BACKGROUND

- Pharmacies are becoming increasingly accepted as non-traditional vaccine providers, allowing for convenient access and the ability to reach underserved populations. As the use of non-traditional vaccine providers becomes more common, there is a potential for fragmented immunization records.
- Immunization registries, or Immunization Information Systems (IIS), have been developed to help mitigate this by consolidating vaccination information for individuals within a defined geographic area.
- Complete immunization records are necessary to track individual vaccination status across multiple providers, which is critical for outbreak response efforts and recalls as well as monitoring vaccination rates and facilitating consent for immunizations.
- Pharmacies are becoming increasingly involved in delivering vaccinations, especially as states mandate providers to be immunization registry participants.

OBJECTIVES

1. To determine the extent to which pharmacy students or other persons at their pharmacy are reporting immunizations to the state registry or primary care provider.
2. To identify pharmacy students’ perceived facilitators and barriers toward implementing and using immunization Information Systems.
3. To explore how message framing impacts decision to utilize IIS.

METHODS

- Study Design: Cross-sectional survey
- Sample: 149 PAs enrolled in the Spring 2016 Management course at Auburn University, Alabama
- Data Collection: Participants completed an online survey administered via Canvas, which included questions related to their perceptions of message framing and its influences on the use of IIS.

RESULTS

Table 1. Message Framing

<table>
<thead>
<tr>
<th>Frame</th>
<th>Statement</th>
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| Presence of positives | "Pharmacists do not report vaccine information to the immunization registry as not providing their patients with a complete immunization record."
| Absence of negatives | "Pharmacists do not report vaccine information to the immunization registry as not providing their patients with a complete immunization record."

Table 2. Awareness and Frequency of Reporting

<table>
<thead>
<tr>
<th>Statement</th>
<th>Number (%)</th>
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<tbody>
<tr>
<td>Aware of immunization registry (N=133)</td>
<td>Yes 72 (54.1)</td>
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<tr>
<td>Frequency of providing immunizations (N=133)</td>
<td>1-2 immunizations per month 31 (23.3)</td>
</tr>
<tr>
<td>Performance Expectancy (128)</td>
<td>Complete/complete access to provider information 41 (32.5)</td>
</tr>
<tr>
<td>Social Influence (18)</td>
<td>Support from authority figures 9 (14.3)</td>
</tr>
<tr>
<td>Price-Value (8)</td>
<td>May increase precision of vaccine schedule 8 (12.7)</td>
</tr>
</tbody>
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Table 3. Perceived Facilitators and Barriers

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| "The majority of students reported that they were aware of immunization registries but that they were not currently working as a pharmacy intern and therefore not providing immunizations."
| The most prominent barrier was effort expectancy, including complexity and time costs.
| Most students selected the message framed in the presence of positives, suggesting that they were most responsive to messages that highlighted the gains for patients.

LIMITATIONS

This study was exploratory in nature and causal relationships cannot be made. Anticipated response biases were self-monitored and reduced through the use of randomization and the inclusion of a control group. Due to the use of a single cohort, the generalizability of the results may be limited.

CONCLUSIONS

Most students are unaware of how immunizations are documented. Addressing this knowledge gap is an essential step in preparing future pharmacists. The results of this study provide valuable insights into the attitudes and perceptions of pharmacy students regarding the use of Immunization Information Systems.

REFERENCES