

Teledermatology Education: Current Use of Teledermatology in US Residency Programs

Telemedicine is increasingly being utilized in health care settings as teledermatology programs increase patient access to quality care.^{1,2} As teledermatology expands, training and mentorship programs have been slow to adapt. Dermatologists cite no prior training and lack of knowledge in teledermatology as barriers to adoption.³ To better understand the current involvement and potential interest in telemedicine in dermatology training programs, we performed a descriptive survey among residency program directors within the United States.

In September 2014, a survey assessing the use of teledermatology among allopathic dermatology residencies was circulated to residency program directors during the annual Association of Professors of Dermatology conference. The survey was available by paper or electronically. Participants had 1 day to complete the survey and anonymous results were gathered. In addition to multiple-choice answers, respondents were given the opportunity to write additional comments and feedback on the topic. Statistical analysis was performed.

Of the 117 existing dermatology residency programs, 72 (62%) completed a portion of the survey, and 56 (48%) completed the entire questionnaire. Of the responders, 34 (47%) programs were using telemedicine as part of their residency curriculum with store and forward technology being the most commonly used (85%), followed by live interactive (35%) or a combination of the 2 methods. Many programs (68%, 39 of 57) reported that there were opportunities for residents to learn more about telemedicine if interested. For programs affiliated with a medical school, 21% (12 of 57) offer telemedicine education to their medical students.

More than half of the responding dermatology programs (68%, 39 of 57) were interested in potentially incorporating telemedicine into their curriculum, and almost all programs that responded (91%, 52 of 57) are interested in resources that would be developed by the American Academy of Derma-

tology, including a telemedicine curriculum template. Most programs (72%, 41 of 57) also stated that teledermatology could be helpful in evaluating their residents. Although many programs (82%, 47 of 57) felt residents were aware of teledermatology, few programs (9%, 5 of 57) expressed that residents had knowledge regarding the health policy effects and legal/legislative landscape of teledermatology, with 18% (10 of 57) of programs suggesting residents did not have any telemedicine knowledge.

The survey results identify an educational gap in telemedicine training for dermatology residents. Identified barriers to incorporate teledermatology into residency training include problems with reimbursement, inadequate ability to evaluate lesions (inability to palpate), insufficient time, and lack of interest or need from staff dermatologists.

Although this study is limited by a small sample size, the subjective nature of the responses, and its descriptive nature, it highlights a need for teledermatology training and mentorship in residency programs and continuing education programs in order to help support trainees in acquiring the appropriate skills in telemedicine. Training of dermatologists proficient in teledermatology is vital to accommodate the dynamic health care system, alleviate the workforce shortage, affirm our specialty's commitment to patient safety, and deliver high-quality care. In addition, teledermatology holds great potential as an educational tool for residents and medical students within dermatology and in other specialties.⁴ Potentially useful resources identified from the survey include written materials, webinars, test cases, and access to equipment to perform teledermatology. Development of a widely available teledermatology curriculum will be an essential next step in training future dermatologists and could enhance development of all core competencies: systems-based practice, professionalism, medical knowledge, patient care, interpersonal and communication skills, and practice-based learning and improvement.

Karolyn A. Wanat, MD

Assistant Professor, Department of Dermatology and Pathology, University of Iowa

Sabrina Newman, MD

Assistant Professor, University of Colorado, Denver

Kristina M. Finney, MPH

Senior Political Analyst, American Medical Association

Carrie L. Kovarik, MD

Associate Professor, Department of Dermatology and Dermatopathology, University of Pennsylvania

DOI: <http://dx.doi.org/10.4300/JGME-D-16-00041.1>

Ivy Lee, MD

Clinical Assistant Professor, Olive View–University of California, Los Angeles Medical Center

References

1. Armstrong AW, Wu J, Kovarik CL, Goldyne ME, Oh DH, McKoy KC, et al. State of teledermatology programs in the United States. *J Am Acad Dermatol*. 2012;67(5):939–944.
2. Lester J, Weinstock MA. Teletriage for provision of dermatologic care: a pilot program in the Department of Veterans Affairs. *J Cutan Med Surg*. 2014;18(3):170–173.
3. Armstrong AW, Kwong MW, Chase EP, Ledo L, Nesbitt TS, Shewry SL. Why some dermatologists do not practice store-and-forward teledermatology. *Arch Dermatol*. 2012;148(5):649–650.
4. Boyers LN, Schultz A, Baceviciene R, Blaney S, Marvi N, Dellavalle RP, et al. Teledermatology as an educational tool for teaching dermatology to residents and medical students. *Telemed J E Health*. 2015;21(4):312–314.