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

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BACKGROUND
- 2016 ACPE Standards require PharmD graduates to have the skills to manage a medication use system with a patient-centric approach.
- Virtual simulations can help promote a successful transition from student to practicing professional by providing a controlled, safe environment to make mistakes with no harm to patient safety.
- MyDispense has been identified as an effective tool to improve dispensing knowledge and skills, but its impact on student confidence is unknown.

OBJECTIVE
- Assess student confidence in various competencies that are essential for pharmacy practice as a result of utilizing MyDispense.

METHODS
- Observational, cross-sectional, survey design
- Included students actively enrolled in their third year of SIUE School of Pharmacy
- Pre-survey included demographic questions assessing age, gender identity, pharmacy work experience, and prior use of MyDispense
- Pre- and post-surveys utilized a 5-point Likert scale to assess student confidence of:
  1. Prescription verification
  2. Medication-related calculations
  3. Prescription DUR
  4. Communication with patients about OTC products
  5. Patient counseling on prescription medications
  6. Provider communication regarding medication-related problems
- Intervention of five required modules and three optional modules within MyDispense.
- Post-survey included open-ended questions for students to provide feedback about their experience using MyDispense.
- Data reported as frequencies, percentages, and mean differences; statistical analysis using t-tests.

RESULTS

PRE- AND POST-SURVEY CONFIDENCE RESPONSES

COMPETENCY ASSESSED

DIFFERENCE OF MEAN CONFIDENCE AFTER MYDISPENSE

STUDENT AGREEMENT TO THE STATEMENT, “PRACTICING IN MYDISPENSE HAS IMPROVED MY CONFIDENCE IN THE SKILLS NEEDED FOR PHARMACY PRACTICE.”

DISCUSSION
- Student confidence of pharmacy practice skills including medication-related calculations, DUR, patient counseling, and provider communication were improved after utilization of MyDispense.
- Significant difference of increased confidence was seen in both OTC and prescription counseling.
- Benefits of the virtual simulation program are its ability to replicate a realistic scenario and allow students to follow through the entire process.
- Challenges include unfamiliarity with the program resulting in utilization and navigation issues.
- Limitations were the inability to match pre- and post-surveys for analysis and potential extraneous factors affecting student confidence in the studied areas.
- More research incorporating MyDispense earlier in student coursework could further support findings and help reduce technical challenges.

CONCLUSION
- Virtual simulation MyDispense has significant impact on improving student confidence in patient and provider communication.
- Students had a positive perception of MyDispense with majority agreeing that it helped improve their confidence in skills needed for pharmacy practice.
- MyDispense has the potential to be incorporated throughout pharmacy curriculum to ensure students are adequately prepared for pharmacy practice.

REFERENCES