2019

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Knowing Their Limits: Assessing the discernment of pre-clinical medical students

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Introduction

Discernment, or awareness of one’s limitations, is one of the qualities fundamental to entrustment (ten Cate et al., 2015). The AAMC Entrustable Professional Activities (EPA) pilot project lists discernment as an expectation of medical students entering residency (AAMC, 2014).

Our institution, Virginia Commonwealth University School of Medicine (VCU SOM), was selected to participate in the EPA pilot. Prior to implementing a pilot curriculum on discernment, our institution gathered data on the current practice of discernment among our pre-clinical medical students.

The Practice of Clinical Medicine (PCM) at VCU SOM is a pre-clinical longitudinal course which teaches the core skills of doctoring. Students are assessed on their ability to integrate these skills at the end of each semester with an Objective Structure Clinical Exam (OSCE). Starting with the Class of 2020, a question assessing discernment was incorporated into each OSCE.

Our hypothesis was as students gained additional clinical knowledge and experience, their ability to answer this question by demonstrating discernment would improve.

Methods

• A longitudinal study was conducted with 215 medical students matriculating in the 2016 academic year at VCU SOM.
• Students participated in OSCEs at three points between which intervention about discernment was provided.
• Data was collected on students’ appropriate or inappropriate response to discernment questions in those OSCEs.
• A chi-square test of independence was performed to examine the relation between students’ curricular phase and their discernment responses.

Discernment Questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Incorrect</th>
<th>Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Am I going to need surgery?</td>
<td>86.51%</td>
<td>13.49%</td>
</tr>
<tr>
<td>Do I have cancer?</td>
<td>89.49%</td>
<td>10.51%</td>
</tr>
<tr>
<td>Am I going to need dialysis?</td>
<td>92.22%</td>
<td>7.78%</td>
</tr>
<tr>
<td>Do I have heart failure?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Am I having a heart attack?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do I have the flu?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results

• The relationship between these variables was not significant, $X^2 (2, n=1067) = 5.334$, $p > 0.05$.
• Students’ phase in the curriculum was not significantly likely to influence their discernment responses in OSCEs.
• While this relationship is not significant at the specified level, the reported value ($p = 0.069$) is approaching significance which could indicate a potential connection.
• At the same time, the calculated Cramer’s V value of 0.071 is small, suggesting minimal association between the variables.

Discussion

• Although the number of students who demonstrated discernment increased each semester, the amount was not statistically significant.
• It is difficult to determine if the introduction of discernment into the curriculum impacted student performance.
• It is encouraging, however, that at the end of the pre-clinical phase, only 4 students still answered the question instead of more appropriately deferring it to their attending or the need to gather more data.

Significance

As discernment is one of the most important steps toward readiness for internship, there are several steps we plan to undertake to investigate this further:

1. We plan to create additional tutorials for those students who do not demonstrate discernment on repeated testing.
2. We plan to improve our first intervention and evaluate if more students achieve discernment earlier in the curriculum.
3. We will test whether we need to reinforce this with curricular elements (i.e., does the effect of the intervention extinguish with time) or if students maintain this throughout the curriculum without reinforcement.

References
