Purpose: Health care workplace violence is an underreported, ubiquitous, and persistent problem. Despite its pervasiveness, medical students receive little training in how to respond to workplace violence, although they are frequently exposed to patients in high-risk settings such as the emergency department and psychiatric wards. De-escalation training has been shown to improve provider confidence in managing these scenarios and provider attitude and temperament when faced with aggressive patients. For any training to be executed and used in real-world conditions, it is important to assess barriers to implementation. The purpose of this study was to identify medical students’ perceived barriers to using verbal de-escalation techniques when faced with an aggressive or agitated patient and to characterize gender-related differences in these perceived obstacles. We hypothesized that female students would be more likely to identify internal barriers to de-escalation.

Methods: This study analyzed qualitative data collected as part of a required workplace violence online training module completed asynchronously by fourth-year medical students at the Michigan State University (MSU) College of Human Medicine in the fall of 2019. The module addressed the appropriate management of agitated patients in the health care setting, including verbal de-escalation. Students were required to answer multiple open-ended questions including this prompt about verbal de-escalation: “What barriers do you anticipate might make it challenging for you to use this technique with agitated patients in the future?” The authors then performed a qualitative analysis of de-identified student responses to this prompt. Using constant comparison, the barriers were sorted into internal or external loci of control. Disputes were resolved by iterative conversation among the researchers until consensus was achieved. The MSU institutional review board reviewed and approved this study.

Results: The module was completed by 161 students who identified 337 barriers. This included 91 female students identifying 191 barriers and 70 male students identifying 146 barriers, for an average of 2.1 barriers per student, irrespective of gender. Two barriers were uncategorizable. The most common barrier cited overall was emotional, namely fear or anxiety felt by the student (40.7% of total). Female students cited emotional barriers most commonly (50% of female responses). Male students cited patient-based barriers most commonly, for example, the patient was too agitated or did not speak English (45% of male responses). We classified 155 total internal barriers (46%) and 180 external barriers (53.4%). 68.3% of the internal barriers were identified by female students, while only 46.1% of the external barriers were identified by female students, which is statistically significant ($P < .02$).

Discussion: Workplace violence is unavoidable for health care workers. It is imperative that medical students are trained early to safely interact with agitated patients, and specifically, how to de-escalate them appropriately, including verbal de-escalation when possible and appropriate. Our data demonstrate that students anticipate multiple barriers to using verbal de-escalation techniques appropriately, ranging from “my attending will prefer using restraints” (male, external) to “more concerned for my own safety” (female, internal). The preponderance of female-identified internal barriers fits with literature that suggests that females are more likely to attribute failures to their own actions, as opposed to males, who will attribute them to external events.

Significance: Our data suggest that not only are students wary of putting these important skills into practice, but it may be beneficial to offer targeted reassurances to male and female medical students based on their perceived barriers. Even without a gender-based component to the training, the anticipated barriers themselves can help guide future instruction to keep our students feeling safe in their environments and confident in their abilities.

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References


Residency Program Director Perceptions of Resident Performance Between Graduates of Medical Schools With Pass/Fail Versus Tiered Grading System for Clinical Clerkships: A Meta-Analysis

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Purpose: The variability and imprecision of clerkship grading raise concerns for program directors (PDs) during applicant selection. Although the majority of medical schools have adopted pass/fail (P/F) preclinical grading, only 12 schools formally use P/F grading for clerkships. Additionally, per Liaison Committee on Medical Education recommendations, events such as Hurricane Katrina and the COVID-19 pandemic have led additional schools to adopt P/F clerkship grading temporarily. Moreover, the rise in studies describing student- and institutional-level disparities in clerkship grading has tasked medical education personnel with weighing the fairness and risk of disparities as well as the potential benefits of tiered grading. With the continued paucity of literature examining P/F
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 systems 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.

**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**

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**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