Telemedicine and Beyond

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Presentation Outline

- What is Telemedicine?
- Market Overview
- Trends and Models of the Future
- Everything is Bigger in Texas
- Closing Comments
Understanding Telemedicine

Telemedicine has three major components by which it succeeds or fails in any state, country or program:
- Regulation
- Reimbursement
- Rhetoric
What is Telemedicine?

– Telemedicine- the use of telecommunication and information technologies in order to provide clinical health care at a distance (physician provided or supervised)
– Telehealth- same as above (physician or other health care professional)
– Remote Monitoring- non-interactive patient monitoring via technology
Internet Revolution: Value to Users

Internet use exploded once content became accessible and useful.

Today, health care information technology (HIT) is at the “1997” of the Internet age

Source: U.S. Census Bureau, Population Division, Education & Social Stratification Branch, “Reported Internet Usage for Households, by Selected Householder Characteristics, 2007”
Telehealth represents a major growth area within the healthcare space. Payors, providers, and even employers are investing in this emerging market.

UnitedHealthcare is expanding coverage options for virtual physician visits, giving people enrolled in self-funded employer health plans secure, online access to a physician via mobile phone, tablet, or computer 24 hours a day. Karen Scott, senior director for product and innovation at UnitedHealthcare, says the initiative is designed to help elevate telemedicine to the mainstream of healthcare delivery options. “Choice and access are key components of our strategy.”

Walgreens, the nation’s largest drugstore chain, and MDLIVE, the nation’s leading provider of telehealth services, today introduced a new telehealth offering that will give Walgreens’ website users 24/7 access to U.S. board-certified doctors through its mobile application. With today’s launch, the service is now available to users in California and Michigan, with plans to roll out to additional states and markets over time.

This year in the U.S. and Canada, 75 million of 600 million appointments with general practitioners will involve electronic visits, or e-visits, according to new research from Deloitte.

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1 Source: “UnitedHealthcare Covers Virtual Care Physician Visits, Expanding Consumers’ Access to Affordable Health Care Options,” Business Wire, April 2015.


4 Source: “Almost one in six doctor visits will be virtual this year,” Computerworld, August 2014.
The industry has witnessed an explosion in telehealth activity among provider organizations, as the following forces are driving disruptive change in systems of care:

- Reimbursement structures that are more conducive to the provision of telehealth services
- Ability to drive down the total cost of care through telehealth under value-based care models, such as accountable care organizations and clinically integrated networks
- The need to provide more convenient access for patients
- A growing acceptance of online access points by patients and providers
- Advances in technology that support the operational provision of telehealth services
A study conducted by IHS predicted that by 2018, the use of telehealth technology will be more than 10 times that of the 2012 rate.

Global Forecast of Telehealth Patients and Device and Service Revenue

## Telehealth has promise for hospitals, IDNs and their communities

### Three Modalities of Telehealth for provider and patient interaction

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<tr>
<th>Real-Time</th>
<th>Store and Forward</th>
<th>Remote Monitoring</th>
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<td>Provider and patient communicate via live videoconferencing. Used often in telepsychiatry, telehomecare, telecardiology and remote consults (teleconsults) with specialists, primary care physicians, counselors, social workers and other health care professionals.</td>
<td>Digital images, video, audio, clinical data are captured and stored on a patient's computer or mobile device and then transmitted securely to a provider for later study or analysis. Used often in teledermatology and telepathology.</td>
<td>Patient uses a system that feeds data from sensors and monitoring equipment to an external monitoring center so that health care professionals can monitor a patient remotely. Used to monitor chronic conditions such as heart disease, diabetes and asthma.</td>
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### Hospital-based Telehealth Platforms

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<th>telestroke</th>
<th>Teleradiology</th>
<th>Tele-ICU</th>
<th>Telemental health</th>
<th>Telapathology</th>
<th>Cybersurgery</th>
<th>Remote monitoring</th>
<th>Telepharmacy</th>
<th>Consultations</th>
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<td>Remote evaluations, diagnoses and treatment recommendations are transmitted to emergency medicine doctors at other sites using advanced telecommunications technologies.</td>
<td>Images and associated data are transmitted between locations for the purpose of primary interpretation or consultation and clinical review.</td>
<td>Networks of audiovisual communication and computer systems are linked with critical care physicians and nurses to ICUs in other, often remote hospitals.</td>
<td>Mental health and substance abuse services are provided from a distance (e.g. using videoconferencing and other advanced communication technologies).</td>
<td>The practice of pathology is performed at a remote location by means of video cameras, monitors, and a remote-controlled microscope.</td>
<td>Surgeons use surgical techniques with a telecommunication conduit connected to a robotic instrument to operate on a remote patient.</td>
<td>Patients are subject to continuous or frequent periodic clinical monitoring via advanced communication technologies.</td>
<td>Pharmaceutical care for patients (or supervision to technicians) is provided at a distance using advanced telecommunications technology.</td>
<td>Remote consults are conducted with remote specialists, primary care providers, counselors, social workers and other health care professionals.</td>
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Apple, with an early lead among hospitals, scales back its smartwatch

Apple’s health technology takes an early lead among top US hospitals

Fourteen of 23 top hospitals contacted by Reuters said they have rolled out a pilot program of Apple’s HealthKit service. Acts as a repository for patient sensor data like BP, weight, heart rate.

Patient data are sent with a patient’s consent to the health provider’s electronic health record. Data sources include glucose measurement tools, food and exercise-trackers, Wi-Fi scales.

Ochsner Medical Center is working with Apple and Epic to pilot a program for high-risk patients.

Apple reports 600 developers are integrating HealthKit into their health and fitness apps.

Samsung and Google are also exploring hospital relationships for similar services.

Apple Watch will provide data and novel communications but not health metrics

Apple will not include tools to monitor blood pressure, heart activity or stress levels as previously planned. Health sensor technology failed to meet Apple standards.

Sensors measuring skin conductivity or heart-rate monitoring didn’t perform consistently. Arm hair or dry skin or varying tightness of the band caused unreliable results.

Apple also tested blood pressure and blood oxygen with inconsistent results. Also these may have required FDA approval and the company is avoiding that for now.

Apple watch will include pulse-rate monitoring. More advanced sensors may be included later.

http://www.reuters.com/article/2015/02/05/us-apple-hospitals-exclusive-idUSKBN0L90G920150205
wsj.com/articles/challenge-of-apple-watch-defining-its-purpose-1424133615
ONC awards $300K to six small businesses for digital health pilots

ClinicalBox™
Tracks patients and visualizes critical tasks to be completed by providers
The pilot with Lowell General Hospital will test CoordinationBox’s efficacy in coordinating care and engaging patients during surgical episodes.

Create it
My Care Communicator engages patients in diverse populations
MHP Salud will pilot the solution in the Texas Rio Grande Valley to enhance the impact of its Community Health Worker programming in the areas of diabetes prevention and breastfeeding.

GECKO HEALTH INNOVATIONS
CareTRx simplifies asthma and COPD management via remote monitoring
Boston Children’s Hospital will evaluate the effectiveness of CareTRx on asthma self-management among urban school children compared to traditional self-management practices.

Optima
Optima4BP provides personalized Rx recommendations for hypertension
The pilot with UCSF Cardiology will evaluate the efficacy of Optima4BP in improving care coordination for patients with uncontrolled hypertension.

physIQ
Personalized analytics for physiology data compared to a baseline
The pilot with Henry Ford Health System will evaluate physIQ’s platform’s ability to reduce hospital readmissions for heart failure and COPD patients.

VitalCare Services
Connects senior populations to preventive and care management
The pilot with Dominican Sisters Family Health Service will test STATS’ efficacy in increasing access to primary and secondary prevention services.

Accenture identifies five top areas for growth of apps for seniors

**Self-care:** More than two-in-three seniors prefer to use self-care technology to independently manage their health. AARP estimates start-up funding in this area grew to $166 million in 2013, up from $143 million in 2012.

**Wearables:** More than three-in-five seniors are willing to wear a health-monitoring device to track vital signs, such as heart rate and blood pressure. AARP estimates $266 million in funding was invested in this area in 2013, more than 2011 and 2012 combined.

**Online Communities:** Three-in-five seniors are somewhat or very likely to turn to online communities, such as Patient Like Me, for reactions to a doctor’s recommendation before acting on it. AARP estimates funding for these platforms rose to $142 million in 2013.

**Navigating Healthcare:** A third of seniors would prefer to work with a patient navigator to manage their healthcare. Last year, $384 million was invested in solutions, like patient navigators, for care navigation.

**Health Record Management:** A quarter of seniors regularly use electronic health records for managing their health, such as accessing lab results (57 percent), and projections by Accenture suggest it will grow to 42 percent in five years, as consumer-facing tools increase.

*Reproduced from the Accenture report.*

Texas- Telemedicine in Nursing Homes

– SB 7 from 2013 states that a managed care organization providing services under the managed care program must offer nursing facility providers access to telemedicine
– Concept was championed by AARP with the goal of avoiding unnecessary transfers
– Long-term view: more integration of telehealth into care models
Texas- Remote Monitoring

- Medicaid remote monitoring benefit was created by SB 293 in 2011 and renewed in 2015
- Benefit was limited in scope and confined to certain diagnoses and included a Sunset provision for the benefit unless recreated by the Legislature in 2019
- Long term view: The shift to managed care makes the Medicaid fee for service rule less important, but still necessary. Medicare penalties for readmission rates have strongly increased hospital interest in this benefit.
Texas- Consumer Telemedicine

– Current Texas Medical Board rules require a face to face visit or a referral before a patient can receive telemedicine services from a non-clinic location, with an exception for mental health

– Tech companies and insurers are developing totally virtual clinic models in response to consumer demand and increasing sophistication of devices and peripherals

– Long term view: State legislatures will have to weigh access and convenience for consumers and businesses vs. some risk that virtual visits may not present the physician with 100% of the needed data
Closing Thoughts

– Medicaid has shifted in terms of policy and now views telemedicine/telehealth as an essential tool, but may still skeptical of the value of home telemonitoring
– Medicare telehealth limitations still highly restrictive
– Commercial insurers are aggressively pursuing virtual care models
– Scope of practice is the battleground issue
Questions?

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