

## Prevalence of Skin Disorders in Patients Seeking Health Care

**To the Editor:** In their article published in the January 2013 issue of *Mayo Clinic Proceedings*, St. Sauver et al<sup>1</sup> reported the prevalence of skin disorders in patients seeking health care, noting that almost half of the observed population (42.7%) had at least one *International Classification of Diseases, Ninth Revision* code for skin conditions within 5 years. The authors stated that “skin disorders are not typically major drivers of disability” and that perhaps teledermatology should be investigated as a way to increase health care efficiency and reduce health care expenditures.

We believe, and the evidence supports, that skin disease is indeed a major driver of disability.<sup>2</sup> In fact, one could infer that the finding that so many patients are willing to navigate the medical system, schedule appointments, and make co-payments, is testament to the fact that their skin ailments are important concerns and not just trivial distractions. Inflammatory skin disease adversely affects not only quality of life but also sleep, work productivity, social functioning, and pain and discomfort levels. Inflammatory skin disease is also associated with other medical and psychiatric disabilities.<sup>3</sup> Neoplastic dermatologic disease, especially nonmelanoma skin cancer, is an epidemic, with 1 in 5 Americans expected to experience a tumor in their lifetime. If left untreated, neoplastic dermatologic disease is potentially deforming and in some cases life threatening.<sup>4</sup>

Although it is true that teledermatology has some real benefits in solving geographic access issues, it has yet to be shown to increase the productivity of dermatologists, which is where cost savings could be realized. Moreover, a recent review of the literature evaluated 78 teledermatology

studies and reported that approximately two-thirds of the studies found better diagnostic accuracy in clinic dermatology.<sup>5</sup> Importantly, it was also determined that teledermatology and teledermatoscopy were inferior to clinic dermatology in diagnosing malignant lesions, a factor that should be seriously considered given the potential adverse outcomes of delayed diagnosis and treatment and the fact that this application is likely to be a common desired use of this technology.

We believe that it is critical to acknowledge the prevalence of skin disease and its potential impact on patients' physical and psychological well-being. We also note that dermatology training in medical school is minimal, especially compared with the demand presented by US patients.<sup>6</sup> A call for action is needed to improve the dermatologic capabilities of many physicians, as well as the appropriateness of referrals and follow-up visits to dermatologists.

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1. St. Sauver JL, Warner DO, Yawn BP, et al. Why patients visit their doctors: assessing the most prevalent conditions in a defined American population. *Mayo Clin Proc.* 2013;88(1):56-67.
2. Bickers DR, Lim HW, Margolis D, et al; American Academy of Dermatology Association. Society for Investigative Dermatology. The burden of skin diseases: 2004 a joint project of the American Academy of Dermatology Association and the Society for Investigative Dermatology. *J Am Acad Dermatol.* 2006;55(3):490-500.
3. Kimball AB, Gieler U, Linder D, Sampogna F, Warren RB, Augustin M. Psoriasis: is the impairment to a patient's life cumulative? *J Eur Acad Dermatol Venereol.* 2010;24(9):989-1004.
4. Stern RS. Prevalence of a history of skin cancer in 2007: results of an incidence based model. *Arch Dermatol.* 2010;146(3):279-282.
5. Warshaw EM, Hillman YJ, Greer NL, et al. Teledermatology for diagnosis and management of skin conditions: a systematic review. *J Am Acad Dermatol.* 2011;64(4):759-772.

6. Moore MM, Geller AC, Zhang Z, et al. Skin cancer examination teaching in US medical education. *Arch Dermatol.* 2006;142(4):439-444.

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## In reply—Prevalence of Skin Disorders in Patients Seeking Health Care

We thank Drs Sung and Kimball for their interest in our recent article.<sup>1</sup> In their letter, they argue that some skin disorders may be major drivers of disability. In particular, they discuss inflammatory skin disease (eg, psoriasis) and nonmelanoma skin cancer. In addition, they argue that teledermatology and teledermatoscopy may not be a strategic alternative to a direct patient interaction with a specialist.

We agree that some skin conditions may have major physical and psychological consequences; however, our findings in Olmsted County were partly driven by common skin conditions such as acne or sebaceous cysts that are generally not major drivers of disability or death.<sup>1</sup> The third major dermatologic condition in Olmsted County was actinic keratosis, a condition considered to be a precursor of nonmelanoma skin cancer. This dermatologic condition may in some cases be life threatening.

We suggested that new models of dermatologic care delivery, such as teledermatology, should be critically explored within US health care systems to increase care efficiency and reduce health care expenditures.<sup>1,2</sup> Drs Sung and Kimball argued that teledermatology is generally inferior to direct examination by a specialist and that malignant lesions may go unrecognized with the former. We acknowledge that melanoma is the fifth most commonly diagnosed new cancer among men and the seventh among women. However, death rates from melanoma have been declining rapidly in whites younger than 50 years of age, suggesting that the

recognition of melanoma is improving in the United States.<sup>3</sup>

We certainly agree with Drs Sung and Kimball that primary care physicians could benefit from additional education related to dermatologic conditions in medical school, residency, and continuing medical education programs. Tele dermatology supported by primary care physicians who have additional training and experience with dermatologic evaluation may provide better results than those reported in current studies. Until we can provide additional primary care training for the identification of skin diseases, we agree with Warshaw et al,<sup>4</sup> who concluded that “tele dermatology may still be superior to dermatologic care provided by nondermatologists.”

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1. St. Sauver JL, Warner DO, Yawn BP, et al. Why patients visit their doctors: assessing the most prevalent conditions in a defined American population. *Mayo Clin Proc.* 2013;88(1):56-67.
2. van der Heijden JP, de Keizer NF, Bos JD, Spuls PI, Witkamp L. Tele dermatology applied following patient selection by general practitioners in daily practice improves efficiency and quality of care at lower cost. *Br J Dermatol.* 2011;165(5):1058-1065.
3. American Cancer Society. Cancer Facts & Figures 2013. [http://www.cancer.org/research/cancerfactsfigures/cancer-facts-figures-2013](http://www.cancer.org/research/cancerfactsfigures/cancerfactsfigures/cancer-facts-figures-2013). Accessed April 23, 2013.

<http://dx.doi.org/10.1016/j.mayocp.2013.05.007>

4. Warshaw EM, Hillman YJ, Greer NL, et al. Tele dermatology for diagnosis and management of skin conditions: a systematic review. *J Am Acad Dermatol.* 2011;64(4):759-772.

<http://dx.doi.org/10.1016/j.mayocp.2013.05.007>

## CORRECTIONS

In the article “**Overreliance on Symptom Quality in Diagnosing Dizziness: Results of a Multicenter Survey of Emergency Physicians**,” which appeared in the November 2007 issue of *Mayo Clinic Proceedings* (2007;82(11):1319-1328), an author’s name was listed incorrectly. Paris Lovett should have been listed as Paris B. Lovett.

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In the article “**The New Oral Anticoagulants in Clinical Practice**” published in the May 2013 issue of *Mayo Clinic Proceedings* (2013;88(5):495-511), there is an error in the statement related to apixaban and its efficacy in preventing ischemic strokes when compared with warfarin.

On page 509, in the “Choosing an Oral Anticoagulant” section at the last line, it reads as follows: “On the other hand, in patients with a history of ischemic strokes while taking warfarin, dabigatran and apixaban may be suitable alternatives as they are the only NOAs with a lower rate of ischemic stroke than warfarin.”

However, even though the primary outcome of systemic embolism or ischemic and hemorrhagic stroke

reduction of apixaban was superior when compared with warfarin, 1.27%/y in the apixaban group vs 1.60%/y in the warfarin group (hazard ratio [HR], 0.79; 95% CI, 0.66-0.95;  $P < .001$  for noninferiority;  $P = .01$  for superiority), this was primarily due to hemorrhagic rather than ischemic stroke reduction. The rate of hemorrhagic stroke was 0.24%/y in the apixaban group vs 0.47%/y in the warfarin group (HR, 0.51; 95% CI, 0.35-0.75;  $P < .001$ ), and the rate of ischemic or uncertain type of stroke was 0.97%/y in the apixaban group and 1.05%/y in the warfarin group (HR, 0.92; 95% CI, 0.74-1.13;  $P = .42$ ). Thus, apixaban did not significantly reduce the risk of ischemic stroke compared with warfarin.

Therefore, the sentence should read: “On the other hand, in patients with a history of ischemic strokes while taking warfarin, dabigatran may be a suitable alternative as it is the only NOA with a lower rate of ischemic stroke than warfarin.”

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In the article “**Management of Newly Diagnosed Symptomatic Multiple Myeloma: Updated Mayo Stratification of Myeloma and Risk-Adapted Therapy (mSMART) Consensus Guidelines 2013**,” which appeared in the April 2013 issue of *Mayo Clinic Proceedings* (2013;88(4):360-76), an author’s name was listed incorrectly. Keith Stewart should have been listed as A. Keith Stewart.

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