INTRODUCTION

Pharmacy practice models progressively incorporate the use of point-of-care testing (POCT) devices to enhance and support pharmacist’s clinical decision-making. The development of an outcomes-based practical course on POCT and injection techniques enhances undergraduate pharmacy students’ pharmacotherapeutic knowledge and clinical skills. The participation of pharmacists enrolled in a postgraduate Doctorate in Pharmacy programme as part of a 4-week clinical rotation contributes to development of teacher practitioners who can support the delivery of these practical sessions.

METHOD

- **Development of Course content:** Six clinical skills practical sessions were developed (Table 1) based on the European Pharmacy Competency Framework, and locally demanded pharmacy service skills by patients.
- **Course Design and Delivery:** Each session comprised of short didactics and hands-on activities delivered as 2-hour sessions to groups of 4-6 students. A workbook was developed to aid student learning. Postgraduate students were trained to assist during the practicals and in elaboration of the teaching material.
- **Evaluation:** A self-administered evaluation questionnaire was developed and disseminated at the end of the sixth session for three academic batches.

RESULTS

A total of 74 students completed the evaluation questionnaire, 60 were female, mean age 18.6 years (range 18-21 years). The results revealed very positive feedback of the sessions:

- Demonstrator’s helpfulness and instructiveness garnered the highest response (n=73).
- Students (n=72) agreed/strongly agreed that the practical sessions developed their POCT skills to competently perform the tests. Students (n=71) believed they were able to apply theoretical knowledge to practice and were positive with use of simulators for learning.
- Workbook was considered user-friendly (n=72) and demonstration videos used as aids in class garnered positive response (n=69).
- Use of Standard Operating Procedures in the laboratory generated mixed reactions, with only 47 students said it was helpful.

CONCLUSION

The clinical practical sessions were positively evaluated by the students which enhanced the didactic component of the pharmacy curriculum. The clinical practical skills sessions allowed students to develop skills and apply their pharmacotherapeutic knowledge as they conduct POCT using various devices and administer injections by different techniques using simulators. The postgraduate Doctorate students enhanced their ability in the clinical skills aspect and in systematically teaching the course.

AIMS

To develop and evaluate clinical skills practical sessions for pharmacy undergraduate students with the participation of postgraduate doctorate students to support the development of teaching skills in postgraduate students.

Setting

POCT Laboratory, Department of Pharmacy, University of Malta.

Table 1. Course Content Developed for POCT Practical sessions

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>AIM</th>
<th>DEVICES AND CONSUMABLES USED</th>
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</thead>
<tbody>
<tr>
<td>Laboratory Quality system and Simulators</td>
<td>Development and standardization of various parameters of tests</td>
<td>Semi-automatized urine analyzers (Sysmex 1100); Calibration strips (Custom Red-M); Contour strip tests</td>
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<tr>
<td>Blood Glucose Testing</td>
<td>Familiarization with blood glucose testing</td>
<td>Blood glucose meter, Control solutions; Test strips, single-use lancet devices</td>
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<tr>
<td>Blood Pressure Measurement</td>
<td>Familiarization with and acquiring skills in blood glucose testing</td>
<td>Blood pressure training system with speakers; Mercury line and oral hypoglycemics; Mantoux; Electronic blood pressure monitors (arm and wrist)</td>
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<tr>
<td>Admissions of Intravenous (IV) and Subcutaneous (SC) injections</td>
<td>Familiarization with and acquiring skills in IV and SC injection techniques</td>
<td>IV injection training simulators (inner forearms), SC injection training simulator (lower abdominal wall)</td>
</tr>
<tr>
<td>Admissions of Intramuscular (IM) injections</td>
<td>Familiarization with and acquiring skills in IM injection techniques</td>
<td>IM injection upper arm training simulator (axillary), IM injection lower arm training simulator (anterolateral, deltoid, biceps)</td>
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</tbody>
</table>

REFERENCE

1. Accreditation Council for Pharmacy Education. Accreditation Standards and Key Elements for Professional Programs in Pharmacy Leading to the Doctor of Pharmacy Degree; 2015.

Figure 1. Percentage response to ‘Most Interesting Clinical Skills Practical Session’ from a Multiple Response Question (N=74)