Lessons from an Empowered Patient and Her Caregiver
Session 228, February 23, 2017
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Speaker Introduction

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Learning Objectives

• Describe patient-facing tools and strategies that support bi-directional communication between patients, providers and other healthcare professionals and discuss how these strategies result in improved health outcomes

• Demonstrate tools and best practices for enabling patient self-management outside the clinical setting and discuss how to integrate the patient-generated data from these tools into the clinical setting

• Show how real world experiences in engaging patients and their caregivers with their health and healthcare activities improve outcomes

• Demonstrate application of IT best practices and methodologies to enable patients to optimize their daily activities
**Satisfaction:** Patient engagement improves communication between patients and providers

**Treatment/Clinical:** Empowering patients to gather symptom data between appointments and clearly communicate the information to their care team supports clinical decision-making and treatment evaluation

**Electronic Data:** Increased availability of patient-generated data increases data sharing and reporting

**Patient Engagement:** Longitudinal patient-generated health data supports analysis, improves patient engagement and increases patient self-awareness

**Savings:** Increased patient engagement has been demonstrated to reduce costs
A Patient’s Story

Kate Sheridan
Student, Health Administration and Policy
George Mason University
The Beginning

First 3 years... 30 Providers, 15 diagnoses, 5 hospitalizations
Soccer to Wheelchair
High Pain Levels
Building Relationships
Emergency Shoes

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Self-Management
Empowered
Kristina Sheridan, MS
Department Head/Principal Investigator
MITRE
Patient’s Story

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“People are experts in everyday living. Physicians are experts in clinical care. Technologies bring them together.”

– Patricia Brennan, RN, PhD, FAAN, FACMI
Almost 1/3 people in the US manage at least one chronic condition\textsuperscript{1}

More than 3/4 of US healthcare dollars are spent on their behalf

Benefits of Patient Engagement

Cultural Shift

Current

Clinical Experts and Clinical & Passive Patient-Generated Health Data

Future

Engaged Patient Expert and Active Patient-Generated Health Data

Patient-Provider Partnership
Why is it so hard?
Track – Symptom Picker

Which symptoms should we track?

- Photophobia (intolerance to light)
- Anxiety without clear explanation
- Sadness lasting for days or weeks
- Hearing voices
- Thoughts of hurting yourself
- Thoughts of hurting others
- Fear of people, places or things
- Mood swings
- Irritability
- Uncontrolled restlessness
Track – Symptom Tracker

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Track - Medications
Track – Medication Reminders
Are they developing a new comorbid condition?

These symptoms are getting worse

How did they respond to that new medication?

My mood is a lot better lately
Share: Layers of Detail
Share: Dashboard View

![Dashboard View Image]

Last 7 days

**Average Symptom Severity:**

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shortness of breath</td>
<td>8.20</td>
</tr>
<tr>
<td>Fatigue</td>
<td>8.60</td>
</tr>
<tr>
<td>Sore throat</td>
<td>6.29</td>
</tr>
<tr>
<td>Blurry vision</td>
<td>5.83</td>
</tr>
<tr>
<td>Constipation</td>
<td>5.00</td>
</tr>
<tr>
<td>Fainting spells</td>
<td>4.83</td>
</tr>
<tr>
<td>Headache</td>
<td>4.40</td>
</tr>
<tr>
<td>Cough</td>
<td>4.20</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>4.60</td>
</tr>
</tbody>
</table>

**Average Symptom Values**

**Average Medication Compliance:**

- **Procardia:** 17%
- **Vasotec:** 67%
- **Avandia:** 83%
- **Glucotrol:** 92%

**Last 7 days**

**Average Feeling:** Poor

**Feeling Breakdown**

- 😊 x 0
- 😊 x 1
- 😊 x 1
- 😞 x 5
- 😞 x 1

View Symptom Data
View Medication Data
View Feeling Data

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Data Standards

- Encrypted Database
- Secure Login
- Device agnostic capabilities

Systematized Nomenclature of Medicine-Clinical Terms (SNOMED-CT)

- Symptoms
- Procedures
- Patient/Family History
- Allergies
- Problems

RxNorm Medications
Evidence from Providers

2 SURVEYS DISTRIBUTED
SurveyMonkey

40 PHYSICIANS
(Responses)
14 GENERALISTS
26 SPECIALISTS

27 PHYSICIAN ASSISTANTS
(Responses)
24 GENERALISTS
3 SPECIALISTS

LONGITUDINAL TREND IN MEDICATION COMPLIANCE
LONGITUDINAL TREND IN SYMPTOM SEVERITY
USE FOR CLINICAL DECISIONs

Source: MITRE Corporation/Heinz College Carnegie Mellon University Fall 2014 Capstone Project

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Evidence from Patients

• Remote collection of Patient Reported Outcomes: Reliable and Feasible
• Improved understanding of disease
• Potential to improve patient-centered care and communication between patient and provider
• Tailored content and other innovations needed to combat declining adherence


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• **MACRA** introduced several reforms that will have a positive impact on patient engagement

• **MIPS** is an opportunity for providers to improve the quality of care they provide by engaging patients through the use of Patient Generated Health Data in the clinical setting

• Key tenet behind **Alternative Payment Models** is patient engagement
In Summary: Future State
An Introduction of How Benefits Were Realized for the Value of Health IT

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Questions

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