WHAT YOU DON’T EXPECT WHEN YOU’RE EXPECTING
SECURITY AND PRIVACY ANALYSIS OF FEMTECH

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WHAT IS FEMTECH?

FEMTECH
Software, diagnostics, products, and services that use technology to improve Women's Health comprises Femtech, also referred to as Female Technology.

Femtech involves the use of digital health to motivate patients to access and use applications for managing health issues.

Digitizing Women's Health
WHY IS FEMTECH IMPORTANT?

- Women have been underrepresented and underserved by health-related apps.
GROWTH OF FEMTECH

VC Funding in the Femtech Industry

Source: Tech Crunch
“Our maternity costs were high, and we needed a more effective solution. Ovia Health helped us reduce costs by improving health outcomes in a way that was both high-tech and respectful of our employees’ privacy. Since we launched, we've increased the number of employees engaging with not just Ovia Health, but all of our family benefits.”

Senior Director at a major technology company
RISKS OF FEMTECH DATA BEING SHARED

• Intrusion into sensitive personal health details
• Healthcare pricing discrimination
• Workplace discrimination
• Abusive relationship dynamics
Most femtech apps are free; what’s the actual price of using them?

1. What data are being transmitted to these third parties?
2. How are the data being transmitted to the third parties?
3. How are the third parties using the transmitted data?
OUR INVESTIGATION

• Identification of the existing and the emerging femtech apps
• Examination of the femtech apps’ privacy policies
• Network traffic analysis of femtech apps in use
PRELIMINARY FINDINGS:
PRIVACY POLICY BREAKDOWN

• Apps not governed by HIPAA (*and not compliant with HIPAA*)
• Most apps transparent about who they share the date with for marketing purposes
• Main data aggregators:
  • AppsFlyer
  • Acxiom
  • Facebook
  • Pinterest
  • Google Analytics
• Vague language on when, how, and which data are collected
PRELIMINARY FINDINGS:
NETWORK ANALYSIS

- Traffic to and from the apps mostly encrypted
- Apps talking to:
  - Multiple AWS EC2 instances
  - Google
  - Facebook
- Further work will focus on:
  - Analyzing the nature of data is being shared with data aggregators
  - Discovering the patterns of data transmissions (only when app in use vs. periodically)
  - Collecting more information about the EC2 instances that the apps are talking to
• Inversion of privacy
  • Third parties have access to data about an individual that even an individual doesn’t know, and can’t access
• HIPAA – a legal framework, regulating medical information in the US

Should femtech data be considered for HIPAA compliance too?
An example from Acxiom on targeting shoppers for Valentine’s Day.

Average amount spent on a spouse/significant other:

- Men: $133.61
- Women: $62.14
- Pets: $26.24

Most in demand gift? Candy at 50% followed closely by flowers and jewelry.

Who will buy online?

Who will hit the Department Store?

Who favors candy vs. jewelry vs. flowers?
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REFERENCES

• Images:
  • Slide 2: Digitizing Women’s Health.
    • Link: https://venturebeat.com/2018/03/08/frost-sullivan-femtech-could-become-a-50-billion-market-by-2025/
  • Slide 3: Femtech Market Map.
    • Link: https://www.cbinsights.com/research/femtech-market-map/
  • Slide 4: Women in HealthCare - The Movers & The Shakers.
    • Link: https://ww2.frost.com/frost-perspectives/femtechtime-digital-revolution-womens-health-market/
  • Slide 5: VC Funding in the Femtech Industry.
    • Link: https://www.hitlab.org/blog/femtech-by-the-numbers
  • Slide 13: Marketing Attraction Made Easy This Valentine’s Day.
THANK YOU!

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