Submission Id: 5522

Title

Graduating Medical Students' Knowledge Compared to Their Confidence in Treating Diabetes

Priority 1 (Research Category)

Education and training

Presenters

Danielle Pitter, BS, Alyssa Indelicato, BA, MPH In Progress, Christopher Morley, PhD, MA, Barbara Feuerstein, MD, Ruth Weinstock

Abstract

Context: To prevent diabetes morbidity and mortality, it is important for future physicians to know how to evaluate and manage people with this common disease. Student self-assessed confidence is frequently used as a proxy for knowledge, but the accuracy of this association is unclear. Objective: To determine if self-reported confidence in graduating medical students to treat and manage adults with diabetes is associated with objective diabetes knowledge. Study Design and Analysis: Cross-sectional, survey-based observational study. The Pearson Correlation coefficient was calculated to assess the relationship between student confidence and knowledge. Dataset: Deidentified voluntary survey responses collected from February-March, 2023. Population studied: Graduating medical students at a US allopathic medical school (n=176). Instrument: A questionnaire was developed and electronically distributed through RedCap to assess student confidence and knowledge of managing people with diabetes. Questions included demographics, external experiences, knowledge, and confidence related to diabetes and student feedback. A curriculum review was used to determine education exposure to diabetes. Outcome Measures: Student confidence levels were measured using a summation of 6 Likert scaled items asking about confidence related to diabetes care (5 points each, 30 points possible total). Knowledge levels were measured by totaling the number of correct answers in the objective questionnaire, with scores ranging from 1-15. Results: The survey response rate was 38% (n=67); male 36%, White 72%, Black 6%, Hispanic 3%. The mean knowledge score was 9.63 out of 15; the mean confidence score was 19.97 out of 30. Overall knowledge and confidence scores were uncorrelated, as were most individual items, with the exception of a positive correlation between confidence in prescribing/adjusting medications used to treat a person with type 1 diabetes and knowledge levels (R=.325, p=.007). Theoretical predictors of knowledge (electives, personal experience) did not relate to measured knowledge differences. Conclusions: The confidence that graduating medical students have in managing people with diabetes is poorly associated with levels of knowledge, and overall knowledge was suboptimal. Confidence levels are a questionable proxy for knowledge. This should be considered during curriculum reform.