ReviewR: A light-weight, portable tool for reviewing individual patient records

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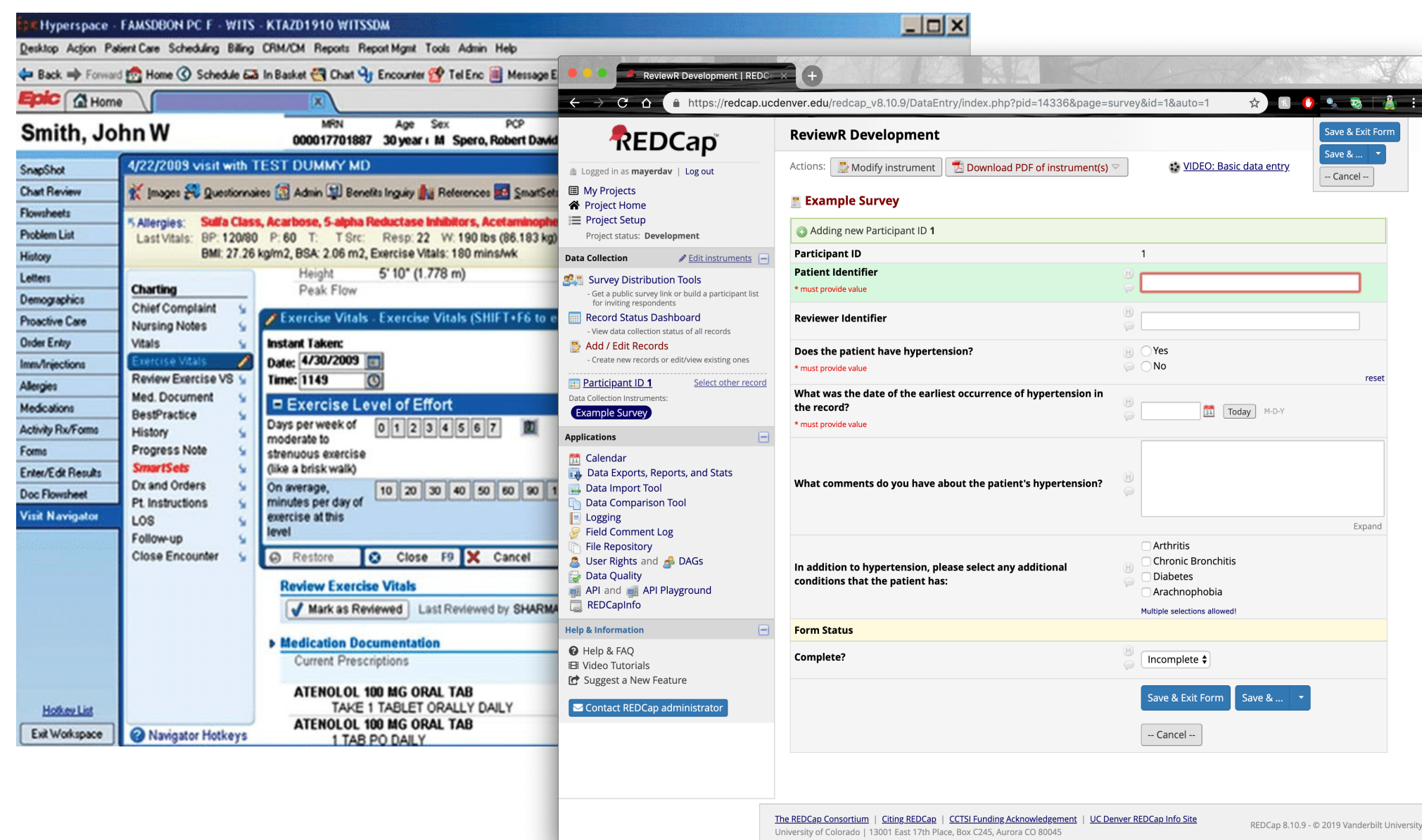
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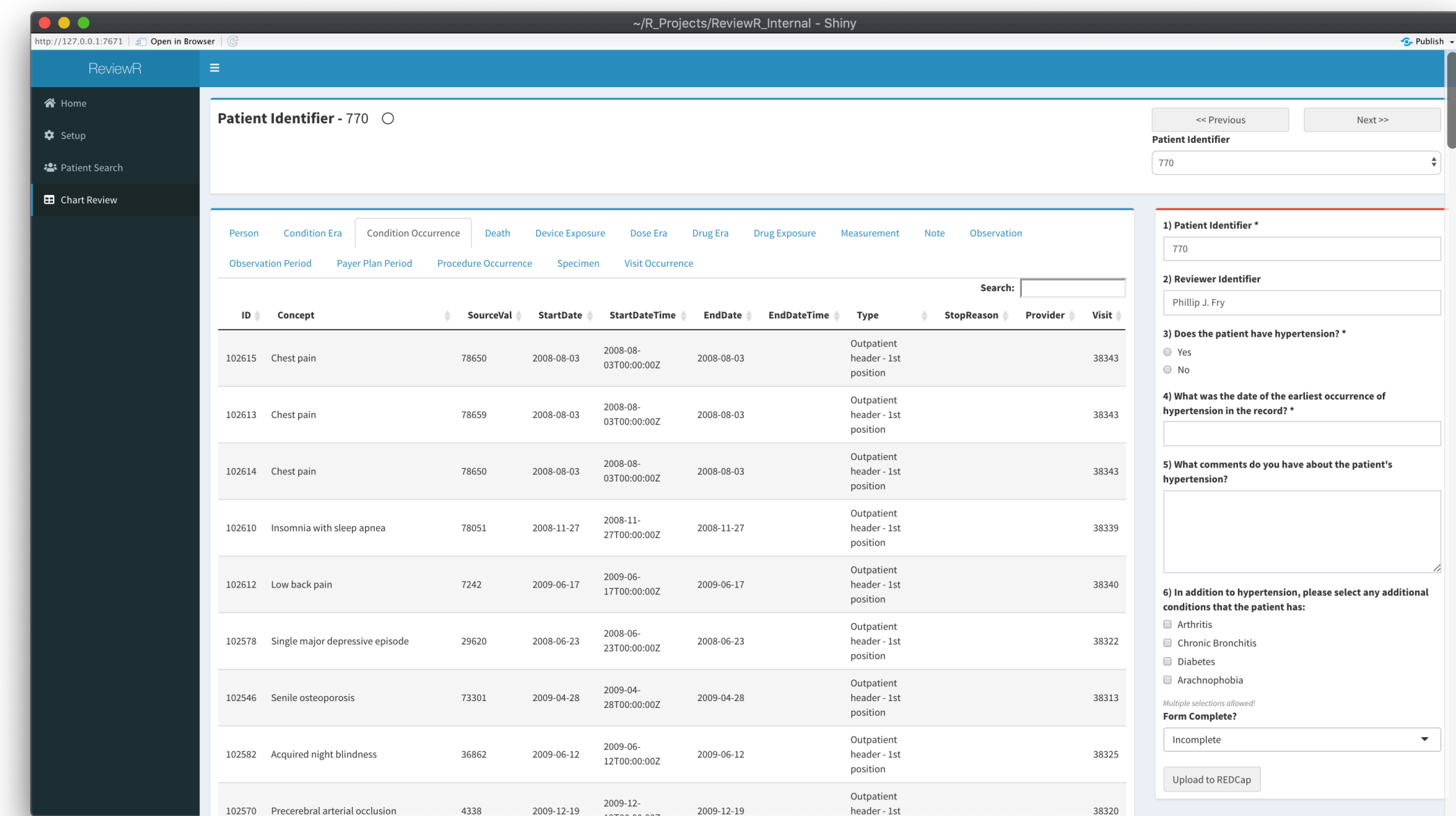
RATIONALE & OBJECTIVE

Completing a manual record review within the EHR can be a tedious task with patient data scattered across multiple windows, tabs and data models. Further, capturing record review information means leaving the EHR environment and inputting information into a separate application.

Reviewer seeks to modernize this process, allowing the user to explore patient data and connect to a REDCap project to perform a chart review, all within the same application!
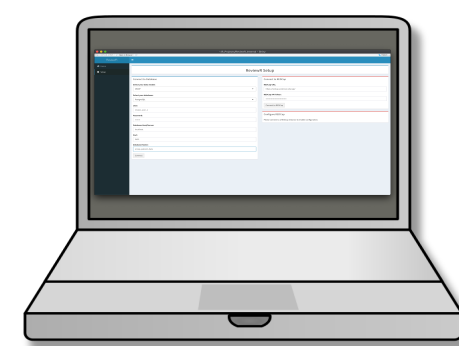
Multiple Applications

ReviewR

METHODS

R Shiny application
- Cross Platform
- Supports local or hosted environments

OR

APPLICATION FEATURES

Patient Chart Review
- Automatic data model detection
- Composite tables -- less navigation required to get to the information that is needed.
- DataTables interface
    - Filter on multiple columns
    - Text based search
    - Highlighting
    - Regular Expression filtering

REDCap Integration
- Automatic API import of REDCap Instrument
- Save updates directly to REDCap database
- Support for many REDCap data entry styles
    - Text
    - Dropdown
    - Date time
    - Checkbox
- Review status indicator

SUPPORTED DATA TYPES

Databases
- Google BigQuery
- PostgreSQL
- Others supported by dbplyr backend can be implemented:
    - https://dbplyr.tidyverse.org/

Patient Data Models
- MIMIC-III
- OMOP

CONCLUSION

ReviewR supports rapid review of EHR data and allows for abstraction of individual patient data into a customized REDCap instrument using a single, easy to deploy tool.

Follow the project on GitHub!
https://github.com/thewileylab/ReviewR

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