

## The Use of Technology in Providing Dermatologic Care to Vulnerable Populations

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I looked over my e-mail on a summer morning in 2008 and found a message that a patient in a small village in Botswana may benefit from my opinion of her rash. The consultation had originated on a mobile telephone in her hometown and was sent via secure messaging through a Web site co-hosted by the University of Pennsylvania. In considering this volunteer work, my thoughts were of the vulnerable people of West Philadelphia, Pennsylvania, who also have trouble getting a dermatology consultation for their itchy skin, as the free clinics where they get general medical care do not have dermatologists associated with them. Why can't such an easy-to-use system work for our own countrymen and women in the United States?

America is faced with a large group of uninsured citizens who have limited access to dermatologic care. They deserve better; our homeless and working poor should be afforded more access to dermatologic services. Currently, medical care that is available to these citizens is provided in community health and free clinics, mostly by volunteer primary care physicians. The service provided by these dedicated physicians is wonderful, but the amount of care that is needed exceeds what is available.

Dermatology's workforce has an ever-increasing number of senior physicians whose hours of practice are diminishing. Some are retiring early and some are just slowing down, while others are retiring at a traditional age but are still energetic and vibrant. At the same time, we have a contingent of young people with idealistic, community-minded visions. At present, many of these physicians are finding ways to volunteer their precious services abroad. They offer their invaluable expertise to the poor and disabled of disadvantaged communities across the globe.

Currently, to provide such service either at community and free clinics in urban US settings or to the

international needy, the majority of volunteers have to leave their home, family, and places of business for an evening (for a local clinic) or for several weeks (for an international trip). A small number give of their expertise within their own practice.

Telemedicine is a modality of care that has been maturing over the last 20 years. The required technology has become more affordable, better quality, well-standardized, and well-studied. This technology can be utilized as a triage tool to provide direction to a primary care physician who needs to know if a growth looks benign or requires biopsy, or if a rash may be treated topically or requires expert consultation.<sup>1,2</sup> Many times the diagnosis and therapy is evident, and clinical outcomes have been shown to rival in-person evaluation.<sup>3,4</sup>

One advancement in the method of obtaining and sending information, which has been used in Botswana, is cellular technology based on mobile telephones or handheld personal digital assistants. Mobile teledermatology allows patients and healthcare workers access to dermatology care even if they are not able to directly connect to the Internet due to location or lack of computers. It also simplifies the interface between providers because it removes the step of downloading photographs from a camera. Volunteer dermatologic care now can occur within the home or office, without the need for travel, with the entire time spent actively participating in patient care.

It seems to me that if 1 dermatologist committed 1 hour a week to such an effort, an additional 6 uninsured patients could be afforded the expertise of a dermatologist. If just 100 American Academy of Dermatology members donated this much service, more than 30,000 consultations to primary providers at community and free clinics could occur in 1 year, which would have an impact in improving the skin health of our patients, saving much discomfort, money, and lives.

The answer to my 2008 question—Why can't such an easy-to-use system work for our own countrymen and women in the United States?—now, in 2012, is a resounding it can, and it is! We have begun to fill this void with organizational and

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financial support from the American Academy of Dermatology and its members, the expertise of many physicians with teledermatology proficiency, and the good hearts of volunteers nationwide. Twenty-six clinics across the country—from poor urban areas, to the rural Midwest, to suburban Virginia, to a large children's hospital in San Francisco, California—are being given care provided by concerned dermatologists. Many physicians who have heard about this effort wish to provide specialty consultations to a free clinic in need. Dermatologic surgeons, pediatric dermatologists, general dermatologists, and dermatopathologists are providing a safety net for approximately 5% of patients who need to be seen, biopsied, and/or have cancer removed (unpublished data, 2011). It is becoming a team effort that will help the vulnerable patients in this country in the long run.

On a greater scale, an impact on our nation's healthcare crisis is in sight. If we can care for patients close to home at a shorter interval from the rash's inception, we may be able to ease their discomfort and save visits to emergency departments. It would allow more resources to be directed to patients who are in need of emergent care, rather than pouring acute care into the treatment of neglected chronic skin conditions. Technology is allowing us to come closer to addressing the 3 main issues facing healthcare delivery today: a high-quality method of delivery with increased access to care at a low cost. Not only is such a process available to help the vulnerable

patients, but it will likely start to be folded into our daily practices. It may be used to limit the need for patients to make in-person return visits for refills of routine medications for basic eruptions such as acne, rosacea, and eczema, which will leave more appointments available for new patients so we may expand our reach and help more patients.

It is my hope that as our specialty leads the way, other specialty societies will be moved to provide similar services. Working together we can make a big difference!

## REFERENCES

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## QUICK POLL QUESTION

Do you volunteer your services as a dermatologist to a free clinic?

- Yes
- No
- I would if I had more time

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