November 2020 and February 2021. Responses were analyzed using descriptive statistics.

**RESULTS:** Of 43 students who completed our initial survey, 32 indicated interest in general surgery and were paired with surgical mentors. Twenty-six paired students completed follow-up surveys (81% response rate). Of these 26 students, 39% reported increased interest in surgery since joining the mentorship program and 54% reported having a surgery mentor, increased from 21% of initial survey respondents. Topics most commonly discussed with mentors included career guidance (23%), research opportunities (23%), and work-life balance (27%). Barriers to mentorship included time constraints of mentees and mentors (46%), COVID-19 (8%), and lack of mentor-mentee communication (8%). Mentorship program impact on perceptions of a surgical career varied (Figure).

**CONCLUSION:** A student-led mentorship program can improve medical students’ access to surgical mentors, which might increase interest in surgery. However, more work is needed to address common concerns about a surgical career.

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**Medical Scribes—Help or Hindrance?**

**Attending and Trainee Satisfaction with Scribes in Outpatient Academic Surgery Clinics**

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**INTRODUCTION:** Implementation of medical scribes has been shown to increase workflow and patient and physician satisfaction in nonsurgical settings. However, more work is needed to address common concerns about a surgical career.

**METHODS:** A Qualtrics survey of clinic workflow and documentation effort, perception of scribes, scribe impact on surgical education, and benefits (eg allow more time with patients) and detriments (eg accuracy of documentation) of scribe use was distributed to all resident, fellow, and attending physicians within the general surgery department at a single academic surgery program. Comparisons of scribe users vs nonusers, trainees vs attendings, and 1 to 6 months vs more than 6 months of scribe use were performed.

**RESULTS:** Overall survey response rate was 59.4% (n = 60 of 101) with 60.0% (n = 36 of 60) resident/fellow and 40.0% (n = 24 of 60) attending respondents. Most participants (81.6% [n = 49]) used scribes, and 18.3% (n = 11) had not. Median duration of scribe use was 12 months (range 1 to 48 months). Documentation after clinic hours was reported as less than 1 hour in 32.6% (n = 15) of scribe users, although all of those without scribes spent 1 hour or more documenting, with 9.1% (n = 1) reporting 4 hours or more (p = 0.05). The majority of trainees and attendings reported similarly that clinic documentation is educational (p = 0.7) and scribes enhance surgical education (p = 0.3). Disagreement that scribes hinder education diminished from 94.7% (n = 18 of 19) with 1 to 6 months of scribe use vs 68.0% (n = 17 of 25) with more than 6 months of use (p = 0.04).

**CONCLUSION:** In outpatient academic surgery clinics, medical scribes enhance workplace satisfaction and decrease documentation burden. Faculty and trainees alike perceive that scribes enhance surgical education, but durable effects must be monitored.

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**Mixed-Methods Analysis of the Sociotechnical Factors Contributing to Workplace Stress in Surgical Residents During the COVID-19 Pandemic**

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**INTRODUCTION:** The COVID-19 pandemic caused unprecedented stress on healthcare workers. This study aimed to identify the sociotechnical factors contributing to workplace stress in surgical residents during the pandemic.

**METHODS:** Surgical residents at a single institution were recruited in October 2020 to complete a 35-item survey. The survey included demographics, abbreviated measures of burnout (emotional exhaustion and depersonalization scores rated 1 to 6), and ratings of stressors related to COVID-19, based on the National Academy of Medicine’s sociotechnical approach to measure factors contributing to workplace stress. Residents then participated in three 90-minute focus groups to identify contextual details of the survey results. Thematic analysis was performed on transcribed data.

**RESULTS:** Fifteen (47%) surgical residents completed the survey. Respondents were evenly distributed across training levels, with a majority being female (66%). Burnout was present in 87% of residents: emotional exhaustion mean (SD) score 2.7 (1.1) and depersonalization 3 (1.4). Nine (60%) surgical residents participated in focus groups. COVID-19 was thought to worsen existing issues of
inadequate staffing (fewer nurses and residents available), job control (frequent reassignment), and time pressure (increased daily tasks). Stressors thought to emerge since COVID-19 included moral distress (fear of infecting family members), physical work environment (lack of safely distanced workspaces), and guilt (reporting exposures and worsening peer workload during quarantines).

CONCLUSION: Since COVID-19, surgical residents continue to demonstrate high levels of burnout, as their well-being is being affected by a complex set of interrelated workplace stressors, causing a lower quality of work and personal distress. Interventions to deal with pandemic-related stress are needed.

Moving Beyond Diversity: A Scoping Review of Inclusion Initiatives in the Surgical Workforce
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INTRODUCTION: Addressing racial disparities within the surgical workforce is vital to provide quality care to all patients; inclusion is critical to do so. Inclusion signifies a move beyond numerical representation; tangible goals include reducing attrition and maximizing career development. The aims of this scoping review were to test whether there are academically published interventions or frameworks addressing inclusion in the surgical workforce and characterize these interventions or frameworks.

METHODS: This review adhered to Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines. Three electronic databases (Medline, PubMed, and Web of Science) were queried. Peer-reviewed, full-text, English-language articles focused on interventions or frameworks to achieve inclusion in the surgical workforce were considered.

RESULTS: The initial search yielded 2,243 papers; 15 met inclusion criteria. The published literature on interventions to achieve inclusion was sparse; the most common reasons for exclusion of full texts were articles not focused on interventions (42%; n = 51) or purely focused on diversity and representation (36%; n = 42). The most common field represented was broadly academic surgery (4 of 15 [26.7%]), with 7 other subspecialties represented. A small minority received funding (3 of 15 [20%]). Common themes included systematic reform of recruitment policies and practices, increased access to targeted mentorship, gaining leadership support, and increased avenues for underrepresented faculty advancement.

CONCLUSION: Although limited, promising work has been undertaken through national collaboration and model institutional work. Future considerations might include incentivizing academic publication of inclusion work, increasing access to funding, and rewarding these efforts in career advancement.

Negative Perceptions of Surgeons among Preclinical Medical Students
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INTRODUCTION: Research has been conducted in the perceptions of surgeons, but this has not been specifically well explored among preclinical medical students. We hypothesize that baseline negative perceptions of surgeons in the preclinical years affect medical student interest in a surgical career, limiting matriculation into surgical residency. We examined whether there is a higher prevalence of negative perceptions among women and LGBT (lesbian, gay, bisexual, and transgender) preclinical students.

METHODS: A Likert scale survey (1 = strongly disagree to 5 = strongly agree) was administered to preclinical medical students at a single institution to better understand their perceptions of surgeons. The Mann-Whitney U test was used for subgroup comparisons.

RESULTS: Of 90 respondents, 76.7% find surgeons intimidating and just 21.1% believe surgeons respect patients. Only 13 students (14.4%) agree that surgeons have good work-life balance. Female students are more intimidated by surgeons (4.15 ± 0.79 vs 3.79 ± 0.71; p = 0.022) and less comfortable approaching them to discuss research (3.24 ± 0.99 vs 3.63 ± 0.93; p = 0.036) and career opportunities (3.02 ± 0.95 vs 3.44 ± 0.93; p = 0.035). LGBT students give surgeons lower ratings for being respectful of other physicians (2.80 ± 0.94 vs 3.36 ± 0.84; p = 0.031) and patients (3.33 ± 1.05 vs 3.91 ± 0.80; p = 0.036).

CONCLUSION: Preclinical medical students have negative perceptions of surgeons. Providing opportunities to mitigate these perceptions will help enhance diversity in the surgical workforce.

New Heuristics to Stratify Applicants: Predictors of General Surgery Residency Applicant Step 1 Scores
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INTRODUCTION: In 2022, US Medical Licensing Examination (USMLE) Step 1 scores will become pass/fail. This is problematic, as residency programs use USMLE Step 1 scores as an efficient heuristic when determining interview invitations. This study aimed to assess predictors of USMLE Step 1 scores to offer programs new cues for stratifying applicants.

METHODS: We performed a retrospective cohort study analyzing interviewed applicants to 1 general surgery residency program in 2019 and 2020. Applicant data analyzed included USMLE Step