



**Telemedicine  
Telehealth**  
Service Provider Showcase™

OCTOBER 2-3, 2017  
HYATT REGENCY  
PHOENIX, AZ

# SPS 2017 Program



**ADVANCING TELEHEALTH PARTNERSHIPS**

[www.ttspsworld.com](http://www.ttspsworld.com)



# Hotel Floor Plan

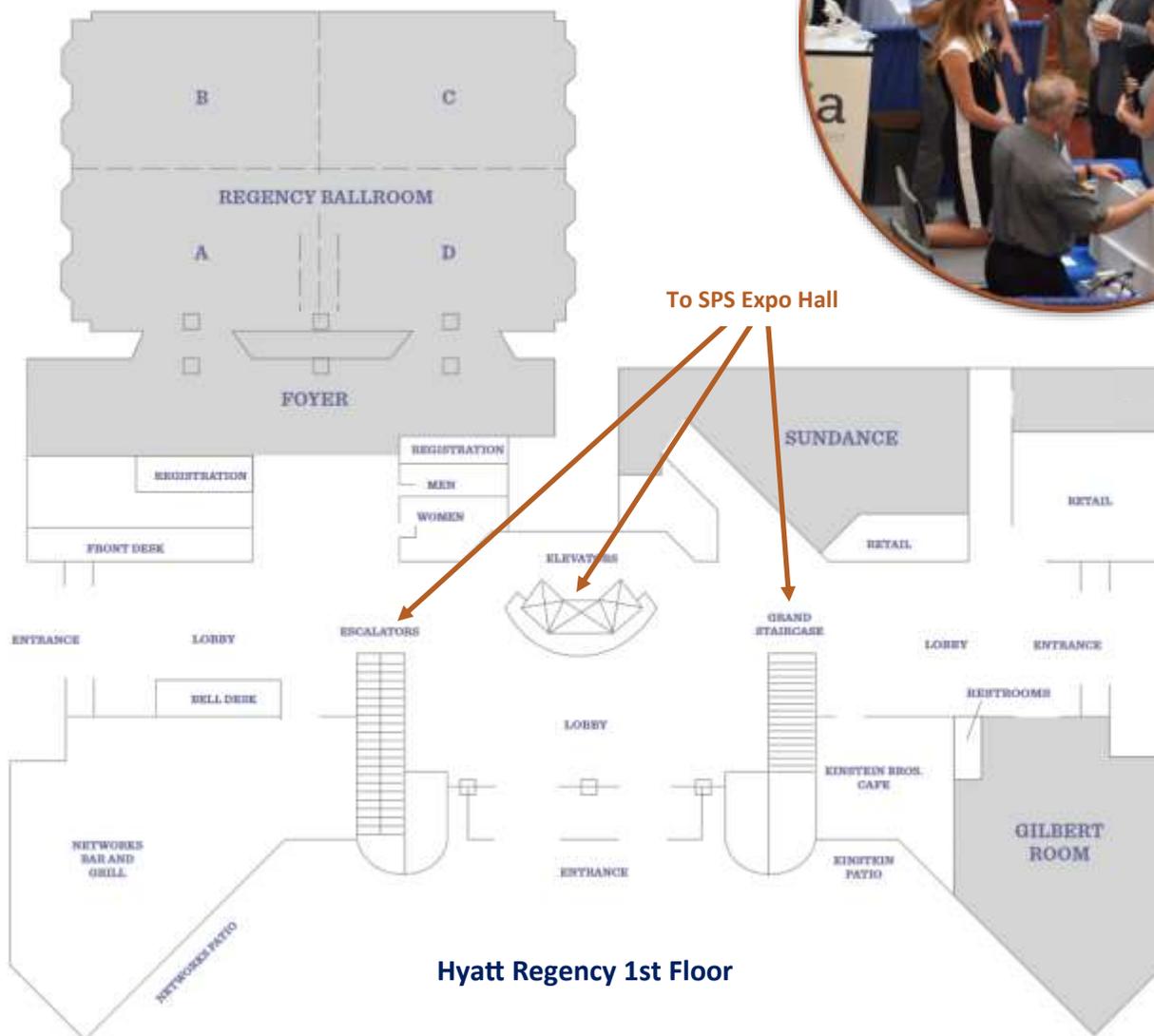
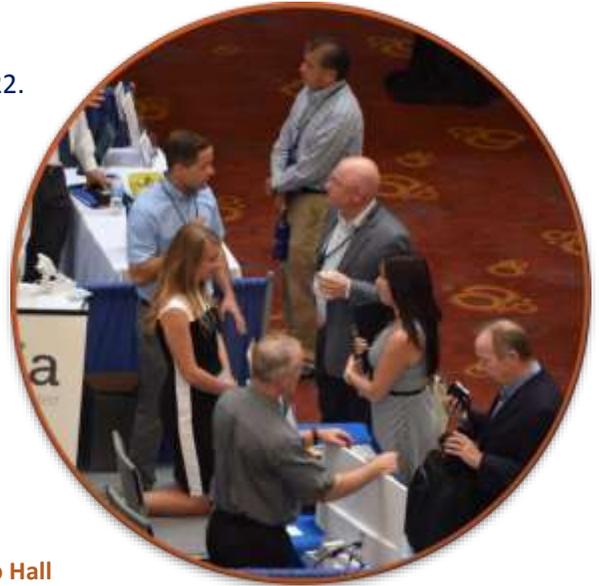
SPS registration and check-in is in the first-floor Foyer.

All talks and lightning rounds will be held in the Regency Ballroom (ABCD).

Posters and poster presentations will be in the Regency Ballroom. Meet the authors at the poster presentation breakfast, Tuesday from 7:30 to 8:30 am. Poster abstracts start on p. 28.

The SPS Expo Hall is in the second-floor Atrium—take the escalator, elevators, or stairs from the hotel Lobby. The Expo Hall layout is on p. 22.

Coffee breaks, lunches, and the Monday evening reception will be in the Expo Hall.



Hyatt Regency 1st Floor

## Photos and Recordings

Photographs will be taken during SPS and are the property of the Arizona Telemedicine Program (ATP). Unauthorized recording or broadcasting (audio, video, still photography) of presentations and posters without the express written consent of ATP and individual presenters is strictly prohibited.

# General Information

## Registration/Information Desk

The SPS Registration/Information Desk is to your left as you enter the Hyatt Foyer (pass the Hyatt front desk and proceed toward the Regency Ballroom).

Registration/Information Desk hours:

- Sunday, Oct. 1: 3:00pm - 6:00 pm
- Monday, Oct. 2: 7:00am - 6:00 pm
- Tuesday, Oct. 3: 7:00am - 3:00 pm

## Speaker & Moderator Registration/Information Desk

The Speaker & Moderator Registration/Information Desk is to your right as you enter the Hyatt Foyer (pass the Hyatt front desk and proceed toward the Regency Ballroom).

Moderators will receive moderator packets; speakers will receive speaker packets and can upload presentations here. Please have your presentation loaded at least two hours before your scheduled session.

## Name Badges

SPS attendees must wear name badges for access to sessions, meals, and the expo hall. Should you misplace your badge, please obtain a replacement badge at the Registration/Information Desk.

## Internet Access

Wi-Fi is complimentary for SPS attendees in meeting rooms, public spaces, and hotel restaurants. The password is printed on the back of your name badge.

## Parking

Hyatt Regency hotel guests: Park at the Regency Garage (40 N. 2nd St.) and tell the front desk agent that you have parked there. You will be given an in/out parking pass and a 20% discount will be applied to your parking charges.

Non-Hyatt Regency guests: Park in the Regency Garage and bring your ticket to the SPS Registration Desk to receive a discount sticker.

Other downtown parking options are at <http://bit.ly/2xhFz86>

## Speaker Slides & Handouts

Speaker handouts and slides (where speakers have granted permission) will be posted at <http://ttspsworld.com/2017-presentations> during the conference. Access information is in your printed program.

# Table of Contents

Welcome .....	4
Leadership .....	5
Sponsors .....	6
Schedule at a Glance .....	7
Detailed Schedule .....	8
Speaker Biographies .....	14
Expo Hall Layout .....	22
Exhibitors .....	23
Poster Abstracts .....	28



## SPS 2017 HOSTS:

Arizona Telemedicine Program  
Southwest Telehealth Resource Center  
Four Corners Telehealth Consortium

# Welcome

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**On behalf of the Conference Advisory Board, the Honorary Chair, the Arizona Telemedicine Program, the Southwest Telehealth Resource Center, and the Four Corners Telehealth Consortium,** we are delighted to welcome you to the third national Telemedicine and Telehealth Service Provider Showcase. SPS focuses on building partnerships to bring high quality, telemedicine- and telehealth-enabled medical specialty services directly into hospitals, clinics, private practices, and patients' homes.

We have an exciting lineup of speakers that includes nationally and internationally recognized experts on telehealth; telemedicine providers and users; and authorities on legal, regulatory and policy aspects. The two-day conference features a series of high-powered talks and panels on learning what it takes to succeed in this increasingly competitive market; finding the right partners; understanding telemedicine laws, regulations and policies; establishing successful working relationships; integrating telehealth into different health-care enterprises; negotiating with payers; influencing telehealth legislation; and navigating changing technology.

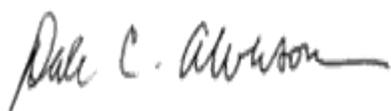
The Expo Hall showcases a wide array of tele-medical specialty services and supporting technologies, providing a forum for networking as well as for seeing and discussing the latest trends in clinical telehealth. To help attendees navigate the floor and hear first-hand what these best-of-breed telehealth companies have to offer, our "Lightning Rounds" highlight exhibitors with brief descriptions of their products and services.

Health care is changing and telehealth is leading the way. Tele-service providers offer an up-and-coming model for improving the efficient and effective delivery of health care in innovative ways that will truly impact patient care. SPS 2017 offers attendees an entrée into this important and influential arena to help you stay competitive in this demanding and dynamic field.

We wish to express our appreciation to those many individuals who have participated in the planning and implementation of the diverse components of SPS 2017. Their enthusiasm and dedication have been critical in making SPS 2017 a reality.

It is our hope that you find this conference enjoyable in your personal and professional experiences.

Sincerely, your SPS 2017 Co-Chairs,



Dale C. Alverson, MD  
Professor Emeritus and Regents' Professor  
Medical Director  
Center for Telehealth  
University of New Mexico Health Sciences Center  
Past President, American Telemedicine Association



Elizabeth A. Krupinski, PhD  
Professor and Vice-Chair of Research  
Department of Radiology & Imaging Sciences  
Emory University  
Co-Director, Southwest Telehealth Resource Center  
Past President, American Telemedicine Association



# SPS 2017 Leadership

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Telemedicine Program  
Co-Director, Southwest  
Telehealth Resource Center

## CO-CHAIR

**Dale C. Alverson, MD, FATA, FAAP**



Medical Director  
Center for Telehealth  
University of New Mexico  
Health Sciences Center

## CO-CHAIR

**Elizabeth A. Krupinski, PhD, FSPIE,  
FSIIM, FATA**



Co-Director  
Southwest Telehealth  
Resource Center

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Medical Director, Utah Telehealth Network, Salt Lake City, UT
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Chief Medical Officer, Avizia, Phoenix, AZ, and Professor of Neuroradiology, Barrow Neurological Institute, Phoenix, AZ
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- **Jay H. Shore, MD, MPH**  
Director of Telemedicine, University of Colorado Depression Center, Aurora, CO
- **Nancy L. Vorhees, RN, MSN**  
Interim Executive Director, Spokane Teaching Health Center, Spokane, WA

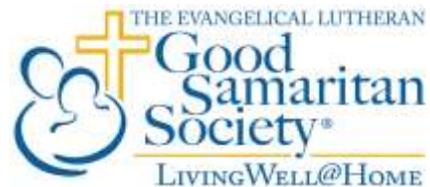
# Thanks to Our Sponsors

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## CONFERENCE PARTNER



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## SPS HOSTS



# SPS Schedule at a Glance

MONDAY, Oct. 2		TUESDAY, Oct. 3	
8:00-8:10	Welcome	7:30-8:30	Poster Sessions and Breakfast – Regency Ballroom
8:10-8:40	<b>KEYNOTE</b> Telehealth as a Strategic Asset: Are You Ready?	<b>MODULE 3</b> MAKING YOUR PARTNERSHIP WORK SMOOTHLY	
<b>MODULE 1</b> TELEHEALTH WINNERS: STRATEGIES THAT WORK		8:30-9:30	<b>PANEL</b> Show Me the Data! Outcomes and Savings from Telehealth Partnerships
8:40-9:10	Saving a Rural Hospital Through Telemedicine	9:30-10:00	Meet the Service Providers Lightning Rounds
9:10-9:35	Meet the Service Providers Lightning Rounds	10:00-10:30	<b>NETWORKING BREAK - Expo Hall</b> <i>Sponsored by the Southwest Telehealth Resource Center</i>
9:35-10:05	<b>NETWORKING BREAK – Expo hall</b> <i>Sponsored by Avizia</i>	10:30-11:00	Successfully Marketing a Telehealth Partnership
10:05-11:05	<b>PANEL</b> Finding and Vetting Your Perfect Telehealth Partner	11:00-12:00	<b>PANEL</b> Integrating a Telehealth Partner into Your Organization: Best Practices and Lessons Learned
11:05-11:35	Embracing Direct-to-Consumer Telemedicine Beyond On-Demand	12:00-1:15	<b>LUNCH – Expo Hall</b>
11:35-12:05	Championing Telehealth Legislation in Your State	<b>MODULE 4</b> NAVIGATING THE RAPIDS OF CHANGING TECHNOLOGY	
12:05-1:20	<b>LUNCH – Expo Hall</b>	1:15-1:45	Moving Away from “Platform Agnostic”
<b>MODULE 2</b> LEGAL AND REGULATORY CONSIDERATIONS		1:45-2:15	Case Study: On-Demand Digital Health Services
1:20-2:35	<b>PANEL</b> A Deep Dive into Advanced Telehealth Legal and Regulatory Issues	2:15-2:45	<b>NETWORKING BREAK – Expo Hall</b>
2:35-3:00	Meet the Service Providers Lightning Rounds	2:45-3:15	Integrating Telehealth into Your EHR
3:00-3:30	<b>NETWORKING BREAK– Expo Hall</b> <i>Sponsored by the Good Samaritan Society and Trapollo</i>	3:15-3:45	Wearable Sensors and Diabetic Foot Remission
3:30-4:00	Understanding Medicare Fine Print	3:45-3:55	Closing
4:00-5:00	<b>PANEL</b> Coverage and Payment: Negotiating Win-Wins		
5:00-6:30	<b>NETWORKING RECEPTION – Expo Hall</b> <i>Sponsored by GlobalMed</i>		

# Detailed Schedule

Please note that all sessions for this conference will be held in the Regency Ballroom.

Speaker handouts and slides will be posted at <http://ttspsworld.com/2017-presentations>; access information is in your printed program.

DAY ONE – MONDAY, OCTOBER 2, 2017	
7:00 am – 6:00 pm	<i>SPS Registration and Information Desk Open</i>
8:00 am – 8:10 am	<p><b>Welcome</b></p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p><b>Dale C. Alverson, MD, FATA, FAAP</b> Medical Director, Center for Telehealth University of New Mexico Health Sciences Center Albuquerque, NM</p> </div> <div style="text-align: center;">  <p><b>Elizabeth A. Krupinski, PhD, FSPiE, FSIIM, FATA</b> Co-Director Southwest Telehealth Resource Center Tucson, AZ</p> </div> </div> <div style="text-align: center; margin-top: 10px;">  <p><b>Ronald S. Weinstein, MD, FCAP, FATA</b> Director, Arizona Telemedicine Program Co-Director, Southwest Telehealth Resource Center Tucson, AZ</p> </div>
8:10 am – 8:40 am	<p><b>Keynote Address—Telehealth as a Strategic Asset: Are You Ready?</b></p> <div style="text-align: center;">  <p><b>Alan C. Roga, MD</b> President, Provider Market Teladoc Lewisville, TX</p> </div>
<b>MODULE 1: TELEHEALTH WINNERS—STRATEGIES THAT WORK</b>	
	<div style="display: flex; align-items: center;"> <div style="flex: 1;"> <div style="text-align: center; margin-bottom: 10px;">  <p><b>SECTION MODERATOR:</b> <b>Ronald S. Weinstein, MD, FCAP, FATA</b> Director, Arizona Telemedicine Program and Co-Director, Southwest Telehealth Resource Center, Tucson, AZ</p> </div> </div> <div style="flex: 1; border: 2px solid orange; border-radius: 50%; text-align: center;">  </div> </div>
8:40 am – 9:10 am	<p><b>Saving a Rural Hospital Through Telemedicine</b></p> <div style="text-align: center;">  <p><b>James J. Dickson, BA, MBA</b> Chief Executive Officer / Administrator Copper Queen Community Hospital Bisbee, AZ</p> </div>
9:10 am – 9:35 am	<p><b>Lightning Rounds: Meet the Service Providers and Tech Companies</b></p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p><b>Dale C. Alverson, MD, FATA, FAAP</b> Medical Director, Center for Telehealth University of New Mexico Health Sciences Center Albuquerque, NM</p> </div> <div style="text-align: center;">  <p><b>Elizabeth A. Krupinski, PhD, FSPiE, FSIIM, FATA</b> Co-Director Southwest Telehealth Resource Center Tucson, AZ</p> </div> </div>
9:35 am – 10:05 am	<p><b>EXPO HALL OPEN (2nd Floor Atrium) – Networking &amp; Coffee Break</b> <i>Sponsored by Avizia</i></p>



**SECTION MODERATOR:**  
**Alexis S. Gilroy, JD**  
 Partner, Jones Day, Washington, DC

10:05 am –  
 11:05 am

**Panel**  
**Finding and Vetting Your Perfect Telehealth Partner**



**Alexis S. Gilroy, JD**  
 Partner  
 Jones Day  
 Washington, DC



**Elizabeth A. Krupinski, PhD, FSPiE, FSIIM, FATA**  
 Co-Director  
 Southwest Telehealth Resource Center  
 Tucson, AZ



**Sarah N. Pletcher, MD, MHCDS**  
 Assistant Professor of Surgery and Assistant Professor of Medicine  
 Geisel School of Medicine at Dartmouth  
 Hanover, NH

11:05 am –  
 11:35 am

**Embracing Direct-to-Consumer Telemedicine Beyond On-Demand**



**Brian Wayling, MBA**  
 Assistant Vice President, Telehealth Services  
 Intermountain Healthcare  
 Salt Lake City, UT

11:35 am –  
 12:05 pm

**Championing Telehealth Legislation in Your State**



**Kofi Jones**  
 Principal and Owner  
 KJ Health Matters  
 Andover, MA



12:05 pm –  
 1:20 pm

**EXPO HALL OPEN – Networking Lunch**

**MODULE 2: LEGAL AND REGULATORY CONSIDERATIONS**



**SECTION MODERATOR:**  
**Sarah N. Pletcher, MD, MHCDS**  
 Assistant Professor of Surgery and Assistant Professor of Medicine, Geisel School of Medicine at Dartmouth, Hanover, NH

1:20 pm –  
 2:35 pm

**Panel**  
**A Deep Dive into Advanced Telehealth Legal and Regulatory Issues**



**Non-Physician Providers in Telehealth**  
**Maureen Cahill, MSN, APN-CNS, AOCNS**  
 Senior Policy Advisor  
 National Council of State Boards of Nursing  
 Chicago, IL

**Telemedicine Prescribing**  
**Michael Grafton**  
 Diversion Program Manager, US Drug  
 Enforcement Agency/Phoenix Field Office  
 Phoenix, AZ



**Using Telehealth to Build Destination Medicine Programs**  
**Nathaniel Lacktman, JD**  
 Partner, Foley & Lardner, LLP  
 Tampa, FL

## MODULE 2: LEGAL AND REGULATORY CONSIDERATIONS (Continued)

2:35 pm –  
3:00 pm

### Lightning Rounds: Meet the Service Providers and Tech Companies



**Dale C. Alverson, MD, FATA, FAAP**  
Medical Director, Center for Telehealth  
University of New Mexico Health  
Sciences Center  
Albuquerque, NM



**Elizabeth A. Krupinski, PhD,  
FSPIE, FSIIM, FATA**  
Co-Director  
Southwest Telehealth Resource Center  
Tucson, AZ

3:00 pm –  
3:30 pm

### EXPO HALL OPEN – Networking & Coffee Break

*Sponsored by the Good Samaritan Society and Trapollo*



#### SECTION MODERATOR:

**Nathaniel Lacktman, JD**

Partner, Foley & Lardner, LLP, Tampa, FL

3:30 pm –  
4:00 pm

### Understanding Medicare Fine Print



**Tracy Schutt**  
Part B Provider Outreach & Education  
Representative  
Noridian Healthcare Solutions  
Fargo, ND



**Tana Williams**  
Provider Outreach & Education  
Representative  
Noridian Healthcare Solutions  
Fargo, ND

4:00 pm –  
5:00 pm

### Panel

#### Coverage and Payment: Negotiating Win-Wins



**Claire E. Castles, JD, LLM**  
Partner  
Jones Day  
Los Angeles, CA



**Cynthia Hatcher**  
National Vice President  
Medicaid Products and Innovation  
WellCare Health Plans  
Tampa, FL



**Nathaniel Lacktman, JD**  
Partner  
Foley & Lardner, LLP  
Tampa, FL

5:00 pm –  
6:30 pm

### EXPO HALL OPEN – Networking Reception

*Sponsored by GlobalMed*

Please fill out the conference and presenter evaluation forms included with your conference packet and drop them off at the SPS registration desk. Or go to <https://www.surveymonkey.com/r/SPS2017Eval> to evaluate presenters and the conference online. Thank you.



## DAY TWO – TUESDAY, OCTOBER 3, 2017

7:00 am –  
3:00 pm

*SPS Registration and Information Desk Open*

7:30 am –  
8:30 am

### Poster Sessions and Breakfast

View the posters and talk with their authors over breakfast in the Regency Ballroom. Read the poster abstracts starting on p. 28.



## MODULE 3: MAKING YOUR PARTNERSHIP WORK SMOOTHLY



### SECTION MODERATOR:

**B. Tilman Jolly, MD, FACEP**

Chief Medical Officer, Specialists On Call, Reston, VA

8:30 am –  
9:30 am

### Panel

**Show Me the Data! Outcomes and Savings from Telehealth Partnerships**



#### *Introduction*

**Elizabeth A. Krupinski, PhD,  
FSPIE, FSIIM, FATA**

Co-Director  
Southwest Telehealth Resource Center  
Tucson, AZ



**Jason C. Goldwater, MA, MPA**

Senior Director  
National Quality Forum  
Washington, DC



**Judd E. Hollander, MD**

Telehealth Fellowship Director  
Thomas Jefferson University  
Philadelphia, PA



**Ryan R. McCool, MD**

ENT-Otolaryngologist  
Section of Otolaryngology  
Department of Surgery  
White River Junction Veterans Affairs  
Medical Center  
White River Junction, VT

9:30 am –  
10:00 am

**Lightning Rounds: Meet the Service Providers and Tech Companies**



**Dale C. Alverson, MD, FATA**

Medical Director  
Center for Telehealth  
University of New Mexico Health  
Sciences Center  
Albuquerque, NM



**Elizabeth A. Krupinski, PhD,  
FSPIE, FSIIM, FATA**

Co-Director  
Southwest Telehealth Resource Center  
Tucson, AZ

10:00 am –  
10:30 am

**EXPO HALL OPEN – Networking & Coffee Break**

*Sponsored by the Southwest Telehealth Resource Center*



**SECTION MODERATOR:**

**Amy L. Waer, MD**

Medical Director, Arizona Telemedicine Program, Tucson, AZ

10:30 am –  
11:00 am

**Successfully Marketing a Telehealth Partnership**



**Tammy Hatting, MPA**

Director of Innovation  
Avera eCARE  
Sioux Falls, SD

11:00 am –  
12:00 pm

**Panel**

**Integrating a Telehealth Partner into Your Organization: Best Practices and Lessons Learned**



**Robert Bernstein, MD, MPH**

Vice President of Clinical Affairs  
Carena  
Seattle, WA



**Chong Jacobs, RN, MSN**

RN Senior Manager  
Banner Telehealth  
Mesa, AZ



**Gigi Sorenson, RN, MSN**

Director of Clinical Integration  
GlobalMed  
Scottsdale, AZ

12:00 pm –  
1:15 pm

**EXPO HALL OPEN – Networking Lunch**

**MODULE 4: NAVIGATING THE RAPIDS OF CHANGING TECHNOLOGY**



**SECTION MODERATOR:**

**Dale C. Alverson, MD, FATA**

Medical Director, Center for Telehealth, University of New Mexico Health Sciences Center, Albuquerque, NM

1:15 pm –  
1:45 pm

**Moving Away from “Platform Agnostic”**



**Bart M. Demaerschalk, MD, MSc, FRCP(C)**

Professor of Neurology and Medical Director, Telemedicine  
Mayo Clinic Center for Connected Care  
Scottsdale, AZ

1:45 pm –  
2:15 pm

**Case Study: On-Demand Digital Health Services**



**Shauna M. Coyne**

Director, IT Innovation  
New York Presbyterian Hospital  
New York, NY



2:15 pm – 2:45 pm **EXPO HALL OPEN – Networking & Coffee Break**



**SECTION MODERATOR:**  
**Gigi Sorenson, RN, MSN**  
 Director of Clinical Integration, GlobalMed, Scottsdale, AZ

2:45 pm – 3:15 pm **Integrating Telehealth into Your EHR**



**Andy Penn**  
 Senior Director, Strategic Business Unit  
 Cerner Corporation  
 Kansas City, MO

3:15 pm – 3:45 pm **Wearable Sensors and Diabetic Foot Remission (via video)**



**David G. Armstrong, DPM, MD, PhD**  
 Professor of Surgery and Director, Southwestern Academic Limb Salvage Alliance (SALSA)  
 Keck School of Medicine at University of Southern California  
 Los Angeles, CA

3:45 pm – 3:55 pm **Closing**



**Dale C. Alverson, MD, FATA**  
 Medical Director  
 Center for Telehealth  
 University of New Mexico Health  
 Sciences Center  
 Albuquerque, NM



**Elizabeth A. Krupinski, PhD, FSPIE, FSIIM, FATA**  
 Co-Director  
 Southwest Telehealth Resource Center  
 Tucson, AZ



**Ronald S. Weinstein, MD, FCAP, FATA**  
 Director, Arizona Telemedicine Program  
 Co-Director, Southwest Telehealth Resource Center  
 Tucson, AZ

*Please fill out the conference and presenter evaluation forms included with your conference packet and drop them off at the SPS registration desk. Or go to <https://www.surveymonkey.com/r/SPS2017Eval> to evaluate presenters and the conference online. Thank you.*



# Speaker and Moderator Biography Excerpts

## Dale C. Alverson, MD, FATA, FAAP



**Medical Director  
Center for Telehealth  
University of New Mexico Health  
Sciences Center**

Dr. Alverson is Professor Emeritus and Regents' Professor at the University of New Mexico, where he is the Medical Director of the Center for Telehealth involved in the planning, implementation, research and evaluation of Telemedicine systems for New Mexico, as well as nationally and internationally. He is also the Chief Medical Information Officer at LCF Research and the New Mexico Health Information Collaborative, assisting in their efforts to address the development and meaningful use of health information exchange, adoption of electronic health records, and integration with telemedicine. He is a Past President of the American Telemedicine Association. He is involved in collaborative international programs to advance Telehealth and e-Health globally.

## David G. Armstrong, DPM, MD, PhD



**Professor of Surgery and Director  
Southwestern Academic Limb  
Salvage Alliance (SALSA)  
Keck School of Medicine at  
University of Southern California**

Before joining USC, Dr. Armstrong was a Professor of Surgery (with Tenure) at The University of Arizona and Deputy Director of the Arizona Center for Accelerated Biomedical Innovation (ACABI). He holds a Master of Science degree in Tissue Repair and Wound Healing from the University of Wales College of Medicine and a PhD from the University of Manchester College of Medicine, where he was appointed Visiting Professor of Medicine. He also co-founded the Southern Arizona Limb Salvage Alliance. Dr. Armstrong was appointed Deputy Director of the Arizona Center for Accelerated Biomedical Innovation and co-founded its "augmented human" initiative, which places him at the nexus of the merger of consumer electronics, wearables and medical devices. He has produced more than 460 peer-reviewed research papers in dozens of scholarly medical journals as well as over 80 book chapters. He is Co-Editor of the American Diabetes Association's (ADA) Clinical Care of the Diabetic Foot, now entering its third edition. He is one of the first six International Wound Care Ambassadors and is the recipient of numerous awards and degrees by universities and international medical organizations.

## Robert Bernstein, MD, MPH



**Vice President of Clinical Affairs  
Carena, Inc.**

Dr. Bernstein is a family physician who joined Carena Medical Providers over 10 years ago, dating back to Carena's time as an innovator in delivering house call visits. He was actively involved with Carena's evolution into a leader in telemedicine care. In addition to leading the CMP group of physicians and nurse practitioners, he helped to develop Carena's Virtual Practice Guidelines and Quality Assurance programs. He served on URAC's Expert Panel for developing telemedicine standards and has presented on virtual urgent care guidelines and clinical outcomes at the annual ATA meetings. He received his BA in economics from the University of Virginia and his MD from the University of North Carolina. He also completed his MPH and a primary care research fellowship at the University of Washington. Since initially relocating for his family medicine residency, he has lived in Seattle and been part of the medical community there for over 25 years.

## Maureen Cahill, MSN, APN, CNS, AOCNS



**Senior Policy Advisor  
National Council of State  
Boards of Nursing**

Maureen Cahill has been an advanced practice nurse in adult and pediatric oncology for more than 35 years. She joined the National Council of State Boards of Nursing in summer 2011 to lead their Campaign for APRN Consensus, implementing the APRN Consensus Model of APRN Regulation, Licensure, Accreditation, Certification, and Education in all 55 US states and jurisdictions. She assists Boards of Nursing in adoption of the Consensus Model. In clinical roles as a nursing director and cancer center administrator, Ms. Cahill has had administrative accountability for other specialty APRNs. Prior to joining the NCSBN, she was Clinical Director of the Aflac Cancer Center at Children's Healthcare of Atlanta. She received her MSN from Boston University and her BSN from the College of St. Teresa in Winona, MN.

## Claire E. Castles, JD, LLM



**Partner**  
**Jones Day**

Claire Castles advises clients across the health care industry on compliance strategies and regulatory issues and in proceedings before federal and state government agencies. Her areas of practice include licensing and certification, payment and reimbursement, health privacy, Emergency Medical Treatment and Active Labor Act (EMTALA), Medicare conditions of participation, contracting and transactional matters, internal investigations, and government investigations and audits. Ms. Castles' experience includes advising hospitals and large academic medical centers in operational and administrative responses to state immediate jeopardy and privacy breach findings and Centers for Medicare and Medicaid Services' surveys and deficiency findings, including threatened termination actions. She also assists clients in responding to Health and Human Services Office of Inspector General audits, recovery audit contractor (RAC) and other program safeguard contractor (PSC) audits, and advising clients on repayments to private payers and the Medicare and Medicaid program. She is a voting member of the National Native American Bar Association and fellow of the American Bar Foundation.

## Shauna M. Coyne, BSc



**Director, IT Innovation**  
**New York-Presbyterian Hospital**

Shauna Coyne is the director of Innovation at New York-Presbyterian Hospital, where she oversees operations and enterprise technology implementation. The mission of the NYP Innovation Center is to leverage the latest technology to improve the patient experience, hospital operations, and clinical outcomes for the NYP enterprise through digital healthcare and innovation. Ms. Coyne and her team are focused on moving 20% of the business to virtual care. Ms. Coyne was one of the original founders of the innovation department back in 2015. Prior to this role, she worked in various departments at NYP such as Peri-Operative Services and Transplant. She has been at New York-Presbyterian for seven years. She is a graduate of University College Cork, Ireland.

## Bart M. Demaerschalk, MD, MSc, FRCP(C)



**Professor of Neurology and Medical Director, Telemedicine**  
**Mayo Clinic Center for Connected Care**

Dr. Demaerschalk received his M.D. from the University of British Columbia. He completed his neurology residency and vascular neurology fellowship training at the University of Western Ontario and postgraduate training in clinical epidemiology, biostatistics, health research methodology, and health professional education at McMaster University and University of Toronto. He joined Mayo Clinic in 2001 and is a professor in the Department of Neurology, director of Vascular Neurology, Hospital Neurology, Tele Stroke, and Tele Neurology. Dr. Demaerschalk has specialized in stroke, emergency neurology, and telemedicine for over a decade. He co-authored American Heart Association and American Stroke Association guidelines for the management of acute ischemic stroke and American Academy of Neurology guidelines for telemedicine in neurology. He has designed and conducted pivotal clinical trials demonstrating reliability, validity, safety, and efficacy of telemedicine for stroke and the first US cost effectiveness analysis of telestroke. He is the author of more than 150 research manuscripts, chapters and editorials.

## James J. Dickson, BA, MBA



**Chief Executive Officer / Administrator**  
**Copper Queen Community Hospital**

James J. Dickson is the Chief Executive Officer of Copper Queen Community Hospital, located in rural Bisbee, Arizona. As CEO for the last 17 years, he has overseen the expansion of CQCH from a struggling facility to a profitable and nationally recognized rural health care network. Mr. Dickson has led hospitals and physician groups in Illinois, Ohio, New York and California. He has spent the past 18 years working with critical access hospitals, including CQCH, a 14-bed acute-care center offering a full range of services. It is a Level IV Trauma Center and is considered among the top 5 percent of hospitals nationally for its innovative use of technology and access to specialty services through its telemedicine program. Mr. Dickson is the 2011 winner of the American Hospital Association's Shirley Ann Munroe Leadership Award. He also recently received honors from the Arizona Hospital and Healthcare Association and has been twice named the Outstanding Rural Health Professional by the Arizona Rural Health Association (AzRHA). He has served for the past six years as a member of the Arizona Hospital Association Board of Directors and is a past President of AzRHA.

## Alexis S. Gilroy, JD



**Partner**  
**Jones Day**

Alexis Gilroy is a partner at the law firm of Jones Day, where she advises health care providers and technology companies on transactional, health regulatory and corporate matters with an emphasis on digital health topics. She has managed numerous strategic merger, acquisition, private equity, venture capital, and joint venture transactions for various healthcare and technology companies, including telemedicine, mobile device, EHR, practice management, cyberknife, imaging centers, and teleradiology. She advises on business strategy and implementation matters specific to telehealth programs, business models, m-health devices and products; counsels on regulations regarding virtual consults, e-prescribing, patient consents, credentialing by proxy, corporate practice of medicine, physician supervision, reimbursement, anti-kickback, and licensure matters specific to telemedicine and telehealth providers and businesses; develops and negotiates e-health specific customer, vendor, and affiliation contracts and documentation; structures research arrangements involving health information technology; and leads strategy and communications with medical boards and other regulators and policy makers on digital health topics.

## Jason C. Goldwater, MA, MPA



**Senior Director**  
**National Quality Forum**

Jason C. Goldwater oversees National Quality Forum activities related to the evaluation of electronic clinical quality measures as well as projects focused on the use of electronic health to improve the quality, safety and efficiency of health care. He has been in the field of health IT for 16 years and has led a number of projects on the utilization of health IT for improved health care delivery. Prior to working at the NQF, Mr. Goldwater was a Senior Vice President for Clinovations Government Solutions, where he led projects in developing a health IT strategic plan for DC Government, and governance and business models for a public health data platform for the Association of State and Territorial Health Officials. He has also served as a Health IT Project Manager for NORC at the University of Chicago; at SRA International, where he led a project to examine the use of clinical decision support systems within the Veterans Information Systems and Technology Architecture (VisTA) EHR system; and with the federal government. He holds bachelor's and master's degrees from Emerson College and a Master of Public Administration degree from Suffolk University.

## Michael Grafton

**Diversion Program Manager**  
**US Drug Enforcement Agency / Phoenix Field Office**

Michael Grafton has been with the Drug Enforcement Administration for over 27 years and is responsible for overseeing Diversion Control operations in the State of Arizona. Prior to relocating to Arizona, he worked for many years in DEA's Chicago Field Division and subsequently served in the Liaison and Policy Section at its headquarters in Arlington, VA. He holds a Bachelors Degree in Criminal Justice from Northern Illinois University.

## Cynthia Hatcher



**National Vice President, Medicaid Products and Innovation**  
**WellCare Health Plans**

Cindy Hatcher is a long-time veteran of the health insurance and managed care industry, with a focus on government-sponsored business. She has over 20 years' experience in strategic planning, business development and operational ownership with profit and loss responsibilities for both Medicare and Medicaid business units. Ms. Hatcher has held leadership positions for UnitedHealth Group, Coventry, and Blue Cross Blue Shield. She joined WellCare in 2014 and leads the Product Team for the WellCare Medicaid business. In this role, she is responsible for the strategic direction and operational support for new products and services, new business development and innovation for the WellCare organization.

## Tammy Hatting, MPA



**eCARE Innovation Director**  
**Avera eCARE**

Tammy Hatting has been with Avera eCARE for over four years and is responsible for the development and growth of new and existing service lines utilizing telehealth technology. This role includes oversight of large-scale innovation projects involving multiple stakeholders, business planning, budget and financial analysis, implementation, and development. Prior to joining eCARE, she worked at two critical access hospitals in Iowa, where she managed admissions, health information, compliance, risk, quality, patient relations, and process improvement utilizing lean methodologies. She also worked in sales and management at a Fortune 500 technology company for over 12 years. She holds Master of Public Administration and Bachelor of Healthcare Administration degrees from Bellevue University in Nebraska.

## Judd E. Hollander, MD



**Associate Dean for Strategic Health Initiatives  
Sidney Kimmel Medical College  
Thomas Jefferson University**

Judd E. Hollander, MD, is Associate Dean for Strategic Health Initiatives at Sidney Kimmel Medical College at Thomas Jefferson University and Professor & Vice Chair of

Finance and Healthcare Enterprises in the Department of Emergency Medicine, where responsibilities include the JeffConnect Telemedicine Program and Jefferson Urgent Care. He graduated from New York University Medical School in 1986 and completed an Internal Medicine Residency at Barnes Hospital in 1989 and an Emergency Medicine Residency at Jacobi Hospital in 1992. His research interests include innovative care delivery models, risk stratification of patients with potential cardiovascular disease, cocaine associated cardiovascular complications, and laceration and wound management. Dr. Hollander has published over 400 peer-reviewed articles, book chapters, and editorials. He was President of the Society for Academic Emergency Medicine, chaired the SAEM Program Committee and Emergency Medicine Foundation Scientific Review Committee and was Deputy Editor for the *Annals of Emergency Medicine*.

## Chong Jacobs, RN, MSN



**Senior RN Manager  
Banner Telehealth**

Chong Jacobs is the Senior RN Manager for Banner Telehealth. She is responsible for TeleICU and TeleAcute program operations and has worked as project lead for Telehealth program implementations, working with diverse and distributed

groups and site locations. Ms. Jacobs has been involved in telehealth workflows development, education planning, culture change management, and a support system that is sustainable for telehealth and customers. She focuses on leading frontline nursing leaders and nursing staff through current health-care challenges and fosters engagement with the vision of an innovative telehealth care model while delivering results. Banner Telehealth eICU is one of the largest teleICU programs in the world; Banner TeleAcute is one of few in the nation. Ms. Jacobs participated in South Korea's first eICU symposium in 2016 as a speaker on optimizing population health management through eICU and returned this year in April to speak at ChungNam National University on eICU and patient safety. She is a graduate of Grand Canyon University with a Master of Science degree in Nursing.

## B. Tilman Jolly, MD, FACEP



**Chief Medical Officer  
Specialists On Call**

Dr. Jolly is a board-certified emergency physician who serves as Chief Medical Officer of Specialists On Call (SOC), the largest provider of acute care specialty telemedicine services to US hospitals and systems, with 400+

hospital partners across 35 states. Dr. Jolly has practiced emergency medicine in the Washington, DC, area for 21 years and continues to practice at Inova Fairfax Hospital. He also retains an appointment as Clinical Professor of Emergency Medicine at the George Washington University. He has extensive experience in academic medicine, private industry, and government. Prior to joining SOC, he served for five years in senior leadership positions in the US Department of Homeland Security, and also previously led medical preparedness planning for 11 Super Bowls.

## Kofi Jones



**Principal and Owner  
KJ Health Matters**

From serving in the Governor Deval Patrick Administration supporting the innovation economy, to creating telehealth policy on a 50-state and federal basis as the Vice President of Government Affairs at American Well, Ms. Jones has been

at the forefront of policy and communications for well over a decade. She spent years as a communications and media expert, both in front of and behind the camera--working as a reporter and anchor all over the country and as vice president at a major public relations firm in Boston. She has hands-on experience with how technology advances care delivery, and the know-how necessary to publicly construct and relay brand strength.

## Elizabeth A. Krupinski, PhD, FSPIE, FSIIM, FATA



**Co-Director, Southwest Telehealth Resource Center**

Dr. Krupinski is a Professor at Emory University in the Department of Radiology and Imaging Sciences and is Vice-chair of Research. She received her BA from Cornell, MA from Montclair State and PhD from Temple, all in Experimental Psychology. Her interests are in medical image perception, observer performance, medical decision making, and human factors. She has published extensively in these areas, and has presented at conferences nationally and internationally. She is Past Chair of the SPIE Medical Imaging Conference, Past President of the American Telemedicine Association, President of the Medical Image Perception Society, and Past Chair of the Society for Imaging Informatics in Medicine. She serves on a number of editorial boards for both radiology and telemedicine journals and is the Co-Editor of the Journal of Telemedicine & Tele-care. She serves regularly as a grant reviewer for the NIH, DoD, TATRC and other federal, state and international funding agencies and has served as a member of a number of FDA review panels. She also is Associate Director of Evaluation for the Arizona Telemedicine Program and Co-Director of the Southwest Telehealth Resource Center.

## Nathaniel Lacktman, JD



**Partner, Foley & Lardner, LLP**

Nathaniel Lacktman is Chair of Foley & Lardner's Telemedicine Industry Team and Co-Chair of its Digital Health Group. He advises hospitals, health-care providers, and technology companies on business arrangements, compliance, and corporate matters, with particular attention to telehealth, digital health, and health innovation. His approach to practicing law emphasizes strategic counseling, creative business modeling, and fresh approaches to realize clients' ambitious and innovative goals. He serves on the Executive Committee of the American Telemedicine Association's Business & Finance Group, co-Chairs the Telemedicine and eHealth Affinity Group of the American Health Lawyers Association, and is Chief Legal Counsel to the Telehealth Association of Florida. Mr. Lacktman speaks and writes frequently on issues at the forefront of telehealth, and has helped author telemedicine policy letters and position statements with such organizations as the American Telemedicine Association and the American Heart Association. He has provided comments, draft legislation, and policy input on telehealth to state lawmakers, the Drug Enforcement Agency, the Congressional Research Service, state Medicaid Agencies, and state boards of medicine.

## Ryan R. McCool, MD



**Assistant Professor of Otolaryngology - Head and Neck Surgery  
Geisel School of Medicine  
at Dartmouth**

Dr. McCool is an academic otolaryngologist at the VA Medical Center in White River Junction, VT and Dartmouth-Hitchcock Medical Center in Lebanon, NH. Before joining the staff at DHMC, he served as Chief of Surgery at Mount Ascutney Hospital in Windsor, VT. His clinical interests include otologic surgery, endoscopic sinus surgery, and functional and cosmetic nasal surgery. His research interest is in the application of technology to the clinical practice of medicine. In 2012, he started an otolaryngology telemedicine program at the White River Junction VAMC and trained telemedicine examiners throughout New England to perform head and neck physical examination. He is working to improve efficiency by anticipating telemedicine eligibility based on specific problem types. Dr. McCool completed his BA in psychology at Samford University and received his MD from the University of Alabama School of Medicine in Birmingham. He completed residency training in Otolaryngology at the University of Utah in Salt Lake City and is certified by the American Board of Otolaryngology-Head and Neck Surgery.

## Andy Penn, BBA



**Senior Director  
Strategic Business Unit  
Cerner Corporation**

As a Senior Director in Cerner's Strategic Business Unit, Andy Penn focuses on the business strategies and solution capabilities to enable virtual health care within Cerner platforms and solutions. In his 14 years at Cerner Corporation, Mr. Penn has held executive leadership roles within its consulting, solution management, and business development organizations while driving solution strategies and strategic partnerships to enable Cerner clients and Cerner Corporation to meet their goals. He is a graduate of the University of Texas at Austin where he earned his bachelor's degree in business administration, management information systems.

## Sarah N. Pletcher, MD, MHCDS



**Assistant Professor of Surgery  
Assistant Professor of Medicine  
Geisel School of Medicine  
at Dartmouth**

Dr. Pletcher came to Dartmouth-Hitchcock Medical Center in 2005 for surgery residency. Before departing in April 2017, she served as

Vice President of Connected Care and Executive Medical Director of Telehealth, with joint academic appointments in the Departments of Surgery and Medicine at the Geisel School of Medicine at Dartmouth. She led the health system in the selection and implementation of new strategies that utilize technology platforms to advance clinical products and services. Dr. Pletcher has successfully launched clinical telemedicine programs across multiple specialties and in multiple settings. She advises health systems, policy makers, payers, and investors about disruptive technologies and new health-care business models that can provide high value care. She is a national thought leader and invited speaker in areas of telemedicine, mHealth, innovation, clinical quality improvement, provider education, and rural health. In recent years she has been the principal investigator on \$20 million in grant and foundational funding to advance rural networks, telehealth, and other innovation initiatives.

## Alan C. Roga, MD

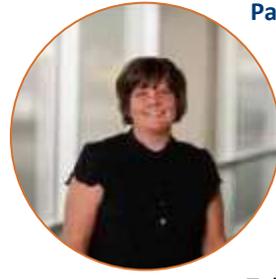


**President, Provider Market, Teladoc**

Dr. Roga, an emergency medicine physician, has full P&L responsibility for the strategic direction and management of Teladoc services offered to hospitals, health systems, retail clinics, and physician groups. His responsibilities include management and oversight of all product

development, sales and marketing, account management, and day-to-day operational functions within the division, and coordination across the organization to achieve company goals and stimulate innovation. Dr. Roga joined Teladoc in 2015 with the acquisition of StatDoctors, a national telehealth company he founded in 2009 and led from its inception to successful acquisition. Prior to founding StatDoctors, he served as president of Scottsdale Emergency Associates Ltd., a leading Scottsdale, AZ, emergency medicine physician group, and chaired the emergency department of HonorHealth. He is a fellow of the American College of Emergency Medicine, a diplomat of the American Board of Emergency Medicine, and past president of the American College of Emergency Physicians, Arizona Chapter. He received his MD from the State University of New York at Stony Brook School of Medicine.

## Tracy Schutt



**Part B Provider Outreach and  
Education Representative  
Noridian Healthcare Solutions**

Tracy Schutt has worked at Noridian Healthcare Solutions for 17 years in a variety of positions including Customer Service Representative, Quality/Process Analyst, Telephone Reopenings Representative, DME Education Representative, Self-Service Coordinator, and Part B Education Representative. As an Education Representative, Ms. Schutt provides training on Medicare billing, coverage and coding guidelines to reduce claim processing errors and ensure proper payment.

## Gigi Sorenson, RN, MSN



**Director of Clinical Integration  
GlobalMed**

Gigi Sorenson is Director of Clinical Integration at GlobalMed. Prior to joining GlobalMed in September 2017, she was System Director of Telehealth & Community Connected Care for Northern Arizona Healthcare (NAH), where she was responsible for the inception of the program, strategic planning, and global operational oversight, with NAH acting as both hub and spoke site. She has developed programs in remote patient monitoring, prehospital, direct to consumer, outpatient, and inpatient care delivery models, as well as transitions planning using connected care programs. The remote patient monitoring program of NAH, Care Beyond Walls & Wires™, is a nationally recognized program for its impact and outcomes. Ms. Sorenson has published on remote patient monitoring (RPM) and has presented a national case study on RPM at the Brookings Institution. She is actively involved in the American Telemedicine Association, as an Executive Committee member and past chair of the Business & Finance Special Interest Group, and is a member of the Arizona Telemedicine Council. She is a graduate of Northern Illinois University with a Master of Science in Nursing.

## Amy L. Waer, MD



**Medical Director  
Arizona Telemedicine Program**

Amy Waer, MD, is Associate Dean for Medical Student Education at the University of Arizona College of Medicine in Tucson. She oversees the Rural Health Professions Program and travels throughout Arizona performing site visits, hosting appreciation dinners, and recruiting rural faculty preceptors. She joined the Arizona Telemedicine Program as Medical Director in June 2016. Dr. Waer has been a general surgeon since 1997 and is a professor in the Department of Surgery on the Educator Scholar Track. She completed her medical school training at the University of Arizona College of Medicine in 1992, followed by her general surgery residency training, also at the University of Arizona. She then practiced general surgery in a private group practice in Virginia for seven years. She returned to the University of Arizona in 2004 to develop the general surgery department at the University of Arizona Medical Center at South Campus, serving successively as Surgery Clerkship Director, Surgery Residency Associate Program Director, Surgery Residency Program Director, and Interim Assistant Dean for Medical Student Education.

## Brian Wayling, MBA



**Assistant Vice President, Telehealth  
Intermountain Healthcare**

Brian Wayling is Assistant Vice President of Intermountain Healthcare TeleHealth Services. He is responsible for developing system-wide strategies and leading operational change to create telehealth delivered care options for clinicians and patients throughout the Intermountain Healthcare system and beyond. Intermountain Healthcare considers telehealth as an integrated option for clinical care delivery and therefore offers a variety of technologies and options to best serve its diverse clinical program and clinical service groups. Prior to joining Intermountain, Mr. Wayling was the Director of the eHealth and eNovation Center, University of Iowa Hospitals and Clinics. He has extensive executive management and operational experience in the financial and digital media industries.

## Ronald S. Weinstein, MD, FCAP, FATA



**Director  
Arizona Telemedicine Program  
Co-Director  
Southwest Telehealth Resource  
Center**

Ronald S. Weinstein, MD, is the founding director of the Arizona Telemedicine Program. While a Massachusetts General Hospital (MGH) pathology resident, he participated in rendering diagnoses on some of the first telemedicine cases of the MGH-Logan International Airport telemedicine program in 1968. Decades later, he turned his attention to telepathology while a pathologist for National Cancer Institute-funded clinical trials. In 1986, he introduced the term “telepathology” into the English language. He invented, patented, and commercialized robotic telepathology and is often referred to as the “Father of Telepathology.” In addition to being President Emeritus of the American Telemedicine Association, he has received the Lifetime Achievement Award of the Association for Pathology Informatics and has been inducted into the United States Distance Learning Association Hall of Fame. Dr. Weinstein has over 600 professional publications cited over 10,000 times in the literature. He received his medical degree from Tufts Medical School in Boston.

## Tana Williams



**Part A Provider Outreach and  
Education Representative  
Noridian Healthcare Solutions**

Tana Williams is a Part A Provider Outreach and Education Representative with a working knowledge of CMS regulations and claims processing. She offers education and problem-solving assistance to providers within Medicare Administrative Contractor (MAC ) Jurisdictions E and F (AK, AZ, CA, HI, ID, MT, ND, NV, OR, SD, UT, WA, WY, American Samoa, Guam, Northern Mariana Islands) on various specialty topics such as therapy, dialysis and rural health clinics. Ms. Williams has been in the medical industry for over 25 years. During her career, she has developed and provided Medicare education to reduce claims processing errors; has examined, monitored and managed all levels of appeals; and has held the position of Medicare Compliance Coordinator. She continues to establish partnerships and participates in external committee meetings.

Full speaker and moderator bios are online at [ttspsworld.com/speakers](https://ttspsworld.com/speakers).

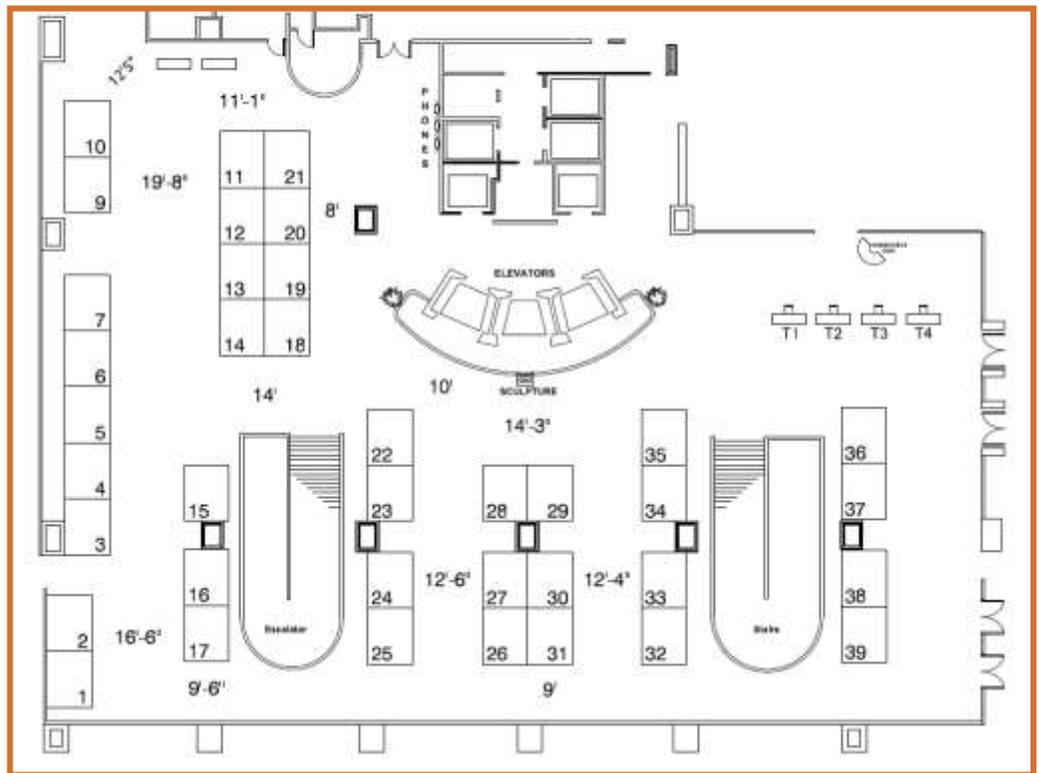


**Visit the Expo Hall to network with industry experts at the exhibitor booths, meet your peers, and enjoy food and beverages!**



# SPS Exhibitors

- **American Well**  
*Booth 33*
- **Avizia**  
*Booth 18*
- **Banner Health**  
*Booth 11*
- **Blue Sky Telehealth**  
*Booth 19*
- **CAPTUREPROOF**  
*Booth 34*
- **Cloud DX**  
*Booth 12*
- **CRF Health**  
*Booth 25*
- **Dignity Health Telemedicine Network**  
*Booth 2*
- **eazyScripts**  
*Booth 32*
- **Evangelical Lutheran Good Samaritan Society**  
*Booth 24 (with Trapollo)*
- **Firstsource**  
*Booth 30*
- **ForaCare Inc.**  
*Booth 13*
- **GlobalMed**  
*Booths 27 & 28*
- **Hodei Technology**  
*Booth 17*
- **Huntingdon Telemed**  
*Booth 36*
- **InTouch Health**  
*Booth 9*
- **Iris Telehealth**  
*Booth 22*
- **Iron Bow Technologies**  
*Booth 21*
- **JEDMED**  
*Booth 7*
- **MD24 iHealth**  
*Table 2*
- **MDLIVE**  
*Booth 10*
- **MedApp S.A.**  
*Booth 16*
- **Medtronic Care Management Services**  
*Booth 15*
- **Medweb**  
*Booth 39*
- **NIDEK**  
*Booth 1*
- **Novant Health**  
*Table 1*
- **Polycom**  
*Booth 31*
- **Rural Health Telecom**  
*Booth 20*
- **SnapMD**  
*Booth 14*
- **Southwest Telehealth Resource Center**  
*Foyer*
- **Starleaf**  
*Booth 38*
- **Stratus Video**  
*Booth 6*
- **Teladoc**  
*Booth 35*
- **TeleMed 2020**  
*Booth 26*
- **TeleSpecialists**  
*Booth 23*
- **Trapollo**  
*Booth 24 (with Evangelical Lutheran Good Samaritan Society)*
- **Tryten Technologies**  
*Booth 4*
- **Vidyo**  
*Booth 37*
- **Yorktel**  
*Booth 5*
- **Zipnosis**  
*Booth 3*
- **Zoom Video Communications**  
*Booth 29*



SPS Expo Hall - Second Floor Atrium

# Exhibitor Descriptions

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American Well is a telehealth services company that brings healthcare into the homes and workplaces of patients. American Well partners with health plans, delivery networks, retailers and employers to deploy telehealth services, including solution design and set-up, provider network design and operations, and marketing services.

[www.americanwell.com/](http://www.americanwell.com/)

@AmericanWell

Booth 33

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## Silver Sponsor



Avizia offers the only end-to-end telehealth platform that integrates care coordination software with industry-leading video devices and mobile apps. Avizia delivers telehealth solutions to more than 400 hospitals and clinics around the world.

[www.avizia.com/](http://www.avizia.com/)

@AviziaHealth

Booth 18

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As Banner Health continues our innovation phase, the people, processes and technology in telehealth are being leveraged to improve patient care and support the rapid changes within the health care environment.

<https://www.bannerhealth.com/>

@BannerHealth

Booth 11

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Blue Sky Telehealth provides emergency and routine consultations dedicated to solving the national specialty physician shortage. We provide innovative, cost-effective answers for hospitals seeking immediate access to experienced, board certified physicians.

<http://blueskytelehealth.com/>

Booth 19

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CAPTUREPROOF is creating the clinical photo and video platform for medicine. Providers can use the asynchronous turn-key solution on its own or embed the CAPTUREPROOF viewer into any other EHR or HIPAA application.

<http://captureproof.com/>

@captureproof

Booth 34

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At Cloud DX, we build and sell precision vital sign monitoring equipment, software and mobile apps. Our products are used by advanced healthcare providers to extend care beyond the four walls of the clinic. We call our platform Cloud Diagnostics.

[www.clouddx.com/](http://www.clouddx.com/)

@CloudDX

Booth 12

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CRF Health creates electronic Clinical Outcome Assessment (eCOA) solutions that are simple, scalable, and effective. From our collaborative, agile design approach to our user-friendly reporting tools, we streamline complex processes and deliver reliable results for superior clinical trial outcomes.

<http://www.crfhealth.com/>

@CRFHealth

Booth 25

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The Dignity Health Telemedicine Network helps hospitals and physicians care for their patients locally, without the challenges of a transfer. Working together we are able to help the local physician determine optimal care plans and provide specialized care.

<https://www.dignityhealth.org/sacramento/services/telemedicine-network/telemedicine-services>

@DignityHealth

Booth 2

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eazyScripts offers providers an effortless way to submit electronic prescriptions and check prescription fill data. eazyScripts also offers secure electronic prior authorization and medication adherence options that increase patient and provider satisfaction.

<http://eazyscripts.com/>

@eazyscripts

Booth 32

## Silver Sponsor



The LivingWell@Home service of the Evangelical Lutheran Good Samaritan Society monitors your patients' vital signs and activities of daily living. Our trained RNs and data specialists help detect changes in health, encourage self-management, and keep you and your patients better informed of their conditions.

[www.good-sam.com/livewell](http://www.good-sam.com/livewell)

@goodsam

Booth 24



Firstsource works with clients in the US healthcare market to help them improve processes and meet the needs of increasing numbers of patients, while improving the customer experience. We have processed hundreds of millions of claims over two decades.

<http://www.firstsourcehealthcare.com/>

@firstsource

Booth 30

## Friends of SPS Sponsor



Foley & Lardner's Health Care Industry Team attorneys can provide counsel on matters related to state licensure, international telemedicine, scope of practice, credentialing, reimbursement, privacy and security, ACOs, remote prescribing, mHealth, technology and outsourcing agreements, hardware and software vendors, and fraud and abuse.

<https://www.foley.com/>

@Lacktman @FoleyHealthCare



ForaCare Inc. is a technology company dedicated to the design, development, and marketing of products for chronic disease management. The aim of ForaCare Inc. is to complete the cycle of chronic disease management by combining innovative technologies and clinical applications.

[www.foracare.com/](http://www.foracare.com/)

@ForaCareUSA

Booth 13



## Conference Partner

GlobalMed is the leading integrator of telemedicine solutions. Our innovations have been deployed in 30+ countries around the world, with more than 3 million telehealth visits annually conducted using GlobalMed technologies.

[www.globalmed.com/](http://www.globalmed.com/)

@GlobalMed\_USA

Booths 27 & 28



Hodei Technology develops and deploys remote real-time telepresence B2B and B2C SaaS/PaaS cloud and enterprise communication solutions, leveraging and integrating advancements in assisted/augmented/virtual reality technology. Its telepresence solutions allow for real-time remote expert oversight and task direction.

<http://www.hodeitech.com/>

Booth 17



Huntingdon Telemed's patented telemedicine cart is lightweight and easily transported in a variety of clinical settings. Our EHR software is Meaningful Use Stage 2 certified, offering the function of clinical documentation, billing and scheduling.

<https://www.huntingdonteled.com/>

@HuntingdonTele

Booth 36



InTouch Health's global cloud-based Telehealth Network supports over 200,000 annual physician encounters with connections to more than 1,500 patient access locations, growing at a rate of one hospital per day. InTouch Health is evolving from "acute care clinical services" focus to an enterprise "care-anywhere" model.

[www.intouchhealth.com/](http://www.intouchhealth.com/)

@InTouchHealth

**Booth 9**



Iris Telehealth is an innovative telepsychiatry company with a mission to provide underserved communities with access to the best mental health care possible. We have earned a reputation for providing outstanding customer service and excellent clinical care.

[iristelehealth.com/](http://iristelehealth.com/)

@IrisTelehealth

**Booth 22**



Iron Bow Healthcare Solutions empowers providers and patients through the implementation of telehealth. Through our knowledge of the healthcare industry, the depth of our technical expertise, and our workflow process awareness, we enable enhanced patient outcomes through increased access to remote care.

[ironbowhealthcare.com/](http://ironbowhealthcare.com/)

@Iron\_Bow @IronBowHC

**Booth 21**



JEDMED Instrument Company has designed and provided dozens of innovative solutions for the medical field. Our goal is to provide you with a "one stop shop" by meeting all of your equipment needs, including scopes, cameras, and video systems.

[www.jedmed.com/](http://www.jedmed.com/)

**Booth 7**



Our goal is to develop an entrepreneurial ecosystem specializing for Healthcare Technology, where we bring innovators together to nurture emerging technologies and accelerate their migration from laboratory to commercialization.

<http://md24ihealth.net/>

@MD24HouseCall1

**Table 2**



MDLIVE's industry-leading cloud-based platform helps consumers, health plans, health systems and self-insured employers obtain better, faster care that's more convenient than visiting a doctor's office and far more cost-effective than going to the ER or Urgent Care for routine ailments.

<https://www.mdlive.com/>

@MDLIVEInc

**Booth 10**



MedApp is an innovative company offering unique, new-generation telemedicine solutions. Telemedicine, based on technology enabling the patient's health condition to be monitored at a distance, is one of the fastest-growing industries in the world.

<http://en.medapp.pl/>

@mkierepka

**Booth 16**



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Booth 29

# Poster Abstracts

Meet the authors at the poster presentation session breakfast, Tuesday from 7:30 to 8:30 am in the Regency Ballroom. Abstract number indicates poster location in the Regency Ballroom.

## 1. Telemedicine in Physician Assistant Education: A Partnership with a Community Agency

Theresa Bacon-Baguley PhD, RN  
Grand Valley State University

**Background:** A core challenge of physician assistant education is preparing professionals for lifelong learning. While this conventionally has encompassed scientific advances, students must also embrace new care delivery models and technologies. Telemedicine, the provision of care via two-way audio and video, is an example of a technological advance reforming health care.

**Methods:** During a three-semester sequence of Hospital Community Experiences, physician assistant students were assigned experiences with Answer Health on Demand, a telemedicine collaborative. Preceding the experiences, the agency lectured on the application of telemedicine. Students were then introduced to the technology, and partnered with a provider. Prior to observing the patient-provider interaction, patient consent was obtained. Afterwards, students completed a reflection paper on lessons learned, and the potential impact of telemedicine on their careers.

**Results:** Thematic analysis was completed on the students' reflection papers (n=13). Preceding the lecture and experience, over 75% of students (10/13) were unaware of telemedicine: "I had no prior understanding of what telemedicine was and I am going into the healthcare field." Several stated they were "skeptical" about the effectiveness of "impersonal" health care appointments. After the experience, all students remarked that telemedicine will play a large role in the future of healthcare and will provide benefits by improving access in rural areas, decreasing wait time, and saving cost. "Within the next decade, telemedicine will be a major route that many individuals will take due to the convenience and practicality," said one student. More importantly, 30% of students (4/13) commented that telemedicine is a technology they can see themselves using in their future practice.

**Conclusion:** Initial results indicate that collaborative interaction between students and telemedicine providers enhanced student learning and exposed students to technological advances in the delivery of care. Further, results indicate that students perceived telemedicine more favorably as a viable delivery method after the experience.

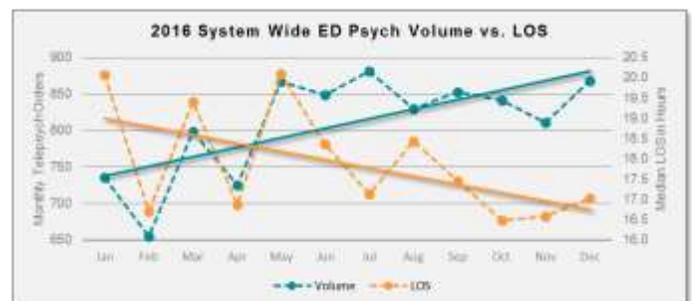
## 2. Using Lean Methods to Improve Virtual Emergency Behavioral Health Treatment

Amy Barrett, MA, LPC  
Carolinas HealthCare System

**Background:** Increasingly, behavioral health patients are presenting to medical emergency departments in our nation. CHS is dedicated to improving the access and quality of care to the psychiatric patient. Through innovative technology and Lean practices, we have improved our process in addressing the specific needs of this population. Clinical barriers for psychiatric patients in medical ED's include variation in care and documentation, decreased quality of care, chaotic environments increasing stress, and increased demand on nursing resources. Considerable communication challenges are embedded in this professional collaboration between the ED and the behavioral health service line to coordinate and actualize a virtual consult result.

**Methods:** Proven and specific problem solving methods including A3 Practical Problem Solving, Root Cause Analysis, Plan Do Study Act (PDSA), and managing for daily improvements (MDI) provide the structure for the team to be successful in implementing positive change. Escalation plans and staffing to demand models enable us to respond more efficiently to surges in consultation requests. The Lean methodologies seek to empower the team of professionals doing the daily work to problem solve and eliminate waste.

**Results:** Using Lean methods, we have been able to decrease the time from consultation request to complete by 2.4 hours, thereby allowing the patient to access care and interventions more quickly. These methods have allowed us to shave 3.2 hours from our response times, the initiation of the consult and decrease ED length of stay with volume increases.



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For more information, please contact Nathaniel Lacktman, Partner Chair, Telemedicine Industry Team Co-Chair, Digital Health Group [nlacktman@foley.com](mailto:nlacktman@foley.com)

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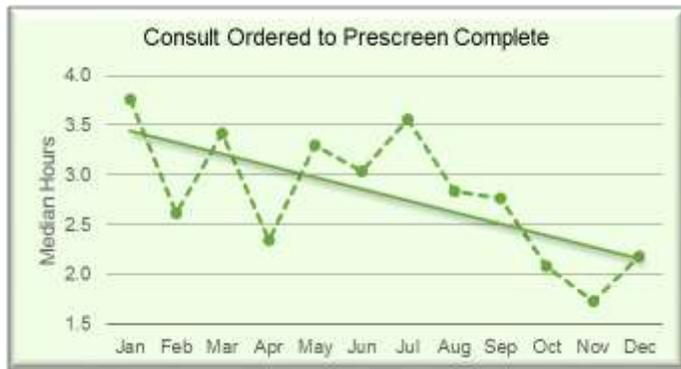
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**Conclusions:** Streamlining the psychiatric consultations process has enhanced patient treatment while increasing patient and employee satisfaction. Lean techniques improve patient care by reducing delays, redesigning and standardizing the processes, and staffing to demand. The scientific method is used to solve problems in conjunction with the daily Huddle and direct observations. Reducing patient length of stay improves quality and engagement.

### 3. TeleICU Nurse-Directed Low Tidal Volume Ventilator Rounds

John Paulo B. Bautista, BSN, RN AGACNP DNP Student<sup>1,2</sup> and Kimberly Shea PhD, RN, CHPN<sup>2</sup>

Banner Telehealth and University of Arizona, College of Nursing

**Background:** Mechanically ventilated critical ill patients are at an increased risk of developing ventilator associated lung injury. The use of high tidal volume (Vt) (10 to 15 ml/kg predicted body weight (PBW)) ventilation causes the alveoli to overstretch, which causes often irreversible injury to the lungs. A Meta-analysis found that about 4.22% of patients assigned to low Vt ventilation developed lung injury while 12.66% of patients developed lung injury with high Vt ventilation. The Acute Respiratory Distress Syndrome Network has recommended the use of low Vt (<8ml/kg PBW) ventilation for patients with Acute Respiratory Distress Syndrome (ARDS). Low Vt ventilation decreases mortality rate for ARDS patients. Low Vt ventilation also benefits critically ill patients without ARDS. Despite known benefits of low Vt ventilation, adherence is low. Adherence to low Vt ventilation in a major academic medical center was reported at 31.2%. An innovative way to increase adherence is the use of tele-intensive care unit (teleICU) directed daily ventilator rounding. TeleICU ventilator rounds have been shown to increase adherence to low Vt ventilation for ARDS and non-ARDS patients.

**Methods:** This DNP quality improvement project will use the descriptive correlational study design to examine the effectiveness of using the teleICU nurse-directed ventilator rounds for all critically ill ventilated patients on: 1) adherence to low Vt ventilation protocol, 2) ventilator duration ratio, and 3) ICU mortality. The participants will be all intubated and ventilated

adult patients requiring mechanical ventilator support for more than 24 hours. Target total number of participants would be 20 in one month (September 2017). Data will be extracted from the Electronic Health Record for the month of September and compared to each of the 2 previous months. The setting will be at a rural hospital's ICU unit, located in the state of Arizona.

**Results:** The goal is to see an increased adherence to low Vt, decreased ventilator duration, and decreased ICU mortality.

**Conclusion:** Low Vt ventilation benefits patients with ARDS and non-ARDS patients. The use of teleICU can be used to increase low Vt ventilation adherence for ARDS and non-ARDS patients, thereby decreasing ventilator duration and mortality.

### 4. Interprofessional Telehealth Program to Address Gaps in Treatment Guidelines for Patients Post Hospitalization

Jennifer Bingham, PharmD<sup>1</sup>, Kate Johnson, BSN, RN<sup>1</sup>, Sandra Leal, PharmD, MPH<sup>2</sup>, Patrick Campbell, PharmD<sup>3</sup>

<sup>1</sup>University of Arizona Medication Management Center, <sup>2</sup>Sinfonía Rx, <sup>3</sup>University of Arizona College of Pharmacy HOPE Center

**Background:** A gap in the continuum of intensive pharmacovigilance exists for patients at high-risk of hospital readmission following discharge, when medication errors most commonly occur. Few transition-of-care programs address care gaps in adherence to national (consensus treatment) guidelines. To address this problem, a local hospital collaborated with a university-based medication therapy management (MTM) provider to evaluate a telepharmacist- and nurse-delivered, hospital discharge program.

**Methods:** The Discharge Companion (DC) Program was integrated into the hospital's transitional care (TC) team model of care to: reduce readmissions; improve patient health outcomes; and decrease patient- and hospital-related costs. The DC pharmacist assimilated information from the TC team and hospital records to develop clinical recommendations for: adherence-related barriers, treatment guidelines, vaccines; safety, and prescription costs. To improve gaps in care continuity, the DC nurse shared electronic health record discharge and MTM summaries with outpatient providers and community pharmacies.

**Results:** A total of 376 patient records were reviewed by the clinical telepharmacist. A total of 1234 recommendations were made. Of these, 190 interventions were related to gaps in care or non-adherence with national consensus treatment guidelines. In particular, the interventions related to: heart failure (n=80), myocardial infarction (n=44), coronary arterial bypass grafting (CABG) (n=20), asthma/COPD (n=41), diabetes (n=4), and kidney disease (n=1). On average, there were 0.50 national consensus treatment guideline interventions made per patient.

**Conclusion:** The MTM telepharmacist and nurse played integral roles in facilitating and streamlining focused follow-up appointments between the patient and provider to promptly resolve patient concerns and therapeutic issues. Interprofessional collaboration between the pharmacists and outpatient providers resulted in identification of recommendations regarding: treatment guidelines, dosage adjustments, monitoring parameters, and drug/disease-drug interactions. Future research is needed to determine the impact of longer-term transitional care programs on the number of telepharmacist interventions made and subsequent provider acceptance rates.

## 5. Interprofessional Medication Therapy Management Services via Collaborative Video Conferencing Technology for Patients with Epilepsy

Kate Johnson, BSN, RN, Jennifer Bingham, PharmD, David Rhys Axon, MPharm, Sandra Leal, PharmD, MPH

SinfoníaRx, University of Arizona Medication Management Center

**Background:** Patients with epilepsy often face challenges with access to healthcare and management of their conditions. 1) Additionally, patients living in rural areas typically have poorer access to clinical pharmacy services than their urban counterparts. 2) Limited literature exists regarding interprofessional collaboration via video conferencing for these patients.

**Methods:** A University of Arizona Medication Management Center (UAMMC) clinical telepharmacist participated in weekly, collaborative video conferencing appointments between Epilepsy Foundation patients and their epileptologist. During the consultation, the UAMMC telepharmacist: performed a comprehensive medication review (CMR); evaluated the patient's medication list for safety concerns and medication-related problems (MRPs); provided patient counseling; and collaborated with the epileptologist on clinical decision making (e.g., dosing, side effects, and pharmacy-related questions). Each patient received a typewritten medication list and personalized action plan via mail, following his/her appointment. Patients received a follow-up phone call from the UAMMC telepharmacist three to six months after the initial review, depending on the severity of concerns identified initially. The telepharmacist documented notes and medication-related recommendations in the Epilepsy Foundation's electronic health record following all consultations.

**Results:** Initial CMRs were completed with 63 patients resulting in identification of: 66 drug-drug interactions; 37 adverse drug reactions; 35 dose-related safety concerns; 13 therapeutic duplications; and 13 drug-disease interactions. Patients had an average of 2.60 (SD: 2.14) MRPs identified per person. Roughly one fifth (17.5%) of patients self-reported

“sometimes”, “often”, or “very often” forgetting to take their medications in the past month, prompting additional telepharmacist-delivered adherence counseling.

**Conclusions:** Preliminary analysis revealed positive program outcomes, suggesting that this telehealth program offers a novel and feasible solution for integrating clinical pharmacists into standard epilepsy care and increasing respective rural patients' access to MTM services. Future research is needed to examine the cost effectiveness of this type of collaboration and explore patient-related outcomes in diverse populations and clinical settings.

## 6. What Makes an Effective User Interface for Virtual Care Solutions?

Scott Brown and Kevin L. Smith, DNP, FNP, FAANP

Zipnosis, Inc.

**Background:** Innovative care delivery through virtual care holds enormous potential for driving care quality and efficiency, customizing support for patients, and promoting patient engagement to produce positive health outcomes. However, before virtual care can achieve its potential, patients need to embrace it. User experience (UX) plays a key role in driving adoption of digital health technologies like virtual care. In fact, adoption and sustained use of technology are tied directly to ease of use and the perceived utility of available information.

**Methods:** Zipnosis partnered with a user experience consulting firm to perform a comprehensive UX research project. This project consisted of 1:1 interviews during which users worked through a series of tasks in the application. Qualitative and quantitative data was collected to evaluate the user experience both before and after redesign.

**Results:** The interviews uncovered several important areas UX needs to address:

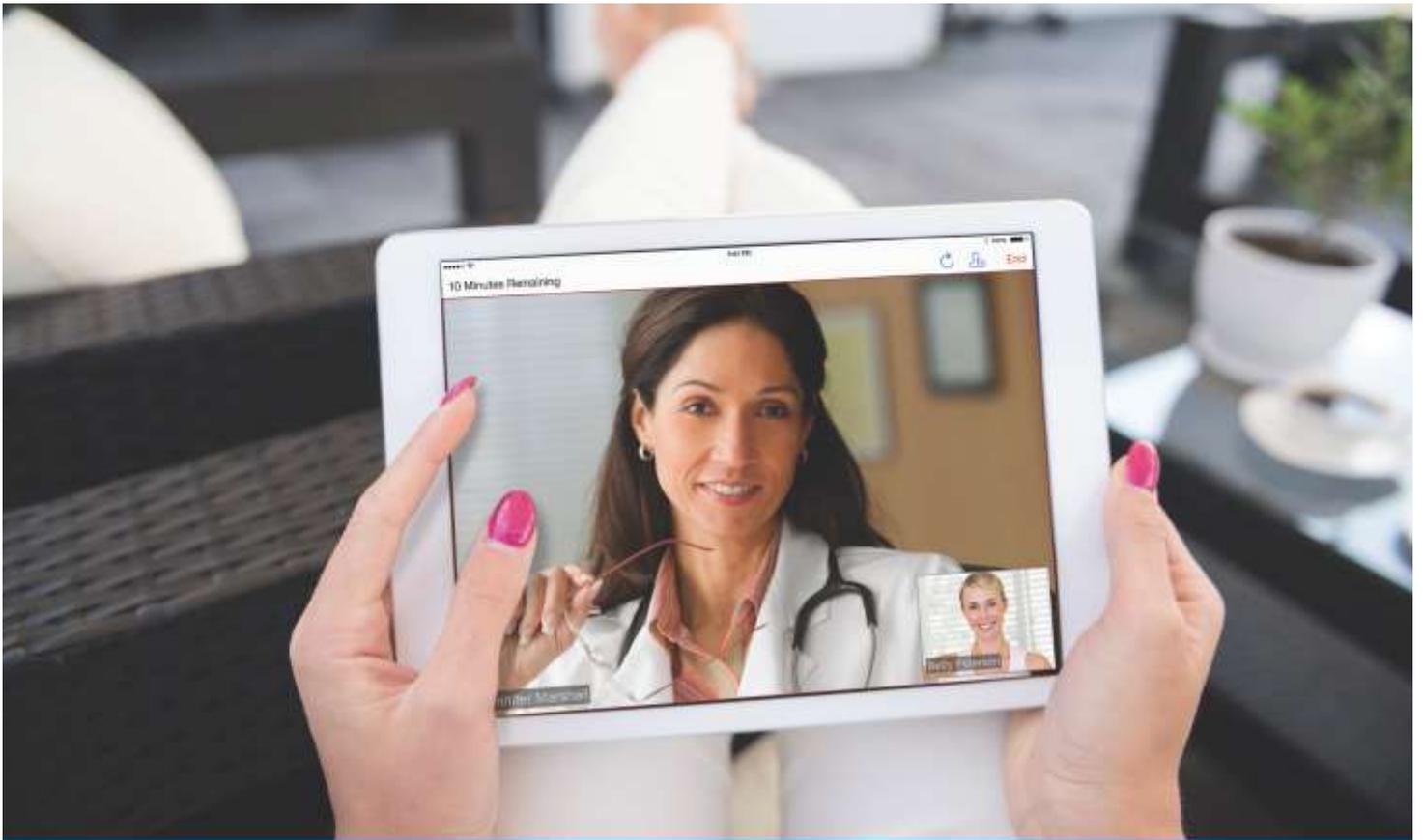
Ease of use—the process for accessing care needs to be simple and intuitive for patients accessing care.

Expectations—patients want to know what to expect regarding process, payment, and possible outcomes prior to starting a visit.

Generational preferences —different age groups preferred to interact with virtual care differently, and needed varying levels of assistance throughout the process.

Empathy—patients were seeking empathetic language in digital interactions, just as they would in an in-person interaction with a healthcare provider.

**Conclusions:** Post-redesign interviews indicate that a user-centered design in virtual care can improve patient satisfaction. The redesigned platform is moving into pilot phase with several health systems. Anticipated results, based on UX interventions in a variety of industries and software products, include improved adoption, reduced visit abandonment,



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increased repeat users and improved patient satisfaction with the service. Further data from the pilot will be included in the poster.

## 7. Tele-health as a Successful Strategy to Provide Asthma Education to Pediatric Patients in Rural Schools

Karen Burgess, MD, Nathan Culmer, PhD,  
Elizabeth Smith, CRNP  
University of Alabama

**Background:** Asthma affects 12.3% of children in Alabama, more than the 9.0% national rate. Alabama is a doctor deficient state, especially in rural areas. Inadequate healthcare access is a barrier to asthma education. Telemedicine is an effective mechanism to address some medical problems when access to care is limited. Pediatric asthma creates additional burdens for asthmatic students and school staff. Improved self-management could translate into reduced symptoms, less academic performance interference and reduced utilization of school nurse staff. The University of Alabama received gift funding to provide pediatric asthma education for rural communities delivered by telemedicine. More is known about using telemedicine for individual management of pediatric asthmatic patients than using it for pediatric asthma education in a group setting. This study assesses the efficacy of this instructional modality by surveying individual participants' asthma knowledge before and after completing the curriculum.

**Methods:** Four synchronous asthma educational modules were delivered via tele-education to asthmatic students in elementary schools in rural Alabama. Children took quizzes about asthma before, immediately after, and when possible, two months after the presentations. Due to scheduling, only 27% of students completed the third data collection. The test was evaluated for validity and revised for clarification. Scores that spanned both versions were standardized.

**Results:** Aggregate average scores improved 10.30% between pre- and post-tests. In the subset of students in which all three scores (pre-, post-, and delayed) were collected, improvement between pre- and post-tests was 13.34% and an additional 4.33% improvement occurred between post-test and the delayed test representing an overall improvement of 17.67%.

**Conclusions:** The educational intervention improved students' comprehension of their condition and self-management. Administering asthma education via tele-education to student groups at school is a successful strategy for improving asthma knowledge and self-management and may be especially useful to reach rural communities.

## 8. A Telemedicine Intervention to Decrease Emergency Department Transfers among Senior Living Residents

Joseph Chan, MD<sup>1</sup>, Richard Newell, MD<sup>2</sup>, Lindsay Kriger<sup>2</sup>  
<sup>1</sup>CEP MedAmerica, <sup>2</sup>CEP America

**Background:** Senior living communities are commonplace nationwide and provide an alternative to independent living for many Americans. Although it is common for senior living facilities to provide various amenities, most do not offer on-site access to physicians. In the event of an adverse health event, it is therefore common to transfer the resident to a local hospital emergency department (ED). This practice results in significant and often unnecessary expenditures. Telemedicine has the potential to improve health outcomes and reduce costs by connecting seniors to a physician, thereby avoiding unnecessary ED transfers.

**Methods:** A pilot study will run from May 2017 through May 2018 at La Costa Glen (a senior independent living facility in California). Residents consent to use telemedicine and have access via the residential services program already in place. EMTs can reach board-certified emergency physicians via video consult for non-emergent questions. These physicians are available on-demand, 24/7, and have an average response time of less than 5 minutes. The program is running as a pilot study and is done at no cost to the patient, facility, or insurance provider. Data is collected from a short survey asking what the EMT would have done in the absence of telehealth – including options such as “wait for next routine physician visit” or “transfer to ED.” Physician recommendation (including disposition and treatment plan) is also captured.

**Results:** To date (June 2017), there have been 10 telehealth consults. Seven out of nine surveys completed by EMTs stated the patient would have been taken to the ED in the absence



of telemedicine, four of whom were transferred and three of whom avoided what would have otherwise been an ED transfer.

**Conclusions:** In a short period of time, telemedicine has been shown to reduce the number of ED transfers from senior living communities by providing access to physicians prior to transfers, thereby reducing unnecessary expenditure and improving overall patient well-being.

## 9. Clinical Simulation-based Usability Testing of a Mobile Telestroke System

Sherita Chapman Smith, MD<sup>1</sup>, Kaitlyne Heath<sup>1</sup>, Pamela Brown<sup>2</sup>, Prachi Mehndiratta<sup>3</sup>, Chip Decker, Rob Lawrence<sup>4</sup>, Dempsey Whitt<sup>4</sup>, Dan Fellows<sup>4</sup>, Tamara Broadnax<sup>3</sup>, Vladimir Lavrentyev<sup>3</sup>, Moshe Feldman<sup>1</sup>, Jeneane Henry<sup>3</sup>, Jason Wong<sup>3</sup>, Andres Ruiz<sup>3</sup>, Kevon Hekmatodoost<sup>5</sup>, Muhammad Bhatti<sup>3</sup>, Basit Rahim<sup>3</sup>, Qaiser Toqeer<sup>3</sup>, Jamie Ricks<sup>1</sup>, Theandra Madu<sup>1</sup>, Baaba Blankson<sup>1</sup>, Jamie Heath<sup>3</sup>, Poanna Bennam<sup>1</sup>, Juan Lu<sup>1</sup>, Warren Felton<sup>1,3</sup>, Joseph Ornato<sup>1,3</sup>

<sup>1</sup>Virginia Commonwealth University, <sup>2</sup>Simmons College, <sup>3</sup>Virginia Commonwealth University Health System, <sup>4</sup>Richmond Ambulance Authority, <sup>5</sup>Emory Healthcare

**Background:** Mobile pre hospital telestroke presents a novel solution to improve stroke diagnosis and reduce treatment times.

**Methods:** An ambulance was equipped with a mobile telemedicine system to perform stroke assessments. Scripted scenarios were performed by actors during transport and evaluated by physicians using the NIH stroke scale (NIHSS). Scores obtained during transport were compared with independent bedside and original scripted NIHSS scores. Participants completed the System Usability Scale (SUS), NASA task load index, audio-video quality scale and a modified Acceptability of Technology survey after completing the NIHSS evaluations. In addition, interviews were conducted to evaluate users' experience and perceptions. Descriptive analysis was used for all surveys. Weighted kappa was used to compare the agreement in NIHSS scores. A regression model was used to further account for variations.

**Results:** Ten scripted scenarios were simulated twice during the mobile transport and once at bedside. All simulations were completed except for one. NIHSS scores between mobile, bedside and original scripted scenarios revealed good agreement [weighted kappa=0.76 (95% CI: 0.63-0.9, p=0.63)]. There were no statistically significant differences in NIHSS scores between evaluations. The results were independent of stroke scenarios, physicians, and actors. Overall, 92% and 81% of raters deemed video and audio quality as "good" or "excellent" (rating <3) respectively. The overall mean SUS score was 69.1 (13.3). Content analysis identified strengths, usability issues, and safety concerns. Overall users identified

similar usability issues with the technology including audibility, connectivity, equipment stability and poor visibility.

**Conclusion:** Our study shows the feasibility and capability of a mobile telestroke system to accurately assess actors simulating stroke patients during transport.

## 10. Evaluating the Effect of Telerehabilitation on Adherence and Patient Satisfaction

Anang Chokshi, PT, DPT, OCS, SCS, Ben Torres, ATC, Stephanie Grier, MS, ATC, CSCS

### Reflexion Health

**Background:** The primary objective of this study was to evaluate the impact of a novel virtual telerehabilitation platform on adherence, usability, and patient satisfaction in post-operative rehabilitation.

**Methods:** Subjects included 218 (n=218) patients, with an average age of 68, who underwent uncomplicated knee or hip arthroplasty. These patients were prescribed telerehabilitation for physical therapy in lieu of traditional in-person physical therapy. The telerehabilitation system was installed in the patient's home 2 weeks prior to surgery for prehab. After surgery the system led the patient through their prescribed home exercise program (HEP) using an avatar. Patients also participated in live video conferencing with their treating physical therapist. Variables analyzed included overall HEP adherence, usability, and patient satisfaction. Adherence was automatically captured through the telerehabilitation software platform, and was measured by calculating the repetitions completed compared to repetitions prescribed over the course of the episode of care. The System Usability Scale (SUS) was administered to calculate usability, and a patient satisfaction survey was administered to calculate a Net Promoter Score (NPS). Both surveys were completed upon discharge.

**Results:** Patients enrolled in the program demonstrated a mean adherence of 77.9 percent. Patients who partake in traditional in-person physical therapy demonstrate an average adherence of 42.7 percent (Chan, 2010, p.132). Patients spent, on average 26 minutes per day engaged in their exercise program. The mean System Usability Scale (SUS) for Vera was 93 with a Net Promoter Score of 87.

**Conclusion:** A virtual telerehabilitation platform, when implemented with lower-extremity joint replacement, points to increased adherence and high patient satisfaction. Furthermore, an increase in adherence may lead to a decrease in total episode length, which would demonstrate that telerehabilitation is not only a tool for care redesign, but also an effective solution when participating in an episode based payment model.



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## 11. Telemonitoring: Using Persuasive Technology to Improve Engagement

John Conway, RN, MSN Ed, DNPc, and  
Kimberly Shea PhD, RN, CHPN

University of Arizona-College of Nursing

**Background:** Many healthcare clients struggle to maintain office visits and contiguous communication with primary care providers. This is often related to travel limitations such as extensive distances (Win, 2015), or debilitating comorbidities that complicate leaving home (Morrissey, 2013). Telemonitoring is emerging as a viable conduit to extend healthcare capacity by managing chronic healthcare issues while clients remain at home and utilize technology to maintain office visits (Arizona Telemedicine Program, 2017). Although telemonitoring has been successful, concerns for effective client engagement due to lack of understanding technology, client complacency, and failure to report accurate data remains of great concern (Fairbrother et. al, 2014).

**Method:** Persuasive Technology (PT) provides rewards for accurate and effective client engagement when utilizing telemonitoring. Virtual rewards, such as electronic thank you cards, prize points, or access to internet resources are examples of the positive reinforcement inherent to PT (Venkatesh, Thong, Xu, 2012). The purpose is to validate if implementing PT improves client engagement in utilizing TM technology.

**Methods:** Scoping reviews were conducted to yield a preliminary assessment of existing research associated with PT's effect on improving client engagement in telemonitoring. Reviews included searching CIHNAL, Medline and PubMed databases. Search terminology included the words: telemonitoring and persuasive technology.

**Results:** Few studies directly examined the use of PT among telemonitoring participants. CIHNAL yielded 502 articles using telemonitoring; 28 articles using PT, and 0 articles using both terms. Similarly, Medline (OVID) yielded 1 article; PubMed: yielded 0 articles, and the Cochrane Library yielded 0 articles using the combined search terms: persuasive communication & telemedicine.

**Conclusions:** The paucity of literature regarding PT to promote client engagement in telemonitoring warrants a deeper systematic review, or more importantly, development of mixed method studies to determine the effectiveness of hedonistic rewards on improving client engagement with telemonitoring.



## 12. Helping Asthmatic Children in Rural Alabama through Building Relationships with School Districts

Nathan Culmer, PhD, Karen Burgess, MD,  
Elizabeth Smith, CRNP

The University of Alabama College of  
Community Health Sciences

**Background:** Because asthma poses unique challenges to children in terms of their physical and academic involvement in school, children with this condition face additional barriers to success. Furthermore, the management of this condition places added demands on the children themselves, their parents, school nurses and schools in general. In order to reduce this burden, we sought to provide asthma education and training via tele-educational means to groups of school children during their school time to better equip and assist asthmatic school-age children in self-management of their condition. However, the challenges of delivering this information were daunting due to significant demands on time; fit of the project to student, nurse, and school needs; and the need to generate appropriate institutional support.

**Methods:** Our intervention consisted of four remotely delivered educational modules with asthma knowledge assessments before, immediately after, and, when possible, approximately 2 months after the delivery of the education modules.

**Results:** We developed a strong working relationship with a local school district characterized by an over representation of rural students. Key components of the high-quality working relationship we developed included: strategic partner selection, goal alignment, communication, IT infrastructure and support, adaptability, and advocacy.

**Conclusions:** Based on very encouraging preliminary data and enthusiasm from district leadership, we are expanding to more schools and exploring clinical interventions to further serve school age children, their parents, school nurses, and the schools themselves.

## 13. Overcoming Barriers to Use of Telemedicine in Inpatient Wound Ostomy Care

Mary Ellen Dzedzic, MSN, RN, CWOCN, Michael Cola, BSN,  
RN, CCRN, Lauren Murphy, MSN, RN, ACNS-BC, Michele  
Wrazien, MSN, RN, CWOCN, Maurie Tassej, BSN, RN,  
CWOCN, Michelle Llewellyn, BSN, RN, CWOCN

Geisinger Health System-Geisinger Wyoming Valley  
Medical Community Medical Center

**Background:** The wound ostomy department at Geisinger Wyoming valley and Geisinger Community Medical Centers in Northeastern PA are part of the Geisinger Health system. This integrated health care system is on the edge of technology and is a leader in electronic documentation. This wound ostomy

my team has been successful in reducing hospital acquired pressure injuries across both campuses including a rehab facility over the past two years.

Because the campuses are separated there was a need to support the WOCN's, particularly in the Community Medical Center Campus. Telemedicine has been in place since 2016 to provide for wound assessment and the initiation of patient care protocols across the continuum.

**Methods:** Telemedicine is the exchange of information in health care with a goal of improving health status. This is a curative model. Telehealth in nursing care is using informatics to provide service over distance. (Telehealth and Telemedicine are often use interchangeably) (McKnight, 2012). This process fit the wound ostomy department well. The team chose a review, store and forward method of observation for care. Staffing was a concern and the group used the program to assist in patient care. Complex patients were cared for quickly, with expertise. Why wasn't the system used more frequently? This is what the team sought to find out.

**Results:** The team met to discuss reasons for limited use. Why the program wasn't accepted freely. The most common reasons noted were the fear of technology; also that the process took too long. Nurses were also concerned about assessment and documentation.

**Conclusions:** A plan was put in place to develop the program, provide for additional education, focus on patient documentation and in general create a supportive environment. It is hoped with this intervention that the Telemedicine program will be more widely used. This can only enhance patient care. Reference McKnight, S. Telehealth: Applications for complex care. On Line Journal of Nursing Informatics (OJNI) 16 (3) available at <http://ojni.org/issues>.

## 14. Will Telemedicine Connectivity at Remote Location with Transport Coordination Add Value to Patient Care?

Kathy Farrell, MD, Lisa Pruitt, BSN, RN, C-NPT,  
Natalie Masters, MSN, RN, CPN, Chad Stotler

Children's Mercy Hospital Kansas City

**Background:** Children's Mercy Hospital Kansas (CMK) is a 50 bed inpatient pediatric hospital with transfers arriving from multiple outside facilities. Patients arrive to inpatient CMK via private vehicle, Children's Mercy Hospital (CMH) Transport Team or local EMS. Patients may arrive sicker or worsen, escalating need for transfer from CMK to CMH 25 miles away. Common handoff is via phone with provider describing patient's bedside condition and need for transfer. Transport Shift Coordinators (TSC), prior to Telemedicine, are often unaware of deteriorating CMK patients until decision to transfer is made. TSC have PICU RN/RT expertise, dispatches CMH

Transport Teams to outside hospitals, as well as CMK. Telemedicine offers opportunity to see the patients, monitors, IV sites, medications at the bedside via Virtual Meeting Room (VMR) and use USB medical devices. The TSC, Charge Nurse, Bedside Physician, Medical Command, and Transport Team can all visualize the patient at the same time via VMR. This communication tool offers interventions to the bedside team real time, adding value to patient care. Telemedicine can serve as a tool for the Transport Team en route, bedside nurse handoff information, and assess patient equipment needs. This provides "eyes" (video), and "ears" (audio) as a communication tool for coordination of patient care to over-see, guide, and provide expertise in real time.

**Methods:** TSC and Charge Nurses require Telemedicine training, credentialing and practice utilizing the Telemedicine equipment. TSC/CMK Safety Huddle connection occurs twice daily at 12:30 pm and 8 pm. This allows CMK Charge Nurse to communicate patient status changes and needs for potential transfer.

**Results:** Practice with equipment twice daily improved connectivity time by fifteen minutes.

**Conclusions:** Telemedicine helps with real time inpatient care communication, provides awareness of potentially deteriorating patients, and improves work flow with practice.

## 15. Opting In: Exploring Veteran's Satisfaction and Perceptions of Telecardiology

Brooke A. Finley, BSN, RN-BC DNP/PhD Student

The University of Arizona and The Southern Arizona  
Veterans Administration Healthcare System

**Background:** Telehealth, in general, has demonstrated time and cost savings while promising non-inferior care to in-person treatment [1-5]. Specifically, telecardiology has reduced readmissions and improved health outcomes, becoming a promising treatment modality [4,5]. While the Veterans Administration (VA) is a recognized leader for telehealth, there remains limited VA telecardiology empirical research; therefore, the purpose of this study is illuminating Veteran patients' telecardiology satisfaction and perceptions [6,7].

**Methods:** Sixty-nine VA telecardiology clinic patients from rural Arizona completed an anonymous survey, answering the free-hand question "Would you recommend cardiology telemedicine clinic visits to a friend? Why or why not?." Responses were analyzed using qualitative descriptive methodology coupled with "in-vivo" thematic content analysis for a naturalistic form of inquiry to understand Veterans' telecardiology perceptions and service satisfaction [7-10].

**Results:** VA telecardiology patients' responses yielded four main themes: 1) High Praise (n= 16 responses) with general commentary such as "excellent" or "great service"; 2) Con-

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## ARIZONA TELEMEDICINE PROGRAM



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# ARIZONA TELEMEDICINE PROGRAM

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venience with subthemes of i. “less travel time and mileage” with references to significant travel reduction (n= 36), ii. “prompt care” (n=7), iii. “easy-to-use” (n= 6); 3) Confidence with subthemes of i. “complete, comprehensive care” (n= 13), ii. “highly qualified and professional service” (n= 9); and 4) Connection with subthemes i. “my cardiology team” (n= 13), ii. “very personable” (n= 10), and iii. “things were clearly explained to me” (n= 9). Negative commentary was not provided.

**Conclusions:** Veterans using telecardiology found the service substantially satisfactory. The most commonly reported benefit was that telecardiology was highly convenient, saving significant travel time while providing an easy-to-use and prompt service. Confidence in the cardiology medical service accuracy and treatment was expressed. Telecardiology was perceived as professional, personal, and educationally informative and Veterans appreciated seeing consistent provider teams. Overall, this research provides a conceptual foundation for future VA telecardiology patient satisfaction research.

## 16. General Surgery Consults Via Telemedicine

**Katie L. George, DNP, MSN, ACNP, RN, CCRN**  
**University Physicians Group,**  
**University of Virginia Health System**

**Background:** There is a lack of surgical care, especially for complex cases, in remote areas. Surgical candidacy can often be determined through complete history taking in combination with imaging, thus avoiding the need for a face to face encounter. Not all patients are surgical candidates, which can be frustrating for patients to hear after extended travel for surgical evaluation. Additionally, telemedicine has repeatedly resulted in high patient satisfaction ratings.

**Methods:** A Telemedicine Surgery Consult pilot protocol was created to offer a telemedicine visit to all patients who lived greater than 60 miles away. The patient was evaluated via telemedicine by either an attending surgeon or the surgery nurse practitioner. To reduce the risk of surgical complications, relative contraindications to surgery included BMI > 35, active smoking, and/or had a HBA1C > 8. In these cases, surgery was deferred and resources were provided to help the patient improve his/her health prior to surgery. In mid-2017 provider access to telemedicine was increased through iPad distribution and installation of telemedicine equipment within the surgery clinic.

**Results:** From January 2015 to June 2017 twenty-five general surgery consult patients were seen. A total of 6,174 miles driven were saved. A significant number of patients were unable to enroll, as a large telemedicine satellite station was temporarily non-operational.

**Conclusions:** This pilot protocol increased access to care for general surgery patients, and anecdotally increased other surgeons’ acceptance of telemedicine. The program continues to expand as additional surgeons, including other surgical specialties, now have easy access to telemedicine capabilities. We expect our telemedicine patient encounters to increase exponentially as provider comfort with the technology increases, additional telemedicine satellite locations are established, and follow-up visits are transitioned to telemedicine.

## 17. CEP On Duty® Telepsychiatry

**Herbert Harman, MD, Richard Newell, MD, Emily Rosendahl, Lauren Sweeney, Tami Longo, Lindsay Kriger, Andrew Smith**  
**CEP America**

**Background:** The U.S. is currently facing a mental health coverage crisis; nowhere is this crisis more pronounced than in hospital Emergency Departments (EDs) where patients regularly board for hours or even days before being seen by the appropriate level of care. Often the patient is transferred to an inpatient unit in another facility. Telepsychiatry is a method to increase timely access to care, and promote better outcomes at an affordable price.

**Methods:** CEP America’s Telepsychiatry program provides 24/7 access to board-certified psychiatrists. When a patient comes to the hospital with a mental health crisis, a consult can be ordered on-demand by the ED physician. An experienced emergency-trained psychiatrist will then review patient records, and connect with the patient via high-quality, HIPAA secure video. Thorough documentation including medical history, diagnosis, disposition recommendations and plan/care instructions are made available to the referring physician.

**Results:** From January to May 2017, over 250 patients were seen via the On Duty Telepsychiatry platform from three different hospital locations. Average wait time to see a psychiatrist is less than 1 hour, and consults last an average of 30 minutes. Only 18% of patients seen via On Duty Telepsychiatry were recommended for inpatient psychiatric care, while 42% were recommended for discharge – much higher than the national average. For those seen while on an involuntary hold, 57% of holds were recommended to be dropped.

**Conclusions:** CEP’s Telepsychiatry program has resulted in faster than average treatment and disposition of mental health patients. As time goes on, we expect this program will show improvement in patient experience, patient throughput, and cost savings.

## 18. North Country Healthcare ECHO Provider Experience

Colleen Hopkins

North Country Healthcare

Hepatitis C ECHO- In 2011, North Country HealthCare had over 950 patients with the Hepatitis C diagnosis and limited access to care. Partnering with hepatology specialists Richard Manch, MD and Ann Moore, NP, we joined the cause for the cure through tele mentoring. Weekly video conferences train primary care providers to be experts in treating Hepatitis C. The outcomes are empowering our providers and communities throughout rural northern Arizona.

## 19. Teledentistry in Arizona: Creating Sustainable Programs Through the Improvement of State Legislation and Policy

Scott Howell DMD, MPH, Colleen Trombly MHSA, RDH, Wayne Cottam DMD, MS, Jack Dillenberg DMD, MPH

A.T. Still University, Arizona School of Dentistry & Oral Health

**Background:** In 2006, a teledentistry pilot project was developed by the Arizona Office of Oral Health (OOH). It was funded by a Health Resources and Services Administration (HRSA) grant. One finding from this project was that reimbursement for teledentistry services was almost non-existent. Subsequently, most of the teledentistry programs closed as they were not financially sustainable beyond the grant. In 2015, a teledentistry bill passed in Arizona requiring insurance providers to reimburse for teledentistry services. Also in 2015, the Arizona School of Dentistry & Oral Health received a HRSA grant (#D85HP20045) to develop didactic and clinical teledentistry curricula. A primary patient population that would be served by teledentistry is patients with AHCCCS (Arizona Medicaid). However, current AHCCCS policy does not allow dental providers to be reimbursed for crucial aspects in the delivery of teledentistry, such as exams. This goal of this poster will be to evaluate current Arizona legislation and policy and compare it to other states to determine where improvements can be made to allow for sustainable teledentistry programs.

**Methods:** The current Arizona legislation and AHCCCS policies will be compared to other state legislation and Medicaid policies in states with successful teledentistry funding mechanisms. Currently, the most robust and sustainable teledentistry programs are in California.

**Results:** The legislation and policies developed in California are more detailed and comprehensive. These policies, particularly as they relate to reimbursement, have been crafted in a fashion that allow for successful and sustainable teledentistry programs. Subsequently, teledentistry programs have been

able to be developed all over the state of California with little to no support on grants to continue operating.

**Conclusions:** Arizona legislation and policies will need to be improved in order to maintain teledentistry programs without relying on grant funding.

## 20. Redesigning the Clinic Visit: Analysis of a Nationwide Asynchronous Virtual Care Program

Lisa Ide, MD, MPH<sup>1</sup>, William J. Riley, PhD<sup>2</sup>, Rebecca Hafner-Fogarty, MD<sup>1</sup>, Kevin L. Smith, DNP, FNP, FAANP<sup>1</sup>

<sup>1</sup>Zipnosis, Inc., <sup>2</sup>School of Science of Health Care Delivery, Arizona State University

**Background:** The prevailing approach for most episodic, non-emergent patient treatment involves a face to face visit in the clinician's office. Yet, the demand for payment and care delivery reform requires innovative methods to improve health care quality and efficiency. Virtual care is radically transforming care delivery; however, its potential impact hasn't been fully quantified. This study reports the findings of a nationwide adaptive algorithmic virtual care delivery program for non-emergency conditions.

**Methods:** This study is a five-year longitudinal analysis of a nationwide virtual care program in eleven states used by twenty health care systems. The virtual care platform deploys innovative technology based on a reengineered patient visit. We describe a formative and summative evaluation of key metrics regarding program performance and care quality.

**Results:** We analyzed 49,046 visits for 31 separate clinical conditions treated during the five-year study period. For 2016, the overall average clinician work time was 1.4 minutes, ranging from a low of 59 seconds for epinephrine pen refill to a high of 6.4 minutes for ingrown toenail. The adherence to evidence based practice was 95% for the virtual asynchronous visits. A comparison based on a composite measure using a sensitivity analysis indicated that virtual care visit adherence to clinical guidelines is 61% greater than traditional in-person visits. Further, the efficiency of a virtual setting saved an average of 20.2 minutes per encounter.

**Conclusions:** The findings indicate that in comparison to traditional visits, asynchronous virtual substantially improves clinician efficiency and adherence to evidence based guidelines for selected conditions. The findings also suggest that virtual care is a key technological innovation to be considered in the pursuit of more convenient access as well as improved efficiency and quality.

## 21. Use of DICOM as an Input for Volume Rendering on Head-mounted Display in Telemedicine

Jakub Kamiński, Msc, Jane Krzysztof, PhD,  
Mateusz Kierepka, Msc

MedApp S.A.

**Background:** An advanced issue in head-mounted displays for augmented reality (AR) applications in medical procedure is the visualization of volumetric images, such as from CT or MRI from DICOM files. Volume rendering is commonly used for 3D images that contain rich information with opacity and color throughout the volume that cannot be easily expressed as surfaces such as polygonal meshes. The ability to change lighting conditions and the transfer function on-the-fly makes it amongst the most flexible techniques. This in turn provides opportunities for better embedding virtual objects in the real world.

**Methods:** Current implementation is based on thin-client solution for volume rendering that exploits a high-performance laptop or standard desktop workstation as a server (host application), allowing access to more system resources. A lightweight software client running on a Microsoft HoloLens device sends in a real-time input data stream to the server using a standard Wi-Fi connection. Host application performs a raycasting rendering with color transfer function and advanced shading from a corresponding camera position at the client's requested resolution and streams content frames back to device.

**Results:** The developed methodology allows for the use of raw 3D or 4D data in DICOM files, in contrast to a common approach with additional surface reconstruction to polygonal models. Possible interactions include visualizing, slicing and interacting with the holographic image by gestures and voice commands.

**Conclusions:** The presented approach aims to achieve the feasibility of using a Microsoft HoloLens to augment patient-specific holographic images without preprocessing for pre-operative diagnosis and during surgeries.

## 22. Evaluation of a Home Assessment Protocol for using Mobile Technology for Integrated Viewing

Melissa Koon, MSN, APRN, FNP-BC, NP-C and  
Kimberly Shea, PhD, RN, CHPN

University of Arizona, College of Nursing

**Background:** The purpose of this project is to evaluate a protocol for technological assessment strategies that ensure the use of an integrated visualization approach in remote home visits. Remote visits using mobile technology (i.e. phones/

tablets) are beneficial in rapidly reducing symptoms, relieving caregiver anxiety and providing psychological support in the homebound patient. Live video communication can "see" the patients in their environment, however, cameras are limited to targeted views. A protocol will guide both targeted views and an integrated rapid assessment. The Home Assessment Protocol (HAP) was developed based upon an integrated approach from the Empowerment Framework. The HAP includes observation in four categories: *Patient Physical Characteristics*, *Treatment Equipment Functioning*, *Environmental Quality and Medications Available*.

**Methods:** The HAP was evaluated by seven home hospice nurse experts. The experts rated the importance of each item, using a 5-point Likert scale (strongly agree to strongly disagree). A content validity index required 5 of 7 experts to significantly agree on item importance ( $p \leq 0.05$ ).

**Results:** Experts significantly agreed on all items in the categories of *Patient Characteristics* ( $SD \leq 0.49$ ), except skin ( $SD = 1.06$ ) and *Medications Available* ( $SD \leq 0.38$ ). In the category of *Treatment Equipment Functioning* and *Environmental Quality* experts disagreed on item importance ( $SD \geq 0.88$ ) except for oxygenation ( $SD = 0.76$ ) and safety ( $SD = 0$ ). Expert importance ratings ranked from greatest to least are: safety, administration guide and nonverbal gestures, breathing, medication dosage and medication administration, positioning, oxygenation, urine collection bags, feeding, fans, skin, massage equipment, bedding. Additional comments advocate for inclusion of fall prevention, oxygenation equipment and environmental assessment.

**Conclusions:** The HAP provides a strategy to prioritize items for viewing in critical moments. Expert home hospice nurses strongly endorse the assessment of medication type, dosage and administration; non-verbal gestures, breathing and safety in remote home visits.

## 23. Health Plan Cost Impacts of a Health System Virtual Visit Program

Tim Lovell, MBA<sup>1,2</sup>, Joe Dalto<sup>1</sup>, Cheryl Ledward<sup>1</sup>, William Daines, MD<sup>1</sup>, Doug Elmer<sup>2</sup>, Michelle James<sup>2</sup>

<sup>1</sup>Intermountain Healthcare and <sup>2</sup>SelectHealth

**Background:** On Demand, Direct-To-Consumer telehealth programs are appearing rapidly across the country, providing quick and convenient access to patients for low acuity conditions. But are these programs making an impact on the overall cost of care? This study evaluates health plan data for Utah based SelectHealth using similar criteria as an Anthem study published earlier this year. Based on index visits for various health care venues, including urgent care, emergency care and primary care, this study will compare the total cost of all incurred care charges within 21 days following the index visit and for each care venue.

**Methods:** We identified index claim visits for various care sites that fit the scope of practice for Intermountain Connect Care virtual visits (i.e. sinusitis, urinary track infection, bronchitis, etc.) that took place between over a year period (April 1st 2016 to March 30, 2017). The total cost of care included all claims within 21 days after an initial index visit, including provider visit cost, lab, imaging and prescription costs. We excluded patients with a Deyo-Charlson Comorbidity Index (DCI) greater than 2, given the difficulty in associating visits within 21 days with the index visit reason. We also restricted the study to members who joined at least 6 months prior to the index visit and remained at least 3 weeks after the study period.

**Results:** This study will be completed in July so results are not yet available.

**Conclusions:** The study will be completed in July so results are not yet available.

## 24. Usage Assessment of Interactive Case Simulation Tools in a Statewide Clinical Education Program

David Lukacs, Venkata Sunil Nekkanti, MS,  
Dongwen Wang, PhD

Arizona State University, Biomedical Informatics

**Background:** Interactive case simulation tools (ICSTs) are important online resources developed by the New York State HIV-HCV-STD Clinical Education Initiative. With healthcare providers as the targeting users, the ICSTs are based on the latest clinical practice guidelines and aim to improve the quality of HIV, HCV and STD patient care. This study reports the usage of ICSTs. The analysis provides important data to identify more effective approaches for dissemination of clinical evidence.

**Methods:** We collected the usage data of 12 ICSTs for a period of 25 months from October 2013 to November 2015. All user activities, such as click of buttons, check of decision branches, and selection of specific patient conditions, were captured and stored for analyses. For each ICST, we measured the usage based on episodes of use and frequency of visits to specific part of ICST, and differentiated the use through web vs. native apps.

**Results:** We recorded a total of 5,321 episodes of use during the study period, with 1,889 (35.50%) from web and the remaining 3,432 (64.50%) from native apps. We recorded a total of 59,450 visits to specific ICST functions, with 21,530 (36.22%) from the web and the remaining 37,920 (63.78%) from native apps. The top usage of ICST was recorded for *HIV Testing*, followed by *Anal Dysplasia & Cancer* and *HIV/HBV/HCV Prophylaxis Following Occupational Exposure*.

**Conclusions:** We recorded intensive use of ICSTs by a large number of clinicians. Native apps have become a preferred platform for using ICSTs. ICST usage is unevenly distributed.

Further study is required to perform correlation analyses on ICST usage, clinical topics, users, and use contexts, such as to identify the most effective approaches to disseminating clinical evidence through ICSTs.

## 25. Behavioral Health Telehealth: Making a Difference

Richard Maas, MA, LPCS, and Nancy Brandon  
Novant Health

**Background:** It is a widely known fact that there is a psychiatry shortage across the nation due to various reasons. To combat this shortage, Novant Health leveraged their “Remarkable Patient Experience” campaign to include telepsychiatry and teleassessment services in combination to meet the needs of patients in all of our hospital ED’s and one community hospital with limited psychiatric resources.

**Methods:** Novant Health Psychiatric Medicine partnered with the North Carolina Statewide Telepsychiatry Program (NCSTeP), a state funded initiative to bring psychiatry resources to areas that were unable to serve patients in a timely manner. NH psychiatrists and therapists work together to provide comprehensive evaluations for each patient in these Emergency Departments. NCSTeP provided each hospital with equipment and IT support to help see patients in these areas. Psychiatrists were credentialed by each hospital with consulting privileges so that they can help the ED providers serve these patients in a timelier manner.

**Results:** A dedicated team of therapists and psychiatrists working together promotes faster placement in an appropriate setting for the patient’s particular needs. This structure decreases length of stay for the patients in the ED setting and helps facilitate the patient receiving treatment faster. The average LOS in NC ED’s is 60 hours. Our service LOS is 17 hours. This service also provides ED staff access to trained therapists.

**Conclusions:** Telemedicine may never replace face-to-face interaction with a patient; it is a better option to those needing faster placement and treatment to help alleviate the strain on the EDs across the state. Novant Health is committed to putting the patient first as the right thing to do and will continue to foster this mission to all areas across the state with which we are so privileged to come in contact.

## 26. Rural Stabilization Grant/Partnership Fills MFM Gap via Telemedicine

Tanya Mack, BSN<sup>1</sup>, C. Anne Patterson, MD<sup>1</sup>, Sallie Barker<sup>2</sup>  
<sup>1</sup>Women’s Telehealth, <sup>2</sup>Upson Regional Medical Center

**Background:** The obstetric healthcare system is often fragile in rural areas. OB access can be limited and maternal fetal medicine care is rare. Studies show that patients with pre-

term delivery (<37 weeks) lived an average of 40 minutes away from their delivering facility. According to the CDC, maternal mortality rates in metropolitan areas was 18.2 per 100,000 livebirths and in rural areas 29.4 in 2015. In 2014, Georgia's Governor Deal created the Rural Hospital Stabilization Committee to identify needs of rural hospitals and to provide grants for solutions. Upson Regional Medical Center, with the only L&D in a 75 mile radius, was a 2016 grant recipient. The hospital allocated a portion of its grant money to implement MFM Telemedicine, which they used to decrease patient bypass, improve patient compliance, generate new revenue, and upgrade the technology. The grant funded telemedicine equipment, set up fees and ultrasonographer training costs. Women's Telehealth and URM C worked to implement the MFM program and have achieved astounding results in their first year.

**Methods:**

- The use of new, non-cart, cost effective technology configurations
- Long distance ultrasonographer training to upgrade OB imaging skills
- Early involvement of all partnership stakeholders
- Use of a single transparent "RoadMap" across all entities

**Results:** The program took < 6 months from the initial meeting to GO LIVE in March of 2017. During the first 90 days > 65 MFM referrals were generated and 72 encounters completed. Yr 1 projections show that >400 MFM telemedicine encounters are expected. URM C reports the project has demonstrated new MFM revenue, patient community retention and positive patient satisfaction. The total cost for program deployment was <\$25K.

**Conclusions:** States that help rural hospitals overcome initial telemedicine costs can expect early success and self-sustaining telemedicine programs to solve access to OB care gaps.

## 27. Incorporating Direct Patient Feedback to Accelerate Operational and Clinical Workflow Improvements

Tanya Mack, BSN, C. Anne Patterson, MD, Bob Foley  
Women's Telehealth, Upson Regional Medical Center

**Background:** Numerous published studies have consistently proven that patient satisfaction will not be impeded by the deployment of telemedicine. However, Women's Telehealth patient survey results have shown that the "comment" section holds key opportunities for incorporating direct patient feedback to quickly improve clinical workflow to achieve more positive and effective telemedicine encounters for all. From May 2016 through today, Women's Telehealth measures patients satisfaction but focuses more not on the

most refined data collection instruments, but on the "patient comment" section to identify opportunities in operational and clinical workflow. Patients have had clear, effective, simple and amazing ideas about how to improve their own telemedicine encounters. If only we would all listen!

**Methods:**

- 10 item questionnaires are emailed to patients across multiple locations within 1 week of their initial and second telemedicine visits via a free, online survey tool. A 5 point Likert scale is used for each survey question and a "Comment" section was added.
- All patients surveyed completed initial and follow-up maternal fetal telemedicine visits
- Phone surveys were initially tried, but abandoned within the first 60 days.

**Results:** The survey response rate was 78%. Results showed that 87% of patients' scores were "satisfied" with their MFM telemedicine visit. However, their free form "comments" led Women's Telehealth to make numerous and immediate operational and clinical improvements, including: adding 2 new service lines, making two technology changes, instituting specific provider on camera training, adding virtual medical assistants, website modifications, virtual queuing, and clinical tasking post encounter .

**Conclusions:** As expected, telemedicine was well accepted by the patients. However, the "Comment" section from patients yielded the greatest opportunity for improving the patients' and providers' telemedicine experience. Valuing patient ideas as a direct link to improving telemedicine encounters may be a crucial accelerator in telemedicine adoption.



## 28. Population Health Screening Transformation: Pine Ridge Reservation Health Promotion

Julia Mattingly, DNP, RN, APHN-BC

Indiana University Southeast School of Nursing

**Background:** The Lakota Sioux of the Pine Ridge Reservation in South Dakota experience numerous health disparities. Access to health care, including preventive care, is very limited for this population. Indiana University Southeast nursing students travel annually to the Pine Ridge Reservation to offer Health Promotion to the Lakota. This population health screening initiative focuses on primary and secondary prevention for Diabetes and Cardiovascular Disease. Adult screenings include blood pressure, blood glucose, total cholesterol, height, weight, and Body Mass Index. Participants in these screenings receive a handwritten copy of their results, pre-printed health education materials, and verbal health teaching with instructions on follow-up.

**Methods:** Through technology provided by TeleMed 2020, the screening methodology at Pine Ridge will be transformed using a secure and real-time electronic data capture platform utilizing tablets and smart phones. The Enform® platform allows for creation of an electronic record for each participant and collection of data via Bluetooth enabled devices. Nursing student-users are able to access an e-library for teaching materials, as well as decision trees which allow for evidence-based instruction on clinical follow-up and re-screening recommendations. Participants receive a printed summary of their health promotion interaction and can have health reminders sent to their mobile phones.

**Results:** Implementation of the TeleMed 2020 Enform® platform at Pine Ridge offers many potential improvements, including automated data capture; increased frequency of participant follow-up; encouraging Lakota tribal members to be more engaged in their self-care; enabling data aggregation for longitudinal assessments and increasing operation efficiencies, including standardizing the student nurses' health teaching and screening processes.

**Conclusions:** The purpose of this presentation will be to share impact, successes, challenges, and opportunities in transitioning from episodic to expanded population health promotion, including highlighting nursing student involvement and any cultural barriers experienced in the use of the platform with the Lakota.

## 29. Technology Interventions to Increase Physical Activity in Allied Health Workers

Emil J. Milas, DNP, FNP-C\*<sup>1</sup>, Susan Halli-Demeter, DNP, FNP-BC<sup>1,2</sup>, Heather M. Ross, DNP, PhD<sup>1</sup>

<sup>1</sup>Arizona State University College of Nursing and Health Innovation, <sup>2</sup>Mayo Clinic, Phoenix, AZ

**Background:** Physical inactivity correlates with a greater risk for obesity and is the fourth leading cause of death globally. Allied health workers have the second highest rate of obesity among all professions and one of the lowest rates of physical activity. Non-exercise activity thermogenesis (NEAT) encompasses net energy spent throughout the day not including planned exercise, eating, or sleeping. NEAT is better at burning total energy than planned exercise and is linked to better health. The purpose of this project was to implement an evidenced based intervention to increase physical activity/NEAT 8-weeks among healthcare workers using telehealth technology based platforms in a community health center setting.

**Methods:** Thirty-two allied health professionals and health center staff of a community health center assessed were assessed for BMI, blood pressure, and given two questionnaires, one assessing readiness to engage in physical activity and one measuring subjective reporting of physical activity, and a Fitbit accelerometer. Text messages were pushed out starting at week-2, 3-4 times per week encouraging physical activity. Daily step data from the Fitbit was uploaded to a telehealth web platform to objectively track the amount of physical activity over the intervention period. Participants could engage in telehealth sessions for continued support around physical activity or nutrition during the 8-week intervention.

**Results:** Technology interventions, overall, did not lead to participants becoming more physically active. There was a correlation ( $p < .048$ ) between subjective reporting of physical activity and objective measurement of activity. For those participants who fully engaged in the technology and telehealth platforms, there was a trend in weight loss, systolic blood pressure control, and increases in physical activity.

**Conclusions:** Wearable activity monitors and telehealth platforms can objectively and accurately capture physical activity. Participants with higher self-efficacy are more likely to make changes and engage in regular PA.

## 30. Critical Communication Tool for Implementing a Telemedicine Provider

Jessica Miller, BSN, RN

Gundersen Health System

**Background:** Gundersen Health System is a comprehensive healthcare network including one of the nation's largest

multispecialty group medical practices, teaching hospital, regional community clinics, affiliate hospitals and clinics, behavioral health services, vision centers, pharmacies, and air and ground transport services. We serve a Tri-State region, with population of 600,000 patients. Our telemedicine clinical services have grown to over 100 providers, in 33 specialty areas.

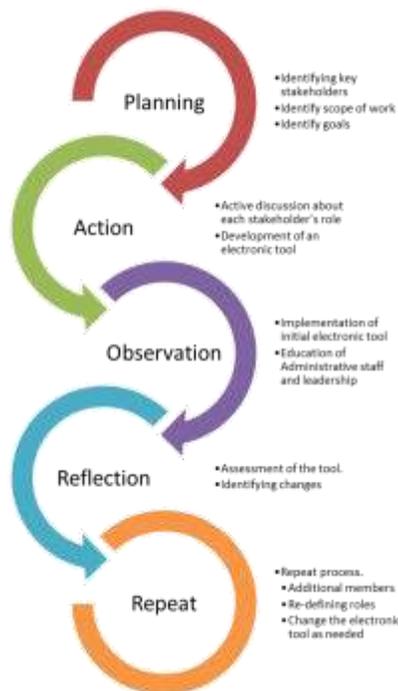
Through the years a strong infrastructure of technology, providers and staff has been built. Statistics that are monitored include the number of appointments, the number of specialists, specialties, regional sites and locations. Our telemedicine program is an essential component to our strengthening commitment to 'Care Close to Home'.

Developing a communication tool between key stakeholders in the implementation of internal providers was imperative.

**Methods:** The action method of research was utilized to plan the timeline and communication tool. This includes planning, action, observation, reflection.

**Results:** A tool for implementation of telemedicine programs was developed. This electronic tool ensures that each stakeholder in the process is notified of a new service line or provider. A final notification is sent to all stakeholders when all of the steps of the implementation have been completed and it has final approval.

**Conclusions:** Our Clinical Telemedicine program at Gundersen Health System has been successful because of the consistent stream of communication between key members of staff as well as the originating site. This has allowed for steady growth and high patient satisfaction.



## 31. A Safer Transition from the Emergency Room: Using Telemedicine to Reimagine the ER Visit

Matt Muller, MD

Emergency Medicine Consultants Ltd.

**Background:** The week following ER discharge is often a challenging time for patients; whether a result of continuing symptoms, anxiety about symptom progression, inability to access follow-up care, or questions related to treatment plan or prescriptions. All have repercussions for patient safety, care quality, and satisfaction with service. Patient-centric solutions for continuity of care during this period are rare, return visits to the ER are not. With this in mind, Emergency Medicine Consultants (EMC) has re-imagined the ER visit; using telemedicine to transform the 3-hour ER visit into a week-long patient relationship.

**Methods:** Through a partnership with CirrusMD, EMC piloted offering 24/7 direct, continual patient access to emergency physicians via a HIPPA-compliant, text-first virtual care platform following discharge from the ER at no cost to the patient. By the end of the pilot, the service is being offered to 30,000 patients a month at 12 hospitals in the Dallas-Ft Worth metroplex.

**Results:** The Safe Transitions program is achieving the triple aim: improved safety, service, and resource utilization. In the first six months of the pilot, 2,700 follow-up virtual encounters were completed, involving almost 2,000 patients. Median response time to initial patient inquiry by a physician was two minutes, with median duration of patient encounters spanning 40 minutes. Nearly 80 percent of patients who registered for the service used it, with 25 percent of patients on the platform having multiple encounters over the 7-day period. Resolution of patient issues occurred in 84 percent of encounters without brick-and-mortar referral, with additional prescriptions written in 15 percent of encounters. Service levels led 90 percent of surveyed patients to indicate that having access to Safe Transitions "improved" their experience with the health system, and 90 percent said they were more likely to recommend the health system to friends and family because of Safe Transitions.

**Conclusions:** Telemedicine following acute care episodes improves access and continuity of care, care quality, and patient experience, while reducing avoidable utilization.

## 32. Reducing Hospital Readmissions Through the MD24 Telemedicine Program in Rural Areas

Linh Nguyen, MD, MMM

MD24 House Call

**Background:** Hospital readmission has been a problem in the US Healthcare industry. In Arizona hospital readmission

rate after discharge in 2010 was 20%. One of the greatest challenges in the US health care system is to provide quality care in a population which does not have access to specialty physicians due to factors like socioeconomic conditions and geographic limitations.

**Methods:** Percentage analysis was done from the total active population of high risk homebound patients including but not limited to patients in pain management, behavioral health, and palliative care patients; with a focus on reduction of hospital readmissions and patient outcomes. Data were all collected from 2015 from March 2015 to July 2017 from the Bridgeway Health Plan in Maricopa County.

**Results:** There were 224 total patients. 52 of the patients were TCM qualified. Data showed that the readmission rate was 9.6% on a 30-day readmission rate.

**Conclusions:** The study was made to seek the benefits of house calls services in combination with Telemedicine collaborating with Accountable Care Organizations. Not only were the readmissions reduced, telemedicine in Homebound patients would allow easy access to health care, especially in rural areas, and it will also improve access to a network of specialists. It is predicted that hospital readmissions will be further reduced by 5% in 1 year if done with the combination of telemedicine and traditional care in the United States in the 3<sup>rd</sup> quarter of 2017.

### 33. Impact of Wound TeleHealth Program on Homecare Operations & Quality

Katherine Repko, MS, BSN, RM, Brenda Freymiller, MS, Becky Greenwood, RN, Mariko Nielson, MBA

Intermountain Healthcare

**Background:** Homecare (HC) nurses need wound care provider support for patients with complex wounds to facilitate assessment and recommendations that will promote healing process and decrease cost of care. Historically, the HC Wound Specialist Nurse would collaborate with HC nurses on complex, non-progressing wound patients through email and phone calls or, in cases where the patient lived in the Salt Lake City or Provo areas, would schedule and travel to the patient's home for a shared visit with the assigned HC nurse. These visits would result in a request for orders from the PCP for a treatment change or a referral to a wound clinic. To receive homecare services, a patient must be home-bound and for some patients, arranging travel to a wound clinic for specialized care is very challenging. Some patients decline wound clinic services because of the cost and difficulty of transporting to a brick and mortar clinic site.

**Methods:** In January 2017, the Wound and Homecare teams began a pilot to provide TeleHealth consultations in the patient's home using Skype for Business. Patients targeted had non-progressing wounds or wounds requiring daily dressing changes, and significant challenges in transporting to a

wound clinic. Once identified, treatment options were explained to the patient and an order for Wound TeleHealth was obtained. The HC nurse obtained patient consent, facilitated scheduling the consult, and updated the treatment plan as directed by the TeleHealth Provider. The HC Wound Specialist Nurse also started utilizing the Skype for Business application to perform shared visits in real time.

**Results:** Homecare Wound Specialist in-person shared visit costs and frequency were reduced by 89% and 66% respectively. Visits previously limited by geographic location have now been expanded to support all locations within Intermountain Homecare.

**Conclusions:** TeleHealth effectively brings needed wound care expertise to HC patients with complex wounds.

### 34. The e-Mentor Program: A Post-Orientation Support Tool for New ICU RNs

Sally Richter MN, RN, CCRN-E, Jennifer Fiegel, Erin Saunders  
Banner Health

**Background:** For new to service (NTS) and new graduate (NG) registered nurses (RNs) hired into critical care, the post-orientation time frame for these RNs and their peers can be a stressful time necessitating extra resources to ensure adequate development and retention. Based on a program by Brindise et. al. (2015), a pilot program pairing experienced Tele-ICU RNs with post-orientation NTS and NG bedside RNs in two intensive care units (ICUs) was developed to provide support and facilitate their transition to competency.

**Methods:** The e-Mentor program was piloted in a rural hospital setting and in an urban hospital setting. The goals were to provide support; improve confidence; and improve critical thinking in the post-orientation bedside RN (participants). A structured program was developed for e-Mentors and participants. E-Mentors evaluated the participant each shift. Meetings were held with participant and e-Mentors every 30 days to evaluate progress. Participants and e-Mentors also completed program evaluations.

**Results:** The e-Mentor program pilot consisted of 2 RNs with NTS experience in the rural setting and 7 RNs in the NTS/NG experience level in the urban setting. The e-Mentor evaluations demonstrate participants' improved time management and critical thinking skills with all reaching the top level of "functions independently" at program end. Participant comments reveal feelings of supportiveness and greater confidence. The most positive results/comments were seen with the NG RNs.

**Conclusions:** The e-Mentor program developed supportive relationships between experienced Tele-ICU RNs and post-orientation ICU RNs. This mentorship helped to foster confidence and critical thinking. Additional program benefits include increased future utilization of Tele-ICU RNs and improved bedside RN retention. Further study is warranted.

Brindise, T., Phophairat, M., et. al. (2015). Development of a Tele-ICU postorientation support program for bedside nurses. *Crit Care Nurse*: 35 (4): 8-16.

### 35. The Feasibility and Satisfaction of Using Telemedicine To Provide Tertiary Pediatric Obesity Care

Reza Sadeghian, MD, MBA, MSc<sup>1</sup>, Leigh Ann Phelps, RN<sup>2</sup>,  
Rebecca A Gooch, MD<sup>3</sup>, Daniel Preudhomme<sup>2</sup>

<sup>1</sup>University of South Alabama, Department of Pediatrics,  
<sup>2</sup>Department of Adolescent Medicine, Department of Pediatrics,  
<sup>3</sup>Department of Medicine and Critical Care, Northwell Health

**Background:** The use of telemedicine in Pediatric tertiary obesity care is in its infancy. Although Telemedicine implementation in tertiary care has been tried, the satisfaction and outcome data is limited largely due to small sample sizes and the marked variation of methods and personnel by which the telemedicine technology is delivered and participants assessed. Our objective was to determine the feasibility of using telemedicine to deliver Pediatric tertiary obesity care and to evaluate Patient/MD/Staff satisfaction.

**Methods:** We used a commercially available telemedicine system to conduct a prospective study where a sample of 30 patients were evaluated by a specialist physician using telemedicine technology from February 2016 through August 2016. Inclusion criteria included children aged 10-18 years of age and a BMI greater than 95%, either as an initial assessment or as follow up. A qualitative assessment of the patient/MD/staff perceptions of telemedicine use were assessed through a 5 point Likert scale. The study was approved by the Institutional Review Board at the University of South Alabama. Consent was obtained from patients' guardians. We used descriptive statistics when appropriate.

**Results:** One specialist physician (DP), along with CRNP/RN/PA/Resident performed 30 telemedicine consultations. 27 (90%) consultations were performed to completion, 3 (10%) sessions were incomplete due to wireless connections issues. 15 consultations were initial assessments. Fifty-seven percent of the patients were female, 70% were African American. The average age of the patient was 14.5 years  $\pm$ 2.4. MD, staff and patient responders agreed that the use of telemedicine is an appropriate and effective use of the clinician's skillset and time ( $\geq$ 96%), and can avoid patient travel from an underserved area to a tertiary care clinic ( $\geq$ 95%). All responders were comfortable and satisfied using the Telemedicine equipment ( $\geq$ 85%). MD and patients agreed that the telemedicine equipment helped the patient avoid a face-to-face visit ( $\geq$ 90%). Specialist MD and patients felt the technology was effective in the management of their visit ( $\geq$ 93%).

**Conclusions:** We successfully delivered tertiary obesity care through the use of telemedicine in different clinical situations

associated with pediatrics. In our opinion, telemedicine represents a realistic, successful and cost effective modality to provide well-received specialty care for the obese pediatric population.

### 36. Making the Right Choice: Keeping Up with Innovation in a Fluctuating Market

Cynthia Scheideman-Miller<sup>1</sup> and James Smith<sup>2</sup>  
<sup>1</sup>Adventist Health, <sup>2</sup>Blue Cirrus Consulting

**Background:** Clinical transformation of a large healthcare organization's telehealth service line is an overwhelming initiative in itself. How do you make sense of the continuous innovation in comparison to the needs of the organization? Nowhere are innovation and market pressures more evident than in the Direct-To- Consumer (DTC) market, where both products and vendors are constantly changing. A combination of loosely defined problems, a myriad of solutions, differing perspectives, market demands and varied needs from stakeholders can be overwhelming. In a multi-facility organization, it is imperative to create a collaborative environment that incorporates a clear understanding of the clinical and operational problems and provides an effective communication of the organization's telemedicine strategic vision.

**Methods:** Adventist Health partnered with an experienced consulting firm to apply a standardized proven methodology that included definition of the initial problem, decision making criteria, strategic discussions outline, evaluation criteria and business logic to solve the organizational need for a Direct-to-Consumer solution. The process brought the individual leaders of each institution together to operationalize a complete evaluation from discovery through market trending, funding, criteria development and selection governance. Customized tools, criteria and methodology were applied to facilitate and uphold the integrity of the decision-making process.

**Results:** By applying this methodical process, Adventist Health was able to drive leadership support as well as facilitate a collaborative decision on a DTC solution to be used corporate-wide.

**Conclusions:** Adventist Health realized that in a large multi-regional integrated delivery network (IDN) a collaborative corporate decision was priority to drive adoption, reduce cost and improve access to care for the Adventist rural community. In order to reach a collaborative decision, a standardized process must be used. Consideration of all internal stakeholders' priorities, consumer needs, service needs and operational needs led to the best decision for the organization as a whole.

## 37. Technology for the Future of Home Health

David Taylor, RN<sup>1</sup> and Chris Otto, SVP<sup>2</sup>

<sup>1</sup>VNA Rockford, <sup>2</sup>MobileHelp Healthcare

**Background:** Home health agencies are in the unique position of providing continued care for patients once they are discharged. But what happens after home health involvement has ended? Patients lack an effective “step-down” solution to aid in the transition from clinical oversight to managing their own health. One HHA is piloting a step-down RPM solution to help patients monitor their own vital signs.

**Methods:** A new RPM system was recently tested in a pilot program by the VNA-Rockford, which believed the solution was the step-down technology it needed to help patients transition from the clinical oversight it provides to managing their own care.

**Results:** VNA patients now have the capability to track and monitor their vital signs – much as they did with the VNA, but without the clinical intervention. In addition, they still have access to emergency services if they need it. Patients have responded positively to the ability to monitor their own data: they have reported a 47 percent increase in confidence levels around managing a chronic condition, and an 18 percent increase in mobility and physical activity. In addition, substantial anecdotal evidence reveals deeper measures of success: numerous patients have identified their vital signs trending negatively, and were able to reach out to their physicians to circumvent a hospital readmission – all on their own.

**Conclusions:** The key to effective management of chronic illness is long-term monitoring. With new technology solutions, this is possible, without the high cost of clinical oversight. And as home health agencies continually look for new ways to position themselves within the landscape of an ever-shifting healthcare industry, the long-term successful patient results reinforce their ability to provide a competitive solution as they work within hospital and ACO networks.

## 38. Certificate Initiative Equips New Mexico Providers with WHO Core Competencies in Adolescent Healthcare and Development

Kevin Werling, BA, Kirsten Bennett, PhD, RD, LD,  
Eleana Shair, Michelle Widener

Envision New Mexico, University of New Mexico – Health Sciences Center

**Background:** New Mexico lacks fellowship-trained adolescent healthcare providers. Envision New Mexico (ENM) pi-

lotted the Adolescent Health Initiative – New Mexico (AHI-NM), a telehealth certificate training to address this critical issue. ENM Telehealth Initiatives connect pediatric subspecialty providers with community and primary care providers, providing up-to-date information on evidence-based guidelines and support with tools and resources to enhance screening, diagnosis, prevention, and management of adolescent medical and behavioral health needs.

**Methods:** ENM adapted the TeleECHO™ model for AHI-NM, providing live and asynchronous online training in adolescent medicine and behavioral health at no cost to providers, including but not limited to providers in NM School-Based Health Centers. During the 2015 – 2016 pilot and 2016 – 2017 continuation, the curriculum maintained emphasis on adolescent reproductive healthcare and comprehensive well care that includes behavioral health care.

Structure includes:

1. Weekly Telehealth sessions covering best-practice care in core areas
2. Participants present an adolescent patient case for consultation
3. Participants complete pre-and post- surveys
4. Participants receive a certificate in adolescent health from UNM Division of Adolescent Medicine and CME/CEUs associated with learning sessions.

**Results:** Participants (Year 1, n=21; Year 2, n=21) completed pre- and post-surveys for 16 areas of knowledge and practice in an adolescent population. Confidence increased in each area with an average increase of 22.58%.

**Conclusions:** A telehealth, web-based learning program addressing competencies for adolescent healthcare facilitated improvements in knowledge, confidence, and communication skills of providers who care for adolescents in NM. By focusing on high-risk areas of adolescent health, the AHI-NM learning model has expanded the general skill set of providers, including communication, Motivational Interviewing, and care coordination. Overall benefits include perceived decreased isolation and increased collaboration among providers. The AHI-NM certificate program for FY18 will continue to focus on comprehensive well care with emphasis on reproductive healthcare, substance abuse, and behavioral healthcare.

## SPECIAL THANKS TO THE FOLLOWING ARIZONA TELEMEDICINE PROGRAM STAFF:

Ellen Dudzik, Kris Erps, Travis Garner, Michael Holcomb, Angel Holtrust, Sarah Joseph, Robert Kerr, Janet Major, Chris Martin, Karen Miller, Nancy Rowe, Tracy Skinner, Phyllis Webster, and Pete Yonsetto



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## SERVICE PROVIDER DIRECTORY

The screenshot shows the website for the Arizona Telemedicine Program's Service Provider Directory. At the top, there is a header with the University of Arizona logo and navigation links. Below the header is a banner image showing a doctor and a patient. The main content area is titled "Service Provider Directory" and features several logos, including the Arizona Telemedicine Program logo, the Southwest Telehealth Resource Center logo, and the Telemedicine SPS logo. A welcome message explains the directory's purpose. Below the welcome message is a search section titled "Search the Directory" with a text input field for "Company Name (or part of)". There are four dropdown menus for filtering results: "Services In" (listing states from Alabama to Delaware), "Tele-services" (listing services like Allergy, Audiology, etc.), "Ancillary Services" (listing services like Continuing education, etc.), and "Customers" (listing organizations like Accountable Care Organizations, etc.).



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