

Evaluating Pharmacy Student Perspectives of Compliance Aids and Devices through an Ambulatory Care Simulation

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Take Home Points

- Use of immersive multimodal experience to improve pharmacy students' perspectives and attitudes as a patient managing disease states with and without compliance aids and devices.
- Most students strongly agreed that the use of compliance aids improved blood glucose monitoring, medication adherence, and attitudes towards ambulatory care patients.
- These results draw attention to this gap in healthcare and how it may impact vulnerable patients without these tools.

Background and Purpose

- More than 35 million Americans are diagnosed with Type 2 Diabetes, and managing this condition is complex.
- Underserved patient-populations face additional challenges due to cost of therapies, devices, and compliance aids.
- This learning experience aimed to enrich pharmacy students' perspectives on the use of compliance aids by simulating the responsibilities of a patient managing their chronic diseases.

Methods

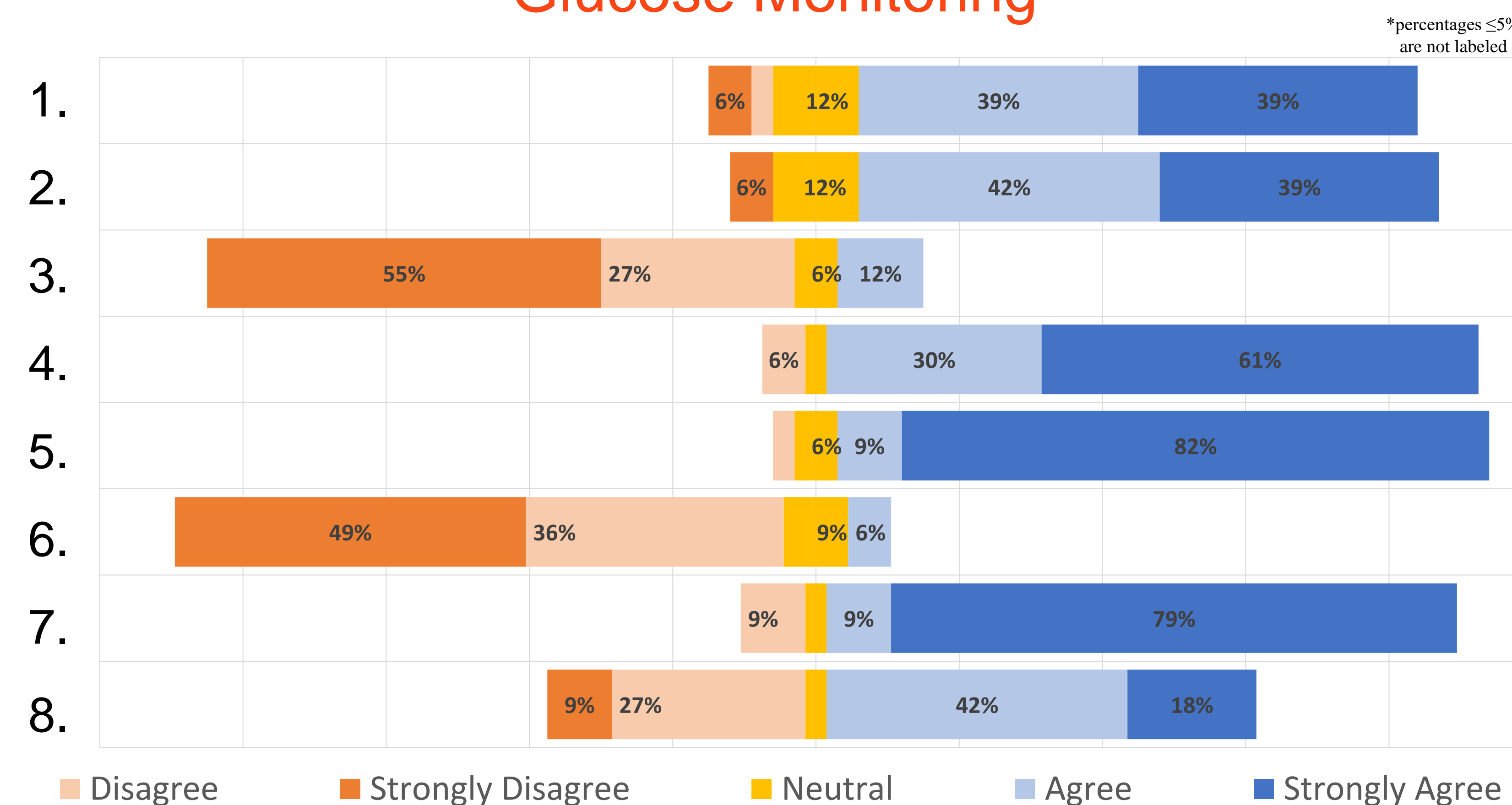
- **First Week:** Students were tasked with taking a complex medication regimen without the use of compliance aids and checking their blood glucose twice daily using a traditional glucometer.
 - Provided with ten labeled bottles filled with different candies associated with a medication.
 - Students were instructed to check their blood glucose twice daily within designated time windows and acknowledge their compliance within the course site.
- **Second Week:** Students were provided with a compliance aids
 - Instructed to fill out and submit a picture of pill organizer
 - Trained and educated in-person on applying and interpreting the continuous glucose monitor (CGM).
 - Used CGM device entire week to aid in self-monitoring glucose
- **Reflection and Survey:** Students were responsible for submitting a reflection on their experience.
 - Submit a voluntary survey regarding their thoughts and attitudes towards glucose monitoring, medication adherence, and overall impact of the experience.

Results

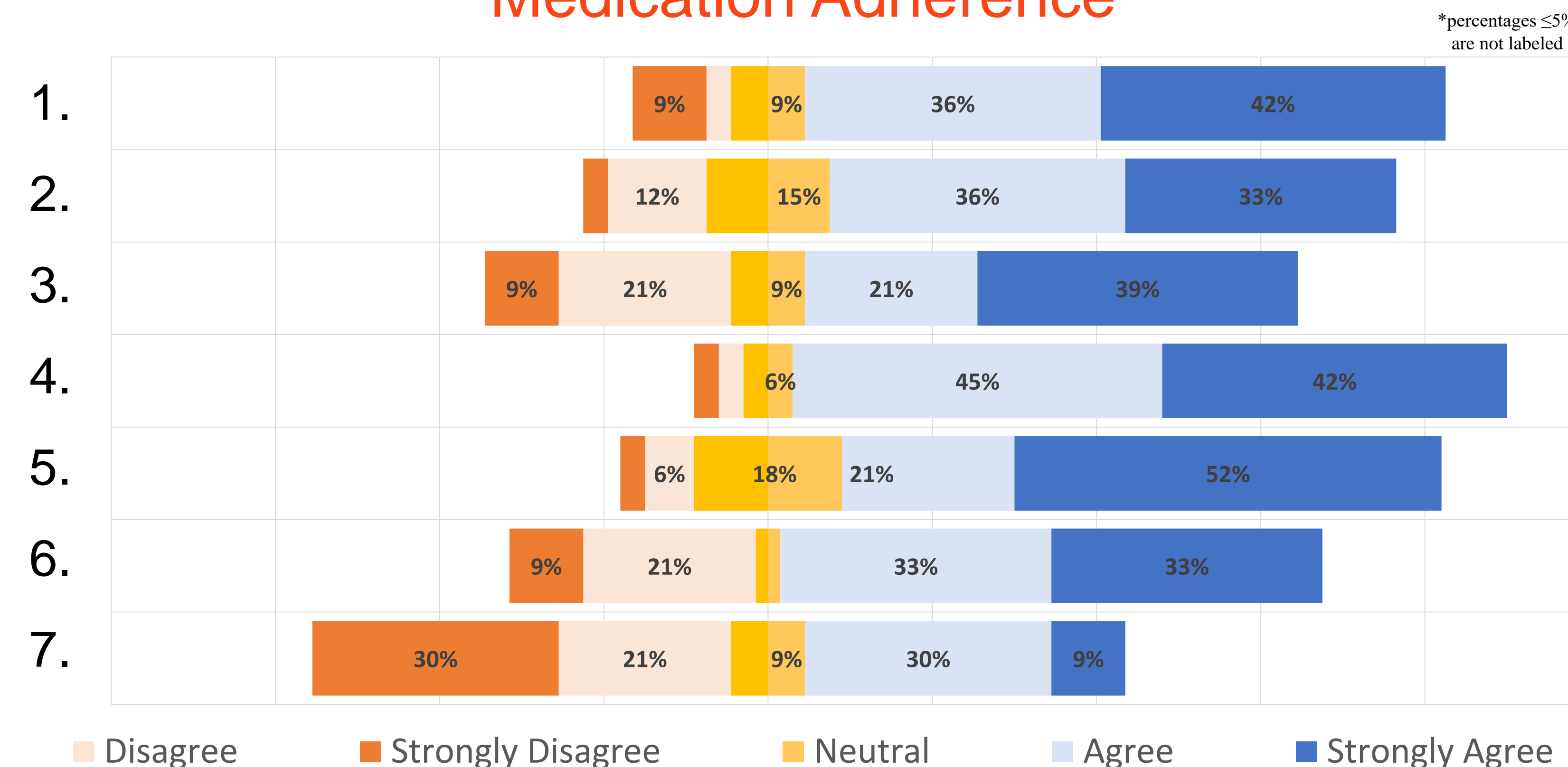
Survey Questions



Glucose Monitoring



Medication Adherence



Results

- A total of 33/35 students (95%) submitted the voluntary survey.
- Most students found that they had greater compliance when checking their blood glucose using a CGM compared to a glucometer (88% vs 60%, respectively). The CGM's convenience of use and alerts contributed to better glucose monitoring (78%).
- The use of a pill organizer made it easier for students to take their medications (78%) and improved their compliance (69%).
- Setting up the pill organizer was more time-consuming (60%) and difficult (87%) than anticipated.
- Medications outside the constraints of a pill box (e.g., injectable therapy) were reported as a difficulty among students (73%).
- Most participants (>80%) agreed that this project increased their understanding of the value of compliance aids and devices.

Discussion

- The immersive simulation compared patient experiences managing chronic diseases with and without compliance aids and devices.
- Despite historical evidence showing little benefit of pill organizers, these results suggest these devices could still have an impact on short term improvements in medication compliance.
- Medicare and other insurances continue to expand coverage of CGMs for those on insulin therapy or a history of hypoglycemia
- It is imperative that student pharmacists to experience real-world applications of these devices.
- The study results relied heavily on academic incentives and student acknowledgements via the course site, with no definitive way to verify if blood glucoses were physically checked or medications were administered.
- Results may more accurately reflect the students' perspective on the potential benefits of using such devices.

Acknowledgements/References

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 - Roche Diabetes Care: Accu-Chek Guide Kits
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