The Current State, Policy and Training Challenges

Serving Delaware, Kentucky, Maryland, New Jersey, North Carolina, Pennsylvania, Virginia, Washington DC and West Virginia

January 10, 2020
A mechanism for enhancing health care, public health, health administration and health education delivery and support, using electronic communication and information technology.
Telehealth

Synchronous “Live Video”

“Clinician to Patient at Health Facility”

Asynchronous “Store and Forward”

“Clinician to Patient at Non-Health Facility”

“Clinician to Clinician”
Telehealth Technology is Just One Tool in the Clinician’s Toolbox – Telehealth is NOT a Separate Service
It Looked Like This

HUB

SPOKE(S)
The Challenges

Which of these clinical, financial or patient engagement challenges are most important for your organization's successful transition to VBP? (Top Five)

- Effective use of intervention strategies for chronic disease patients: 60%
- Improve patient education and engagement: 50%
- Reduce preventable readmissions: 49%
- Improve patient/family experience and satisfaction: 47%
- Improve transitions of care through better coordination: 45%
Current State

It Now Looks Like This
Integration of telehealth into mainstream care delivery

Current State

Growing Telehealth Options – On-Demand Medicine

Source: THINK-Health curated list of telehealth companies, 24 September 2015
A Smart Watch That Monitors Blood Pressure?

Biobeats has received a nod from FDA for a device that can monitor blood pressure, pulse rate, and oxygen saturation.

AliveCor® KardiaMobile 6L | FDA-Cleared | Wireless 6-Lead EKG | Works with Smartphone | Detects AFib or Normal Heart Rhythm in 30 Seconds

by AliveCor

🌟🌟🌟🌟🌟 431 ratings  | 142 answered questions

Amazon’s Choice for “kardiomobile heart monitor”
**Connected Care** leverages technology to deliver patient care outside of the hospital or doctor’s office.
### BIOSENSING WEARABLES LANDSCAPE

#### COMMODITY ZONE

- amilo
d- BASIS
- Bodymedia
- Conventis
- Empatica
- fitbit
- GARMIN
- iHealth
- Jawbone
- JINS Meme
- Konftel
- Lumedu
- Mio
- Nima
- Nike+
- Nymi
- Omron
- Owlet
- Proteus
- Samsung
- Spire
- Sproutling
- Withings
- Zephyr

#### GROWING LONG TAIL

- BASIS
- Bodymedia
- Empatica
- Athos
- Conventis
- Medtronic
- JINS Meme
- Ortel
- Withings
- Zephyr

### Features

<table>
<thead>
<tr>
<th>Movement</th>
<th>Heart Rate</th>
<th>Sleep</th>
<th>Temperature</th>
<th>Respiration</th>
<th>Skin Conductance</th>
<th>Brain Activity</th>
<th>Hydration</th>
<th>Posture</th>
<th>Glucose</th>
<th>Oxygen Level</th>
<th>Heart Rate Variability</th>
<th>Muscle Activity</th>
<th>Blood Pressure</th>
<th>Eye-Tracking</th>
<th>Ingestion</th>
</tr>
</thead>
</table>

Source: Rock Health review of 75+ companies (companies are selected, not comprehensive)
# The Guide to the Future of Medicine

By Bertalan Meska, MD, PhD

## Healthcare Professionals
- Digital Literacy In Medical Education
- Virtual Dissection
- Full Physiological Simulation
- Microchips Modeling Clinical Trials
- DIY Biotechnology

## Patients
- Gamification Based Wellness
- Curated Online Information
- Home Diagnostics
- Wearable E-skins
- Embedded Sensors
- Digestible Sensors

## Data Input & Diagnostics
- Holographic Data Input
- Medical Tricorder
- Robotic Nurse Assistant
- Semantic Health Records
- Augmented Reality
- Personalized Genomics

## Prepare & Prevent
- Real-Time Diagnostics in the OR
- Smartwatch

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**Around the Corner**
Around the Corner

3 perspectives are added featuring the main trends that shape the future of medicine, such as which scope of the delivery of healthcare and the practice of medicine is affected (prevent & prepare: data intake & diagnostics; therapy & follow-up; and outcomes & consequences), whether it affects patients or healthcare professionals; and the practicability of it (already available - green; in progress - orange; and still needs time - red).
Methodology

An quantitative online survey was conducted by Penn Schoen Berland in eight countries among a representative sample of 12,000 adults 18+ from July 28 to August 15, 2013.

<table>
<thead>
<tr>
<th>Sample Size</th>
<th>12002</th>
<th>1500</th>
<th>1500</th>
<th>1500</th>
<th>1501</th>
<th>1500</th>
<th>1500</th>
<th>1501</th>
<th>1500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margin of Error</td>
<td>+/- 2.89</td>
<td>+/- 2.53</td>
<td>+/- 2.53</td>
<td>+/- 2.53</td>
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<td>+/- 2.53</td>
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<td>+/- 2.53</td>
<td>+/- 2.53</td>
</tr>
</tbody>
</table>

Surprising Findings:

- Traditional hospitals, according to 57% of people, will be obsolete in the future

- Majority of people (84%) would be willing to share their personal health information to advance and lower costs in the health care system

- More than 70% of people are receptive to using toilet sensors, prescription bottle sensors and swallowed health monitors

- 72% of those surveyed would be willing to see a doctor via video conference for non-urgent appointments

- 66% of people say they would prefer a care regimen that is designed specifically for them based on their genetic profile or biology
“I want you to find a bold and innovative way to do everything exactly the same way it’s been done for 25 years!”
CULTURE OF INNOVATION NOT SUPPORTED BY POLICY ENVIRONMENT

Factors Driving Innovation Culture

Based on our research and considering our working definition for culture of innovation, we have identified seven factors that we believe are required to enable and sustain an effective culture of innovation over time. These factors, illustrated in Figure V, are dynamic and interactive, working together to enable or constrain the culture you seek. Similarly, each of these major factors are comprised of constituent elements.

Figure V: Seven Factors Driving Innovation

Policy Environment

<table>
<thead>
<tr>
<th>Orientation</th>
<th>District or state policy environments can be preventive (constrains innovation), permissive (allows, but doesn’t support) or enabling (actively promotes, supports and rewards risk-taking).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leverage Enablers &amp; Remove Barriers</td>
<td>Leaders should actively seek to create more policies that promote and reward the innovative behaviors you seek while also stopping the policies that inhibit innovation.</td>
</tr>
<tr>
<td>Aligned Incentives</td>
<td>Wherever possible, system-level incentives should be aligned to the outcomes you seek.</td>
</tr>
</tbody>
</table>
Licensure

• Determination of criteria, issuance and enforcement of health professional licensure is a right delegated to the states.

• Other than for Veterans’ Health Administration providers, there is no true physician licensure portability.

• A provider must hold a valid license in the state WHERE THE PATIENT IS PHYSICALLY LOCATED AT THE TIME OF SERVICE.
Interstate Medical Licensure Compact

- Drafted by Federation of State Medical Board
- Offers expedited process to obtain physician license
- Enacted in 29 states, DC and Guam
- Some states have chosen to go with licensure by endorsement instead

(Last Updated October 2019)
Federal Standards – Ryan Haight Act

- No controlled substance may be delivered, distributed, or dispensed without a “Valid Prescription”

- “Valid Prescription” A prescription issued for a legitimate medical purpose in the usual course of professional practice

- A Prescription issued by a practitioner who has conducted, at least 1 “in-person medical evaluation” of the patient
“...a practitioner engaged in the practice of telemedicine within the meaning of the Act is exempt from the requirement of an in-person medical evaluation as a prerequisite to prescribing ... controlled substances by means of the Internet.” (Ryan Haight, 74 FR 15603)
Federal Standards – Ryan Haight Act and Telemedicine Defined

(A) is being conducted -
while the patient is being treated by, and physically located in a DEA-registered hospital or clinic.

(B) is being conducted -
while the patient is being treated by, and in the physical presence of, a DEA-registered practitioner.

Exceptions to DEA Registration
• Employee or Contract of Veterans Affairs (VA) or Indian Health Service or Tribal Organization
• Medical Emergency (VA) or Public Health Emergency
• Special Registration for Telemedicine
Federal Standards — Ryan Haight Act

The Special Registration for Telemedicine Clarification Act of 2018 amends Section 831(h)(2) of the Controlled Substances Act (21 U.S.C. § 831(h)(2)) to read as follows:

(2) REGULATIONS. — Not later than 1 year after the date of enactment of the SUPPORT for Patients and Communities Act, in consultation with the Secretary, the Attorney General shall promulgate final regulations specifying —

- the limited circumstances in which a special registration under this subsection may be issued; and
- the procedure for obtaining a special registration under this subsection.

Establishing a timeframe for the DEA to issue final regulations regarding the special registration means that there is a date in sight at which time providers will have greater clarity on how to pursue this special registration.

However, providers should not consider this development in a vacuum. Many states have enacted laws on prescribing via telemedicine, and some state requirements may be more restrictive.
Liability/Malpractice

- American Medical Association Joint Commission
- State Law
- Private Regulators
- Federal Law
- Case law
- Statute
- Regulation
- Agency guidance
Medical Malpractice

Physician Patient Relationship Exists

Standard of Care is Breached

The Breach Causes Injury

Medical Expenses, Lost Wages, Pain and Suffering
As a general rule of thumb, CMS defines “General Supervision” as meaning that the physician or Advanced Practitioner is available by telephone to provide assistance and direction as needed. For procedures that specifically fit under the general supervision requirement, then telehealth can be used to meet that requirement since it exceeds the telephone requirement.

PAYMENT FOR PHYSICIAN SERVICES IN TEACHING SETTINGS

Medicare pays for services furnished in teaching settings through the Medicare Physician Fee Schedule (PFS) if the services meet one of these criteria:

- They are personally furnished by a physician who is not a resident
- They are furnished by a resident when a teaching physician is physically present during the critical or key portions of the service or
- They are furnished by a resident under a primary care exception within an approved Graduate Medical Education (GME) Program

Physically Present

When the teaching physician is located in the same room as the patient (or a room that is subdivided with partitioned or curtained areas to accommodate multiple patients) and/or performs a face-to-face service.
The American Medical Association (AMA) circulated resolution language at the AMA’s Annual House of Delegates Meeting held in June of 2016 which stated that the AMA “supports pilot programs in the Medicare program to enable virtual supervision of ‘incident to’ services that require direct supervision if those programs abide by certain principles.”¹ Those principles include:²

- The physician billing the “incident to” services must meet requirements of direct supervision of “incident to” services which includes seeing the patient and initiating the course of treatment, and providing services that shows active management and participation in the course of treatment.
- Supervision by the physician should conform to all applicable state laws in the state where the patient receives services.
- Non-physician practitioners must follow all state licensing laws and state medical practice laws during the provision of the “incident to” services.
- State scope of practice laws must be followed and the physician must be connected through real-time audio and video technology with the room where the service is provided, and to ensure that the physician is immediately able to provide assistance.
- Virtual supervision of “incident to” services must follow evidence-based practice guidelines when available.
- The physician providing the virtual supervision should visit the sites where the “incident to” services will be performed.
- Physicians providing virtual supervision of the “incident to” services must establish protocols for arranging emergency services “including having an agreement with a physician at the site at which the ‘indirect to’ services are provided, to ensure immediate assistance.”
Most states do not recognize EMS as a health care provider or EMS facilities as health care facilities. Thus, they get “paid” to transport, but not to provide care. In addition they aren’t eligible for broadband assistance.
INADEQUATE INFRASTRUCTURE

Digital gap between rural and nonrural America persists

Despite growth, rural Americans have consistently lower levels of technology adoption

% of U.S. adults who say they have...

Microsoft study of persons of download that reached or exceeded 25 megabits per second. Map diet follower using Microsoft 36

RURAL DOWNLOAD SPEEDS ARE WORSE THAN REPORTED, MICROSOFT STUDY SAYS

By Roberto Gallardo | February 3, 2019 | Pew article

Source: Survey conducted Sept. 29-Nov. 6, 2016. Trend data from other Pew Research Center surveys.

PEW RESEARCH CENTER
SLOW DIFFUSION OF INNOVATION

Closing the 17-year gap between scientific evidence and patient care
FEAR

A.I. will not replace physicians.

However, physicians who use A.I. will replace those who don't.
What needs to change in medical education to prepare clinicians of the future

Michael Pitt, a professor of pediatrics at the University of Minnesota School of Medicine, outlined how the medical education system can adapt to the challenges of the future during a speech at the Manova Summit in Minneapolis.

Training future doctors: how does medical education need to adapt?

From teaching compassion to raising the standards of postgrad courses, experts from across the sector discuss how universities can improve training.

Medical school hasn’t changed much in a century. Here are 5 ways to fix that

By AKHILESH PATHIWAL / JULY 1, 2016
Training Challenges

Telemedicine Training in Undergraduate Medical Education: Mixed-Methods Review

Shayan Waseh, MPH and Adam P Dicker, MD, PhD, FASTRO

Proportion of US MD Medical Schools with a preclinical telemedicine curriculum by state. LCME: Liaison Committee on Medical Education; MD: Doctor of Medicine.
Proportion of US MD Medical Schools with a preclinical telemedicine curriculum by state. LCME: Liaison Committee on Medical Education; MD: Doctor of Medicine.
Proportion of US MD Medical Schools with a clinical telemedicine curriculum by state. LCME: Liaison Committee on Medical Education; MD: Doctor of Medicine.
Medical students have been shown to graduate feeling unprepared to utilize telemedicine effectively and feeling uninformed about the laws governing telemedicine use [16]. At the same time, there is a growing appreciation among medical students that such training would be both relevant and important for their future work [17]. Therefore, the acceleration of the implementation of telemedicine training into the undergraduate medical education curriculum in the United States is of vital importance.
The Future of Telemedicine Education

To accomplish this, telemedicine training in undergraduate medical education should move beyond the simple exposure of medical students to telemedicine technology and seek to augment such exposure with at least basic understanding of the complex governmental, socioeconomic, and cultural principles involved. This is especially important in light of the rapid pace of technological innovation in the telemedicine space; future physicians must not only be trained to use telemedicine but also to do so professionally, safely, and in an evidence-based manner [19].

The likely answer to this concern is already being explored by a multitude of medical schools that are finding ways to combine and consolidate different curricular aims into multifaceted educational components. By combining telemedicine training with existing competencies such as rural care exposure and interprofessional training, medical schools are able to expose future physicians to telemedicine without significant additional burden. Rather than struggling to fit telemedicine into an already overflowing curriculum, medical schools are most successfully able to include telemedicine competencies when they build them into existing components of the curriculum.
TRCs are funded by the U.S. Department of Health and Human Service’s Health Resources and Services Administration (HRSA) Office for the Advancement of Telehealth, which is part of the Office of Rural Health Policy.
Upcoming Events > Webinars

Find out more >

National TRC Webinar – Indiana University School of Medicine Project ECHO: Tele-mentoring Program for the treatment of Opioid Use Disorder
October 10 @ 11:00 am - 12:00 pm

National TRC Webinar – Behavioral Assessment and Intervention via Telehealth for Children with Autism and Related Disorders
September 20 @ 11:00 am - 12:00 pm

National TRC Webinar – Mapping and Designing Telehealth Clinic Workflows
August 16 @ 11:00 am - 12:00 pm

National TRC Webinar – Innovation and Impact with Speech Language Pathology Telepractice
July 19 @ 11:00 am - 12:00 pm
Here to Help!
Center for Connected Health Policy

IS A NONPROFIT, NONPARTISAN ORGANIZATION WORKING TO MAXIMIZE TELEHEALTH’S ABILITY TO IMPROVE HEALTH OUTCOMES, CARE DELIVERY, AND COST EFFECTIVENESS.

https://www.cchpca.org/
CCHP’s comprehensive assessment and compendium of state Medicaid telehealth policies and laws covers all fifty states and the District of Columbia.

CCHP’s semi-annual State Telehealth Laws and Reimbursement Policies report offers the nation’s most current summary guide of Medicaid provider manuals, applicable state laws, and telehealth-related regulations for all fifty states and the District of Columbia. This report serves as a vital resource for policymakers, health care professionals, and health advocates on how each state defines, governs, and regulates technology-enabled health care, noting policy trends across eleven key categories.

FIFTY STATES, FIFTY APPROACHES

Remarkably, no two states are alike in how telehealth is treated despite some similarities in the language used. For example, some states have incorporated telehealth-related policies into law, while other states address issues in their Medicaid program guidelines. In some cases, CCHP discovered policy inconsistencies within a single state. This variability creates a confusing environment for those who use (or intend to use) telehealth, especially health systems that provide health care services in several states.
The National Telehealth Technology Assessment Resource Center aims to create better-informed consumers of telehealth technology. By offering a variety of services in the area of technology assessment, TTAC (pronounced “tea-tac”) aims to become the place for answers to questions about selecting appropriate technologies for your telehealth program.

Resources

http://telehealthtechnology.org/

Toolkits

Toolkits are a critical part of the work that the Telehealth Technology Assessment Center does. These interactive elements allow users to learn the fundamentals of how various technologies work, as well as how to assess them for use in telehealth programs.

We will be releasing new toolkits or assessments in our new Innovation Watch section of our website every few months, as well as working to keep existing content relevant and accurate. Some toolkits will guide users through performing their own assessments. Other toolkits will help users identify their needs, bringing technology into alignment with clinical requirements.

- Clinician’s Guide to Video Platforms
- Digital Cameras – DSLR
- Digital Cameras – Point and Shoot
- Electronic Stethoscopes
- Home Telehealth
- mHealth
- mHealth App Selection
- Mobile Blood Pressure
- Patient Exam Cameras
- Technology Assessment 101
- Tympanometers
- Video Ophthalmoscopes
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