

Comprehensive Program Review Report



Program Review - Pharmacy Technician

Program Summary

2020-2021

Prepared by: Mitch Andrews

What are the strengths of your area?: What are the strengths of your area?: Pharmacy Technician program has several specific strengths:

1. Student Success rates in Pharm Tech courses: Overall pass rate for 2020 was 15 out of 16 . This is consistent with the previous year's pass rate of 91%. Clinical externship courses had a pass rate of 90% again for 2020, which indicates the students were prepared for the clinical externship requirements for licensure as a pharmacy technician and to work as a Pharm Tech. Faculty, industry standards, affiliate expectations, and course rigor all remained unchanged from the previous year. Student success is directly tied to several factors: the selection of updated, ASHP standard focused, textbooks specifically designed with a Canvas-friendly practice environment to allow students' to practice and learn pharmacy technician skills and knowledge; curriculum and externship support from the Pharmacy Technician Advisory Board; an increase in number and variety of simulation exercises; an additional hour per week of faculty office time for student interaction and remediation after lab; increasing student and faculty utilization of services on campus: Student Success, MathLab, Writing Center, Career Services, LRC, Health Center, Student pantry, EOPS, Welcome Center, AAC, etc.
2. The pharmacy Technician Advisory Board continues to meet every March and September. Membership includes employers, faculty, pharmacists, Pharmacy Technician Program alumni, pharmacy technicians, current year pharmacy technician students. The Pharmacy Technician Advisory Board is intimately involved in curriculum updates, externship placement, and program success.
3. The Pharmacy Technician Program admits a maximum of 24 students each semester. This instructor: student ratio (1:24) moves the program towards compliance with ASHP Accreditation Standards for Pharmacy technician education and training. (Lecture 1:24, Lab 1:12) Fall 2020 enrollment was 20 students.
4. The Pharmacy Technician Program maintains affiliate contracts with multiple pharmacies for externships. The program maintained 5 existing contracts, added 2 new contracts, and 2 approved contracts pending facility signatures. The pharmacy technician instructor coordinates placements with the clinical sites. Currently working to secure additional externship sites to introduce students to multiple practice settings that are now available to pharmacy technicians.
5. The job outlook for Pharmacy Technicians in the Central Valley is expected to grow by 8% from 2019-2026. Pharmacy technician employment growth for 2016-2026 is projected to be 11.8% according to the Bureaus of Labor and Statistics.
6. Certificate of Achievement Entry-level Pharmacy Technician was offered the first time for the 2019-2020 academic year. The new Program (2019-2020) has prerequisites in place for English and math which will lead to an ongoing higher success rate and employability. (Previously only approximately 50% of students who registered for first-semester program courses, complete the program.)
7. Mitch Andrews, Pharm Tech faculty completed the pre-survey documents for ASHP Model Accreditation. The ASHP survey is scheduled for Nov 4, 2020. Accreditation will be retroactive to May 2020. Class of 2020 graduates will be issued corrected certificates when accreditation is granted.
8. The Pharmacy Technician simulation lab is equipped with updated equipment and pharmaceutical supplies to ensure student success with simulated lab practicals.
9. A marketing plan has been developed to ensure accurate community awareness of the program updates and accreditation plan. Marketing tools and activities include an updated COS pharmacy technician website and web address, a new pharmacy technician program brochure, participation in the COS health science open house, and periodic social media postings. Inter-departmental collaboration is ongoing to ensure a cohesive communication strategy for potential students and COS counselors in regard to program information and expectations.
10. A certified pharmacy technician was hired as an adjunct pharmacy technician faculty member to assist with training and

meeting ASHP Accreditation Standards set maximum instructor: student ratios. (lab 1:12; sterile compounding lab 1:8);

11. The Program is a PTCB-recognized training program that grants all COS pharmacy technician program graduates access to the PTCB national certification exam.

12. Lexicomp and Facts and Comparison references are now available electronically for all COS students and faculty at the LRC.

13. COS Foundation and Grant funding provided a Certification Review course and PTCB practice Exams for 2020 graduates.

What improvements are needed?: 1. Additional clinical sites for externship placement are needed to ensure a good fit with the curriculum. Pharmacy practice continues to evolve and the program needs additional clinical externship sites that reflect the diversity of this evolution. Improving success rates leads to a subsequent need for additional affiliate sites. Ensuring students are able to get the number of hours required by the program and the California Board of Pharmacy in order for the student to become a registered technician in California is a priority and a challenge.

2. A continuous requirement for updates of the COS Pharmacy Technician website to reflect current Pharmacy Technician Program information and current industry standards.

3. Pharmacy references require frequent updates to ensure students have access to current information, are successful with curriculum, and meet workforce expectations.

4. American Society of Health-system Pharmacists (ASHP) accreditation completion.

5. Improve student simulation lab success. Advisory Board approved an increase of simulation lab hours as part of the curriculum update.

6. Support faculty development for increasing and maintaining clinical skills and current pharmacy standards and knowledge. (VTEA)

7. Reimbursement FT faculty for ongoing administrative work required by ASHP accreditation: application, documents, survey preparation, affiliate externship site inspections

Describe any external opportunities or challenges.: 1. COVID-related challenges include moving portions of the program to an online teaching format, scheduling labs with shared lab space, designing face-to-face labs with social distancing, increased difficulty with externship placement, and some affiliates suspended externships mid-semester.

2. Pharmacy practice continues to evolve and an adequate variety of clinical externship sites that reflect the diversity are needed to successfully prepare our students for the workforce and ensuring students are able to accrue the required number of hours to become a registered pharmacy technician in California.

3. ASHP accreditation is an industry-standard of Pharmacy Technician training and education. The American Council on Pharmacy Education (ACPE) accredits pharmacy colleges and advocates for ASHP accreditation of pharmacy technician training programs to ensure they are meeting educational requirements.

4. The Pharmacy Technician Certification Board (PTCB) administers a national pharmacy technician certification exam and requires that training programs meet specific, stringent curriculum requirements. Education/training programs that are ASHP/ACPE accredited are recognized as fulfilling PTCB's curriculum requirement. Starting in 2020 students must have completed a PTCB approved program in order to be eligible to take the national exam.

5. At this time our program has a survey scheduled for Nov 2020 for accreditation by ASHP.

6. A larger percentage of local employers are preferring that candidates be PTCB certified, however, the exam is not required for CA BOP licensure. We highly recommend our students take the national exam but the percentage of students sitting for and passing the exam is less than 50%. This percentage needs to increase in order to improve the placement of COS Pharmacy Technician graduates in the workforce.

Overall SLO Achievement: Overall SLO Achievement: Students in the 2019-2020 cohort: 90% met the assessments in place for that academic year. The student learning outcomes for all of the courses in the Certificate of Achievement Entry-level Pharmacy Technician Program (2019-2020) are completed and in CourseLeaf. All student learning outcomes are directly linked to ASHP Standards. Courses include: PT 200, PT 215, PT 216, PT 217, PT 218, PT 402, PT 225, PT 226, PT 227, PT 228, PT 229, and PT 404

Changes Based on SLO Achievement: All student learning outcomes are directly linked to ASHP Standards required for accreditation.

Overall PLO Achievement: Overall PLO Achievement: Students in the 2019-2020 cohort: 90% met the assessments in place for the academic year. The program learning outcomes for the Certificate of Achievement Entry-level Pharmacy Technician Program (2019-2020) are directly linked to ASHP Standards. Courses include: PT 200, PT 215, PT 216, PT 217, PT 218, PT 402, PT 225, PT 226, PT 227, PT 228, PT 229, and PT 404

Changes Based on PLO Achievement: All Program Learning Outcomes are linked directly to ASHP Accreditation Standards required for accreditation.

Outcome cycle evaluation: Outcome cycle evaluation: Outcome assessment of new curriculum began in 2019-2020 and the program is complying with the outcomes required by ASHP entry-level Pharmacy technician training programs.

Action: 2020-2021,2019-2020,2018-2019; 2017-2018 Provide students pharmacy technician clinical training sites selecting various pharmacy

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practice settings.

The pharmacy technician training program must have inpatient and outpatient experiential training sites to meet ASHP standards. All experiential training sites will be evaluated by the pharmacy technician program faculty or designee annually per ASHP regulations.

Leave Blank: Essential for Operation

Implementation Timeline: 2019 - 2020, 2020 - 2021

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Identify related course/program outcomes: Linked to district objective 2.4 Increase Career Technical Education course success rates and program completion annually.

Person(s) Responsible (Name and Position): Mitch Andrews

Rationale (With supporting data): California State Board of Pharmacy requires experiential training for registration as a pharmacy technician. ASHP accreditation regulations and standards require annual inspection of experiential sites which must be reflective of various practice settings.

Priority: High

Safety Issue: No

External Mandate: Yes

Safety/Mandate Explanation: State Pharmacy regulation: pharmacy technician training must include externship hours.

ASHP regulation- Each training site must be evaluated for its appropriateness to the program and meeting student and program objectives.

Link Actions to District Objectives

District Objectives: 2018-2021
District Objective 2.1 - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years
District Objective 2.4 - By 2021, Increase the percentage of CTE students who achieve their employment objectives by 5 percentage points

Action: 2020-2021, 2019-2020; Provide students with an ASHP accredited pharmacy technician training program.

Finalize research and complete application for ASHP accreditation. Develop a timeline for the pharmacy technician program ASHP application by Summer 2020. ASHP accreditation provides students access to the national certification examination.

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Implementation Timeline: 2019 - 2020, 2020 - 2021

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Identify related course/program outcomes: 1. All the pharmacy technician course and program outcomes are directly related to ASHP accreditation standards and ASHP model curriculum.

2. All pharmacy technician training programs accredited by ASHP are approved by the Pharmacy Technician Certification Board (PTCB) for access to the certification examination.

3. Industry employers are requiring certification for an increasing number of positions, especially in institutional and correctional pharmacy settings.

Person(s) Responsible (Name and Position): Mitch Andrews

Rationale (With supporting data): 1. The Pharmacy Technician Certification Board (PTCB) allows those pharmacy technician students that completed an approved program to sit for the national exam.

2. Students are encouraged throughout the program to take the exam soon after completion of the certificate of achievement. Our course is set up using ASHP model curriculum and the 2020 blueprint for the PTCB exam to ensure students successfully complete the certification examination.

Priority: Medium

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Safety Issue: No

External Mandate: No

Safety/Mandate Explanation: This is not mandated yet but is being evaluated to be required by 2020.

Link Actions to District Objectives

District Objectives: 2013-2015

2013-2015: District Objective #1 - District Objective #1 for 2013-2015: Provide effective academic support services as measured by an increase in the rate at which students successfully complete courses.

District Objectives: 2015-2018

District Objectives - 2.2 - Increase the number of students who earn an associate degree or certificate annually.

District Objectives - 2.4 - Increase Career Technical Education course success rates and program completion annually.

Action: 2020-2021, 2019-2020; Provide current pharmacy equipment that meets ASHP standards.

The goal is to provide current standard pharmacy equipment required to meet ASHP simulation lab requirements.

The goal is to host an onsite ASHP survey visit in Fall 2020 and lab space must give students the opportunity for adequate skill attainment in a simulated inpatient and outpatient setting.

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Implementation Timeline: 2019 - 2020, 2020 - 2021

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Identify related course/program outcomes: PT 215 Pharmacy Outpatient Practice and PT 217 Pharmacy In-Patient Operations: Processing and Handling of Medications and Medication Orders:

Receive, process, and prepare prescriptions/medication orders for completeness, accuracy, and authenticity to ensure safety. (ASHP 3.2)

Prepare patient-specific and non-patient specific medications for distribution. (ASHP 3.4, 3.5)

Assist pharmacist s in preparing, storing, and distributing medication products including those requiring special handling and documentation. (ASHP 3.6)

Maintain pharmacy facilities and equipment. (ASHP 3.8)

Apply quality assurance practices to pharmaceuticals, durable and non-durable medical equipment, devices, and supplies. (ASHP 3.11)

Use current technology to ensure the safety and accuracy of medication dispensing. (ASHP 3.13)

Processing and Handling of Medications and Medication Orders: Describe basic concepts related to preparation for nonsterile compounding. Prepare simple, non-sterile medications per applicable USP chapters (e.g., reconstitution, basic ointments, and creams). Assist pharmacist s in preparing medications requiring compounding of nonsterile products. (ASHP 3.15, 3.16, 3.17)

Processing and Handling of Medications and Medication Orders: Explain accepted procedures in purchasing and inventory control of pharmaceuticals, devices, equipment, and supplies. (ASHP 3.18, 3.19)

Prepare, store, and deliver medication products requiring special handling and documentation. (ASHP 3.22)

Processing and Handling of Medications and Medication Orders: Maintain pharmacy facilities and equipment. (ASHP 3.8)

Person(s) Responsible (Name and Position): Mitchell Andrews

Rationale (With supporting data): ASHP standards for Pharmacy Technician training programs include a required list of industry-related equipment and supplies.

This equipment is essential for adequate preparation of pharmacy technician students congruent with current industry standards and area industry partners.

Priority: High

Safety Issue: No

External Mandate: Yes

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Safety/Mandate Explanation: ASHP mandates adequate equipment and supplies

10.2 The simulated component:

- (a) is a hands-on practice of skills without impact, or potential for impact, on patients and occurs before the experiential component;
- (b) includes sufficient equipment and supplies for each student to realistically simulate an actual work environment and achieve the program's educational competencies;

Link Actions to District Objectives

District Objectives: 2018-2021

District Objective 2.4 - By 2021, Increase the percentage of CTE students who achieve their employment objectives by 5 percentage points

Action: 2020-2021, 2019-2020; Provide an ASHP accredited Pharmacy Technician Certificate of Achievement Program to COS students and area employers.

Complete the application and documentation process for the Pharmacy Technician Program to become accredited by ASHP.

Spring 2020: Application

Summer 2020: Survey Preparation Documentation.

Fall 2020 Host ASHP Survey team

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Implementation Timeline: 2020 - 2021

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Identify related course/program outcomes: All Program and Course outcomes are directly related to ASHP Standards.

Person(s) Responsible (Name and Position): Mitchell Andrews

Rationale (With supporting data): American Society of Health-System Pharmacists (ASHP) and the American Council on Pharmacy Education (ACPE) are partnering to accomplish nationally standardized Pharmacy Technician training and education. ASHP accredited training programs are being required by employers and sought out by students. ASHP Accreditation ensures quality education and improves student employability with industry employers in the area.

In order to write this extensive report, faculty will be reimbursed with a timesheet of a consultant will be hired.

Priority: High

Safety Issue: No

External Mandate: Yes

Safety/Mandate Explanation: ASHP Standard 10, 11

Action: 2020-2021, 2019-2020: Provide ongoing ASHP accredited / PTCB approved Pharmacy Technician Program each year via budget augmentation

The goal is to provide students access to current industry-standard equipment, supplies, and references each year via budget augmentation of \$9000.

Annual accreditation fees, reference replacement cycle collaboration with the library, industry-standard equipment, and simulation lab supplies.

Provide appropriate release time for the program director for the creation and maintenance of ASHP required documentation for ongoing survey reaccreditation process..

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Implementation Timeline: 2019 - 2020, 2020 - 2021

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Identify related course/program outcomes: PT 215 Pharmacy Outpatient Practice and PT 217 Pharmacy In-Patient Operations: Processing and Handling of Medications and Medication Orders:

Receive, process, and prepare prescriptions/medication orders for completeness, accuracy, and authenticity to ensure safety. (ASHP 3.2)

Prepare patient-specific and non-patient specific medications for distribution. (ASHP 3.4, 3.5)

Assist pharmacists in preparing, storing, and distributing medication products including those requiring special handling and documentation. (ASHP 3.6)

Maintain pharmacy facilities and equipment. (ASHP 3.8)

Apply quality assurance practices to pharmaceuticals, durable and non-durable medical equipment, devices, and supplies. (ASHP 3.11)

Use current technology to ensure the safety and accuracy of medication dispensing. (ASHP 3.13)

Explain accepted procedures in inventory control of medications, equipment, and devices. (ASHP 3.19)

Prepare, store, and deliver medication products requiring special handling and documentation. (ASHP 3.22)

Person(s) Responsible (Name and Position): Mitchell Andrews

Rationale (With supporting data): Maintaining an ASHP accredited training program requires budgetary support for meeting the program and course outcomes. See attached files: ASHP equipment list, ASHP annual accreditation fee schedule, Lab supplies master list, Pharmacy references, Professional association memberships required by ASHP Standards

Priority: High

Safety Issue: No

External Mandate: Yes

Safety/Mandate Explanation: ASHP Standards, model curriculum and guidance documents are attached

Action: 2020-2021, 2019-2020; Improve student success through faculty development

Improve student success by providing faculty development in areas of current pharmacy practice and skills, pharmacy technician education, classroom effectiveness, and online teaching. ASHP \$2500, PTEC \$2500 (VTEA)

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Implementation Timeline: 2020 - 2021

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Identify related course/program outcomes: The goal of the Pharm Tech Certificate of Achievement Program is to increase student success to 80%. This goal requires ongoing faculty development to ensure that current and future faculty members make the transition from pharmacy practice to academia.

Advisory Board Survey/Minutes support faculty development activities to support a successful pharmacy technician program.

Person(s) Responsible (Name and Position): Mitchell Andrews

Rationale (With supporting data): Pharmacy technician faculty and Advisory Board members directly relate faculty development to the success of the pharmacy technician program. This is documented in Advisory Board minutes (attached), previous program review, and goal-settings sections of faculty elevations. Faculty utilized on campus and online resources for improving academic transition skills. ASHP annual conference supports ongoing current clinical skills. PTEC annual conference supports ongoing pharmacy technician education meets industry expectations.

COVID requires online teaching for current academic year

Priority: High

Safety Issue: No

External Mandate: Yes

Safety/Mandate Explanation: ASHP standards require ongoing faculty development

6.2 The program director:

(d) demonstrates on-going continuing education in the field of pharmacy and/or education.

6.4. To stay current with professional issues, the program director is a member of a national pharmacy or education association and a state pharmacy association. He/she ensures that memberships in pharmacy and education associations are represented among the program faculty members.

COVID emergency orders

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Link Actions to District Objectives

District Objectives: 2018-2021
District Objective 2.1 - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years
District Objective 4.3 - College of the Sequoias Board of Trustees, administration, faculty, and staff will engage in best practices and staff development to sustain effective operational systems for institutional assessment and continuous improvement.

Action: 2020-20212019-2020; Improve student pass rate on PTCB national certification exam.

Improve student pass rate on the PTCB national certification exam by providing a certification review course and/or PTCB practice exams.

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Implementation Timeline: 2020 - 2021

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Identify related course/program outcomes: Career Opportunities

Upon successful completion of this certificate, students will be eligible to apply for a pharmacy technician license from the California State Board of Pharmacy and will be prepared for employment as an entry-level pharmacy technician in various pharmacy practice settings. Industry partner requirements for certified technicians to fill posted positions are increasing. Advisory Board recommends students are prepared for and take the national certification exam.

Person(s) Responsible (Name and Position): Mitchell Andrews

Rationale (With supporting data): National standards for pharmacy technician education are reflected by passing scores on the PTCB certification exam.

Priority: High

Safety Issue: No

External Mandate: Yes

Safety/Mandate Explanation: ASHP Accreditation standards require the following program assessments

14.2 Program assessments include, but are not limited to:

- (a) program completion;
- (b) performance on national certification examinations or performance on a psychometrically valid evaluation;
- (c) program satisfaction, including student, graduate, and employer satisfaction;
- (d) job placement; and
- (e) assessment data used in the continuous quality improvement process is actively maintained.

Link Actions to District Objectives

District Objectives: 2018-2021
District Objective 2.4 - By 2021, Increase the percentage of CTE students who achieve their employment objectives by 5 percentage points
District Objective 4.1 - Increase the use of data for decision-making at the District and department/unit level