## My RWD (My Real World Data)

Sarah Hackley

America's Got Regulatory Science Talent Student Competition

University of Rochester Class of 2019, Bioethics



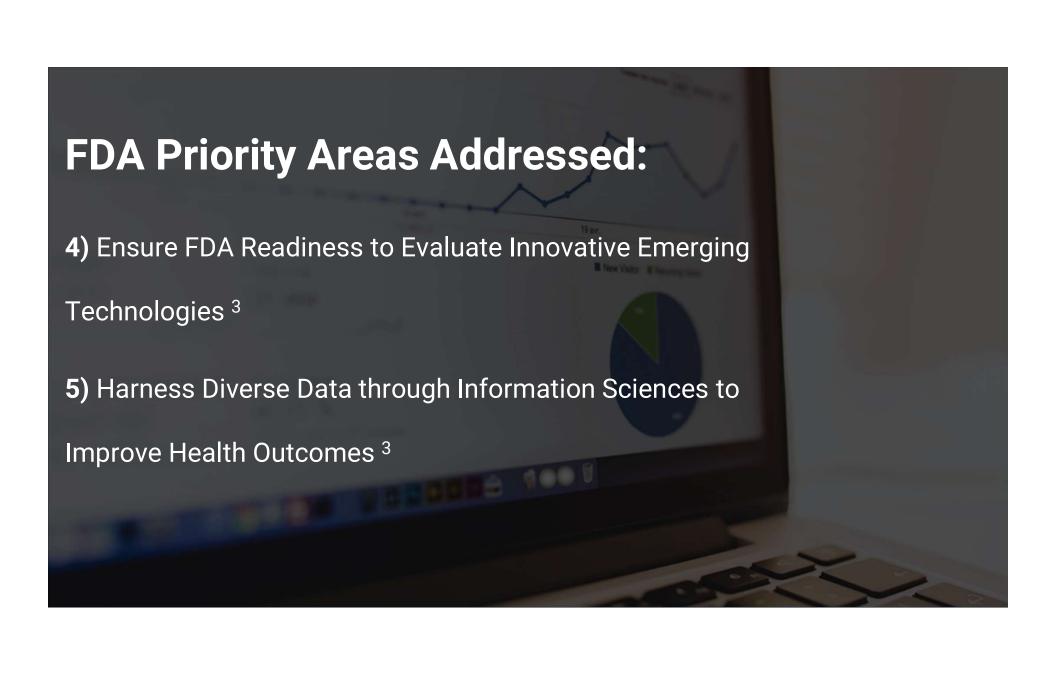
### **My Real World Data**

#### The Process:

- Opt-in/opt-out of data sharing
- Applies to devices that collect RWD
  - Example: Verily Study Watch <sup>1</sup>

#### Why?

- Increase autonomy over mobile health data
- Responsible collection of RWD for Real World Evidence (RWE) program <sup>2</sup>



## **The Problem**

- Deregulation around non-device software functions and medical devices <sup>4</sup>
  - Gap: FDA encourages, but does not require transparency and patient access to patient-specific information from medical devices <sup>5</sup>
- Lack of protection for anonymized (de-identified) data <sup>6</sup>
  - Risk of data re-identification
  - Privacy and confidentiality concerns

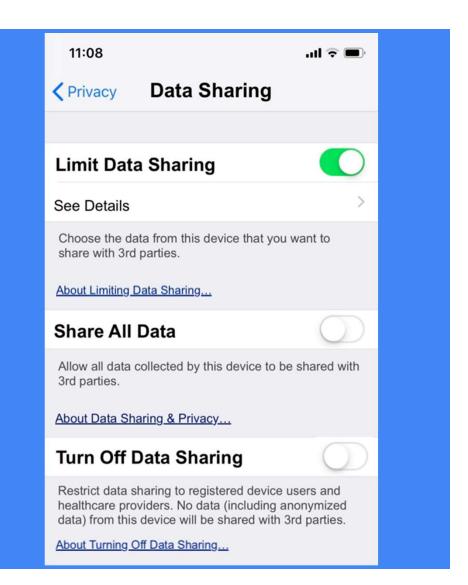
#### Data Re-identification

The process of matching de-identified data with publicly available data 6

- The Health Insurance Portability and Accountability Act (HIPAA) authorizes
  the release of de-identified health data to 3rd parties <sup>6</sup>
- Risk of re-identification is increasing
  - Era of Big Data
  - Advancing Classification Algorithms

# **Examples of Medical Devices that Transmit Data Wirelessly:**

- Wearable heart monitors and implanted pacemakers
- Continuous Positive Airway
   Pressure (CPAP) machines
- Blood glucose monitors (glucometers)



## Future Directions (Open Data Portal)

- Open data portal for research and development purposes
  - For patients who opt-in to sharing their health data with 3rd parties
- FDA could consider creating or using an existing Public Private Partnership (PPP) for this purpose
  - Examples: The Reagan-Udall Foundation and C-Path (Critical Path Institute)

You should not have to give up your right to privacy to participate in a technological society.

#### References

- 1. United States, Department of Health and Human Services, Food and Drug Administration. "K182456." https://www.accessdata.fda.gov/cdrh\_docs/pdf18/K182456.pdf
- United States, Department of Health and Human Services, Food and Drug Administration. "FRAMEWORK FOR FDA'S REAL-WORLD EVIDENCE PROGRAM." Office of Regulatory Science and Innovation, U.S., Dec. 2018. www.fda.gov/downloads/ScienceResearch/SpecialTopics/RealWorldEvidence/UCM627769.pdf
- 3. United States, Department of Health and Human Services, Food and Drug Administration. "Strategic Plan for Regulatory Science." *Office of Regulatory Science and Innovation*, U.S., 30 Mar. 2018. www.fda.gov/ScienceResearch/SpecialTopics/RegulatoryScience/ucm267719.htm
- 4. United States, Department of Health and Human Services, Food and Drug Administration. "REPORT ON NON-DEVICE SOFTWARE FUNCTIONS: IMPACT TO HEALTH AND BEST PRACTICES." Office of Regulatory Science and Innovation, U.S., Dec. 2018. <a href="https://www.fda.gov/downloads/MedicalDevices/DigitalHealth/UCM628128.pdf">www.fda.gov/downloads/MedicalDevices/DigitalHealth/UCM628128.pdf</a>
- 5. United States, Department of Health and Human Services, Food and Drug Administration. Manufacturers Sharing Patient-Specific Information from Medical Devices with Patients Upon Request Guidance for Industry and Food and Drug Administration Staff." *Office of Regulatory Science and Innovation*, U.S., 30 Oct. 2017. <a href="https://www.fda.gov/downloads/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/UCM505756.pdf">www.fda.gov/downloads/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/UCM505756.pdf</a>
- 6. Porter, Christine. 2008 "Constitutional and Regulatory: De-Identified Data and Third Party Data Mining: The Risk of Re-Identification of Personal Information." University of Washington Shidler Journal of Law, Commerce & Technology. http://digital.law.washington.edu/dspace-law/bitstream/handle/1773.1/417/vol5\_no1\_art3.pdf

#### Images:

- 1. Defense Advanced Research Projects Agency (DARPA). (2013). DARPA Big Data. [Image]. http://www.darpa.mil/NewsEvents/Releases/2013/02/13.aspx
- 2. Smart Watch. [Image]. https://pixabay.com/images/search/smart%20watch/
- 3. Christoph Scholz (2016) BIG DATA [Image]. https://www.flickr.com/photos/140988606@N08/27471484371
- 4. Data Privacy [Image]. <a href="https://images.app.goo.gl/iJr7W4rnRgz3rYL68">https://images.app.goo.gl/iJr7W4rnRgz3rYL68</a>

