grading in core clerkships, we conducted a meta-analysis of studies comparing PDs’ perceptions of residency performance among residents from schools using P/F versus tiered clerkship grading systems.

**Approach/Methods:** Embase, PubMed, and Scopus were searched since inception through October 2020, and hand searches were performed of the retrieved reference lists. No study or language restrictions were applied. Studies exploring P/F clerkship in the context of a cohort of PD assessments were included, and the CLARITY risk of bias was used. Reviewers assessed study characteristics, overall resident performance, learning ability, work habits, work products, educational assessments, and PD’s personal evaluation (worse: 0 to best: 100), and were assessed using Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) guidelines. To account for different survey and grading metrics, adjusted standard difference in means were used. Main outcomes and measures were program director ratings of residents from U.S. medical schools using tiered versus P/F clerkship grading.

**Results/Outcomes:** From 4,931 studies screened, we identified 6 eligible studies (3 cohort, 3 surveys; 6 low risk of bias) with 2,118 participants. From 31 accredited medical specialties, 7 specialties were represented with a median response rate of 81.0% (95% CI, 49.0–100.0). Reported as means, there was no difference in PD preference for residents from P/F or tiered grading system throughout residency training (37.0% Tiered; 95% CI, 0–100, P > .05). Adjusted scaled scores utilizing mean difference from an equal variance model from PDs showed overall performance (5.5; 95% CI, –1.9 to 12.9), learning ability (2.7; 95% CI, 0–5.4), work habits (2.9; 95% CI, 0–5.8), personal evaluations (–1.6; 95% CI, –3.8 to 0.6) and educational evaluation (1.7; 95% CI, –0.8 to 4.3) of residents from tiered clerkship grading systems were not statistically significant (P > .05) from P/F residents. However, there was a difference in work products produced (6.8; 95% CI, 1.4–12.2, P < .0001). Meta-regression standard difference in means revealed that there is no difference in tiered applicant’s overall performance in residency compared with P/F applicants (0.0001 fixed, P = .98; –0.0047 random, P = .81).

**Discussion:** Clerkship performance has often been used as a metric to assess medical student preparedness for residency. While PDs reported that residents from medical schools using P/F clerkship gradings tended to perform slightly lower on average, these results were not statistically significant. In addition, PDs did not generally prefer applicants from tiered medical schools. Given the continued expansion of P/F grading in medical school curricula, our findings allow for early discussion regarding the implications of P/F clerkship grading and its anticipated reception by stakeholders.

**Significance:** In our cohort, there appears to be no perceived difference in resident performance based on clerkship grading system. This study provides further impetus for discussion of wider adoption of P/F grading in clinical clerkships.

Correspondence should be addressed to Andrew Wang. University of California, Los Angeles, 10833 Le Conte Ave., Los Angeles, CA 90095; email: andrewwang@mednet.ucla.edu.

**Author affiliations:** A. Wang, David Geffen School of Medicine, University of California, Los Angeles, and College of Medicine, Charles R. Drew University of Medicine and Science; K.L. Karunungan, J.D. Story, E.L. Ha, C.H. Braddock III, David Geffen School of Medicine, University of California, Los Angeles; N.A. Shlobin, Feinberg School of Medicine, Northwestern University; K.E. Hauer, School of Medicine, University of California, San Francisco

The authors have informed the journal that they agree that both A. Wang and K.L. Karunungan completed the intellectual and other work typical of the first author.

**Funding/Support:** None reported.

**Other disclosures:** None reported.

**Ethical approval:** This study was exempt by the University of California, Los Angeles, Institutional Review Board.

**References**


**Mistreatment of Providers by Patients and Family Members: Effect of an Organizational Strategy on Provider Knowledge, Self-Efficacy, and Patient Safety Incident Reporting of Mistreatment**

Pnine G. Weiss, MD, Marianne Hatfield, RN, Rebecca Ciaburri, RN, Henna Shaikh, MD, Kirsten M. Wilkins, MD, Kurt Bjorkman, MD, Matthew Goldenberg, MD, MSc, Sarah McCollum, MPH, and Veronika Shabanova, PhD

**Purpose:** Identifying effective approaches to achieve safe and inclusive environments is a priority for academic medical centers and health care systems. However, mistreatment of health care providers (HCPs) is common and is associated with burnout and lower quality patient care. Unfortunately, mistreatment of HCPs by patients and their family members is underreported. Furthermore, data on effective methods to mitigate mistreatment are lacking. We investigated the prevalence of mistreatment of HCPs by patients and family members in an academic, tertiary care children’s hospital. We hypothesized that an organizational strategy that uses patient quality and safety infrastructure, consisting of training, incident reporting, and response protocol, would increase HCP knowledge of and self-efficacy in addressing and reporting mistreatment.

**Design and Methods:** In this single-center, serial cross-sectional study, we sent anonymous surveys to HCPs before and at least 5 months after intervention, consisting of training, safety incident
S218

2019. Training included ERASE 4 and New Haven Children’s Hospital 2018–2019. Training included ERASE 4 and “Ouch! That Stereotype Hurts” sessions. We modified the hospital’s electronic safety incident reporting software to track mistreatment events that were reviewed daily and acted upon by quality and safety leadership. We developed a response algorithm that provided guidance for handling mistreatment in real time and reporting mistreatment events. Multivariable logistic regression was used to examine the effect of intervention on the outcomes of interest and whether this association was moderated by staff role.

**Results:** A total of 309 baseline surveys were completed by 72 faculty, 191 nurses, and 46 residents, representing 39.1%, 27.1%, and 59.7%, respectively, of eligible HCPs. Verbal threats from patients/family were reported by 69.5% of HCPs. Offensive behavior was most commonly based on age (85, 28.5%), gender (85, 28.5%), ethnicity or race (55, 18.5%), and appearance (43, 14.6%) but varied by role. HCPs who received training had higher odds of reporting knowledge of mistreatment policies (OR 2.7; 95% CI, 1.38–5.32), a standardized approach to address mistreatment (OR 4.43; 95% CI, 2.03–9.67), and intervening effectively when mistreated (OR 1.93; 95% CI, 0.93–4.01) or when witnessing mistreatment (OR 2.39; 95% CI, 0.99–5.78). Incident reporting of mistreatment increased 3-fold after intervention.

**Discussion:** We found that the majority of pediatric HCPs in our study reported experiencing mistreatment by patients and their family members, which is concerning given the potential adverse consequences on HCPs and patient care. We were able to demonstrate that training was associated with increased odds of HCPs reporting knowledge and self-efficacy at least 5 months later, supporting long-term benefits. That training was associated with increased odds of experiencing offensive behaviors, which is likely due to enhanced awareness, as it was covered in the curriculum. While it is possible that the increase in incident reports of mistreatment reflects an increase in the number of events, our results suggest that it is more likely due to increased awareness of mistreatment and enhanced safety culture that promotes event reporting.

**Significance:** This is the first report of an effective organizational approach to address mistreatment of HCPs by patients and family members. It capitalizes on existing patient safety culture and infrastructure and can be adopted by other institutions to combat all forms of mistreatment, including racism.

Correspondence should be addressed to Pnina G. Weiss, Yale University School of Medicine, 333 Cedar St., New Haven, CT 06520-8064; email: pnina.weiss@yale.edu.

**Author affiliations:** P.G. Weiss, K.M. Wilkins, M. Goldenberg, S. McComb, V. Shabanova, Yale University School of Medicine; M. Hatfield, Wellstar Kennestone Hospital; R. Ciaburri, Yale New Haven Children’s Hospital; H. Shaikh, Seattle Children’s Hospital; K. Bjorkman, University of Iowa Stead Family Children’s Hospital

**Funding/Support:** None reported.

**Ethical approval:** None reported.

**Previous presentations:** International review board approval obtained, considered exempt.

**References**


**Demographic Differences in Medical Students’ Perceptions of Respect for Diversity Among Faculty**

Jasmine Weiss, MD, MHS, Lilanthi Balasuriya, MD, Laura D. Cramer, PhD, ScM, Marcella Nunez-Smith, MD, MHS, Inginia Genao, MD, Rosana Gonzalez-Colaso, PharmD, MPH, Ambrose H. Wong, MD, MSeD, Elizabeth A. Samuels, MD, MPH, MHS, Darin Latimore, MD, Down Boatright, MD, MBA, MHS, and Mona Sharifi, MD, MPH

**Purpose:** Faculty role modeling is critical to medical students’ professional development to provide culturally adept, patient-centered care. The behaviors displayed by faculty can directly influence students’ attitudes and behaviors and is considered a part of the “hidden curriculum.” However, little is known about students’ perceptions of faculty role modeling of respect for diversity. The purpose of our study was to examine the perceptions of faculty role modeling of respect for diversity among a nationally representative sample of medical students and to assess the extent to which perceptions varied by student demographics. We hypothesized that students from historically marginalized groups (females; racial/ethnic minorities; and lesbian, gay, or bisexual [LGB]) and older students with greater lived experiences would be more likely to have a negative perception of faculty respect for diversity.

**Approach/Methods:** This cross-sectional study analyzed data from respondents of the 2016 and 2017 Association of American Medical Colleges Graduate Questionnaire (AAMC-GQ). The AAMC-GQ surveyed graduating students at the 140 accredited allopathic U.S. medical schools with graduates as of 2017. Students’ responses from the GQ were linked to self-reported demographic data via AAMC data applications and services, including the American Medical College Application Service, Medical College Admissions Test, and Electronic Residency Application Service. Demographic variables included sex (male vs female), race/ethnicity, sexual orientation (heterosexual, LGB, or unknown), and age. Using multivariable logistic regression, we examined the extent to which student-reported faculty respect for diversity varied by demographic characteristics and sequentially adjusted all logistic regression models first for demographics then for marital status and financial variables.

**Results:** The final study sample consisted of survey responses from 28,778 students, which represented 75.4% of the total