Patient Engagement

The Future State of Technology
Driving Patient Engagement

Al Kinel – President,
Brett Kinsler, DC - Partner, Clinical Services & Informatics
Strategic Interests, LLC
Rochester Digital Health eco-System

Fact: Global Digital Health & Health IT sectors are exploding and Patient Engagement is a key part

Our community has assets to be a digital health leader, but we lack critical mass, branding, alignment, & focused economic development to accelerate innovation and growth of new projects and ventures

Inspiration:

• Adoption of digital health by providers, payers, collaboratives, etc.
• Increase activity to start, attract and grow digital health companies
• Declare the strength of our digital health eco-system – and “sell it”

Look for these symbols in our presentation

Developed in Rochester Strategic Interests Affiliate
Agenda

1. The Patient Engagement Explosion

2. What the Future Holds – Patient Engagement Technology

3. Barriers & Pitfalls to Attaining the Benefits of Patient Engagement Technologies

4. How to Succeed with Patient Engagement Solutions
Patient Engagement Technology Explosion

U.S. mHealth market size, by services, 2014 - 2025, (USD Billion)

Global mHealth Market
- $152.2 billion by 2026
- CAGR around 26.1 %
Patient Engagement Technology Explosion

Adoption of Digital Health Tools 2015-2019

Legend:
- 2015
- 2016
- 2017
- 2018
- 2019

Percent of all respondents

Source: Rock Health 2019 Digital Health Consumer Adoption Survey data (n = 4,000)
Telehealth Adoption Rates

Use of Telehealth is Finally Growing – and Expected to Explode

US Telehealth Market Size

Sales ($mil)

Source: US Telehealth Industry Analysis Report, 2022

Source: Deloitte 2018 Survey of US Physicians

Source: US Telehealth Industry Analysis Report, 2022
Patient Engagement Explosion – Perfect Storm

1. Consumerism & Demand

2. Disruptors – Major Moves Disintermediating Incumbents

3. Phenomenal Innovation Breakthroughs

4. Ubiquitous Smartphones, Portals, Other Self-Service Tools

5. Regulatory & Reimbursement Changes - VBP

6. Organization Initiatives that Leverage Patient Engagement
Consumerism - Expectations

McKinsey & Company  Consumer Health Survey 2015

MYTH #1
HEALTHCARE IS DIFFERENT FROM OTHER INDUSTRIES.
Consumers don’t bring the same expectations about customer experience to healthcare that they bring to retail or tech companies.

REALITY
Our findings indicate consumers have similar expectations for healthcare and non-healthcare companies.
Participants were offered ten traits and asked to select three they thought mattered most.

Here are traits consumers value in companies:

- Consumers demanding as much in healthcare as other industries
- We know the impact of consumer demands
Consumerism – Expectations
What is Important AND Missing?

The Priority-Capability Gap

Source: 2018 Kaufman Hall Healthcare Consumerism Survey
Consumer Demands & Action

Engagement Drives Patient Choice

Providers believe 44% of patients would leave due to poor communication

But the risk is much greater

I would switch doctors due to poor communication or engagement

78% agree
Demand for Patient Engagement

Digital Demand

There is massive digital demand for health and wellness experiences

- 72% of people researched health online
- 77% of health inquiries start with search
- 58% refilled their prescriptions online
- 32% measure fitness goals via app
- 31% pay their medical bills online
- 24% monitor their health issues with devices
- 18% research care costs with insurer tools
- 17% get alerts for treatment or medication

Sources: Pew & Deloitte University Press
Consumerism Driving Telehealth Adoption

**Top three benefits of virtual care relate to patient experience**
Survey question: What are some of the benefits of virtual care technologies?

- Improved patient access to care: 66%
- Improved patient satisfaction: 52%
- Staying connected with patients and their caregivers: 45%

**Other benefits:**
- Improved care coordination, outcomes, and quality of care: 42%
- Potential to improve cost effectiveness of care: 42%
- Increased flexibility to clinician’s schedule: 41%
- Potential to improve workflow: 32%
- Staying connected with my peers and other clinicians: 28%
- I don’t see any benefits: 11%

**Statements by Patients**
- Use of technology important to managing my healthcare: 72%
- Want to use smartphones to with healthcare providers: 54%
- Want better access to mHealth and telehealth tools: 78%
- More likely to select provider with online or mobile visits: 79%
- Ready to adopt mHealth and technology in treatment: 66%
- Millennials who prefer telehealth to in-person visit: 60%
- Millennials who want providers to use app for appointments, share data, manage care: 71%

Source: Deloitte 2018 Survey of US Physicians

Telehealth Virtual Care Models

“Telehealth has the potential to reform and transform the industry by reducing costs and increasing quality and patient satisfaction.”
— Health Affairs, February 2014

Direct to Consumer

• Replace some urgent care / PCP visits
• Chronic disease management checkups
• Initial consult with specialist – 2nd opinion
• Monitor patients at home (with-w/o Home Health services)
• Clinical trials: recruitment & retention

Institution-Centric

• Hospital link to LTPAC to reduce readmissions
• Rural hospital/clinic link to tertiary care to care for trauma and complex cases

Provider to Provider

• Second opinion
• Integrate behavioral health / primary care
• Store & Forward
• Education (MDs, nurses, mid-levels)
Who Is Disrupting Healthcare?

Facebook is developing products and partnerships that can help people connect with resources to improve their health. Today we’re sharing an update on how Facebook is delivering more Health tool in the US.

Best Buy’s Healthcare Strategy: 5 Million Seniors in 5 Years

New CEO Corie Barry unveils the company’s new business direction.

It wasn’t long ago that Best Buy (NYSE:BBY) seemed headed for a slow, certain death, thanks to Amazon. Customers were increasingly visiting Best Buy only to look at electronics, then leaving to buy them online. Best Buy’s greatest assets -- location and number of stores -- were quickly becoming liabilities. The future looked grim.

But Best Buy wouldn’t go without a fight. Former CEO Hubert Joly successfully turned the company around by prioritizing excellent customer service, both at the stores and in customers’ homes. As technology expanded, the house-call model proved key, as consumers needed help with everything: TV remotes, home-security setup, smartphones, laptops, TVs, garage-door openers. Best Buy’s Geek Squad and tech advisor ranks swelled to 20,600 employees.

Customer loyalty grew, too. Joly improved Best Buy’s

Amazon

Haven teams up with Aetna, Cigna to offer plans to JPMorgan workers

Haven is teaming up with Aetna and Cigna to offer health plans to JPMorgan workers in two states. (Shutterstock)

Haven is partnering with two national health insurers to launch the first sales in its mission to disrupt the healthcare system.

The joint venture between Amazon, JPMorgan Chase and Berkshire Hathaway will offer health plans to 30,000 JPMorgan workers in Ohio and Wisconsin in 2020 and is backed by Aetna and Cigna. Health Fears, Bloomberg reported. Amazon will also allow customers to purchase in the FierceHealthcare Health Fears, home and Amazon. Amazon.
Who Else is Disrupting Healthcare?

Cleveland Clinic and Boston-based telehealth company American Well are forming a joint venture digital health company.

Google, Mayo Clinic strike sweeping partnership on patient data

Sony launches new B-to-B mobile health platform including a wearable

Others
Why Patient Engagement Explosion?

Disruptors

Uber encroached taxis by ability to meet unmet needs: convenience – reliability – transparency – cost – personalization

Coming to Healthcare – Use Them – or lose

An integration that lowers the barrier to care

Streamline non-emergency medical transportation (NEMT) using Uber Health, directly from Cerner's electronic health record (EHR).

Uber Health chief: With 1,000+ partners, the question is no longer, 'What the heck is Uber doing in healthcare?'

Morgan Haefner - Monday, June 24th, 2019 Print Email

Four million medical appointments are missed or delayed every year because patients can't get to their appointments due to transportation, data shows. That's $150 billion in cost to the healthcare system each year that rideshare companies like Uber and Lyft are looking to address.

Dan Trigub, head of Uber Health, told Becker's at the AHIP Institute & Expo that when he attended the conference three years ago as a leader of healthcare partnerships at Lyft, attendees questioned why a rideshare company was at a health insurance industry meeting.

"Three years ago, the conversation was, 'What the heck is Uber doing in healthcare? You're just taking a millennial to a bar on a Friday night,'" Mr. Trigub, who has been head of Uber Health for six months, said during a June 19 interview in Nashville. "But that couldn't be further from the truth in terms of how we can help underserved populations."

The $24B question: Is Lyft about to transform health care?

10:50 AM - April 2, 2019

By Jackie Kimmel, Senior Analyst

When Lyft filed for its initial public offering (IPO) last month, one fact became increasingly clear: The company is hemorrhaging money. The company reported a net loss of $2.3 billion over the past three years, and it's not sure it can be profitable in the future. "We have a history of net losses and we may not be able to achieve or maintain profitability in the future," the company wrote in the filing document.

Four lessons on reducing no-show rates with hospital-provided transportation

Yet, on Friday, Lyft vastly outperformed expectations when it began public trading. Lyft shares opened up 20% at $87.24—giving it a market value over $26 billion (and making it one of the most valuable American companies to go public in the past decade).

So why were investors (at least initially) so bullish on the company? Because of the future it promises—a big part of which is driverless cars. The company says they want autonomous vehicles to provide most of its trips within the next five years. However, this goal is quite optimistic, as the technology and regulatory environment...
Phenomenal Innovation Breakthroughs

1. Sensors and PGHD
2. Artificial Intelligence / Machine Learning
3. Communication, Admin, Phones & Apps
4. Personalized / Precision Medicine
Breakthrough Sensors and Wearables

Types of Sensors Used in Devices for Healthcare

Source: SAM Solutions
Remote Patient Monitoring (RPM)
Patient Generated Health Data (PGHD) & Patient Reported Outcomes (PRO)

**PGHD:** Data created/recorded from patients outside clinical setting to address health concern

**PRO:** Patients report health, quality of life, or functional status related to treatment

**RPM:** Monitoring patients in-home (or elsewhere) by collecting biometric and behavioral data and alerting caregivers when intervention is needed

- Most provider RPM programs have been able to keep patients out of hospital, reducing:
  - Readmissions
  - ER visits
- Even those new to RPM have had success and are shifting from pilots to broad deployment
- Some deploy by payer, by disease, by risk-profile, or for other factors

**Proliferation of wearable devices, online questionnaires, mobile apps, and analytics has increased types, frequency, amount and uses of PGHD**

Applications of Devices & Wearables

Clinical Conditions & Vitals

Monitor patients between encounters experiencing:

• Diabetes
• Cardio-Pulmonary disease
  – CHF
  – Myocardial Infarction
  – COPD/Asthma
  – Hypertension
• Oncology
• Kidney disease
• Neurological disorders
• Transplant patients
• Others
• Multiple Co-morbidities

Vitals Monitored:

• Heart Rate / Pulse
• Blood Pressure
• Glucose Levels
• Sleep
• Respiration
• Blood Oxygen (pulse-ox)
• Activity
• Blood Flow
• Perspiration
• Temp (Body & Skin)
Evolution of Health Care Toward Personalization

Five Stages of Health Sector Evolution

Health 1.0
Production
Focus: Evidence based treatment
Strategic differentiator: Quality; patient survivability

Health 2.0
Industrialising
Focus: Value chain
Strategic differentiator: Responsiveness; end-to-end service coverage

Health 3.0
Automation
Focus: Operating model
Strategic differentiator: Access: cost to serve, efficiency

Health 4.0
Digitalisation
Focus: Business model
Strategic differentiator: Uniqueness: mass personalisation, proactive healthcare

Health 5.0
Personalisation
Focus: Customer model
Strategic differentiator: Lifelong partnership: customer wellbeing, quality of life

Five stages of evolution of the health sector
Adoption of Self-Service Tools in Healthcare

Need to link portals - notes - apps - messaging

The number of mobile phone users in the world is expected to pass the five billion mark by 2019.

Source: Mobile users: Statista.com; Pew Research Center

The Growing Value of Digital Health

Evidence and Impact on Human Health and the Healthcare System

Research Article

Patient portal messaging for care coordination: a qualitative study of perspectives of experienced users with chronic conditions

Jennifer L. Hefner1,2,3, Sarah R. Maclaurin2, Alison Blitz4 and Cynthia J. Seed1,3

Abstract

Background: Patient portal secure messaging (asynchronous electronic communication between physicians and their established patients) allows patients to manage their care through asynchronous, direct communication with their providers. This type of engagement with health information technology could have important benefits for patients with chronic conditions, and a more thorough understanding of the use and barriers of secure messaging among this population is needed. The objective of this study was to explore how experienced portal users engage with secure messaging to manage their chronic conditions.

Methods: Three focus groups were conducted with 17 total patients who self-reported a cardiovascular condition. Participants were asked questions about their experience with patient portal secure messaging. Focus group transcripts were coded through inductive and deductive methods to reveal common themes.

Results: Participants’ motivation for using messaging included the speed and ease of such communication and direct access to a physician. Messaging was used by patients on an extension of the office visit and supported coordination of care among providers as well as patient collaboration with family members or caregivers. Patients

Source: OpenNotes Foundation, University of Rochester Medicine

ROCHESTER
Adoption of Self-Service Tools in Healthcare

Need to link portals - notes - apps - messaging

Epic has focused patient engagement on MyChart and has 69 apps in the App Orchard related to Patient Experience.

Give patients the tools to be healthier with MyChart, Epic's patient portal.

Patients have personal and family health information at their fingertips with MyChart. They can message their doctors, attend e-visits, complete questionnaires, schedule appointments, and be more involved in managing their health.

Patients in the hospital can use MyChart Bedside to stay in touch with their care team, review their schedule, access personalized patient education materials, and request help.

Prospective patients can become new patients through easy online scheduling with MyChart.
Personalized Patient Engagement

Data, Apps, Precision Medicine Coming Together

- Online, open, patient-facing community
- Focused on bringing ecosystem together
- Started in ALS in 2004
- Expanded to many conditions in 2011
- Deep patient data and experience
- 30-40 chronic diseases
Regulatory & Reimbursement Shifts

The following are enabling or motivating the shifts to increase adoption of patient engagement initiatives, technologies and approaches:

- **Promoting Interoperability – Anti-information Blocking**
- **Reimbursement**
  - Remote Patient Monitoring (RPM)
  - Chronic Care Management (CCM)
  - Telehealth – CONNECT for Health Act
- **Trusted Exchange Framework – Common Agreement (TEFCA)**
- **Fee for Service (FFS) to Value Based Payment (VBP)**
  - Bundled Payments
  - ACOs / DSRIP / MCOs / PACE
  - Impact of Quality Scores and Readmissions on Payment
Shift in Care From the Hospital to?

Healthcare is shifting from hospitals to many venues
What are the Barriers & Pitfalls?

## Top Barriers Preventing Widespread Adoption of Patient Engagement Technology Tools

### What are the top three barriers preventing widespread adoption of technology tools for patient engagement?

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not covered by insurance</td>
<td>51%</td>
</tr>
<tr>
<td>Lack of integration with EMRs</td>
<td>46%</td>
</tr>
<tr>
<td>Cost to patient</td>
<td>45%</td>
</tr>
<tr>
<td>Unclear benefit</td>
<td>37%</td>
</tr>
<tr>
<td>Complexity of use</td>
<td>33%</td>
</tr>
<tr>
<td>Security concerns</td>
<td>21%</td>
</tr>
<tr>
<td>Lack of provider recommendations</td>
<td>21%</td>
</tr>
<tr>
<td>Not currently available as off-the-shelf tools</td>
<td>17%</td>
</tr>
<tr>
<td>Lack of funding by providers</td>
<td>13%</td>
</tr>
<tr>
<td>Unfavorable cost-benefit ratio</td>
<td>7%</td>
</tr>
</tbody>
</table>

*Base = 595 (Multiple responses)*

### SI Perspective

- **Silo not linked to other patient engagement solutions**
- **Lack clarity of stakeholders & impact(s)**
- **Lack patient focus: cohort, population, service line, behavior**
- **Tech-centric vs. strategic**
- **Lack use cases, scenarios & interventions**
- **Poor execution: Pilot/Rollout/Vendors/Outreach**
- **Not linked to patient needs, goals, behaviors**
- **Poor workflow of providers, patients & caregivers**

NEJM Catalyst (catalyst.nejm.org) © Massachusetts Medical Society
Challenges in Attaining Value from Solutions

Devices
- Difficult to remain current
- Different connection approaches
- Device management / BYOD?
- Multiple vitals – and devices

Data - Needle in haystack syndrome
- Volume of data overwhelming
- Not validated
- Not normalized
- Relevant patients / events / actions

Workflow
- Order, dispatch, train, use data
- Integration: EMR, Telehealth, other
- Communicating with patients
- Coordinating data to interventions

Regulatory / Policy
- Reimbursement
- Risk of network vulnerability
- Patient consent
- Data as part of medical record
Examples of Patient Engagement Technology
Example: Engagement at home, office, hospital

- Wearable thermometer connected to smartphone doesn’t disturb sick baby
- Kiosk connected to patient portal and EMR in waiting room
- Hospital bedside screen for use by patient: education, surveys, information, scheduling
Integrating Sensors and Analytics

Source: SAM Solutions

Medication with ingestible event marker to track if taken

Home device dispenses medication and tracks adherence

Actionable dashboards and alerts from integrated patient generated health data
Innovative Patient Engagement

Combining Sensors, Images & AI

AI powered diagnostics from dermatology images

In-home monitoring for heart failure patients

Camera is swallowed and captures images for diagnosis

Screening for Diabetic Retinopathy
Cost and Quality Transparency Tools

**Patient tools to gather real cost and quality data for health care planning**

- Fair price estimates for procedures
- Quality comparisons of hospital metrics

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**Rochester, NY: Knee Repair Surgery Cost Comparison**

<table>
<thead>
<tr>
<th>Cost Category</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Price</td>
<td>$2,625</td>
</tr>
<tr>
<td>Fair Price</td>
<td>$4,300</td>
</tr>
<tr>
<td>Expensive Price</td>
<td>$7,200</td>
</tr>
</tbody>
</table>

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**Spine MRI (no contrast)**

<table>
<thead>
<tr>
<th>Cost Category</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair Price</td>
<td>$669</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>- $1,757+</td>
<td></td>
</tr>
</tbody>
</table>

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**Insurance Reimbursement Transparency**
Connecting Complex Patients at Home
Solutions Integrated with Care Management

Bio-Metrics
- **Capability:** Continuous Remote Clinical Monitoring
- **Benefit:** Increased Patient Adherence

Medication Adherence
- **Capability:** Encourage & Remotely Monitor Patient Meds
- **Benefit:** Increased Safety and Intervention

Safe Home Monitoring
- **Capability:** AI Learns Behavior, Monitors & Alerts
- **Benefit:** Increased Well Being and Independence

Telehealth
- **Capability:** Home triage, e-visits, advice, peripherals
- **Benefit:** Increased Access and Adherence

Individually each helps improve care. Together, impact can be significant

**Technology Enabled Engagement**
How can organizations be successful?

**What Needs to Happen Next to Make Patient Engagement a More Meaningful Strategy for Improving Healthcare?** (n=68)

- **Vendor**
  - Make Technology More Usable/Effective
  - More Disruptive Technology/Approaches

- **Patient-Centric**
  - Put Patient in the Driver’s Seat (Listen)
  - Adapt to Individual/Group Patient Needs
  - Flexible Options for Patient Interaction
  - Treat Patients like Consumers
  - Build Broad Patient Relationships
  - Make PE Worthwhile for Patients
  - Greater Patient Responsibility/Accountability

- **Operational**
  - Integrate Tools, Processes, and PE Goals
  - Enact Provider Cultural Change
  - Ability to Measure PE Costs/Benefits
  - Develop Enterprise Strategy/Consensus

- **Other**
  - Adjust Reimbursement Models
  - Adapt Regulations
How can organizations be successful?
Moving from silos to conversations…

And enabling multi-faceted Patient journeys

Consumer Journey
- Awareness
- Consideration
- Management
- Diagnosis
- Treatment

Clinical Journey
- Care Plans
- Interventions
- Clinical Interactions
How can organizations be successful?

*Offer what they want and need*

Principles to Guide Patient Engagement

- User and Patient Centered
- Outcome and Goal Driven
- Compliant and Secure
- Agile and Planned
- Connected to Other Solutions
- Workflow Optimized
- Timely
- Measured
- Corporate Commitment
- Continuous

Make it of value to the user, easy to use, flexible and continually enhanced
Why Rochester Can Thrive in Digital Health

Companies, individuals & volunteers to make a difference

Momentum in tech startups, recruitment & expansion – even Digital Health

Proven ability to collaborate in healthcare

Payer concentration – and leadership to address issues

Eager venture community – with experience in healthcare

Alignment with NY State & Funding: ESD, DOH, OMH, Dormitory Authority

Manageable Health HIT footprint & Effective RHIO

Innovation in our DNA

Top academic institutions & technical workforce - # 1 in STEM

High-quality healthcare with exceptional programs – that strive to get even better
Backup
Example: Remote Patient Monitoring

**Home-based Cardiac Rehab**

**Project Description:** A home-based rehab program following a cardiac event that tracks and monitors activity utilizing a wearable, a mobile app and a real-time clinical dashboard following a cardiac event.

**Outcomes to date**
- Scaled to all SCAL medical centers
- Over 2,362 patients enrolled
- Over 1,880 patients graduated
- Completion rates improved to 80%+ for home based cardiac rehab (vs. ~50% for in-clinic rehab)
- 27 post-program hospitalizations, only 17 cardiac related*

**Going Forward**
- Expand home based cardiac rehab to 5000+ patients in 2019
- Expand home based rehab platform, considering pulmonary rehab

*Note: *As of June 2019

Source: Kaiser Permanente
NEJM Catalyst (catalyst.nejm.org) © Massachusetts Medical Society
Perceived Benefits of Patient Engagement by Providers

Top Benefits of Using Technology for Patient Engagement

What do you consider to be the top three benefits of using technology for patient engagement?

- Support patients in efforts to be healthy
  - Total (595): 67%
  - Executive (153): 65%
  - Clinical leader (165): 68%
  - Clinician (277): 66%

- Provide input to providers on how patients are doing when not in clinic
  - Total (595): 60%
  - Executive (153): 63%
  - Clinical leader (165): 58%
  - Clinician (277): 59%

- Create ecosystem that allows for better predictive analytics around patient health and more timely intervention
  - Total (595): 51%
  - Executive (153): 63%
  - Clinical leader (165): 56%
  - Clinician (277): 42%

- Augment current capabilities of bricks-and-mortar health system
  - Total (595): 47%
  - Executive (153): 42%
  - Clinical leader (165): 52%
  - Clinician (277): 47%

- Provide extra motivation to patients since they know clinician will observe data
  - Total (595): 29%
  - Executive (153): 21%
  - Clinical leader (165): 26%
  - Clinician (277): 35%

- Replace case management and other personnel-intensive ways of monitoring patient behavior
  - Total (595): 19%
  - Executive (153): 26%
  - Clinical leader (165): 18%
  - Clinician (277): 16%

- Create mechanism that allows people to make high-risk behavior more difficult
  - Total (595): 16%
  - Executive (153): 12%
  - Clinical leader (165): 13%
  - Clinician (277): 21%
How can organizations be successful?

**Know your patient segments**

Consumers vary in their attitudes and healthcare spending

<table>
<thead>
<tr>
<th>Customer segment</th>
<th>Relative annual medical spend&lt;sup&gt;1&lt;/sup&gt;</th>
<th>... believe that “taking care of my health is as much my responsibility as my doctor’s”</th>
<th>... are highly satisfied with their PCP</th>
<th>... used online tools to find a PCP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy convenience seeker</td>
<td>1.00</td>
<td>77</td>
<td>70</td>
<td>56</td>
</tr>
<tr>
<td>Loyal affluent care seeker</td>
<td>0.95</td>
<td>86</td>
<td>90</td>
<td>48</td>
</tr>
<tr>
<td>Disadvantaged disconnected user</td>
<td>1.47</td>
<td>60</td>
<td>66</td>
<td>46</td>
</tr>
<tr>
<td>Thrifty baby boomer</td>
<td>1.18</td>
<td>80</td>
<td>88</td>
<td>38</td>
</tr>
<tr>
<td>Constrained chronic-care consumer</td>
<td>1.39</td>
<td>84</td>
<td>79</td>
<td>41</td>
</tr>
<tr>
<td>Passive reliant consumer</td>
<td>3.06</td>
<td>34</td>
<td>61</td>
<td>30</td>
</tr>
</tbody>
</table>

PCP, primary care provider.

<sup>1</sup>Index is relative; annual medical spending by healthy convenience seekers is indexed at 1.00.

Source: 2016 McKinsey Consumer Health Insights Survey

Patients want control and a personal experience, but that looks different to different segments
Example: Remote Patient Monitoring

Refine, Redesign, Redeploy

Prepare

Data Collection

Program Design
Formalize goals/strategy
Establish funding
Select populations
Create device strategy
Enroll patients

Transmit

Care Management
Configure alerts
Monitor data
Respond to alerts
Establish care plans
Coordinate care
Document care

Engage

Patient Activation
Educate patients
Remind patients
Guide patients
Facilitate collaboration

RPM Highly Successful at Reducing Hospital Visits

The majority of study participants are very pleased with the success of their RPM programs. Most have achieved measurable outcomes, particularly when it comes to keeping patients out of the hospital (i.e., admits, re-admits, and ER visits). Even those earliest in their RPM journeys share anecdotal victories, and only a few hesitate to call their efforts a success—not because of failure, but rather because of blurred lines between vendor monitoring and their own outreach work. Heart disease and COPD are the leading use cases, but organizations are branching out to less acute chronic diseases, such as diabetes and hypertension.

<table>
<thead>
<tr>
<th>Key Outcomes Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n=24)</td>
</tr>
<tr>
<td>Reduced hospital admissions</td>
</tr>
<tr>
<td>Improved patient satisfaction</td>
</tr>
<tr>
<td>Reduced readmissions</td>
</tr>
<tr>
<td>Reduced ER visits</td>
</tr>
<tr>
<td>Quantified cost reductions</td>
</tr>
<tr>
<td>Improved medication compliance</td>
</tr>
<tr>
<td>Improved patient health</td>
</tr>
<tr>
<td>Decreased A1c levels</td>
</tr>
<tr>
<td>None/unsure</td>
</tr>
</tbody>
</table>