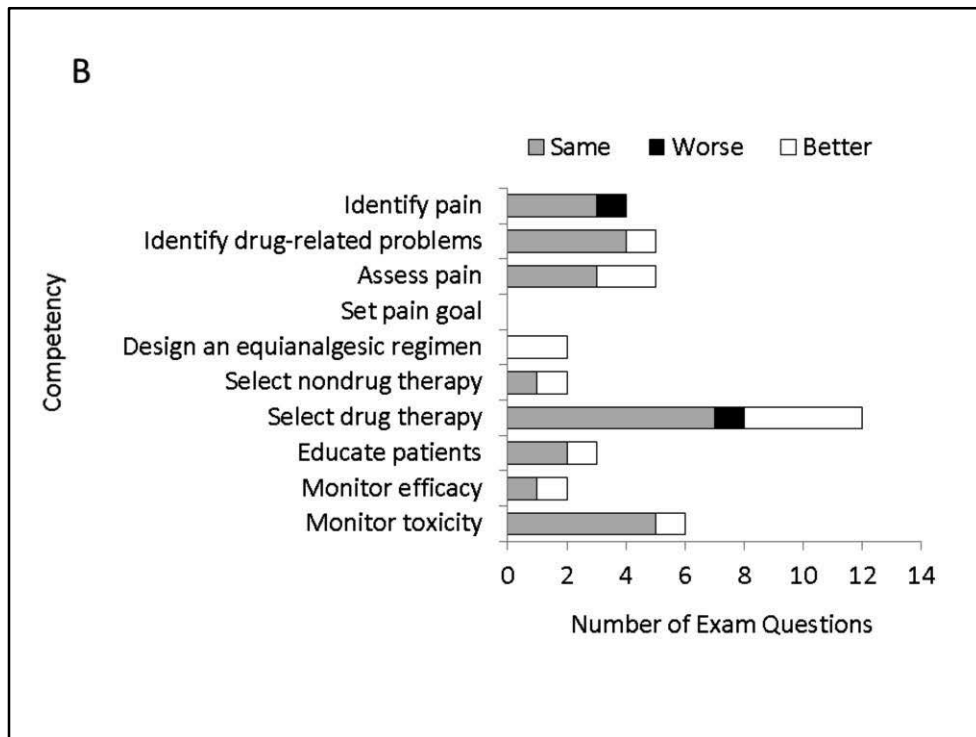


Supplemental Digital Appendix 2A. Performance on 20 multiple-choice exam questions, categorized by the highest level of cognition required to answer the question, among University of Maryland first-year doctor of pharmacy students learning pain therapeutics in a traditional (TC, Class of 2018) versus flipped classroom (FC, Class of 2019).

Better performance indicates more students in the flipped cohort answered the question correctly, $P < .05$. *Worse* performance indicates a fewer students in the flipped cohort answered the question correctly, $P < .05$. *Same* performance indicates there is no significant change in the number of students with a correct answer between the traditional cohort and flipped cohort.



Supplemental Digital Appendix 2B. Performance on multiple-choice exam questions, categorized by competency domain, among University of Maryland first-year doctor of pharmacy students learning pain therapeutics in a traditional (TC, Class of 2018) versus flipped classroom (FC, Class of 2019). Of 20 total exam questions, some questions assessed more than 1 competency domain.

Better performance indicates more students in the flipped cohort answered the question correctly, $P < .05$. *Worse* performance indicates a fewer students in the flipped cohort answered the question correctly, $P < .05$. *Same* performance indicates there is no significant change in the number of students with a correct answer between the traditional cohort and flipped cohort.