Building an Epic-FHIR Adapter

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FHIRWorks

- Fall 2015

- Goals:
  - Integrate Bilirubin Application into Epic 2015
  - Integrate OpenCDS into BPA workflow

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Interconnect

- Epic 2014
  - No FHIR Support
  - FHIR: Read-only 2015, RW 2016
- "Regular" Services
  - SOAP/REST
- MyChart/Mobile Services
  - REST
- Security
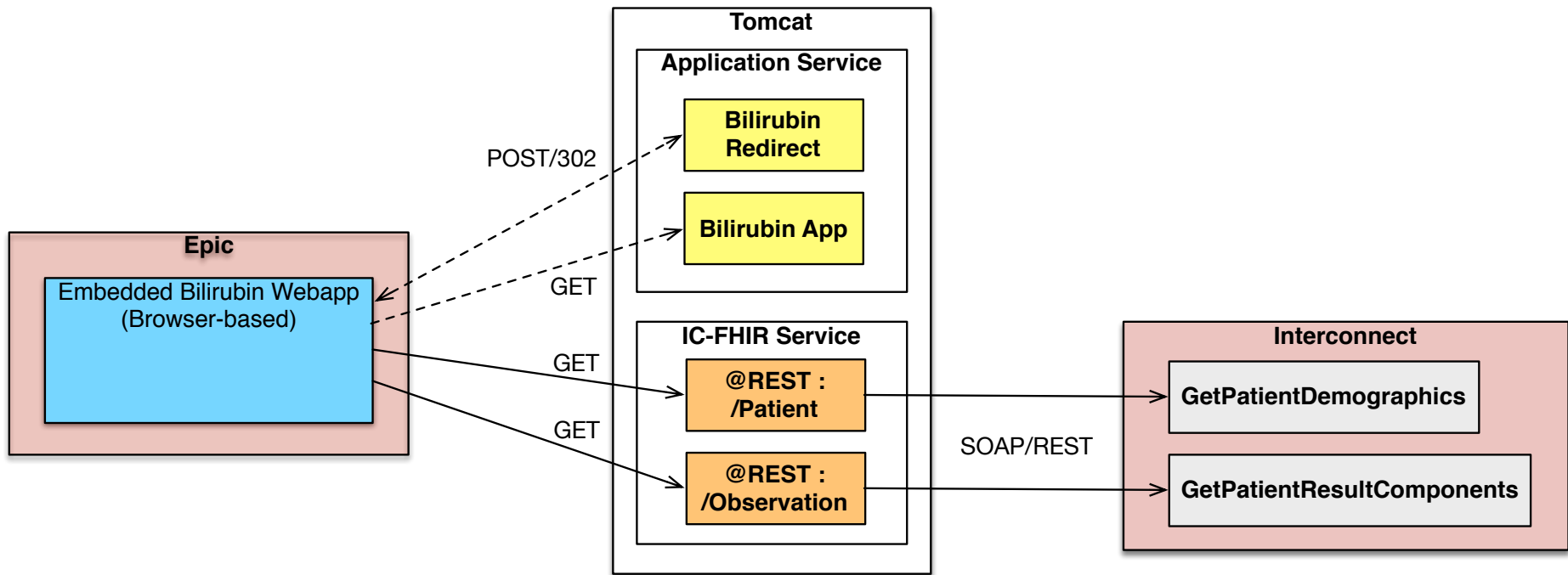 - Options: None, HTTP Basic-Auth, Client Certs

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SMART on FHIR

- Bilirubin Resources:
  - Conformance (/metadata)
  - Patient (/Patient/{id})
  - Observation (/Observation?patientId={id}&code={code})

Epic + SMART on FHIR

- Reuse PowerChart integration
  - POST to a web service to obtain patient data
- Bilirubin needs:
  - GET
  - Produce a 302 from a POST
    - Copy POST data to query string
- Security
  - SSL/TLS
  - Needs Epic User

Epic + Bilirubin : Design

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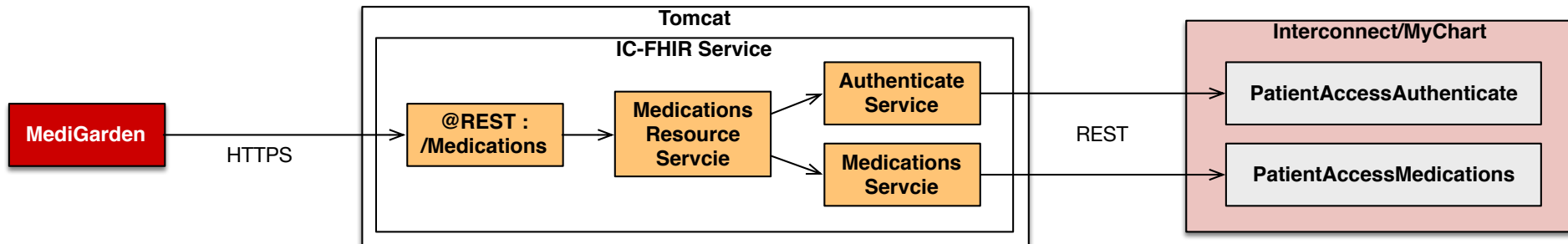SCHOOL OF MEDICINE

Epic + Bilirubin Issues

- Bilirubin requires specific LOINC code
  - 58941-6 ➔ Bilirubin [Mass/Volume] In Skin
  - Test data included procedure
    - CPT 82248
  - Rudimentary Terminology Map
    - Map for any other potential selections

Epic + MediGarden

- MediGarden
  - UofU GApp Lab
  - Medication Management
- FHIR-based
  - Currently working with OpenEpic
  - Will work with Epic FHIR Services
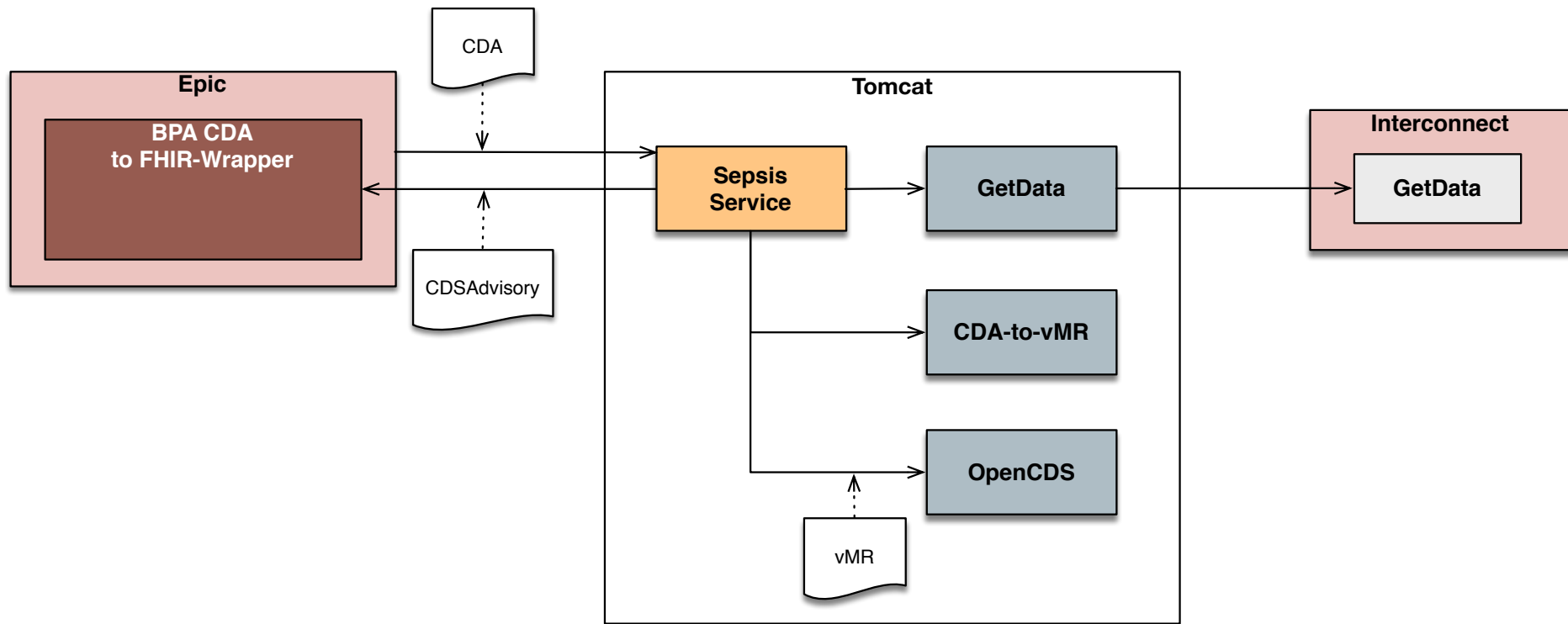
Epic + MediGarden : Design

Epic + MediGarden Issues

- Authentication
  - Epic requires MyChart user/pass
    - Get Patient ID and MyChart ID
  - How to pass without exposing in URL?
    - SSL/TLS
    - HTTP Basic Authentication

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Epic BPA + OpenCDS

- Sepsis Prediction
  - Predictive Analytics in OpenCDS
  - Reduce false positives
- Epic Best Practice Advisory (BPA)
  - BPA conditions met
  - Send CDA to a configured Web Service
    - (optional)
  - WS returns CDSAdvisory
  - Epic BPA Alert Suppression given conditions

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Epic BPA + OpenCDS : Design

Summary

- Bilirubin App integration into Epic
  - Including Interconnect integration
- MediGarden FHIR Services
  - Based on Interconnect MyChart services
- Epic BPA integration with OpenCDS
  - Including Interconnect Integration
  - Currently CDA ➔ vMR
  - Future will include CDA ➔ FHIR

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