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 Flex\(^1\) 

ViSi Mobile  
(from Sotera Wireless)\(^4\)

Withings Smart Body Analyzer\(^3\)

ForaCare Thermometer\(^2\)

$100

$120

$150

$500?
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

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

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