

INTRODUCTION

Nearly \$1 trillion is wasted annually in U.S. healthcare expenditures and clinical decision-making is a major contributor to rising costs. Research suggests that physician resource utilization is strongly influenced by practices to which they were exposed during training. Choosing Wisely (CW) is a campaign that promotes resource stewardship by helping physicians and patients engage in conversations about unnecessary tests and treatments. The main objective of this study is to evaluate the impact of including CW curriculum into first-year case-based learning activities on the attitude and behavior of pre-clinical University of Utah students around resource stewardship.

METHODS

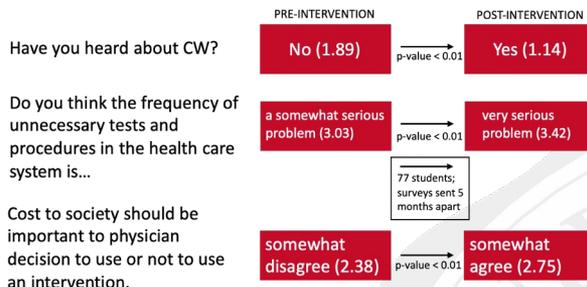
We incorporated CW recommendations into the pre-clinical case-based learning (CBL) curriculum to familiarize medical students with high-value care concepts. We evaluated each CBL case and incorporated applicable CW guidelines into the discussion points for treatment, imaging, and patient centered decision-making. Example:

Following surgery, lovenox treatment was initiated for his DVT and PE. The duration of lovenox treatment will depend on his how his tumor responds to adjuvant radiation and chemotherapy. The medical team opted to not reimage the leg as per **Choosing Wisely** guidelines: <http://www.choosingwisely.org/collection-lists/society-vascular-medicine-reimage-deep-vein-thrombosis/>

High-value care concepts were integrated into ten cases and were presented to 125 first-year medical students, who met in small groups with a faculty facilitator.

A pre-intervention survey was distributed to all students prior to starting classes to assess initial attitudes toward cost-conscious care and level of familiarity with the Choosing Wisely campaign. Another survey was distributed at the completion of the first year, after the completion of all CBL interventions. Answers to each of the survey questions were correlated to a numerical value that allowed for paired t-test statistical analysis; results were considered statistically significant at p-value < 0.05.

RESULTS/DISCUSSION



Integrating CW principles into the case-based curriculum at the University of Utah Medical School led to increased familiarity and exposure to high-value practices. Survey data among the 77 participants that responded showed significant differences in pre and post implementation data in three categories:

- (1) Prior to CBL changes, students only learned about high-value care through elective courses or independent learning. After intervention, almost all students had heard about the CW campaign and its purpose.
- (2) Students were more likely to identify that the frequency of unnecessary tests and procedures in the healthcare system was “a very serious problem” compared to “a somewhat serious problem.”
- (3) More students agreed that cost to society should be an important factor in the utilization of interventions

Overall, implementation of CW topics into our medical school curriculum demonstrated quantitative changes in students’ attitudes surrounding resource stewardship.

CONCLUSIONS

We believe the inclusion of curriculum focused on high-value care and CW guidelines can help students incorporate evidence-based practice recommendations in encounters they will undoubtedly face in their careers. Incorporating such information into existing courses offers a method to introduce novel concepts into the expanding competencies expected of graduating medical students. This intervention offered a unique method to integrate a topic endorsed by the American Medical Association, and soon to be incorporated into standardized exams by the National Board of Medical Examiners. As additional competencies are expected of medical students, schools are obligated to adapt and incorporate new objectives into existing curricula in order to prepare learners.

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