Telehealth

Building the Future of Health Care Delivery
Agenda

Industry Overview

Building & Operating a Successful Program

Challenges & Barriers

Reimbursement Mechanisms

Emerging Applications & Opportunities
Why Telehealth?

What is it?
Why is it important?
Is Telehealth less costly to deliver?
Is Telehealth valuable?
Will we get paid?
Will providers adopt Telehealth?
What is the regulatory environment?
Will Telehealth disrupt my practice?
What’s Changed?

Consumers are demanding access and convenience
Competitive advantages
Costs have decreased significantly
Provider shortages have increased
Shift from volume to value
Reimbursement improved nationally
Legal & regulatory barriers decreasing

*Telehealth is a disruptive force*
Current Surveys

American Telemedicine Association Survey:
- 98% believe telehealth services create a competitive advantage
- What advancements are you most excited about: 2/3 name patient-centered healthcare
- 83% of Health Execs likely to invest in Telehealth this year

Nemours Health System
- 64% of parents plan to use telemedicine for their child this year
Defining “Telehealth”

The use of medical information exchanged from one site to another via electronic communications to improve a patient’s clinical health status.

- American Telemedicine Association
Modalities Differ by Recipient and Timing of Service

### Intended Recipient

<table>
<thead>
<tr>
<th>Timing of Interaction</th>
<th>Provider-to-Patient</th>
<th>Provider-to-Provider</th>
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</thead>
<tbody>
<tr>
<td><strong>Synchronous</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(real time)</td>
<td>Common applications:</td>
<td>Common applications:</td>
</tr>
<tr>
<td></td>
<td>• Virtual primary care</td>
<td>• Telesstroke</td>
</tr>
<tr>
<td></td>
<td>• Virtual urgent care</td>
<td>• TeleICU</td>
</tr>
<tr>
<td></td>
<td>• Virtual pre- and post-op</td>
<td>• Telepsychiatry</td>
</tr>
<tr>
<td><strong>Asynchronous</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(time lag)</td>
<td>Common applications:</td>
<td>Common applications:</td>
</tr>
<tr>
<td></td>
<td>• Secure e-messaging</td>
<td>• Teleradiology</td>
</tr>
<tr>
<td></td>
<td>• Remote patient monitoring</td>
<td>• Telepharmacy</td>
</tr>
<tr>
<td></td>
<td>• Wearables (e.g., Fitbit)</td>
<td>• Teledermatology</td>
</tr>
</tbody>
</table>

Source: Market Innovation Center research and analysis.
FAQ’s: Telemedicine in the United States

* 200 telemedicine networks
* 3,500 service sites
* Over half of U.S. hospitals use some form of telemedicine
* In 2015, Providence Health & Services delivered over 10,000 remote consultations

Source: IHS Technology, January 2014
Around the clock, around the region, our specialists are with you when every minute counts.
PH&S telehealth programs

**Enterprise**
- TeleStroke
- TeleHospitalist
- TelePsychiatry
- TeleBehavioral Health
- TelePhysiatry
- TeleBrain Injury
- TeleCardiology
- TeleCritical Care
- TeleECG
- TeleEEG
- TeleHand Trauma
- TeleEpilepsy
- TeleGI
- TeleMovement Disorders
- TeleNeonatal Resuscitation
- TeleNeurosurgery

**Consumer**
- Health eXpress Direct-to-Consumer
- Health eXpress Kiosks
- Primary Care
- TeleDM education

**Integrated services spanning the continuum**
Connecting Communities for Healthcare Collaboration
INHS Northwest Telehealth

- Launch Date: 1996
- Partner Sites: 35 (Washington/Northern Idaho)

Current Services:

- Movement Disorders
- Wound Care
- Behavioral Health
- Professional Education
- Grand Rounds/Tumor Boards
Program Goals

Widen Access
• Expand access to scarce resources by leveraging technology

Improve Outcomes and Quality metrics
• Deliver same level of quality care in the patient’s local community

Drive Affordability
• Create network of collaboration
• Disrupt the traditional delivery of health care
TeleStroke

- Effectively Dx and Tx stroke patients within the optimum clinical window in their communities.
- 24/7/365 coverage
- Improve access to experienced stroke neurologist
- Improve patients outcomes
- Keep care local
- Reduce cost of care
- Improve regional collaboration
- Deliver care thru evidence-based and standardized protocols
- Return patient to home
TeleHospitalist

- 7pm – 7am / 365 nocturnist coverage
  - Admits
  - Consults
  - Cross coverage
Seaside Hospital

- 25 Bed CAH in Seaside, Oregon
  - 90 miles from Portland
- Revenue/care concerns
  - Difficulty in retaining and recruiting quality nocturnist
  - Unqualified bypass issue
  - Not consistently capturing first day of service
  - Spending too much for on-call coverage
TelePsychiatry

- Inpatient
- Emergency Department
- Ambulatory (*coming*)
A review of Health eXpress

• A video conferencing platform that connects consumers to quality health care providers securely where ever they are and at convenient hours

• Health care providers can
  • Discuss symptoms
  • Diagnose conditions
  • Prescribe medications
  • Manage care more efficiently
Clinical Scope: Low Acuity

- Cough, cold & allergy
- Flu
- Rash
- Oral lesions
- Diarrhea
- Bladder infection

- Smoking cessation
- Pinkeye
- Ear pain
- Acne
- Joint pain
- Low back pain

- Headache
- Burns
- Sunburns
- Wellness services
- Children’s services
- Rx scripts

28% of IC and ED visits
Why Use Telehealth

• Reduces barriers to access
• Increases efficiency for providers
• Reduces overall health care costs
• Reduces delays in care
• Retains resources locally
• Reduces travel
• Increases patient satisfaction
• Supports improved quality
• Improves health outcomes
The right care at the right time in the right location by the right provider
Telehealth Applications Are Growing

Across Levels & Types of Service
Choosing A Technology Platform
Buy or Build?
Cost Considerations

Direct
- Platform
- Licensing
- Maintenance
- Repair

Indirect
- Planning
- Training
- Implementation
- Maintaining proficiency for telemedicine services
What’s the value?
What problem are we trying to solve
Aligns with organizational mission
Available provider capacity
Increases efficiency
Reduces cost
Reimbursable/Potential to generate revenue
Volume potential
Scalable
# Needs Evaluation Matrix

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>How critical is the identified need</td>
<td>Not a reported or identified need</td>
<td>An identified need. Met to some extent with current services</td>
<td>An identified need not being met or just barely being met</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Availability of technology</td>
<td>No technology or partners available</td>
<td>Technology is available but not partners (professional services) or partners available but not technology</td>
<td>Technology and partners are readily available</td>
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</tr>
<tr>
<td>Adaptability</td>
<td>Will not fit in current workflow or policy/procedures</td>
<td>Can be adapted to current workflow. Policy and procedures will need updating</td>
<td>Easily adapted to current workflow. Minimal if any changes needed to current policy &amp; procedures</td>
<td></td>
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</tr>
<tr>
<td>Cost, revenue &amp; funding</td>
<td>Very costly. Minimal revenue expectations. No subsidies or grant funds available</td>
<td>Costly. Good revenue potential. Potential grant subsides</td>
<td>Reasonable cost. Excellent revenue potential. Grant funding and/or subsides available</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Logistics &amp; Implementation</td>
<td>Complicated logistics. Major retooling of IT infrastructure required to support it. Additional support team required</td>
<td>Some logistical considerations. Some upgrade to existing IT infrastructure required. Some additional support required</td>
<td>Minimal logistical considerations. Works with existing IT infrastructure. Minimal support required</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Monitoring</td>
<td>Clinical outcomes are not clear. Very difficult to monitor/track outcomes/utilization</td>
<td>Clinical outcomes are clear. Outcomes/utilization can be tracked with some effort</td>
<td>Clinical outcomes are transparent. Outcomes/utilization can be tracked with minimal effort</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Evaluation &amp; Reporting</td>
<td>Difficult to measure overall program success. Communicating success to stakeholders will be difficult</td>
<td>Clear goals. Able to track and verbalize to stakeholders.</td>
<td>Program success is easily tracked and measured. Easily communicated to stakeholders</td>
<td></td>
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</tr>
</tbody>
</table>

**ANTHC Telemedicine Course**
Organizational Buy-in, Create a Team

Why is this a Best Practice?

**Team Members**
- Project Manager
- Clinical
- Executive
- Administrative/Clinical
- Operations
- Technical
- Legal/Risk
- Public Relations
Development Process

Assess
- Determine need and demand
- Define program model
- Develop business case

Develop & Plan
- Plan program and technology
- Develop performance monitoring plan

Implement & Monitor
- Implement telemedicine program
- Ongoing evaluation & improvement
1. Look at Needs

- What problems are we solving
- What services are needed
- What solutions can be provided through telemedicine
- Quantify
What Program Model?

2. Define & Specify Program Model

- Determine best fit telemedicine model
- Is it feasible
- What results do we want
- What are the boundaries
- Identify best practice models
Understand the Motivators?

- Return on investment
- Access to needed services
- Value to community/partner organizations
- Keeping care local
- Right care, right time, right place
- Support for clinical staff
- Improve the patient experience
Many Moving Parts to Consider

- Equipment & technology
- Telecommunications
- Clinical
- Legal
- Operations
- Policies & procedures
- Human factors
- Data/reporting
- Training & skill building
Implement, Monitor, Evaluate, Improve

Execute the Plan

Monitor/Improve

Measure: Where are we?

Is Close Enough Good Enough?
Predictors of Success

- High level support (aligned with organizational mission)
  - Administrative champion
  - Development funding
  - Staffing
  - Clinical champion, clinical support
  - Telemedicine coordinator
  - Telepresenters
  - Team approach

- Understanding needs and demand
- Evaluation & monitoring (iterate)
- Mentors/program assistance
- Technical support
Challenges & Barriers to Opportunities (Providers)

- Can I get paid?
- My practice is busy enough
- Replicating current workflow
- Quality of life
- Licensing & credentialing
Reimbursement

CMS
- Restricted to HPSA’s (rural patient locations)
- Restricted to certain provider groups
- Does not include store-and-forward
- Considerable pressure on CMS to expand telehealth coverage

Medicaid
- All 50 states have some level of coverage (varies by state)

Private
- 32 states have telehealth “parity”
- Majority of states don’t have “payment parity”
Telemedicine Legislation: Washington State

1. Telehealth parity for private payers
2. Includes urban (MSA) patient locations (originating sites)
3. Jan. 2018-patient sites include the home
4. Established Washington State Telehealth Collaborative to guide development
5. Physician licensure compact (Governor’s desk for signature)
**REMOTE PRESENCE TELEMEDICINE NETWORK**
**A MODEL FOR QUALITY RURAL HEALTHCARE**

**IDA/ORE NETWORK**

The IDA-ORE network, developed by Saint Alphonsus Regional Medical Center and nine partnering hospitals in Idaho and Oregon, has facilitated the extension of services to rural areas through the use of telemedicine. The Network has evolved from a hub-and-spoke model to a health system model, with member hospitals developing services with multiple partners throughout the United States. Grande Ronde Hospital has been a leader in developing services, with a commitment to expanding local opportunities for rural health care with telemedicine through medical consults, specialty care, education, and more. In addition to partnering with Saint Alphonsus and other IDA-ORE Network hospitals, Grande Ronde works with specialists from coast to coast to provide consultative services in the local community. This ensures that patients receive high-quality, specialty care in their local community without the time and expense of travel. This presentation highlights the services Grande Ronde Hospital has developed to serve the La Grande community.

**SAINT ALPHONSES REMOTE PRESENCE HEALTH SYSTEM**

**GRANDE RONDE HOSPITAL REMOTE PRESENCE SERVICES**

- **Ambassador Program**
- **NICU Telephony**
- **Respiratory**
- **Teledermatology**
- **Remote Ultrasound**
- **Consulting Services**
- **Other Services**

**TELEMEDICINE IN THE ICU**

- **24 patients**
- **109 remote presence consultations**
- **Average length of consult: 12 minutes**
- **6 patients transferred as the care progressed**
- **21 patients clearly would have been transferred without AICU coverage**

**REIMBURSEMENT 2009**

<table>
<thead>
<tr>
<th>Reimbursement</th>
<th>Medicare 4.5%</th>
<th>Medicaid Comp 5.2%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reimbursement</td>
<td>56.4%</td>
<td>43.6%</td>
</tr>
</tbody>
</table>

**Remote ICU Benefit Summary**

- **Establishes ICU patient safety initiative**
- **Improved quality and clinical performance through subspecialty support in collaboration with the attending staff on site**
- **Assures best practices**
- **Improves professional and personal lives of the local practitioners physicians and nurses**
- **Recruitment and retention**
- **Positive financial impact for hospital**
- **Positive impact for patients and families**
- **Savings to the "system"**

**RECENT UTILIZATION**

<table>
<thead>
<tr>
<th>July 1, 2009 – June 30, 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>128 Patient Care Encounters</td>
</tr>
<tr>
<td>18 Outreach Education Experiences</td>
</tr>
<tr>
<td>10 Ambassador Visits (156)</td>
</tr>
</tbody>
</table>

**Healthcare Reform: Remote Presence Health System Style**

- **Calendar Year 2009**
- **18 patient transfers avoided:**
  - **$24,666.00 per transfer**
  - **$444,000 savings to the system**
- **Average Length of Stay 7.8 days**
- **Additional GHH ICU and Med Surg days = 140**
- **Average per day = $2,408.00 (cost report)**
- **Healthcare dollars staying in the local community**
  - **$337,120**

**DOING THE RIGHT THING**

We are not doing risky new procedures via remote presence but rather a continued expansion of services that have shown to benefit patients, benefit the community and provide a standard of care consistent with other on-site care services. We will ensure access to high-quality, cost-effective health services in a safe and customer-friendly environment for all those in need of our services.
Anchor Telehealth Investments in Overarching Goals

Common Goals for Telehealth Solutions, by Setting

- **Primary Care**
  - Improve primary care coverage
  - Reduce patient no-shows
  - Respond to retail competition
  - Overcome patient transportation barriers
  - Elevate management of chronic disease

- **OP Care**
  - Extend clinic coverage from specialists
  - Streamline information transfer between care settings
  - Improve patient compliance with post-discharge care pathway

- **ED**
  - Cut inappropriate admissions and transfers
  - Encourage cost-effective patient ED utilization

- **IP Care**
  - Improve availability or access to specialist expertise
  - Reduce patient LOS
  - Address causes of frequent treatment complications
  - Avoid readmission rates/penalties
  - Support seamless care transitions

- **PAC**
  - Bridge gaps in availability or access to specialist expertise
  - Increase interoperability between hospital/post-acute care provider EMRs
  - Improve access for home-bound, geriatric patients

Source: Market Innovation Center research and analysis
Consumers Increasingly Prefer “On-Demand” Care

Preference for Location of Services

- Clinic location near work
- Clinic located near errands
- Emailing provider with symptoms
- Clinic located near the home

Increasing Consumer Preference

Young, Wealthy, Busy—Strongest Potential Telehealth Targets¹

- 54% Of 18-29 yrs olds
- 49% Of those making >$71K per year
- 53% Of those working >35 hours per week

Patients Favor Accessibility Over Type of Interaction

**First, Willingness**

- **72%** Consumers would see a doctor via video

**Then, Preference**

- **67%** Patients prefer email over webcam
- **70%** Patients prefer an online visit to get prescriptions

**Eventually, Shift**

- **20%** Percentage of total potential primary/urgent care visits eligible for virtual care¹
- **11%** Patients aged 19–34 who would leave their PCP in favor of one who offers virtual visits

**Key Takeaways**

- Many patients aren’t looking for the same type of intimate doctor-patient relationship of old
- Access to care is top concern
- Virtual interactions are preferable for low-acuity episodes
- Patients are looking for the fastest, easiest access point—no special skills or equipment needed
- Currently, about 1 in 5 outpatient visits could be done online
- Millennial patients are starting to actively choose tech-savvy providers

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¹ Calculated using CDC National Ambulatory Care Survey volumes by reason for visit

Source:
- Pennic J, “72% of Consumers Are Willing to See a Doctor Via Telehealth Video Conferencing,” HIT Consultant, December 11, 2013;
- American Hospital Association “Trendwatch: The Promise of Telehealth for Hospitals, Health Systems and Their Communities”, January 2015;
Direct-to-Consumer Virtual Visits
Convenient, On-Demand Access to Primary and Urgent Care Services

“2015 was the year that virtual visits went from an ‘up-and-coming trend’ to a ‘stay in business application’ for payers and pharmacy chains.”

Dr. Joseph Kvedar
Partners Connected Health

Strategic Benefit
- Enhanced rural access
- Improved patient convenience
- New patient capture/retention of existing patients
- Expanded PCP capacity

Popular Vendors
- Teladoc
- American Well
- MDLive
- Doctor on Demand

Clinical Applications
- Episodic Primary Care
- Urgent Care
- Chronic Disease Management
- Behavioral Health

Source: Tahir D, “Telehealth services surging despite questions about value,” Modern Healthcare, February 2015; Market Innovation Center research and analysis.
Real-Time Virtual Specialist Consults

Access to Specialist Expertise for Diagnosis and Treatment Planning

“These online communities give rural physicians access to expertise and a sounding board they didn’t have in the past, which also reduces the isolation factor.”

Ken Simone, DO
Family medicine physician

<table>
<thead>
<tr>
<th>Strategic Benefit</th>
<th>Popular Vendors</th>
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</thead>
<tbody>
<tr>
<td>Improved access in communities with persistent provider shortages</td>
<td>Avizia</td>
</tr>
<tr>
<td>Improved patient experience from convenient appointments</td>
<td>Vidyo</td>
</tr>
<tr>
<td>Reductions in avoidable patient transfers</td>
<td>Vsee</td>
</tr>
</tbody>
</table>

Popular Vendors

- Avizia
- Vidyo
- Vsee
- Zoom

Clinical Applications

- Telespsychiatry
- Telestroke
- TeleICU

Strategic Benefits for Enhancing Patient Access

1. Expands Provider Capacity
   - Boosts provider productivity through reduced travel time, improved operational efficiencies
   - Bolsters referrals of high-acuity transfers from tertiary care organizations participating in telehealth consults

2. Improves Patient Access and Market Capture Opportunities
   - Expands patient access to care
   - Enhances patient convenience
   - Pre-empts on-demand retail competition

3. Engages Patients and Providers
   - Meet patient demands for convenient care options in the face of market disruptors
   - Can connect previously unassigned patients to a health system
   - Increases access to specialist expertise

4. Supports Cost Management
   - Encourages appropriate and cost-effective utilization
   - Reduces likelihood of chronic disease exacerbations for at-risk patient populations

Source: Market Innovation Center research and analysis
Remote Patient Monitoring Devices

Estimated RPM market size in 2017: $46B

Strategic Benefit
- Reduced ED utilization, patient readmissions
- Improved patient management of chronic, comorbid conditions
- Reductions in patient mortality

Popular Vendors
- Honeywell HomMed
- McKesson
- Medtronic Care Management Services
- Philips Healthcare
- ScottCare
- TouchPoint Care

Clinical Applications
- Heart Failure
- COPD
- Diabetes

- Market Innovation Center research and analysis.
Telehealth Resource Centers
http://www.telehealthresourcecenters.org

• California Telemedicine & eHealth Center (CTEC)
• Great Plains Telehealth Resource & Assistance Center (GPTRAC)
• Heartland Telehealth Resource Center (HTRC)
• Mid Atlantic Telehealth Resource Center (MATRC)
• Northeast Telehealth Resource Center (NETRC)
• Northwest Regional Telehealth Resource Center (NRTRC)
• Pacific Basin Telehealth Center (PBTRC)
• South Central Telehealth Resource Center (SCTRC)
• Southeastern Telehealth Resource Center (SETRC)
• Southwest Telehealth Resource Center (SWTRC)
• Upper Midwest Telehealth Resource Center (UMTRC)

In partnership with: The Telehealth Technology Assessment Center (TTAC)
Thank You.