Medical Student Survey on Pain Management in Medical Education Across Three Continents

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INTRODUCTION

Effective pain management is a fundamental part of patient care, yet pain education varies widely across medical schools. This international survey assessed medical students' attitudes, training, clinical experiences, and knowledge in pain management on three continents to identify opportunities to improve acute and chronic pain education, locally and globally.

METHODS

Design: Voluntary, anonymous 34-item survey administered via Qualtrics, February 2025 to April 2026.

Participants: 194 medical students across all years of training at one US institution (n = 101), one UK institution (n = 29), and three Singapore institutions (n = 64).

Survey domains: attitudes toward and comfort with pain management, clinical experiences, training experiences, pain management knowledge, and preferences for pain education.

Analysis: Responses were compared across countries with chi-square tests. US students were also compared by training stage: preclinical (MS1) vs clinical (MS2–MS4).

	US (n = 101)	UK (n = 29)	Singapore (n = 64)
Female, n (%)	70 (78%)	8 (28%)	32 (51%)
Age, mean (SD)	26.5 (2.3)	21.7 (0.7)	23.0 (2.8)
Age, range	23–37	21–23	19–33
Year 1	13 (13%)	0	4 (6%)
Year 2	15 (15%)	0	10 (16%)
Year 3 (US: MS3/MS3+)	56 (55%)	0	16 (25%)
Year 4	17 (17%)	25 (86%)	16 (25%)
Year 5	—	4 (14%)	17 (27%)

Table 1. Demographics.

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RESULTS

	US	UK	Singapore
Do you believe pain management is an integral part of patient care?	99%	100%	96.3%
Do you feel medical students receive adequate training in pain management?	24%	44.8%	30.9%
Have you received any teaching about pain management in children?	20%	7.1%	8.2%
% of students who desire additional training in the use of opioids	46.3%	70.4%	53.2%
Most frequently preferred method of teaching	67.9% Bedside	63% Bedside / Videos	42.5% Didactics

Table 2. Student perceptions on pain management and perceived sufficiency of pain management education, topics, and training modalities.

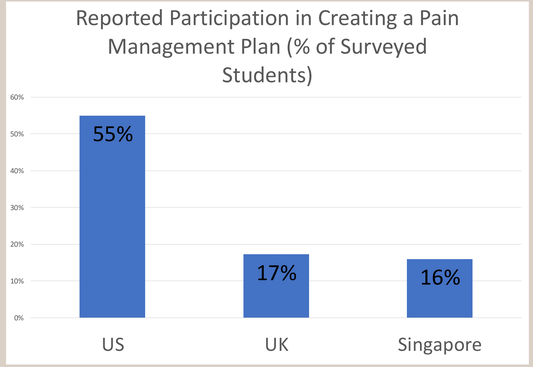


Figure 1. Proportion of students who reported participating in creating a pain management plan, by country. Chi-square, p < 0.001.

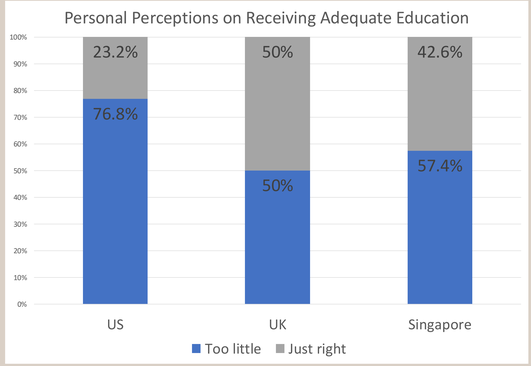


Figure 2. Response to: "The amount of education on pain management I received in medical school was: too little, just right, or too much." No students selected "too much." Chi-square, p < 0.001.

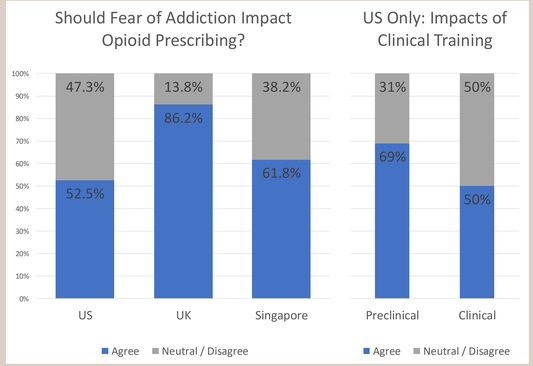


Figure 3. Left: agreement that fear of addiction should influence opioid prescribing, by country (chi-square, p < 0.001). Right: US students by training stage, preclinical (MS1) vs clinical (MS2–MS4) (chi-square, p = 0.035).

KEY FINDINGS

1. 98% of students consider pain management integral to patient care, yet only 29% feel medical students receive adequate training.
2. Opioids were the most requested topic for additional training at every site (52% overall).
3. US students were the most likely to have helped create a pain management plan (55% vs 17% and 16%) yet the most likely to report too little pain education (77% vs 50% and 57%).
4. Few students reported any teaching on pediatric pain management (7-20%).
5. Agreement that fear of addiction should influence opioid prescribing varied by country (US 52.5%, UK 86.2%, Singapore 61.8%; p < 0.001) and was lower in US clinical than preclinical students (50% vs 69%; p = 0.035).

CONCLUSIONS

Most respondents were in their clinical years, yet only a minority felt adequately trained, suggesting gaps that persist into clinical training. Greater hands-on participation among US students was not accompanied by greater perceived adequacy of their pain education. Pediatric pain management and opioid risk assessment are potential curricular targets.

Limitations include small sample of institutions, voluntary sampling, differing curricular structures across institutions and continents, and self-reported training experiences.

Future directions include expansion to additional institutions, compare formal curricula with student-reported experience, and implementation and evaluation of curricular changes.

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