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# SPS 2016 Program



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# **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 to the Regency Ballroom).

Registration/Information Desk hours:

- Tuesday, June 21: 7:00am 6:00 pm
- Wednesday, June 22: 7:00am 3:00pm

# Speaker Registration/ Information Desk

The Speaker Registration/Information Desk is to your right as you enter the Hyatt Foyer (pass the Hyatt front desk). Speakers will receive speaker packets and can upload presentations here. Please have your presentation loaded at least 2 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 registered hotel guests in guest rooms, the Lobby, and the Atrium. Hotel guests can upgrade to Premium Internet, with higher bandwidth and access in meeting rooms, for \$5 per day.

For non-hotel guests, Premium Internet is available for purchase at the hotel front desk for \$14.95 per day.

# Parking

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.

Locals: park in the Regency Garage and get a ticket, then request a 20% discount sticker at the SPS Registration Desk.

# Messages/Lost and Found

The SPS Registration/Information Desk includes a message board and a lost and found.

# **Photos**

Photographs will be taken and are the property of SPS.

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SPS is a national conference focusing on linking telemedicine and telehealth service provider companies with hospitals, healthcare systems, clinics, and others who need their services.

# SPS 2016 HOSTS:

Arizona Telemedicine Program Southwest Telehealth Resource Center Four Corners Telehealth Consortium



# Welcome

On Behalf of the Conference Advisory Board, the Honorary Chairs, the Arizona Telemedicine Program, the Southwest Telehealth Resource Center, and the Four Corners Telehealth Consortium, we are delighted to welcome you to the second national Telemedicine and Telehealth Service Provider Showcase! SPS is the first national meeting focusing exclusively 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 29 speakers that includes nationally and internationally recognized experts on telemedicine; telemedicine providers and users; and authorities on legal, regulatory and policy aspects. The two-day showcase 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, and integrating telehealth into different health-care enterprises.

The Expo Hall has a wide array of tele-medical specialty services and supporting technologies that will provide a forum 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" will highlight exhibitors who will briefly describe their services, markets and thoughts about the state of the market for telehealth service providers.

Health care is changing and telemedicine is leading the way. Service providers offer a new and exciting model for improving the efficient and effective delivery of health care in innovative ways that will truly impact patient care. SPS 2016 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 2016. Their enthusiasm and dedication have been critical in making SPS 2016 a reality.

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

Sincerely, your SPS 2016 Co-chairs,

The C. alverson

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

Eljabet a. Kuipink

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 2016 Leadership

# **HONORARY CHAIR**



Jay H. Sanders, MD, FACP, FACAAI, FATA President and Chief Executive Officer The Global Telemedicine Group

# **HONORARY CHAIR**



### **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

# NATIONAL ADVISORY BOARD

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- Daniel J. Derksen, MD Director, Arizona Center for Rural Health, Mel & Enid Zuckerman College of Public Health, University of Arizona, Tucson, AZ
- Charles R. Doarn, MBA, FATA Editor-in-Chief, Telemedicine and e-Health Journal Family Medicine, University of Cincinnati, Cincinnati, OH
- Joe G.N. "Skip" Garcia, MD Senior Vice President, University of Arizona Health Sciences, Tucson, AZ
- Alexis S. Gilroy, JD
  Partner, Jones Day, Washington, DC

# **CONFERENCE COORDINATORS**

- Kris Erps Associate Director for Administration, Arizona Telemedicine Program, Tucson, AZ
- Nancy Rowe

Associate Director for Outreach, Arizona Telemedicine Program, Tucson, AZ

Telemedicine Telehealth

- Robert A. Greenes, MD, PhD Professor of Biomedical Informatics, College of Health Solutions, Arizona State University, Phoenix, AZ
- James P. Marcin, MD, MPH, FATA Professor, Pediatric Critical Care, UC Davis Children's Hospital, Sacramento, CA
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  President, Mercy Virtual, Chesterfield, MO
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- Marta J. Petersen, MD
  Medical Director, Utah Telehealth Network,
  Salt Lake City, UT
- Ronald K. Poropatich, MD, FATA Executive Director, Center for Military Medicine Research, University of Pittsburgh Medical Center, Pittsburgh, PA
- Lisa A. Robin, MLA Chief Advocacy Officer, Federation of State Medical Boards, Washington, DC
- Jay H. Shore, MD, MPH Director of Telemedicine, University of Colorado Depression Center, Aurora, CO
- Nancy L. Vorhees, RN, MSN Chief Administrative Officer, Inland Northwest Health Services, Spokane, WA



# Hotel Floor Plan

SPS registration is in the first-floor Foyer.

All talks and lightning rounds will be held in Regency Ballroom A/B.

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 Tuesday evening reception will be in the Expo Hall.

Posters and poster presentations also will be in the Expo Hall. Poster presentations are from 12:50 to 1:20 pm Wednesday. Poster abstracts start on p. 28.



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**TUESDAY LUNCH SPONSOR** 



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# SPS Schedule at a Glance

TUESDAY, June 21, 2016			WEDNESDAY, June 22, 2016		
8:00-	Welcome	8:00-	Day 2 Kickoff		
8:15		8:05			
8:15-	Keynote:	8:05-	Lifetime Achievement Award Presentation		
8:55	Remote Monitoring Partnerships:	8:15			
	Opportunities and Barriers	8:15-	Keynote: An Accreditation Process for Direct-		
		8:45	to-Consumer Telehealth Providers		
MODULI	E1/	MODUL	E 3 / FINDING THE PERFECT PARTNER &		
TELEHEA	LTH WINNERS: STRATEGIES THAT WORK	NEGOTI	ATING THE HURDLES		
8:55-	"Hospitals Without Borders": The Command	8:45-	Panel: Safe, Secure and Accepted—Telehealth		
9:25	Center Model of Telemedicine	9:45	Legal and Policy Considerations		
9:25-	Meet the Service Providers Lightning Rounds	9:45-	Meet the Service Providers Lightning Rounds		
9:50		10:05			
9:50-	COFFEE BREAK – Expo hall	10:05-	COFFFF BRFAK – Expo Hall		
10:20		10:35			
		40.05			
10:20-	Panel: How Rural Hospitals are Leveraging	10:35-	Federal Policy Impacts on Healthcare		
11:20	Telemedicine to Survive the Closure Crisis	11:05	Workforce Disparities		
11:20-	Improving Statewide Health Through a Central	11:05-	Telehealth Coverage and Parity Laws: Trends,		
11:50	Telemedicine Program	11:35	Challenges and Opportunities		
11.20-	I UNCH – Expo Hall	11.35-	The Partnering Process: Perspectives from		
1.05		12.05	Both Sides		
		12.05			
MODULI	E 2 / SUCCEEDING AS A SERVICE PROVIDER	12:05-	LUNCH – Expo Hall		
		1:20	12:50-1:20: POSTER PRESENTATIONS – Expo		
			наш		
1:05-	Starting a Telehealth Service Provider Business	MODULE 4 / SUCCESSFULLY INTEGRATING SERVICE			
1:35		PROVID	ERS INTO ORGANIZATIONS		
1:35-	Growing into Partnership: From Startup to	1:20-	Integrating Mental Health into Primary Care		
2:05	Acquisition	1:50			
2:05-	Meet the Service Providers Lightning Rounds	1:50-	Letting People in from the Outside: Enabling		
2:30		2:20	Onsite and Offsite Providers to Work		
			Together Effectively		
2:30-	COFFEE BREAK – Expo Hall	2:20-	COFFEE BREAK – Expo Hall		
3:00		2:50			
3:00-	Expanding Telehealth Services to the Employer	2:50-	Selling Telemedicine to Your Organization:		
3:30	Market	3:20	Best Practices for Clinical Adoption and		
			Measuring Quality		
3:30-	Roundtable: Thriving in Today's Telemedicine	3:20-	Roundtable: Integration Tips and Best		
4:30	Market	4:20	Practices from the Pros		
4.20		4.20	Looking Forward		
4:30-	NETWORKING RECEPTION – EXPO Hall	4:20-	LOOKING FORWARD		
0.00		4:45			

Please note: Any events not listed on this schedule are neither part of, nor sanctioned by, SPS 2016.



# **Detailed Schedule**

Please note that all sessions for this conference will be held in Ballroom A/B.

DAY ONE – TUESDAY, JUNE 21, 2016				
7:00 am – 6:00 pm	SPS Registration and Information Desk Open			
8:00 am –	Welcome and Opening Remarks			
8:15 am	Dale C. Alverson, MD, FATA, FAAP Medical Director, Center for Telehealth University of New Mexico Health Sciences Center 			
8:15 am –	Opening Keynote Address:			
8:55 am	Remote Monitoring Partnerships: Opportunities and Barriers			
	James R. Mault, MD, FACS Vice President and Chief Medical Officer Qualcomm Life San Diego, CA Atul Singh, MS Director, Business Operations and Innovation, Digital Health, Walgreens Deerfield, IL			
MODULE 1	: TELEHEALTH WINNERS—STRATEGIES THAT WORK			
MODERATOR: Jeffrey R. Lisse, MD Medical Director Emeritus, Arizona Telemedicine Program, Tucson, AZ				
8:55 am – 9:25 am	"Hospitals Without Borders": The Command Center Model of Telemedicine			
	Randall S. Moore, MD, MBA President Mercy Virtual Chesterfield, MO			
9:25 am — 9:50 am	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, NMElizabeth A. Krupinski, PhD, FSPIE, FSIIM, FATA Co-Director Southwest Telehealth Resource Center Tucson, AZ			
9:50 am – 10:20 am	EXPO HALL OPEN – Networking & Coffee Break			



10:20 am – 11:20 am	Panel:
	James J. Dickson, BA, MBA    Raymond T. Hino, MPA, FACHE      Chief Executive Officer / Administrator    President and Chief Executive Officer      Copper Queen Community Hospital    Sonoma West Medical Center      Bisbee, AZ    Sebastopol, CA
	Mary Ellen Pratt, MHA, FACHE Chief Executive Officer St. James Parish Hospital Lutcher, LA
11:20 am – 11:50 am	Improving Statewide Health Through a Central Telemedicine Program
	Kristi Henderson, DNP Vice President for Telehealth & Innovation Seton Healthcare Family Austin, TX
11:50 am – 1:05 pm	EXPO HALL OPEN – Networking Lunch <i>sponsored by RealTime Clinic</i>
MODULE 2	2: SUCCEEDING AS A SERVICE PROVIDER
SECT Mar Senio	TION MODERATOR: k M. Tomaino, MBA, JD or Industry Executive, Welsh, Carson, Andersen & Stowe, New York, NY
1:05 pm – 1:35 pm	Starting a Telehealth Service Provider Business
1.55 pm	Steven Lee, OD Co-Founder / Chief Science Officer Opternative Chicago, IL
1:35 pm –	Growing into Partnership: From Startup to Acquisition
2.03 μπ	Samir Malik, MBA Senior Vice President / General Manager Genoa Telepsychiatry New York, NY
2:05 pm – 2:30 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, NMElizabeth A. Krupinski, PhD, FSPIE, FSIIM, FATA Co-Director Southwest Telehealth Resource Center Tucson, AZ
2:30 pm – 3:00 pm	EXPO HALL OPEN – Networking & Coffee Break



### MODULE 2: SUCCEEDING AS A SERVICE PROVIDER (Continued) **SECTION MODERATOR:** Alexis S. Gilroy, JD Partner, Jones Day, Washington, DC 3:00 pm -Expanding Telehealth Services to the Employer Market 3:30 pm lan Tong, MD **Chief Medical Officer Doctor On Demand** Palo Alto, CA 3:30 pm -**Roundtable:** 4:30 pm Thriving in Today's Telemedicine Market Richard S. Bakalar, MD Managing Director, Advisory Services in Healthcare Solutions, Specialist in Virtual Care Global Center of Excellence for Health KPMG, LLP Denver, CO **Grant Chamberlain** Mark M. Tomaino, MBA, JD Managing Director, Healthcare Senior Industry Executive **Investment Banking** Welsh, Carson, Andersen & Stowe Ziegler New York, NY Chicago, IL 4:30 pm -**EXPO HALL OPEN – NETWORKING RECEPTION sponsored by GlobalMed** 6:00 pm

Please fill out the presenter evaluation forms included with your conference packet and drop them off at the SPS registration desk. Or go to <u>https://www.surveymonkey.com/r/SPS2016-Conference-Eval</u> to evaluate presenters online. Thank you.





DAY TWO – WEDNESDAY, JUNE 22, 2016				
7:00 am – 3:10 pm	SPS Registration and Information Desk	Open		
8:00 am –	Day 2 Kickoff			
8:05 am	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		
8:05 am –	Lifetime Achievement Award Presenta	tion:		
8:15 am	Jonathan Linkous, MPA, CEO, American Telemedicine Association			
	Past Presidents of the American Telemedicine As	sociation:		
	Dale C. Alverson, MD, FATA, FAAP Richard S. Bakalar, MD Elizabeth A. Krupinski, PhD, FSPIE, FSIIM, FATA	Jay H. Sanders, MD, FACP, FACAAI, FATA Ronald S. Weinstein, MD, FCAP, FATA		
8:15 am –	Keynote:			
8:45 am	An Accreditation Process for Direct-to-Consumer Telehealth Providers			
	Jonathan Linkous, MPA Chief Executive Officer American Telemedicine Association Washington, DC			
MODULE 3	8: FINDING THE PERFECT PARTNER AND	NEGOTIATING THE HURDLES		
SECT Jona Chief	TION MODERATOR: than Linkous, MPA Executive Officer, American Telemedicine Association, N	Vashington, DC		
8:45 am –	Panel: Safe, Secure and Accepted—Telehealth Legal and Policy Considerations			
9:45 am	Alexis S. Gilroy, JD Partner Jones Day Washington, DC	Mario Gutierrez, MPH Executive Director Center for Connected Health Policy Sacramento, CA		
	Kofi Jones Vice President of Government Affairs American Well Boston, MA			
9:45 am —	Lightning Rounds: Meet the Service Providers and Tech Companies			
10:05 am	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		
10:05 am — 10:35 am	EXPO HALL OPEN – Networking & Coffe	ee Break		



# MODULE 3: FINDING THE PERFECT PARTNER AND NEGOTIATING THE HURDLES (Cont.)

SECT Rich Mana Healt	TION MODERATOR: ard S. Bakalar, MD aging Director, Advisory Services in Healthcare Solutions, Specialist in Virtual Care, Global Center of Excellence for th, KPMG, LLP, Denver, CO		
10:35 am –	Federal Policy Impacts on Healthcare Workforce Disparities		
11:05 am	Daniel J. Derksen, MD Director Arizona Center for Rural Health The University of Arizona Mel & Enid Zuckerman College of Public Health Tucson, AZ		
11:05 am –	Telehealth Coverage and Parity Laws: Trends, Challenges and Opportunities		
11:35 am	Nathaniel Lacktman, JD      Partner      Foley & Lardner, LLP      Tampa, FL		
11:35 am –	The Partnering Process: Perspectives from Both Sides		
12:05 pm	Irene Krokos, MD Senior Medical Director Molina Healthcare, Inc. Herndon, VALeigh Ann Ruggles Executive Vice President of Sales and Client Success MDLIVE Baltimore, MD		
12:05 pm – 1:20 pm	EXPO HALL OPEN – Networking Lunch		
12:50 pm – 1:20 pm	Poster Presentations		
MODULE 4	: SUCCESSFULLY INTEGRATING SERVICE PROVIDERS INTO ORGANIZATIONS		
SECTION MODERATOR: Dale C. Alverson, MD, FATA, FAAP Medical Director, Center for Telehealth, University of New Mexico Health Sciences Center, Albuquerque, NM			
1:20 pm –	Integrating Mental Health into Primary Care		
1:50 pm	Barb Johnston, MSN, MLM Chief Executive Officer and Co-Founder HealthLinkNow Sacramento, CA		
1:50 pm –	Letting People in from the Outside:		
2:20 pm	Enabling Onsite and Offsite Providers to Work Together Effectively		
	<b>Gigi Sorenson, RN, MSN</b> System Director of Telehealth and Community Connected Care Northern Arizona Healthcare Flagstaff, AZ		



2:20 pm – 2:50 pm	EXPO HALL OPEN – Networking & Coffee Break				
SECT Eliza Co-D	SECTION MODERATOR: Elizabeth A. Krupinski, PhD, FSPIE, FSIIM, FATA Co-Director, Southwest Telehealth Resource Center, Tucson, AZ				
2:50 pm – 3:20 pm	Selling Telemedicine to Your Organization: Best Practices for Clinical Adoption and Measuring Quality				
	Alan Pitt, MD Chief Medical Officer, Avizia Professor of Neuroradiology, Barrow Neurological Institute Phoenix, AZ				
3:20 pm –	Roundtable:				
4:20 pm	Integration Tips and Best Practices from the Pros				
	B. Tilman Jolly, MD, FACEPIsabelle C. Kopec, MDChief Medical OfficerVice President of Medical AffairsSpecialists On CallAdvanced ICU CareReston, VASt. Louis, MO				
	Tarik Shaheen, MD      Child Psychiatrist and Founder      Iris Telehealth      Charlottesville, VA				
4:20 pm –	Looking Forward				
4.43 pm	Ronald S. Weinstein, MD, FCAP, FATA Director, Arizona Telemedicine Program Director, Southwest Telehealth Resource Center Tucson, AZ				
Please fill out t	he presenter evaluation forms included with your conference packet and drop them off at the SPS registration				





# Speaker and Moderator Biography Excerpts

# Dale C. Alverson, MD, FATA, FAAP



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

Dale Alverson, MD, is Professor Emeritus and Regents' Professor at the University of New Mexico, where he is the Medical Director of the Center for Telehealth. He is involved in the planning, implementation, research and

evaluation of Telemedicine systems for New Mexico, as well as nationally and internationally. He also is the Chief Medical Information Officer at LCF Research and the New Mexico Health Information Collaborative. He is a Past President of the American Telemedicine Association.

### **Richard S. Bakalar, MD**



### Managing Director, Advisory Services in Healthcare Solutions Specialist in Virtual Care Global Center of Excellence for Health KPMG, LLP

Richard S. Bakalar, MD, has an active medical license in Maryland with board certification in Internal Medicine and Nuclear Medicine and over 30 years of clinical, health informatics and execu-

tive leadership experience. A US physician consultant for the Global Healthcare Center of Excellence at KPMG, LLP, he advises clients in health care, telecommunications, retail health, and medical devices, as well as on leading telehealth practices, market readiness, shared services, innovative data analytics, and consumer engagement solutions. He is a past President of the American Telemedicine Association and an active member of the *Telemedicine and eHealth* journal editorial review board. As the Navy Surgeon General's first Special Assistant for Telemedicine, he established the Navy's operational Global Telemedicine Network, supporting digital radiology and 12 medical specialties on 28 Navy ships, 3 Navy medical centers and 23 hospitals and clinics worldwide between 1995 and 2002.

# **Grant Chamberlain**



#### Managing Director, Healthcare Investment Banking Ziegler

Grant Chamberlain joined Ziegler in 2015 as a managing director in the Corporate Finance Healthcare Practice. With more than 20 years of investment banking experience, he has advised some of the leading health-care systems, including Sharp Healthcare,

Cedars-Sinai, and Baylor Health, along with several of the most innovative mHealth companies, such as AirStrip, MDLIVE, and Voalte. Prior to Ziegler, he led the mHealth sector coverage at Raymond James—which included telehealth, remote monitoring and wireless health-care solutions—after spending 15 years advising health-care information technology and tech-enabled outsource services companies on a broad variety of mergers and acquisitions, joint venture/ partnerships and private financings. He was a principal at Shattuck Hammond Partners prior to its acquisition by Morgan Keegan and was a part of the corporate finance group of General Electric Capital Corporation and the financial services division of GE Medical Systems.

# Daniel J. Derksen, MD



### Director, Arizona Center for Rural Health Mel and Enid Zuckerman College of Public Health, University of Arizona

Daniel J. Derksen, MD, is the Walter H. Pearce Endowed Chair and Director of the Center for Rural Health, as well as Professor and Chair of the Community, Environment and Policy Department at the University of Arizona Mel and Enid

Zuckerman College of Public Health. He oversees the State Office of Rural Health and Rural Hospital Flexibility Programs. He completed an RWJ Health Policy Fellowship in 2007-08 with US Senator Jeff Bingaman. He researched and drafted provisions to improve the supply and distribution of the nation's health workforce included in Title V of the Affordable Care Act. While working for Governor Susana Martinez (R-NM), he established New Mexico's health insurance marketplace. As principal investigator of state, federal, and private foundation grants in excess of \$50 million over his career, he works to improve health insurance coverage and access to high quality health care, emphasizing community-based service-learning models in rural areas.



# James J. Dickson, BA, MBA



### CEO / Administrator Copper Queen Community Hospital

James J. Dickson is the Chief Executive Officer of Copper Queen Community Hospital (CQCH), 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. He has led

hospitals and physician groups in Illinois, Ohio, New York and California and has spent the past 20 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. He 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 twice has been named the Outstanding Rural Health Professional by the Arizona Rural Health Association. He has served as a member of the Arizona Hospital Association Board of Directors and is a past President of the Arizona Rural Health Care Association.



# Alexis S. Gilroy, JD

# Mario Gutierrez, MPH



#### Executive Director Center for Connected Health Policy

Mario Gutierrez, who joined the Center for Connected Health Policy (CCHP) in May 2010 as a senior policy associate, brings more than 30 years of experience in California's non-profit health and health philanthropy sectors. Prior to joining CCHP, he served as a program director with

The California Endowment for 12 years, where he led several major health-care initiatives, including its 10-year, \$20 million investment in telehealth deployment throughout California. He also served as The Endowment's lead for Rural and Agricultural Worker Health Programs and Policy. Previously, he served for six years as a senior program officer with The Sierra Health Foundation. He serves on the Board of Directors of OCHIN, one of the nation's largest and most successful non-profit health information networks, and is Chairman of the Rural Policy Research Institute's Rural Human Services Advisory Panel.

### Kristi Henderson, DNP



#### Vice President for Telehealth & Innovation Seton Healthcare Family

Kristi Henderson is the Vice President for Telehealth & Innovation at Seton Healthcare Family in Austin, Texas. In her prior role as Chief Telehealth & Innovation Officer for the University of Mississippi Medical Center (UMMC), she led the development of a state-

wide telehealth program that is recognized as a national model. As a leader in healthcare innovation, she has testified before the U.S. Senate Committee on Commerce, Science and Transportation's Subcommittee on Advancing Telehealth through Connectivity, as well as the Subcommittee on Rural Health and the White House Domestic Policy Council. She has made numerous presentations across the country to advance telehealth policy and practice, including a TEDx talk in 2014 and a panel discussion at Austin's SXSW in March 2016. She serves as a board member of the American Telemedicine Association, executive director of the Mississippi Telehealth Information Network. She is a Fellow with the Emergency Nurses Association and maintains national certification as a family and acute care nurse practitioner.



# 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 health-care and technology companies, including telemedicine, mobile device, EHR, practice management, cyberknife, imaging centers, and teleradiology. In addition, she advises on business strategy and implementation matters, counsels on regulations, develops and negotiates contracts, structures research arrangements, and leads strategy and communications with medical boards and other regulators and policy makers on digital health topics. She is on the Board of Directors of the American Telemedicine Association, is an appointee to the Maryland Governor's Telemedicine Taskforce, is a subject matter expert for the Federation of State Medical Boards' State Medical Boards Appropriate Regulation of Telemedicine (SMART) Workgroup on Telemedicine, and leads the American Health Lawyer Association's E-Health and Telemedicine Affinity Group.

# Raymond T. Hino, MPA, FACHE



### President and Chief Executive Officer Sonoma West Medical Center

Raymond Hino is President and CEO of Sonoma West Medical Center, a 25-bed community hospital located in Sebastopol, California. In October 2015, he and his team successfully re-opened the former Palm Drive Hospital, which closed its doors in 2014, under the new name of Sonoma

West Medical Center—one of the few known hospitals in the U.S. in the last several decades to close its doors and then reopen. He is nationally known as a forward-thinking leader in the health-care field, with experience in health-care policy at the state and federal levels, health information technology, telemedicine, and rural health-care delivery. He serves on the Health Research & Education Trust Board of Directors and is a past member of the Boards of Directors of the American Hospital Association and the California Hospital Association. He was the Founding Chair of the California Critical Access Hospital Network. In 2014 he was named by Becker's Hospital Review to its inaugural list of "50 Rural Hospital CEOs to Know."

# Barb Johnston, MSN, MLM



#### Chief Executive Officer and Co-Founder HealthLinkNow

Barb Johnston, CEO of HealthLinkNow, has more than 20 years of experience implementing Telemedicine programs. HealthLinkNow was the first Telepsychiatry Company to fully integrate secure videoconferencing, a patient portal, scheduling, billing, and an elec-

tronic health record into one seamless telemedicine system. She was the Project Director for the Patient-Centered Medical Home Mental Health Program, funded by the Centers for Medicare & Medicaid Services between 2012 and 2015, which integrated telepsychiatry services into more than 80 primary care clinics across Montana, Wyoming, and Washington State. She has experience in the business, legal, clinical, and policy aspects of the telemedicine service industry. She is a former Executive Director of the Medical Board of California and is a past Board Member of the American Telemedicine Association (ATA). Under her leadership, HealthLinkNow became one of the first two Telemedicine companies to become accredited by the ATA in 2015.

# B. Tilman Jolly, MD, FACEP



### Chief Medical Officer Specialists On Call

B. Tilman "Til" Jolly, MD, is a boardcertified emergency physician who serves as Chief Medical Officer of Specialists On Call, a large national provider of specialty tele-medicine services. He has practiced emergency medicine in the Washington, DC, area for 21 years and continues to practice

at Inova Fairfax Hospital. He 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 Specialists On Call, he served for five years in senior leadership positions in the U.S. Department of Homeland Security, and also led medical preparedness planning for 11 Super Bowls.

### **Kofi Jones**



### Vice President of Government Affairs American Well

Kofi Jones is the Vice President of Government Affairs for American Well, a national mobile and webbased telehealth solution provider based in Boston, Massachusetts. She focuses most of her efforts evangelizing on the power of telehealth and

collaborating with federal, state, and congressional leaders to ensure the proliferation of modernized and safe telehealth policies. Prior to joining American Well, she spent four and a half years working for the Deval Patrick Administration first as a Public Affairs Director and spokeswoman for the Governor's Economic Development Secretary, and then as the state's first Chief Marketing Officer. She also has spent several years as a communications and media expert, including a decade in television news as a producer, reporter, and anchor.



# Isabelle C. Kopec, MD



### Vice President of Medical Affairs Advanced ICU Care

As Vice President of Medical Affairs, Isabelle C. Kopec, MD, oversees Advanced ICU Care's clinical outcomes, physician and allied health providers' performance, and services. She is deeply involved in client collaboration, where she oversees process improvement initiatives and acts as a liaison

between the physicians at client hospitals and the intensivists at Advanced ICU Care. A co-founder of Advanced ICU Care, she also is a practicing intensivist and the lead intensivist physician for Advanced ICU Care's Consulting Services. She served as Medical Director of the ICU at Roswell Park Cancer Institute, was Chair of the Department of Critical Care Medicine at SSM-DePaul Health Center in St. Louis for more than 15 years, and chaired the Society of Critical Care Medicine's Tele-ICU Committee. She an active member of Mid-America Transplant Services Physician Advisory Board, Society of Critical Care Medicine, American Association for Physician Leadership, American College of Chest Physicians, and American College of Physicians.

# Irene Krokos, MD



### Senior Medical Director Molina Healthcare, Inc.

Irene Krokos, MD, focuses on health system transformation and improvement, with particular interest in patient-centered quality improvement initiatives, payment reform, and the use of technology to help solve health system challenges. She is Senior Medical Director at Molina Healthcare,

where she provides leadership for telehealth initiatives. Previously, as Chief Medical Officer for Molina Healthcare of New Mexico, she implemented a state-wide Community Health Worker intervention and Patient-Centered Medical Home program that were both expanded nationally.

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



#### Co-Director Southwest Telehealth Resource Center

Elizabeth A. Krupinski is a Professor at Emory University in the Department of Radiology & Imaging Sciences and is Vice-Chair of Research. She also is Associate Director of Evaluation for the Arizona Telemedicine Program and Co-Director of the Southwest Tele-

health Resource Center. 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 & Telecare*. 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.

### Nathaniel Lacktman, JD



#### Partner Foley & Lardner, LLP

Nathaniel Lacktman is a partner with the law firm of Foley & Lardner and heads its telemedicine and virtual care practice, working with hospitals, health systems, and start-ups to build telemedicine arrangements across the United States and internationally. His practice emphasizes strategic counsel-

ing, creative business modeling, and fresh approaches to realize clients' ambitious and innovative goals. He is the chief legal counsel to the Telehealth Association of Florida and co-Chairs the Telemedicine and EHealth Group of the American Health Lawyers Association. Mr. Lacktman speaks and writes frequently on issues at the forefront of telehealth thought leadership, appearing in publications such as *Inside Counsel*, *Buzzfeed*, *Politico*, *Modern Healthcare*, *Forbes*, *Fox News*, *Bloomberg*, and *Reuters*. He maintains the leading telehealth law twitter feed (@Lacktman).



# Steven Lee, OD



### Co-Founder / Chief Science Officer Opternative

In addition to his formal training in eye care, Steven Lee, MD, has a background in engineering, as well as a keen interest in optics. Before starting Opternative, he was in clinical practice from 2007 to 2013. During that time, he focused on the areas of difficult contact lens fittings, ocular disease

treatment, and dry eye management. In addition to seeing patients in the past, he has taught ophthalmology students the basics of clinical refraction and the systematic approach to contact lens fittings. He has managed numerous surgical cases and was previously a reviewer for the Council on Optometric Practitioner Education, as well as a researcher and clinical investigator for the Global Revitalens Experience and Acceptance Trial. He recently gave a TEDx talk outlining his journey to make vision care accessible to the entire world. Dr. Lee loves thinking outside of the box, and enjoys creating solutions to problems that people never thought possible to solve.

### Jonathan Linkous, MPA



# American Telemedicine Association

**Chief Executive Officer** 

Jonathan Linkous is the Chief Executive Officer of the American Telemedicine Association (ATA)—the leading international resource and advocate promoting the use of advanced remote medical technologies. As the chief staff executive of ATA since its inception in 1993, he has lectured and written ex-

tensively on healthcare modernization, technology issues, emerging applications and market trends in the U.S. and around the world. The national and international advisory bodies on which he has served include: the Hurricane Katrina Advisory Panel, the HHS Chronic Care Workgroup and the joint FCC-NTIA Advisory Committee on Communications Capabilities of Emergency Medical and Public Health Care Facilities. He has 30 years of experience in public policy related to healthcare, telecommunications and aging in both the corporate and public sectors. He has served as a senior telecommunications consultant at Issue Dynamics, as the Executive Director of the National Association of Area Agencies on Aging, and as a senior executive with the National Association of Regional Councils and the Appalachian Regional Commission.

# Jeffrey R. Lisse, MD



#### Medical Director Emeritus Arizona Telemedicine Program

A Medical Fellow at Eli Lilly and Company, Jeffrey R. Lisse, MD, is recently retired as Professor of Medicine in the University of Arizona (UA) College of Medicine, Medical Director for the UA Arthritis Center's Osteoporosis Program, and Medical Director of the Arizona Telemedicine Program. He

joined the UA College of Medicine in 2000 as the Ethel McChesney Bilby Endowed Chair for Osteoporosis. He served as chief of the UA Division of Rheumatology from 2004 to 2013 and was interim director of the UA Arthritis Center from 2005 to 2008. Before joining the University of Arizona, Dr. Lisse spent 17 years at the University of Texas Medical Branch in Galveston, serving as a Professor of Medicine and Chief of the Division of Rheumatology, a consultant in the Department of Pathology, and Medical Director of the Immuno-diagnostic Laboratory. Prior to these appointments, he was a staff associate at the National Institutes of Health Southwest Studies Field Section in Phoenix, Arizona, and an internal medicine consultant for the Phoenix and Sacaton Indian Health Service Hospitals. He has served on the boards of directors of the Arizona Osteoporosis Coalition, the Southwest Osteoporosis Council and the Center for Physical Activity and Nutrition and is past president of the Arizona Osteoporosis Coalition.

### Samir Malik, MBA



#### Senior Vice President / General Manager Genoa Telepsychiatry

Samir Malik joined Genoa, a QoL Healthcare Company, in 2015 as Senior Vice President/General Manager of Genoa's telepsychiatry division. He is responsible for developing and executing the expansion of psychiatry services both within and outside of the

clinics that Genoa serves today. Previously, he was Cofounder and CEO of 1DocWay, a New York City-based telepsychiatry company, which expanded access to mental health care in rural America, treating 25,000 patients before being acquired by Genoa in November 2015. Prior to 1DocWay, he was President of Signature Healthcare and CEO of ZipCare Transportation, two health care companies he started. He served as Director of Strategic Planning at CenterPointe Hospital in St Louis, Missouri, where he designed and built a new model for outpatient mental health programs across three states. He began his career with McKinsey & Co. as a McKinsey Hospital Institute Fellow and Business Analyst, focusing on strategic and operational initiatives for large organizations both inside and outside healthcare.



# James R. Mault, MD, FACS



### Vice President and Chief Medical Officer Qualcomm Life

James R. Mault, MD, is the Vice President and Chief Medical Officer of Qualcomm Life as a result of its 2013 acquisition of HealthyCircles, a care coordination and remote patient moni-

coordination and remote patient mor toring software platform company founded and led by Dr. Mault since

2009. Prior to starting HealthyCircles, he was the Director of New Products and Business Development for the Health Solutions Group at Microsoft. He has more than 30 years of experience in senior executive positions in the health IT and medical device industry as well as in clinical medicine. He founded five Health IT and medical device companies and is the named inventor of more than 80 issued and pending US patents for a variety of novel health information and medical device innovations. He has been board-certified in both general surgery and cardiothoracic surgery, having specialized in heart and lung transplantation, thoracic oncology, and critical care. He has conducted academic medical research under numerous grant awards from the National Institutes of Health, American Cancer Society, and others and has authored more than 60 scientific articles, chapters and books in the published medical literature.

### Randall S. Moore, MD, MBA



### President Mercy Virtual

Randall S. Moore, MD, President of Mercy Virtual, and his team are pioneering a new model of care using the power and potential of telemedicine to expand access and improve outcomes while reducing costs. His experience includes more than 30 years as both an

academic clinical physician and a business executive. Before joining Mercy, Dr. Moore focused on the development and implementation of transformational health-care models through his consulting firm. Working in major health-care systems such as Intermountain Health, Ascension Health and Presence Health, his work focused on evolving from traditional fee for service to optimizing the value of population health. He served as CEO of American Telecare, which developed innovative solutions to enable health care teams to extend care beyond the walls of the hospital and clinic environment. Previously, he served on the board of an 800,000-member, managed Medicaid/Medicare health plan, and was Chairman of the Compensation and Medicare Quality Committees.

### Alan Pitt, MD



### Chief Medical Officer, Avizia Professor of Neuroradiology, Barrow Neurological Institute

Alan Pitt, MD, is a Professor at the Barrow Neurological Institute and, since 2014, Chief Medical Officer of Avizia, a global provider of telehealth services. Over the past two decades, he has worked at the nexus of computers and medicine, looking for better ways to

stitch together our fragmented care system. He passionately believes that by putting the patient in front of the right person, fear and anxiety can be replaced by reassurance. Dr. Pitt was the health-care representative to the Digital Arizona Council, a group organized by the State of Arizona's Chief Information Officer. He is an Adjunct Professor for the Arizona State University College of Nursing and Health Innovation and the University of Arizona College of Medicine/Phoenix. In 2011 he was awarded a \$100,000 innovation grant from Dignity Health for (Mi)hospital, a novel cloud-based system for patient engagement.

# Mary Ellen Pratt, MHA, FACHE



### Chief Executive Officer St. James Parish Hospital

As the Chief Executive Officer at St. James Parish Hospital, Mary Ellen Pratt received the Quorum Health Resources (QHR) CEO Award for Most Increased Admissions (2009) and the QHR CEO Award for Best Performing Critical Access Hospital (2010). In 2012 she received the Community

Leader Award from the River Parishes Chamber of Commerce. She has served as Administrator of University Hospital and Clinics-Holmes County, owned by the University of Mississippi Medical Center; as Assistant Administrator at Thibodaux Regional Medical Center in Thibodaux, Louisiana; and as Assistant Administrator at Tulane University Hospital and Clinic. She is Chair of the American Hospital Association (AHA) Small and Rural Hospital Governing Council, a Board member for the Louisiana Rural Health Association, a member of the Office of Rural Health Policy Rural Health Issues Group and a Fellow of both the American College of Healthcare Executives and the National Rural Health Association (NRHA). She has participated in various state and national taskforces appointed by the Louisiana Hospital Association, AHA, NRHA, and the Office of Rural Health Policy.



# Leigh Ann Ruggles



### Executive Vice President of Sales and Client Success MDLIVE

Leigh Ann Ruggles serves as Executive Vice President, Sales and Client Success for MDLIVE, where she brings 20 years of experience in health care and technology firms across business development, account management, marketing, and product strategy roles.

Prior to MDLIVE, she was Director of Strategy and Business Development for Verizon's Mobile Health Division, where she led the sales, account management, and marketing teams for Verizon's mobile health products. She also served as Director of Business Development for Healthways, a population health management company, where she held several roles, including new sales and channel sales management with health plans, employers, and health systems. Prior to Healthways, she led the Marketing Division for Managed Objects (now Novell), where she directed the team responsible for global and domestic marketing and communications. She also has held leadership roles in non-profit and publicprivate organizations.

# Jay H. Sanders, MD, FACP, FACAAI, FATA



### President and Chief Executive Officer The Global Telemedicine Group

Jay H. Sanders, MD, is the CEO of The Global Telemedicine Group, Professor of Medicine (Adjunct) at Johns Hopkins School of Medicine, and a Founding Board Member and President Emeritus of the American Telemedicine Association. Known to many as the "Father of Telemedicine," he developed the first

Statewide telemedicine system; the first Correctional telemedicine program; the first tele-homecare technology, called "The Electronic House Call"; and the first telemedicine kiosk. His consulting activities have included NASA, DOD, HHS, the FCC, state governments, WHO, and multiple academic institutions and Fortune 500 companies. He served as the sole civilian representative on the DOD Telemedicine Board of Directors with the Surgeons General of the Army, Navy, and Air Force. During the Clinton Administration, he represented the USA to the G8 nations for telemedicine and was appointed by former HHS Secretary Leavitt to the Chronic Care Workgroup Committee.

# Tarik Shaheen, MD



### Child Psychiatrist and Founder Iris Telehealth

Tarik Shaheen, MD, is a board-certified psychiatrist with specialized fellowship training in treating children, adolescents and their families. He founded Iris Telehealth with the goal of providing a more patient-friendly telehealth company that is able to quickly adapt to an organization's needs. With more

than five years of experience and training at the University of Virginia in telepsychiatry, he has learned the ins and outs of how to give great care via telemedicine and how important building relationships between partners is to delivering that care. Leading Iris Telehealth, he is able to enjoy his clinical role just as much as his administrative one.

# Atul Singh, MS



### Director, Business Operations & Innovation, Digital Health Walgreens

Atul Singh is a digital health and marketing leader in the health-care industry. He is passionate about creating innovative digital products and services that offer differentiated user experience, drive customer engagement, and improve health

outcomes. At Walgreens, he leads a team of digital health experts delivering high quality customer experience for the digital pharmacy, telehealth, and remote patient monitoring programs. Prior to joining Walgreens, he worked at leading pharmaceutical companies such as Abbvie, Sanofi and Teva, on teams responsible for launching some of the blockbuster drugs for auto-immune disorders, such as Humira and Copaxone.





# Gigi Sorenson, RN, MSN



### System Director of Telehealth & Community Connected Care Northern Arizona Healthcare

Gigi Sorenson is System Director of Telehealth & Community Connected Care for Northern Arizona Healthcare (NAH). She is responsible for the inception of the program, strategic planning, and global operational responsibilities, with NAH acting as both hub and spoke site. She

has developed programs in remote monitoring, pre-hospital, outpatient and inpatient care delivery models, and transitions planning using connected care programs. She is actively involved in the American Telemedicine Association as immediate past Chair of the Business and Finance Special Interest Group and is a member of the Arizona Telemedicine Council.

# Mark M. Tomaino, MBA, JD



### Senior Industry Executive Welsh, Carson, Andersen & Stowe

Mark Tomaino is a Senior Industry Executive at the private equity firm of Welsh, Carson, Anderson & Stowe, where his focus is exclusively on health-care technology investment opportunities, including deal generation, due diligence, execution, and portfolio company monitoring. He has served on

the boards of directors of Matrix Medical Network and GetWellNetwork, and is on the strategic advisory boards of Wiser Together, Seamless Medical, Conversa Health, AMC Health, Viimed, and NextHealth Technologies. He established the "Healthcare IT Knowledge Network" website as a vehicle to share insights relevant to collaboration in the health-care technology industry. Previously, he was Senior Vice President, Corporate Development and Mergers and Acquisitions at The TriZetto Group, where he initiated the \$1.4 billion go-private transaction with Apax Partners in August 2008. Prior to joining TriZetto, he worked at Bausch & Lomb in a variety of legal, strategic, and business development capacities.

# lan Tong, MD



### Chief Medical Officer Doctor On Demand

Ian Tong, MD, is Chief Medical Officer of Doctor On Demand. He has spent his entire career working to improve access to high quality care and has continued this work at Doctor On Demand. He is a Clinical Assistant Professor (Affiliated) at Stanford University Medical School. Prior to joining Doctor On

Demand, he held multiple medical leadership roles, including Stanford Internal Medicine Chief Resident; Founder and Medical Director of The Health Resource Initiative for Veterans Everywhere (THRIVE), which was honored in 2008 with the VA Secretary's Award for Outstanding Achievement in Service to Homeless Veterans; and Co-Medical Director of the Arbor Free Clinic. He is board-certified in Internal Medicine.

# Ronald S. Weinstein, MD, FCAP, FATA



### Arizona Telemedicine Program 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.

Full speaker and moderator bios are online at ttspsworld.com/speakers.

# **SPS Exhibitors**

- Acute Care Telemedicine Table 1
- Advocate Health Care Table 2
- Alkermes
  Booth 20
- AMD Global Telemedicine Booth 23 (with Polycom)
- American Well Booth 18
- Asociación Iberoamericana de Telesalud y Telemedicina (AITT) *Table 5*
- ASU Department of Biomedical Informatics Table 6
- Avedis, LLC Table 7
- Avera eCARE Table 4
- Avizia Booth 35
- Avtex Booth 9
- Banner Health Booth 11
- Carenection Booth 12
- Cloud DX Table 3
- Computerized Screening, Inc. (CSI) Booth 27
- eVisit Booth 13
- EyePACS Booth 6
- ForaCare Booth 21
- GlobalMed Booth 14

- Go Telecare Booth 7
- Honeywell Life Care Solutions Booth 33
- InTouch Health Booth 30
- Iris Telehealth Booth 22
- Iron Bow Healthcare Solutions Booth 26
- JEDMED Booth 25
- JSA Health Telepsychiatry Booth 4
- MD24 House Call Booth 28
- MedApp S.A. Booth 31
- MLS Telehealth Booth 5
- Philips Enterprise Telehealth Booth 19

- PipelineRx Booth 34
- Polycom Booth 23 (with AMD Global Telemedicine)
- SnapMD Booth 29
- Southwest Telehealth Resource Center Booth 32
- Specialists On Call Booth 15
- Stratus Booths 16 and 17
- Telemedicine Magazine Table 8
- Verizon Wireless Booth 3
- Yorktel Booth 10
- Zoom Booth 24



**SPS Expo Hall - Second Floor Atrium** 



# **Exhibitor Descriptions**

	AcuteCare Telemedicine (ACT) is the leading practice-based provider of Telemedicine services for hospitals seeking around-the-clock stroke and other urgent neurological care.		
	www.acutecaretelemed.com	@AcuteCareTele	Table 1
Advocate Health Care	Advocate's eICU currently provides tele its 15 ICUs and for other organizations o cian and nurse coverage.	-ICU services to almost 400 ICU be outside of Advocate. We provide 2	:ds both within 4/7/365 physi-
	www.advocatehealth.com	@advocatehealth	Table 2
Alkermes"	Alkermes applies its scientific expertise tive medicine designed to help patients their disease.	and technological know-how to de with serious, chronic conditions b	evelop innova- etter manage
ratient inspired	www.alkermes.com/		Booth 20
Giobal Telemedicine	AMD Global Telemedicine, Inc. is the least ter Management Solutions (TEMS)® to contries.	ading developer of clinical Teleme over 8,700 patient end-points in m	dicine Encoun- ore than 98
	www.amdtelemedicine.com/	@AMDTelemedicine	Booth 23
American Well®	American Well is a telehealth services c and workplaces of patients. American V retailers and employers to deploy teleh up, provider network design and operat	company that brings healthcare int Vell partners with health plans, de ealth services, including solution d tions, and marketing services.	o the homes livery networks, lesign and set-
	www.americanwell.com/	@AmericanWell	Booth 18
	The Asociación Iberoamericana de Teles Association of Telehealth and Telemedi nates programs and activities in telehea America, Spain and Portugal.	salud y Telemedicina (AITT), or Lat cine, is a nonprofit that promotes alth and telemedicine among coun	in American and coordi- tries of Latin
	teleiberoamerica.com/	@AITTtelesalud	Table 5
College of Health Solutions	The Department of Biomedical Informatic researchers, clinical practitioners, and ment of research and education in the s	tics upholds a strong partnership a d regional health care providers in science and practice of biomedical	imong academ- the advance- informatics.
Department of Biomedical Informatics	chs.asu.edu/programs/schools/departr	ment-biomedical-informatics @b	omiasu Table 6
We Get II Done	Avedis is a growing technical services of mation Technology, Operations and Ma Management solutions.	rganization that provides Engineer aintenance, Integrated Logistics and	ing, Infor- d Program
•	www.avedisllc.com/		Table 7
Avera <i>e</i> CARE <sup>™</sup>	Avera eCARE supports your clinicians w 24/7/365 to assist in care delivery. We l munity so you can treat more patients i	ith a telemedicine team of experts help you bring advanced medicine in place.	, ready to your com-

www.averaecare.org/ecare/

@AveraHealth

Table 4



Avizia	Avizia offers the only end-to-end telehealth platfo software with industry-leading video devices and solutions to more than 400 hospitals and clinics a	orm that integrates care or mobile apps. Avizia delive round the world.	pordination frs telehealth
	www.avizia.com/	@AviziaHealth	Booth 35
avtex	Avtex is an end-to-end customer experience (CX) provides professional services and solutions. Our gy deployment delivered with accuracy, consister tion to ensure an integrated customer experience	technology deployment p customers receive unique ncy and vision specific to t e for every point of interac	artner that CX technolo- heir organiza- tion.
	www.avtex.com/	@avtex	Booth 9
	As the leading nonprofit provider of health care in Health is deeply committed to our mission: "To methrough excellent patient care."	n every community we ser nake a difference in people	rve, Banner a' <i>s lives</i>
Banner Health <sup>®</sup>	www.bannerhealth.com/	@BannerHealth	Booth 11
CARENECTION	Carenection is a comprehensive solutions partner telehealth network in the country, delivering over thousands of video endpoints to hundreds of hos	Carenection is the most r 40,000 encounters per n pitals nationwide.	widely utilized nonth via
THE HEALTH NETWORK	www.carenection.com/	@carenection	Booth 12
At Cloud DX, we build and sell precision vital sign monitorion mobile apps. Our products are used by advanced healthcat beyond the four walls of the clinic. We call our platform C			oftware and xtend care
	www.clouddx.com/	@CloudDX	Table 3
Innovations in Personal Health Assessment	CSI provides the only complete Health System Kio Systems in the world offering Telemedicine, PHR/ checking, billing, and physician consulting, resulting accessibility, reliability, security, and durability.	osks, Counter Top, and Poi EMR set up and managen ng in industry-leading adv	table Health nent, eligibility ancements in
	www.computerizedscreening.com/	@computerizedscr	Booth 27
<b>e</b> Visic <sup>®</sup>	At eVisit, our mission is to create engaging, physic delivery for providers and patients by bridging the healthcare.	cian-first tools that improve gap between technology	ve healthcare v and
	evisit.com/	@eVisit	Booth 13
<b>EVEPACS</b> Picture Archive Communication System	EyePACS helps prevent vision impairment from di care providers with eye care specialists. EyePACS designed to simplify the process of image capture	abetic retinopathy by link is a license-free Web-base e, transmission, and reviev	ing primary ed DRS system v.
	www.eyepacs.com/		Booth 6
	Fora Care Inc. is a technology company dedicated	to the design, developme	ent, and mar-
renA	plete the cycle of chronic disease management by and clinical applications.	nt. The aim of Fora Care in y combining innovative te	nc. is to com- chnologies
	plete the cycle of chronic disease management by and clinical applications. www.foracare.com/	ere alm of Fora Care I combining innovative ter @ForaCareUSA	nc. is to com- chnologies Booth 21





# SPS 2016 Tuesday evening reception sponsor

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/	@GlobalMed_USA	Booth 13
<b>L</b> Go Telecare	GoTelecare is a leading provider of business and kn healthcare domains. We deliver proprietary techno cesses to meet our clients' expectations and enhan	owledge process services logies, workflow and busir ce their operational capab	in ∩ess pro- pilities.
	www.gotelecare.com/	@GoTelecare	Booth 7
Honeywell	Honeywell Life Care Solutions provides digital healt tems, payers, employers, home health agencies, an and cost efficiency of care. Our remote patient mo management solutions help individuals actively cor	h technologies for health o d individuals to improve th nitoring and clinically-drive ntribute to their own care.	care sys- he quality en self-
	www.honeywelllifecare.com/	@Honeywell_LCS	Booth 33
InTouch 12	InTouch Health is focused on enabling healthcare p where it is needed. Our telehealth network and ser of high-quality clinical care to any patient, at any time	roviders to deliver care wh vices can expand access an , while reducing overall cos	nen and nd delivery ts of care.
Пеанн	www.intouchhealth.com/	@InTouchHealth	Booth 30
FIRIS TELEHEALTH	Iris Telehealth is an innovative telepsychiatry comp served communities with access to the best mental a reputation for providing outstanding customer se	any with a mission to prov health care possible. We rvice and excellent clinical	<sup>,</sup> ide under- have earned l care.
	iristelehealth.com/	@IrisTelehealth	Booth 22
IRON BOW	Iron Bow Healthcare Solutions empowers providers tation of telehealth. Through our knowledge of the technical expertise, and our workflow process awar outcomes through increased access to remote care	and patients through the healthcare industry, the d reness, we enable enhance	implemen- lepth of our ed patient
	ironbowhealthcare.com/	@Iron_Bow	Booth 26
CEWCEL	JEDMED Instrument Company has designed and pro for the medical field. Our goal is to provide you wit your equipment needs, including scopes, cameras,	ovided dozens of innovativ h a "one stop shop" by me and video systems.	ve solutions eting all of
	www.jedmed.com/		Booth 25
<b>j: jsahealth</b>	JSA Health Telepsychiatry is a behavioral health tele 24/7 access to high quality telepsychiatry care for a emergency departments, community health clinics, tional facilities.	emedicine company that p wide variety of settings, i educational institutions a	rovides including nd correc-
	jsahealthmd.com/	@JSATelepsych	Booth 4
MD24 House Call	Through telemedicine, MD24 is able to connect our need, with the help of on-site Certified Health Profe call, for in-depth diagnosis and accurate treatment.	qualified providers with personals, through video co	oatients in onference
	www.md24housecall.com/	@MD24HouseCall1	Booth 28





MedApp S.A. develops mobile solutions for pharmacy and health facilities. The company offers real-time location systems for designing, building, and managing clinical information systems, as well as EKG mHealth software for use by patients, primary care physicians, and medical facilities.

### http://medapp.pl/en/home/

Booth 31

MLS Telehealth provides telemedicine coverage and ePrescribing services in all states that permit it. All MLS Telehealth physicians are U.S. trained and Board Certified, have an active DEA (for prescription writing privileges) and have an active state license in the state they reside in as well as in any other states where they render services.

Booth 5

Booth 23













www.mlstelehealth.com/ Philips Enterprise telehealth portfolio combines leading technology and data-driven pop-

ulation management with clinical expertise and a proven programmatic approach. The new care models this approach provides help health care systems and clinicians meet the demands of the evolving, pay-for-value focused healthcare landscape.

www.usa.philips.com/healthcare/solutions/enterprise-telehealth

Booth 19 @philipshealth

@Polycom

From fully managed and staffed Telepharmacy services, to the industry's only scalable, technology platform for optimizing your own Pharmacy staff across care settings, to an advanced queue management system, PipelineRx's solutions help you advance your Pharmacy's impact on patient care while reducing total cost.

	www.pipelinerx.com/	@PipelineRx	Booth 34
	Healthcare organizations the world over are turning to	Polycom video collab	oration solu-
tions to improve care and reduce cost. Our healthcare solutions enable p		solutions enable patie	ent centered
ח™	care, multi-disciplinary team support, reduction of unr	ecessary re-hospitaliz	ations, and
•	collaboration across the entire healthcare team indepe	endent of physical bar	riers.

The SnapMD Virtual Care Management (VCM) platform allows providers to extend their reach of care by leveraging secure one-on-one or multi-participant virtual consultations between ambulatory patients and their medical practitioner.

www.snap.md	@snapmdinc	Booth 29		
The SWTRC assists start-up telehealth programs in their development and is a resource				
or existing programs regarding changes in technology and other issues affecting tele-				
health in the United States Southwest region. We offer a va	riety of training oppor	tunities		
and resources.				

	southwesttrc.org/	@UA_ATP	Booth 32
Ľ	Specialists On Call is the nation's most experienced provide via telemedicine, offering 24x7 coverage to over 380 host experienced, board certified, U.Strained neurologists, pre- rectly to the patient's bedside.	der of physician consu pitals nationwide, deli sychiatrists and intens	Iltations vering iivists di-

specialistsoncall.com/

www.polycom.com/

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# **Poster Abstracts**

Meet the authors at the poster presentation session, Wednesday from 12:50 to 1:20 pm in the Expo Hall. Abstract number indicates poster location in Expo Hall.

# 1. Using Synchronous, TeleWound Visits to Teach and Confirm Competencies in Nursing Wound Care

Patricia Arocho, RN, BSN, Scott Bolhack, MD, MBA, Robin McCollester, MEd, NSN, RN-BC, Cynthia Bakko, RN, BSN, Florence Gores, RN, MPS

### Southern Arizona VA Health Care System

**Background:** The Southern Arizona Veterans Administration Health Care System (SAVAHCS) was awarded a grant to develop a TeleWound program for the veterans in VISN 18. Veterans are examined while at their Community Based Outpatient Center (CBOC) by a Wound Certified Physician and Wound Trained Registered Nurse from the base office in Tucson; each CBOC has a dedicated, trained telehealth nurse who presents the patient, characterizes the wound (measurements, odor, pain, drainage, etc.), and performs other aspects of the wound care.

**Method:** The telehealth nurses in the CBOCs are not dedicated wound care nurses; they have responsibility for multiple telehealth programs within the SAVAHCS system. The general wound care knowledge of the telehealth nurse reflects variability that is common in this medical specialty. Our dedicated Telemedicine Wound Care Nurse Specialist developed a Wound Care Competency List to use as a guide and basis of the essential skills needed to care for the veterans with chronic wounds in our program. In lieu of a dedicated wound care education program, it was decided that at the time of our patient visits, the Telemedicine Wound Physician and the Telemedicine Wound Care Nurse Specialist would use the opportunity to educate, teach, acknowledge, and record expertise in the competencies.

**Results:** Since some of the competencies require recognizing certain conditions and disease states, the completion of the competencies will require exposure to many patients over time. The nursing staff has responded positively to the teaching moments and we educate with actual patients in a manner that is not burdensome to the patient or that delays the encounter unnecessarily. This has increased the efficiency of the program greatly in the early course.

**Conclusions:** Telemedicine programs can effectively be used to educate professional staff. By incorporating the education component along with the patient visit, the Telehealth nurses can be trained without traveling to the main Tucson Medical Facility.

# 2. Positive Impact Through Use of Telestroke in Two Large Pacific Northwest Networks on Clinical Performance

Elizabeth Baraban, PhD, Lindsay Lucas, MS, Alexandra Lesko

# Providence Brain and Spine Institute, Providence Health and Services

**Background:** Stroke treatment is available for eligible stroke patients but must be administered within 4.5 hours of onset. Unfortunately, rural communities rarely have access to specialized care to treat stroke in a timely manner in order to prevent poor outcomes. Telestroke programs have been gaining wider acceptance to address this gap in specialty care. This study looks at the efficacy of telestroke in the Pacific Northwest for two large telestroke networks.

**Methods:** Data include patients presenting at 26 hospitals within 4.5 hours of stroke onset from 2013-2015. Efficacy of telestroke was measured by clinical performance measures which include use of a clot-busting drug (IV tPA), time from patient arrival to receiving a computed tomography (CT) scan, and patient arrival to administration of IV tPA. Medians and interquartile ranges are reported.

**Results:** The number of patients included in the analyses were 1801 from 2013-2015. The percent of patients treated with IV tPA increased from 15% (n=97) to 20% (n=121) from 2013 to 2015. The median door to CT time decreased from 33.0 [16.0, 59.8] minutes to 26.0 [11.0, 53.3] minutes and the overall median door to treatment times decreased from 73.0 [59.0, 94.0] minutes to 66.0 [49.0, 96.0] minutes. For those cases that utilized the robot versus no use of robot, the treatment times were lower in 2013 (70.0 minutes [59.0, 91.5] versus 78.5 minutes [62.0, 112.3]. Likewise, cases using the robot were lower in 2015 (62.5 minutes [48.0, 88.3]) versus those that did not (74.5 minutes [54.0, 105.3]).

**Conclusions:** Our data show that telestroke has been beneficial over time. Time to treat decreased over time, was lower when telestroke was used and the overall percentage of patients being treated increased with time. Telestroke is an important clinical tool that can be used to improve stroke care in communities with fewer healthcare resources.



# 3. Outcomes for Synchronous, Clinical Video Telehealth (CVT) for Chronic Wound Care

### Scott Bolhack, MD, Patricia Arocho, RN, BSN, Robin McCollester, MEd, MSN, RN-BC, Cynthia Bakko, RN, BSN, Florence Gores, RN, MPS

#### Southern Arizona VA Health Care System

**Background:** The care of chronic wounds is costly to our medical care system. The Southern Arizona Veterans Administration Health Care System (SAVAHCS) was awarded a grant to develop a telewound program for the veterans in VISN 18. After six months of dedicated development, the program went live in November, 2015.

**Methods:** Patients were referred into the telewound program from the outlying Community Based Outpatient Clinic (CBOCs) to our Telewound Nurse Coordinator who then scheduled patients. Patients were examined with a Wound Certified Physician and Wound Trained Registered Nurse from the base facility in Tucson; each CBOC had a dedicated, trained nurse who presented the patient, characterized the wound (measurements, odor, pain, drainage, bandages, etc.), and performed other aspects of the wound care as directed by a certified physician. We collected data from the initiation of the program through the end of March on conditions seen, patients treated, cured, and referred to other specialists.

**Results:** Through the end of March 2016, a total of 43 new patients were seen by the team(s), for a total of 152 visits. The total healing rate of patients is 35% from initiation of the program. We have made 11 referrals to specialists during this time period for definitive diagnosis and/or procedures (dermatology: one skin cancer; one pyoderma gangrenosum; podiatry: diabetic ulcerations that required urgent debridement; plastic surgery: eschar formed in area of prior graft; general surgery: removal of eschar in wound; lymphedema: decompression therapy; burn center: evaluation of potential contractures). The most common condition is venous insufficiency with ulcerations.

**Conclusions:** This early start to our Telewound Program at the SAVAHCS proves that complicated wounds can be cared for effectively through telemedicine. The success of the program depends on trained personnel on both sides of the examination.

# 4. How Good is that Doc in the Box? Morgan Boyer, BSN, BS, RN, CNRN

#### Penn State Health, Milton S. Hershey Medical Center

**Background:** Penn State Health is a telestroke program in a hub for 14 partner hospitals. It has been providing expert stroke neurology consultation using telemedicine for nearly

four years. Accuracy of the physician assessment of a potential stroke patient using telemedicine is not widely reviewed. Utilizing real time audio/video encounters and the ability to visualize radiology images, it is expected that the physician would be able to make an accurate consult impression of acute ischemic stroke (AIS) and recommend safe treatment options.

**Methods:** All patients that were consulted and subsequently transferred to the hub were analyzed for variances between consult impression for AIS and a final discharge diagnosis of AIS. In addition the tPA treatment rate for patients consulted using telemedicine with an AIS impression transferred to the hub was compared to the true treatment rate based on discharge diagnosis. Patient outcomes were also reviewed.

**Results:** In the first year of the telemedicine program, the stroke neurologists accurately diagnosed 79% of AIS patients transferred to the hub facility. In the second and third year, the accuracy decreased to 76% (p value > 0.05). The consult volume has greatly increased over the three years without impacting the level of care the stroke neurologists have be able to provide. A high rate of tPA administration using telemedicine was demonstrated ranging from 34% to 42% when the transferred population was examined. When the rates are adjusted to recognize the final diagnosis, the rate does not significantly change. Patients that were accepted from a partner hospital post-tPA infusion without a final stoke diagnosis did not experience any adverse sequela related to tPA administration.

**Conclusion:** The Penn State Health Telestroke Program has demonstrated an average of 77% accuracy for evaluating the AIS patient and safe thrombolysis treatment recommendations.

# 5. Healthcare Technology for High-Risk Homebound Quality Care Julie Bui, PMP

#### MD24 House Call

MD24 is a network of 70+ healthcare providers who bring coordinated medical services to high risk homebound plus complex patients for chronic care management through clinics, traditional house calls, and modern telemedicine. We alleviate the stress of leaving the comfort of home, remove the practical barriers of transportation, eliminate the need to sit in crowded waiting areas and reduce the wait times often associated with facility-based medical visits. Using a technology-driven platform and cost-effective model, we are increasing the appropriate utilization of primary care and specialty services to improve patients' overall health, while reducing expensive ER visits, hospitalizations, and readmission. Project MD24 Global Telemedicine Network (MD24 GTN) aims to take patients' values first as the core, and collaborates to build up



a platform that will accommodate the care for population health and high risk homebound groups. Taking a different approach from "Build it and they will come", MD24 GTN is using the focus group method to understand the difficulties from providers while using a telemedicine platform, and combining with the needs of patients to provide the solution for quality care. Through the network of our partners, including Independent Physician Associations, insurance plans, and healthcare systems, MD24 GTN brings in valuable benefits to the current practice. They all have exclusive networks of physicians and patients, both of whom will benefit from our robust platform. The interactive platform allows patients to experience a new way of taking care of their health at their convenience anywhere, even from home.

# 6. Factors that Affect Computer-assisted Diagnosis Supporting Teleretinal Consultations

Jorge Cuadros, OD, PhD<sup>1,2</sup>, Carolyn Smith-Morris, PhD, MS, LPC<sup>3</sup>, Kathryn Bouskill, PhD<sup>2</sup>, George Bresnick MD, MPA<sup>1,2</sup>

### <sup>1</sup>University of California, Berkeley, <sup>2</sup>EyePACS LLC, <sup>3</sup>Southern Methodist University

**Background:** Teleretinal programs (TR) have been performed successfully on millions of patients with diabetes. Computer assisted diagnosis (CAD) has been developed for automated detection of retinal disease, and provides accurate and immediate results that can be used for triage of patients to treatment. Adherence with TR recommendations for timely treatment is low, however, and treatment is often delayed until symptoms arise and successful outcomes are much less likely. This study identifies key factors that influence patient adherence and will guide the development of new features in TR, including CAD.

**Methods:** Two ethnographers and one computer-human interface expert along with the EyePACS research team interviewed 24 patients and 24 staff members in three clinics that use TR. The interviews focused on referral processes and adherence with treatment plans.

**Results:** Most patients who are referred for treatment from TR are not being treated in a timely manner: 1. Substantial barriers exist in scheduling follow-up appointments from TR visits. 2. Failure to integrate TR results into Primary Care is linked with inadequate communication and support of referred patients. 3. Patient education is considered important but is not supported in the TR process. 4. Cultural, religious, and social factors greatly influence patient decisions about treatment. 5. Comorbidities also influence patient decisions about eye treatment when patients see well. 6. Social isolation is both a cause and outcome of poor health and is not addressed by TR. **Conclusion:** While teleretinal programs continue to grow, development must be focused on targeting the right individuals and enhancing and supporting follow through with live medical care. CAD may improve follow through if it is developed in a way that supports the referral process and engages patients.

# 7. Novel e-Health Intervention for Panic Disorder: Functional Improvement and Patient Compliance Robert N. Cuyler, PhD Palo Alto Health Sciences

Background: Panic disorder is a common and debilitating condition that produces terrifying symptoms such as chest pain, shortness of breath, fear of dying or losing control. Consequences include social and job impairment, excess medical spending, and development of agoraphobia, depression and substance use disorders. Current first line treatments include medication and therapy but each has significant limitations. Treatment drop-out is common in both. Palo Alto Health Sciences offers the Freespira Breathing System, an FDA-cleared intervention for treatment of panic that teaches clients to modify the dysfunctional breathing patterns characteristic of panic sufferers. The intervention is an e-health intervention that is practiced twice daily at home for one month. Initial client training can be given either in person or via secure telehealth. Data are uploaded to the company's secure server following each session, so that client adherence and progress is available asynchronously to the clinician.

**Methods:** Recent clinical trials provided Freespira's capnometry-assisted breathing training to subjects with panic disorder and measured baseline and post-treatment functioning. This poster presents discontinuation and adherence data on clinical trials subjects as well as from routine clinical practice. In addition, a subset of clinical trials subjects showing the most severe functional impairment were assessed using the Sheehan Disability Scale score at baseline and one year posttreatment.

**Results:** Treatment discontinuation rates were 20% or below, while 87% of clients completed the recommended course of treatment. Sheehan Disability Scale scores showed clinically and statistically significant decreases.

**Conclusions:** The majority of clients use the device as directed and have low rates of discontinuation. Additionally, remote monitoring capability promotes compliance and benefit. Data reflect rapid and significant decrease in functional impairment. The significant reductions in disruption of work/school function, social activities, and family/home responsibilities may reduce the impact of this disorder on quality of life and productivity and decrease medical costs.



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# 8. Transforming the Management of Pain in Primary Care with Project ECHO Bennet Davis, MD<sup>1</sup> and Kevin Massey<sup>2</sup> <sup>1</sup>Integrative Pain Center of Arizona and <sup>2</sup>Weitzman

**Institute-Community Health Center** 

About 100 million Americans have chronic non-cancer pain (CNCP), exceeding the number affected by heart disease, cancer, and diabetes. CNCP patients are also at high risk of having multiple medical and psychiatric co-morbidities. Over half of all American CNCP patients receive their pain care from nonspecialist, primary care providers (PCPs). Unfortunately, the majority of PCPs have limited training in pain and often struggle to treat it. Community Health Center, Inc., one of the nation's largest FQHCs, in partnership with its Weitzman Institute Research and Innovations Center and the Integrative Pain Center of Arizona, have developed a national telehealth learning network that provides a flexible platform to engage practices across the country in improving their approach to treating patients with pain. The interventions focus on helping providers and practices adopt nine core best practices for pain care, with a heavy emphasis on safe opioid prescribing, multimodal care, and attention to the psychological, behavioral, and lifestyle aspects of pain. The project combines three state of the art technologies, Project ECHO, eConsults, and online collaborative learning, to help embed evidence-based care for pain and opioid addiction into routine primary care delivery. Since its inception in 2012, this project has provided support to over 130 primary care practices in 14 states including Arizona, with measurable and clinically significant improvements in knowledge and self-efficacy, adherence to evidence based guidelines, and a reduction in overall opioid prescribing. This session will offer an overview of the intervention and provide results collected from participating practices across the US.

- 1. Learn about novel telehealth solutions for supporting pain care in primary care;
- 2. Learn how to leverage technology to improve pain outcomes and adherence to evidence based care;
- 3. Use the nine best practices of evaluating and treating pain effectively in primary care.

# 9. Nurse Practitioners and Telehealth: The Impact on Health Care Delivery

Tearsanee Davis, DNP, APRN-BC<sup>1</sup> and Kristi Henderson, DNP, APRN-BC, FAEN<sup>2</sup>

### <sup>1</sup>University of Mississippi Medical Center/Center for Telehealth; <sup>2</sup>Seton Healthcare

**Background:** Changes must be made in the healthcare delivery system in order to meet the needs of all people and improve the health of our nation. Telehealth has greatly im-

proved patient access to healthcare and has equipped providers with innovative tools to provide quality healthcare to a larger population. Geographic location should not limit the healthcare services one can access.

**Methods:** The purpose of this presentation is to demonstrate ways nurse practitioners can drive efforts to improve access to care with the use of telehealth. Nurse practitioners will learn how telehealth has been incorporated into traditional healthcare delivery models as well as how telemedicine has become the focus of new models of care with nurse practitioners as the key providers.

### **Results:**

- 13 years of operation
- 213 telehealth sites of service (non-affiliated)
- 35 medical specialties
- 8 types of locations
- Nearly 100,000 telehealth visits/year
- Over 1/2 million telehealth visits completed
- Corporate and School Over 3000 lives covered
- Over 60 NP opportunities created including Teleemergency and Telepsychiatry.

**Conclusions:** The health care climate demands an innovative approach to healthcare delivery with an attention to scalable and sustainable models. Telehealth, and the use of nurse practitioners (NPs), will be an integral part of these new models which provides a scalable approach to coordinated and collaborative care. Nurse practitioners possess the relationships and the skills needed to effectively identify gaps in the healthcare system as well as the ability to transform healthcare models that use technology to bridge the gaps.

# 10. Remote Patient Monitoring in Rural Mississippi

### Megan Duet, MS, Jaime Wheeler, MSN, RN, Michael P. Adocock, FACHE,

### Tearsanee C. Davis, DNP, FNP-BC, Scott Laidlaw

### University of Mississippi Medical Center, Center for Telehealth

**Background:** The University of Mississippi Medical Center's Center for Telehealth launched The Mississippi Diabetes Telehealth Network in August 2014 to pilot an advanced healthcare model on patients with uncontrolled diabetes living in the Mississippi Delta. In 2012, diabetic medical expenses in Mississippi totaled \$2.74 billion, according to the American Diabetes Association. This program is empowering diabetics to take control of their health by providing specialized care in rural Mississippi.

**Methods:** By bringing healthcare resources into the patient's home we aim to improve clinical outcomes and care coordination for chronic disease management. Commercially available off-the-shelf technology with Care Innovations Virtual



Care Software suite was deployed to the patient's home and connected via a regional 4G telecom. At the Center for Telehealth, our active multidisciplinary team works together to provide individual disease management plans for patients who would not otherwise have access to this type of care without telehealth.

**Results:** Study results of the first 100 patients enrolled in the Mississippi Diabetes Telehealth Network Project have shown a decrease in HbA1c of 1.7 %, 70 pounds weight loss, 9 cases of retinopathy and have saved patients nearly 10,000 miles in travel. The program is proving to reduce hospital admissions with zero hospitalizations among the active program participants.

**Conclusion:** Success of the Diabetes Telehealth Network has lead UMMC to ramp up programs for patients across multiple disease states. It is estimated that the state will save approximately \$125 million each year with the use of remote patient monitoring. Together with our partner Care Innovations, we are offering this service to patients in Mississippi as well as those outside of the state. Our program continues to focus on decreasing health disparities; managing chronic diseases; reducing emergency room visits, hospital admissions and readmissions; and improving health quality while reducing the overall cost of care.

# 11. Telemedicine to Provide Expedient and Optimal care for the Wound Ostomy Patient Mary Ellen Dziedzic, MSN, RN, CWOCN and Michael Cola, BSN, RN, CCRN

### **Geisinger Health System**

**Background:** Geisinger Health System is an integrated organization recognized for its innovative use of the electronic health record and the development of innovative models. It serves over 2.6 million residents in 44 counties in Pennsylvania. Physician led, the Geisinger system is comprised of more than 20,800 employees, a 1,000-member multi-specialty group practice, seven hospital campuses, two research centers and a 448,000-member health plan (Geisinger Health System, 2016).

The size of this system has fostered the use of telemedicine in various disciplines including critical care and psychiatry. The care of patients has been enhanced so that they receive optimal care from the best specialists who are part of Geisinger. In the past year, Geisinger Community Medical Center in Scranton, PA, has grown tremendously and has experienced growing pains trying to keep up with expanding and a changing patient population. One service in need of support was that provided by the Wound Ostomy Nurse. Through research, it was noted that telemedicine can provide health care services across distances (Sperring, 2013).

**Methods:** This was found to be one way to provide for wound assessment and the initiation of patient care protocols when the WOCN was not available or when there was a need to for a more experienced consultation. A multidisciplinary team was developed including performance improvement staff, project managers, CWOCNs and information system experts. Research was analyzed, products reviewed, and the process discussed.

**Results and conclusions:** The goal of this program is for the WOCN to analyze a wound that is a concern, provide basic assessment and initiate patient care protocols. This has not been without hurdles including hesitance from the WOCNs themselves. The group has persevered and the project continues. The goal is to provide this service across the continuum.

**Reference:** Sperring, B. (2013). Use of telehealth and photography for wound assessment in Western Australia. Wounds International; 4 (4); p 26-82.

# **12. Enterprise Telehealth Strategy: If You Build It, They Will Come** Chris Gooditis<sup>1</sup>, William Jennings, MD<sup>2</sup>, Crystal Jenkins<sup>1</sup>, Amelia Bischoff<sup>2</sup>

### <sup>1</sup>Blue Cirrus Consulting and <sup>2</sup>Palmetto Health

**Background:** Establishing a corporate initiative focusing on the development, implementation and support of telehealth services across a healthcare organization is the foundation of successful enterprise telehealth initiatives. Moving pilot telehealth projects from silos into an integrated organizational solution is complex. How the telehealth business is launched can have a long-term impact on how it is perceived, impacting the sustainability of the program. To achieve the program goal and objectives, Palmetto Health conducted an organizational readiness assessment and developed a sustainable telehealth business plan and strategy that is supported by executive leadership.

**Methods:** A readiness assessment was completed to identify the degree to which Palmetto Health was prepared and willing to participate and succeed in the implementation of a system-wide telehealth program. This was achieved using proven assessment methodologies, critical assessment factors and translating the findings into a SWOT analysis. The business plan and strategy were developed to provide the ability to predict and measure program sustainability at an enterprise level. Blue Cirrus, in partnership with Palmetto Health, utilized a 10 Step Telehealth Methodology to develop the plan and strategy.





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SWTRC is a subsidiary of the Arizona Telemedicine Program and is funded by the Office for the Advancement of Telehealth/ Health Resources and Services Administration/HHS.

#### **Results and Conclusions:**

• Provides an understanding of the current and future telehealth efforts within the organization and how those contribute toward developing telehealth services.

• Presents the importance of a structured telehealth program for achieving the corporate strategic population health objectives

• Provides an overview of the telehealth services and their effectiveness as a business line, both now and in the future

 Identifies industry impacts including market and competitive analysis

Defines a financial model for the telehealth program

• Presents a strategy for implementing a comprehensive telehealth program across Palmetto Health.

The poster will present key components of developing a telehealth business plan and strategy, including: defining a business model, funding a telehealth program, developing a Pro Forma and establishing strategic building blocks.

# 13. Telehealth: Lowering Readmission Rates, Raising Patient Satisfaction

### Lee Horner

#### Stratus

**Background:** Stratus has developed a powerful Telehealth Readmissions Program in an effort to eliminate inpatient readmissions and assist in delivering better outcomes. The program has adopted a strategy that works by getting to the real challenges once the patient leaves the hospital. It has a workflow that allows you to monitor a patient's recovery over the 30-day requirement. It is designed for the patient to have access to the support team of the healthcare provider from the comfort of their own residence. It provides visual confirmation of medications, doses, patient visual behavior, and compliance along with allowing for patient Q&A within a secured video setting. This program has proven to reduce cost and avoid re-entry into the hospital, which in return has shown tremendous saving to the healthcare provider.

**Methods:** The program includes video conferencing and a workflow program, allowing you to monitor patient recovery. Every call placed is encrypted automatically from end-to-end. Private HIPAA compliant calls can be made over public Wi-Fi and 4G connections, providing visual confirmation of medications, doses, patient visual behavior, and compliance, as well as an opportunity for patient Q&A within a secured video setting.

The program provides direct access to SMS via mobile devices and appointment cards, with the ability to review discharge paperwork, medications, doses and Q&A as well as schedule follow up appointments for virtual consults. **Results and Conclusions:** The program's strategy has proven to reduce cost and avoid re-entry into the hospital and in turn show tremendous savings to healthcare providers. This is an ideal solution for health care providers looking to greatly reduce hospital readmissions while increasing level of patient care.

# 14. MHealth Device Implementation in an Academic Medical Hospital: Lessons Learned

### John Larsen, MBA, PMP

### University of Utah Hospitals and Clinics, Department of TeleHealth

In the last year, the University of Utah spearheaded an initiative to identify, evaluate and deploy pilot MHealth programs to provide for remote patient care using technology. In our trials, we learned much about how to evaluate and deploy these devices and what is likely to be a barrier to success. We will share these principles with the results from our program.

# 15. DirectDerm: Full Service Specialty Care

### Ivy Lee, MD, David Wong MD, Marilyn Loy DirectDerm, LLC

**Background:** The physician shortage and maldistribution limits patient access to specialty care. This is especially true in dermatology where both insured and uninsured patient experience multi-month waits that impact both morbidity and mortality from skin diseases. Store-and-forward teledermatology is an innovative, validated means to significantly improve patient access and, when integrated into healthcare systems, can provide high quality, cost-effective skin care. DirectDerm (DD) collaborated with the Health Plan of San Joaquin (HPSJ), a California Medicaid program, and integrated its store-andforward teledermatology platform to provide teleconsultations and teletriage in addition to staffing a procedure clinic for patients who required in-person dermatology care.

**Methods:** A retrospective claims study evaluating access and utilization (claims/charges from office visits and pharmacy) and retrospective chart review evaluating physician-assessed improvement as a proxy for clinical outcome.

**Results:** HSPJ found that their DD-treated patients averaged charges of about \$132/case while their conventional dermatology-treated cases averaged roughly about \$397/case. This represents a reduction of roughly 65% in charges per case. While DD physician charges were similar to those of conventional dermatologists seeing patients in office visits, DD patients had dramatically lower pharmacy charges. HPSJ also found that roughly 90% of cases treated with a DD consulta-



tion had no claims history of further dermatology in-person office visits. More than 80% of skin conditions treated by DD were found to have improved at the patients' follow-up visit. Patients obtained a diagnosis and treatment within two business days by a DD consultation initiated through their PCP. Patients who went directly to a dermatologist for an office visit had an average wait of more than 90 days for an appointment.

**Conclusion:** DirectDerm offers unparalleled access to comprehensive, high quality, cost-effective care for integrated health systems and the populations they serve.

# 16. Realizing Value with Telehealth in Chronic Condition Management (CCM) Programs Monica Leslie, MHA and Rehan Virani

#### **Schumacher Clinical Partners**

**Background:** Chronic conditions represent more than 80% of all health care spending. Telehealth is an effective tool for chronic condition management (CCM), but reimbursement on a volume basis is halting organizations from taking steps toward adoption.

**Methods:** We've conducted a thorough analysis of industry research and performed interviews with successful programs to create a body of research and tools that help organizations see the benefits of focusing on value over volume. We compare and draw conclusions on value of CCM programs with and without telehealth.

**Results:** Organizations that use telehealth to manage chronic populations will see an estimated 50-60% more value created over those that do not.

**Conclusions:** Benefits that produce that value include revenue from the Medicare CCM program, cost avoidance opportunities from avoiding admissions and readmissions, as well as cost savings opportunities from shifting to more appropriate care settings and appropriate use of clinical resources.

# 17. Using Maternal Fetal Telemedicine to Decrease Preterm Labor Birth Rates in High Risk Areas

### Tanya Mack and C. Anne Patterson, MD

### Women's Telehealth

**Background:** To bring specialized maternal fetal medicine to underserved areas of Georgia, Women's Telehealth and the Southwest District DCH office (serving 14 counties) created a first-of-its-kind public-private partnership to integrate a Centering Pregnancy program with maternal fetal telemedicine. They focused on low income African American birth outcomes as Georgia ranks 50/50 for maternal death and 42/50 for infant mortality. Centering pregnancy is a model of group pregnancy care for women who are due the same month. Patients have a monthly health department OB visit and Women's Telehealth provides long distance patient education at four critical times: antenatal testing, the 18-20 week ultrasound, the 26-28 week gestational diabetic screening visit, and the last trimester for pregnancy complications. Patients with high risk indications get a maternal fetal telehealth consult. The partnership has achieved national acclaim and astounding patient outcomes.

Methods: Strategies that facilitated these results include:

- Innovative joint program creation
- Focusing on health districts with existing women's programs
- Both organizations having physician "champions" and committed leadership
- Georgia Medicaid reimbursing for telemedicine
- Both entities willing to "pilot" a new program for an extended period

**Results:** Over three years, a total of 524 MFM telemedicine encounters and education sessions were completed. Within the first 18 months, the preterm labor rate dropped from 18.2% to 8% in the targeted "at risk" population that is 86% African American (below the national average of 12.1%.) The program has saved GA Medicaid an estimated \$4.3-\$6.7 million dollars.

**Conclusion:** This model has been effective for low income patients who have childcare, travel, IT access at home and cost barriers. Early high risk identification and patient compliance has been significantly improved. The success, format and program expansion has demonstrated that this model can be replicated in other areas with high risk OB populations.

# 18. Implementing Maternal Fetal Telemedicine into an Urban Obstetric OB Practice Tanya Mack and C. Anne Patterson, MD

#### Women's Telehealth

**Background:** Although telemedicine has extended subspecialty access for many years, maternal fetal telemedicine physicians are rare and most often practice in large healthcare institutions. Studies show that telehealth use can mitigate complications of high risk pregnancy and reduce costs. Imagine what might happen if obstetricians could offer MFM services directly in their offices! In 2014, Intown Midwifery, an Atlanta-based, independent obstetric practice delivering > 500 births/year, and Women's Telehealth, a maternal fetal



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# Key Benefits of Telepsychiatry

### **BENEFIT #1: DECREASED BOARDING**

- Studies show boarding of behavioral health patient average 8 - 34 hours.
- Targeted pharmacologic management allows patients to improve quickly and be discharged.
- See as much as an 80% decrease in patient boarding times.
- Expect up to 75% of patients will avoid waiting for hospital beds.

#### **BENEFIT #2: DECREASED MEDICAL CLEARANCE**

- Evidence based Models Decrease the Practice of Automatic Medical Clearance.
- Expect a decrease in the unnecessary labs and radiological studies often required for behavioral health patients.
- ED physicians can spend more time with their medically acute patients while the telepsychiatrist manages the patient.

### **BENEFIT #3: DECREASED RISK**

- Meet rigorous Joint Commission Standards on Assessing Suicidal patients.
- Decrease unnecessary seclusion, restraint, medications over objection, needle sticks, and assaults of staff.
- Risk management support enabling the safe discharge of potentially suicidal and/or violent patients.

### **BENEFIT #4: DECREASED COST**

- Boarding of behavioral health patients average cost to hospital is \$2,264.
- Reduced costs are generated by reducing boarding in the ED and ICU, and decreased need for sitters for one to one observation.
- Decreased transportation costs to psychiatric facilities as admissions are reduced.

The Arizona Telemedicine Program was established by the State Legislature to enhance health care delivery to medically underserved populations throughout Arizona using telemedicine technologies, to increase access to medical specialties, to provide training and outreach programs, to provide information, expertise and technical assistance in the field of telemedicine to healthcare systems, and to test and evaluate equipment.





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Telemedicine learning modules: www.southwesttrc.org/online\_education telemedicine provider, began their partnership. The local delivering hospital had no maternal fetal physician specialist but did have OB hospitalists that introduced the two organizations. Lack of MFM resources, revenue opportunities, improved access, decreased expense to patients and technology mindsets drove them to achieve remarkable results together.

**Methods:** To accomplish the goal, the partners overcame barriers of telemedicine adoption, clinical workflow disruption, technology integration and patient acceptance. Strategies included:

- Telemedicine adoption:
  - \* "Live" demos of similar MFM telemed programs
  - \* Joint ROI development
  - \* Education sessions
- Disruptive clinical workflow:
  - \* Training an onsite, dedicated telehealth coordinator
  - \* Development of Clinical Collaborative Agreement
  - \* MFM patient appointment "blocks" (if non-urgent)
- New/Legacy Technology Integration:
  - \* Legacy ultrasound use
  - \* T1 line installation
  - \* WT supplied telemed cart under "Rent Back" Agreement
  - \* EMR integration from referral to consult results
- Patient Engagement:
  - \* Joint marketing collateral and a "Trial" mentality

**Results:** The program was "live" within 60 days of agreement execution and has existed for 15 months (as of 3/31/16). A total of 1656 MFM telemedicine encounters (store-and-forward, hybrid and "live scanning") have been completed. Benefits include: continuity of care, high patient satisfaction, decreased costs for patients, market differentiation, faster MFM access and increased revenue.

**Conclusion:** Through commitment to mutual goals, keeping patient care foremost, and problem solving together, the two organizations were able to create a sustainable, high quality and unique service using telehealth technologies.

# 19. Adoption of Telerehabilitation by Older Adults: the Validation of a Survey Instrument Robert W. Nithman, PT, DPT, GSC, COS-C

#### **Midwestern University**

**Background:** The practice of telerehab can refer to any remote assessment, monitoring, or intervention performed by a licensed occupational therapist, physical therapist, or speechlanguage pathologist. While telehealth may be a welcome option for some individuals, little is known about the attitudes and beliefs of older adults with regard to receiving telecommunications-aided healthcare services and whether or not those attitudes and beliefs will be influenced by a telerehab experience. Older adults, as end users, may not be receptive to the use of real-time telehealth delivery systems. No surveys specific to telerehabilitation are found in the literature.

**Methods:** Appraisal of the literature revealed seven constructs that will depict an older adult's attitude toward using a system and their behavioral intention to use a system. Evidenced-based constructs are as follows: performance expectancy/perceived usefulness, effort expectancy, social influence, facilitating conditions, perceived security, computer anxiety, and physicians' opinion. A panel of healthcare providers and technology experts that included one communitydwelling older adult were then assembled to assist with survey construction and content validation. Results: The expert panel completed two reviews of this survey tool; content validity indices are being calculated based upon final panelist responses for each item: essential, useful but not essential, not necessary.

**Conclusions:** This 7-point Likert scale survey tool is methodologically superior to other telehealth surveys found in the literature. Survey construction is evidence-based and the first of its kind to measure prospective telerehabilitation use in older adults.

# 20. Diagnosis of Acute Abdomen by e-Visit: A Physician-guided Exam for Suspected Diverticulitis Rachel Nordstrom, BS<sup>1,2</sup>, Justin Fazio, BS, MS<sup>1,2</sup>, Priva Radhakrishnan, MD, FACP<sup>2</sup>

<sup>1</sup>Creighton University School of Medicine, <sup>2</sup>St. Joseph's Hospital & Medical Center

**Background:** Traditionally, telemedicine provides the opportunity to bring subspecialists to underserved and rural areas, provide "e-visits" for urgent care, and more recently, to improve compliance in patients with chronic disease. The application of telemedicine to the diagnosis and treatment of acute abdomen presentations has been limited. In this report, we describe the use of telemedicine for physician assessment of a patient presenting with diverticulitis.

**Methods:** 48-year-old female with a past medical history of hypothyroidism presented to the physician by e-visit with one day of acute right lower quadrant pain. The pain worsened with deep breathing. She denied nausea or vomiting or any changes in her bowel movements. On review of systems, she denied fever, chills, weakness, weight loss, visual changes, chest pain, edema, shortness of breath, dyspnea on exertion, diarrhea, heartburn, blood in stool, dysuria, hematuria, frequency, nocturia, and abnormal vaginal bleeding. T 36/HR 60/ RR 12/ BP 114/73. On guided physical exam, patient had ten-



derness on palpation at McBurneys point and pain on forward flexion of hip, with no rebound tenderness.

**Results:** A STAT CT abdomen and pelvis with contrast was ordered for suspicion of ovarian cyst rupture versus diverticular disease. CT demonstrated diverticulosis, prominent in the cecum with adjacent pericecal edema and trace free fluid compatible with uncomplicated diverticulitis. Adjacent appendix was shown to be normal.

**Conclusions:** Telemedicine is most limited by the provider's inability to complete a "hands-on" physical exam. Instead, in situations like this, the physician must walk the patient through a clinically reliable physician-guided exam. The efficacy of a physician-guided exam was demonstrated by the diagnostic outpatient imaging ordered by the physician, which confirmed suspected diverticulitis. This case is an example of the opportunity for broader application of telemedicine in assessing acute medical problems by e-visit.

# 21. Telemedicine in Chronic Disease: Case Series of Type 2 Diabetes Mellitus Management by e-Visit

Rachel Nordstrom, BS<sup>1,2</sup>, Justin Fazio, BS, MS<sup>1,2</sup>, Heather Watters, RN, BS, BSN, CPN<sup>2</sup>, Priya Radhakrishnan, MD, FACP<sup>2</sup>

### <sup>1</sup>Creighton University School of Medicine, <sup>2</sup>St. Joseph's Hospital & Medical Center

**Background:** The application of telemedicine in chronic disease management allows for more frequent physician-patient interaction which can help improve patient compliance with diet, exercise, and medication regimens. In patients with diabetes, it has been shown that these "e-visits" can lead to maintenance of lower blood sugar levels and ultimately help patients decrease their Hgb A1c values. In this report, we describe the use of telemedicine in the management of three patients with type 2 diabetes mellitus.

**Methods:** 67 year old male presenting with poorly controlled type 2 diabetes currently taking Lantus 18 units qAM and 20 units qHS and glipizide 7.5mg. His fasting blood sugars ran <120, pre-prandial >200, and post-prandial >200. He denied any signs or symptoms of hypoglycemia.

68 year old male with a past medical history of liver transplantation presenting by e-visit with well controlled type 2 diabetes on glipizide. Patient denied episodes of hypoglycemia and checked blood sugar levels three times daily.

51 year old male with a past medical history of congestive heart failure presenting by e-visit with type 2 diabetes mellitus on Humalog 5-10 units with meals, Novolog, Lantus 35 units qHS. His fasting blood sugars ran between 120-150 at home. **Results:** Guided physical exam was used to assess patients for diabetic foot ulcers. Each patient received diabetic education. Each patient showed an improvement in either blood sugar logs or HBA1c values at follow-up.

**Conclusions:** Management of type 2 diabetes mellitus is limited by patient compliance with medications and blood sugar testing. E-visits provide a more convenient avenue for patients to meet with their providers than conventional in-office appointments. This can improve compliance and create opportunity for physician guidance and motivational counseling. In our patients, telemedicine allowed for modification of medications and diabetic education, resulting in improvement of patient's blood sugar control.

# 22. Developing a Mobile Dementia Caregiver Outreach Program Myonghwa Park, PhD, RN, GNP Chungnam National University and Arizona State University

Recently, mobile interventions to provide education or support to individuals with dementia and to their family caregivers have been actively developed and shown to be effective. The purpose of this study was to develop the mobile support program for dementia family caregivers. The individualized mobile education and support program was developed collaboratively by experts including the content experts, a mobile web designer, a database programmer, and a multimedia designer. The contents were designed to address a range of various issues including understanding the dementia stage, treatment of dementia, coping behavioral problem, assisting daily living, and living a pleasant life. The selected family caregivers reviewed the storyboards and provided the feedback. This feedback was incorporated into the final storyboards. Core modules such as understanding the dementia stage was provided to every user. Optional modules were provided according to the results of the family caregiver's need assessment. Formative evaluation to assess usability of the program was conducted. Family caregivers were very satisfied with the amount of information, the content of mobile interactive activity, and the design of site. The use of animation has been shown to improve family caregivers' interest and understanding of the contents. An active participation of family caregivers with their higher level of satisfaction was gained compared with traditional support programs with written material and group based approach. The use of mobile support program offers users the opportunity to participate in a support program at their own time and pace. Results from this study demonstrate support to move forward with this program. These programs can be applied to various settings such as home care settings, outpatient clinics, and community centers.\* This research was supported by Basic Science Research



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# 23. Innovative Collaboration Between VA and Local Fire Department Using Clinical Video Telehealth

### Valentin O. Rivish, RN, BSN, MSN, Manolo D. Moneda, RN, BSN, MBA, Janice Aquart, RN, MSN, MHA

#### Phoenix Veterans Affairs Health Care Systems (PVAHCS)

**Background:** PVAHCS Telehealth and Clinical Informatics Departments have partnered up with the Chandler Fire Health and Medical Department on a pilot program where both organizations' resources have been combined to provide care to veterans within the comfort of their own homes and improve healthcare outcomes, improve access to care, and serve as a model program for future collaborations between fire departments and VA medical centers around the nation.

**Methods:** Clinical Video to Home is being provided to veterans for non-emergent 911 follow-up and primary care by placing advanced teleconferencing technology into the hands of the paramedics who are visiting the patient and facilitating face-to-face clinical encounters with the healthcare providers at PVAHCS. Additionally, sophisticated healthcare predictive analytics are used within the VA to identify the veterans that have the highest level of healthcare needs and who are most likely to require hospital admission or are at risk for death. These veterans that are in the catchment area of Chandler Fire are offered care through this innovative program.

**Conclusion:** The news of this collaboration is spreading and the innovation is replicable. We would like to share how this program works so that others could benefit as well.

**Results:** This is an on-going 6-month pilot with full final results not available as of yet. However, preliminary data show that access to care and healthcare outcomes have improved. Additionally, new veterans are being enrolled in the VA for care as a result.

24. Successful Intervention: Providing Functional Communication Strategies for Utah's Inmates Lisa A. Schweitzer, MS, CCC-SLP and Sarah Gallant, MS, CCC-SLP

#### University of Utah Outpatient Rehabilitation Center

**Background:** Telespeech services have been a resource for many residents in Utah's rural areas. It has recently demon-

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strated promising outcomes for inmates in Utah's State Penitentiary who qualify for speech therapy intervention.

**Methods:** Recent treatment plans and outcomes of inmates in the Utah State Penitentiary who were experiencing aphasia or apraxia of speech were reviewed.

**Results:** The inmates demonstrated significant improvements in all communication aspects and weekly progression towards the established plan of care. Goals were developed based on the inmate's functional communication needs, enabling frequent practice and use of strategies outside of the treatment sessions.

**Conclusions:** The use of meaningful communication strategies and goals encouraged increased participation and carryover of learned information. By making the communication targets individually relevant, prison employees could assist with addressing the inmates' goals outside of treatment sessions. Telespeech is a promising resource for Utah inmates as therapy can be administered directly in the inmates' environment where their communication needs are necessary. The presence of healthcare workers in the treatment rooms during the therapy sessions assisted with carryover and further training for prison staff, inmates and cell mates. Direct intervention of inmates' communication breakdowns within their environment facilitated progression towards more meaningful communication skills.

# 25. Establishing National Standards for Telehealth Through an Iterative Dialogue Deborah Smith, MS, RN-BC<sup>1,2</sup> and Aaron Turner-Phifer<sup>2</sup> <sup>1</sup>Redfine Health and <sup>2</sup>URAC

Rapid growth of telehealth has created variability between providers of telehealth services. URAC launched the first independent Telehealth Accreditation program March 30, 2016. The purpose of the accreditation is to enable telehealth provider organizations to verify that they are adhering to the highest standards and best practices that foster quality and consumer protection.

The proposed poster session will focus on the use of an iterative dialogue in the standards development process to establish national performance standards for telehealth practices. This development process will be described in a manner that demonstrates the impact of broad stakeholder contributions in policy formation and deployment.

URAC was approached by a group of telehealth providers interested in setting national standards for quality telehealth services. This led URAC to collaborate with an expert panel of telehealth providers to construct the first independent telehealth accreditation standards. The goal of this new telehealth accreditation program is to promulgate standards for the practice of medicine and other health professions, consumer education, and care coordination facilitated through telecommunications.

URAC's standards were developed through a comprehensive, iterative dialogue among the content experts. URAC engaged telehealth providers from universities, large healthcare systems, national and regional leaders among telehealth enterprises, payers and those working in regional telehealth centers. Participants included: Carena, the Great Plains Telehealth Resource & Assistance Center, George Washington University Medical Faculty Associates, HCA, Humana, Mercy Virtual, Optum, Teladoc, and the University of Kentucky. Once consensus was reached on an initial draft, URAC invited public comment from stakeholders throughout health-care including consumer representatives and regulators.

Each iterative phase of the development of these standards led to refinement of the standards so that the perspectives of stakeholder groups from health care in general, telehealth providers, consumers, payers, and policymakers are embedded into the final accreditation program that emerged.

# 26. Southern New Mexico's Adolescent Services Telemedicine Project (ConneXions)

### Linda Summers, PhD and Conni DeBlieck, DNP

### New Mexico State University

**Background:** Health services and education are both critical issues in rural economic development and can be delivered over the infrastructure developed for either one. An alliance of medical, technical and management expertise would enable the service providers to operate in a well-managed technological and administrative environment leading to a sustainable rural telehealth system. The lack of affordable broadband could be compensated for by connecting existing and proposed telehealth networks to create a network of networks that will provider broader access and increase connectivity. The Southern New Mexico Adolescent Services Telemedicine Project (ConneXions) is one such network.

**Method:** ConnecXions endeavors to address these barriers through telemedicine. ConnecXions has interlinked four school based health centers in two school districts and one juvenile detention center with three consultation sites permitting efficient flow of medical information and increasing the availability of mental health services for adolescents at each of the five sites. Access to medical and mental healthcare is the primary goal of the program. Advances in telecommunications enable the five sites to achieve this goal by developing a more flexible and cost effective approach to building an inter-



disciplinary and interagency healthcare delivery infrastructure.

**Results:** The ConnecXions telemedicine program clinical services have included primary care, mental health, and health education. Since it is early in the project, utilization has been primarily mental health and health education. The evidence on the use of telemedicine for the provision of health care to adolescents is still growing; however, preliminary findings have demonstrated the feasibility, efficiency and increased acceptance of using telemedicine in school settings and juvenile detention centers.

**Conclusion:** With the introduction of a telemedicine unit to New Mexico State University's Nursing Program, the ConnecXions program offers nursing students the opportunity to expand their knowledge on the use of technology to provide direct health care to patients.

# 27. Solving the Documentation Dilemma Using Virtual Scribes

Jia Zeng, PhD<sup>1</sup>, Amna Fares, MS<sup>1</sup>, Amit A. Shah, MD<sup>2</sup>, Jennifer M. Slonaker, RN, CNP<sup>2</sup>, Barbara E. Ruddy, MD<sup>2</sup>, James A. Yiannias, MD<sup>3</sup>, Marnie J. de Mooij<sup>3</sup>, Mary Ann Hare, MS<sup>3</sup>, Ryan P. Miller<sup>3</sup>, Naomi L. Woychick<sup>3</sup>, Pelu Tran<sup>4,5</sup>, and Anita Murcko, MD<sup>1</sup>

<sup>1</sup>Department of Biomedical Informatics, Arizona State University, <sup>2</sup>Division of Community Internal Medicine, Mayo Clinic, <sup>3</sup>Center for Innovation, Mayo Clinic Arizona, Mayo Clinic, Scottsdale, <sup>4</sup>Augmedix, <sup>5</sup>Stanford University School of Medicine

**Background:** Wearable technology has many potential applications in improving care delivery. Google Glass with Augmedix (GG+A) [1] has been introduced as a pilot in collaboration with the Mayo Clinic Center for Innovation (CFI) in Arizona. CFI is working with Mayo Clinic primary care providers who face documentation challenges due to the patient population and range of undifferentiated problems. Scribes trained specifically for the needs of such providers have been proposed [2]. Using this GG+A technology that includes a virtual scribe, primary care providers can streamline and improve clinical encounter documentation while maintaining the intimacy of the encounter.

**Methods:** The A3 problem-solving methodology [3] was used for this study. The current condition and target condition are described and represented in diagrams. Root cause analysis was performed to identify potential areas for improvement and development of an implementation plan.

**Results:** Patients experience more one-on-one interaction during encounter. Providers interact more with patients, save up to three hours of documentation time each day and see

more patients. Providers and patients have an overall positive response to the technology. Drawbacks with the current technology include connectivity, audio/video quality and ergonomics issues [4]. As currently structured, incomplete medical information may result due to poor video quality and Wi-Fi disconnection.

We propose the following recommendations for improvement:

- 1. Improve Wi-Fi connectivity by installing signal boosts.
- 2. Enable temporary local audio and video recording as a back-up.
- 3. Provide automated alert to clinician and scribe when connectivity is disrupted.
- 4. Revise protocol to include a clinician-initiated pre-closure wrap-up with scribe to rectify documentation gaps before encounter ends.
- 5. Make the standard paper Progress Note template available as a manual back-up.
- 6. Communicate device usability issues (heat, camera angle, etc.) and upgrade and/or substitute Google Glass with audio-only or other communication device.

**Conclusion:** Patients and clinicians are generally satisfied with the Google Glass + Augmedix technology. Pilot clinicians are committed to the benefits of virtual scribes to improve the efficiency of encounter documentation. Drawbacks include connectivity, transmission quality and ergonomics.

# 28. Care of Acute Minor Illness via Telemedicine in Primary Care to Support Emergency Departments

Jason H. Alexander, MBS, MSF, FACHE<sup>1</sup>, MAJ Daniel Yourk<sup>2</sup>, Joseph Wood, MD<sup>3</sup>

### <sup>1</sup>US Army, Regional Health Command—Atlantic, Telehealth, <sup>2</sup>Blanchfield Army Community Hospital, <sup>3</sup>Dwight D. Eisenhower Army Medical Center

**Background:** The Vice Chief of Staff of the Army recently endorsed a proposed telehealth (TH) pilot to alleviate an overused Emergency Department (ED) while also creating a model of telehealth in a contested operational environment. Facilities selected for the pilot include Dwight D. Eisenhower Army Medical Center, Fort Gordon and Blanchfield Army Community Hospital, Fort Campbell. Both hospitals are members of Regional Health Command – Atlantic (RHC-A), the Army Medical Department's largest Regional Health Command.

**Methods:** Analysis showed a percentage of patients seen in ED were acute instead of emergent. Once triaged, a portion of these non-urgent patients can be seen using TH, with the



assistance of providers at an alternate location. The Department of Telehealth for RHC-A developed a new healthcare delivery model to attempt to reduce wait times and Left Without Being Seen (LWOBS) rates using this concept. The process starts when a patient enters the ED and is triaged by a registered nurse. If the patient is determined to be non-emergent, he/she is offered a TH option at an urgent care-type setting, within the ED. If a patient selects TH, he/she is greeted by a Care Coordinator and RN who assist a primary care provider located at Ft Gordon. The patient site has a TH cart device which includes an otoscope, stethoscope, and dermatology camera.

**Results:** 100% overall patient satisfaction, 2.4% of all ED patients were redirected to TH Pilot, wait time for patients was significantly reduced, proper documentation resulted in provider receiving equal productivity per encounter as his/her peers.

**Conclusions:** The pilot will run through July 2016. As a further proof of concept, the program will also be tested in a field training environment from May through August, 2016, at Ft Knox, KY. If successful, further studies will be developed to determine if TH can support soldiers in deployed areas.

# **29. Poor Man's Telemedicine** Roberta L. Howard and Steven Peterson

#### NAZCARE, Inc.

NAZCARE, Inc. will present the cost-effective use of technology using low cost, effective telemedicine increasing effectiveness to outreaching in rural and remote geographic areas.

**Background:** NAZCARE, Inc. has effectively used and measured the effectiveness of low-cost telemedicine approaches to improve the quality and effectiveness of services and staff, and provide better quality services to the entire State of Arizona; eliminate barriers to services; increase training for supported employment to staff, interviewing of staff and conducting meetings without expensive hardware.

**Methods:** NAZCARE, Inc. uses WebEx (sometimes Google and Zoom) to provide one-to-one services, group services, training, workshops, panel interviews and consumer and public meetings using a low-cost telemedicine approach.

**Results:** NAZCARE, Inc. has increased services to consumers in rural and remote areas by 60% and increased the ability to interview and hire employees by 80%. Additional measures available upon request.

**Conclusions:** Expensive set-ups, equipment and servers are not necessary to provide face-to-face services using technology.



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# Notes


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