Efficacy of a dermatology interest group-sponsored biopsy and suturing workshop for medical students

To the Editor: Despite the global prevalence of skin disease, most medical schools offer limited instruction in both medical and procedural dermatology.1-3 Medical student interest groups focused on dermatology are well-situated to address some of these curricular gaps; however, the efforts of these groups have been infrequently reported.4,5

Herein, we describe the New York University Grossman School of Medicine Dermatology Interest Group’s experience piloting a skin biopsy and suturing workshop for preclinical medical students. To create a cocurricular experience, the workshop was held contemporaneous with the dermatology lectures of the preclinical curriculum. The workshop began with a 10-minute PowerPoint presentation explaining the medical indications and technique for shave and punch biopsies and simple interrupted sutures. This presentation was followed by 80 minutes of hands-on practice using simulated skin pads in small groups. Each small group was comprised of 4 to 5 students and supervised by 1 dermatology provider.

Anonymous pre- and postworkshop surveys were administered to all students. Demographics and information on prior dermatology exposure were collected. In addition, students’ understanding of the indications for skin biopsies and suturing, confidence in performing these procedures, and overall workshop evaluation were assessed using 1 to 5 Likert scales, ranging from Strongly Disagree (1) to Strongly Agree (5). Wilcoxon signed-rank tests were calculated via MATLAB-R2016b to evaluate the significance of the difference between pre- and postworkshop average Likert scores. Institutional review board review was not required because the project constituted quality improvement.

Forty-one preclinical medical students participated in the workshop, 40 of whom completed the surveys (97.5% response rate). At baseline, 95% (38/40) did not know how to perform shave or punch biopsies, and 57.5% (23/40) did not know how to suture (Table 1). For shave biopsies, understanding of the indications increased from a mean Likert score of 2.83 to 4.48 (P < .001), and confidence in performing the procedure increased from 1.40 to 4.05 (P < .001) (Fig 1). For punch biopsies, understanding of the indications increased from 2.73 to 4.48 (P < .001), and confidence in performing the procedure increased from 1.50 to 4.38 (P < .001) (Fig 1). For simple interrupted sutures, understanding of the indications increased from 2.38 to 4.33 (P < .001), and confidence in performing the procedure increased from 1.70 to 3.95 (P < .001) (Fig 1). Additionally, 95% (38/40) strongly agreed that the workshop was a meaningful addition to their lecture-based dermatology curriculum. Interest in dermatology as a potential specialty increased from 3.35 to 4.00 (P < .001).

Strengths of our workshop include its sponsorship by a student interest group, integration with the dermatology preclinical curriculum, high supervisor-to-student ratio, and emphasis on hands-on practice time. Limitations of our workshop include potential voluntary response bias and lack of objective outcome measures.

In summary, our skin biopsy and suturing workshop increased students’ understanding of and confidence in performing fundamental dermatology procedures.

Table 1. Workshop participant demographics and prior exposure to dermatology

| Variables (N = 40) | N (%) |
|-------------------|-------|
| **Gender identity** |       |
| Male              | 13 (32.5) |
| Female            | 26 (65) |
| Nonbinary, gender queer, or not exclusively male or female | 1 (2.5) |
| **Race** |       |
| Asian             | 12 (30) |
| Black or African American | 1 (2.5) |
| White             | 23 (57.5) |
| Middle Eastern    | 1 (2.5) |
| Multiracial       | 2 (5) |
| Prefer not to respond | 1 (2.5) |
| **Ethnicity** |       |
| Hispanic/Latinx/Spanish origin | 5 (12.5) |
| **Age in years, mean (range)** | 23.5 (22-27) |
| **Prior exposure to dermatology** |       |
| Shadowed a dermatologist | 10 (25) |
| Worked or volunteered in a dermatology clinic or office | 4 (10) |
| Conducted dermatology research | 7 (17.5) |
| **Prior knowledge of dermatology procedures** |       |
| Shave biopsy      | 2 (5) |
| Punch biopsy      | 2 (5) |
| Suturing          | 17 (42.5) |

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procedures. Moreover, almost all students reported that the workshop effectively supplemented their lecture-based dermatology curriculum. Given our experience, we encourage other dermatology interest groups to organize events that bridge curricular gaps at their institutions.

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Conflicts of interest
None disclosed.

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