

## OBJECTIVES

To develop a comprehensive in-course remediation program for the Pharmacy Skills courses to support students in achieving a higher course grade and meeting the new passing standard of 70 %.

## BACKGROUND

The Accreditation Council for Pharmacy Education (ACPE) Accreditation Standards and Guidelines state that schools and colleges of pharmacy must have policies related to remediation and progression<sup>1</sup>. The guidelines are not specific as to the methods of remediation, but the interventions should have the potential to be successful. Given that the most successful remediation programs are those tailored to the individual student<sup>2</sup>, in-course, content specific, required remediation was implemented.

Albany College of Pharmacy and Health Sciences (ACPHS) offers a sequence of six required Pharmacy Skills (PS) courses in the Doctor of Pharmacy curriculum. The PS courses are required each semester of the P1 to P3 years. Failure of a course in the sequence prevents students from progressing through the sequence and potentially delays graduation by one year. Each course was classified as a one credit-hour laboratory with a passing grade of 60 %. Based on course evaluations, students admittedly did not prioritize the one credit-hour courses and previous voluntary remediation strategies had limited results.

To encourage students to put forth additional effort, the following changes were implemented:

- The Pharmacy Skills sequence was reclassified from a laboratory to a course
- The credit hour allocation was increased from one to two

To support students in achieving a higher course grade, reinforcing comprehension of the material, and demonstrating APPE-readiness, the following changes were implemented:

- The passing grade was increased from 60 to 70 % in all courses
- Mandatory remediations were implemented across the sequence

## METHODS

Pharmacy Skills faculty successfully championed a proposal to increase the passing grade in the PS sequence from 60 to 70 %. This change was scheduled to be implemented with the fall semester of 2017. In preparation, a multifaceted support program including mandatory remediation was introduced across the sequence in the fall semester of 2016.

All courses in the Pharmacy Skills sequence offer multiple assessments and skill demonstrations throughout the semester. These frequent “knowledge checks” (Table 1) allow for the identification of students requiring content specific remediation.

Table 1

Course	PS 1	PS 2	PS 3	PS 4	PS 5	PS 6
# of knowledge checks/semester	14	11	11	10	6	11

## METHODS

The remediation program varies slightly across the sequence to accommodate the needs of the students. Generally the program is administered by APPE Students or Teaching Assistants (TA) who are identified after successfully completing the Pharmacy Skills course and demonstrating proficiency of the course content.

Table 2 describes the characteristics of the Pharmacy Skills remediation program.

Table 2

<b>Remediation is required when the student receives:</b>
A grade of less than 70 % on any assessment (“knowledge check”).
An average course grade < than 70 % after the first Exam (mid-semester).
<b>Remediation Policies:</b>
Remediation does <b>not</b> alter the grade received on the previous assessment or provide “extra credit”.
Students must attend a remediation session within one week of receiving the grade.
Failure to attend a remediation session within one week results in a one point deduction of professionalism points (equivalent to a one point deduction in the overall course grade).
<b>Remediation Structure (written assessments):</b>
Group remediation sessions are held three to four times a week; daytime sessions and evening sessions.
At the beginning of the session a APPE/TA works through assessment and answers specific questions.
When the student has had all their questions answered and feels confident with the material, the student will complete a different version of the assessment.
The APPE/TA will check the answers. If any answers are incorrect the APPE/TA will work individually with the student until they are competent with the content.
<b>Remediation Structure (skill based assessments):</b>
Group remediation sessions are held two to three times a week; daytime sessions and evening sessions.
Students review deficiencies with APPE/TA then practice the specific skill. APPE/TA offer feedback during skill demonstration.
APPE/TA will work with individual students until they demonstrate competency

## RESULTS

Table 3 shows the number of students, the course average and number of students scoring less than 70 % for 3 consecutive offerings of each course.

- During the 2015-2016 academic year, for each course remediation was **voluntary**
- During the 2016-2017 academic year, for each course remediation was **required**
- During the 2017-2018 academic year, for each course remediation was **required**, the course **credit hours increased** from 1 to 2 hours and the **passing grade raised** from 60 to 70 %

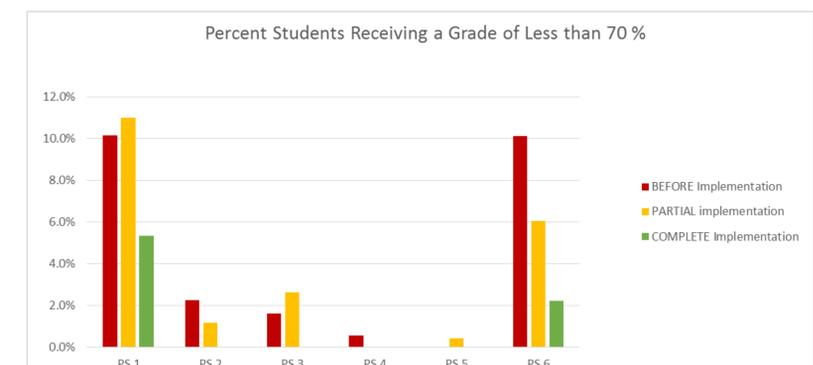
We evaluated the percent of students with a final grade less than 70 % after complete implementation of the support program. When possible, Fisher Exact tests were run comparing percent of students scoring below 70 % before implementation vs complete implementation. While a decrease in the percent of students scoring less than 70 % was seen in most courses, a statistical difference was noted for PS 6 only (10.13 % in 2016, and 2.23 % in 2018; p<.05, Figure 1).

## RESULTS

Table 3

Semester	# of students	Course Average	# of students with final grade <70 %
<b>Pharmacy Skills 1</b>			
a. Fall 2015	187	80.9	19
b. Fall 2016	182	82.1	20
c. Fall 2017	169	83.9	9
<b>Pharmacy Skills 2</b>			
a. Spring 2016	178	86.9	4
b. Spring 2017	172	85.9	2
c. Spring 2018	161	88.8	0
<b>Pharmacy Skills 3</b>			
a. Fall 2015	186	84	3
b. Fall 2016	190	85.2	5
c. Fall 2017	181	85.2	0
<b>Pharmacy Skills 4</b>			
a. Spring 2016	185	85.7	1
b. Spring 2017	188	85.6	0
c. Spring 2018	176	85.3	0
<b>Pharmacy Skills 5</b>			
a. Fall 2015	228	88.6	0
b. Fall 2016	230	85.7	1
c. Fall 2017	220	88.8	0
<b>Pharmacy Skills 6</b>			
a. Spring 2016	227	78.7	23
b. Spring 2017	231	78.6	14
c. Spring 2018	224	83.2	5

Figure 1



## IMPLICATIONS

- Student specific remediation reduces the number of course failures and the need to repeat a course.
- In course remediation seems to promote a better understanding of the material as reflected by the slight increase in the overall class average in several of the courses.
- We will track individual student’s grades based on their midterm and final exam grades and the number of required remediation sessions and optional practice/tutoring sessions they attended. Planned remediation improvements include:
  - o Students with a course average of less than 70 % at the midpoint, must meet with a course instructor to develop an individualized remediation plan.
  - o Students with individualized remediation plans will meet weekly with an assigned APPE/TA to review content and practice skills.

## REFERENCES

1. Accreditation Standards and Guidelines 2016 [Internet]. Acpe-accredit.org 2016 [cited 9 July 2018] Available from: <https://www.acpe-accredit.org/pdf/Standards2016FINAL.pdf>
2. Maize D, Fuller S, Hritcko P, Matsumoto R, Soltis D, Taheri R et al. A review of Remediation Programs in Pharmacy and Other Health Professions. American Journal of Pharmaceutical Education. 2010; 74(2):25.