Diving Into Telemedicine:

Adventist Health’s Virtual Care Network

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Diving Into Telemedicine with Adventist Health

Featured Presenters

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V.P. of Global Sales & Corporate Development
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What We Will Cover

- Key factors to telemedicine implementation
- Importance of interoperable technologies
- Adventist Health’s Virtual Care Network: How they got started and keys to success
Dan McCafferty  
V.P. of Global Sales & Corporate Development  
AMD Global Telemedicine

- Key Factors to Telemedicine implementation
- Importance of interoperable technologies
Telehealth Spectrum - Clinical Telemedicine

Medical Event → Clinical Assessment → Outpatient Treatment → Inpatient Treatment

Surgery → Home Monitoring Mhealth
Telemedicine Applications Areas

- Rural Clinics & Hospitals
- Hospital Systems
- Correctional Facilities
- Schools Health Centers
- Mobile Clinics
- Retail/Pharmacy Clinics
- Shipping /Transportation / Industrial
- SNFs and LTC Facilities
Reasons Telemedicine is Used

- Gaps in patient care 42.7%
- Adding additional services 27.0%
- Remove patient barriers to receiving care 13.5%
- Healthcare policy changes 7.2%
- Cost reduction 3.1%

* based on HIMSS Analytics 2015 Telemedicine Study
State of the Clinical Telemedicine Market

- EMR’s do a poor job of directly integrating devices needed for clinical telemedicine
- Video conferencing systems have never been designed to support direct, live medical device integration
- Nearly all medical device development have PC terminated connection points
- Consulting Clinicians insist on mobility
Importance of True Interoperability

- EMR’s are critical tools, huge investments, imperative for continuity of care
  - Over 800 active vendors in the US market alone

- Video conferencing has been used in Healthcare for many, many years;
  - Major investments already made and wished to be preserved
  - At least 5 major vendors and more emerging with different architectures and operating models.

- Medical device market changing rapidly;
  - New devices entering the market
  - USB and wireless connections dominate
How the Technology Works Together – a typical telemedicine encounter
Remote Consultant

Exam Room

Real-time on demand telemedicine cloud

Secure HIPAA encrypted telemedicine network

WAN or Internet

PATIENT

Nurse

PC

Medical Devices

EMR

HL7

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AMD Clinical Telemedicine Interoperability

Medical Devices
- 40 +
- 12 diff mfrs
- USB 2.0
- USB 3.0
- HDMI
- DVI
- Audio
- Dicom
- PDF
- HL7 -in

Network
- 10/100
- Wifi
- 3G
- 4G
- Satellite

Consult/Interface
- Any machine
- Google Chrome
- FireFox
- IE/EDGE

Patient/Nurse UI
- Browser-based
- Google Chrome
- FireFox
- IE/EDGE

EMR
- Any via HL7 configuration file

PTZ: Universal Far End Camera Control
Video: H323, H264, WebRTC, any mfr.

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Virtual Care Network

Rob Marchuk
VP Ancillary Services
Adventist Health
Adventist Health

**Who we are**
- Faith-based, not-for-profit, integrated health care delivery system
- 20 hospitals with more than 2,875 beds
- More than 275 hospital-based, rural health, and physician clinics
- 14 home care agencies and seven hospice agencies

**Where we serve**
- Headquartered in Roseville, CA, providing care throughout California, Hawaii, Oregon and Washington

**Who we serve**
- With a focus on whole-person health, Adventist Health not only strives to promote healthy individuals and families, but also healthy communities.
Adventist Health
CA Locations
Adventist Health Virtual Care Vision

Support the mission, vision, and values of AH by creating enhanced and expanded access to care for the patients and populations we serve both in existing and expanded markets. Access between patients and providers will be delivered through innovative, efficient, reliable, and cost effective technologies.
Outpatient Services
- Specialty Consultations – live interactive – store & forward
- Behavioral Health

Inpatient Services
- Emergency Services
- Stroke Services
- Critical Care: ICU/CCU/PICU/NICU
- Specialty Consultations
- Behavioral Health

Ancillary Service Support Services
- Pharmacy
- Radiology
- Pathology

Home Monitoring & Support Services
- Monitoring
- Education
- Visits
- Training

- Hospitals
- Clinics
- Nursing Homes
- Schools
- Correctional Facilities
- Employer based clinics
- Assisted living facilities
- Home based

- Hospitals
  - ED
  - ICU
  - Med/Surg Units
  - Outpatient services

- Hospitals
  - Outpatient clinics
  - Nursing Homes

- Patient homes
  - Assisted living facilities
Alignment to The Triple Aim +

Mission Expansion

**Measurement Categories**
- Staying Healthy
- Managing Health Risks
- Living with illness
- Optimal Care
- Community Health

**Measurement Categories**
- Access to Care
- Coordination of care
- Patient Satisfaction
- Provider Satisfaction

**Measurement Categories**
- Total Cost of Care
- ED Utilization Rate
- Readmission Rate
Adventist Health Challenges

- Rural Health needs:
  - Provider shortage
  - Access to specialists
  - Cost to recruit and keep specialists in markets
  - Leakage (referrals out of network)

- Eroding Hospital Margins
- Population health/ at risk populations
- Quality
- Leverage competencies/clinical expertise across the enterprise
Value Proposition to Providers

- The ability to connect to a broader base of patients
- Reduced overhead or other operational expenses
- Maximize efficiency and time
- Augment existing practice through additional patient volume and expanded revenue stream
Value Proposition to Patients

- Access to convenient, high quality, and affordable care when and where you need it, including multiple specialties across California
- Affordable: reduces travel time, transportation expense and time away from work
- Reduces wait times
- Integrated and coordinated care across the patient’s care team
- Promotes rapid diagnosis and treatment linked to improved patient outcomes
Payers and Partners

- Blue Shield of California:
  - Vision for Rural Health
  - Access to specialists
  - Aligned mission/vision/values

- USDA Grant (distant learning and telehealth)

- California Medicaid program
Keys to success

**Telehealth Vision**
- Where We Want To Go
- Direction On How To Get There

**Strategic Alignment Across Enterprise**
- Rural Health Strategy
- Payment Options in CA

**Leadership Buy-in**
- Multiple CEOs & Leaders
- Unique Physician Relationships
- Competing Internal Initiatives

**Clear Communication**
- Internal Marketing
- External Marketing

**Focus on Specific Clinical Problems**
- Access to Care
- Program Expansion

**Success Metrics**
- Consistent Criteria
- Comparable Data
Operations - Care Coordination Center

- Full service virtual multi-specialty physician practice with robust patient and provider supporting services
- MSO Services to our aligned IPA
- One call access to the Center initiates all aspects of the patient’s care:
  - Appointment scheduling
  - Coordination between specialist and clinic site
  - Coordination of all prior medical information in preparation for the visit
  - Insurance verification and preauthorization
  - Billing to the payers
  - Scheduling follow up ancillary services and physician appointments
Technology Component – Patient Site

❖ **State-of-the-Art AMD Telehealth Cart**
  - High definition camera
  - Ability to see both patient and diagnostic equipment images simultaneously
  - Remote clinician can control camera and diagnostic devices

❖ **Diagnostic Equipment**
  - Otoscope
  - General Use Exam Camera
  - Stethoscope
  - Vital Signs Monitor
Technology Component – Provider Station

- Uses PC with telehealth hardware and software
- Two stations in Glendale
- One in Bakersfield
- Can be used in provider’s office with appropriate bandwidth / speed and in-office support
- Cerner ambulatory EHR for TeleHealth
- Order entry and ePrescribe
- Mobile option for videoconferencing
Current Locations

- **Peds ICU**
- **New AHTN Sites**
  - Corcoran
  - Corning
  - Glendale
  - Montebello
  - +11 more

- **Patient Sites**
  - Paradise
  - Clearlake
  - Ukiah
  - Willits
  - Fort Bragg
  - Napa
  - St. Helena
  - Sonora
  - Dinuba
  - Roseville

- **Provider Sites**
  - **Stroke Services**
    - Feather River
    - Clearlake
    - Ukiah Valley
    - St. Helena

- **Care Coordination Center**
Results

- **Outpatient Telehealth**
  - Blue Shield Initiative – 25 rural sites
  - USDA Grant – 11 sites
  - 2016 Psychiatry: Northern CA Initiative

- **Inpatient Telehealth**
  - Stroke Services – 4 sites
  - Peds ED/Critical care – 6 sites
  - Cardiology – 2 sites. ED & Rounding

- 27% increase in utilization 2014<2015
- 2014 – 2015 largest increase in utilization – correctional facilities
- Added 5 telehealth service lines 2014 – 2015
- Time to access stroke neurologist – currently within 5 minutes of page
What Can Still be Improved

Continuous improvement on:

- Market communication
- Project management
- Project planning
- IP strategies around non-emergent specialties
- Training
- Clinical protocols
- Provider engagement (both on the provider and referral side)
- Evaluation of new technology that can lead to better and enhanced workflows and patient engagement
What We Would do Differently

- More of a focused start up...one clinic one specialty...vs 25 clinics and 13 specialties
- Time to integrate more closely in the markets prior to launch...identify a physician champion up front with an administrative champion
- Build the program/set expectations before launch vs building on the fly
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