



Resource Stewardship in Pre-clinical Case-Based Learning

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BACKGROUND & OBJECTIVES

BACKGROUND

- The US spends more per capita on healthcare than any other nation.¹
- Medical costs contribute to over half of bankruptcies in the US.²
- Physicians are responsible for 80% of healthcare costs.³
- The Choosing Wisely® STARS Campaign aims to integrate healthcare value curricula into medical education programs across the US.

OBJECTIVES

- Our “Cost Card” lists prices of diagnostic studies for use in problem-based learning. With use of this tool, learners will be able to:
1. Consider the financial impact of a diagnostic workup when deciding which tests to order in a problem-based learning case.
 2. Identify diagnostic studies that are more costly or more affordable for patients within a problem-based learning case.
 3. Appreciate the impact of unnecessary diagnostic studies on patient care value after completing a problem-based learning course.

METHODS AND RESULTS

Figure 1. Example Cost Card.

Hematology Study	Price (\$)	Potential Alternative	(\$)
CBC	17 w/out diff. 21 w/ diff.	Spun Hemoglobin	7
Iron studies	17 serum Fe 36 ferritin 23 TIBC 34 Transferrin	Ferritin alone	36
Coagulation panel	11 PT/INR 16 PTT	INR	11
Other blood studies	Price (\$)	Potential Alternative	(\$)
CMP	28	BMP LFT	23 22
ESR CRP	8 14		
Lipid profile	43		
Thyroid panel	44 TSH 17 T3/T4	TSH only	44

- Costs of diagnostic tests derived from: www.healthcarebluebook.com
- First- and second-year students used cards in pre-clinical case-based learning.
- Students answered three questions about cost cards on end-of-year evaluations.

Figure 2. I consider cost when evaluating what tests should be ordered in a case.

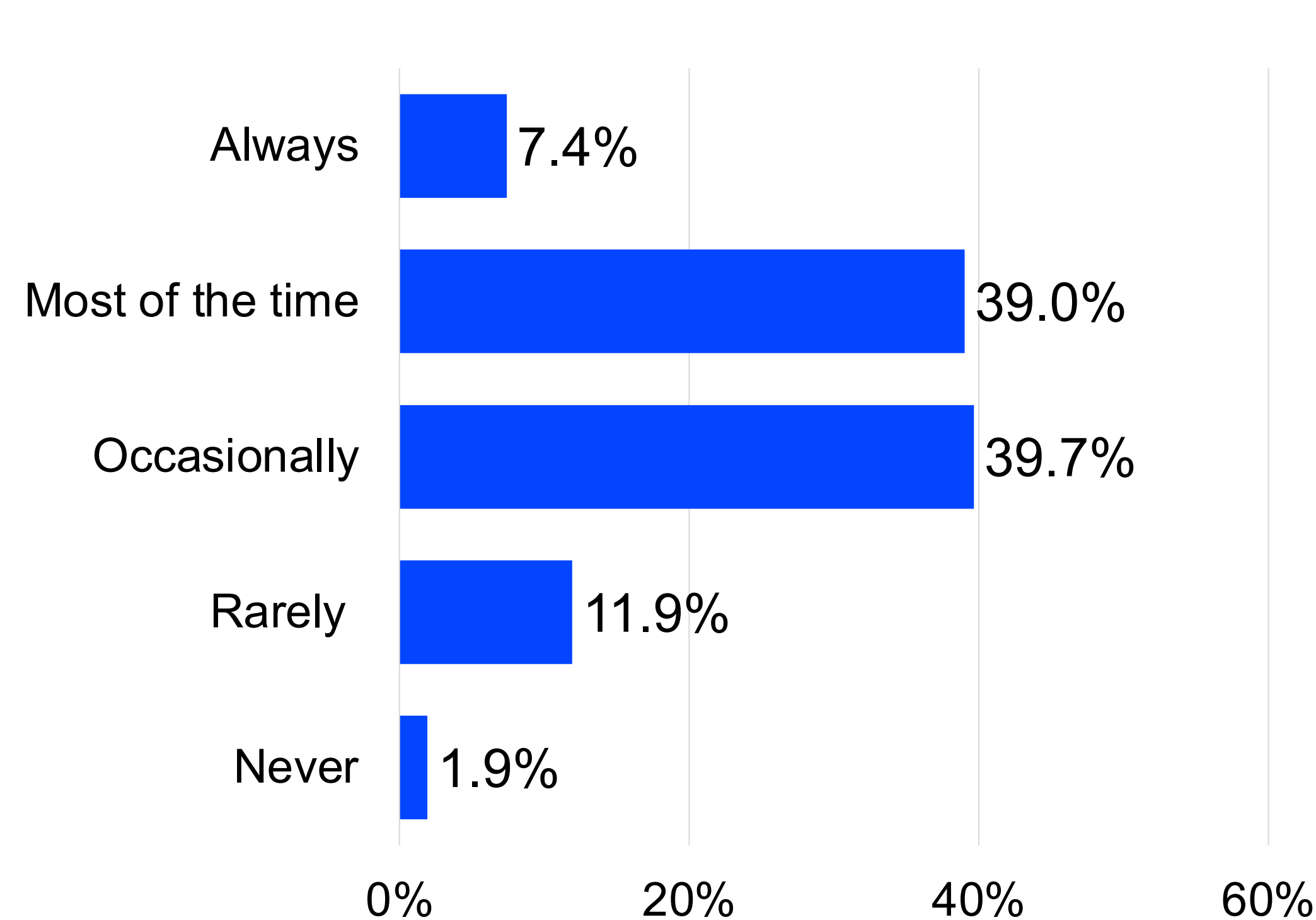


Figure 3. How often did your group use the cost card for labs and imaging studies with their respective prices?

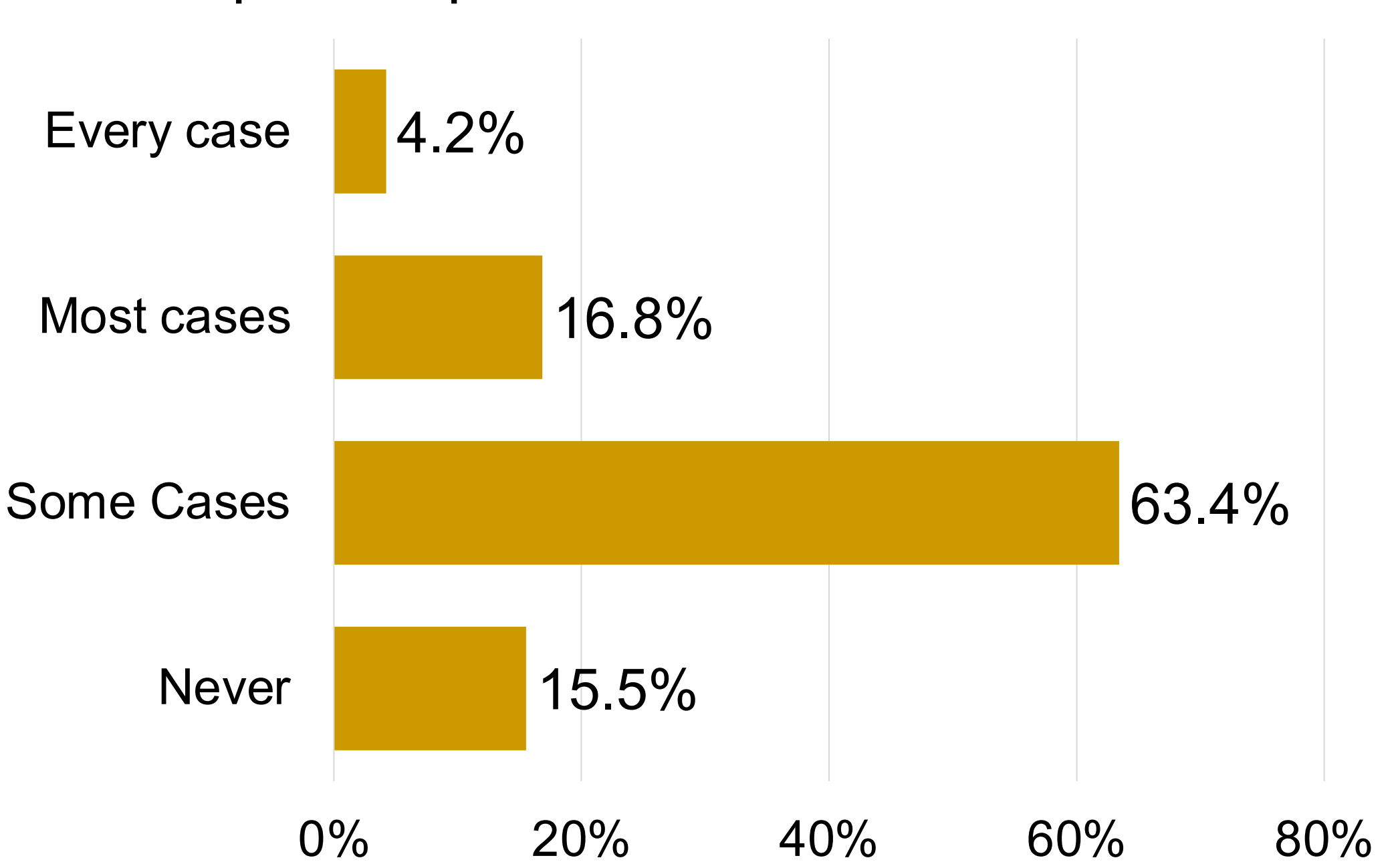
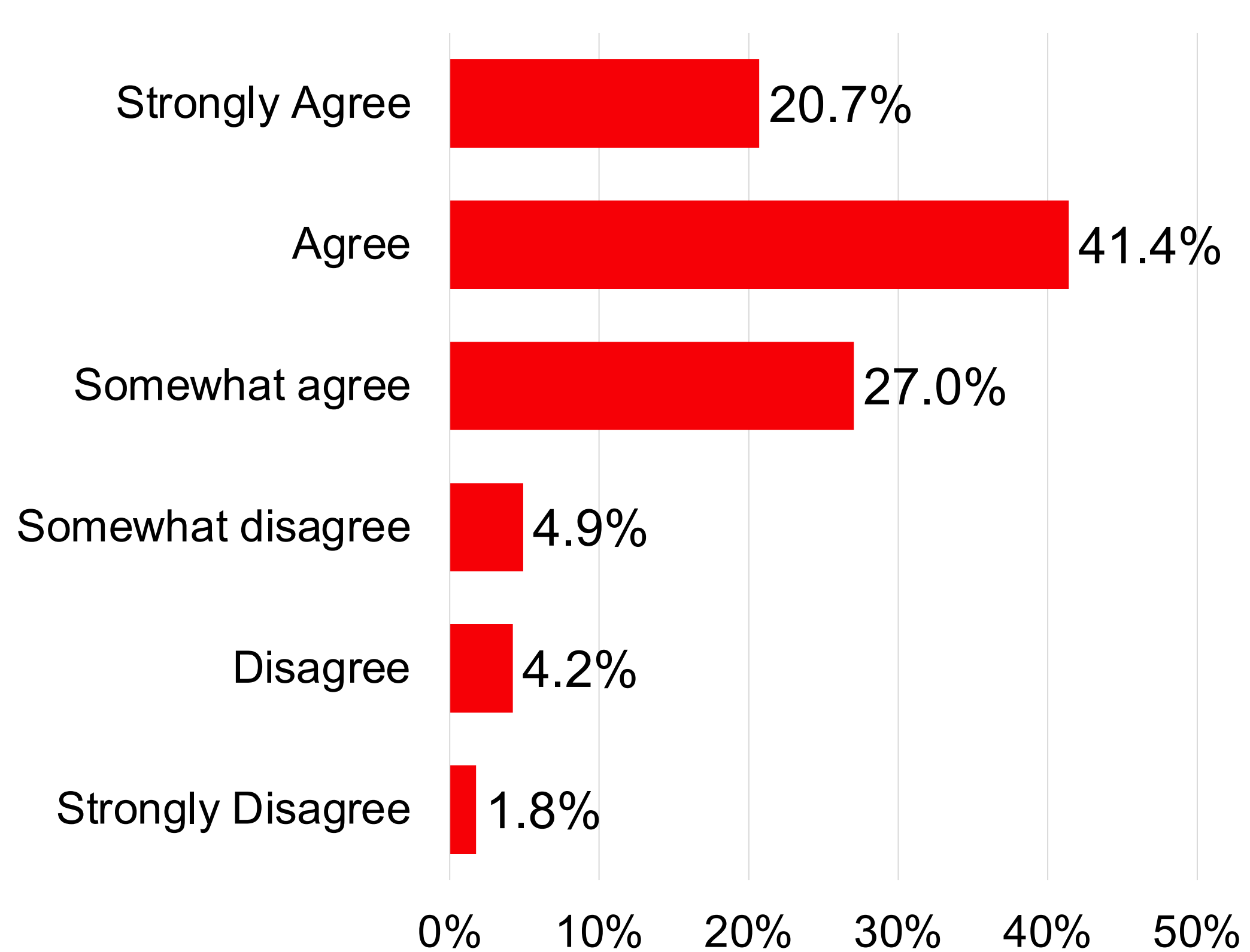


Figure 4. The cost card for labs and imaging studies with their respective prices improved my understanding of relative costs of common tests.



DISCUSSION AND NEXT STEPS

- Cost card incorporation in case-based learning is achievable. It contributes to engagement with and understanding of healthcare value concepts.
- Further research is needed to evaluate if this intervention will decrease resource utilization as students enter residency and unsupervised practice.
- Different versions of cost cards have been incorporated into other specialty-specific small groups for medical students.
- We propose implementation in other medical schools as early in medical education as possible to encourage consideration of cost in clinical reasoning.

Scan QR Code to view a digital Cost Card



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REFERENCES

1. Shrank WH, Rogstad TL, Parekh N. Waste in the US health care system: estimated costs and potential for savings. *JAMA*. 2019;322(15):1501-1509.
2. Himmelstein DU, Lawless RM, Thorne D, Foohey P, Woolhandler S. Medical bankruptcy: still common despite the Affordable Care Act. *American Journal of Public Health*. 2019;109(3):431-433.
3. Fred HL. Cutting the cost of health care: the physician's role. *Texas Heart Institute Journal*. 2016;43(1):4-6.