Mind the Gap: Knowledge, Attitudes, and Practices of Internal Medicine Residents toward Immunizations

Jennifer Whitaker, MD, MS1, Caroline Poland, MA, LCAC, NCC2, Thomas Beckman, MD1, Kris Thomas, MD1, Rajeev Chaudhry, MBBS, MPH1, Andrew Halvorsen, MS1, Majken Wingo, MD1, Jill Huber, MD1, Timothy Olson, MD1, Matthew Thomas, MD1, Karen Mauck, MD, MS1, John Bundrick, MD1, Mary Jo Kasten, MD1, Abinash Virk, MD1, Diane Grill, MS1, Ramila Mehta, MS1 and Gregory Poland, MD1

1 Mayo Clinic, Rochester, MN 2 Taylorsville, Upland, IN

Background

There has been little emphasis on vaccine education for internal medicine (IM) residents. Vaccine educational efforts have generally used a fact-based analytic approach and have often neglected teaching residents how to effectively communicate with patients about vaccines. Helping residents understand how patients make decisions about vaccines is critical in training them how to address barriers to vaccine acceptance. The table below shows examples of patient cognitive styles, how individuals with these styles might express concern about vaccines, and healthcare provider responses.1

Objectives

To assess IM residents' knowledge of CDC ACIP adult immunization recommendations for influenza, pneumococcal, Tdap, and zoster vaccines.

To assess IM residents’ attitudes and practices toward counseling patients on adult immunizations.

Methods

This study was approved by the Mayo IRB. An anonymous 35-item electronic questionnaire was sent to all Mayo IM residents (n=143).

10-item IM board-style multiple choice questions on CDC ACIP adult immunization guidelines.

10-item vaccine refusal clinical scenarios and multiple choice questions regarding patient preferred cognitive styles.

10-item 5-point Likert scale (1=Strongly disagree; 2=Disagree; 3=No opinion; 4=Agree; 5=Strongly agree) questions to assess resident attitudes toward communicating with patients about vaccines.

5-item 5-point Likert scale questions (1=Never; 2=Rarely; 3=Sometimes; 4=Usually; 5=Always) to assess resident practices regarding counseling patients on immunizations.

Results

143 Mayo IM residents sent questionnaire

99 (69%) residents completed the questionnaire.

ACIP Immunization Knowledge Assessment

Mean % correct = 43.3% (SD17.9%)

Cognitive Styles Knowledge Assessment

Mean % correct = 59.8% (SD17.8%)

Attitudes

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree (%)</th>
<th>Somewhat Agree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>When a resident refuses a vaccine, it is important to ask why and address the reason for refusal</td>
<td>76</td>
<td>20</td>
</tr>
<tr>
<td>I am confident in addressing patients’ fear of vaccines</td>
<td>6</td>
<td>52</td>
</tr>
<tr>
<td>I am confident in addressing patients about immunization efficacy</td>
<td>6</td>
<td>52</td>
</tr>
<tr>
<td>I am confident in addressing patients fears about immunizations</td>
<td>6</td>
<td>52</td>
</tr>
</tbody>
</table>

Most Common Reasons for Not Addressing Vaccine Refusal

There is not enough time (67%)

It is uncomfortable to discuss this (17%)

I can just document refusal in the chart and it doesn’t affect quality data (11%)

Practice

<table>
<thead>
<tr>
<th></th>
<th>Always (%)</th>
<th>Usually (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>When a patient refuses a vaccine, I routinely ask about the reason for refusal</td>
<td>45</td>
<td>46</td>
</tr>
<tr>
<td>I try to understand my patient’s point of view on vaccines</td>
<td>22</td>
<td>50</td>
</tr>
</tbody>
</table>

Discussion

Conclusions

• Residents in this study population have knowledge deficits in ACIP adult immunization recommendations and confidence gaps in discussing immunization efficacy, side effects, and in addressing patients’ fears of vaccines.

• Dissemination of knowledge regarding CDC ACIP adult immunization recommendations among internal medicine residents is needed.

• Education efforts that teach residents how to address patients’ questions about immunizations and their fears of immunizations are needed.

Reference:

1. Polish CM, Poland GA. Vaccine education spectrum disorder: the importance of incorporating psychological and cognitive models into vaccine education. Vaccine 2011;29(37): 6145-8

This research was supported by Pfizer Independent Grants for Learning and Change.
Title Safe Area: Title text should appear within this area

Author/Affiliation Area: Authors, affiliations and subbrand names should snap to the top of this area and flow downward.

Brand Safe Area: The upper title banner section of the poster provides a brand safe area for the logo, title and author-affiliation text. No photos, illustrations, patterns, high-contrast backgrounds, or graphics are allowed within this area. A logo representing another non-Mayo listed contributing affiliation may be placed in upper right corner within green guideline space.

Poster Body Area: Research text, figures, tables and graphs should appear within this area. No photos, illustrations, patterns, high-contrast backgrounds, or graphics are allowed in the margins. Use the text boxes in the template when possible.

Copyright Line: Copyright graphic should appear at bottom right under last text/figure box. Recommend graphic be placed no more than 1.5" from bottom of poster.