

INTRODUCTION

- High-value care (HVC) is an essential component of medical school curricula, but students' exposures vary by school.^{1,2}
- Previous research has showed that 51% of surveyed students on Internal Medicine (IM) clerkships found their HVC education inadequate.³ 78.5% felt that HVC education should be included in the IM clerkship.³
- Thematic analysis of medical student perceptions of HVC found that common identified problems include unnecessary tests and treatments and duplicative tests and treatments.⁴
- First and second-year medical students' attitudes and perceptions of HVC before and after taking HVC-related courses are not understood at Johns Hopkins University School of Medicine (JHUSOM).

OBJECTIVES

- To understand first and second-year medical students' experience, comfort, and attitudes with HVC during their Longitudinal Ambulatory Clerkship (LAC), a weekly half-day ambulatory clinical rotation in outpatient family medicine, internal medicine, or pediatric clinics.
- To explore the impact of a 3-day Topics in Interdisciplinary medicine (TIME) course about HVC on these parameters.

MATERIALS AND METHODS

- A voluntary survey relating to HVC during LAC, approved by Hopkins IRB, was distributed once in February 2021 to Year 1 medical students at JHUSOM and again in February 2022 for both Year 1 and 2 students.
- Descriptive and chi-square analyses were used to compare responses of students based on categorization by survey responses stratified by year.
- GEE logistic and proportional odds models were used to compare Year 1 and Year 2 student responses.
- All analyses were conducted in SAS

RESULTS



TOTAL RESPONSES

YEAR 1
100 Responses

YEAR 2
51 Responses

Did you notice any instances when labs or imaging tests were ordered that seemed unlikely to impact patient care?

YEAR 1
22% Yes

YEAR 2
35% Yes

There was **no significant difference** in witnessing labs or imaging unlikely to impact patient care between Year 1 and Year 2 students ($p = 0.10$)



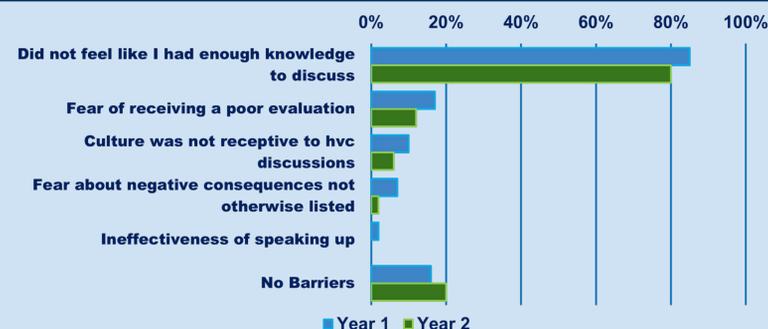
Are you comfortable bringing to the attention of your preceptor that a lab or test is unnecessary?

YEAR 1
20% Comfortable

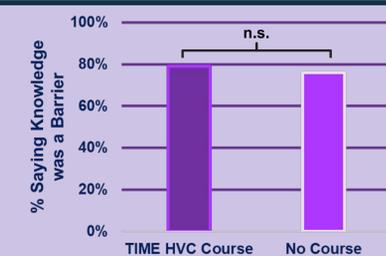
YEAR 2
29% Comfortable

Year 2 students were significantly **MORE COMFORTABLE** compared to Year 1 students ($p = 0.03$)

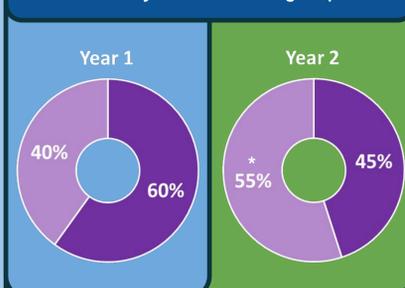
Barriers to feeling comfortable bringing up high value care discussions with healthcare team



Did taking the HVC TIME Course lower the knowledge barrier for Year 2 students?

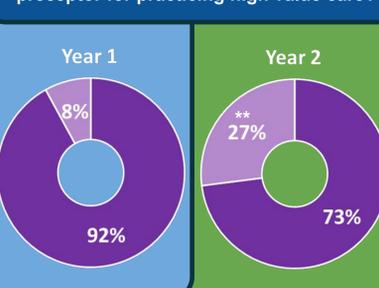


How often were costs of tests/prescriptions discussed at any time when caring for patients?



Year 2 students were **MORE LIKELY** to experience discussions of costs ($p = 0.03$)

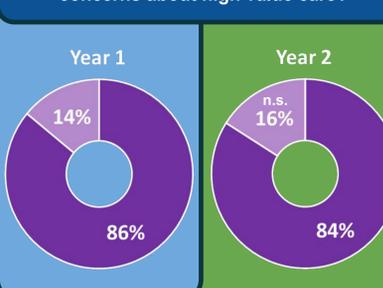
How often were you praised by your preceptor for practicing high value care?



Year 2 students were **MORE LIKELY** to receive praise for HVC discussions ($p = 0.001$)

Year 2 **FEMALE** identifying students were **LESS LIKELY** to receive praise compared to Year 2 males (12% vs 41%, $p = 0.02$)

How often did you bring up your specific concerns about high value care?



Year 1 and Year 2 students were **EQUALLY UNLIKELY** to bring up concerns about HVC

DISCUSSION

CONCLUSIONS

- Roughly one-third of medical students witnessed labs or imaging that was unlikely to impact patient care, indicating a need for improving high-value care practices in the clinic.
- Relative to Year 1 students, Year 2 students reported greater comfort bringing attention to low value care in the clinic, experienced more frequent discussions of costs with patients, and were more often praised for HVC discussions.
 - There was a disparity of praise between male and female identifying Year 2 students, with females receiving less praise for discussing HVC.
- Lack of knowledge is markedly the greatest barrier for students to discuss HVC in the clinic for both Year 1 and Year 2 students.
 - There was no difference in this barrier between years despite the increased clinical experience of Year 2 students, and both years were equally unlikely to bring up concerns about high value care.
 - This barrier was not reduced for students who had taken a 3-day course dedicated to HVC.
 - These data suggest that additional measures are necessary to translate HVC education to the clinic.

LIMITATIONS

- Survey administration occurred one month after clinical experience began for first-year students, which may leave inadequate time to assess high value care in clinic.

FUTURE DIRECTIONS

- Introducing principles of high value care earlier in medical education could help prepare students to address HVC in the clinic.
- Implementing longitudinal HVC education with the addition of clinical case-based vignettes may promote integrated learning and therefore prepare students to translate their HVC knowledge from didactic to clinical.
 - We hope to accomplish this through the creation of a year-round HVC student group and a revamped HVC selective given at the beginning of year 1.
- Analysis of year 3 data will be conducted in the upcoming academic year.

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