

AUTHORS

Kaleana Plares BA, Misty M. Montoya MD PhD, Todsaporn Rodbumrung MD, Nancy Ha MD, Travis Reece-Nguyen MD MPH, Rita Agarwal MD, and Felipe D. Perez MD

TITLE

Anesthesiologists Outreach to Help Build Our Future Healthcare Workforce

ABSTRACT

(1) Background: AAMC estimates a shortage of 139,000 physicians by 2033. Part of the solution involves early community outreach with the creation of a healthcare pipeline targeting grades K-12 through STEM curriculum. Anesthesiologists use science, technology, engineering, and math in their daily work and are perfectly suited to lead these efforts. In partnership with a national nonprofit organization, Project Lead The Way (PLTW), we integrate our medical expertise to the STEM curriculum through interactive and engaging learning experiences.

(2) Project Lead The Way: <https://www.pltw.org>

(3) Methods: Due to the COVID-19 pandemic, starting in 2021 we adapted our educational activities to an online curriculum using video conferencing platforms. PLTW teachers from 3 local high schools host online classrooms where we lead multiple sessions virtually bringing students into the operating room. In each hour-long session, anesthesiologists teach lessons on airway anatomy, cardiac and respiratory monitoring, and crisis resource management in the operating room while encouraging student engagement and active participation. Sessions end with a Q&A connecting students, teachers, and physicians to promote interest into healthcare fields.

(4) Results: Stanford Anesthesiology Department and the CSA in collaboration with state legislators have reached hundreds of high school students over the past 3 years through PLTW. Participants generated positive feedback and demonstrated broadened knowledge of session topics in post-session surveys.

(5) Conclusion: Anesthesiologists are in an ideal medical specialty to promote health education within their local communities. PLTW high school graduates are nearly 3x as likely to major in STEM fields compared to non-PLTW graduates.

Preliminary results: Our 2022 survey has shown that 100% of participating high school students would recommend this workshop to a friend. 48% rated the event as the "best ever" with most of the remaining students indicating that they "enjoyed it." High school students broadened their knowledge on basics of a mechanical ventilator, cardiac and respiratory monitors during a surgical procedure, intubation techniques, and potential pathways to medicine and anesthesiology.

FUNDER: CSA (California Society of Anesthesiologists)

COMMUNITY PARTNER

Project Lead The Way (PLTW), CSA (California Society of Anesthesiologists); Local high schools (Willow Glen HS, Palo Alto HS, and Leland HS); and state legislators (Asm. Evan Low)

CATEGORY

Promotion of Health Awareness and Healthcare Access Through Education