

Evaluating the Impact of a Value-Based Medicine Intervention on Medical Students' Understanding of Deep Vein Thrombosis and the Wells Criteria

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INTRODUCTION

- Preparing future physicians to deliver high-value, patient-centered care requires early integration of value-based medicine (VBM) into medical education [1-3].
- Limited research exists on incorporating VBM principles into undergraduate medical curricula, particularly in the context of deep vein thrombosis (DVT) diagnosis.
- The Wells Criteria, an evidence-based and cost-conscious clinical decision-making tool for DVT, offers a valuable framework for introducing VBM concepts to medical students.

OBJECTIVES

- Enhance medical students' competency in diagnosing DVT while introducing foundational principles of VBM early in training.
- Evaluate the impact of a targeted educational intervention on students' VBM attitude, knowledge of Wells Criteria and venous thromboembolism, and cost-effective diagnostic decision-making.

METHODS

- Participants:** Second-year medical students at the UC San Diego School of Medicine (N = 141) enrolled in the Clinical Decision-Making course.
- Design:** Pre-/post-intervention survey study assessing knowledge and attitudes toward VBM and DVT diagnostics.
- Intervention:** After completing a pre-survey adapted from Shelke et al. [1], students attended lectures on Bayesian reasoning and VBM.
- Analysis:** A total of 92 students completed both surveys. Changes in Likert-scale responses were analyzed using paired t-tests.

RESULTS

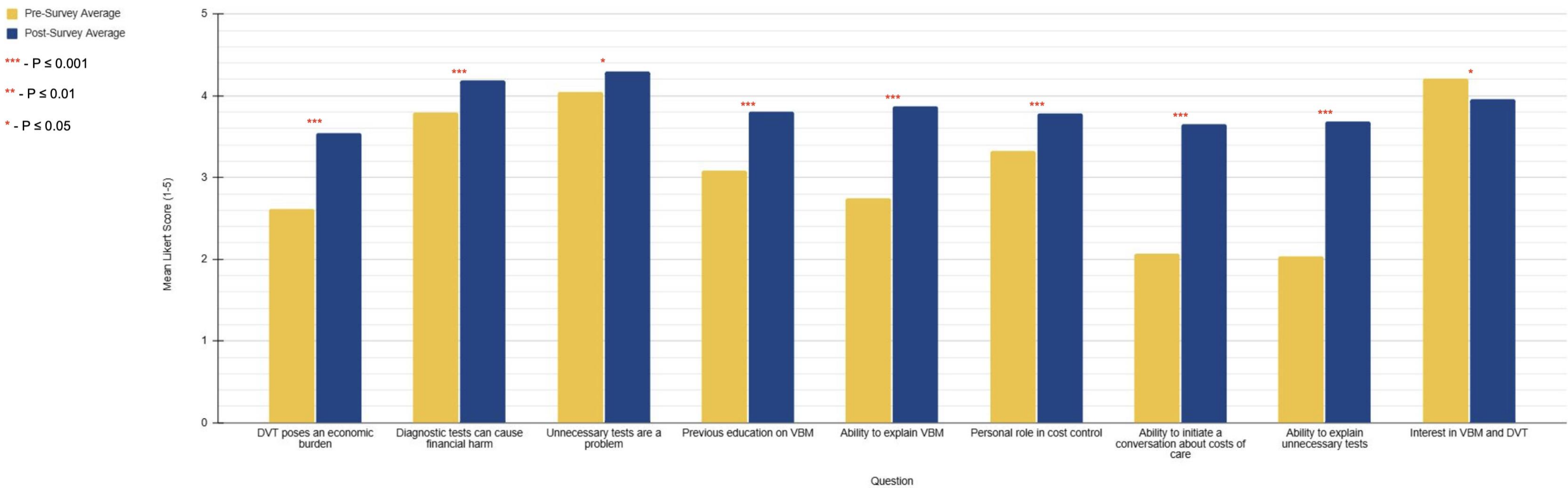


Table 1. Attitudes survey responses before and after intervention graded on a Likert scale (Strongly agree – 5, Somewhat agree – 4, Neither agree nor disagree – 3, Somewhat disagree – 2, Strongly disagree – 1).

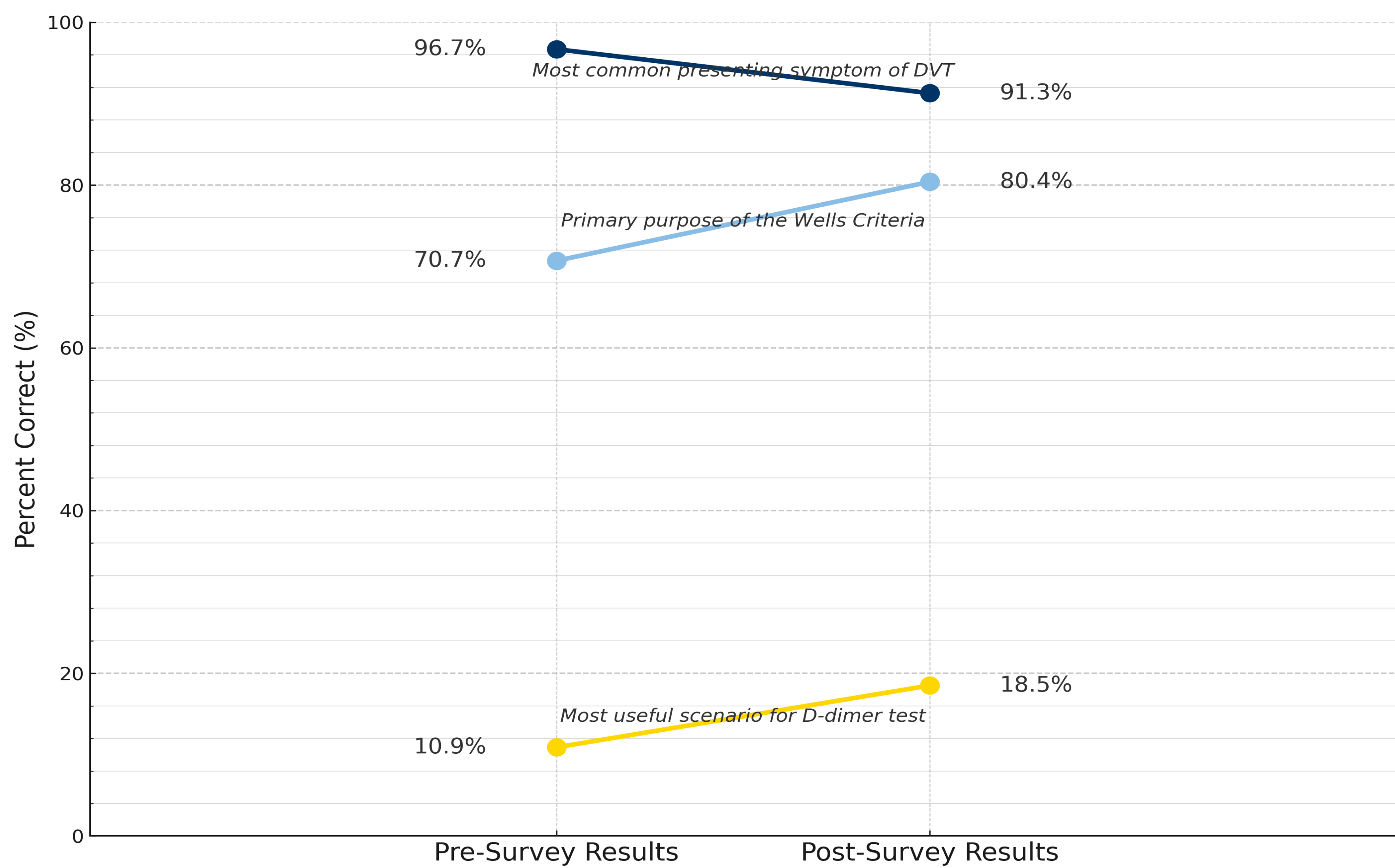


Figure 2. Percentage of students answering correctly on knowledge assessment of DVT diagnosis. Average assessment performance increased from 58.70% to 63.41%, demonstrating a trend toward significance (P = 0.057).

CONCLUSIONS

This single-session intervention on Bayesian reasoning and VBM increased medical students' awareness of cost-conscious care and their confidence in applying these principles. The Wells Criteria proved useful for shaping positive attitudes toward value-based clinical reasoning, though knowledge gains were modest.

Findings suggest that, although early exposure to VBM can shift perceptions, deeper learning may require longitudinal and clinically-integrated instruction. Future efforts should utilize peer-led teaching, incorporate performance-based assessments, and provide context-rich practice with tools like the Wells Criteria to ensure lasting integration of VBM principles into clinical training.

References

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