



# PCORnet

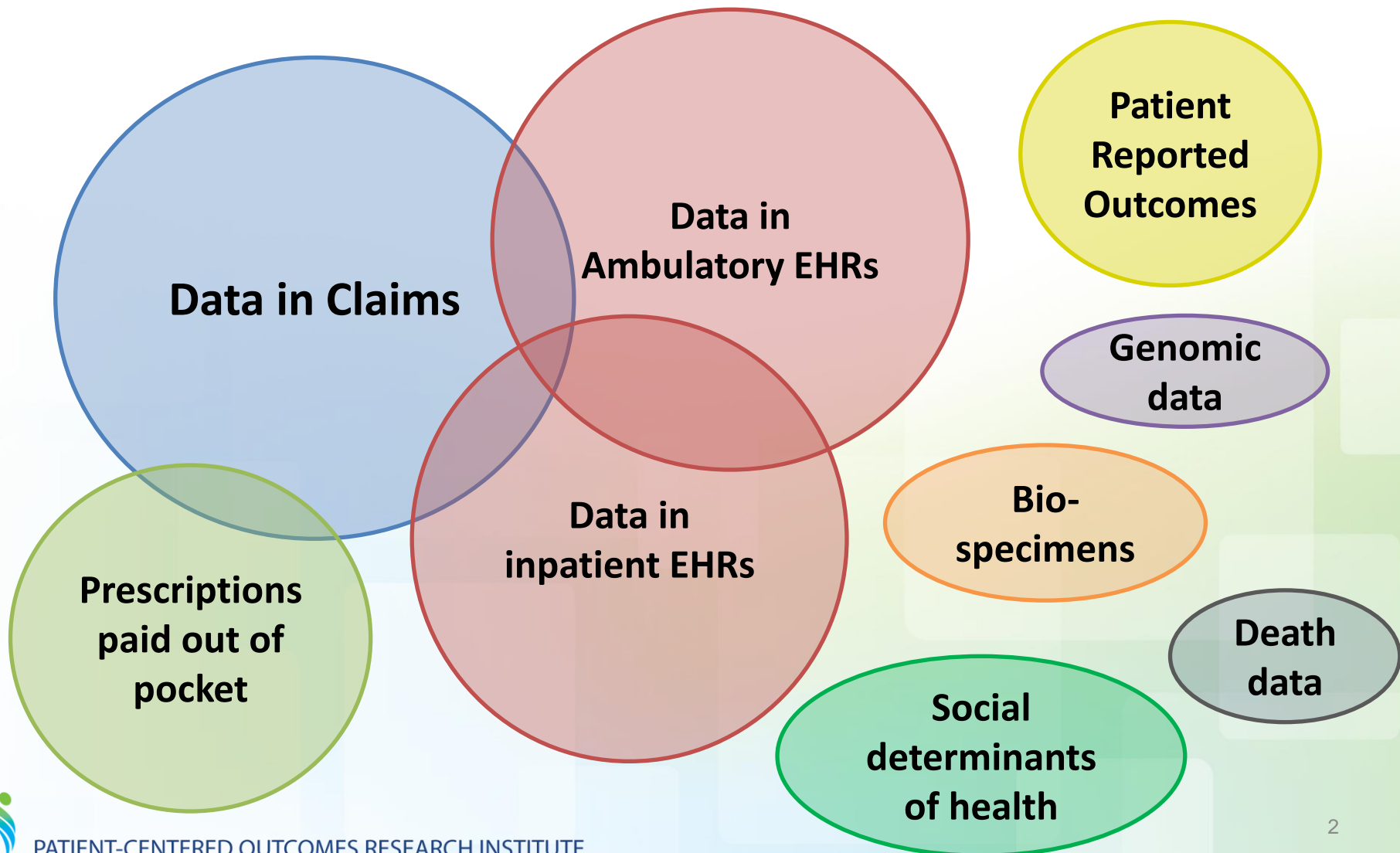
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**Harnessing the Power of Healthcare Data Across  
the USA**





# Challenge: getting “complete” data





# Solution: PCORnet



Health systems

PCORnet

Claims data

Other data

- The Chicago Community Trust (CAPriCORN)
- The Children’s Hospital of Philadelphia (PEDSnet)
- Harvard University (SCILHS)
- Kaiser Foundation Research Institute (PORTAL)
- Louisiana Public Health Institute (REACHnet)
- Mayo Clinic (LHSNet)
- Oregon Community Health Information Network (ADVANCE)
- University of California, San Diego (pSCANNER)
- University of Florida (OneFlorida)
- University of Kansas Medical Center (GPC)
- University of Pittsburgh (PaTH)
- Vanderbilt University (Mid-South CDRN)
- Weill Medical College of Cornell University (NYC-CDRN)





# PCORnet Network

**13 CDRNS**  
**21 PPRNS**



# PCORnet Common Data Model v3.0

New to v3.0

DEMOGRAPHIC
PATID
BIRTH_DATE
BIRTH_TIME
SEX
HISPANIC
RACE
BIOBANK_FLAG

**Fundamental basis**

ENROLLMENT
PATID
ENR_START_DATE
ENR_END_DATE
CHART
ENR_BASIS

DISPENSING
DISPENSINGID
PATID
PRESCRIBINGID
DISPENSE_DATE
NDC
DISPENSE_SUP
DISPENSE_AMT

DEATH
PATID
DEATH_DATE
DEATH_DATE_IMPUTE
DEATH_SOURCE
DEATH_CONFIDENCE

DEATH_CONDITION
PATID
DEATH_CAUSE
DEATH_CAUSE_CODE
DEATH_CAUSE_TYPE
DEATH_CAUSE_SOURCE
DEATH_CAUSE_CONFIDENCE

Data captured from processes associated with healthcare delivery

VITAL
VITALID
PATID
ENCOUNTERID (optional)
MEASURE_DATE
MEASURE_TIME
VITAL_SOURCE
HT
WT
DIASTOLIC
SYSTOLIC
ORIGINAL_BMI
BP_POSITION
SMOKING
TOBACCO
TOBACCO_TYPE

CONDITION
CONDITIONID
PATID
ENCOUNTERID (optional)
REPORT_DATE
RESOLVE_DATE
ONSET_DATE
CONDITION_STATUS
CONDITION
CONDITION_TYPE
CONDITION_SOURCE

PRO_CM
PRO CM ID
PATID
ENCOUNTERID (optional)
PRO_ITEM
PRO_LOINC
PRO_DATE
PRO_TIME
PRO_RESPONSE
PRO_METHOD
PRO_MODE
PRO_CAT

Data captured within multiple contexts: healthcare delivery, registry activity, or directly from patients

ENCOUNTER
PATID
ENCOUNTERID
ADMIT_DATE
ADMIT_TIME
DISCHARGE_DATE
DISCHARGE_TIME
PROVIDERID
FACILITY_LOCATION
ENC_TYPE
FACILITYID
DISCHARGE_DISPOSITION
DISCHARGE_STATUS
DRG
DRG_TYPE
ADMITTING_SOURCE

DIAGNOSIS
DIAGNOSISID
PATID
ENCOUNTERID
ENC_TYPE (replicated)
ADMIT_DATE (replicated)
PROVIDERID (replicated)
DX
DX_TYPE
DX_SOURCE
PDX

PROCEDURES
PROCEDURESID
PATID
ENCOUNTERID
ENC_TYPE (replicated)
ADMIT_DATE (replicated)
PROVIDERID (replicated)
PX_DATE
PX
PX_TYPE

Data captured from healthcare delivery, direct encounter basis

LAB_RESULT_CM
LAB RESULT CM ID
PATID
ENCOUNTERID (optional)
LAB_NAME
SPECIMEN_SOURCE
LAB_LOINC
STAT
RESULT_LOC
LAB_PX
LAB_PX_TYPE
LAB_ORDER_DATE
SPECIMEN_DATE
SPECIMEN_TIME
RESULT_DATE
RESULT_TIME
RESULT_QUAL
RESULT_NUM
RESULT_MODIFIER
RESULT_UNIT
NORM_RANGE_LOW
MODIFIER_LOW
NORM_RANGE_HIGH
MODIFIER_HIGH
ABN_IND

PRESCRIBING
PRESCRIBINGID
PATID
ENCOUNTERID
RX_PROVIDERID
RX_ORDER_DATE
RX_ORDER_TIME
RX_START_DATE
RX_END_DATE
RX_QUANTITY
RX_REFILLS
RX_DAYS_SUPPLY
RX_FREQUENCY
RX_BASIS
RXNORM_CUI

PCORNET_TRIAL
PATID
TRIALID
PARTICIPANTID
TRIAL_SITED
TRIAL_ENROLL_DATE
TRIAL_END_DATE
TRIAL_WITHDRAW_DATE
TRIAL_INVITE_CODE

Associations with PCORnet clinical trials

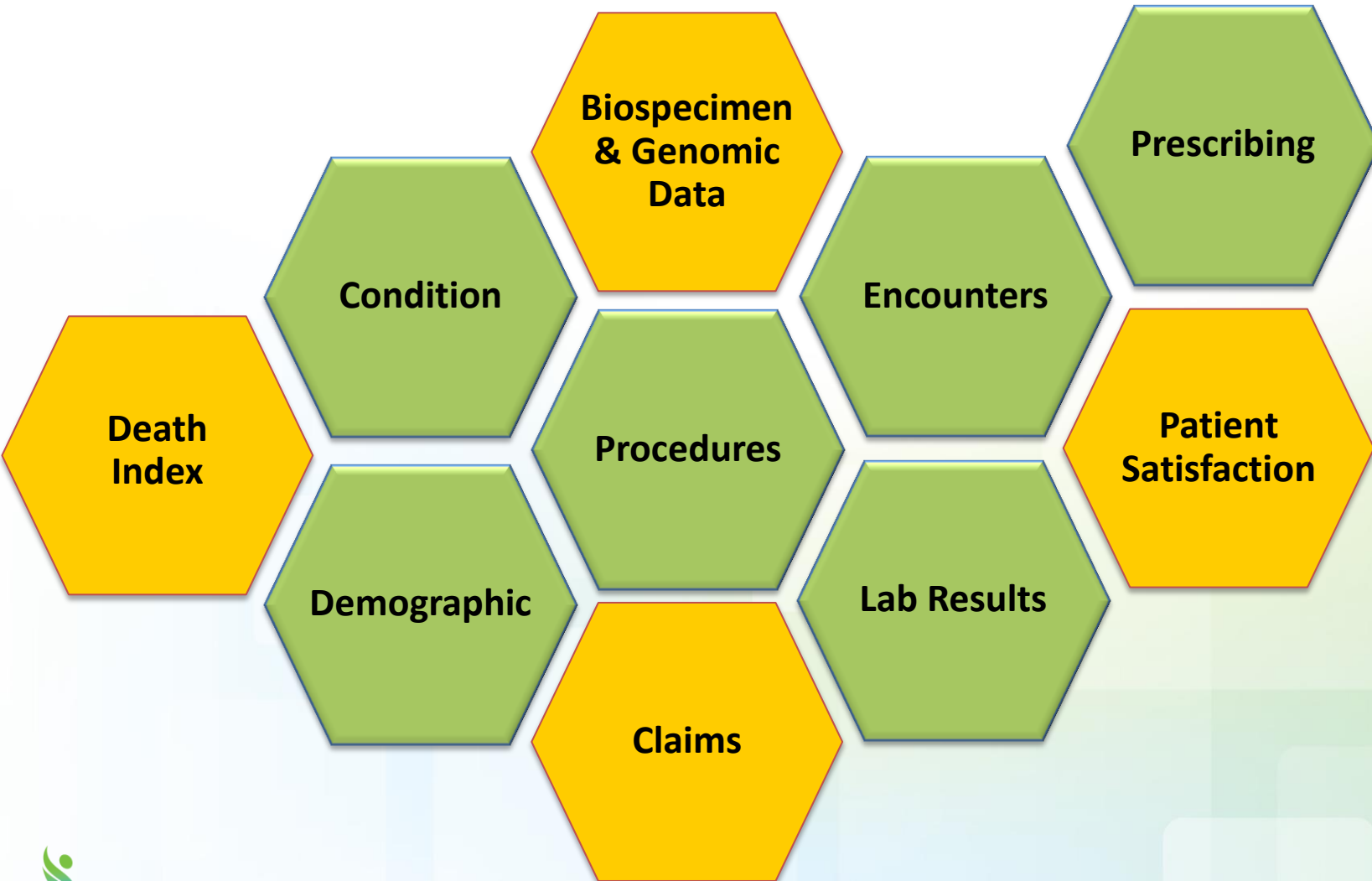
HARVEST
NETWORKID
NETWORK_NAME
DATAMARTID
DATAMART_NAME
DATAMART_PLATFORM
CDM_VERSION
DATAMART_CLAIMS
DATAMART_EIR
BIRTH_DATE_MOMT
ENR_START_DATE_MOMT
ENR_END_DATE_MOMT
ADMIT_DATE_MOMT
DISCHARGE_DATE_MOMT
PX_DATE_MOMT
RX_ORDER_DATE_MOMT
RX_START_DATE_MOMT
RX_END_DATE_MOMT
DISPENSE_DATE_MOMT
LAB_ORDER_DATE_MOMT
SPECIMEN_DATE_MOMT
RESULT_DATE_MOMT
MEASURE_DATE_MOMT
ONSET_DATE_MOMT
REPORT_DATE_MOMT
RESOLVE_DATE_MOMT
PRO_DATE_MOMT
REFRESH_DEMOGRAPHIC_DATE
REFRESH_ENROLLMENT_DATE
REFRESH_ENCOUNTER_DATE
REFRESH_DIAGNOSIS_DATE
REFRESH_PROCEDURES_DATE
REFRESH_VITAL_DATE
REFRESH_DISPENSING_DATE
REFRESH_LAB_RESULT_CM_DATE
REFRESH_CONDITION_DATE
REFRESH_PRO_CM_DATE
REFRESH_PRESCRIBING_DATE
REFRESH_PCORNET_TRIAL_DATE
REFRESH_DEATH_DATE
REFRESH_DEATH_CAUSE_DATE

Process-related data

**Bold text indicates fields that cannot be null due to primary key definitions or record-level constraints.**



# Expanding Data



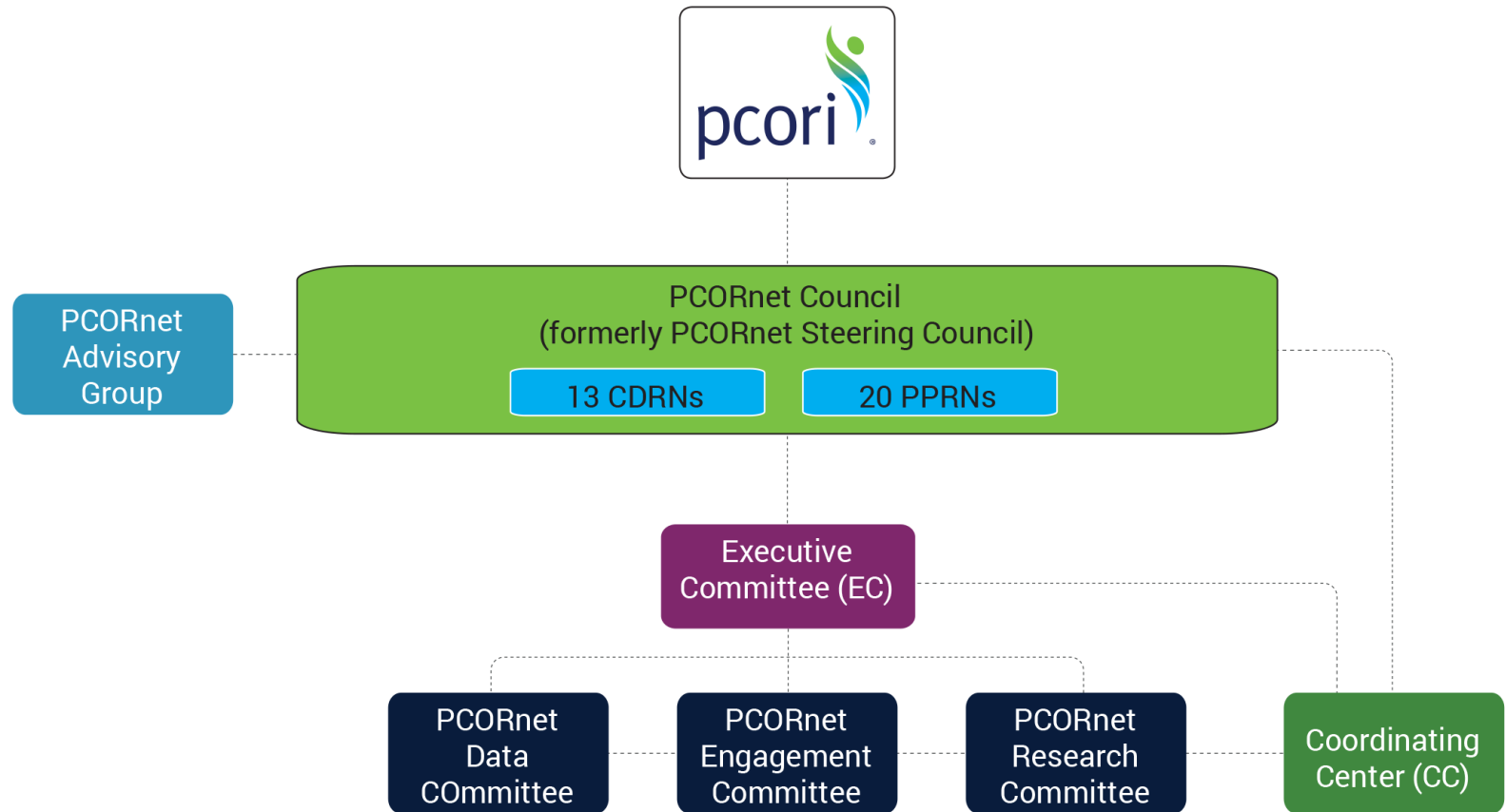


# PCORnet's Mission

- To make it **faster, easier, and less costly** to conduct health system and clinical research than is now possible by harnessing the power of large amounts of health data and patient partnerships.
- Harness data and research findings to facilitate **health system improvement**.
- And in the process, **transform the culture of clinical research** from one directed by researchers to one driven by the needs of patients and those who care for them.



# PCORnet Organizational Structure



## Role Descriptions:

Executive Committee (EC): Oversight for PCORnet operations

PCORnet Council: Representative advisory body for PCORnet strategy and operations; includes PCORnet's 13 Clinical Data Research Networks (CDRNs) and 20 Patient-Powered Research Networks (PPRNs)

Coordinating Center (CC): Coordinates operational activities, maintains data infrastructure, identifies research opportunities, coordinates multi-site research







## What PCORnet Offers

# PCORnet

**130** health systems across  
the country

Over **60 data marts**

Data on over  
**70 million** patients





# PCORnet Sponsored Research

- Aspirin dosing study (ADAPTABLE)
- Bariatric surgery
- Antibiotics and childhood obesity





# Aspirin Study: the ADAPTABLE Trial

- To compare the effectiveness and safety of two doses of aspirin (81 mg and 325 mg) in high-risk patients with coronary artery disease.
- To compare the effects of aspirin in pre-defined key subgroups of patients
  - Age, Diabetes, Sex
  - Race, P2Y12 inhibitor Use
  - Chronic Kidney Disease





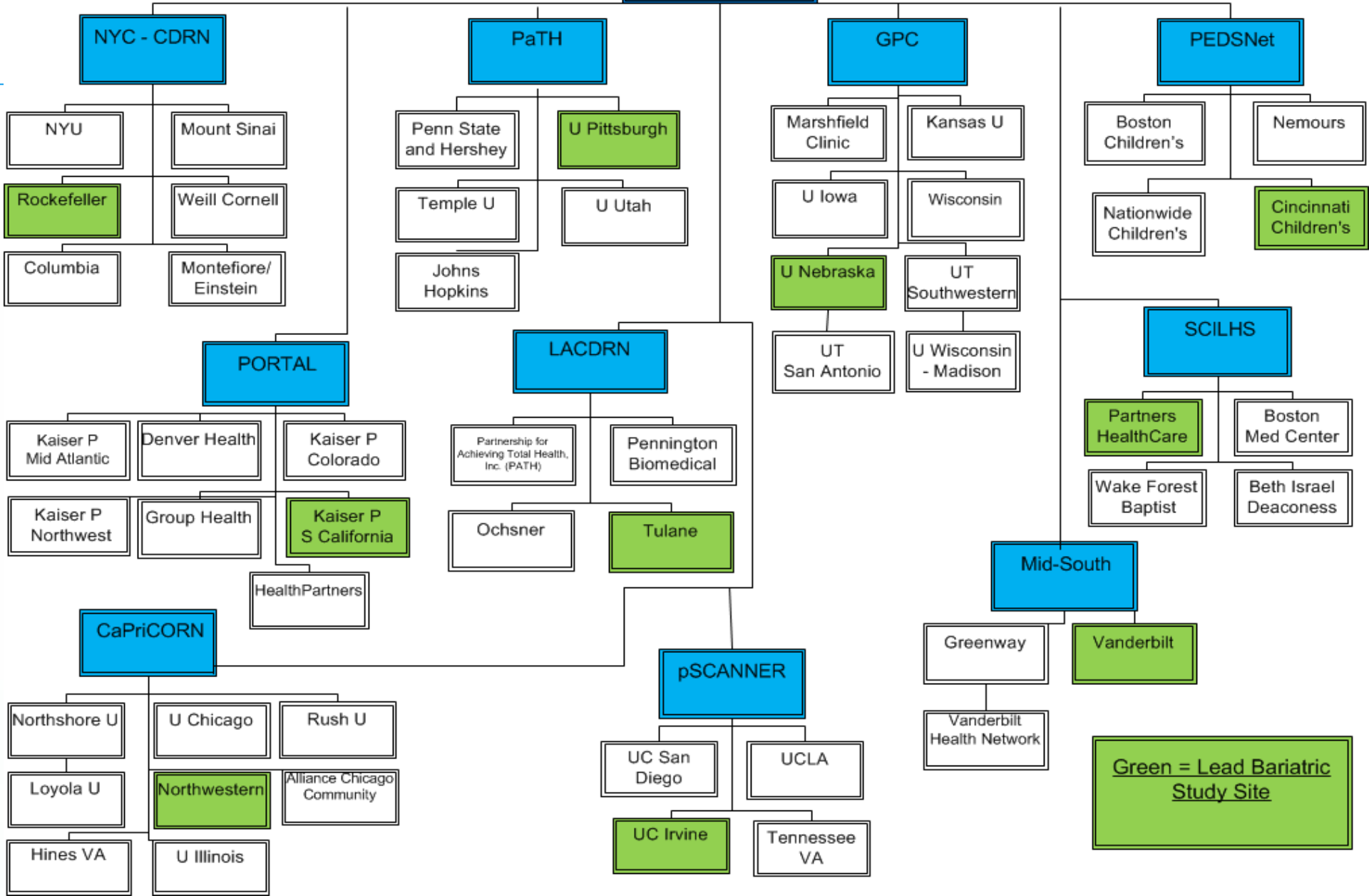
# Bariatric Surgery Study

PI: David Arterburn (PORTAL)  
Co-PI: Kathleen McTigue (PaTH)

- The main goal is to provide accurate estimates of the 1-, 3-, and 5-year benefits and risks of the three main surgical treatment options for severe obesity
  - Roux-en-y gastric bypass (RYGB)
  - Adjustable gastric banding (AGB)
  - Sleeve gastrectomy (SG)
- Focus on the outcomes that have been shown to be most important to adults and adolescents with severe obesity:
  - Weight loss,
  - Improvement in diabetes,
  - Risk of adverse events



**PCORnet  
Bariatric Study**



**Green = Lead Bariatric Study Site**



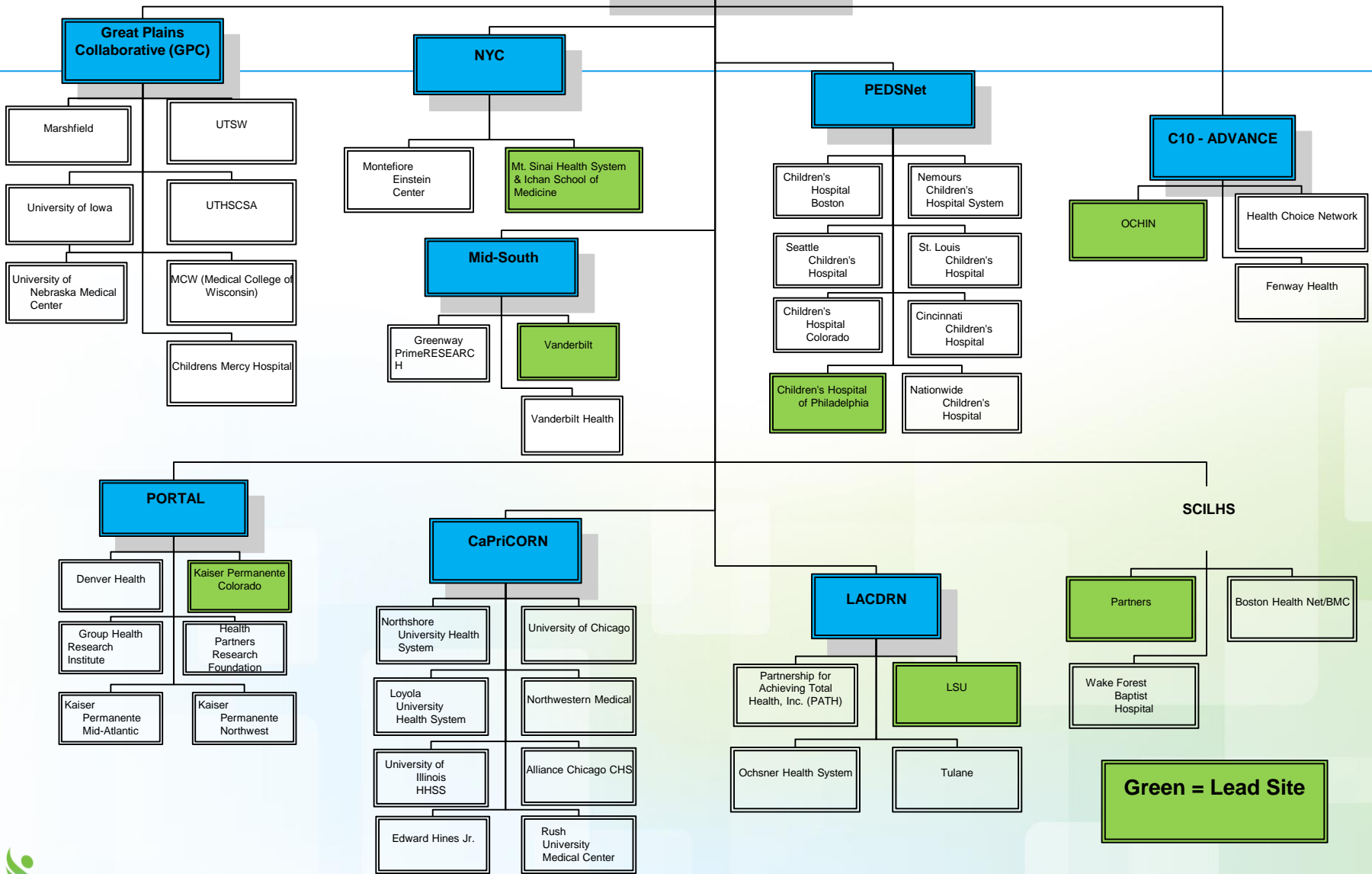
# Antibiotic and Childhood Obesity

PI: Chris Forrest (PEDSnet)  
Co-PI: Matt Gilman (CC)

- Is there truly a relationship?
  - If so, is it worst with the combination of
    - Broad v. narrow spectrum,
    - Earlier v. later exposure, and
    - How large the exposure is (#doses)?
- Study Aims: evaluate the comparative effects of different types, timing, and amount of antibiotics prescribed during the first 2 years of life on
  - Body mass index and risk of obesity at 5 and 10 years
  - Growth trajectories from infancy onwards
  - And how these effects differ according to
    - Child sex, race/ethnicity, geography
    - Use of other medications
    - Maternal BMI, antibiotics during pregnancy, C-section



**PCORnet Obesity  
Observational Study:  
Pediatric Antibiotics**





# Value of PCORnet

- Standardized and efficient project start-up
- Reusable infrastructure with no-to-limited shut-down costs
- Learning model – each project benefits from prior studies
- Scale and diversity of patients and providers
- Patient and clinician engagement to help develop the questions, plan and conduct studies, and disseminate findings
- Investigators will find accessing and using PCORnet easier and less expensive
- Culture of collaboration
- Network of relationships
- Health system commitment to sustainability
- Track record of success

