



Following the Impact of Pre-Clinical High Value Care Education

Emily Turner Mallory, Anna Dickson, Avery Villeret, Caroline Doherty, Johnny Yang, Jayla Mondy, and Joshua Jeter
University of Mississippi Medical Center

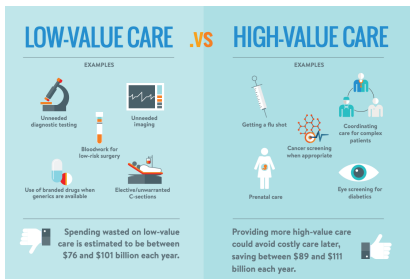


INTRODUCTION

High-value medical care is a concept that has gained significant attention in recent years. The aim is to provide safe, effective and efficient care to patients while minimizing costs.

Although medical schools have traditionally focused on teaching these concepts throughout the clinical years of medical student education, there is a growing recognition of the importance of educating pre-clinical students on High Value Care (HVC) principles.

Choosing Wisely is an international organization that is committed to teaching and incorporating high value care (healthcare that focuses on balancing benefits and costs of testing/procedures with the goal of improving patient outcomes) into our medical institutions. After our medical school began selecting students to attend the "Choosing Wisely STARS"; we created a committee for outreach of these principles at our home institution.



Our committee then created an elective course for first year medical students entitled: "High Value Care- A Choosing Wisely Course". Through this, students learned the pillar concepts of "high-value care" as well as explored how to implement these concepts in their clinical years and future practices.

AIM

OUR AIM:

To create a course exposing students to concepts of High Value Care in the pre-clinical years of medical school education.

Our hope was through early exposure, students would be excited to continue research and integration into their own studies and clinical rotations.

OBJECTIVE:

To evaluate the effectiveness of a program designed to teach high-value medical care principles in a medical school classroom setting to pre-clinical students.

OUR COURSE:

During the first-year spring at the University of Mississippi Medical School, students select an elective course to attend throughout the entirety of that semester. Our course incorporated lectures to teach the concepts of high value care and interactive sessions to teach students how to apply these principles. Students were prompted to create their own framework for how to use HVC principles as part of their clinical reasoning. At the end of the course, students worked in groups on final presentations, which allowed them to showcase their knowledge of high value care and apply it to clinical scenarios. Student projects focused on a variety of topics aimed at the four pillars of Choosing Wisely. For example, a group this past year presented a case: "Do you need an ammonia level for every hepatic encephalopathy patient?"

Four Pillars of High Value Care (HVC)

1) Is it evidence based?

Yes... and no.

While ammonia levels can correlate with severity of HE, these findings are inconsistent. HE is a clinical diagnosis. Recommendations to treat and bend clinically.

Guideline	Initial Ammonia Level	Upper Ammonia Level
1	20-30	30-40
2	20-30	30-40
3	20-30	30-40
4	20-30	30-40
Total	81-286	109-112 pt.c

2) Is it patient centered?

No! No one likes to be stuck with a needle. Patient has good support system (wife), can make appropriate medication changes and monitor.

Four Pillars of HVC

3) Is it cost effective?

No! No clinical gain + costly Ammonia \$138 CBC \$147 CMP \$149 LFTs \$347 CT Head w/o contrast \$1391

4) Does it make sense?

While it physiologically makes sense for ammonia levels to be elevated, hepatic encephalopathy is a clinical diagnosis. Studies have shown patients can have HE with low ammonia levels.

Above are the slides where students incorporated these four pillars of HVC into their presentations, showcasing their adaptation of these concepts.

After three consecutive years of offering the "Choosing Wisely" course at our home institution, we collected surveys from 30 participating first-, second-, and third-year medical students to gather quantitative and qualitative information on the continuation of these principles through post-course surveys. The surveys assessed the students' understanding of HVC concepts, attitudes towards HVC, experiences with the program, and their intention to incorporate these principles into clinical practice.

RESULTS

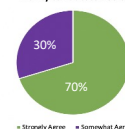
Surveys included questions that asked students to indicate how much they agreed with the following statements:

- I learned what high value care is through this course.
- I plan to make changes in my educational clinical years as well as future practice because of this course.
- I feel I can adequately educate peers on the topics learned.
- The selective was highly relevant and engaged learning.

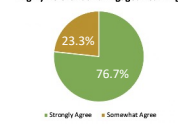
METHODS

The response data showed that every student agreed with each of the above statements. The green on the graphs to the right showing the percent of "strongly agree" and other color representing "somewhat agree."

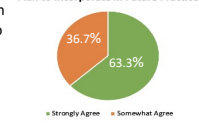
Ability to Educate Peers



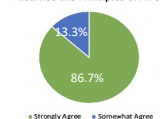
Highly Relevant and Engaged Learning



Plan to Incorporate in Future Practice



Learned the Principles of HVC



CONCLUSION

This study demonstrates the effectiveness of a pre-clinical course designed to teach HVC principles in a classroom setting. The program was found to be highly relevant to medical education along with significant improvement in students' understanding. The incorporation of HVC principles in medical education has the potential to improve patient outcomes while reducing healthcare costs. Medical schools should consider implementing similar programs early on in medical education to emphasize the importance of high-value care in medical practice, no matter the clinical base knowledge of students.

WHAT'S NEXT:

- Expand the Elective course for 1st year medical students to include more interactive sessions so students can better learn to apply these principles to clinical practice
- Implemented a lecture for all first-year medical students to educate and expose those not in the elective course.
- "Choosing Wisely: Things we do for no reason" emailed to clinical students prior to core rotations.

Future investigations may also include a comparative and statistical analysis which includes an assessment of student knowledge of HVC principles before and after HVC exposure as well as incorporations into the clinical years to further understand the role of introducing HVC in medical education.

CONTACT

The University of Mississippi Medical Center, School of Medicine and Choosing Wisely Coalition.

Visit <https://www.choosingwisely.org/> for more information.

CONTACT: Emily Turner Mallory, at 601-941-0688 or eturner@umc.edu.