604-How to Enhance Self-Management through New Technology for Patients and Their Families: Not Your Mother's Telehealth

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M & J ASSOCIATES

Objectives
At the conclusion of Presentation, participant will be able to:

1. Identify 5 new IT products that may be used to ease patient transition from hospital to home.
2. Implement IT product usage into organizational workflow with minimal disruption.
3. Measure outcomes that have demonstrated improvement with use of above programs.
Class goal

During this presentation the participants will have an opportunity to:
2. Think outside the box about ways to use technology.

Why do we care?

- Changing patient expectations—”the quantified self”
- Continued focus on care transitions
- Communication, Communication, Communication
- Rapidly developing technology
- Lack of experience in implementation
4 Pillars of Coleman’s Care Transitions Model

1. Medication Self-Management
2. Patient Centered Health Record
3. Early, consistent communication with PCP/Specialists
4. Red Flags

What do patients and their families say?

Hospital discharges did not provide for:

- information transfer
- patient/caregiver preparation
- support for self-management
- empowerment skills to assert preferences
What's out there?

- Personal pedometers
- Apple health book
- Google glass
- Apple watch
- PHR

Personal pedometers

- Fitbit, Nike Fuelband, Move,
- Jawbone UP, Basis, Omron
Healthcare research

- Decreased LOS post-op
- Demonstrated accuracy in sleep/wake studies
- Increased activity w COPD patients

Next Step:
- Under mattress sensors for sleep
- Red Brick Health-personalized coaching plans

Additions Quantified Self Apps

- AskMeEvery: track mood for 3 months. Example: it proved was unhappy with job. Soon after, I quit. Other good apps include MercuryApp and TrackYourHappiness. Being mindful of our changing moods keeps us self-aware.
Apple’s Healthbook

- Fitness functionality: activity, weight, nutrition
- Heat Rate and BP Monitoring
- Blood work, O2 Sat, BS
Hydration and respiratory rate monitoring

Sleep tracking
### Apple Watch

![Image of Apple Watch]

**Emergency Card**

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Birthdate</td>
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<tr>
<td>October 21</td>
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<tr>
<td>November 22</td>
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<td>December 23</td>
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<td>January 24</td>
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<td>February 25</td>
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<tr>
<td>March 26</td>
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<td>April 27</td>
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**Medications**

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**Weight**

| Weight | 190 lb |

**Eye Color**

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**Blood Type**

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**Orgon Donor**

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**Location**

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Apple Watch in Health Care

- Data Consolidation
- Quantified Self
- Easier compliance
- Minimally Disruptive Medicine
- Social Aspects
- Real Time Data Transmission

Minimally Disruptive Medicine

Shared decision making enables patients and clinicians to share the best available research evidence and make decisions that better reflect the patient’s values and preferences. Minimally disruptive medicine focuses on pursuing the patient’s goals (preventing premature death, feeling better, and living without hindrance from complications of disease or treatment) while reducing the treatment burden.
Google Glass

- Able to pull information from large data banks
- Record interactions
- Immediate access to medical record
- Others cannot hear audio

Google Glass In healthcare

- Clinical documentation
- Emergency department dashboards
- Decision support
- Alarms and notification system

- Think what you could use it for!
Lower tech personal health records
http://www.myphr.com/startaphr/what_is_a_phr.aspx

My Kinergy
Medications

Barriers to Overcome

- Imbedding in workflow
- Perception of time to implement
- Concerns regarding patient/family maintaining record.
- Legal documents: new category
Barriers to Implementation

"It takes too long."

I'm a good teacher.

He's just stubborn to try it.

I don't have the time.

Pt/Staff Responses

- Inclusion
- Importance
- Job Performance
- Insecure?
Evaluating new technology

- What problem will it solve?
- Can I objectively measure its impact
- What population will best serve?
- Do I have champions in my agency who will help
- How easy is it to use
- How versatile is it

Data Consolidation

- Getting to know what to collect
- Developing minimally invasive ways to collect.
- Barriers:
  - How to share
  - How to analyse
  - How impacts practice
Embedding new technology in your Workflow

- Use of PDSA
- Start small: one clinician one patient
Plan

- Assemble your team
- State aim of your test.
- Predict what you expect to happen.
- Develop change action.

Flow Map Process

1. Determine the boundaries
2. List the steps
3. Sequence the steps
4. Draw appropriate symbols
5. Check for completeness
6. Finalize the current process map
7. Complete the “Quality Audit”
8. Apply waste analysis to identify bottlenecks, waste and improvements
9. Test your changes
10. Redesign new system and document in the form of policies and procedures.

Web Sites to Help w Process Map

- Xmind.com

Do

- CARRY OUT YOUR PLAN.
- IDENTIFY BARRIERS, UNEXPECTED FINDINGS.
- EVALUATE, ANALYZE DATA.
- START SMALL, 1 CLINICIAN, 1 PATIENT
Study

STUDY YOUR FINDINGS:

- WERE THEY WHAT YOU EXPECTED?
- WHAT DID YOU LEARN?
- WHAT FINDINGS SURPRISED YOU?

Charts, stories, diagrams

Successes and failures
Act

- MAKE CHANGE PLANS BASED ON WHAT YOU LEARNED
- PLAN NEXT “DO”: INCREASE NUMBERS INVOLVED.

Change

- Small tests of change-revise (PDSA)
- Kaizen (teams)
- Look at variations/unexpected findings
- Measure success-tell the story
- Revise
- Try again!
- Slowly “spread”
- Accept variations
Implementing the Change

- Develop **processes** to reinforce change
- “**Make it easy to do the right thing**”
- Report outcomes
- Tell success stories
- Look for cultural paradigm shift
- Leverage successes in marketing, recruiting, other community groups, providers
- Examine effect on other departments
- Build into infrastructure i.e. orientation

Desired Outcomes/Measurement Tools

- Increased patient/caregiver satisfaction
  - HCAPS
- Improved patient engagement
  - Tool: Patient Activation Measure (PAM) (How will this impact practice)
  - Improved adherence to plan of care
- Improved medication adherence
  - Morisky Medication Adherence Tool
- Adherence with scheduled appointments
### Morisky 8-Item Medication Adherence Questionnaire

<table>
<thead>
<tr>
<th>Question</th>
<th>Patient Answer</th>
<th>Score</th>
<th>Yes: N=0</th>
</tr>
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<tbody>
<tr>
<td>Do you sometimes forget to take your medications?</td>
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<tr>
<td>People sometimes may take their medicines for reasons other than forgetting. Thinking over the past 2 weeks, were there any days when you did not take your medicine?</td>
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<td>Have you ever cut back or stopped taking your medicine without telling your doctor because you felt worse when you took it?</td>
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<td>When you travel or leave home, do you sometimes forget to bring along your medication?</td>
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<td>Did you take all your medications yesterday?</td>
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<td></td>
<td></td>
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<tr>
<td>When you feel like your symptoms are under control, do you sometimes stop taking your medicine?</td>
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<tr>
<td>Taking medicine every day is a real inconvenience for some people. Do you ever feel hassled about sticking to your treatment plan?</td>
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<tr>
<td>How often do you have difficulty remembering to take all your medications?</td>
<td></td>
<td>A=0;</td>
<td>B=1;</td>
</tr>
<tr>
<td><em>A. Never or rarely</em></td>
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<td></td>
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<tr>
<td><em>B. Once in a while</em></td>
<td></td>
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<tr>
<td><em>C. Sometimes</em></td>
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<tr>
<td><em>D. Usually</em></td>
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<td></td>
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<tr>
<td><em>E. All the time</em></td>
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**Score: 0-8:**
- **0-3:** poor adherence
- **4-5:** moderate adherence
- **6-8:** high adherence

Financial Considerations

- Productivity
- number of visits
- staffing
- length of stay
- brand loyalty
- patient/family
- referral sources

Just Imagine.......
References

Coleman, E., Parry, C., Chalmers, S. & Min, S. (2006). The Care Transitions Intervention: Results of a randomized controlled trial. Archives of Internal Medicine, 166(25), 1822-1828


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