# Wonderful title here

# Outline

- Use case overview
- Problem
- Patterns
- Competency question
- Feedback?? (TBD)

# Use Case Overview

- Ontology is designed for a specific customer
  - Several researchers from Dayton Children's hospital and Wright State University Boonshoft School of Medicine
- Collect and analyze data for research purposes from large scale nationwide health databases

# Use Case Overview

- Databases contain info from a variety of sources:
  - Patient-specific medical info
  - Billing records
  - Prescription drugs ordered
  - And more!

# Problem Overview

- Each set is exported as a csv abstract
  - Most have some columns in common
  - NOT organized on the same keys
- Research group would like to analyze data that relies on information from multiple abstracts
- Often unclear how to merge these data sources
- Would be nice to have a common representation framework

# Problem Overview

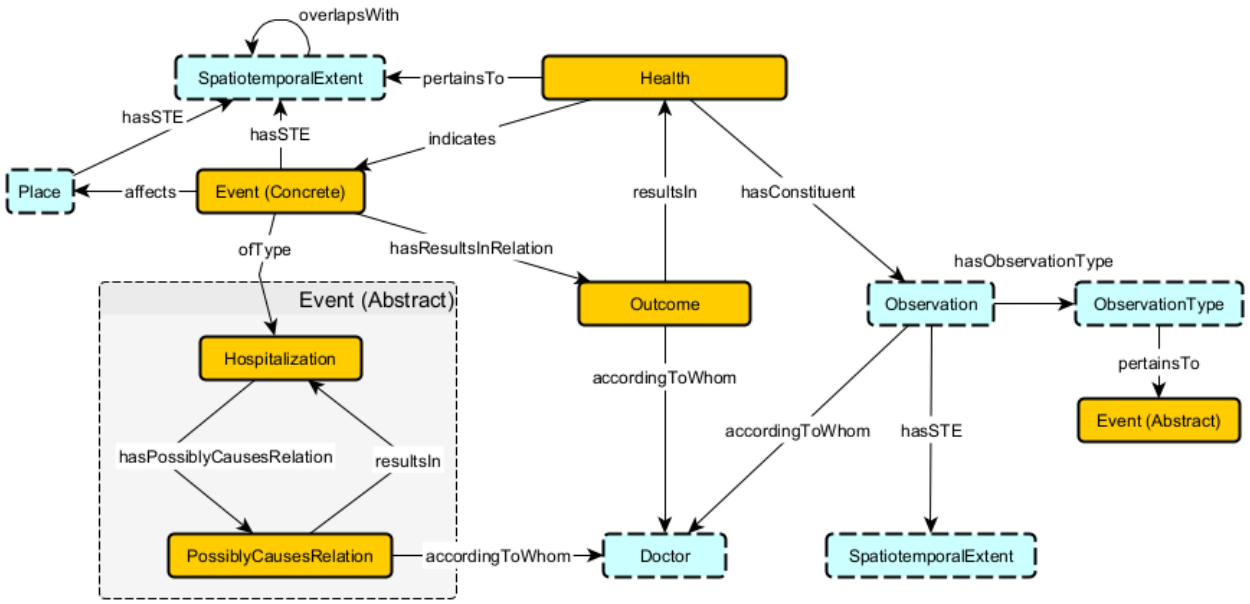
- Each set is exported as a csv abstract
  - Most have some columns in common
  - NOT organized on the same keys
- Research group would like to analyze data that relies on information from multiple abstracts
- Often unclear how to merge these data sources
- Would be nice to have a common representation framework

- **An extensible ontology**

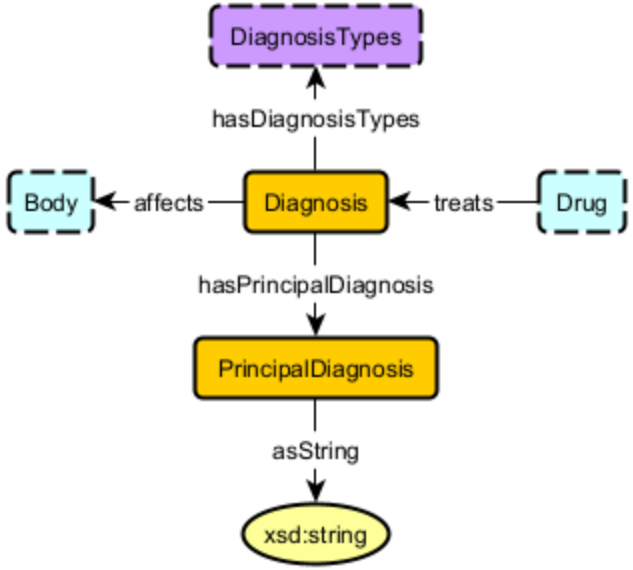
# Outline

- Use case overview
- Problem
- **Patterns**
- Competency question
- Feedback?? (TBD)

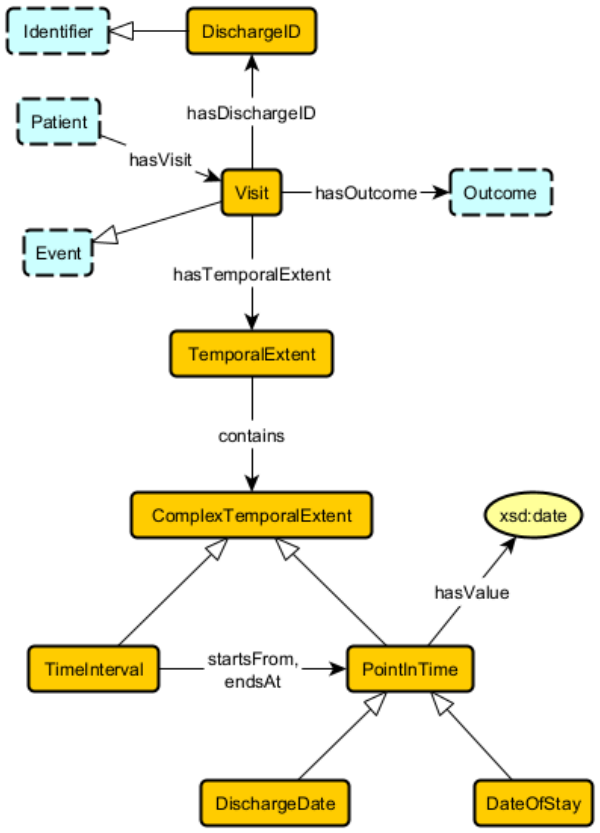
# Patterns


overlapsWith
SpatiotemporalExtent
pertainsTo
Health
hasSTE
hasSTE
indicates
Place
affects
Event (Concrete)
resultsIn
hasConstituent
ofType
hasResultsInRelation
hasObservationType
Event (Abstract)
Outcome
Observation
ObservationType
Hospitalization
accordingToWhom
pertainsTo
Event (Abstract)
accordingToWhom
hasSTE
hasPossiblyCausesRelation
resultsIn
PossiblyCausesRelation
accordingToWhom
Doctor
SpatiotemporalExtent

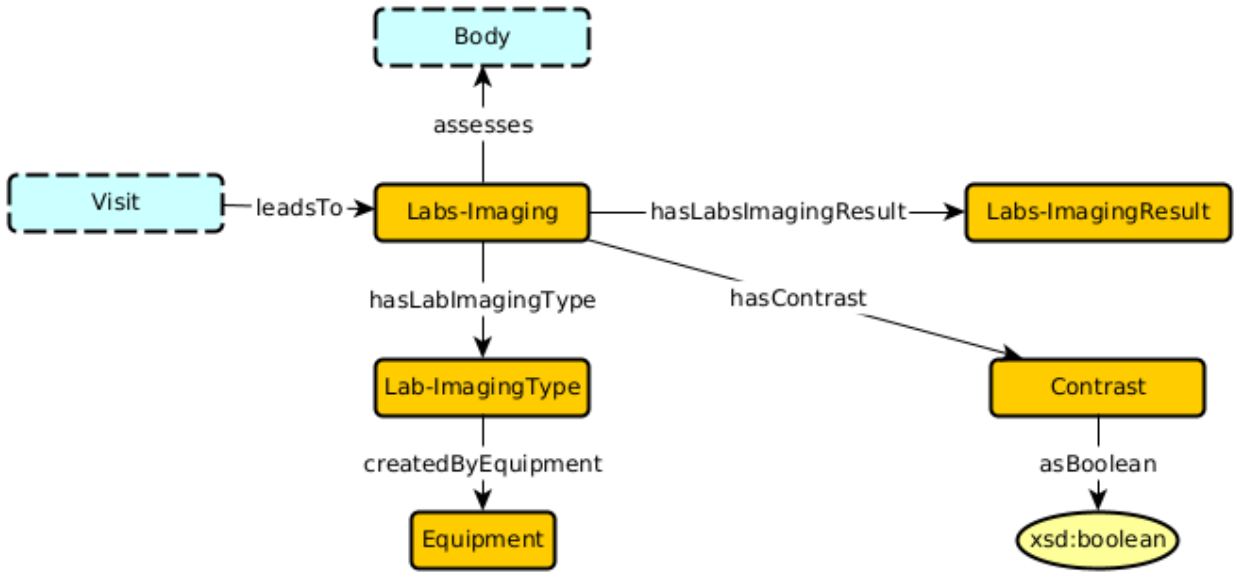
# Diagnosis


DiagnosisTypes
hasDiagnosisTypes
Body
affects
Diagnosis
treats
Drug
hasPrincipalDiagnosis
PrincipalDiagnosis
asString
xsd:string

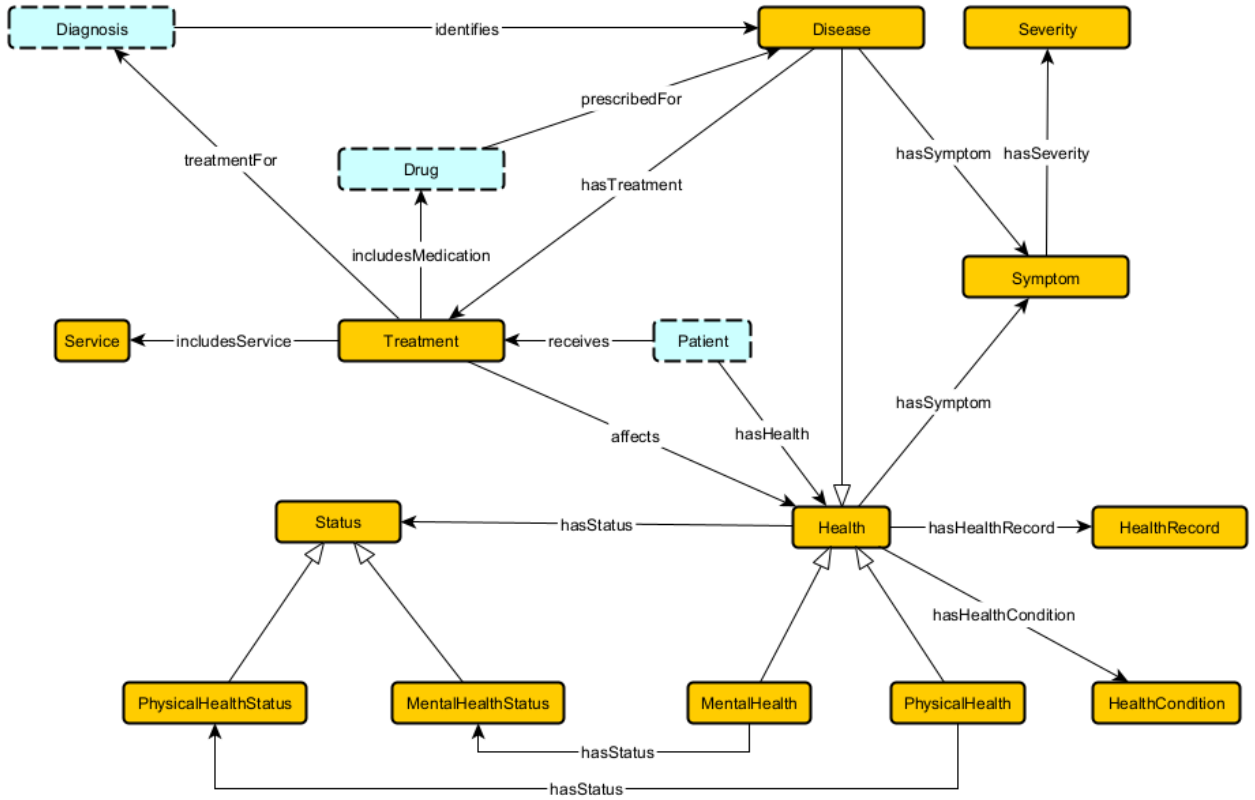
# Temporal Event



# Labs and Imaging



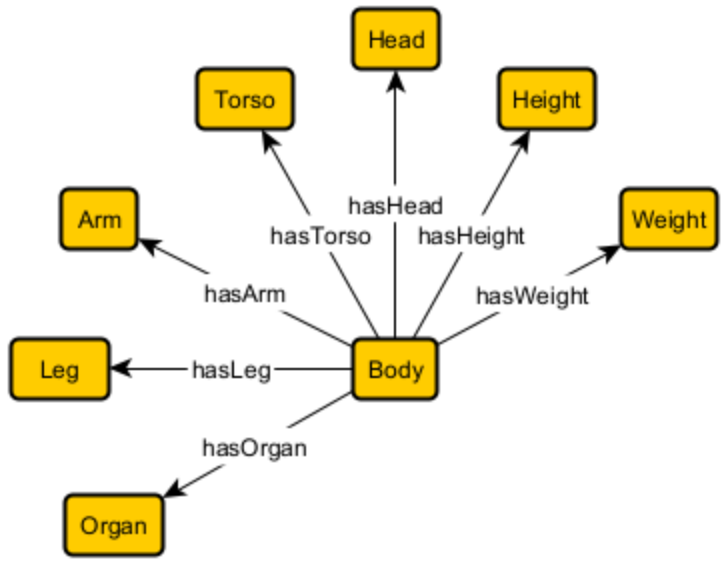
# Health


Diagnosis
identifies
Disease
Severity
prescribedFor
treatmentFor
Drug
hasTreatment
hasSymptom
hasSeverity
includesMedication
Symptom
Service
includesService
Treatment
receives
Patient
hasSymptom
affects
hasHealth
Status
hasStatus
Health
hasHealthRecord
HealthRecord
hasHealthCondition
PhysicalHealthStatus
MentalHealthStatus
MentalHealth
PhysicalHealth
HealthCondition
hasStatus
hasStatus

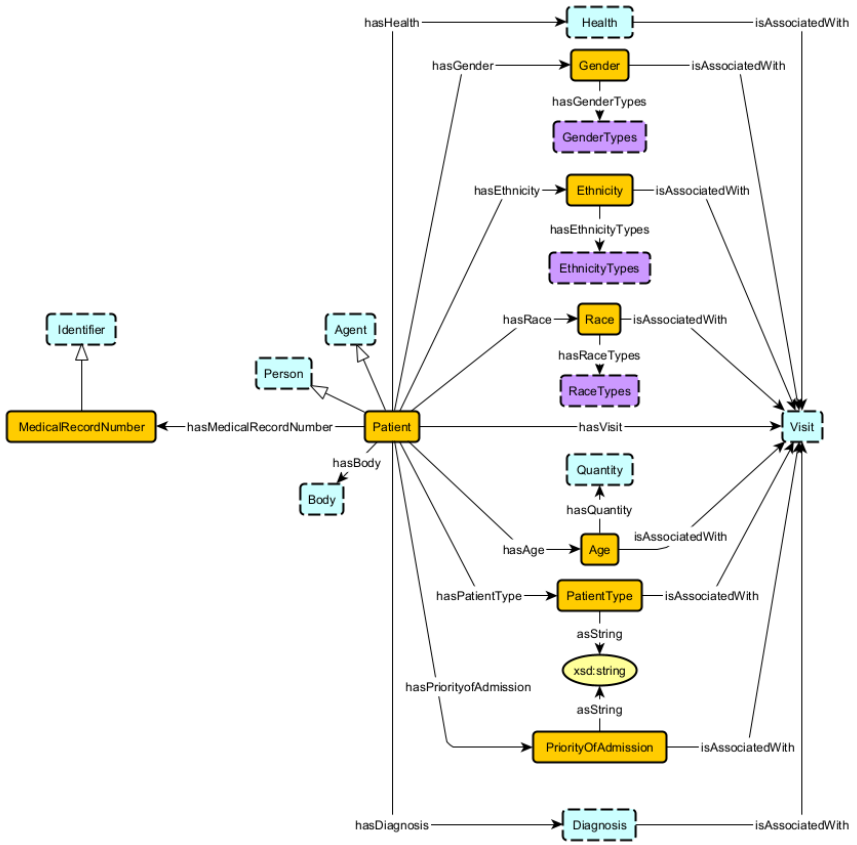
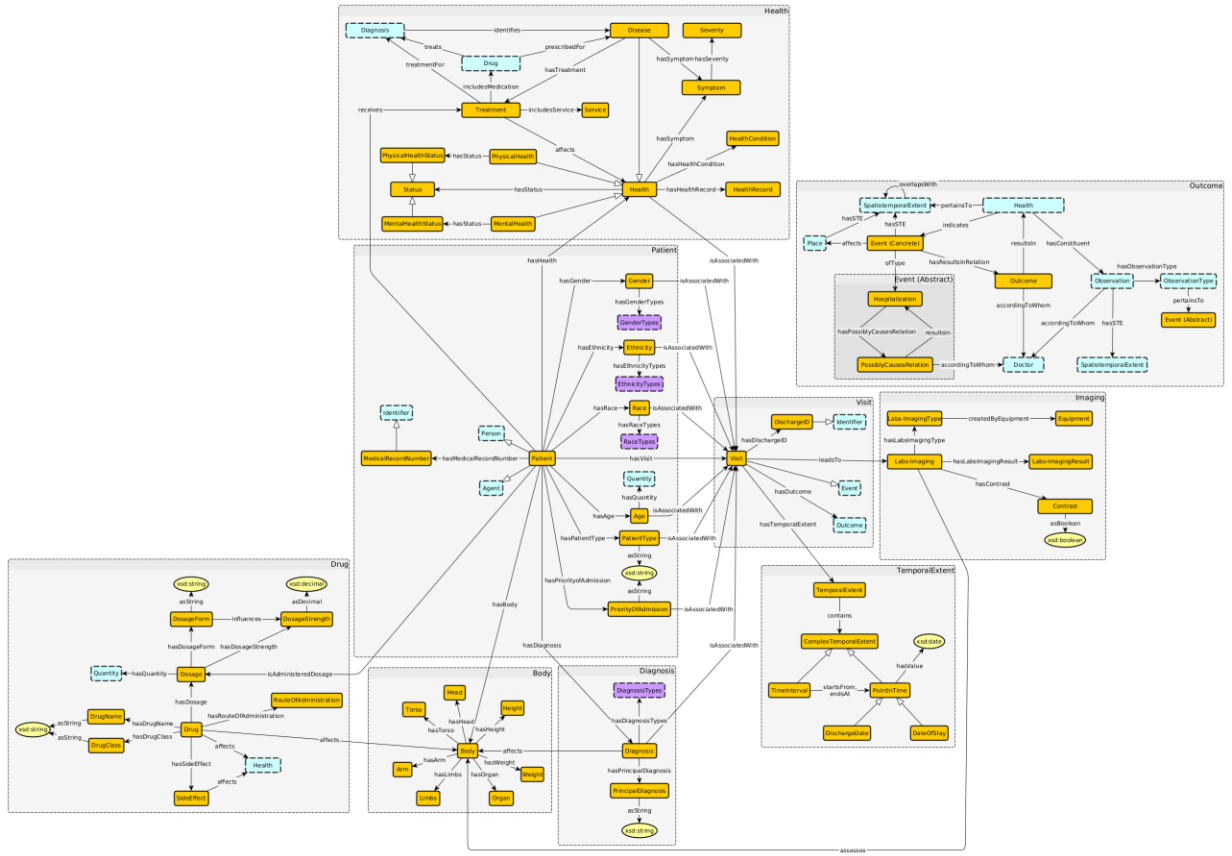
# Drug

xsd:string
xsd:decimal
asString
asDecimal
DosageForm
influences
DosageStrength
hasDosageForm
hasDosageStrength
Quantity
hasQuantity
Dosage
isAdministeredDosage
Patient
RouteOfAdministration
hasDosage
DrugName
asString
xsd:string
hasRouteOfAdministration
hasDrugName
Drug
hasDrugClass
DrugClass
asString
affects
Body
affects
treats
hasSideEffect
Health
affects
Diagnosis
SideEffect

# Body


Head
Torso
Height
Arm
hasHead
hasTorso
hasHeight
Weight
hasArm
hasWeight
Leg
hasLeg
Body
hasOrgan
Organ

# Patient


hasHealth
Health
isAssociatedWith
hasGender
Gender
isAssociatedWith
hasGenderTypes
GenderTypes
hasEthnicity
Ethnicity
isAssociatedWith
hasEthnicityTypes
EthnicityTypes
Identifier
Agent
hasRace
Race
isAssociatedWith
hasRaceTypes
Person
RaceTypes
MedicalRecordNumber
hasMedicalRecordNumber
Patient
hasVisit
Visit
hasBody
Quantity
Body
hasQuantity
hasAge
Age
isAssociatedWith
hasPatientType
PatientType
isAssociatedWith
asString
xsd:string
hasPrioritYofAdmission
asString
PriorityOfAdmission
isAssociatedWith
hasDiagnosis
Diagnosis
isAssociatedWith

# Overall Graph