	INS
99276 (1)	AORTIC ANEURISM	✓		✓	✓	✓
99131 (2)	eMerge's Peripheral Arterial Disease (PAD)	✓	✓	✓	✓	✓
99265 (3)	HEART (ALL) FAILURE ID 99265	✓		✓	✓	
99266 (4)	Heart failure Reduced Ejection frac ID 99266	✓			✓	
99279 (5)	Obesity ID 99279	✓			✓	
99170 (6)	Seizure		+A	✓	✓	✓
99277 (7)	T2D		✓ / ✓		✓	✓
99278 (8)	Heart failure Preserved ejection fraction ID 99278	✓			✓	
99273 (9)	Glaucoma				✓	✓
99280	VTE ID 99280					

(Severe) Asthma

DONE !

At Least 50

99282
99269
99267
99270
99271

		JnT	St an	CHOP	Columb.	INS
99276	① AORTIC ANEURISM	✓	✓	✓	✓	✓
99131	② eMerge's Peripheral Arterial Disease (PAD)	✓	✓ ✓	✓	✓	✓
99265	③ HEART (ALL) FAILURE ID 99265	✓	✓	✓	✓	
99266	④ Heart failure Reduced ID 99266 Ejection frac	✓	✓		✓	
99279	⑤ Obesity ID 99279		✓ +A		✓	
99170	⑥ Seizure		✓	✓	✓	✓
99277	⑦ T2D		✓	✓		✓
99278	⑧ Heart failure Preserved ID 99278 ejection fraction	✓	✓	✓		
99273	⑨ Glaucoma		✓	✓	✓	✓
99280	VTE ID 99280		✓	✓		

(Severe) Asthma

Left-column sticky notes (phenotype IDs):

- 99269
- 99285
- 99271
- 99276 — (1)
- 99131 — (2)
- 99265 — (3)
- 99266 — (4)
- 99279 — (5)
- 99170 — (6)
- 99277 — (7)
- 99278 — (8)
- 99273 — (9)
- 99280

Condition	UNM MACK 2022-19	JNJ	Stan	CHOP	Columbia	IMU
Anaphylaxis		✓				✓
(1) Aortic Aneurism		✓	✓	✓	✓	✓✓
(2) eMerge's Peripheral Arterial Disease (PAD)		✓	✓	✓	✓	✓
(3) Heart (All) Failure ID 99265		✓	✓	✓	✓	✓
(4) Heart failure Reduced Ejection frac ID 99266		✓	✓	✓		✓
(5) Obesity ID 99279	✓		✓✓	✓		✓
			+A			✓
(6) Seizure			✓	✓	✓	✓✓
(7) TZD			✓	✓		✓
(8) Heart failure Preserved ejection fraction ID 99278		✓	✓	✓		
(9) Glaucoma			✓		✓	✓
VTE ID 99280			✓			✓

(Severe) Asthma 99282

99269 (crossed out)

99285

99271

99276 ①

99131 ②

99265 ③

99266 ④

99279 ⑤

99170 ⑥

99277 ⑦

99278 ⑧

99273 ⑨

99280

Condition	JHM MACK 2008-12	JNJ	Stan	CHop	Columbia	IMS
Anaphylaxis		✓			✓	✓
Aortic Aneurism		✓	✓	✓	✓	✓✓
eMerge's Peripheral Arterial Disease (PAD)		✓	✓	✓	✓	✓
Heart (All) Failure ID 99265		✓	✓	✓	✓	✓
Heart failure Reduced Ejection frac ID 99266		✓	✓		✓	✓
Obesity ID 99279	✓		✓ +A		✓	✓
Seizure			✓	✓	✓	✓✓
T2D			✓	✓		✓
Heart failure Preserved ejection fraction ID 99278		✓	✓	✓		
Glaucoma			✓		✓	✓
VTE ID 99280			✓	✓	✓	

	JNJ	Stan	CHOP	Columbia	IMS
T2DM IN KIDS			✓		
Anaphylaxis	✓	✓	✓	✓	✓
AORTIC ANEURISM	✓	✓	✓	✓	✓
eMerge's Peripheral Arterial Disease (PAD)	✓	✓✓	✓	✓	✓
HEART (ALL) FAILURE ID 99265	✓	✓	✓	✓	✓
Heart failure Reduced Ejection frac ID 99266	✓	✓		✓	✓
Obesity ID 99279		✓ +A		✓	✓
SeiZure	✓	✓	✓		✓
T2D		✓	✓		✓
Heart failure Preserved ejection fraction ID 99278	✓	✓	✓		
Glaucoma		✓	✓	✓	✓
		✓	✓✓	✓	✓
VTE ID 99280					

Left side sticky notes:

(ere) sthma

99286

99285

① 99276

② 99131

③ 99265

④ 99266

⑤ 99279

⑥ 99170

⑦ 99277

⑧ 99278

⑨ 99273

99280

#	ID	Condition	JNJ	Stan	CHOP	Columbia	IMS
1	99286	T2DM IN KIDS		✓	✓		
2	99285	Anaphylaxis	✓	✓	✓	✓	✓
3	99276	AORTIC ANEURISM	✓	✓	✓	✓	✓
4	99131	eMerge's Peripheral Arterial Disease (PAD)	✓	✓	✓	✓	✓
5	99265	HEART (ALL) FAILURE ID 99265		✓	✓	✓	✓
6	99266	Heart failure Reduced Ejection frac ID 99266	✓	✓		✓	✓
7	99279	Obesity ID 99279		✓ +A		✓	✓
8	99170	Seizure		✓	✓	✓	✓
9	99277	T2D		✓		✓	✓
10	99278	Heart failure Preserved ejection fraction ID 99278	✓	✓		✓	✓
11	99273	Glaucoma		✓	✓	✓	✓
12	99280	VTE ID 99280		✓	✓	✓	✓

| #	Code	Condition	JNJ	Stan	CHOP	Columbia	IMS
		(Severe) Asthma aDM IN KIDS	✓	✓ ✓	✓	✓	✓
1	99286						
2	99285	Anaphylaxis	✓✓	✓	✓	✓	✓
3	99276	Aortic Aneurism	✓✓	✓	✓	✓	✓
4	99131	eMerge's Peripheral Arterial Disease (PAD)	✓	✓	✓	✓	✓
5	99265	Heart (all) Failure ID 99265	✓	✓ ✓	✓	✓	✓
6	99266	Heart failure Reduced Ejection frac ID 99266	✓	✓	✓	✓ ✓	
7	99279	Obesity ID 99279	✓✓	✓ ✓ +A	✓	✓✓	
8	99170	Seizure	✓✓	✓	✓	✓	✓✓
9	99277	T2D	✓✓	✓ ✓	✓	✓✓	
10	99278	Heart failure Preserved ejection fraction ID 99278	✓✓	✓	✓		
11	99273	Glaucoma	✓✓	✓✓	✓	✓✓	
12	99280	VTE ID 99280	✓✓	✓✓	✓	✓	
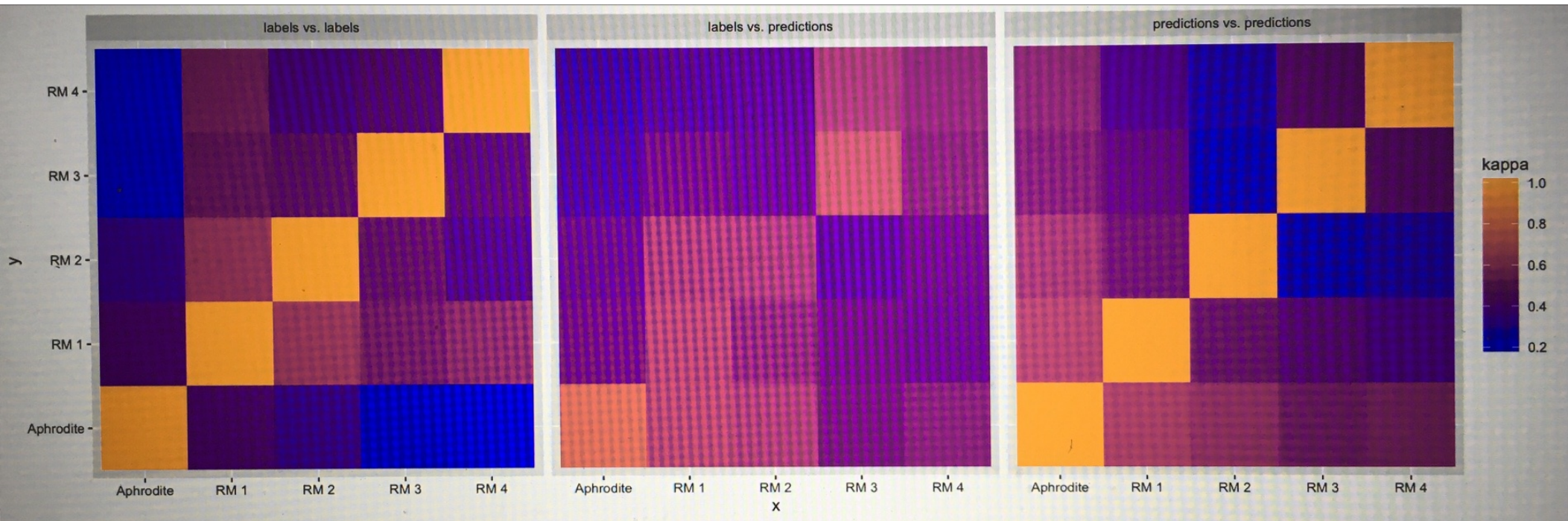
What we accomplished

- Created 12 phenotype definitions
- Successfully re-used each definition at four other sites
    - gets you the count of patients
- Got breakdown by age, gender, and year at three sites
    - Gets you a table of stratified percentage of patients

What Next?

- Hang on to your phenotype definition materials
    - The description of the intent of the definition
    - The human readable definition of the logic of the definition
- Hang on to your csv files with the stratified cohort breakdown
- Jon Duke and I will get back to you on how we (as OHDSI) collect the items above