

Clinical Research on FHIR

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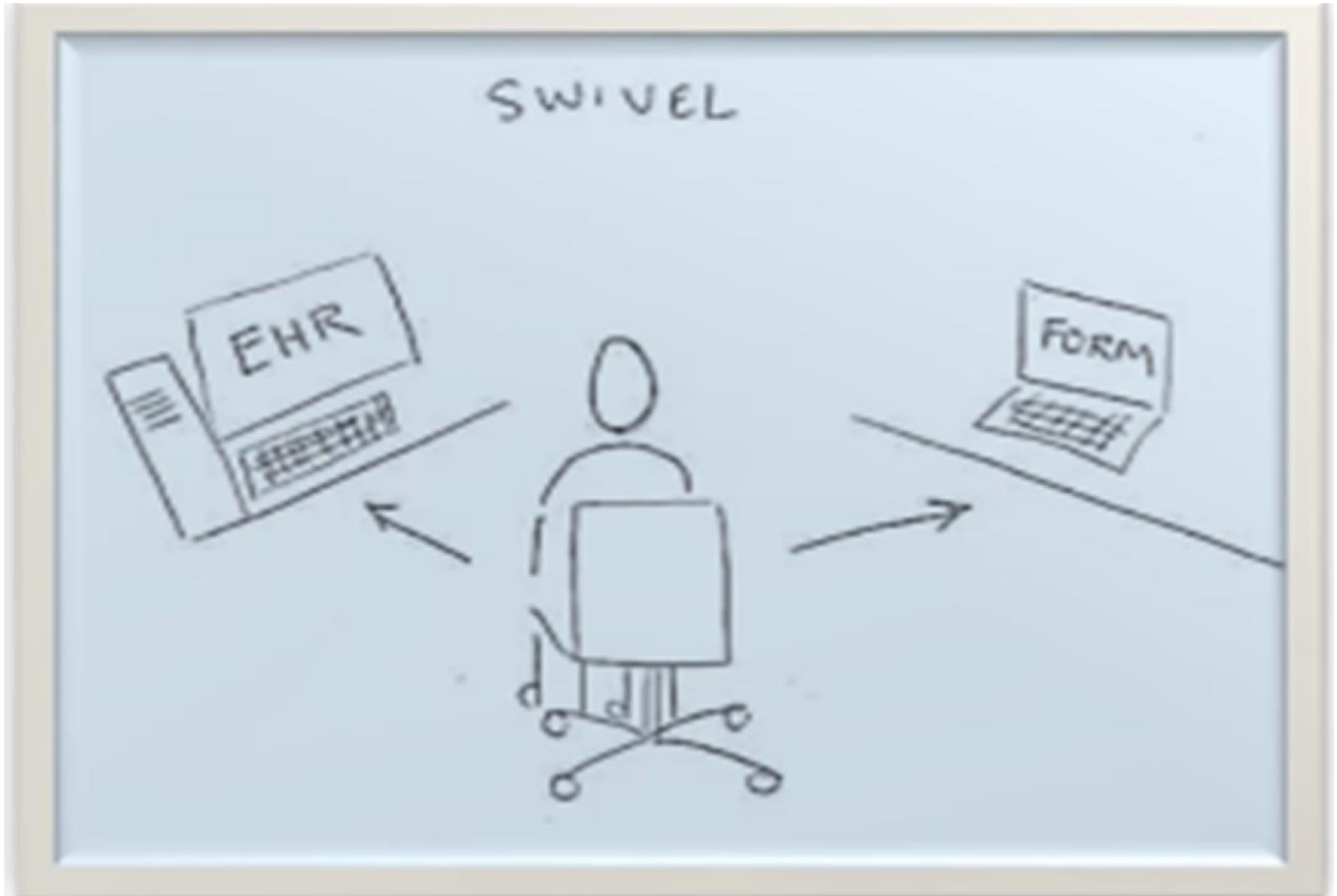
Supported in part by Duke's CTSA grant (UL1TR001117)

Duke University

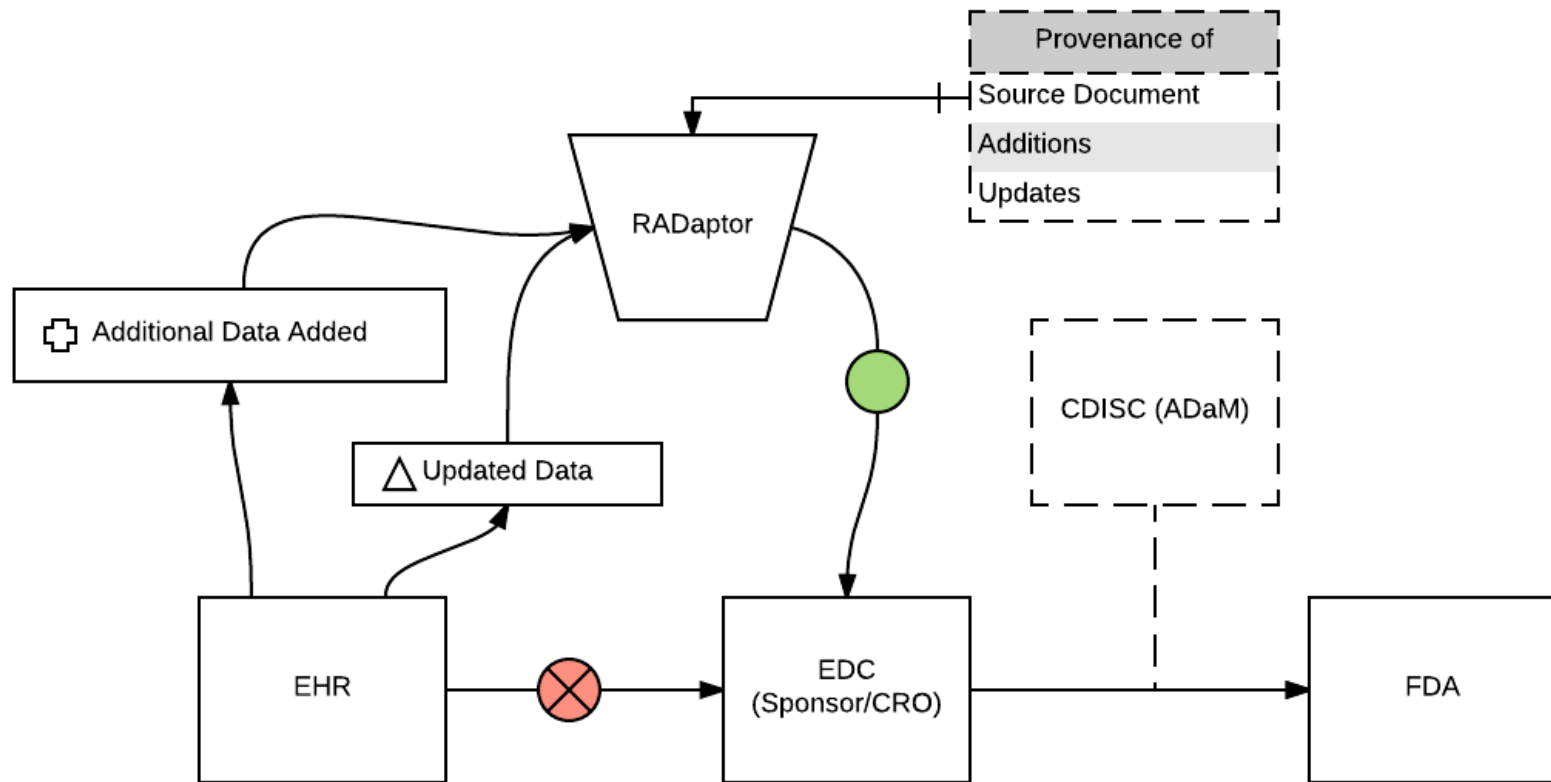
- 3 Integrated hospitals using Epic 2015 (16,513 employees)
- Duke School of Medicine Ranked 8th 2016
- 1462 investigators, 400+ coordinators in site based research
- ~2100 open enrolling IRB studies during FY15
- ~300 NEW clinical trial studies/year open
- Duke's REDCap approximately 4000 projects and 4000 users



Swivel Chair Approach



eSource Compliance



Development Team

Jonathan Parrish

Lori Evans

Chet Corey

Karen Collins

Paula Morrison

April Feickert

Darin London

Matt Gardner

Amy Nordo

(not pictured)



How did we get here?

- Developed middleware application (RADaptor) to implement the Retrieve From Data standard using the CCD at Duke as part of our CTSA award
- Conducted pilot study (demographics) August 2015
- Transitioned to production use December 2015
- Conducted a Time & Motion study to evaluate error reduction and time savings – proof it worked!



Cons of the CCD

- Inconsistent implementation across EHRs
 - CCD, CCDA, CDA, C32, etc..
- Limited Data
- XML translation is cumbersome/restrictive

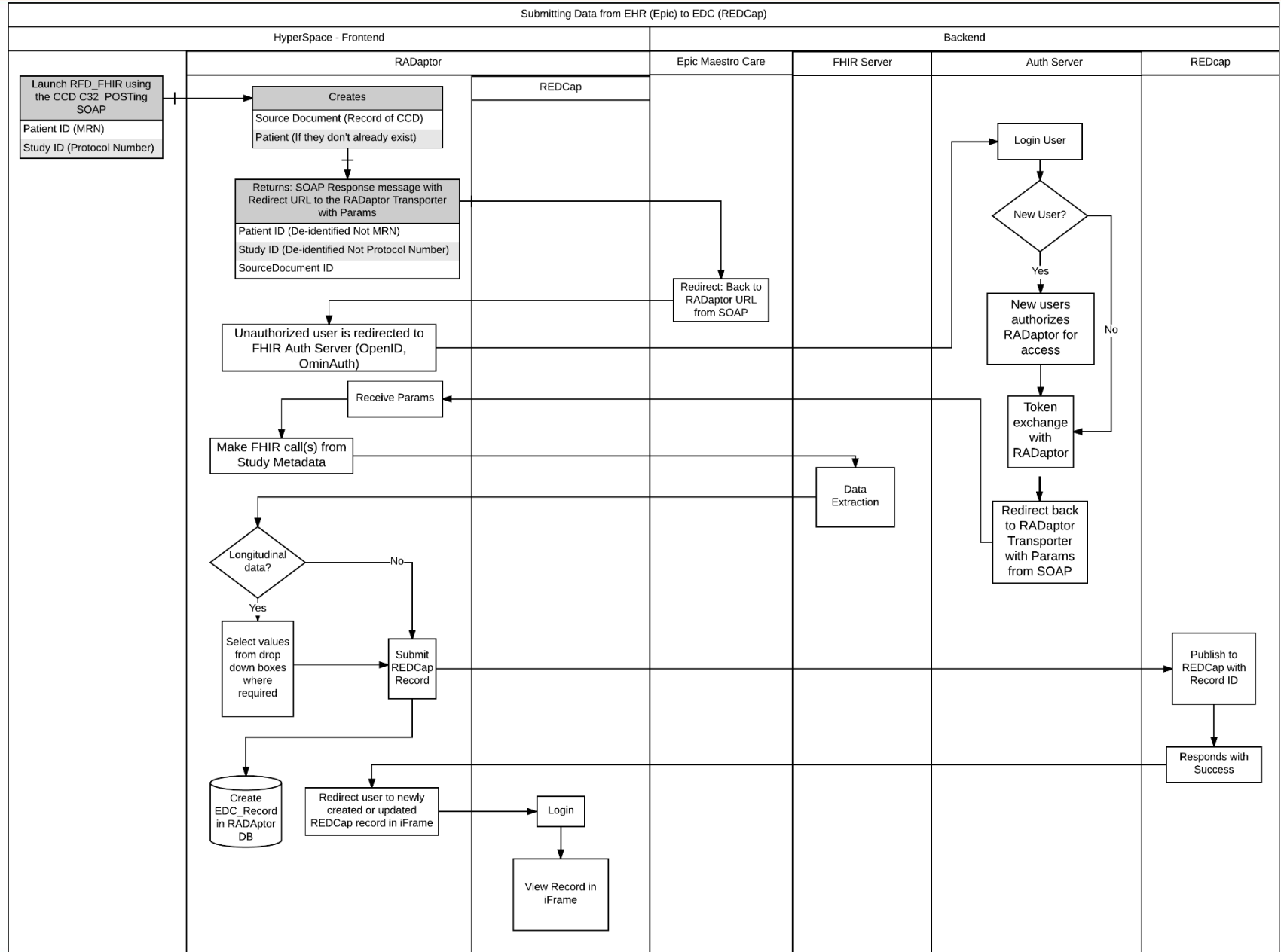


FHIR Provides

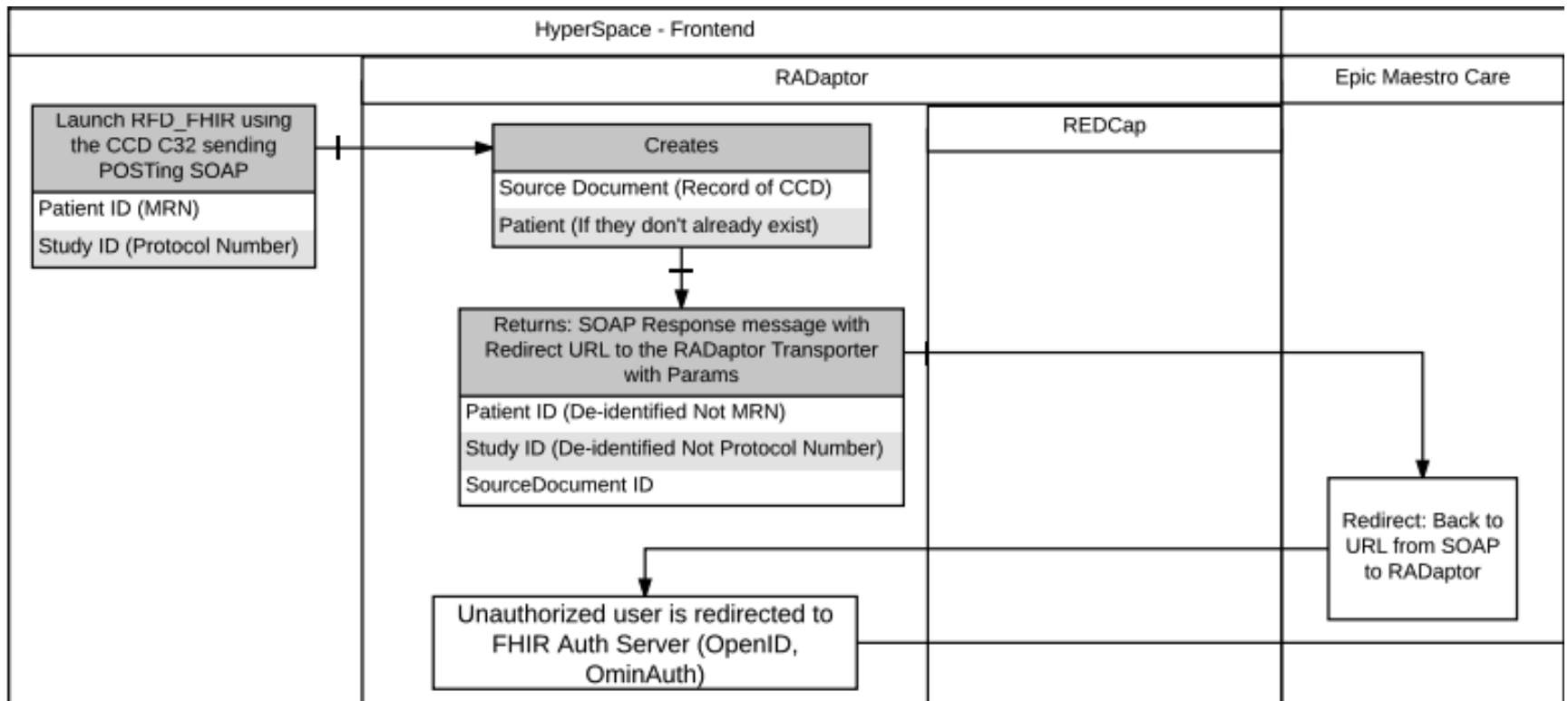
- Single Accepted Standard
- More Data Points
 - Avenue for promotion of new resources
 - ResearchStudy
 - ResearchSubject
- Variety of Formats
 - JSON
 - XML



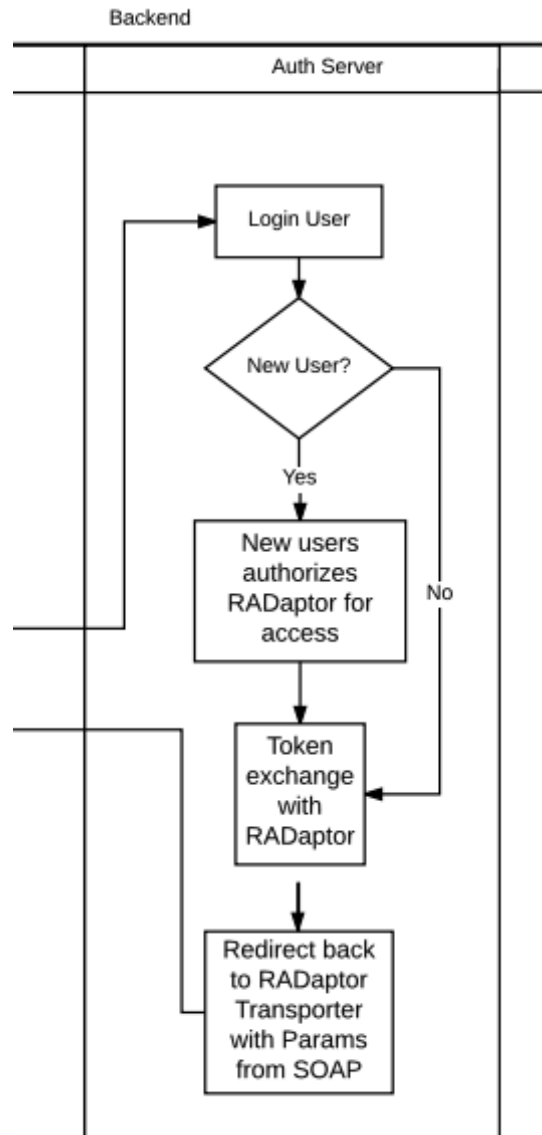
Submitting Data from EHR (Epic) to EDC (REDCap)



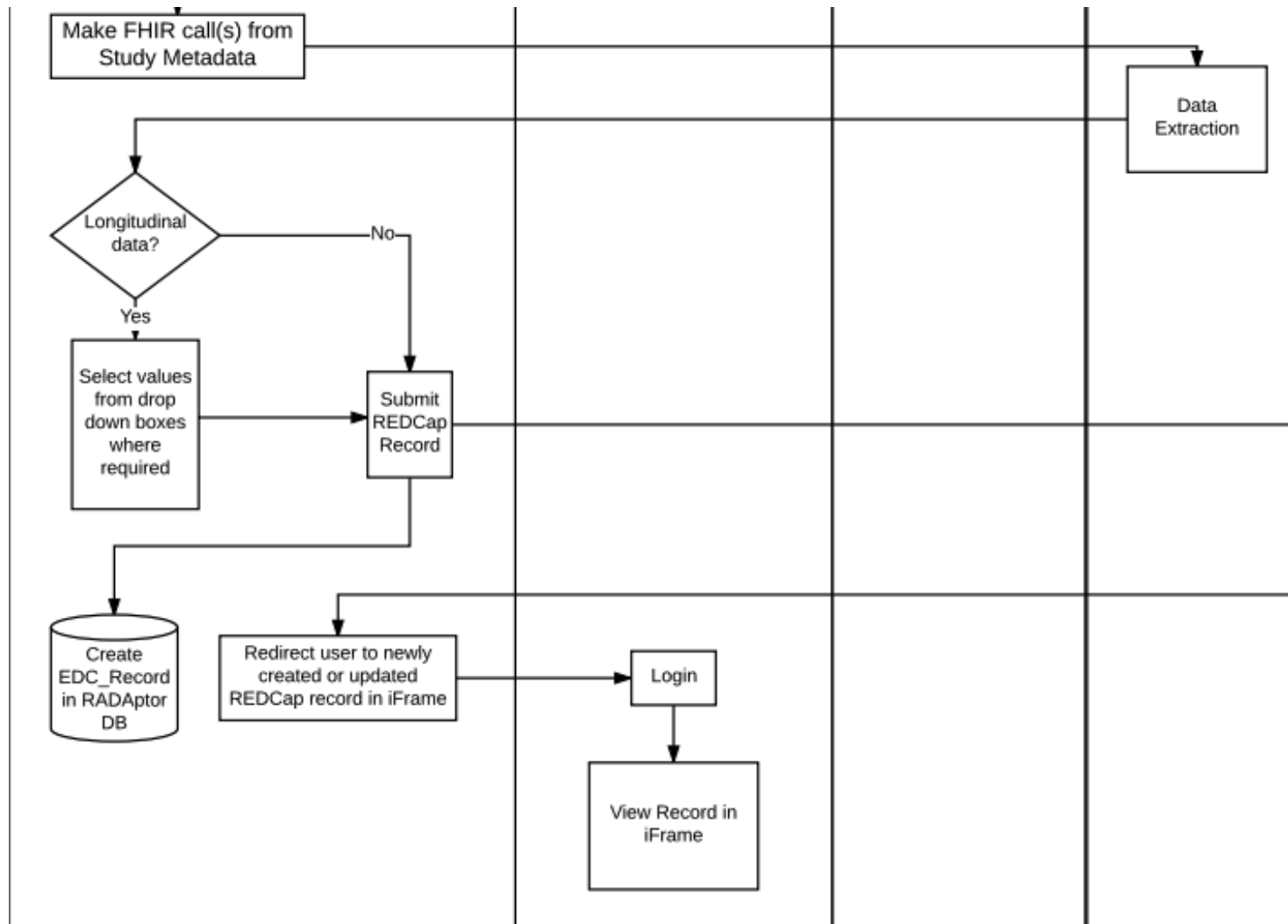
Launch



Authorize



Retrieve and Publish Data



QuickTime PlayerFileEditViewWindowHelp

Hyperspace - DUKE ABDOMINAL TRANSPLANT CLINIC - DUKE POC Environment - CC462 - CHARLES COREY

Epic

Pt StationIn BasketScheduleRecord ViewerStudy MaintenanceProtocol BuilderPt Research StudiesEpic Enterprise Management ConsoleUpToDate

Maestro,NatalieAsap,Shelley A

Duke-POC EnvironmentSearch

Log Out

Maestro, Natalie

Female, 50 y.o., 06/30/1966,

MRN: X22416Primary Loc: 4313-01Allergies: Latex, Egg, Flu...Ht: 154.9 cm (...Txp Coordinator: NoneIsolation: NonePatient FYIs: FYIMyChart: Active

CSN: NoneC1: BLUE CROSS BLUE SHI...Code: Not on FileWt: 72.6 kg (1...Transplants: NoneInfection: NonePref Language:...

DukeWELL Eli...C2: CHAMP VA/CHAMPVA S...Advance Care Planning: YDosing Wt: NoneBPA: NoneFalls Risk: NoneNeed Interp: NoPCP: Elisabeth B Nadler...

HM Modifiers:...Research: ActiveHealth MaintenanceBMI: 30.23 kg/...

Research Studies

Add a new study to listAdd

Enrolled (IC obtained-under waiver or signed form)

RFD Testing Two

Study Code: PRO00011112Data Capture Forms: REDcap

Study Description

RFD Testing Two

Additional Info FEICKERT, APRIL on 2/2...

Snapshot

Chart Review

Review Flows...

Results Review

Allergies

History

Problem List

Implants

Demographics

Letters

Identity Manager

FYI

Research Stud...

Customize

More

CHARLES COREY

Future/Standing Orders

9:23 AM

Next Steps

- EHR agnostic
- EDC agnostic
- Incorporate additional FHIR Resources
 - ResearchStudy
 - ResearchSubject
- Share our work

