Xarelto Z-Tracker

Health Care App

29th January 2017
**Purdue University Health Data Hackathon**

Why Rivaroxaban (Xarelto)?

Number of FAERS Events & Role by Medication

role_cod
- C
- I
- PS
- SS

C= concomitant
I = Interacting
PS = Primary Suspect
SS = Secondary Suspect
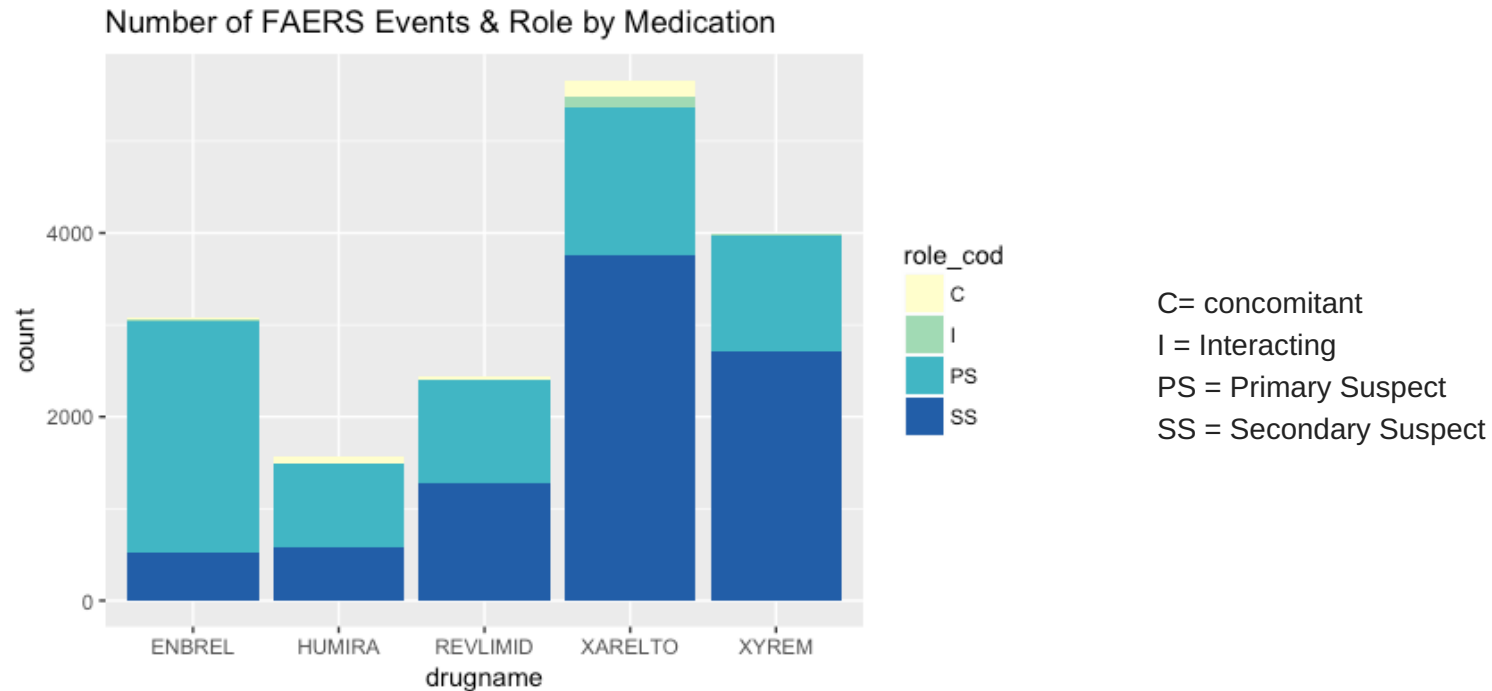
- According to the open source data available by the FDA Adverse Event Reporting System (FAERS), Xarelto is the most common drug to cause adverse reactions in patients.
- While most of these cases result identified Xarelto as Secondary Suspect, data in which Xarelto was a Primary Suspect was strictly utilized.

Effects of Xarelto:

Number conditions caused by Xarelto in Primary Suspect Cases

age_grp
A   A= Adult
E   E= Elderly
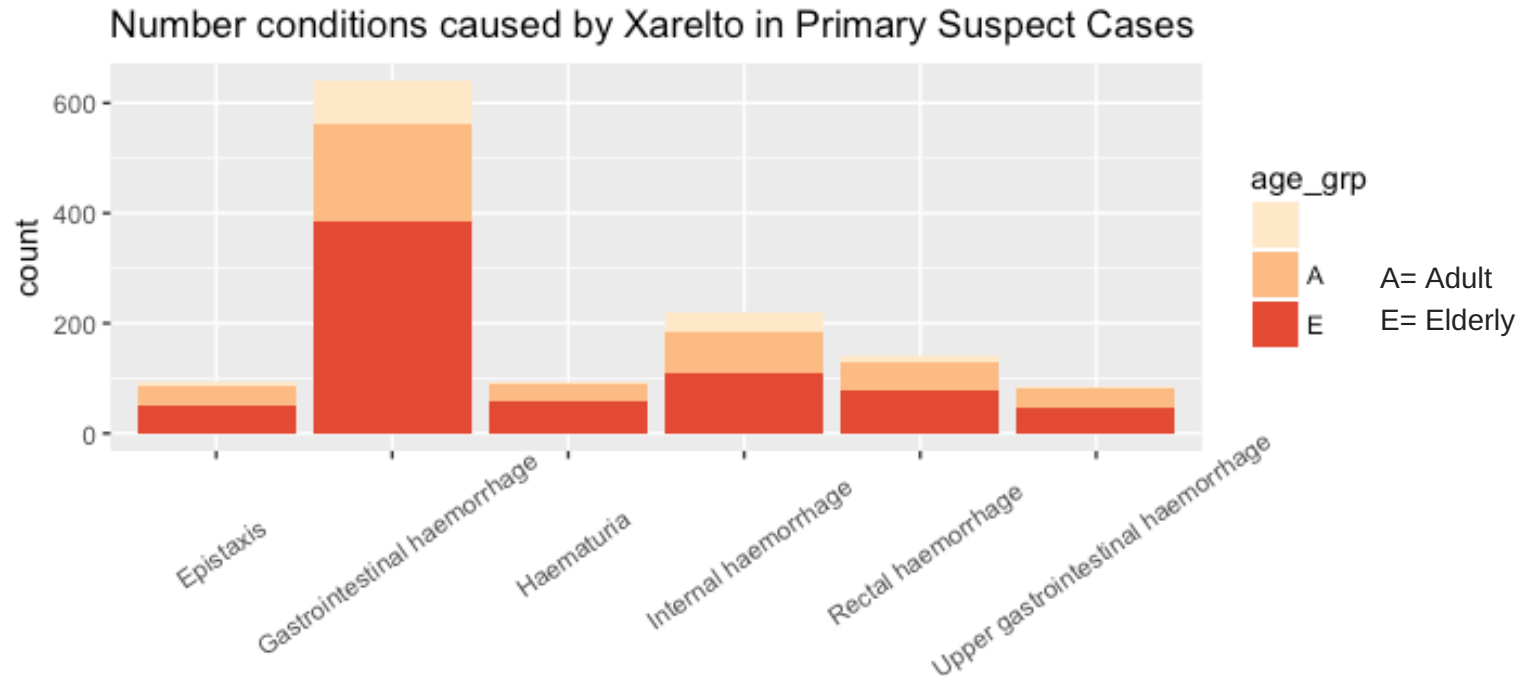
- These are the top 6 adverse effect when taking Xarelto & the age groups effected most by it
- Patients taking Xarelto need to accurately assess if their side effects is normal/ abnormal to reduce chances of developing further complications.
- Other conditions included: cerebral haemorrhage, CVA, death, & acute kidney injury

Functionality

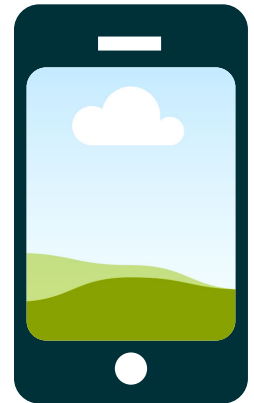## What can Xarelto Z-Tracker do?

- App created in Android Studio

- User input: DOB, sex, name, weight, past medical history, and symptoms experienced

- Determine if the symptoms require the user to go to the hospital or seek medical advice based off the popularity of the symptom

- Great way for users to double check the severity of their symptoms given their personal medical information
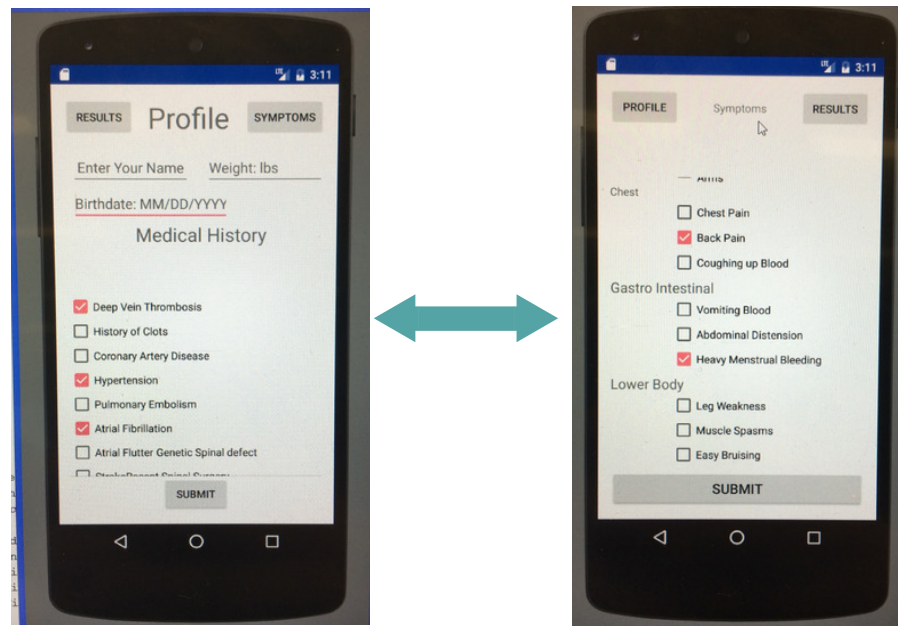
Further Recommendations

to improve the app

- Add more medications (beyond Xarelto) and more side effects
- Increase accuracy of frequency calculation by increasing dataset
- Account for medication dosages & user weights or age
- Consider ways to prevent possible HIPPA violations
- Improve accessibility for users who speak different languages, are hard of hearing, or visually impaired.

Sources:

- **Data (2016 Quarter3):**

http://www.fda.gov/Drugs/GuidanceComplianceRegulatoryInformation/Surveill ance/AdverseDrugEffects/ucm082193.htm

- **Presentation**: www.canva.com

- **Other programs:** R Studio, Android Studio, PostgreSQL, JDBC