

## **Assessing the impact of virtual simulation activities on student confidence in pharmacy practice**

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**Background:** Essential responsibilities of a pharmacist include prescription verification and processing, drug utilization review (DUR), patient education, and communication with providers. Although these skills are taught within pharmacy curriculum, the transition from student to practicing pharmacist and application of these skills can be challenging. This study aims to assess the impact of virtual simulation, MyDispense, on student confidence in the skills needed for pharmacy practice.

**Methods:** Third year pharmacy students completed a pre-survey, five modules within MyDispense, and a post-survey. The pre-and post-survey assessed their confidence of essential pharmacy practice skills including prescription verification, medication-related calculations, DUR, patient counseling, and provider communication. These skills were incorporated into the simulation activities that each student completed. Additionally, demographic questions about pharmacy work experience and prior utilization of MyDispense were on the pre-survey, and open-ended feedback questions related to the students' experience with MyDispense were on the post-survey.

**Results:** The pre- and post-surveys were completed by 65 students. 94% had pharmacy work experience, mostly within the community setting (84%). Comparison of mean confidence on the pre- and post surveys show increased confidence with calculations (17%), DUR (8%), patient communication (13%), and provider communication (4%). Significantly increased confidence was seen in both over-the-counter product (0.37,  $p=0.01$ ) and prescription counseling (0.34,  $p=0.01$ ). Identified benefits of MyDispense were replicating a realistic scenario and allowing students to follow through the entire fulfillment process. Challenges were associated with unfamiliarity of the program resulting in utilization and navigation issues. Majority (68%) of students agreed that practicing in MyDispense improved their confidence in skills needed for pharmacy practice.

**Conclusion:** MyDispense has significant impact on student confidence in patient and provider communication and is positively perceived by students to ensure they are adequately prepared for pharmacy practice. Further research can help support incorporation of virtual simulations throughout pharmacy curriculum.