Telemedicine: An Effective Tool for Addressing Physician Shortage


"While the long-term solution to the physician shortage may involve making changes in our system of medical education, teledicine has the promise to increase our provider capacity in the relatively immediate future," says Adam C. Powell, PhD, president of Payer+Provider Syndicate, a healthcare consulting company.

3 Ways Telemedicine Can Help Alleviate the Physician Shortage

1. Increase physician utilization rate
2. Provide access to specialists for rural hospitals
3. Widen the pool of available physicians

Background on Telemedicine and Telehealth


Although the terms “telemedicine” and “telehealth” are often used to describe similar types of technologies, the term “telemedicine” has historically been used to refer specifically to bilateral, interactive health communications with clinicians on both “ends” of the exchange (e.g., videoconferenced Grand Rounds, x-rays transmitted between radiologists or consultations where a remote practitioner presents a patient to a specialist). Whereas, the term “telehealth” incorporates not only technologies that fall under “telemedicine,” but also direct, electronic patient-to-provider interactions and the use of medical devices (e.g., smartphone applications (“apps”), activity trackers, automated reminders, blood glucose monitors, etc.) to collect and transmit health information, often with the intent to monitor or manage chronic conditions.

https://mhealthintelligence.com/features/is-there-a-difference-between-telemedicine-and-telehealth

In general terms, telemedicine is considered the clinical application of technology, while telehealth encompasses a broader, consumer-facing approach – “a collection of means or methods, not a specific clinical service, to enhance care delivery and education,” according to the federal network of telehealth resource centers.

“Telehealth is different from telemedicine because it refers to a broader scope of remote healthcare services than telemedicine. While telemedicine refers specifically to remote clinical services, telehealth can refer to remote non-clinical services, such as provider training, administrative meetings, and continuing medical education, in addition to clinical services.”

April 10, 2017 - Eighty-three percent of healthcare organizations responding to a American Telemedicine Association (ATA) poll said they are highly likely to invest in telehealth with operational efficiency and convenience in mind.

The Evolution of the Telemedicine Market
Provider acceptance converts to provider adoption
A number of surveys now estimate that the percentage of provider organizations offering telemedicine services to patients has crossed the 50 percent threshold and likely is even higher. Most of those not currently offering telemedicine services to patients intend to do so. For example:
• 70.5 percent of 136 hospitals and health systems surveyed by HIMSS Analytics said they currently use a telemedicine solution or service. That’s up from 54 percent in 2014, according to an earlier HIMSS survey. The increase in telemedicine adoption is a “clear indicator that health care organizations are working to incorporate new telemedicine technology and services to help facilitate patient care communication with clinical colleagues and provide patients and consumer better access to care,” HIMSS said.

The Evolution of the Telemedicine Market
• 49 percent of 161 physician practices surveyed by HIMSS Analytics said they currently use a telemedicine solution or service.

ACOs and Telemedicine
https://mhealthintelligence.com/news/telemedicine-a-key-component-of-next-generation-acos
Telemedicine a Key Component of Next-Generation ACOs
The new model, unveiled this week, lifts restrictions on telemedicine use and enables the 21 participating ACOs to create a better network of care for patients.
A new Accountable Care Organization model that stresses telehealth is getting high marks from the American Telemedicine Association

ECHO (Expanding Capacity for Health Outcomes)

As Project ECHO expands its impact nationwide, it’s mindboggling to consider that it was once such a small and contained project.
Founded by Sanjeev Arora, MD, professor of Internal Medicine at the University of New Mexico, Project ECHO commenced as a clinic to treat thousands of underserved hepatitis C patients.
The ECHO Model launched in 2003 as a collaboration between teams of specialists at academic medical centers with local clinicians to expand treatment knowledge and capability.

https://echo.unm.edu/
Project ECHO: A Revolution in Medical Education and Care Delivery
Project ECHO is a lifelong learning and guided practice model that revolutionizes medical education and exponentially increases workforce capacity to provide best-practice specialty care and reduce health disparities. The heart of the ECHO model™ is its hub-and-spoke knowledge-sharing networks, led by expert teams who use multi-point videoconferencing to conduct virtual clinics with community providers. In this way, primary care doctors, nurses, and other clinicians learn to provide excellent specialty care to patients in their own communities.

ECHO trains primary care clinicians to provide specialty care services. This means more people can get the care they need.

The ECHO model™ breaks down the walls between specialty and primary care. It links expert specialist teams at an academic ‘hub’ with primary care clinicians in local communities – the ‘spokes’ of the model. Together, they participate in weekly teleECHO™ clinics, which are like virtual grand rounds, combined with mentoring and patient case presentations.

### ECHO, Telehealth, and Telemedicine comparison

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Opioid Abuse, Telemedicine and ECHO

http://www.modernhealthcare.com/article/20140618/INFO/306189968

N.J. docs tackling prescription pill abuse with telemedicine

By Newsworks (Philadelphia) | June 18, 2014
Balancing a patient's need for pain meds with the risk of substance abuse is a challenge for any physician, but it's especially tough for primary-care doctors. Now, a telemedicine program aimed at curbing opiate addiction in New Jersey focuses on providing these first-line-of-defense doctors with additional resources.


Tackling prescription pill abuse with telemedicine in New Jersey
To combat the increasing problem of opiate abuse, primary care physicians in New Jersey have kicked off a new telemedicine program. That's where video conferencing with specialists as part of a training program called Project ECHO, or Extension for Community Health Care Outcomes, might be able to help.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4873719/

Project ECHO (Extension for Community Healthcare Outcomes): A new model for educating primary care providers about treatment of substance use disorders
This article describes a teleECHO clinic based at the University of New Mexico Health Sciences Center that is focused on treatment of substance use disorders (SUDs) and behavioral health disorders. Methods: Since 2005, specialists in treatment of SUDs and behavioral health disorders at Project ECHO have offered a weekly 2-hour Integrated Addictions and Psychiatry

Hep C, Telemedicine and ECHO
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4832092/

Extension for Community Health Outcomes-hepatitis C: Small steps carve big footprints in the allocation of scarce resources for hepatitis C virus treatment to remote developing areas
Hepatitis C virus (HCV) infection is still a major health problem throughout the world. HCV patients living in rural areas are less fortunate than their counterparts residing in populous urbanized regions. The lack of medical resources and properly trained medical personnel in rural regions make it especially burdensome for HCV patients seeking treatment. Dr. Sanjeev Arora at the University of New Mexico Health Sciences Center took initiative to resolve the issue at hand by developing a model named Project Extension for Community Health Outcomes (ECHO).

Diabetic Eye Screening
In the first paper, Garg's team demonstrated that when implemented in primary care settings, retinal tele-screening increased the rates of diabetic retinopathy evaluation in rural and underserved areas and increased access to care among minority populations and others at particularly high risk for vision loss. Furthermore, they examined demographic and clinical
factors that require ophthalmology referral. Notably, these were minority race and older age, as well as history of kidney disease and stroke.


According to a study in JAMA Internal Medicine, the Los Angeles County Department of Health used a primary-care based telemedicine program to screen more than 21,000 patients for diabetic retinopathy, the leading cause of blindness in adults. The program increased the annual screening rate by 16.3 percent and reduced screening wait time by 89.2 percent.

https://www.medpagetoday.com/ophthalmology/generalophthalmology/65496
Telemedicine Ups Diabetic Retinopathy Screening
—Screening rates rose for rural and underserved patients
Tele screening for diabetic retinopathy (DR) in primary care clinics increased screening rates from approximately 25% to 40% in rural and underserved patients, researchers reported.

At the Wills Eye Institute Alumni Conference, Christopher J. Brady, MD, presented early results of a pilot study conducted by Wills Eye Institute and Jefferson Hospital Department of Family Medicine and funded by the U.S. Department of Defense.

"We believe that there may be a role for telemedicine in urban settings, given the rates of screening at a third to half of patients," he said. "Even if there are enough ophthalmologists, we believe that there may be other barriers [to screening], and we may be able to surmount those if we put the screening in the primary care setting."

Telemedicine-based diabetic retinopathy screening programs: an evaluation of utility and cost-effectiveness

Conclusion

New telemedicine programs are in development for detection of macular degeneration, glaucoma, and other sight-threatening conditions. These new programs will be important in order to sustain the service in the future. Eye care telemedicine is here to stay, and the question is not whether it will be sustainable in the future, but what other eye care services will be added on to the networks that are forming now.

Black Diabetics
http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.89.12.1878
American Journal of Public Health (ajph) »
The effect of health education on the rate of ophthalmic examinations among African Americans with diabetes mellitus.
C E Basch, E A Walker, C J Howard, H Shamoon, and P Zybert
Published Online: August 30, 2011

Abstract

Telemedicine Bridges Gaps in Patient Access to Rheumatologists
Whereas the benefits of telemedicine are clear — including improved access, outcomes, and patient satisfaction, and lower costs, for example — there are also multiple potential barriers. Insurance reimbursement is one of the primary issues, although progress has been steady if sluggish in this area. “Currently 29 states have mandated that commercial insurance cover telemedicine encounters.

Assessing the Need for Improved Access to Rheumatology Care
A Survey of Massachusetts Community Health Center Medical Directors
Results: Thirty-six CHC physician medical directors returned surveys (47% response rate). Fifty-five percent indicated a need for better access to rheumatology care. Eighty-six percent of CHC physicians would not start a patient with rheumatoid arthritis on a disease-modifying antirheumatic drug; 94% would not start a patient with systemic lupus erythematosus on an immunosuppressant.

Telemedicine/Telehealth and Pharma
Telehealth and Patient Outcomes: The Wave of the Future
“Telehealth is an invaluable opportunity for pharma to capture the types of data that will allow companies to identify the interventions and practices that deliver the biggest improvements in healthcare”

http://creation.co/knowledge/telehealth-and-pharmaceutical-engagement/
Pharma and telehealth – the future
. Pharmaceutical companies should remain aware of telehealth developments in their areas of interest, and consider how they can use these emerging technologies to engage with healthcare professionals and patients.

Reimbursement Issue for Telemedicine by State
Related resources: Laws and policies by state:
http://www.cchpca.org/state-laws-and-reimbursement-policies

Parity legislation by state:
http://www.americantelemed.org/policy-page/state-policy-resource-center

CMS: https://www.cms.gov/Medicare/Medicare-General-Information/Telehealth/index.html