INTRODUCTION

The Accreditation Council for Pharmacy Education (ACPE) released ACPE Standards 2016 in February 2015. Within the new standards, Appendix 1-Required Elements of the Didactic Doctor of Pharmacy Curriculum, contains the didactic areas that will provide students with the needed comprehensive foundation to provide patient-centered care in diverse settings. The document is divided in 4 science categories: Biomedical Sciences, Pharmaceutical Sciences, Social/Administrative/Behavioral Sciences and Clinical Sciences.

In November 2015, the National Association of Boards of Pharmacy (NABP) released new NAPLEX Competency Statements. These descriptions state the knowledge and skills expected in an entry-level pharmacist. The blueprint format changed from three areas to two distinct areas in which the health promotion area was incorporated into the pharmacy care area. Area 1: Ensure Safe and Effective Pharmacotherapy and Health Outcomes (Approximately 67% of Test) and Area 2: Safe and Accurate Preparation, Compounding, Dispensing, and Administration of Medications and Provision of Health Care Products (Approximately 33% of Test).

In view of these changes, a curriculum map was developed to accomplish the following objectives:

1. Evaluate the alignment of the curriculum content with ACPE Standards 2016- Appendix 1.
2. Evaluate if the curriculum content addresses the revised NAPLEX blueprint competency statements.
3. To determine breadth and depth of the curriculum content when compared to Appendix 1 and NAPLEX blueprint.

METHODS

As part of the Curriculum Committee (CC) tasks, a curricular mapping process was completed during the second semester of 2015-2016 for the required elements of the didactic Doctor of Pharmacy curriculum. This process considered the alignment of all required courses (as well as some electives) with ACPE Standards 2016 Appendix 1 Key Elements, and the NAPLEX Blueprint Competency Statements.

The following procedures were conducted to collect the necessary data for analysis:

1. The Dean requested the CC to perform a curricular mapping process for the required elements of the didactic Doctor of Pharmacy curriculum.
2. The Director of the Curriculum and Institutional Effectiveness Evaluation Division (CIEDD) developed electronic questionnaires for faculty to map Appendix 1 Key Elements, and the NAPLEX Blueprint Competency Statements with required and elective courses.
3. Associate Dean of Academic Affairs (ADAA) sent an email to faculty with specific instructions, links and deadlines to complete the survey.
4. A faculty data collection workshop was carried out to expedite data collection. Data collection process lasted three months.
5. Data from surveys was extracted and summarized from the electronic database.
6. An initial discussion session on mapping raw data and preliminary results was conducted with CC members. Incomplete data from some courses was added as part of the review and discussion process. A descriptive analysis of data and demographics was conducted afterwards.
7. A second discussion session on mapping results was conducted by CC members. Descriptive and demographics data revealed that some required courses were missing on the mapping process. Further meetings with course coordinators were programmed with CIEDD Director to collect missing data.
8. Incomplete data from curriculum required courses was added to the data files. Descriptive analysis of data as well as demographics was revised. Methods and results draft report was developed by Director of CIEDD and presented to CC.
9. Final report was completed and presented to the faculty on December 22, 2016.

RESULTS

Demographic data

Faculty aggregate response rate was 81% (n=33). Table 1 was composed of 47 required (core) courses and 25 elective courses. The survey demographics for the course representation is shown in Table 1 Course participation.

<table>
<thead>
<tr>
<th>Course participation Survey</th>
<th>Course Classification</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Required</td>
<td></td>
</tr>
<tr>
<td>NAPLEX and ACPE surveys</td>
<td>67</td>
<td>67%</td>
</tr>
<tr>
<td>Only ACPE surveys</td>
<td>5</td>
<td>5%</td>
</tr>
<tr>
<td>None</td>
<td>3</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>75</td>
<td>100%</td>
</tr>
</tbody>
</table>

As shown in Table 1, 100% (n=47) of the required courses were represented in the study. Corresponding faculty completed questionnaires for ACPE Appendix 1 as well as NAPLEX content.

Appendix 1 Curricular Mapping with Doctor of Pharmacy program Courses

Appendix 1 didactic content areas were associated with courses’ learning outcomes, from the perspective of participating faculty.

Curricular map results showed the weight distribution within each of the four critical content areas of learning, as included in ACPE Appendix 1.

- Biomedical Sciences: 13.1%
- Pharmaceutical Sciences: 21.3%
- Social/Administrative/Behavioral Sciences: 36.7%
- Clinical Sciences: 29.0%

These results are described in Figure 1.

Figure 1- Distribution of content area as addressed in ACPE Standards 2016

NAPLEX Blueprint Curricular Mapping with Doctor of Pharmacy Program Courses

AREA 1: Ensure Safe and Effective Pharmacotherapy and Health Outcomes:
- 84.0% (17.0% compared with 67% by NAPLEX for Area 1)

AREA 2: Safe and Accurate Preparation, Compounding, Dispensing, and Administration of Medications and Provision of Health Care Products:
- 16.0% (17.0% compared with 33% by NAPLEX for Area 2)

These results are shown in Figure 2.

Figure 2- Distribution of content area as addressed in NAPLEX Blueprint

CONCLUSIONS

1. All Appendix 1 content areas are represented within the curriculum of the Doctor of Pharmacy program. Appropriate breadth and depth is suggested by the number of courses that address each key element at different years in the curriculum.
2. All NAPLEX Competency Statements are represented within the curriculum of the Doctor of Pharmacy program, however, percentage of distribution for area 2 is significantly lower (16%) than the 33% of weight distribution for this area in the NAPLEX.
3. Results for Area 2 show that competency statements: 2.2.2-Techniques, procedures, and equipment for drug preparation, compounding, and administration of nonsterile products; 2.2.3-Physiochemical properties of active and inactive ingredients; and 2.2.5-Physiochemical properties of drugs that affect solubility and stability, may need to be reinforced.

RECOMMENDATIONS

Analyze and evaluate performance of students in PCD&A and NAPLEX in the contents related to area 2 of the NAPLEX Blueprint and revise curricular content as needed.

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REFERENCES


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