

Patient-managed Health Data

From FitBit to CME
(Consumer Mediated Exchange)

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Conflicts

Dr. Ozeran is president of a strategic consulting firm and president of a start-up in the patient engagement market. No information specific to either company will be discussed in this presentation.

Note: The information presented is general in nature and does not constitute a recommendation.

What do Patients want?

Accenture Consumer Survey on Patient Engagement

- 57% of consumers track their own health data
- 84% of consumers think they should have **complete access** to all of their EHR data
 - 40% of consumers would **consider switching providers** to obtain online access to their EHR data
- 71% of consumers feel they should be able to **update** their electronic health records

Impact of HIPAA on Patient Data

- Patient asks for data
 - What do you ask?
- Patient sends data
 - What are you obligated to do with it?

FitBit Flex¹



ForaCare Thermometer²



Withings Smart Body Analyzer³



ViSi Mobile
(from Sotera Wireless)⁴

Apple's Latest

- Partners: Epic, Mayo Clinic
- HealthKit: cloud API to aggregate data from multiple apps and monitoring devices
- Analytics and patient education by Mayo Clinic
- Providers can pull data from HealthKit into their EHR
- Similar to Samsung's (recently announced) Architecture for Multimodal Interactions (SAMI) - cloud-based, open software platform for aggregating data from multiple sources for analysis

Source: <http://www.informationweek.com/healthcare/mobile-and-wireless/apple-partners-with-epic-mayo-clinic-for-healthkit/d/d-id/1269371>

Data

Patient data is expanding rapidly – burden or benefit?

Key factors to consider

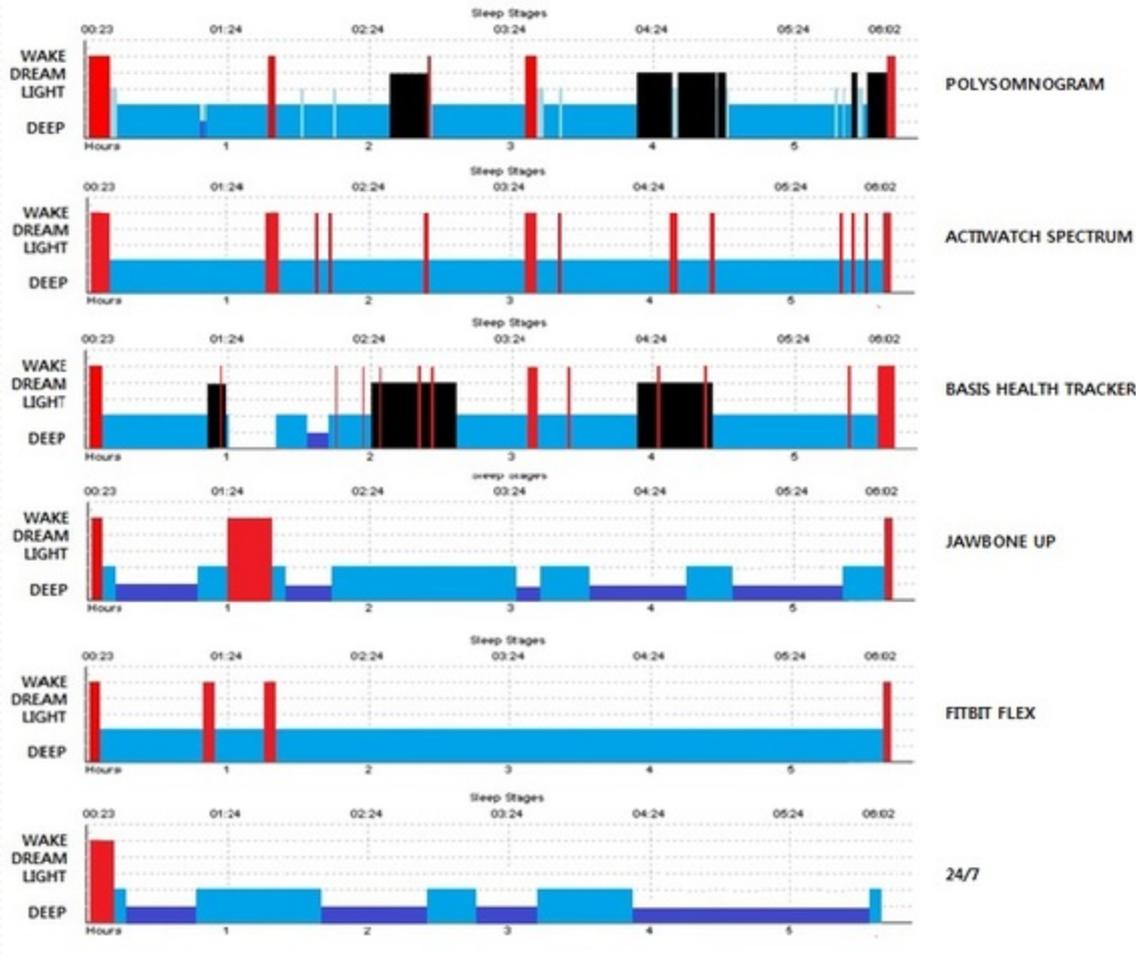
- Accuracy – was it accurate when collected?
- Provenance – the chronology of ownership
- Format – text, CSV, PDF, scan, CCD, CDA
- Filtering – find what is useful

Data Accuracy

There is a rapid proliferation of in-home devices

- How do you know if the measurements are accurate?

Sleep monitor comparison



Source: http://www.huffingtonpost.com/dr-christopher-winter/sleep-tips_b_4792760.html

Data Accuracy

There is a rapid proliferation of in-home devices

- How do you know if the measurements are accurate?
- When the patient reports the data, does it tell you which device it came from?
- Do you have a list of in-home devices that you know are accurate and ones that are questionable?
- Is there a UL-like entity testing them?

Data Provenance

Managing patient submitted data is not always easy

- Where did it come from?
 - A clinical provider
 - A lab (under the new rules that they must release)
 - Generated by the patient
- How do you know?
 - Is it signed in some fashion?
 - Is there an audit trail or record about the record?
 - Is the patient keeping it secure to ensure that it hasn't been altered?

Data format

- Device data stored in the cloud / company server
- Device data collected in the home / blue tooth
- What format is the data stored in?
- Can you incorporate it into your EHR?
- Do you want to?

Data Filtering

If you have all this patient data, what do you do with it?

- Large volumes of data is not information or knowledge
- How do you identify what is clinically useful?
- How do you ensure that you do not miss something that is clinically useful?

Consumer Mediated Exchange

A different approach to information exchange

- The HIE paradox (resolved with VBP/ACO?)
- Alignment of incentives
- Beneficiaries of HIE

Will those who benefit from HIE make it happen?

Image Sources

1. <http://www.fitbit.com/flex>
2. <http://www.foracare.com/Thermometer-IR20.html>
3. <http://vitrine.withings.com/us/smart-body-analyzer.html>
4. <http://www.visimobile.com/overview/>

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