Patient Engagement: The Next Wave of Change in Healthcare IT

AUGUST 2017
Core Problems That Need To Be Addressed

National health expenditures accounted for 18% of the GDP in 2015, and are expected to increase to 20% by 2025. This is a crippling problem to our economy and presents a major spotlight in the political environment.

The average consumer spends less than .01% of their life in clinics, yet healthcare spending accounts for nearly 20% of the GDP. In an era of shifting care models, providers can no longer be successful by simply providing paid services; rather, they must also achieve outcome success.

The Regulatory Environment is Focused on Reducing Cost Without Negatively Impacting Quality of Care or Outcome

<table>
<thead>
<tr>
<th>Affordable Care Act</th>
<th>Trump’s Health Plan</th>
<th>Implication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicaid expansion remains</td>
<td>&gt; Capped funding, block grants</td>
<td>Medicaid plans are forced to innovate, low-income affected most</td>
</tr>
<tr>
<td>Introduced taxes, such as on investment income, capital gains, and payroll</td>
<td>&gt; Reduce or repeal these taxes for businesses and high-income households</td>
<td>Hundreds of billions of dollars in tax revenue lost</td>
</tr>
<tr>
<td>Most Americans required to purchase health insurance</td>
<td>&gt; Individual mandate replaced with less robust tax credits to help people afford healthcare</td>
<td>Fewer people insured → premiums increase - disproportionately affects the old and the low-income population</td>
</tr>
<tr>
<td>Mandates for coverage that states must require insurers to provide (such as maternal leave)</td>
<td>&gt; More jurisdiction left to states</td>
<td>More flexibility for states, less comprehensive coverage</td>
</tr>
</tbody>
</table>

The Trump Administration’s argument is that Americans should feel like they are spending their own money on healthcare services. This will make Americans more active and aware of their spending choices, empowering them as consumers.

Source: Cascadia Capital, Wall Street Journal.
Providers are increasingly facing financial incentives and pressures to improve patient engagement, driving a shift in service models to reduce unnecessary financial waste in an overburdened system.

Key Drivers: Healthcare Undergoing a Revolution in Service Model

1. Shifting Service Model
2. Consumerization and the Transition to Consumer Wellness
3. Technology Enablers
4. Generational Changes
5. Alternative Care Platforms

- Increased focus on wellness
- Rising out-of-pocket costs have made patients more price-sensitive and likely to shop around
- Regulatory requirements
- Patient–doctor communication has improved
- Patients are becoming more educated consumers with more access to shopping tools
- Medicare’s value-based purchasing
- Improved outcomes knowledge and standardize quality reporting
- Increased payer-provider relationships incentivize providers to improve outcomes by increasing engagement

Key Drivers: Consumerization is Spreading to Healthcare

1. Shifting Service Model
2. Consumerization and the Transition to Consumer Wellness
3. Technology Enablers
4. Generational Changes
5. Alternative Care Platforms

Traditionally, healthcare providers treated conditions as they arose, making more by performing more services.

Now, preventative care is king. The costs are less in the long-run than treating acute or chronic conditions. Healthy patients means healthy profits.

3 Major Trends in Consumerization

**CONSUMER CHOICE**
Health Insurance Competition, Provider/Physician/Clinic Comparison Tools

**CONSUMER EMPOWERMENT**
Health Savings Accounts, Personal & Financial Tools

**CONSUMER WELLNESS**
Lifestyle, Prevention, & Consumer Self-Management Tools

Source: Accenture, MediPENSE, eWeek
Key Drivers: Consumers Leverage Technology to Gain Control

1. Shifting Service Model
2. Consumerization and the Transition to Consumer Wellness
3. Technology Enablers
4. Generational Changes
5. Alternative Care Platforms

As digital health tool usage becomes more widespread, there will be an abundance of patient engagement data. EHR vendors, health insurers, and other health systems tend to fiercely guard their patient information, but technology integration to increase communication, organization and workflow will alleviate the friction.

Technological Advances are Encouraging Unprecedented Levels of Patient Engagement

46% Of consumers are considered digital health users, meaning they use 3 or more digital health tools.

Greater data integration with current healthcare systems gives consumers more decision making tools and drives engagement.
1. Shifting Service Model

2. Consumerization and the Transition to Consumer Wellness

3. Technology Enablers

4. Generational Changes

5. Alternative Care Platforms

Key Drivers: A New Kind of Patient is in the Waiting Room

- Boomers care most about cost value, but customer service and convenience are most critical to millennials, who are beginning to utilize the healthcare system more regularly.

- Millennials prioritize having knowledgeable providers and quick issue resolution so much that they are far more willing to switch providers, driving competition and encouraging providers to offer better care.

- Millennials’ prioritization of convenience also makes them more open to telehealth and alternative mediums of care.

Source: CDC; Truven Analytics; Center for Connected Health Policy, as of September 2014; Teladoc; Accenture.
Key Drivers: Future of the Doctor-Patient Encounter

1. Shifting Service Model
2. Consumerization and the Transition to Consumer Wellness
3. Technology Enablers
4. Generational Changes
5. Alternative Care Platforms

Millennial Workforce Preferences for Convenience are Driving a Shift to Telehealth

- **1.25bn** Ambulatory care visits per year in US
- **71%** of employer-sponsored ER visits not necessary
- **417mm** 33% could be treated through telehealth

**Employees are open to virtual care**
- **54%** of 18-29 Year Olds
- **49%** earn > $71,000

**And employers are responding**
- **48%** Offered telehealth services in 2015
- **74%** Offered telehealth services in 2016

- **Telehealth** can be used to replace 1/3rd of in-patient visits, and is attractive for its low cost and convenience. This medium of care works particularly well for concerns that do not require lab work, such as behavioral health, radiology, rehabilitation, and dermatology.

- **New primary care models** are providing platforms to make physicians more accessible to patients, whether through a virtual platform enabling 24/7 messaging or video conferencing, personalized treatment plans, or through live visits to the patient’s home, office, or hotel.

- Advancements in **remote patient monitoring** are also providing physicians with new ways to track patient status using data collection tools (such as wearables) after discharge from a clinical setting, consequently reducing follow up visits, readmission rates, and healthcare delivery costs.

Source: CDC; Truven Analytics; Center for Connected Health Policy, as of September 2014; Teladoc; Accenture.
Record Based Deal Activity for Patient Engagement

• Q1 and Q2 2017 data shows that deal count and deal volume are on track to greatly exceed 2016 benchmarks.

• Private placement average deal size has grown substantially in recent years, indicating that VC/PEs are not only making more investments but are also making larger bets.

• The high proportion of early stage financings signals that patient engagement is a young space, explaining why M&A activity has not caught up yet, although we can expect M&A to accelerate in the coming years.

• Series B through E financings are growing as a percentage of total deal activity over the years, signaling the beginning signs of maturation and a healthy appetite for venture and growth equity deals in the market.

Private Equity Financing Deal Volume
($ in Millions)

- Q1 and Q2 2017 data shows that deal count and deal volume are on track to greatly exceed 2016 benchmarks.
- Private placement average deal size has grown substantially in recent years, indicating that VC/PEs are not only making more investments but are also making larger bets.
- The high proportion of early stage financings signals that patient engagement is a young space, explaining why M&A activity has not caught up yet, although we can expect M&A to accelerate in the coming years.
- Series B through E financings are growing as a percentage of total deal activity over the years, signaling the beginning signs of maturation and a healthy appetite for venture and growth equity deals in the market.

Patient Engagement Landscape

Workflow / Scheduling / Patient Relationship Management
Provider solutions focused on maximizing the patient experience through ease of access, scheduling, communication, etc.
- Facilitation of care coordination
- EHR integration
- Patient-provider communication
- Appointment booking, scheduling and reminders
- Patient relationship management

Disease Management and Med Adherence
Guidance providers for patients with chronic conditions, helping them better engage with their care, reduce risk, and improve overall health.
- Preventative measures to manage risk
- Daily guidance, reminders, etc., to increase patient engagement with care plan
- Drug compliance

Data Analytics and Outcome / Survey Results
Leveraging big data (from EHRs, clinical trials, etc.) to help providers improve health outcomes.
- Clinical trial data aggregation and analysis
- Patient surveys to evaluate provider performance and measure results
- Predictive analytics

Disease / Condition / Population Focused
Healthcare companies offering services to a specific population subset, enabling access to specialized care and advice.
- Age-specific (ex. senior care)
- Condition-specific (ex. diabetes, cancer, obesity)

Broad Patient Engagement Universe
Most companies can be identified in several categories

On Demand Care
Virtual platforms offering real-time, 24/7 remote service, thereby increasing patient convenience and physician accessibility while lowering costs.
- Telemedicine
- Provider home-visits at patient’s convenience
- Direct messaging with health provider
- Remote patient monitoring

Personal Health Tools
Digital health tools centered around patients (as a consumer), enabling them to track health status, manage spending, and make educated decisions.
- Wearables
- Consumer apps
- Social Media
- Consumer facing engagement
- Community platform software

Source: PitchBook, Capital IQ, Cascadia Capital.
Note: Companies displayed in the landscape are illustrative examples. Source: PitchBook, Capital IQ, Cascadia Capital.
Industry Outlook

- As an emerging industry subsector, patient engagement technology has relatively low barriers to entry, encouraging many new disruptive entrants and business models.
- The Healthcare IT market overall is fairly developed, with robust M&A activity making consolidation the norm for future years.
- Within HCIT, patient engagement is still a growing sub-vertical of the market, so its M&A activity lags behind that of the overall industry. There are, however, already beginning signs of rapid development and growth, evidenced by the shift in funding volume to later stage and larger size private deals.
- Elements of patient engagement will eventually find ways into all of digital health as software vendors integrate new technology centered around patients as a consumer.

Cascadia Thoughts

- Communication is a critical part of achieving better patient outcomes and driving down costs; patient engagement is here to stay and has the potential to become the backbone of the new healthcare system.
- It is still early in the patient engagement wave; equity dollars are flowing freely and investors are focused on the customer base and compelling/sticky use cases.
- EMR vendors aren’t going to open up their communications, so patient engagement companies need to provide interoperability.
- Scale and broad service offerings are crucial elements of success in the sector. Expect consolidation as the leaders establish themselves; big equity dollars are the first sign.
- Partnering with a service delivery company will help drive patient engagement technology into the healthcare system. Smart technology companies will embrace the people that drive change – “Nurses will rule the earth and millennials will show their parents the way.”
- Given the volume of dollars flowing into the sector we expect a robust M&A environment in the next few quarters.

Expected Patient Engagement Market Growth

Source: Markets and Markets, Grand View Research.
Patient Engagement Deals and Investors

Largest Financing Deals in Q1 & Q2 2017

<table>
<thead>
<tr>
<th>Company</th>
<th>Invested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcome Health</td>
<td>$600M</td>
</tr>
<tr>
<td>Modernizing Medicine</td>
<td>$231M</td>
</tr>
<tr>
<td>PatientPoint</td>
<td>$140M</td>
</tr>
<tr>
<td>patientslikeme</td>
<td>$100M</td>
</tr>
<tr>
<td>medwell ventures</td>
<td>$21M</td>
</tr>
<tr>
<td>wellBehealth</td>
<td>$15M</td>
</tr>
<tr>
<td>Updox</td>
<td>$13M</td>
</tr>
<tr>
<td>SMARTCARE</td>
<td>$11M</td>
</tr>
<tr>
<td>DOC HALO</td>
<td>$11M</td>
</tr>
<tr>
<td>Clarify Medical</td>
<td>$10M</td>
</tr>
</tbody>
</table>

Most Active Investors 2015-2017 YTD

<table>
<thead>
<tr>
<th>Firm</th>
<th># of Deals</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-Prime Capital Partners</td>
<td>5</td>
</tr>
<tr>
<td>Excelerate Health Ventures</td>
<td>5</td>
</tr>
<tr>
<td>BlueCross BlueShield Venture Partners</td>
<td>5</td>
</tr>
<tr>
<td>HEALTHx Ventures</td>
<td>5</td>
</tr>
<tr>
<td>HLM Venture Partners</td>
<td>5</td>
</tr>
<tr>
<td>.406 Ventures</td>
<td>4</td>
</tr>
<tr>
<td>McKesson</td>
<td>4</td>
</tr>
<tr>
<td>Khosla Ventures</td>
<td>4</td>
</tr>
<tr>
<td>SEQUOIA</td>
<td>3</td>
</tr>
</tbody>
</table>

Most Funded Companies

<table>
<thead>
<tr>
<th>Company</th>
<th>Total Raised</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcome Health</td>
<td>$600M</td>
</tr>
<tr>
<td>beacon health options</td>
<td>$422M</td>
</tr>
<tr>
<td>healthdialog</td>
<td>$364M</td>
</tr>
<tr>
<td>Modernizing Medicine</td>
<td>$322M</td>
</tr>
<tr>
<td>Sharecare</td>
<td>$203M</td>
</tr>
<tr>
<td>Accolade</td>
<td>$170M</td>
</tr>
<tr>
<td>Concerto Health</td>
<td>$164M</td>
</tr>
<tr>
<td>PatientPoint</td>
<td>$164M</td>
</tr>
<tr>
<td>patientslikeme</td>
<td>$126M</td>
</tr>
<tr>
<td>socialWellth</td>
<td>$108M</td>
</tr>
</tbody>
</table>

(1) Companies with the largest amount of total equity capital raised to date. Source: PitchBook.
Unprecedented Recent Investor Activity and More to Come

Investors that have invested in the following companies

$3.8B Total Raised 2016 – 2017 YTD

233 Private Placement Deals

Note: Selected sample of companies and investors.
CASCADIA CAPITAL OVERVIEW
Our Firm

Founded in 1999
Cascadia has a successful 18 year history

40 investment banking professionals

12 Managing Directors in five cities

OVER 245 transactions completed, with more than $8 billion in aggregate value

Headquartered in Seattle, with Managing Directors in Los Angeles, Minneapolis and New York

Leading diversified investment bank

• M&A, private placements, advisory services
• Specialized in-depth expertise across multiple industry verticals
• Representing clients in the US and globally, including Europe, Asia and Australia

Experienced team with successful track record

• Cascadia is the investment bank of choice for entrepreneurs and family-owned companies
• Decades of investment banking and operational expertise
• Deep capital markets expertise
Providing a Full Suite of Banking Services

**MERGERS & ACQUISITIONS**

We have completed hundreds of M&A transactions ranging in size from $20-$500 million. Our thorough and disciplined process, in combination with our deep industry expertise, has resulted in a proven track record of delivering successful outcomes for our clients.

**CORPORATE FINANCE**

We have extensive experience placing equity and debt capital ranging from $10-$250 million. We leverage our deep relationships with institutional investors; including private equity, growth equity, venture capital, family office, mezzanine and venture debt, hedge funds and BDCs.

**STRATEGIC ADVISORY SERVICES**

We provide our clients with analytical data and insights to facilitate strategic decision-making. We advise our clients on how to maximize shareholder value and then provide support for transaction implementation.

**PRIVATE CAPITAL**

We listen carefully to business owners and managers and then work closely with them to custom design long-term and flexible capital solutions. Our approach resonates particularly well with family-owned and closely-held companies.

**ENGAGEMENTS INCLUDE:**

- Mergers & Acquisitions (Buy & Sell Side)
- Corporate Divestitures
- Management Buyouts
- Leveraged Buyouts
- Recapitalizations
- Partial Liquidity Events
- Private Equity Capital Raises
- Public Company Capital Raises
- Debt Financings & Restructurings
- Project Finance
- Valuations
- Fairness Opinions
- Shareholder Rights Planning
- Shareholder Value Analysis
- Strategic Alternatives Reviews
- Strategic Partnerships & Joint Ventures
- Special Situations
Principal Sector Focus

- Consumer Driven Health IT & Mobile Health
- Clinical Workflow & Practice Management
- Insurance & Reimbursements
- Medical Devices
- Care Coordination
- Healthcare Services
- Data Analytics & HC Information

Overview

We have four professionals with over 40 years of collective experience who have originated and executed over $1 billion of M&A and financing transactions in the Healthcare sector. Emerging trends in the industry are driven by consumers demanding higher quality care with cost transparency, integrated health information, and better provider access and communication. The solutions lie at the intersection of healthcare and technology, where innovation provides for better, more accessible care at lower costs. Cascadia’s team is perfectly primed to meet the growing needs of the industry’s players, leveraging vast experience coupled with a thorough understanding of the market.

Representative Transactions

- Vera has received a strategic investment from Leerink Transformation Partners in March 2017
- BardyDx has received strategic investment from Ascension and debt financing from AM Capital in December 2016
- Impel Neuropharma has been acquired by VIVO Capital in November 2016
- Integra has been acquired by J.M. Smith Corporation in August 2015