

"Educating and Training the New Virtual Clinical Workforce"

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Objectives



- Characterize the rapid expansion of virtual care delivery
- Understand provider reluctance & resistance
- List unique clinical challenges in delivering virtual care
- Explore clinical literature supporting virtual patient assessment
- Explore strategies used to properly train and educate virtual provider
- Understand the techniques to promote ongoing education with a distributed medical group
- Discuss strategies for managing challenging situations unique to telemedicine

We need training?







"The continued development of telemedicine--and the assurance of quality, accessible healthcare into the future--<u>relies on training a skilled, competent workforce.</u> Providing clinicians, administrators and engineers with a skill set in telemedicine ensures that our healthcare system best utilizes the available remote healthcare technologies."

-American Telemedicine Association

American Telemedicine Association Connected to Care

Expectations are being set...







"75 million eVisits expected in 2014 in North America (out of 600 million annual visits to general practitioner)"

-Deloitte (2014)

"37% of employers surveyed said that by 2015 they expect to offer their employees telemedicine consultations as a low-cost alternative to emergency room or physician office visits for nonemergency health issues; 34% plan to offer in 2016-2017; 22% offer telemedicine now"

-Towers Watson report (2014)

"The number of doctor-patient video consultations will nearly triple from this year to the next, from 5.7 million in 2014 to over 16 million in 2015, and will exceed 130 million in 2018,"

-Harry Wang, Director, Health & Mobile Product Research, Parks Associates

Telemedicine in the vernacular: Internet searches since '05



Recent Policy Statements





June 2014: "Coverage of and Payment for Telemedicine"

The Council believes that key tenets in the delivery of in-person services hold true for the delivery of telemedicine services. Notably, [providers] <u>must abide by state</u> <u>licensure laws and requirements as well as state medical practice laws including, for</u> <u>example, laws concerning consent involving minors, prescribing, reproductive rights,</u> <u>end-of-life, and scope.</u>

The delivery of telemedicine services <u>must follow evidence-based practice</u> <u>guidelines</u>, to the degree they are available, to ensure patient safety, quality of care and positive health outcomes...and it is essential for national medical specialty societies to continue to develop appropriate and comprehensive practice parameters, standards and guidelines to address the clinical and technological aspects of telemedicine.

Recent Policy Statements



Federation of STATE MEDICAL BOARDS

April 2014:

"Model Policy on the Appropriate Use of Telemedicine Technologies in the Practice of Medicine"

For clarity, a physician using telemedicine technologies in the provision of medical services to a patient (whether existing or new) must take appropriate steps to establish the physician-patient relationship and conduct all appropriate evaluations and history of the patient consistent with traditional standards of care for the particular patient presentation. <u>As such, some situations and patient presentations are appropriate for the utilization of telemedicine technologies as a component of, or in lieu of, in-person provision of medical care, while others are not.</u>

Industry Precedent

ARIZONA

TELEMEDICINE

PROGRAM

Home

Hot Links

Service Provider Directory

ATP Service Desk

ATP Training





Medical Education is recognizing the need





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tation/MedicalSpecialties/FamilyMedicine/TelemedicinePrecepting.aspx

But what about the current provider workforce?



Clinical Challenges

- > Scope of practice, eligibility for Virtual Visits
- Unfamiliarity with clinical practice guidelines
- Prescribing policies
- > Another residency?



Operational Challenges

- Privacy & Security
- Technical difficulties
- Licensing
- Continuity of care
- Skepticism about providers' credentials







About Carena

Seattle-based team of medical, technology, and consumer service professionals committed to creating the **best healthcare experience** possible.

Software, 24/7 staffing, and operations expertise for employers & health systems seeking to deploy consumer-based virtual visits.

Virtual clinic provides care for over **6M** people in: WA, CA, IA, IL, MO, NE & KY.







Carena's story & evolution into Telemedicine





American Telemedicine Association

In 2011 Carena joined the ATA & co-chairs the committee to develop standards for the use of telemedicine in primary & urgent care.

Carena, Inc.

The Carena Medical Team: 2009





- Employed team of board-certified Family Medicine MDs
- Provide exclusive in-person care: Home Visits for urgent and primary care
- Providers licensed in WA only
- Collaborative clinical culture
- Adhere to national Clinical Practice Guidelines for in-person medicine
- No prior experience with telemedicine delivery

The Carena Medical Team: Today

- Employed "virtualist" team of board-certified Family Medicine MDs and ARNPs
- Devoted to an exclusive telemedicine practice
- Mix of experienced providers and new graduates
- All providers are licensed in multiple states
- Collaborative clinical culture
- Develop and adhere to Virtual Practice Guidelines (VPGs) at the point of care
- Bonus compensation based on patient satisfaction and adherence to VPGs
- Virtual care thought leader





How did we get here?



SUMMER 2009

R&D

Researched telemedicine regulations and licensure

Review of clinical practice guidelines and evidence related to telehealth Development of Virtual Practice Guidelines (VPG) and decision support tools Revised procedures and protocols

TRAINING

Extensive Provider Training plus VPG integration into delivery software

FALL 2010

Launched the Carena Virtual Clinic

Initial Carena Provider responses



"What, no exam?"

"Is this legal?"

"Does malpractice cover this?"

"I'm not licensed in California"

"Can I prescribe?"

"You mean I have to use a webcam?"

"Patients won't like this!"

"I WON'T LIKE THIS!!"

Virtual Practice Guidelines (VPGs)

- Diagnosis-specific virtual care criteria and treatment guidelines for urgent and primary care
- Based on an analysis of 35,000 Carena house call encounters & national standards of practice
- Emphasizes patient safety, best practices, and clinical quality
- Embedded into proprietary point-of-care clinical software platform
- Basis for clinical and actuarial review and study



Carena University - Overview



Learning Formats:

- Online platform for training and ongoing e-learning (LMS)
 - Recorded webinars
 - Interactive presentations
 - Software demos
 - Mock visits and scenarios
- Live, hands-on training
- Virtual visit shadowing

Courses emphasize:

- Operational and Technology considerations
- Legal/Regulatory limitations
- Virtual Visit interview techniques
- Clinical processes
- Patient expectations
- Reimbursement
- Highlights of evidence-based Virtual Practice Guidelines for commonly encountered conditions

Carena University - Overview





Carena, Inc.

Online LMS Platform





Instructional Format





Carena University – Instructional Format



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	Clinical Notes S O A P Summary Note Boot Docs Docs	Select a Virtual Practice Guideline	
	Medical History New 🔶		
	Prior surgical procedures. One line per Item Medications New & Free Name & Current meds. OTCLs, etc. One line per item		

Mock Visits

Visit Shadowing

Carena University - Curriculum



- Course 1: Telemedicine 101
 - Module 1: Telemedicine 101
 - Module 2: Rules and Regulations
 - Module 3: Patient Intake Experience
- Course 2: The Patient Experience and the Virtual Visit
 - Module 1: Patient Satisfaction in Telemedicine
 - Module 2: Conducting the Virtual Visit
- Course 3: The Virtual Examination
 - Module 1: Physical Exam 101
 - Module 2: Clinical Decision-Making in Virtual
 Practice

- Course 4: Virtual Practice Guidelines
 - Module 1: Introduction and Acute Cystitis
 - Modules 2-8: Presentations of existing body of VPGs, organized by body system
- Course 5: Delivery Software
 - Module 1: Overview/queue/EMR integration
 - Module 2: Software demonstration, Clinical Decision Support
 - Module 3: Provider sandbox
- Course 6: System-specific Policies
 - Module 1: Policies and Protocols unique to your System and Practice

Telemedicine Outcomes: selected examples



Quality of Care

- **2010:** Literature review of BP telemonitoring found significant BP reduction in 13/15 studies; systolic BP declined by 3.9 to 13.0 mm Hg and diastolic BP declined by 2.0 to 8.0 mm Hg across these studies, magnitudes of effect comparable to those of antihypertensive drugs. (AbuDagga et al., 2010)
- **2006:** In a study of patients receiving skilled nursing care at home +/- virtual visits, patients receiving additional virtual visits had improved scores related to ADLs. (Finkelstein et al., 2006)

Cost-Effectiveness

- **2013**: Clinical Videoteleconferencing for veterans with PTSD was associated with significant lower total costs compared with in-person delivery. (Morland et al., 2013)
- **2011**: "Health Buddy" telehealth care management program for high risk patients led to 7-13% reduction in costs/quarter (Baker et al., 2011)

Patient Satisfaction

- 2013: In a study of utilization and impact of an e-consultation service for PCPs, the PCPs perceived the value of the service to the patient to be **excellent** or **very good** in 92% of cases. (Keely et al., 2013)
- **2000**: Study on Patient Satisfaction with Telemedicine evaluations: Overall patient satisfaction was found to be 98.3% in 495 US patients using clinical consultations. (Gustke et al., 2000)

Data supporting virtual assessment: example



For example, the studies below supported the validity and reliability of virtual assessment of specific orthopedic measures

A review of the literature revealed several studies evaluating knee and elbow range-of-motion, gait analysis. No comprehensive studies or reviews were found.

Knee Eval- 2002

A comprehensive study in 2002 evaluated webcam assessment of knee range of motion, limb girth, quadriceps muscle strength, and gait assessment. There was 95% agreement between in-person and web-based measurements. Interestingly, these limits held at bandwidths of 17 kbs and 128 kbs, much lower than what is routinely available today. (Russell et al., 2002) Elbow ROM- 2012

In a 2012 study, Measurement of elbow flexion-extension and forearm pronationsupination was conducted via webcam in 30 subjects. Both measures showed a "high percentage of correlation", though less-so for pronation-supination. (Chanlalit et al., 2012)

Related, a 2012 study at the Mayo Clinic showed a high degree of validity for digital photography based elbow flexion-extension ROM measurements. The limit of agreement was at most 8 degrees for flexion. (Blonna et al., 2012)

Telerehab after TKA- 2013

This study sought to validate the use of a telerehab program in lieu of conventional rehab for therapy after TKA. While not citing specific components of telemedicine assessment or techniques, it did ask important larger questions about the use of telemedicine in this orthopedic context. After the 2-week intervention period, there were no significant differences in measures between patients who had undergone traditional or tele-rehabilitation programs. (Piqueras et al., 2013)





Carena Provider Survey Responses

"I am part of the solution to the healthcare problem in the US." - 91% of Carena Providers

"I want telemedicine to be a part of my career."

– 91% of Carena Providers

"I feel my position here professionally satisfies me."

- 100% of Carena Providers

Top 15 Virtual Diagnoses & Management Rates





Top 15 represent **79%** of all visits



Carena, Inc.

5 Day Follow-up Call Status



Clinical Status on Day 5



Subsequent Care Required



Prescribing Policies and Outcomes



Carena providers DO NOT prescribe controlled substances or routine refills

FSMB Context "Prescribing medications, in-person or via telemedicine, is...in accordance with current standards of practice and consequently carry the same professional accountability as prescriptions delivered during an encounter in person"



1. National Ambulatory Medical Care Survey & National Hospital Ambulatory Care Survey (2006-2009)

2. Mehrotra A: Paone S; Martich GD; Albert SM; Shevchik GJ, A comparison of care at e-visits and physician office visits for sinusitis and urinary tract infection. JAMA Internal Medicine. 2013 Jan 14; Vol. 173 (1), 192-4.

Quality Assurance and Improvement



INTEGRATED QAIP PROGRAM*

- Clinical Appropriateness of Virtual Visit
- Adherence to Virtual Practice Guidelines
- Ongoing monitoring of prescribing practices and antibiotic stewardship processes

PROCESS

- 5 member Carena clinician committee
- Quarterly Reports
- Blinded reviews of random and targeted diagnoses

*Approved by WA State Dept. of Health as a Certified Quality Improvement Program



Patients love it!



5 day Follow-up Call: "Would You Use the Service Again?"



Patient Comments

"The quick response blew me away. The provider was thorough, treatment was successful and I didn't spend all morning at the urgent treatment center. Very satisfied and would definitely use the service again."

"The entire experience was beyond awesome and so easy. I was able to get treatment before I left for work this morning, so no lost time...This experience far exceeded my expectations!"



- Virtual Care Delivery is a **new clinical competency** with a fundamentally different set of clinical and operation challenges
- Most of the current provider workforce is not (yet) well versed in the nuances of telemedicine
- Training and education must be crafted and deployed to accommodate this new care delivery
- It needs to be flexible enough to support busy providers...and fun!



Thank you!