



LICENSING COMMITTEE REPORT

Stan Weisser, Licensee Member, Chairperson
Debbie Veale, Licensee Member, Vice-Chairperson
Lavanza Butler, Licensee Member
Ricardo Sanchez, Public Member
Albert Wong, Licensee Member

1. Call to Order and Establish of Quorum

2. Public Comment for Items Not on the Agenda, Matters for Future Meetings

Note: the committee may not discuss or take action on any matter raised during the public comment section that is not included on this agenda, except to decide to place the matter on the agenda of a future meeting. [Government Code Sections 11125 and 11125.7(a)]

3. Certification Programs Developed to Satisfy Requirements for Licensure as an Advanced Practice Pharmacist Pursuant to Title 16, California Code of Regulations Section 1730.2

Attachment 1

Background

Since the passage of SB 493 (Hernandez, Chapter 469, Statutes of 2013), the board has been working on implementation of the various provisions, including developing regulations to establish the parameters for acceptable certification programs that can be used as one of the qualifications for licensure as an Advanced Practice Pharmacist.

More specifically, Section 1730.2 establishes the parameters for certification programs in general clinical pharmacy practice. The regulation requires such a certification program to meet the following:

1. Recognition by the Accreditation Counsel for Pharmacy Education as a continuing education provider **OR**
Accreditation by the National Commission for Certifying Agencies
2. Include specified learning objectives in at least five sequentially-ordered education modules covering specific topics
3. Include an assessment after completion of each of the education modules to confirm the participant's understanding, knowledge, and application of the learning objective
4. Instruction and assessment is be developed and provided by either an advanced practice pharmacist licensed by the board or an expert with experience in the respective area of focus
5. A final overall assessment is given

6. Ten hours of continuing education every two years to maintain certification

A copy of the full regulation text, which took effect August 10, 2016, is included in **Attachment 1**.

During the Meeting

The committee will hear a presentation by the California Pharmacists Association (CPhA) on its Advanced Practice Pharmacist certification program done in conjunction with the National Association of Chain Drug Stores (NACDS). The California Society of Health-Systems Pharmacists (CSHP) has also developed a certification program and will be providing a presentation as well.

In addition to the regulation language, **Attachment 1** includes an article about the CPhA/NACDS training course as well as program information from CSHP.

4. Discussion and Consideration of Possible Revisions to the Licensure Requirements for a Designated Representative in a Reverse Distributor

Attachment 2

Relevant Law

Business and Professions Code section 4040.5 provides a definition for a reverse distributor to include every person who acts as an agent for pharmacies, drug wholesalers, third-party logistics providers, manufacturers and other entities by receiving, inventorying, warehousing, and managing the disposition of outdated or nonsaleable dangerous drugs.

Business and Professions Code section 4043 provides a definition for a wholesaler as a person who sells for resale, or negotiates for distribution, or takes possession of, any drug or device. Under this section, a reverse distributor is considered a wholesaler.

Business and Professions Code section 4053 provides the board with the authority to issue a license to a designated representative who shall be responsible to provide sufficient and qualified supervision in wholesaler or veterinary food-animal drug retailer. This section also provides the application requirements for such an individual. General requirements include:

- Minimum age of 18 years old **AND**
- High school graduation or equivalent **AND**
- One year paid work experience related to distribution or dispensing of dangerous drugs or dangerous device **OR**
Eligibility to take the pharmacist exam **AND**
- Completion of a training program covering specific content areas.

An individual applying for a designated representative must meet all of the criteria above as

well as additional training.

Business and Professions Code section 4053.1 provides the board with the authority to issue a license to a designated representative who shall be responsible to provide sufficient and qualified supervision in a third-party logistics provider. Although similar, the training course requirements for a designated representative-3PL are not as comprehensive.

Background

By law, for a wholesaler to operate, it must have at least one designated representative or a pharmacist on the premises as all times when the wholesaler is open for business (B&PC 4160 (c)(1)). A wholesaler must also have a designated representative-in-charge who shall be responsible for the wholesaler's compliance with state and federal laws governing wholesalers (B&PC 4160(d)).

Recently board staff was contacted by a pharmaceutical waste company that is seeking an exemption to the designated representative requirement as well as the requirement to have a designated representative-in-charge.

Board staff is not aware of any provision that would provide the board with the ability to make such an exemption. However, staff notes that it may be appropriate to consider if the general licensing requirements for a designated representative are appropriate for a business that solely handles dangerous drugs and pharmaceutical waste for destruction.

Under federal law, states shall require personnel employed in wholesale distribution to have appropriate education and/or experience to assume responsibility for positions related to compliance with state licensing requirements.

For Committee Discussion and Information

During the meeting the committee will hear a brief presentation from Bob Shaw, President of Medical Waste Services on this issue.

Board staff will have possible proposed statutory language to establish separate licensing requirements for a designated representative working in a reverse distributor available during the meeting should the committee wish to take action on this information.

Attachment 2 includes the relevant law sections referenced.

5. Discussion and Consideration of a Statutory Proposal to Establish a Satellite Compounding Pharmacy Licensure Category

Attachment 3

Relevant Law

Business and Professions Code section 4029(a) provides the definition of a hospital pharmacy as a pharmacy licensed by the board, located within any licensed hospital, institution, or establishment that maintains and operates organized facilities for the

diagnosis, care and treatment of human illness, to which persons may be admitted for overnight stay...

Business and Professions Code section 4029(b) also provides that a hospital pharmacy also includes a pharmacy that may be located outside of the hospital in another physical plant that is regulated under a hospital's consolidated license issued pursuant to Health and Safety Code section 1250.8. This section continues to state that as a condition of licensure, the pharmacy in another physical plant shall provide pharmaceutical services only to registered hospital patients who are on the premises of the same physical plant in which the pharmacy is located with an exemption being provided for a centralized hospital packaging pharmacy.

Business and Professions Code section 4127.1 generally establishes the requirements for licensure for a pharmacy that compounds sterile drug products. As part of these requirements 4127.1(b) provides that a license to compound sterile drug products shall be issued only to a location that is licensed as a pharmacy.

Background

As the board implemented the expanded sterile compounding licensure program both hospitals and board staff have experienced challenges in applying appropriate licensing requirements. Part of the challenge results from the board's requirements and regulation while considering the regulations that a hospital must also comply with under CDPH requirements.

To address some of these challenges board staff have meet both internally as well as consulted with CDPH staff and counsel. The intent of these meetings was to gain a better understanding of the overlay between the two regulators, understand the expectations for patient care as well as determine what changes, if any, staff would recommend to ensure safe and appropriate pharmaceutical services within a hospital.

In addition, board staff was approached by a large health system that is seeking clarification on the board's authority to issue more than one hospital pharmacy license. This request was made noting that a CDPH hospital license includes more than just the physical hospital building, but also includes other "approved services" that may be located off the premises. The concern expressed was about both the logistics of the main hospital pharmacy provided medications in a safe and secure manner to such facilities that are located off site and if there was an opportunity to provide for better drug control at some of these other locations.

For Committee Discussion and Consideration

Based on these discussions, board staff is recommending statutory changes to address some of these challenges. Staff notes that some of these changes create additional options for hospitals, but do not create mandates. Specifically the proposal would provide the following:

1. Allow a hospital to secure a second hospital pharmacy license from the board to be located within an “approved service” area that is not part of the hospital’s physical plant.
2. Establishes the authority to issue a satellite sterile compounding pharmacy license to a location separate from the hospital’s physical plant under specified conditions.

Attachment 3 includes the legal sections cited above as well as the draft statutory proposal.

6. Discussion and Consideration of a Statutory Proposal to Establish Authority for County Emergency Medical Services Providers to Use Automated Drug Delivery Systems for Purposes of Restocking Ambulances

Attachment 4

Background

As discussed during the December 2016 Board Meeting, board staff have been meeting periodically with the LA County Fire Department headquarters staff on a proposal to allow the Fire Department to establish automated drug delivery systems in certain fire stations from which the department’s ambulances can restock their ambulances. This system would supplement other methods already in place that permit the restocking of ambulances.

The general provisions would be that medications would be owned by LA County Fire, and initially purchased and stored centrally in a licensed wholesaler premises licensed by the board that is owned and operated by the Fire Department.

Distribution of medications from the wholesaler premises would be to the fire stations with automated drug delivery systems. A fire station with an automated drug delivery system would be licensed (requiring a new license type). Restocking of the automated drug delivery systems would be under the supervision of a pharmacist. The automated dispensing machine would then be available for access by ambulance staff, where the tracking system for the automated drug delivery system would track the signatures of the two staff who removed medications from the automated drug delivery system to replenish the stock of medications on the ambulance.

As part of its discussion the board expressed concern about who would have access to the system as well as its preference to have pharmacist involvement.

At the conclusion of its discussion the board referred this matter to the Licensing Committee for further discussion and development of a statutory framework that would provide such a model of restocking ambulance emergency medical supplies of medications for a county.

For Committee Discussion and Consideration

Attachment 4 contains draft statutory language that could serve as a starting point for a legislative proposal. This draft was developed based on the board’s discussion as well as

review of California's Emergency Medical Services Personnel Programs provided by the Emergency Medical Services Authority (EMSA), also included in **Attachment 4**. Staff used this information as a reference as well when developing the proposal.

Upon further discussion and direction from the committee, board staff will refine the proposal for consideration by the full board during the January 2017 Board Meeting.

Staff notes that it may be possible to secure the legislative changes this year depending on the preference of the board.

7. Licensing Statistics

Attachment 5

Licensing Statistics for July 1, 2016 – November 30, 2016

Attachment 5 includes the licensing statistics for the first 5 months of the fiscal year. The board has received 8,512 applications including:

- 2,457 pharmacy technicians
- 1,683 intern pharmacists
- 912 pharmacist exam applications

As of November 30, 2016, the board has issued 6128 licenses, renewed 26701 licenses and has 139,762 active licenses including:

- 44,836 pharmacists
- 6,783 intern pharmacists
- 73,064 pharmacy technicians
- 6,578 pharmacies
- 514 hospitals and exempt hospitals

General processing information by license type is provided below reflecting data as of December 23, 2016. The numbers reflect the time an application is received by the board through the time it is processed by licensing staff which may include a deficiency letter(s) being sent to the applicant. If an incomplete application is received, there will be additional processing time involved.

Updated statistics including licensing statistics through December 31, 2016 will be provided during the meeting.

Site Application Type	Number of Days
Pharmacy	10
Nonresident Pharmacy	14
Sterile Compounding	4
Nonresident Sterile Compounding	Current
Hospital	4
Clinic	14
Wholesaler	21
Nonresident Wholesaler	22
Third-Party Logistics Provider	Current
Nonresident Third-Party Logistics Provider	Current

In addition to general processing times, the processing time for evaluating deficiency mail of site licenses is averaging between 7 and 10 days, depending on the license type.

8. Future Committee Meeting Dates for 2017

- April 4, 2017 (Pharmacy Technician Summit)
- June 29, 2017
- September 19, 2017

Attachment 1

**Title 16. Board of Pharmacy
Order of Adoption**

Add Section 1730.2 of Article 3. of Division 17 of Title 16 of the California Code of Regulations as follows:

§ 1730.2 Certification Programs

- (a) For purposes of Business and Professions Code section 4210, subdivision (a)(2)(A), general clinical pharmacy practice is among the relevant areas of practice for which certification may be earned.
- (b) For a pharmacist seeking to demonstrate certification in general clinical pharmacy as a criterion for advanced practice pharmacist licensure by the board, the certification may be earned from an organization recognized as a continuing education provider by the Accreditation Council for Pharmacy Education or accredited by the National Commission for Certifying Agencies as a certification provider, so long as:
 - (1) The certification program includes specified learning objectives in at least five sequentially-ordered education modules, covering the following topics: performing patient assessments; ordering and interpreting drug therapy-related tests; referring patients to other health care providers; participating in the evaluation and management of diseases and health conditions in collaboration with other health care providers; and initiating, adjusting, modifying or discontinuing drug therapy;
 - (2) The certification program requires assessment after completion of each of the education modules in an examination format or by other assessment methodology that confirms the participant's understanding, knowledge, and application of the specified learning objectives for the module, where any failure to successfully complete the assessment in any module prevents advancement to the next module;
 - (3) The certification program requires that instruction and assessments in each of the modules are developed and provided by either:
 - (A) An advanced practice pharmacist licensed by the board or
 - (B) An expert with experience in the respective area(s) of focus specified in subparagraph (1), where "expert" means a person who qualifies to teach at a school of pharmacy recognized by the board.
 - (4) The certification program requires that, upon successful completion of all modules and their respective assessments, each participant shall earn a passing score on a final overall assessment before being awarded certification. The assessment shall be either a final written examination or an objective structured clinical examination developed and administered in collaboration with an accredited school of pharmacy recognized by the board; and
 - (5) The certification program require(s) a minimum of ten hours of continuing education on the topics identified in (b)(1) every two years to maintain certification.

Note: Authority cited: Section 4005 and 4210, Business and Professions Code.

Reference: Sections 4052.6, 4210, and 4233, Business and Professions Code.



CPHA and NACDS Launch Advanced Practice Pharmacist Certificate Training Course

December 19, 2016 09:52 PM Eastern Standard Time

SACRAMENTO, Calif.--(BUSINESS WIRE)--The California Pharmacists Association (CPHA) and National Association of Chain Drug Stores (NACDS) announced today the launch of a new certificate training program. The program, which is open to pharmacists from all practice settings, is intended to provide a pathway for pharmacists looking to become an advanced practice pharmacist.

In 2013, California state legislation, SB 493 (Hernandez) formally recognized pharmacists as healthcare providers and developed a new licensed category known as Advanced Practice Pharmacist. Today's announcement by CPHA and NACDS complements a California State Board of Pharmacy announcement that the regulatory process for recognizing advanced practice pharmacists was complete and they are ready to begin licensing highly educated and trained pharmacists who will collaborate with other healthcare providers to improve patient care.

Advanced practice pharmacists are authorized to perform patient assessments, order and interpret drug-therapy related tests, participate in the evaluation and management of disease and health conditions, refer patients to other providers, and initiate, adjust or discontinue drug therapy for patients.

"We're excited to be able to advance community-based health care for patients by offering this certificate program, which is one of the regulatory requirements for pharmacists to become an Advanced Practice Pharmacist," said Jon Roth, Chief Executive Officer of the California Pharmacists Association.

To become an advanced practice pharmacist, applicants must be a licensed pharmacist in good standing and meet any two of the following three criteria established in Business and Professions Code section 4210(a)(2):

- Earn a practice-based certification in a relevant area of practice from an organization recognized by the Accreditation Council for Pharmacy Education or the National Commission for Certifying Agencies.
- Complete a postgraduate residency through an accredited postgraduate institution where at least 50 percent of the experience includes providing direct patient care services with interdisciplinary health-care teams.
- Provide clinical services to patients for at least one year under a collaborative practice agreement or protocol with a physician, advanced practice pharmacist, pharmacist practicing collaborative drug therapy management, or health system.

The Advanced Practice Pharmacist Certificate Training Program is the product of CPhA's Institute for Advanced Pharmacy Practice and was developed in close collaboration with NACDS. The program satisfies one of the Board of Pharmacy regulatory criteria to become an Advanced Practice Pharmacist. The accredited certificate program consists of thirty-eight (38) hours; including thirty (30) hours of home-study and eight (8) hours of in-person skills demonstration and assessment.

"We are happy to be working with the California Pharmacists Association on this effort that will help patients get the care they need and deserve," said NACDS President and CEO Steven C. Anderson, IOM, CAE.

For more information on the advanced practice pharmacist regulatory and application process, please visit the California State Board of Pharmacy [webpage](#).

For more information on the advanced practice pharmacist certificate training, please visit the CPhA [webpage](#).

About CPhA

The California Pharmacists Association (CPhA) is the statewide professional association for pharmacists in all practicing settings. CPhA promotes the health of the public through the practice of pharmacy.

About NACDS

NACDS represents traditional drug stores and supermarkets and mass merchants with pharmacies. Chains operate more than 40,000 pharmacies, and NACDS' chain member companies include regional chains, with a minimum of four stores, and national companies. Chains employ more than 3.8 million individuals, including 175,000 pharmacists. They fill over 2.7 billion prescriptions yearly, and help patients use medicines correctly and safely, while offering innovative services that improve patient health and healthcare affordability. NACDS members also include more than 800 supplier partners and nearly 40 international members representing 13 countries. For more information, visit www.NACDS.org.

Contacts

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ADVANCED PRACTICE PHARMACIST CERTIFICATE

PROPOSAL TO ESTABLISH AN EDUCATIONAL PROGRAM

A Joint Submission by

Touro University California College of Pharmacy

and

The California Society of Health System Pharmacists

December 7, 2016

December 2, 2016

Virginia Herold
Executive Officer
Board of Pharmacy
1625 North Market Blvd, Suite N219
Sacramento, CA 95834

Dear Ms. Herold,

It is our pleasure to submit, for your consideration, this proposal for an Advanced Practice Pharmacist (APP) certificate program. This program was developed and will be carried out in a collaboration between Touro University California-College of Pharmacy and the California Society of Health-System Pharmacists (CSHP). Enclosed in this proposal package you will find the following sections:

1. Background information of each partner institution;
2. Program outline;
3. Program comprehensive learning objectives;
4. Touro University California-College of Pharmacy faculty bios;
5. Touro University California-College of Pharmacy faculty curricula vitae – Appendix 1

The enclosed certificate program materials were designed to meet Section 1730.2, Item (b), of Article 3.5 of Division 17 of Title 16 of the California Code of Regulations. Specifically, the following criteria have been addressed:

- The specified learning objectives are in five sequentially-ordered education modules;
- Topics covered include those stipulated in 1730.2 (b) (1) with appropriate assessments;
- Faculty are highly qualified experts as evidenced by their CVs.

If you have any questions regarding this submittal, please don't hesitate to contact any one of us at the below contact information.

Respectfully Submitted,



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SECTION 1: ORGANIZATION BACKGROUNDS

Touro University and College System

Touro College is a Jewish-sponsored independent institution of higher and professional education. The College was established primarily to enrich the Jewish heritage, and to serve the larger American community. Approximately 19,000 students are currently enrolled in its various schools and divisions.

Touro University California and its Nevada branch campus are accredited by the Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges (WASC).

MISSION

Touro University California provides graduate and professional educational excellence in the fields of Health Sciences, Public Health, and Education. The TUC learning experience is student-centered, enriched by focused research and scholarship, and prepares professionals for rewarding lives in service to others both locally and around the globe.

VISION

Touro University California – inspirational teaching and scholarship, transformative leadership, exemplary service.

VALUES STATEMENT

Touro University California is a university under Jewish auspices founded upon the universal values of commitment to social justice, intellectual pursuit, and service to humanity. As such, Touro University California is dedicated to the following:

- Respect for the inherent value and dignity of each individual
- Intellectual inquiry, discovery, and passion for life-long learning
- Acceptance and appreciation of diversity
- Compassion and service to society
- Student-centered education
- Collaboration and a sense of community
- Promotion of inter-professionalism

Established in 1997, Touro University California offers graduate degrees in osteopathic medicine, pharmacy, physician assistant studies, nursing, public health and education. The mission of Touro

University is to educate caring professionals to serve, to lead and to teach. Students from diverse backgrounds are recruited nationally to create a dynamic, robust learning environment.

The Touro College and University System is comprised of Jewish-sponsored non-profit institutions of higher and professional education. Touro College was chartered in 1970 primarily to enrich the Jewish heritage, and to serve the larger American community. Approximately 19,000 students are currently enrolled in its various schools and divisions. Touro College has branch campuses, locations and instructional sites in the New York area, as well as branch campuses and programs in Berlin, Jerusalem, Moscow, Paris, and Florida. Touro University California and its Nevada branch campus, as well as Touro College Los Angeles and Touro University Worldwide, are separately accredited institutions within the Touro College and University System.

The Touro University California College of Pharmacy was the first in the country to adopt a 2+2 model of education with 2 years of didactic training followed by a full two years of clinical training (following the medical school model). It remains one of only two in the country (the other being the Touro New York campus). The charter class started in 2005 with 60 students. Touro University California College of Pharmacy has grown and now graduates approximately 100 students per year. Touro University California College of Pharmacy received full accreditation from the Accreditation Council for Pharmacy Education (ACPE) and is recognized as a College of Pharmacy by the California State Board of Pharmacy.

California Society of Health-System Pharmacists

Established in 1962, the California Society of Health-System Pharmacists (CSHP) is a non-profit professional association established to serve the needs of hospital and health-system pharmacists and technicians. CSHP represents over 4,000 members comprised of pharmacists, new practitioner, students and pharmacy technicians. It is an affiliate of the American Society of Health-System Pharmacists. Its member services include:

- Legislative advocacy for the pharmacy profession,
- ACPE accredited Continuing Education (CE) for chapter affiliates and the whole membership,
- Meetings and conferences,
- Bi-monthly journal, including articles accredited for CE (ACPE).

CSHP MISSION

To represent and empower pharmacists and pharmacy technicians practicing in health-systems to promote wellness, patient safety and optimal use of medications.

CSHP VISION

Pharmacists are recognized as leaders in wellness, patient safety and the optimal use of medications.

CSHP Continuing Education Program Mission

The mission of the California Society of Health-System Pharmacists Continuing Pharmacy Education program is to provide innovative educational activities that will advance the practice of pharmacy and optimize patient care.

CSHP is accredited by the Accreditation Council for Pharmacy Education as a Continuing Education provider. In June 2016, CSHP underwent a comprehensive review/audit and received the maximum six-year renewal through June 30, 2022.

SECTION 2: PROGRAM OUTLINE

This is a proposal for a Certificate Program to meet one of the requirements for licensure as an Advanced Practice Pharmacist as identified in B&P §4210(a)(2)(A) and CCR §1730.2.

The program is a combination of self-study and live interactive instruction. The Disease State Management components are formatted to meet the Board of Pharmacy regulations in CCR §1730.2 such that specified learning objectives in at least five sequentially-ordered education modules, covering the following topics: performing patient assessments; ordering and interpreting drug therapy-related tests; referring patients to other health care providers; participating in the evaluation and management of diseases and health conditions in collaboration with other health care providers; and initiating, adjusting, modifying or discontinuing drug therapy. There is an assessment after completion of each of the education modules in an examination format that confirms the participant's understanding, knowledge, and application of the specified learning objectives for the module, where any failure to successfully complete the assessment in any module prevents advancement to the next module.

All instruction is delivered by faculty from an accredited college of pharmacy recognized by the Board of Pharmacy. The successful candidate must complete ALL modules of ALL Disease State Management components, plus the practicum, before a Certificate may be granted,

I. Online Modules (30 hours; allow participant 6-8 weeks to complete at their own pace prior to attending live meeting)

- Introduction to Advanced Practice Pharmacist
- Practice Affiliations
- Patient Encounter
 - Introduction to patient interviewing
 - Motivational Interviewing Techniques
 - Proper medication reconciliation techniques
- Disease State Management
 - Hypertension
 - Diabetes Mellitus
 - Hyperlipidemia
 - Psychiatry (focus on depression and anxiety)
 - Anticoagulation
 - Geriatrics/Safe Medication Use in Elderly

Assessment questions after each section with a passing rate of $\geq 75\%$ for each section before progressing to the next section.

II. Live Event (8 hours)

- *Measuring vital signs (blood pressure, heart rate, respiratory rate)
- *Diabetes foot exam
- *Devices Workshop
 - Diabetes (BG Meter and Point-of-Care (POC) A1C machine, injectables/administration)
 - Anticoagulation (POC INR, injectables)
- Clinical cases/discussion
- Simulation of patient encounters

*Competency will be assessed for the above-mentioned activities.

A comprehensive exam will take place at the end of the APP Certificate Program with a score of $\geq 75\%$ needed to pass. Participants can retake the exam up to three times.

SECTION 3: COMPREHENSIVE LEARNING OBJECTIVES

Online/At-Home Training

- I. Introduction to Advanced Practice Pharmacist (APP)** (Instructor: Keith Yoshizuka)
 - A. Identify the minimum five sequentially ordered learning modules that must be included in an APP Certificate Program.
 - B. Identify the areas of enhanced scope of practice that an Advanced Practice Pharmacist may participate in.
 - C. Identify the additional continuing education requirements for the Advanced Practice Pharmacist to maintain licensure as such.

- II. Practice Affiliations** (Instructors: Melissa Kirkpatrick, Emily Chan, Shadi Doroudgar)
 - A. Describe a collaborative practice agreement between a pharmacist and other health care providers.
 - B. Review clinical documentation procedures.

- III. Patient Encounter** (Instructors: Melissa Kirkpatrick, Emily Chan, Shadi Doroudgar)
 - A. Discuss key steps in a patient interview.
 - B. Describe motivational interviewing techniques.
 - C. Describe proper medication reconciliation techniques.

- IV. Clinical Disease States and Topics**
 - A. Hypertension** (Instructor: Eric Ip)
 - i. Performing patient assessments
 1. Define hypertension and classify adult blood pressure readings.
 2. Assess the patient's risk factors, clinical presentation, and signs and symptoms.
 3. Identify and interpret key national practice guidelines.
 4. Identify goal BP targets and goals of therapy.
 5. Apply key national practice guidelines.
 6. Utilize treatment guidelines to guide patient pharmacotherapy: mechanism-of-action, dosing, drug interactions, adverse events (common as well as rare but serious), precautions/contraindications, and boxed warnings.
 7. Design a patient-centered therapeutic regimen for a patient.
 - ASSESSMENT (cannot complete this module until successful completion)
 - ii. Order and interpret drug therapy-related tests
 1. Identify appropriate labs to order when initiating, modifying, and monitoring pharmacotherapy.
 2. Interpret lab value changes.
 3. Adjust medication therapy based on lab values.
 - ASSESSMENT (cannot complete this module until successful completion)

- iii. Refer patients to other health care providers
 - 1. Recognize appropriate signs and symptoms warranting referral to a specialist.
 - 2. Triage patients to seek urgent treatment when necessary.
 - 3. Communicate relevant patient information with other health care professionals involved in a patient's care.
 - 4. Collaborate with other members of the health care team to optimize the patient's medication therapy.

ASSESSMENT (cannot complete this module until successful completion)

- iv. Participate in the evaluation and management of disease and health conditions in collaboration with other health care providers
 - 1. Recommend non-pharmacologic strategies to address hypertension.
 - 2. Design a patient-centered, evidence-based pharmacotherapy regimen.
 - 3. Optimize management of hypertension at follow-up visits in regards to monitoring for efficacy, safety, and tolerability.
 - 4. Recognize what alternative therapies may be considered based on patient presentation due to intolerance, lack of efficacy, patient comorbidities, adverse effects, drug interactions, etc.

ASSESSMENT (cannot complete this module until successful completion)

- v. Initiate, adjust or discontinue drug therapy
 - 1. Initiate medication therapy and non-pharmacologic options based on standard of care guidelines and patient specific criteria.
 - 2. Follow-up with patient to evaluate therapy.
 - 3. Adjust treatment regimen based on patient's response to therapy.
 - 4. Identify potential indications for medication discontinuation.

ASSESSMENT (cannot complete this module until successful completion)

B. Diabetes Mellitus (Instructor: Eric Ip)

- i. Performing patient assessments
 - 1. Describe the different types of diabetes mellitus.
 - 2. Assess the patient's risk factors, clinical presentation, and signs and symptoms.
 - 3. Identify and interpret key national practice guidelines.
 - 4. Identify goal glycemic targets and goals of therapy.
 - 5. Apply key national practice guidelines.
 - 6. Utilize treatment guidelines to guide patient pharmacotherapy: mechanism-of-action, dosing, drug interactions, adverse events (common as well as rare but serious), precautions/contraindications, and boxed warnings.
 - 7. Design a patient-centered therapeutic regimen for a patient.

ASSESSMENT (cannot complete this module until successful completion)

- ii. Order and interpret drug therapy-related tests
 - 1. Identify appropriate labs to order when initiating, modifying, and monitoring pharmacotherapy.

2. Interpret lab value changes.
3. Adjust medication therapy based on lab values.

ASSESSMENT (cannot complete this module until successful completion)

iii. Refer patients to other health care providers

1. Recognize appropriate signs and symptoms warranting referral to a specialist.
2. Triage patients to seek urgent treatment when necessary.
3. Communicate relevant patient information with other health care professionals involved in a patient's care.
4. Collaborate with other members of the health care team to optimize the patient's medication therapy.

ASSESSMENT (cannot complete this module until successful completion)

iv. Participate in the evaluation and management of disease and health conditions in collaboration with other health care providers

1. Recommend non-pharmacologic strategies to address diabetes mellitus.
2. Design a patient-centered, evidence-based pharmacotherapy regimen.
3. Optimize management of diabetes mellitus at follow-up visits in regards to monitoring for efficacy, safety, and tolerability.
4. Recognize what alternative therapies may be considered based on patient presentation due to intolerance, lack of efficacy, patient comorbidities, adverse effects, drug interactions, etc.

ASSESSMENT (cannot complete this module until successful completion)

v. Initiate, adjust or discontinue drug therapy

1. Initiate medication therapy and non-pharmacologic options based on standard of care guidelines and patient specific criteria.
2. Follow-up with patient to evaluate therapy.
3. Adjust treatment regimen based on patient's response to therapy.
4. Identify potential indications for medication discontinuation.

ASSESSMENT (cannot complete this module until successful completion)

C. Hyperlipidemia (Instructor: Emily Chan)

i. Performing patient assessments

1. Define hyperlipidemia.
2. Assess the patient's risk factors, clinical presentation, and signs and symptoms.
3. Identify and interpret key national practice guidelines.
4. Understand which tools for risk assessment are appropriate based on patient presentation.
5. Calculate a patient's 10-year ASCVD risk score.
6. Identify goals of therapy.
7. Apply key national practice guidelines.

8. Utilize treatment guidelines to guide patient pharmacotherapy: mechanism-of-action, dosing, drug interactions, adverse events (common as well as rare but serious), precautions/contraindications, and boxed warnings.
9. Design a patient-centered therapeutic regimen for a patient.
ASSESSMENT (cannot complete this module until successful completion)
- ii. Order and interpret drug therapy-related tests
 1. Identify appropriate labs to order when initiating, modifying, and monitoring pharmacotherapy.
 2. Interpret lab value changes.
 3. Adjust medication therapy based on lab values.ASSESSMENT (cannot complete this module until successful completion)
- iii. Refer patients to other health care providers
 1. Recognize appropriate signs and symptoms warranting referral to a specialist.
 2. Triage patients to seek urgent treatment when necessary.
 3. Communicate relevant patient information with other health care professionals involved in a patient's care.
 4. Collaborate with other members of the health care team to optimize the patient's medication therapy.ASSESSMENT (cannot complete this module until successful completion)
- iv. Participate in the evaluation and management of disease and health conditions in collaboration with other health care providers
 1. Recommend non-pharmacologic strategies to address hyperlipidemia.
 2. Design a patient-centered, evidence-based pharmacotherapy regimen.
 3. Optimize management of hyperlipidemia at follow-up visit in regards to monitoring for efficacy, safety, and tolerability.
 4. Recognize what alternative therapies may be considered based on patient presentation due to intolerance, lack of efficacy, patient co-morbidities, adverse effects, drug interactions, etc.ASSESSMENT (cannot complete this module until successful completion)
- v. Initiate, adjust or discontinue drug therapy
 1. Initiate medication therapy and non-pharmacologic options based on standard of care guidelines and patient specific criteria.
 2. Follow-up with patient to evaluate therapy.
 3. Adjust treatment regimen based on patient's response to therapy.
 4. Identify potential indications for medication discontinuation.ASSESSMENT (cannot complete this module until successful completion)

D. Major Depressive Disorder (MDD) and Generalized Anxiety Disorder (GAD)

(Instructor: Shadi Doroudgar)

i. Performing patient assessments

1. Assess the patient's risk factors, clinical presentation, and signs and symptoms.
2. Interpret the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) diagnostic criteria.
3. Apply treatment guidelines and relevant landmark trials.
4. Utilize treatment guidelines to guide patient pharmacotherapy: mechanism-of-action, dosing, drug interactions, adverse events (common as well as rare but serious), precautions/contraindications, and boxed warnings.
5. Apply standardized rating scales to appropriately initiate and evaluate patient pharmacotherapy.
6. Design a patient-centered therapeutic regimen for an uncomplicated patient, as well as for a patient belonging to a special population group (i.e. elderly, pregnant, pediatrics).

ASSESSMENT (cannot complete this module until successful completion)

ii. Order and interpret drug therapy-related tests

1. Identify appropriate labs to order when initiating, modifying, and monitoring pharmacotherapy.
2. Interpret lab value changes.
3. Adjust medication therapy based on lab values.

ASSESSMENT (cannot complete this module until successful completion)

iii. Refer patients to other health care providers

1. Recognize appropriate signs and symptoms warranting referral to a specialist.
2. Triage patients to seek urgent treatment when necessary.
3. Review emergency protocol and follow up steps with patients at each visit.
4. Communicate relevant patient information with other health care professionals involved in a patient's care.
5. Collaborate with other members of the health care team to optimize the patient's medication therapy.

ASSESSMENT (cannot complete this module until successful completion)

iv. Participate in the evaluation and management of disease and health conditions in collaboration with other health care providers

1. Recommend non-pharmacologic strategies to address MDD and GAD.
2. Design a patient-centered, evidence-based pharmacotherapy regimen.
3. Optimize management of MDD and GAD at follow-up visits in regards to monitoring for efficacy, safety, and tolerability.

4. Recognize what alternative therapies may be considered based on patient presentation due to intolerance, lack of efficacy, patient comorbidities, adverse effects, drug interactions, etc.

ASSESSMENT (cannot complete this module until successful completion)

- v. Initiate, adjust or discontinue drug therapy
 1. Initiate medication therapy and non-pharmacologic options based on standard of care guidelines and patient specific criteria.
 2. Follow-up with patient to evaluate therapy.
 3. Adjust treatment regimen based on patient's response to therapy.
 4. Identify potential indications for medication discontinuation.
 5. Plan an appropriate tapering regimen when discontinuing a treatment.

ASSESSMENT (cannot complete this module until successful completion)

E. Anticoagulation (Instructor: Melissa Kirkpatrick)

- i. Performing patient assessments
 1. Describe the clotting cascade, highlighting sites of action for available anticoagulants.
 2. Identify physiologic states and comorbidities that increase risk of thromboembolism and abnormal bleeding.
 3. Recognize signs and symptoms of deep vein thrombosis, pulmonary embolism, and embolic stroke.
 4. Recognize signs and symptoms of clinically relevant major and non-major bleeding.
 5. Identify modifiable and non-modifiable risk factors for thromboembolism and bleeding.
 6. Review available anticoagulation agents, comparing and contrasting features with clinical impact.
 7. Discuss reversal agents for anticoagulant medications.
 8. Summarize guideline recommendations for anticoagulant therapy.
 9. Develop a plan to initiate, transition, and discontinue anticoagulant therapy.
 10. List appropriate subjective and objective information necessary to appropriately monitor patients taking anticoagulants.

ASSESSMENT (cannot complete this module until successful completion)

- ii. Ordering and interpreting drug therapy related tests
 1. Identify appropriate labs to order when initiating, modifying, and monitoring pharmacotherapy.
 2. Interpret lab value changes.
 3. Adjust medication therapy based on lab values.
 4. Describe use of point-of-care (POC) testing machines.

ASSESSMENT (cannot complete this module until successful completion)

- iii. Referring patients to other healthcare providers
 1. Recognize appropriate signs and symptoms warranting referral to a specialist.

2. Triage patients to seek urgent treatment when necessary.
3. Communicate relevant patient information with other health care professionals involved in a patient's care.
4. Collaborate with other members of the health care team to optimize the patient's medication therapy.

ASSESSMENT (cannot complete this module until successful completion)

- iv. Participating in the evaluation and management of diseases and health conditions in collaboration with other health care providers
 1. Recommend non-pharmacologic strategies to prevent embolic events.
 2. Design a patient-centered, evidence-based pharmacotherapy regimen.
 3. Optimize management of anticoagulation at follow-up visits in regards to monitoring for efficacy, safety, and tolerability.
 4. Recognize what alternative therapies may be considered based on patient presentation due to intolerance, lack of efficacy, patient comorbidities, adverse effects, drug interactions, etc.

ASSESSMENT (cannot complete this module until successful completion)

- v. Initiating, adjusting, modifying or discontinuing drug therapy
 1. Initiate medication therapy and non-pharmacologic options based on standard of care guidelines and patient specific criteria.
 2. Follow-up with patient to evaluate therapy.
 3. Adjust treatment regimen based on patient's response to therapy.
 4. Identify potential indications for medication discontinuation.

ASSESSMENT (cannot complete this module until successful completion)

F. Geriatrics/Safe Medication Use in Older Adults (Instructor: Shadi Doroudgar)

- i. Performing patient assessments
 1. Be familiar with the patient profile of the growing aging population.
 2. Recall challenges in managing pharmacotherapy in older adults.
 3. Identify prescribing cascades given medication profiles of older adults.
 4. Establish pharmacotherapy regimens to avoid prescribing cascades.
 5. Identify potential pharmacokinetic (PK) and pharmacodynamic (PD) changes in older adults.
 6. Describe how PK and PD changes affect response to medications.
 7. Describe the American Geriatrics Society (AGS) Beers Criteria 2015.
 8. Discuss new changes incorporated into this updated criteria.
 9. Effectively utilize the Beers criteria to identify inappropriate prescribing in older adults.

ASSESSMENT (cannot complete this module until successful completion)

- ii. Order and interpret drug therapy-related tests
 1. Identify appropriate labs to order when initiating, modifying, and monitoring pharmacotherapy.

2. Interpret lab value changes in the elderly.
3. Adjust medication therapy based on lab values.

ASSESSMENT (cannot complete this module until successful completion)

iii. Refer patients to other health care providers

1. Recognize appropriate signs and symptoms warranting referral to a specialist.
2. Triage patients to seek urgent treatment when necessary.
3. Communicate relevant patient information with other health care professionals involved in a patient's care.
4. Collaborate with other members of the health care team to optimize the patient's medication therapy.

ASSESSMENT (cannot complete this module until successful completion)

iv. Participate in the evaluation and management of disease and health conditions in collaboration with other health care providers

1. Educate health care providers regarding pharmacokinetic/pharmacodynamics changes in the elderly, the prescribing cascade and polypharmacy.
2. Discuss relevant clinical patient education information, strategies for adherence and mental health resources.

ASSESSMENT (cannot complete this module until successful completion)

v. Initiate, adjust or discontinue drug therapy

1. Initiate medication therapy when appropriate.
 - a. "start low, go slow, but go"
2. Follow-up with patient to evaluate therapy.
3. Adjust treatment regimen based on patient's response to therapy.
4. Identify potential indications for medication discontinuation.

ASSESSMENT (cannot complete this module until successful completion)

Live/In-Person Training (Instructor: Eric Ip, Shadi Doroudgar, Melissa Kirkpatrick, Emily Chan)

I. Measuring vital signs (blood pressure, heart rate, respiratory rate)

ASSESSMENT (cannot complete this module until successful completion)

II. Perform a diabetes foot exam

ASSESSMENT (cannot complete this module until successful completion)

III. Demonstrate how to utilize various devices (blood glucose meter, point-of-care A1C and INR machines, diabetes injectables, anticoagulation injectables)

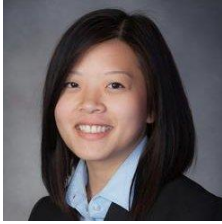
ASSESSMENT (cannot complete this module until successful completion)

IV. Analyze clinical cases

V. Simulate mock patient encounters

Comprehensive Exam (cannot complete APP Certificate Program without successfully passing with score of $\geq 75\%$).

SECTION 4: PROGRAM FACULTY BIOS



Emily Chan, Pharm.D., BCACP

*Assistant Professor of Clinical Sciences- Touro University California College of Pharmacy
Clinical Pharmacist, Ambulatory Care- LifeLong Medical Care East Oakland*

Dr. Emily Chan is an Assistant Professor of Clinical Sciences at Touro University California College of Pharmacy and Clinical Pharmacist at LifeLong Medical Care East Oakland. She received her Doctor of Pharmacy from the University at Buffalo School of Pharmacy and Pharmaceutical Sciences. She then completed a PGY1 Ambulatory Care Focused residency at Mercy Health Muskegon and a PGY2 Ambulatory Care Residency at the University of Pittsburgh Medical Center Presbyterian Shadyside. She is a Board Certified Ambulatory Care Pharmacist, precepts students and residents, and continues to focus her practice on primary care with the underserved population.

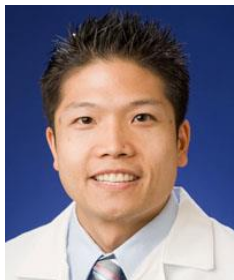


Shadi Doroudgar, Pharm.D., BCPS, CGP, BCPP

*Assistant Professor of Clinical Sciences - Touro University California College of Pharmacy
Residency Research Coordinator - Touro University California
Clinical Pharmacist – LifeLong Medical Care East Oakland
Psychiatric Pharmacist - Pathways to Wellness, Oakland
Pharmacist - Sutter Center for Psychiatry, Sacramento*

Dr. Shadi Doroudgar is an assistant professor of Clinical Sciences at Touro University California College of Pharmacy. She is a clinical pharmacist and preceptor at LifeLong Medical Clinic East Oakland and a psychiatric pharmacist at Pathways to Wellness in Oakland. She also practices as a pharmacist at Sutter Center for Psychiatry in Sacramento. She received her Bachelor's degree in

Biochemistry from University of California, Los Angeles (UCLA) and her Doctor of Pharmacy Degree from University of Southern California (USC). She completed her PGY-1 Pharmacy Practice Residency at California Northstate University/ Sutter Sacramento Sierra Region and her PGY-2 Psychopharmacology Residency at Touro University California/ Center for Behavioral Health in Vallejo. She is a Board-Certified Pharmacotherapy Specialist, a Board Certified Psychiatric Pharmacist and a Certified Geriatric Pharmacist. Her main research interests have been studying the effects of various drugs on driving and sleep and actigraphy. She has led the Touro University California student CAPSLEAD team in research in the areas of pharmacy student professionalism, minority enrollments trends in pharmacy and residency growth trends. She is actively involved with the Area Agency on Aging Napa/Solano, providing continuing education to health care providers through her involvement with the Prevention and Early Access Program for Seniors and providing community education through the Stepping On Fall Prevention Program.



Eric J. Ip, Pharm.D., BCPS, CSCS, CDE, FCSHP

*Chair and Associate Professor of Clinical Sciences- Touro University California College of Pharmacy
Diabetes Specialist/Clinical Pharmacist- Kaiser Permanente Mountain View Medical Offices*

Dr. Eric Ip is Chair and Associate Professor of Clinical Sciences at Touro University California College of Pharmacy and co-heads the Diabetes/Chronic Conditions Management Program as an ambulatory care pharmacist at Kaiser Permanente Mountain View Medical Offices. He received his Bachelor's degree in Exercise Science from UC Davis, his Doctor of Pharmacy degree from UCSF School of Pharmacy, and completed his PGY-1 Pharmacy Practice Residency at Kaiser Permanente Santa Clara Medical Center. He is a Board-Certified Pharmacotherapy Specialist, a Certified Diabetes Educator, a Certified Strength and Conditioning Specialist, and a fellow of the California Society of Health-System Pharmacists. Dr. Ip has authored numerous peer-reviewed research articles and book chapters as well as presented his work nationally and internationally. He lectures on diabetes mellitus and cardiovascular topics and has received multiple teaching awards from the College of Pharmacy.



Melissa Kirkpatrick, Pharm.D., BCACP

Assistant Professor of Clinical Sciences- Touro University California College of Pharmacy

Health Sciences Assistant Clinical Professor - UCSF School of Pharmacy

Clinical Pharmacist, Ambulatory Care - Highland Hospital

Dr. Melissa Kirkpatrick holds a dual appointment with Touro University California College of Pharmacy and UCSF School of Pharmacy, precepting pharmacy students and residents in Anticoagulation and Primary Care settings. She received a Bachelor's degree in both Nutritional Sciences and Molecular & Cellular Biology from the University of Arizona, her Doctor of Pharmacy degree from the University of North Carolina Eshelman School of Pharmacy, and completed her PGY-1 Ambulatory Care Residency at UC San Diego Health System. She is a Board Certified Ambulatory Care Pharmacist and has focused her practice on working with underserved patients in hospital-based, safety-net clinics.



Keith Yoshizuka, PharmD, MBA, JD, FCSHP

Assistant Dean for Administration and Chair of Social, Behavioral, & Administrative Sciences- Touro University California College of Pharmacy

Dr. Keith Yoshizuka is Assistant Dean for Administration and Chair of the Social, Behavioral, & Administrative Sciences Department at Touro University California College of Pharmacy. He received his PharmD from the University of the Pacific, his MBA from California State University, Sacramento, and his Juris Doctor from the University of San Francisco. Dr. Yoshizuka is licensed to practice both pharmacy and law in the state of California (as well as other jurisdictions). He has 40 years of experience as a pharmacist, pharmacy manager, and hospital administrator, and as a college professor teaching pharmacy law, management, and ethics. Practice sites include UCSF Medical Center, Kaiser Permanente, and Sutter Health. He is an active member of the California Society of Health System Pharmacists and has twice served as chair of CSHP's Government Affairs Advisory Committee. He is also active in the American Society for Pharmacy Law and an active advocate for the profession of pharmacy.



Appendix 1

ADVANCED PRACTICE PHARMACIST CERTIFICATE
PROPOSAL TO ESTABLISH AN EDUCATIONAL PROGRAM

Touro University California-College of Pharmacy
Faculty Curricula Vitae



Emily Chan, PharmD

Work:	Touro University California College of Pharmacy, Mare Island 1310 Club Drive, H-84, Rm 109 T: (707) 638-5904 E: Emily.chan@tu.edu	Home: 717 East 21 st Street, Apt #3 Oakland, CA 94606 T: (917) 915-8238 E: emilychan5@gmail.com
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ACADEMIC APPOINTMENTS

Touro University California, College of Pharmacy Assistant Professor, Clinical Sciences Department	7/2015 – Present <i>Vallejo, CA</i>
LifeLong Medical Care East Oakland ASHP Accredited PGY1 Pharmacy Residency Primary Care Focus Site Coordinator	7/2015 – Present <i>Oakland, CA</i>

PROFESSIONAL EDUCATION AND TRAINING

ASHP Accredited PGY2 Ambulatory Care Pharmacy Residency University of Pittsburgh Medical Center Presbyterian Shadyside Director: Deanne Hall, PharmD, CDE, BCACP	7/2014 – 6/2015 <i>Pittsburgh, PA</i>
ASHP Accredited PGY1 Pharmacy Practice Residency, Ambulatory Care Focused Mercy Health Muskegon Director: Angela Green, PharmD, BCPS	7/2013 – 6/2014 <i>Muskegon, MI</i>
Doctor of Pharmacy Program University at Buffalo School of Pharmacy and Pharmaceutical Sciences (UB SoPPS) Mentions: Cum Laude; GPA: 3.5/4.0	8/2009 – 6/2013 <i>Buffalo, NY</i>
Undergraduate Coursework University at Buffalo, The State University of New York, Honors College Mentions: Honors Scholar; GPA: 3.7/4.0	8/2007 – 6/2009 <i>Buffalo, NY</i>

LICENSURES & CERTIFICATIONS

California Pharmacist License, #74388	Exp. 2/2017
Pennsylvania Pharmacist License, #RP449088	Exp. 9/2016
Pennsylvania Authorization to Administer Injectables, #RPI009351	Exp. 9/2016
Michigan Pharmacist License, #5302042044	Exp. 6/2016

Michigan Controlled Substance License, #5302042044 Exp. 6/2016

Pharmacy Based Immunization Delivery Certificate 9/2014
American Pharmacists Association

Basic Life Support for Healthcare Professionals Exp. 9/2016
American Heart Association

POSTGRADUATE YEAR 2 AMBULATORY CARE PHARMACY RESIDENCY EXPERIENCES

Healthcare to the Underserved Longitudinal
Matilda Theiss Family Medicine Clinic (FHQC) *Pittsburgh, PA*
Preceptor: Sharon Connor, PharmD; Karen S. Pater, PharmD, BCPS, CDE

Heart and Vascular Institute Longitudinal
Advanced Heart Failure/Pulmonary Hypertension Clinic *Pittsburgh, PA*
Preceptor: Deanne Hall, PharmD, CDE, BCACP; Ravi Ramani, MD

Research Experience: Improving medication and lifestyle adherence in an outpatient advanced heart failure clinic Longitudinal
University of Pittsburgh School of Pharmacy *Pittsburgh, PA*
Preceptor: Deanne Hall, PharmD, CDE, BCACP

Residency Research Program 7/2014 – Present
University of Pittsburgh School of Pharmacy *Pittsburgh, PA*
Director: Sandra Kane-Gill, PharmD, MSc, FCCM, FCCP

Staffing – Outpatient Pharmacy with Discharge and Employee Services Longitudinal
UPMC Presbyterian Prescription Shop *Pittsburgh, PA*
Preceptor: Sharon Miller, PharmD

Outpatient Pharmacy/Immunization Clinics 9/2014 – 10/2014
Falk Pharmacy *Pittsburgh, PA*
Preceptor: Sharon Miller, PharmD

Medical Infectious Diseases 11/2014 – 12/2014
Pittsburgh AIDS Center for Treatment *Pittsburgh, PA*
Preceptor: Thomas Glowa, PharmD, BCPS

Diabetes Clinic 1/2015 – 2/2015
University Diabetes Care Associates *Jeannette, PA*
Preceptor: Scott Drab, PharmD, CDE, BC-ADM

Geriatrics Clinic 3/2015 – 4/2015
UPMC Senior Care – Shadyside; Benedum Geriatric Center
Pittsburgh, PA
Preceptor: Christine Ruby-Scelsi, PharmD, BCPS; Erin Suhrie, PharmD

Precepting Block 5/2015 – 6/2015
Heart and Vascular Institute
Pittsburgh, PA
Preceptor: Bethany Helms, PharmD; Deanne Hall, PharmD, CDE, BCACP

POSTGRADUATE YEAR 1 PHARMACY PRACTICE RESIDENCY EXPERIENCES

Administration Longitudinal
Mercy Health Muskegon
Muskegon, MI
Preceptor: George Kuhnert, RPh

Managed Care/Physician Hospital Organization Longitudinal
Lakeshore Health Network
Muskegon, MI
Preceptor: Jason Barnum, PharmD, CDE

HIV/AIDS Longitudinal
Mercy Health McClees Clinic for HIV/AIDS
Muskegon, MI
Preceptor: Sarah Kemink, PharmD

Research Experience: A joint collaboration between nursing and pharmacy to improve medications-related HCAHPS scores Longitudinal
Muskegon, MI
Mercy Health Muskegon
Preceptor: Carrie Morrison, PharmD

Staffing – Inpatient and Outpatient Longitudinal
Muskegon, MI
Mercy Health Muskegon, Mercy Campus; Fruitport Family Medicine Clinic
Preceptor: Jeffrey Sundell, PharmD

Orientation/Pharmacokinetics 6/2013 – 9/2013
Muskegon, MI
Mercy Health Muskegon, Mercy Campus
Preceptor: Ted Woods, RPh; Lisa Tyjewski, RPh

Primary Care Clinics 9/2013 – 11/2013
Muskegon, MI
Westshore Internal Medicine Clinic; Harbour Pointe Family Medicine Clinic
Preceptor: Jeffrey Sundell, PharmD

Anticoagulation Clinics 11/2013 – 12/2013
Muskegon, MI
Mercy Heart Center Coumadin Clinic
Preceptor: Carrie Morrison, PharmD

Internal Medicine Mercy Health Muskegon, Mercy Campus Preceptor: Angela Green, PharmD, BCPS	1/2014 – 2/2014 <i>Muskegon, MI</i>
Infectious Diseases Mercy Health Muskegon; Hackley Infectious Disease Clinic Preceptor: James Avila, RPh	2/2014 – 3/2014 <i>Muskegon, MI</i>
Unit-based Pharmacy Mercy Health Muskegon, Mercy Campus Preceptor: Lisa Tyjewski, RPh	3/2014 – 4/2014 <i>Muskegon, MI</i>
Nephrology Mercy Health Muskegon, MI; West Michigan Nephrology Clinic Preceptor: Lisa Tyjewski, RPh; Gregory Downer, MD	4/2014 – 5/2014 <i>Muskegon, MI</i>
Geriatrics Clinics Mercy Geriatrics Clinic; LifeCircles Program for All-inclusive Care for Elderly Preceptor: Angela Green, PharmD, BCPS	5/2014 – 6/2014 <i>Muskegon, MI</i>

TEACHING EXPERIENCES

Teaching Certificate Programs

Mastery of Teaching Program: Advanced Instruction, Mentoring, Teaching University of Pittsburgh School of Pharmacy Director: Denise Howrie-Schiff, PharmD	9/2014 – 6/2015 <i>Pittsburgh, PA</i>
Pharmacy Education Development and Lecture Series (PEDALS) Teaching Certificate Program Ferris State University Director: Kali VanLangen, PharmD, BCPS	9/2013 – 6/2014 <i>Grand Rapids, MI</i>

Pharmacy Practice Experiential Educator

Ambulatory Care Experiential Learning Rotation, APPE (P3, P4) Touro University California College of Pharmacy Primary preceptor , daily experience LifeLong Medical Care East Oakland	8/2015 - Present
Ambulatory Care Experiential Learning Rotation, APPE (P4) Duquesne University Mylan School of Pharmacy Primary preceptor , daily experience University Diabetes Care Associates	2/2015 – 3/2015

<p>Ambulatory Care Experiential Learning Rotation, APPE (P4) University at Pittsburgh School of Pharmacy Co-preceptor, twice weekly experience Matilda Theiss Family Medicine Clinic; Heart and Vascular Institute Advanced Heart Failure/Pulmonary Hypertension Clinic; Immunization Clinics Primary preceptor, daily experience for Pharmacotherapy Scholars Matilda Theiss Family Medicine Clinic; Heart and Vascular Institute Lipid Clinic, Advanced Heart Failure/Pulmonary Hypertension Clinic, and Anticoagulation Clinic</p>	<p>10/2014 – 6/2015 Pittsburgh, PA</p>
<p>PHARM 5801 Pharmaceutical Care to Underserved Populations (P3) University at Pittsburgh School of Pharmacy Co-preceptor, once weekly in-clinic experience Matilda Theiss Family Medicine Clinic</p>	<p>9/2014 – 11/2014 Pittsburgh, PA</p>
<p>PHARM 5111 Profession of Pharmacy 2 (P1) University at Pittsburgh School of Pharmacy Primary Preceptor, 2 sessions of medication reviews at senior center Glen Hazel Senior Community Center</p>	<p>2/2015 – 2/2015 Pittsburgh, PA</p>
<p>Professional Organization Events University at Pittsburgh School of Pharmacy Preceptor, University APhA-ASP Blood Pressure Screening, Peterson Events Center SNPhA National Diabetes Health Fair, Sam’s Club SSHP Contraception Talk, Robert Morris University with Delta Zeta LKS/SSHP Sun and Skin Care Health Fair, William Pitt Student Union</p>	<p>10/2014 - Present Pittsburgh, PA</p>
<p><u>Didactic Educator</u></p>	
<p>PHRM 616 Clinical Sciences (P2) Touro University California College of Pharmacy Course Instructor, prepared presentations and designed exam questions Human Immunodeficiency Virus Viral Hepatitis Travel Medicine</p>	<p>1/2016 – Present Vallejo, CA</p>
<p>PHRM 608 Clinical Sciences (P1) Touro University California College of Pharmacy Course Coordinator</p>	<p>1/2016 – Present Vallejo, CA</p>

<p>PHRM 604 Clinical Sciences (P1) Touro University California College of Pharmacy Course Instructor, prepared presentations and designed exam questions OTC Dermatology</p>	<p>9/2015 – Present Vallejo, CA</p>
<p>PHARM 5318 Endocrinology (P3) University of Pittsburgh School of Pharmacy Course Instructor, prepared presentations and designed exam questions Menopause: Pathophysiology and Management Osteoporosis: Prevention and Treatment</p>	<p>10/2014 Pittsburgh, PA</p>
<p>PHARM 5808 Comprehensive Diabetes Management (P3) University of Pittsburgh School of Pharmacy Course Instructor, prepared patient cases with DM Educate™ online material for in-class discussions Large Group Facilitator/Evaluator Patient cases Diabetes – inpatient and outpatient management</p>	<p>1/2015 – 5/2015 Pittsburgh, PA</p>
<p>PHARM 5223 Gastroenterology/Nutrition (P2) University of Pittsburgh School of Pharmacy Course Instructor, prepared online lectures using flipped classroom, prepared materials for large group practicum, designed exam questions Large Group Facilitator/Evaluator Patient cases Obesity</p>	<p>4/2015 – 5/2015 Pittsburgh, PA</p>
<p>PHARM 5215 Infectious Disease (P2) University of Pittsburgh School of Pharmacy Course Instructor, revised presentation and presented lecture Human Immunodeficiency Virus (HIV) Infection</p>	<p>5/2015 Pittsburgh, PA</p>
<p>PT2102 Pharmacology (Doctor of Physical Therapy-Year 2) University of Pittsburgh School of Health & Rehabilitation Sciences Course Instructor, prepared presentation and designed exam questions Diabetes</p>	<p>4/2015 Pittsburgh, PA</p>
<p><u>Practica/Laboratory Educator</u></p>	
<p>PHARM 5321 Advanced Pharmaceutical Care 2 (P3) University of Pittsburgh School of Pharmacy Small Group Practicum Developer, Facilitator/Evaluator Patient case, physician defense, SOAP rubric Menopause and Osteoporosis</p>	<p>10/2014 – 5/2014 Pittsburgh, PA</p>

Individual Facilitator/Evaluator

Patient case, physician defense
Inflammatory Bowel Disease

Individual Facilitator/Evaluator

Patient cases for Problem-Based-Learning (PBL) activity
Chronic Kidney Disease

Individual Capstone Examination Evaluator

Patient case, physician defense for Fall and Spring semesters
Cumulative Final Examination

PHARM 5216 Pharmacotherapy of Cardiovascular Disease (P2)

University of Pittsburgh School of Pharmacy, Winter Institute for Simulation,
Education, and Research (WISER)

11/2014

Pittsburgh, PA

Small Group Facilitator/Evaluator

Patient case using patient simulator
Heart Failure, STEMI, Ventricular Tachycardia

PHARM 5310 Profession of Pharmacy 5 (P3)

University of Pittsburgh School of Pharmacy

10/2014

Pittsburgh, PA

Small Group Facilitator/Evaluator

Journal Club

PHARM 5210 Profession of Pharmacy 3 (P2)

University of Pittsburgh School of Pharmacy

9/2014 – 10/2014

Pittsburgh, PA

Small Group Facilitator/Evaluator

Standardized Patient Interviewing
Self-care and Non-prescription Drug Therapy

PHARM 5316 Pulmonology/Rheumatology (P3)

University of Pittsburgh School of Pharmacy

9/2014

Pittsburgh, PA

Small Group Facilitator

Respiratory Laboratory Inhaler Demonstration/Education

PHAR 589 Integrated Case Studies (P3)

Ferris State University College of Pharmacy

2/2014

Grand Rapids, MI

Small Group Case Developer, Facilitator/Evaluator

Patient case, physician defense, in-service presentation
Women's Health

PHM 603 Immunology/Infectious Diseases Pharmacotherapeutics (P2)

University at Buffalo School of Pharmacy and Pharmaceutical Sciences

2/2013

Buffalo, NY

Individual Assignment Developer

Patient cases with referenced open-ended questions
HIV/AIDS

PUBLICATIONS

Ho MJ, Chan E, Fan-Havard P, Thompson C, Hess JM. The Effects of Leadership Involvement and Part-time Employment on Pharmacy Student Academic Performance. *Pharmacy Education*, 2014; 14(1) 57-63.

Chan E, MacDonald C, Pung E. Serotonin Syndrome. *Michigan Pharmacists Association Pharmacy News*. October 14th, 2014. <https://oldsite.michiganpharmacists.org/news/article.php?x=3448>.

POSTER PRESENTATIONS

Chan E, Avila J, Feinauer S. Evaluation of appropriate pain assessment and treatment in critically ill patients sedated with dexmedetomidine and/or propofol. Poster presentation at the 2013 American Society of Health-System Pharmacists Midyear Clinical Meeting.

Chan E, Fan-Havard P, Hess JM, Sauberman M, Thompson C, Ho MJ. The impact of part-time employment and leadership on academic success. Poster presentation at the 2013 American Association of Colleges of Pharmacy Annual Meeting.

PRESENTATIONS

Regional

“A joint collaboration between nursing and pharmacy to improve medications-related HCAHPS scores,”

Platform presentation to pharmacy residents and clinical pharmacists, Great Lakes Pharmacy Residency Conference.	4/2014 West Lafayette, IN
Platform presentation at the West Michigan Society of Health-System Pharmacists (WMSHP) Pharmacy Residency Project Showcase.	4/2014 Grand Rapids, MI

Institutional

“Ready for a PEP talk? PrEParing for HIV Prophylaxis,” Continuing Pharmacy Education presentation to pharmacy students, pharmacy residents, and clinical pharmacists. University of Pittsburgh Medical Center – Presbyterian Shadyside. 1/2015
Pittsburgh, PA

“HIV and Osteoporosis,” Continuing Medical Education presentation to attending physicians, medical residents, clinical pharmacists, pharmacy residents, nurses, and social workers. Pittsburgh AIDS Center for Treatment. 12/2014
Pittsburgh, PA

<p>“PCV13 and PPSV23: The need for both in adults ≥65 years old,” Clinical pearl presentation to pharmacy interns, pharmacy residents, and staff and clinical pharmacists. University at Pittsburgh Medical Center – Presbyterian Shadyside.</p>	<p>12/2014 <i>Pittsburgh, PA</i></p>
<p>“Target-specific oral anticoagulants: Dose adjusting in renal impairment and with interacting medications,” Continuing Pharmacy Education presentation to pharmacy students, pharmacy residents, and clinical pharmacists. University of Pittsburgh Medical Center – Presbyterian Shadyside.</p>	<p>8/2014 <i>Pittsburgh, PA</i></p>
<p>“How to aim with no target: An update on the new cholesterol treatment guidelines,” Continuing Pharmacy Education presentation to pharmacy technicians, pharmacy residents, and clinical pharmacists. Mercy Health Muskegon.</p>	<p>5/2014 <i>Muskegon, MI</i></p>
<p>“Primer on peritoneal dialysis,” Formal presentation to pharmacy residents and clinical pharmacists. Mercy Health Muskegon.</p>	<p>5/2014 <i>Muskegon, MI</i></p>
<p>“Cardiovascular effects of intensive lifestyle interventions in type 2 diabetes,” Formal journal club to pharmacy residents and clinical pharmacists. Mercy Health Muskegon</p>	<p>2/2014 <i>Muskegon, MI</i></p>
<p>“Anticoagulants: Perioperative management and reversal strategies,” Continuing Pharmacy Education co-presented to pharmacy technicians, pharmacy residents, and clinical pharmacists. Mercy Health Muskegon.</p>	<p>1/2014 <i>Muskegon, MI</i></p>
<p>“Sofosbuvir for hepatitis C genotype 2 or 3 in patients without treatment options,” Formal journal club presented to pharmacy residents, clinical pharmacist, medical students, and family practice medical residents. Mercy Health Muskegon.</p>	<p>11/2013 <i>Muskegon, MI</i></p>
<p>“Intermediate cardiac care medications,” Formal presentation to nurses in cardiac step-down unit. Mercy Health Muskegon.</p>	<p>7/2013 <i>Muskegon, MI</i></p>
<p>“Vaccinations,” Live broadcast co-interviewed with other pharmacy students by WNY Tonight Live host. Lockport Community Television.</p>	<p>5/2013 <i>Lockport, NY</i></p>
<p>“Osteoporosis: A review of current treatment guidelines and prescribing patterns,” Formal presentation to pharmacy students, clinical pharmacists, and internal medicine physicians. Buffalo Psychiatric Center.</p>	<p>5/2013 <i>Buffalo, NY</i></p>

PROFESSIONAL COMMUNITY SERVICES

Birmingham Underserved Clinic Dispensary	9/2014 – Present <i>Pittsburgh, PA</i>
Mercy Health Enhancement and Rehabilitative Therapy (HEART) Center Small-group diabetes education classes, medication counseling	9/2013 – 5/2014 <i>Muskegon, MI</i>

PROFESSIONAL EXPERIENCES

Pharmacy Intern Kmart Pharmacy	5/2010 – 2/2013 <i>New York, NY</i>
Reproductive Health Counselor Sub-Board 1, Incorporated Health Education	12/2011 – 6/2012 <i>Buffalo, NY</i>
Electronic Medical Records Assistant Catholic Health, Mercy Comprehensive Care Center	2/2012 – 7/2012 <i>Buffalo, NY</i>

HONORS AND AWARDS

UB SoPPS Lori Esch Memorial Award	5/2013
UB SoPPS Academic Scholarship	9/2012
APhA-ASP, University at Buffalo Chapter Member of the Year Award	5/2010
APhA-ASP, University at Buffalo Chapter Top 10 Finalist Counseling Competition	2/2010
University at Buffalo Dean's List	9/2007 – 1/2009
University at Buffalo Provost Scholarship	9/2007 – 5/2011

PROFESSIONAL ORGANIZATIONS AND COMMITTEES

National

American Association of Colleges of Pharmacy (AACP)	5/2013 – Present
American College of Clinical Pharmacy (ACCP)	7/2014 – Present
Ambulatory Care PRN Networking Committee	1/2015 – Present
American Society of Health-System Pharmacists (ASHP)	7/2012 – Present
Phi Lambda Sigma (PLS), Pharmacy Leadership Society	4/2011 – Present
Lambda Kappa Sigma (LKS), Professional Fraternity	8/2010 – Present

American Pharmacists Association (APhA)	9/2009 – Present
Academy of Student Pharmacists (APhA-ASP)	
Mid-year Regional Meeting Officer	10/2010 – 10/2011
Chapter International Pharmaceutical Students Federation Liaison	5/2010 – 5/2011
Chapter Local Exchange Officer	3/2010 – 5/2011

Regional

California Society of Health-System Pharmacists	9/2015 – Present
New York State Council of Health-System Pharmacists	7/2012 – Present
Pharmacists in Society of the State of New York (PSSNY)	9/2012 – 10/2012
Western Michigan Society of Health-System Pharmacists (WMSHP)	8/2013 – 6/2014

Institutional

Pharmacy and Therapeutics Committee, Mercy Health Muskegon	7/2013 – 6/2014
Institutional Review Board, Mercy Health Muskegon	9/2013 – 6/2014

Shadi Doroudgar, Pharm.D., BCPS, CGP, BCPP

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(818) 281-5856

CURRENT EMPLOYMENT

July 2013-Present Touro University California College of Pharmacy, Vallejo, California
Assistant Professor of Pharmacy Practice
Clinical Pharmacist – LifeLong Medical Care East Oakland

January 2015- Present Sutter Center for Psychiatry, Sacramento, California
Pharmacist

POST-GRADUATE TRAINING

July 2012-July 2013 Touro University California College of Pharmacy
Postgraduate Year Two (PGY2) Psychopharmacology Resident

July 2011- July 2012 California Northstate University College of Pharmacy/ Sutter Health
Sacramento Sierra Region
Postgraduate Year One (PGY1) Pharmacy Practice Resident

EDUCATION

August 2007- May 2011 University of Southern California
Doctor of Pharmacy Degree awarded May 2011

September 2003- June 2007 University of California, Los Angeles
Biochemistry Bachelor of Science received June 2007
College Honors

LICENSURE

Registered Pharmacist State of California, Board of Pharmacy
License Number RPH 66037
Issued August 31, 2011
Expires September 30, 2018

CERTIFICATIONS

June 2016 Pharmacy-Based Travel Health Services
May 2016 APhA's Pharmacy-Based Immunization Delivery Faculty Training
Program

May 2016 Basic Life Support| CPR Recertification| American Heart Association
July 2015 Board Certified Psychiatric Pharmacist Specialist (BCPP)
March 2014 Certified Geriatric Pharmacist (CGP)
January 2014 Board Certified Pharmacotherapy Specialist (BCPS)
July 2013 Teaching Certificate| Touro University California

July 2013	PGY2 Residency Training Certificate Touro University California
July 2012	Teaching Certificate California Northstate University College of Pharmacy
July 2012	PGY1 Residency Training Certificate California Northstate University College of Pharmacy
January 2012	MAD-ID Antimicrobial Stewardship Training Program
July 2009	Environmental Health and Safety Laboratory Safety Training Certificate
August 2007	Certificate of Completion, Adult and Adolescent Immunization Program
August 2006	Public Speaking Specialization, Glendale Community College

HONORS and AWARDS

May 2015	Clinical Sciences Department Professor of the Year Award Class of 2018
November 2014	ASHP Research Boot Camp Grant (\$5000)
November 2013	Best of Western States Award, CSHP distinction
June 2013	Touro Resident Research Award, Touro University California, Residency Steering Committee
October 2010	University of Southern California, Pharmacy Alumni Scholarship
April 2010	Student Industry Association End of Year Scholarship
May 2009	University of Southern California, Summer Research Fellowship Award
July 2003	Golden State Scholar Share, Governor's Scholarship

TEACHING

Didactic Lectures and Course Coordination

Spring 2016	Forensic Toxicology: Drugs and Driving (1 hour)
Fall 2013, 2014, 2016	Introduction to Geriatrics (3 hours) Delivered lecture to first year Touro University pharmacy students
Fall 2015	Drug drug interactions (3 hours) Delivered lecture to second year Touro University pharmacy students Prepared and discussed small group discussion case
Fall 2013, 2014, 2015	Bipolar Disorder (3 hours) Delivered lecture to second year Touro University pharmacy students Prepared and discussed small group discussion case
Fall 2013, 2014, 2015	Course Coordinator for PHRM 604 first year clinical sciences course Coordinated the course exams including three block exams, three quizzes, grading of students' work, and lecturer evaluations each year Used blackboard to communicate information to students Used ExamSoft to prepare exams and run reports Met with students at risk of failing and provided academic support Conducted exam challenge sessions following each block exam and coordinated the challenge process
Fall 2013, 2014, 2015	Alzheimer's Disease (3 hours) Delivered lecture to second year Touro University pharmacy students Prepared and discussed small group discussion case

Fall 2013, 2014, 2015	Alcohol (1.5 hours) Delivered lecture to first year Touro University pharmacy students
Fall 2013, 2014, 2015	Substance Abuse Debates (6 hours) Collaborated with Professor Paul J. Perry to guide students on debates focusing on various controversial substance abuse topics
Fall 2013, 2014	OTC Student Presentations (6 hours) Mentored first year pharmacy students to present on various over-the-counter therapies (e.g. home testing, incontinence, ostomy, eye products)
Fall 2012, 2013, 2014, 2015	Sleep Disorders (3 hours) Delivered lecture to second year Touro University pharmacy students in 2012 and 2013 Mentored PGY1 resident in updating slides and presenting lecture in 2014 Mentored P4 student for half of the lecture and delivered second half in 2015
Fall 2012, 2013, 2014, 2015	Depression (3 hours) Delivered lecture to second year Touro University pharmacy students Prepared Mega Case group discussion
Fall 2012, 2013, 2014, 2015	Receptor Pharmacology of Drugs of Abuse (1.5 hours) Delivered lecture to first year Touro University pharmacy students

Resident Training

2016-2017	Stephanie Chin, LifeLong Clinic primary care track resident Yasmien Ibrahim, LifeLong Clinic psychiatry track resident
2015-2016	Michelle Healy, LifeLong Clinic primary care track resident Lauren Brown, LifeLong Clinic psychiatry track resident Linda Bach, Golden Gate Pharmacy community track resident Alyssa Zima, Sutter acute care resident Alicia Yeh, Ole Health Clinic primary care resident Rita Lau, San Francisco General Hospital primary care resident
2014-2015	Janet Kwon, LifeLong Clinic primary care track resident Priscilla Van Dyke, LifeLong Clinic psychiatry track resident Afsheen Ahmad, Golden Gate Pharmacy community track resident
2013-2014	Kristin Wong, LifeLong Clinic primary care track resident

Master of Science in Medical Health Sciences (MSMHS) Advising

2016-2017	Vivian Dao, PharmD Candidate 2020
2015-2016	Hannah M Chuang, PharmD Candidate 2019 Kimberly Bohnert, PharmD Candidate 2019 Joanne Canedo, PharmD Candidate 2019

COMMITTEE MEMBERSHIPS

May 2016 to July 2016	Chair of Faculty Search Committee Touro University California, College of Pharmacy
July 2015 to June 2016	Residency Ad Hoc Committee on Application Review Touro University California, College of Pharmacy
July 2013 to present	Residency Steering Committee Touro University California, College of Pharmacy
July 2013 to present	Graduate Program Committee (GPC) Touro University California, College of Pharmacy

PROFESSIONAL LEADERSHIP EXPERIENCES

June 2016 to present	Touro University California College of Pharmacy Residency Research Coordinator <ul style="list-style-type: none">• Guide ~15 residents in starting and successfully completing their year-long residency research project• Will provide mentorship in areas including initial research design, IRB writing and submission, data collection, using statistics software, presentation preparation and delivery
2013 to present	Touro University - California Pharmacy Student Leadership (CAPSLEAD) Advisor <ul style="list-style-type: none">• Guide eight first year pharmacy students each year through a leadership conference attended by all California schools of pharmacy• Assist students in selecting a research project topic and conducting a brief research project over a few months period• Helped in planning and hosting the 2016 CAPSLEAD meeting
August 2012 to July 2013	Western States Conference Board of Directors Residency Representative <ul style="list-style-type: none">• Helped with planning the annual Western States Conference, a conference for residents to present their research project
August 2009 to May 2010	Rho Chi Honor Society, Theta Chapter, Co-Historian University of Southern California <ul style="list-style-type: none">• Documented the achievements of the Rho Chi Society by video capturing and photographing different events designed by our chapter to benefit pharmacy student at USC as well as to serve the community• Wrote the Theta Annual Chapter Report• Helped other board members implement different events
August 2008 to May 2009	Student Industry Association (SIA)/American Pharmacy Student Alliance (APSA), Co-director of Pain Management Committee University of Southern California <ul style="list-style-type: none">• Organized and implemented the pain management health fair booth

- Recruited members for the pain management committee to attend health fairs and consult the community at the booth
- Attended health fairs to supervise the booth and answer questions

August 2008 to May 2009

**Student Industry Association (SIA), Director of Student Involvement
University of Southern California**

- Planned a speaker series to inform students about career options within the industry
- In charge of all logistics, such as organizing food, location, gifts, and motivating students to attend

POSTER PRESENTATIONS

“Correlations of Hyperglycemia with Impairments in Driving Performance in Patients with Type 2 Diabetes Mellitus”

September 2016 (accepted)

American Osteopathic Association, Anaheim, CA

“Do Pharmacy Students Cheat? A Survey of Motivations and Predictors of Cheating”

July 2016

American Association of Colleges of Pharmacy, Anaheim, CA

“California Pharmacy Schools: Minority Enrollment Trends and Barriers” CAPSLEAD Poster

July 2016

American Association of Colleges of Pharmacy, Anaheim, CA

October 2015

CSHP Seminar, San Diego, CA

“Correlations of Anticholinergic Drug Scales with Driving Impairment in Older Adults”

April 2016

Touro College of Pharmacy Research Day, Vallejo, CA

“The Castro 200: Anabolic Steroid Abuse and Risk of HIV Among Homosexual Males in the San Francisco Castro District”

October 2015

CSHP Seminar, San Diego, CA

“Effects of Regular Marijuana Use on Driving Performance”

April 2015

College of Psychiatric and Neurologic Pharmacists (CPNP), Tampa, FL

“Factors Motivating PGY2 Residency Pursuit and Program Growth Trends” CAPSLEAD Poster

April 2015

Touro College of Pharmacy Research Day, Vallejo, CA

October 2014

CSHP Seminar, San Francisco, CA

“Academic Dishonesty in Pharmacy Schools”

October 2014

CSHP Seminar, San Francisco, CA

“The Anabolic 1000: A Survey of Anabolic Steroid Use, Psychiatric Traits, and HIV Among Gay Males”

October 2014

CSHP Seminar, San Francisco, CA

“A 10-year Evaluation of Venlafaxine Ingestion in Children Under 4 Years of Age”

May 2013

The 15th Annual Spring Research Seminar at UCSF, San Francisco, CA

October 2012

North American Congress of Clinical Toxicology (NACCT), Las Vegas, NV

October 2012

California Society of Health-System Pharmacists, Las Vegas, NV

“Evaluation of Trazodone and Quetiapine for Insomnia in an Inpatient Psychiatric Setting”

October 2013

CSHP Seminar, Anaheim, CA

May 2013
April 2013

Touro College of Pharmacy Research Day, Vallejo, CA
College of Psychiatric and Neurologic Pharmacists (CPNP), Colorado Springs, CO

PUBLICATIONS

Lo SN, Pal J, Teoh CS, Shu J, Pang C, Lau M, Leung H, Mendez Y, Rajagopalan V, **Doroudgar S**. Factors Influencing Decision of Postgraduate Year 1 (PGY1) Pharmacy Residents to Pursue Postgraduate Year 2 (PGY2) Residency Training: A Survey of Residents from the Western States of United States. *AJHP*. [in press]

Thomas K, Canedo J, Perry PJ, **Doroudgar S**, Lopes I, Chuang HM, Bohnert K. Effects of valerian on subjective sedation, field sobriety testing and driving simulator performance. *Accid Anal Prev*. 2016 Jul;92:240-4.

Doroudgar S, Chuang HM, Perry PJ, Thomas K, Bohnert K, Canedo J. Driving Performance Comparing Older versus Younger Drivers. *Traffic Inj Prev*. 2016 Jun 21:0.

Thomas KL, La AQ, Punia S, **Doroudgar S**, Perry PJ. Valproic acid-induced hyperammonemia and minimal hepatic encephalopathy prevalence among psychiatric inpatients. *Ann Clin Psychiatry*. 2016 Feb;28(1):37-42.

Perry PJ, Fredriksen K, Chew S, Ip EJ, Lopes I, **Doroudgar S**, Thomas K. The Effects of Dextromethorphan on Driving Performance and the Standardized Field Sobriety Test. *J Forensic Sci*. 2015 Sep;60(5):1258-62.

Doroudgar S, Perry PJ, Lackey GD, Veselova NG, Chuang HM, Albertson TE. An 11-year retrospective review of venlafaxine ingestion in children from the California Poison Control System. *Hum Exp Toxicol*. 2015 Sep 8. pii: 0960327115604202. [Epub ahead of print]

Doroudgar S, Chou TI. How to modify psychotropic therapy for patients who have liver dysfunction. *Current Psychiatry*. 2014;13(12):46-49.

Doroudgar S, Chou TI, Yu J, Trinh K, Pal J, Perry PJ. Evaluation of trazodone and quetiapine for insomnia: an observational study in psychiatric inpatients. *Prim Care Companion CNS Disord*. 2013;15(6).

OTHER PRESENTATIONS

September 2015

“Medication Management in Older Adults”

Guest expert and presented to the residents of Marina Towers
Area Agency on Aging Serving Napa and Solano, Vallejo, California

August 2015

“Depression and Anxiety: Optimizing Medication Treatment in Older Adults”

Presented to Nurses and Social Workers
Area Agency on Aging Serving Napa and Solano, Suisun, California

February and May 2015

“Stepping On Class”

Presented to skilled nursing facility patients
Area Agency on Aging Serving Napa and Solano, Suisun, California

February 2015

“An Overview of Psychiatric Medications in Older Adults with Dementia”

Presented to Nurses and Social Workers

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- Area Agency on Aging Serving Napa and Solano, Suisun, California
- November 2013 **“Best of Western States”**
Presented to Pharmacists and Pharmacy Students
CSHP Seminar, Anaheim, California
- May 2013 **“Overview of Geriatric Pharmacotherapy”**
Presented to Nurses and Social Workers
Area Agency on Aging Serving Napa and Solano, Fairfield, California
- May 2013 **“Evaluation of Trazodone and Quetiapine for Insomnia in an Inpatient Psychiatric Setting”**
Presented to Pharmacists
Western States Conference, San Diego, California
- February 2013 **“Predicting Anabolic Androgenic Steroid Use in Youth”**
Presented to Touro University faculty for faculty position interview
Touro University, Vallejo, California
- June 2012 **“Association of Mental Health Disorders With Prescription Opioids and High-Risk Opioid Use in US Veterans of Iraq and Afghanistan”**
California Accreditation for Pharmacy Education (CAPE) Continuing Education
Presented to pharmacists
58 Degrees & Holding, Sacramento, California
- May 2012 **“A 10-year Evaluation of Venlafaxine Ingestion in Pediatrics, A California Poison Control System (CPCS) Study”**
Presented to pharmacists
California Northstate University College of Pharmacy Residency Symposium, Rancho Cordova, California
Western States Conference, Asilomar, California
- September 2011 **“What’s New? New Drugs of 2010 and 2011”**
Accreditation Council for Pharmacy Education (ACPE) Continuing Education Presented to pharmacists, pharmacy technicians, residents and students
Anthem College, Sacramento, California
- September 2011 **“Hypnotics and Insomnia”**
“Schizophrenia: A Comparison of the New Antipsychotics”
“Continuing Education- What’s New? New Drugs of 2010 and 2011”
Presented to Nursing Students
Sutter Center for Psychiatry, Sacramento, California
- March to May 2011 **“Prevalence of Extrapyrarnidal Side Effects with Atypical Antipsychotics”**
“Medication Optimization in Refractory Schizophrenia”
Presented to pharmacists, medical attendings, residents, and students
Augustus F. Hawkins Psychiatric Unit, Los Angeles, California

October 2010	<p>“Pediatric Self Care Treatment: Fever, Cold/Cough, Diarrhea/Vomiting, Constipation, Colic, Teething” Presented to APPE students and Edith Mirzaian, Pharm.D. University of Southern California, Los Angeles, California</p>
September 2010	<p>“Victoza, the New GLP-1 Agonist” Presented to APPE students and Stan Louie, Pharm.D., Ph.D. University of Southern California, Los Angeles, California</p>
May to June 2010	<p>“Acute Coronary Syndrome” “Efficacy and safety of quetiapine in critically ill patients with delirium” “Geriatric Pharmacotherapy” “Atrial Fibrillation” Patient Case Presentation Presented on medicine rotation to pharmacists and students on site Hollywood Presbyterian Medical Center, Los Angeles, California</p>
June to August 2010	<p>“Rapid Approval Process and gemtuzumab ozogamicin (Mylotarg)” “SGLT-2 Inhibitors in Diabetes” “Qnexa-The New Diet Pill” “Pterygium and its Biomarkers”-Final Presentation Presented to Clinical Pharmacology and Quantitative Sciences group, fellows at Allergan and David Truong, Pharm.D. Allergan, Inc, Irvine, California</p>
January 2010	<p>“My Experience at Procter and Gamble” Invited to present to 50 pharmacy students interested in summer internships in the industry University of Southern California, Los Angeles, California</p>
June to August 2008	<p>Midpoint and final presentation on prebiotic and probiotic research Presented to Upstream Research Team Iams, Procter and Gamble, Lewisburg, Ohio</p>

ASSOCIATIONS and AFFILIATIONS

National Associations

2016 to present	AACP – American Association of Colleges of Pharmacy
2012 to present	CPNP – College of Psychiatric and Neurologic Pharmacists
2012 to present	NAMI – National Alliance on Mental Illness
2007 to present	ASHP – American Society of Health-System Pharmacists
2007 to 2011	APhA – American Pharmacists Association
2007 to 2008	AMCP – Academy of Managed Care Pharmacy

State Associations

2007 to present	CSHP – California Society of Health-System Pharmacists
2007 to 2008	CPhA – California Pharmacists Association

Regional/University Involvement

2009 to present	University of Southern California Rho Chi Honor Society, Theta Chapter
2007 to 2011	APSA- American Pharmacy Student Alliance
2007 to 2011	SIA- Student Industry Association

2007 to 2011 Skull and Mortar Honorary Service Fraternity Pledge/Member
 2007 to 2008 University of Southern California Honor Council

Conferences

October 2015	CSHP Seminar – San Diego, CA
April 2014	CPNP Conference – Tampa, FL
October 2014	CSHP Seminar – San Francisco, CA
October 2013	CSHP Seminar – Anaheim, CA
May 2013	Western States Conference – San Diego, CA
April 2013	CPNP Conference – Colorado Springs, Colorado
October 2012	CSHP Seminar – Las Vegas, NV
May 2012	Western States Conference – Asilomar, CA
December 2011	ASHP Midyear – New Orleans, LA
November 2011	CSHP Seminar – Anaheim, CA
December 2010	ASHP Midyear – Anaheim, CA
October 2010	CSHP Seminar – San Francisco, CA
February 2009	CPhA Outlook – Anaheim, CA
March 2008	APhA Annual – San Diego, CA

TRAINING EXPERIENCES

Research

January 2014 to present

ASHP Foundation Research Boot Camp

- Selected as one of six pharmacists in the United States in 2014 to take part in the ASHP Foundation Research Boot Camp program
- Program consisted of the University of Florida online course focusing on research design and onsite training at the ASHP headquarters in Bethesda Maryland
- Topics discussed and mentored included research design, scientific writing, and grant preparation
- Goal is to design, develop and implement a research project from initiation to completion
- Required to submit a grant proposal as part of the program to the ASHP Research Foundation

June to August 2009

Summer Research Fellowship, Preceptor: Nouri Neamati, Ph.D. University of Southern California, Pharmacology Laboratory

- Screened compounds for cytotoxicity using different assay methods in various mammalian cell culture lines
- Collaborated with other graduate students on different ongoing laboratory projects

January 2006 to January 2007

Directed Independent Research, Preceptor: Diane Harris, Ph.D. University of California at Los Angeles, Nutrition Laboratory

- Gained tissue culture experience
- Tested the effects of several flavonoids on prostate cancer by treating various tumor cells with different concentrations of flavonoids and for a duration of time to detect optimal tumor inhibition conditions
- Handled, bred, and regulated the diet of laboratory mice

- Assisted in mice dissection and observed the effect of nutritional supplements on colon cancer in mice

PGY2 Psychopharmacology Residency

May 2013 to present

**Academic Detailing; Preceptor: Daina Wells, PharmD, BCPS, BCPP
VA Palo Alto Health Care System, Palo Alto, CA**

- Provide evidence based non-commercial biased educational outreach to providers
- Evaluate patients in the psychiatric clinic and prescribe psychotropic medications under the VA pharmacist's scope of practice

February 2013 to March 2013

**Geriatric Psychotherapy, Preceptor: Shimul Kumbhani, MD
Over 60s Clinic, Berkeley, CA**

- Visited patients alongside psychiatrist and made recommendations regarding pharmacotherapy
- Engaged in one-on-one medication counseling with geriatric patients
- Gave a talk to geriatric patients on medication awareness and compliance

September 2012 to October 2012

**Academic Rotation, Preceptor: Tony Chou, PharmD, BCPP
Touro University College of Pharmacy, Vallejo, CA**

- Make and deliver effective lectures for students on topics of depression, sleep disorders, and substance abuse
- Attend research meetings in order to gain more research experience

July 2012 to present

**Inpatient Hospital, Preceptor: Tony Chou, PharmD, BCPP
Center for Behavioral Health, St. Helena Hospital, Vallejo, CA**

- Gain experience with interviewing inpatient psychiatric patients
- Monitor patients' medication therapy through pharmacy protocols
- Write consult notes for patients referred for in depth medication evaluation by medical doctors and psychiatrists
- Conduct medication groups for both inpatient and partial hospitalization patients
- Precept APPE students on psychiatric rotation

July 2012 to December 2012

**Outpatient Clinic, Preceptor: Lester Love, MD
Bay Area Clinics (BACs), Oakland, CA**

- Conduct patient interviews and provide pharmacotherapy ideas for patients who are above 60 years of age, homeless or at risk of homelessness, and with a psychiatric diagnosis

July 2012 to May 2013

**Safety Net Clinic, Preceptor: Tony Chou, PharmD, BCPP
LifeLong Clinic, Oakland, CA**

- Interview low income patients with psychiatric diagnoses in order to optimize pharmacotherapy
- Efficiently and accurately progress note each patient encounter
- Supervise APPE students on psychiatric rotation

PGY1 Pharmacy Practice Residency

May 2012 to June 2012

**Long Term Care, Preceptor: Martha Pauli, PharmD, BCPP
Various Facilities including Eskaton and Davis Health Care**

- Gained exposure to geriatric patients' needs by visiting skilled nursing facilities, assisted living facilities, and day care centers as a consulting pharmacist
- Used the RxPertise™ consulting software to summarize patient data to make written recommendations
- Met with interdisciplinary teams to communicate recommendations

February 2012 to May 2012

Inpatient Hospital Pharmacy Practice Experience, Preceptor: Allan Yamashiro, Pharm.D.**Sutter Davis Hospital, Davis**

- Gained experience as a competent inpatient clinical pharmacist
- Participated in daily Med-Surg and ICU rounds
- Precepted IPPE and APPE pharmacy students
- Performed Adverse Drug Reaction reports
- Participated in various meetings such as Pharmacy and Therapeutics (P&T) Committee, Medication Safety, and Regional Directors
- Completed inpatient pharmacy related projects for presentation at meetings

January 2012 to February 2012

Psychiatry II, Preceptor: Kathy Fritz, PharmD**County of Sacramento, Mental Health Service, Sacramento**

- Monitored patients on clozapine therapy and determined appropriate treatment criteria
- Taught patients about their medications through medication group and discharge counseling
- Served as the medication expert on the treatment team and answered medication related questions
- Developed an understanding of the legal background with regards to psychiatric practice

September 2011 to June 2012

Weekly Summit, Preceptor: Martha Pauli, PharmD, BCPP**California Northstate University, Sacramento**

- Leading 20 APPE students every week in therapeutic topic discussion as part of Weekly Summit
- Developing Individual Readiness Assurance Tests (IRATs) and choosing reading material for psychiatric topics
- Evaluating student SOAP note presentations and grading IRATs

September 2011 to January 2012

Longitudinal Teaching, Preceptor: Sonya Frausto, PharmD, MS**California Northstate University, Rancho Cordova**

- Gained exposure to Team Based Learning (TBL) method of teaching pharmacy students
- Taught sessions using TBL in the Drug Literature course to second and third year pharmacy students
- Prepared for 2 teaching sessions in the Self Care class with the topics of Nausea/Vomiting and Hair Loss for first year pharmacy students
- Evaluated students through grading for both the Drug Literature and the Self Care course

August 2011 to January 2012

**Ambulatory Care, Preceptor: Justin Bouw, PharmD, BCPS
Sacramento County Primary Care Clinic, Sacramento**

- Helped in setting up the Pharmacist Managed Primary Care Clinic (PMPCC) for the Sacramento County underserved patient population
- Visited patients, optimized medication therapy, and ordered essential laboratory tests under a protocol
- Made presentations for the Diabetes Class for new clinic patients
- Designed educational pamphlets and pre/post-diabetes class patient surveys
- Wrote the APhA Incentive Grant for Residents and their Preceptors to obtain funds for setting up a nutrition class at the clinic

August to September 2011

**Psychiatry I, Preceptor: Micki Soehn, PharmD
Sutter Center for Psychiatry, Sacramento**

- Formed thorough patient care plans through chart review, patient interviews, and communication with other health care providers
- Presented to the nursing students on a weekly basis on topics such as hypnotics and insomnia, schizophrenia, and new drugs of 2010 and 2011
- Prepared an informational journal club on vilazodone
- Predicted the pharmacy budget through a presentation about brand psychiatric medications that will soon be available as generics
- Performed literature searches and presented to the psychiatrists on multiple occasions
- Served as preceptor for the fourth year pharmacy students on APPE rotation while teaching the weekly Medication Education Class to the patients in the adult unit
- Gained exposure to Electroconvulsive Therapy (ECT)

July to August 2011

**Administration Rotation, Preceptor: Dawn Benton, MBA
California Society of Health System Pharmacist (CSHP), Sacramento**

- Raised awareness of the Asheville Project and the role of pharmacists as direct health care providers by writing a letter, gathering informational articles on the topic and delivering these to each senator and assemblyman's office at the Capitol
- Summarized the results of the recent membership survey to be presented by CSHP
- Provided legal explanation for the Title 22 proposed changes using the California Board of Pharmacy recent laws
- Worked on different projects to help organize CSHP membership and budget

Advanced Pharmacy Practice Experience (APPE)

March to May 2011

**Inpatient Psychiatry, Preceptor: Julie Dopheide, Pharm.D., B.C.P.P.
Augustus F. Hawkins Psychiatric Unit, Los Angeles County**

- Worked as part of the healthcare team to manage the medication therapy of psychiatric patients in an acute setting
- Taught medication group and counseled patients individually to raise awareness of pharmacotherapy in psychiatry

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- January to February 2011
- Advanced Ambulatory Care, Preceptor: Gladys Mitani, Pharm.D.
University of Southern California, Health Science Campus**
- Managed anticoagulation therapy for Los Angeles County patients under the supervision of the preceptor
 - Conducted a literature search project on CYP2C19*17 and its effect on clopidogrel therapy
- September to November 2010
- Community Pharmacy, Preceptor: Hannah Lee, Pharm.D.
University of Southern California, University Park Campus**
- Performed duties of an outpatient intern
 - Clinical duties involved immunizing patients, running the latent tuberculosis clinic, and screening for diabetes and hypertension
 - Performed weekly medication therapy management
 - Designed a disease state management program on Attention Deficit Hyperactivity Disorder
 - Prepared a monograph for Vitrase Ovine
 - Served as preceptor to 11 second year pharmacy students
- August to September 2010
- Ambulatory Care, Preceptor: Stan Louie, Pharm.D., Ph.D.
University of Southern California, Health Science Campus**
- Functioned as part of the health care team in order to manage patients referred by physicians in an ambulatory clinic setting
 - Became familiar with the pharmacologic management of HIV, as well as its complications such as opportunistic infections, diabetes, hypertension, and hypercholesterolemia
 - Skilled at recognizing indications for Coumadin therapy, initiating therapy, and managing interactions with other medications and diet
- June to August 2010
- Clinical Research, Preceptor: Diane Tang-Liu, Ph.D.
Allergan, Inc.**
- Prepared presentations on pterygium and its biomarkers, Fair Market Value of consulting physicians, and relevant topics for morning weekly reports
 - Met with more than 20 pharmacists in various departments to explore postgraduate options in the industry
 - Conducted literature searches on the pharmacokinetics of eye pharmaceuticals with regards to route of administration and also on the effect of adjunct eye drop therapy on intraocular pressure
- May to June 2010
- Acute Care/Medicine, Preceptor: Ann W. Vu, Pharm.D., BCPS
Hollywood Presbyterian Medical Center**
- Optimized patient therapy in the SICU, MICU and CICU floor by monitoring drug therapy
 - Daily activities included: correcting drug interactions, dosing antibiotics, designing TPN mixtures, counseling on proper use of Coumadin, participating in morning rounds, and assessing and implementing proper GI and DVT prophylaxis
 - Wrote an article for the newsletter to update GI prophylaxis guidelines

Introductory Pharmacy Practice Experience (IPPE)

February to March 2008

**Hospital Pharmacy, Preceptor: Michelle Kuei, Pharm.D.
University of Southern California, University Hospital, Los Angeles**

October to November 2007

**Community Pharmacy, Preceptor: Sylvia Barao, Pharm.D.
CVS Pharmacy, Broadway and Chevy Chase, Glendale****PREVIOUS EMPLOYMENT**

February 2008 to March 2011

**Intern Pharmacist; Preceptor: Jackie Chung, Pharm.D.
CVS Pharmacy, 3943 San Fernando Road, Glendale, CA**

- Performed duties of a community pharmacy intern such as typing, filling, submitting insurance claims, and counseling patients
- Proficient in communicating with other health care providers such as pharmacists, nurses and physicians to optimize treatment for patients
- Highly involved with patient consultations on prescriptions, self-care items, and chronic disease state management

May to August 2008

**Graduate Intern; Preceptor: Elizabeth Flickinger, Ph.D.
Procter and Gamble (P&G), Iams, Lewisburg, OH**

- Engaged in upstream research and development for the Fortune 500 Company by conducting experiments on prebiotics and probiotics in the microbiology laboratory
- Expert at presenting research data and clearly conveying scientific findings to team members with varying expertise

June to August 2007

Private TOEFL Tutor, Glendale, CA

- Tutored Internet-Based TOEFL and succeeded with student passing the test after his 6th attempt
- Composed many practice tests consisting of speaking, reading, and listening sections of the test in order to prepare the student for the exam

Eric Ip, Pharm.D., BCPS, CSCS, CDE, FCSHP

Curriculum Vitae

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Office: (707) 638-5993

FORMAL EDUCATION

- 2002 – 2006 **University of California, San Francisco**
School of Pharmacy
Doctor of Pharmacy, March 2006
Bowl of Hygeia Award Recipient
- 1998 – 2002 **University of California, Davis**
Bachelor of Science with Honors, Exercise Science, June 2002

PROFESSIONAL TRAINING

- 2006 – 2007 **Pharmacy Practice Residency (PGY-1)**
Kaiser Permanente Santa Clara Medical Center, Santa Clara, CA

LICENSES AND CERTIFICATIONS

- 7/2006-present California Registered Pharmacist, License #58424
- 12/2007-present Board Certified Pharmacotherapy Specialist (BCPS) #307009212
Recertified 12/2014
- 10/2006-present Certified Strength and Conditioning Specialist (CSCS) #200630876
Recertified 12/2014
- 6/2009-present Certified Diabetes Educator (CDE) #20910198
Recertified 12/2014
- 4/2016 APhA Pharmacy-Based Travel Health Services Certificate
- 9/2008 APhA Pharmacy-Based Immunization Delivery Program Trainer
- 3/2008 APhA Pharmacy-Based Lipid Management Certificate
- 9/2007 APhA Pharmacy-Based Immunization Delivery Certificate
- 2003, 2008 Emergency Contraception Certified
- Recertified 10/2014 Basic Life Support Certified

PROFESSIONAL EXPERIENCE

- 8/2014-present **Chair, Clinical Sciences Department**
Touro University-California College of Pharmacy, Vallejo, CA
- Regularly meet with Management Team to accomplish work of the College
 - Hold monthly Clinical Sciences Department meetings to discuss operational and professional needs of the department
 - Responsible for development, implementation, evaluation, and improvement of

- all teaching programs of the department
- Develop the professional potential of each faculty member of the department; assess strengths and weaknesses and provide individual assistance
- Promote and support research in the department; keep records of research productivity of the department
- Perform regular evaluation of all aspects of faculty performance
- Insures active participation of department members in COP and University committees
- Work effectively with Chairs of the other departments on various curricular and scheduling issues
- Oversee didactic teaching and faculty research
- Established and oversee teaching and research mentorship within the department (10/2013-present)
- Established Faculty Development Sessions for the department (1/2015-present)
- Established Annual Interdepartmental Health Outcomes Research Retreat (5/2015-present)
- Increased department peer-reviewed publications by 57%

10/2013-7/2014

Interim Chair, Clinical Sciences Department

Touro University-California College of Pharmacy, Vallejo, CA

7/2012-present

Associate Professor of Clinical Sciences

Touro University-California College of Pharmacy, Vallejo, CA

- Lecturing in the Pharmacy Practice Department (2007-present)
- **Director of Curriculum, Clinical Sciences (2009-present)**
 - Oversee Clinical Sciences 1-4 (PHRM 604, 608, 612, 616), Callbacks Course (PHRM 702A/B), PREP Course (PHRM 631), Oral Exams, SGD Mega Case Days
- **Director of Teaching, Residency/Fellowship Program (2011-2015)**
 - Developed the Touro University College of Pharmacy Teaching Certificate
 - Oversee Touro University and affiliated residents and fellows in teaching/academia
- **Course Coordinator PHRM 608: Clinical Sciences 2 (2008-2015)**
- Course Coordinator PHRM 604: Clinical Sciences 1 (2007)
- Touro University Masters' Program Faculty (2012-present)
- **APPE Academic/Research Rotation Preceptor (2009-present)**
- Touro University College of Pharmacy Committees:
 - Faculty Development and Promotion Committee Member (2007-2009)
 - Admissions Committee Member (2009-2010)
 - Curriculum Committee (2010-present), **Vice Chair** (2012-2013), **Chair** (2015-present)
 - Residency Steering Committee Member (2011-present)
- **Faculty Advisor for Touro University ASHP/CSHP Chapter (2011-2015)**
- Admissions Interviewer (2007-present)
- Judge and coach for student clinical skills and patient counseling competition; faculty coordinator for clinical skills competition
 - CSHP Clinical Skills Competition State Champions: 2009 (Bair/Donnelley), 2010 (Morris/Middleton), 2013 (Singh/Uzosike)
 - CPhA Patient Counseling Competition State Champion: 2011 (Bidwal)
 - APhA National Patient Counseling Competition Top 10: 2012 (Kim)

- 7/2007-6/2012 **Assistant Professor of Clinical Sciences**
Touro University- California College of Pharmacy, Vallejo, CA
- 7/2007-present **Clinical Pharmacist/Diabetes Specialist, Internal Medicine Department**
Kaiser Permanente Mountain View Clinics, Mountain View, CA
- **Developed and co-head a diabetes management clinic in the Internal Medicine Department**
 - Helped improve Kaiser Permanente Mountain View's regional diabetes and cardiovascular ranking to top 5 out of over 40 facilities in Northern California in just over a year
 - Optimize diabetes and cardiovascular patient care via medication initiation/adjustments, laboratory monitoring, foot examinations, and immunizations for adult diabetes mellitus patients
 - Serve as a drug information resource for the Internal Medicine Department
 - Trained:
 - RN and LVNs for basic diabetes management
 - Clinical pharmacist for comprehensive diabetes and cardiovascular management
 - **Clinical preceptor for Touro University APPE students (4 students per year) and Kaiser Permanente PGY-1 residents (1-2 per year)**
 - Residency Steering Committee
- 2009-2015 **Consultant for RxPrep**
- Provide live board exam review sessions for Touro University Students
 - Chapter Reviewer for RxPrep Course Book (2013-present: Diabetes, Chronic Angina)
- 2016-present **Consultant for PassNAPLEXNow**
- Provide live board exam review sessions for Touro University Students
- 2012-present **Creator and Author of "Dr. Ipster's Cardiology Review" iPhone App**
- Launched in iTunes App Store on 3/19/13
- Ip EJ (2013). Dr. Ipster's Cardiology Review (Version 1.0) [Mobile application software]. Retrieved from <http://itunes.apple.com>
- <https://itunes.apple.com/us/app/dr.-ipsters-cardiology-review/id560830899?ls=1&mt=8>
- 2015-present **Author of *Dr. Ipster's Cardiology Handbook***
- 1st Edition published November 2015
 - 2nd Edition published April 2016
- <http://ipster.tictail.com/>

TEACHING EXPERIENCE

- Classroom Teaching Experience for Touro University California College of Pharmacy Students-

Academic Year & Semester	Course Number	Course Title	Presentations/Coordination	#Units	#Students	#Hours
Spring 2016	PHRM 623	IPPE 4	Amcare Care PPC Simulation Lead Acute Care PPC Simulation Preceptor	1	100	12
Spring 2016	PHRM 608	Clinical Sciences 2	Course Coordination Mentor OTC Musc Disorders/Pain Osteoporosis Bone disorder Mega Case Hypertension I Hypertension II (cases) Ischemic Heart Disease Arrhythmias Cardiology Cases	5	103	24
Fall 2015	PHRM 620	IPPE 1	Immunizations Proctor	1	100	3
Fall 2015	PHRM 612	Clinical Sciences 3	Diabetes Part I Diabetes Part III/Cardiology Review Diabetes/Cardio Mega Case Diabetes Workshop Lead	1	100	12
Spring 2015	PHRM 623	IPPE 4	Amcare Care PPC Simulation Lead	1	100	14
Spring 2015	PHRM 621	IPPE 2	Physical Exam/Assessments	1	100	6
Spring 2015	PHRM 608	Clinical Sciences 2	Course Coordinator OTC Musc Disorders/Pain Osteoporosis Bone disorder Mega Case Hypertension I Hypertension II (cases) Ischemic Heart Disease Arrhythmias Cardiology Cases	5	103	24
Fall 2014	PHRM 620	IPPE 1	Immunizations Proctor	1	100	3
Fall 2014	PHRM 604	Clinical Sciences 1	Clinical Lab Medicine #2	5	100	3
Fall 2014	PHRM 612	Clinical Sciences 3	Asthma Asthma/COPD Mega Case Diabetes Part I Diabetes Part III/Cardiology Review Diabetes/Cardio Mega Case Diabetes Workshop Lead	5	100	18
Spring 2014	PHRM 623	IPPE 4	Acute Care PPC Simulation Preceptor	1	100	7
Spring 2014	PHRM 621	IPPE 2	Physical Exam/Assessments	1	100	6
Spring 2014	PHRM 608	Clinical Sciences 2	Course Coordinator OTC Musc Disorders/Pain Osteoporosis Bone disorder Mega Case Hypertension I Hypertension II (cases) Ischemic Heart Disease Arrhythmias Cardiology Cases	5	103	24
Fall 2013	PHRM 620	IPPE 1	Physical Exam	1	100	6
Fall 2013	PHRM 604	Clinical Sciences 1	Clinical Lab Medicine #2 Immunizations Proctor	5	103	6
Fall 2013	PHRM 612	Clinical Sciences 3	Asthma Asthma/COPD Mega Case Diabetes Part I Diabetes Part III/Cardiology	5	103	18

Eric Ip, Pharm.D., BCPS, CSCS, CDE, FCSHP
Curriculum Vitae
Current as of 11/28/16

			Review Diabetes/Cardio Mega Case Diabetes Workshop Lead			
Spring 2013	PHRM 608	Clinical Sciences 2	Course Coordinator OTC Musc Disorders/Pain Osteoporosis Bone disorder Mega Case OTC Diarrhea/Constipation Hypertension I Hypertension II (cases) Ischemic Heart Disease Arrhythmias Cardiology Cases Cardiology Review	5	103	30
Spring 2013	PHRM 616	Clinical Sciences 4	Hormone Replacement	5	103	3
Spring 2013	PHRM 631	PREP	Cardiology/Diabetes Module Lead	1	103	4
Fall 2012	PHRM 604	Clinical Sciences 1	Clinical Lab Medicine #2 Clinical Lab Medicine #4 Immunizations Proctor	5	103	9
Fall 2012	PHRM 612	Clinical Sciences 3	Asthma Asthma/COPD Mega Case Diabetes Part I Diabetes Part III/Cardiology Review Diabetes/Cardio Mega Case Diabetes Workshop Lead	5	103	18
Spring 2012	PHRM 608	Clinical Sciences 2	Course Coordinator OTC Musc Disorders/Pain Osteoporosis Bone disorder Mega Case OTC Diarrhea/Constipation Hypertension I Hypertension II (cases) Ischemic Heart Disease Arrhythmias Cardiology Cases	5	103	27
Spring 2012	PHRM 616	Clinical Sciences 4	Hormone Replacement	5	103	3
Spring 2012	PHRM 631	PREP	Cardiology/Diabetes Module Lead Clinical Mnemonic	1	103	5
Fall 2011	PHRM 604	Clinical Sciences 1	Clinical Lab Medicine #2 Immunizations Proctor	5	103	6
Fall 2011	PHRM 612	Clinical Sciences 3	Asthma Asthma/COPD Mega Case Diabetes Part I Diabetes Part III/Cardiology Review Diabetes/Cardio Mega Case Diabetes Workshop Lead	5	103	18
Spring 2011	PHRM 608	Clinical Sciences 2	Course Coordinator OTC Musc Disorders/Pain Osteoporosis Bone disorder Mega Case OTC Diarrhea/Constipation Hypertension I Hypertension II (cases) Ischemic Heart Disease Arrhythmias	5	103	24
Spring 2011	PHRM 616	Clinical Sciences 4	Hormone Replacement	5	103	3
Spring 2011	PHRM 631	PREP	Cardiology/Diabetes Module Lead Clinical Mnemonic	1	103	5
Spring 2011	PHRM 626	Research Foundations 1	Research Posters and Abstracts	1	5	2
Fall 2010	PHRM 604	Clinical Sciences 1	Clinical Lab Medicine #2 Immunizations Proctor	5	103	6
Fall 2010	PHRM 612	Clinical	Asthma	5	103	15

		Sciences 3	COPD + Mega Case Diabetes Part I + Mega Case Diabetes Part III/Cardiology Review Diabetes Workshop Lead			
Spring 2010	PHRM 608	Clinical Sciences 2	Course Coordinator OTC Musc Disorders/Pain Osteoporosis Bone disorder Mega Case OTC Diarrhea/Constipation Hypertension I Hypertension II (cases) Ischemic Heart Disease Arrhythmias	5	103	24
Spring 2010	PHRM 616	Clinical Sciences 4	Hormone Replacement	5	103	3
Spring 2010	PHRM 631	PREP	Cardiology/Diabetes Module Lead	1	103	6
Fall 2009	PHRM 604	Clinical Sciences 1	Clinical Lab Medicine #3 Immunizations Proctor	5	103	6
Fall 2009	PHRM 612	Clinical Sciences 3	OTC Cough,Cold,Allergy Asthma COPD Pulmonary Device Workshop Diabetes Part I Diabetes Part III/Cardiology Review Diabetes Workshop Lead	5	103	21
Spring 2009	PHRM 608	Clinical Sciences 2	Course Coordinator Acne and Scale Dermatoses OTC Musc Disorders/Pain Osteoporosis Bone disorder Mega Case OTC Diarrhea/Constipation Hypertension I Hypertension II (cases) Ischemic Heart Disease Atrial Arrhythmias	5	103	27
Spring 2009	PHRM 616	Clinical Sciences 4	Hormone Replacement	5	103	3
Spring 2009	PHRM 631	PREP	Cardiology/Diabetes Module Lead	1	103	6
Fall 2008	PHRM 604	Clinical Sciences 1	Clinical Lab Medicine #3 Immunizations Coordinator/Proctor	5	103	6
Fall 2008	PHRM 612	Clinical Sciences 3	OTC Cough,Cold,Allergy Asthma COPD Pulmonary Device Workshop Diabetes Part I Diabetes Part III/Cardiology Review Diabetes Workshop Lead	5	103	21
Spring 2008	PHRM 608	Clinical Sciences 2	Course Coordinator Acne and Scale Dermatoses OTC Musc Disorders/Pain OTC Diarrhea/Constipation Arrhythmias	5	103	12
Spring 2008	PHRM 616	Clinical Sciences 4	Hormone Replacement OTC Oral and Otic Health	5	103	6
Fall 2007	PHRM 604	Clinical Sciences 1	Course Coordinator Physical Assessments I Physical Assessments II Immunization Lecture Immunization Coordinator/Proctor Clinical Lab Medicine #2 Clinical Lab Medicine #3	5	103	21
Fall 2007	PHRM 612	Clinical Sciences 3	OTC Cough,Cold,Allergy COPD Pulmonary Device Workshop Diabetes Workshop Lead	5	103	12

- Other Touro University California College of Pharmacy Teaching Experience-

Academic Year & Semester	Course/Program	Presentation	# Students	#Hours
Spring 2016	Residency Research Series and Master's Program	Presenting Research Posters	30	1
Fall 2015	Residency Workshop	Interview Skills	200	2
Spring 2015	RxPrep	NAPLEX/CPJE Board Exam Cardiology/Diabetes Review	100	6
Spring 2015	Residency Research Series and Master's Program	Presenting Research Posters	30	1
Fall 2014	Residency Workshop	Interview Skills	200	2
Spring 2014	RxPrep	NAPLEX/CPJE Board Exam Cardiology/Diabetes Review	100	6
Spring 2014	Residency Research Series and Master's Program	Presenting Research Posters	30	1
Fall 2013	Residency Workshop	Interview Skills	200	2
Spring 2013	RxPrep	NAPLEX/CPJE Board Exam Cardiology/Diabetes Review	100	6
Fall 2012	Residency Workshop	Interview Skills	200	2
Spring 2012	RxPrep	NAPLEX/CPJE Board Exam Cardiology/Diabetes Review	100	6
Fall 2011	Residency Workshop	Interview Skills	200	2
Fall 2011	Residency Workshop	Residency and Fellowship Panel	200	2
Spring 2011	PHRM 702 (ClinSci 6)-Callbacks	Insulin Titration and Diabetes Update 2011	100	2
Spring 2011	RxPrep	NAPLEX/CPJE Board Exam Cardiology/Diabetes Review	100	6
Fall 2010	Residency Workshop	Interview Skills	200	2
Fall 2010	Residency Workshop	Residency and Fellowship Panel	200	2
Spring 2010	PHRM 702 (ClinSci 6)-Callbacks	Insulin Titration and Diabetes Update 2010	100	2
Spring 2010	RxPrep	NAPLEX/CPJE Board Exam Cardiology/Diabetes Review	80	8
Fall 2009	Residency Workshop	Interview Skills	100	2
Spring 2009	PHRM 702 (ClinSci 6)-Callbacks	Insulin Titration and Diabetes Update 2009	100	2
Spring 2009	RxPrep	NAPLEX/CPJE Board Exam Cardiology/Diabetes Review	60	6
Fall 2008	Residency Workshop	Interview Skills	80	2
Spring 2008	PHRM 702 (ClinSci 6)-Callbacks	Atrial Fibrillation	80	2

- Invited Classroom Teaching Experience for UCSF School of Pharmacy, UCSF School of Nursing, Stanford University Physician Assistant Program, and Touro University College of Medicine-

Academic Year & Semester	University/Program	Presentation	# Students	#Hours
Spring 2016	UCSF School of	Diabetes Mellitus	120	2

Eric Ip, Pharm.D., BCPS, CSCS, CDE, FCSHP
Curriculum Vitae
Current as of 11/28/16

	Nursing (Advanced Clinical Pharmacology)			
Spring 2015	UCSF School of Nursing (Advanced Clinical Pharmacology)	Diabetes Mellitus	120	2
Spring 2013	Touro Univ College of Medicine	Drugs and Pregnancy	30	2
Spring 2012	Touro Univ College of Medicine	Drugs and Pregnancy	30	2
Spring 2010	Stanford PA	Menopause Treatment	50	1
Summer 2009	Stanford PA	Oral Diabetes Drugs	50	1
Spring 2007	UCSF School of Pharmacy	Atrial Fibrillation	122	1
Spring 2006	UCSF School of Pharmacy	Atrial Fibrillation	122	1

- Clinical Teaching Experience-

Kaiser Permanente Mountain View Diabetes Clinic (2008-present)

- Preceptor for 3rd and 4th year Touro University pharmacy students for Ambulatory Care I and II rotations
- Preceptor for Santa Clara Kaiser Permanente PGY-1 residents
- Preceptor for Touro University PGY-1 residents and fellows

- Touro University APPE Research/Academic Rotation Precepting/Mentoring-

- Josephine Chi (Spring 2016)
- Punam Patel (Spring 2016; submitted book chapter)
- Jai Pal (Spring 2016)
- I-Kuan Hsu (Spring 2016; submitted book chapter)
- Amanda Do (Spring 2015; present state posters, submitted national poster; residency)
- Annie Tran (Spring 2015-2016; present state poster, submitted national poster; residency)
- Sebastian Al-Saiegh (Spring 2015; present state and national poster; residency)
- Kathy Nguyen (Fall 2014, Spring 2015; present state and national poster; peer-reviewed publication acceptance; residency)
- Hermine Mkrtchyan (Summer 2014; present state poster; residency)
- Amber Mann (Spring 2014; non-refereed journal publication; present state poster)
- Lindsay Newsom (Spring 2014; present state poster; residency)
- Jackie Ho (Spring 2014/Open Period; present state and national poster; two peer-reviewed publications; 2015 ASHP Student Research Award; residency)
- Anh Do (Spring 2013; present state poster; residency)
- Vincent Cheng (Fall 2012, Spring 2013; peer-reviewed publication; state/national poster presentation; residency)
- Derren Cheongsiatmoy (Spring 2012, Fall 2012; peer-review publication; state/national poster presentation; residency)
- Steve Kim (Fall 2011; state poster presentation; Top 10 APhA Patient Counseling Competition; residency)
- Amanda Morris (Fall 2011; won CSHP Clinical Skills Competition; residency)
- Eric Chu (Fall 2011; peer-reviewed publication, state poster presentation; residency)
- Monica Bidwal (Winter and Summer 2011; peer-reviewed publication; non-refereed article; state/national poster presentation; won CPhA Patient Counseling Competition; residency)
- Lynda Nguyen (Winter 2011; peer-reviewed publication; national poster presentation; residency)
- Melissa Serino (Fall 2010; peer-reviewed publication; state poster presentation)
- Justin Vo (Fall 2010; peer-reviewed publication)
- Amin Kazani (Fall 2010; peer-reviewed publication; state poster presentation)
- Hoang Truong (Spring 2010; peer-reviewed publication; residency)
- Janine Wu (Fall 2009; submitted case report/not accepted; residency)
- Deempal Chaudari Bhatt (Fall 2009; peer-reviewed publication; national poster presentation; residency)
- Jennifer Kim (Summer and Fall 2009; peer-reviewed publication; state/national poster)

- Touro University College of Pharmacy Masters of Science Medical Health Sciences Mentor-

- Marvin Ortanez (2015-2016): 1 state poster presentation
- Michael Yadao (2014-2015): 1 state poster presentation; 1 peer-reviewed review article publication and submitted 1 original research manuscript; admitted to PharmD program)
- Stephanie Chew and Kristian Fredriksen (2013-2014): 1 peer-reviewed publication; admitted to PharmD program)
- Jai Pal and Karen Trinh (2012-2013): 2 peer-reviewed publications; state poster presentation; admitted to PharmD program)

- Teaching Awards and Honors-

5/2016	Touro University- California College of Pharmacy- Clinical Sciences Professor of the Year
5/2013	Touro University- California College of Pharmacy- Professor of the Year
5/2012	Touro University- California College of Pharmacy- Professor of the Year
5/2012	Touro University- California College of Pharmacy- Best Lecturer (Clinical Sciences)
5/2011	Touro University- California College of Pharmacy- Professor of the Year
7/2010	Recognized at the annual American Association of Colleges of Pharmacy (AACP) "Teacher of the Year Luncheon" in Seattle, WA
6/2010	Touro University- California College of Pharmacy- Clinical Preceptor of the Year
5/2010	Touro University-California College of Pharmacy- Professor of the Year
7/2008	Recognized at the annual American Association of Colleges of Pharmacy (AACP) "Teacher of the Year Luncheon" in Chicago, IL
5/2008	Touro University-California College of Pharmacy- Professor of the Year
4/2008	Touro University- California College of Pharmacy- Best Lecturer

RESEARCH AND SCHOLARLY ACTIVITY

- Peer Reviewed Journal Publications-

Accepted or Published

1. **Ip EJ**, Yadao MA, Shah BM, Doroudgar S, Perry PJ, Tenerowicz MJ, Newsom L, Mann AA, Mkrtchyan H, Pope HG. Polypharmacy, seroprevalence, sexual behavior, and psychophysical health among anabolic steroid-using homosexual gym clients: A Study in the San Francisco Castro District. *Subst Use Misuse*. (in press)
2. Palisoc AJL, Matsumoto RR, Ho J, Perry, PJ, Tang TT, **Ip EJ**. Relationship between Grit with Academic Performance and Attainment of Postgraduate Training in Pharmacy Students. *Am J Pharm Educ*. (in press)
3. **Ip EJ**, Nguyen K, Shah BM, Doroudgar S, Bidwal MK. Motivations and Predictors of Cheating in Pharmacy School. *Am J Pharm Educ*. 2016;80(8):133.
4. Bidwal MK, Lor KB, Yu J, **Ip E**. Evaluation of Asthma Medication Adherence Rates and Strategies to Improve Adherence in the Underserved Population at a Federally Qualified Health Center. *Res Social Adm Pharm*. 2016 Aug 3. pii: S1551-7411(16)30311-4.
5. **Ip EJ**, Yadao MA, Shah BM, Lau B. Infectious disease, injection practices, and risky sexual behavior among anabolic steroid users. *AIDS Care*. 2016;28(3):294-299.
6. Lindfelt TA, **Ip EJ**, Barnett MJ. Career Satisfaction, Work-Life Balance and Stress among United States Pharmacy School Faculty: Snapshot from a Comprehensive Survey. *Am J Health Syst Pharm*. 2015 Sept 15; 72(18):1573-1578.
7. Perry PJ, Fredriksen K, Chew S, **Ip EJ**, Lopes I, Doroudgar S, Thomas K. The Effects of Dextromethorphan on Driving Performance and the Standardized Field Sobriety Test. *J Forensic Sci*. 2015 Sep;60(5):1258-1262.
8. Shah BM, Mezzio DJ, Ho J, **Ip EJ**. Association of ABC (HbA1c, blood pressure, LDL-cholesterol) goal attainment with depression and health-related quality of life among adults with type 2 diabetes. *J Diabetes Complications*. 2015 Aug;29(6):794-800
9. Lor KB, Truong J, **Ip EJ**, Barnett MJ. A Randomized Prospective Study on Outcomes of an Empathy Intervention among Second-year Student Pharmacists. *Am J Pharm Educ*. 2015; 79(2):18.
10. Lor KB, Moua S, **Ip EJ**. Frequency and perceptions of herbal medicine use among Hmong Americans: a cross sectional survey. *J Immigr Minor Health*. 2015 Apr;18(2):397-401.
11. Wong T, **Ip EJ**, Lopes IC, Rajagopalan V. Pharmacy Student Performance and Perceptions in a Flipped Teaching Pilot on Cardiac Arrhythmias. *Am J Pharm Educ*. 2014;78(10):185.
12. Ho J, Bidwal MK, Lopes IC, Shah BM, **Ip EJ**. Implementation of an Accelerated Physical Examination Course in a Doctor of Pharmacy Program: A Flipped Approach. *Am J Pharm Educ*. 2014;78(10):182.
13. Bidwal MK, **Ip EJ**, Shah BM, Serino M. Stress, Drugs, and Alcohol Utilization among Healthcare Professional Students: A Focus on Prescription Stimulants. *J Pharm Pract*. 2015 Dec;28(6):535-42.
14. **Ip EJ**, Tang TT-L, Cheng V, Yu J, Cheongsiatmoy DS. Impact of Educational Levels and Health Literacy on Community Acetaminophen Knowledge. *J Pharm Pract*. 2015 Dec;28(6):499-503.

15. Truong JT, Barnett MJ, Tang TT, **Ip EJ**, Teeters JL, Knapp KK. Factors impacting self-perceived readiness for residency training: results of a national survey of postgraduate year one residents. *J Pharm Pract.* 2015 Feb;28(1):112-118.
16. **Ip EJ**, Trinh K, Tenerowicz MJ, Pal J, Lindfelt TA, and Perry PJ. Characteristics and behaviors of older male anabolic steroid users. *J Pharm Pract.* 2015 Oct;28(5):450-456.
17. Yoshizuka K, Perry PJ, Upton G, Lopes I, and **Ip EJ**. (2014) Standardized Field Sobriety Test: False Positive Test Rate among Sober Subjects. *J Forensic Toxicol Pharmacol* 3: 2.
18. Lu D, **Ip EJ**, Lopes I, Barnett M, Chu E, Ghayyem P, Perry P. Effects of Diphenhydramine versus Fexofenadine on the Standardized Field Sobriety Test. *California Journal of Health-System Pharmacy.* 2014; 26(3):81-88.
19. **Ip EJ**, Pal, J, Yu J, Trinh K, Lopes I, Lindfelt T, and Perry PJ. Effects of dextromethorphan on the standardized field sobriety test. *California Journal of Health System Pharmacy.* 2014; 26(2):52-57.
20. **Ip EJ**, Shah BM, Yu J, Chan J, Nguyen LT, Bhatt DC. Enhancing diabetes care by adding a pharmacist to the primary care team. *Am J HealthSyst Pharm.* 2013 May 15;70(10):877-886.
Podcast Audio Interview:<http://www.ashpmedia.org/podcasts/ajhp/index.html> (May 15, 2013)
21. **Ip EJ**, Bui QV, Barnett MJ, Kazani A, Wright R, Serino MJ, Perry PJ. The effect of trazodone on standardized field sobriety tests. *Pharmacotherapy.* 2013 Apr; 33(4):369-374.
22. Yu J, Shah BM, **Ip EJ**, Chan J. A Markov Model of the Cost-Effectiveness of Pharmacist Care for Diabetes in Prevention of Cardiovascular Diseases: Evidence from Kaiser Permanente Northern California. *J Manag Care Pharm.* 2013 Mar;19(2):102-114. **JMCP 2013 Award for Excellence Honorable Mention**
23. **Ip EJ**, Lu DH, Barnett MJ, Tenerowicz MJ, Vo JC, Perry PJ. The psychological and physical impact of anabolic-androgenic steroid (AAS) dependence: a comparison of AAS-dependent users and AAS-non-dependent users. *Pharmacotherapy.* 2012 Oct;32(10):910-919.
24. **Ip EJ**, Barnett MJ, Tenerowicz MJ, Perry PJ. Weightlifting's Risky New Trend: A Case Series of 41 Insulin Users. *Curr Sports Med Rep.* 2012 Jul;11(4):176-179.
25. Truong HB, **Ip EJ**. A Review of Erythropoietin Abuse: An Analysis of Effectiveness and Safety in Exercise. *J Sports Med Doping Stud.* 2:106.
26. Bruno CB, **Ip EJ**, Shah B, Linn WD. A Mnemonic for Pharmacy Students to Use in Pharmacotherapy Assessment. *Am J Pharm Educ.* 2012;76(1):16.
27. **Ip EJ**, Barnett MJ, Tenerowicz MJ, and Perry PJ. The Anabolic 500 Survey: Characteristics of Male Users versus Nonusers of Anabolic-Androgenic Steroids for Strength Training. *Pharmacotherapy* 2011;31(8):757-766.
28. **Ip EJ**, Barnett MJ, Tenerowicz MJ, Kim JA, Wei H, and Perry PJ. Females and Anabolic Steroids: An Analysis of a Dozen Users. *Clin J Sport Med* 2010;20(6):475-481.
29. **Ip EJ**, Barnett MJ, Tenerowicz MJ, and Perry PJ. The Touro 12-Step: A Systematic Guide to Optimizing Survey Research with Online Discussion Boards. *J Med Internet Res* 2010;12(2):e16.

30. **Ip EJ**, Lee-Ma A, Troxell LS, Chan J. Low-dose filgrastim in patients with breast cancer treated with docetaxel, doxorubicin, and cyclophosphamide. *Am J Health-Syst Pharm* 2008;65:1552-1555.

- Abstracts and Posters Presented at Professional Meetings-

International/National-Level

Ip EJ, Lindfelt TA, Tran AL, Do AP, Barnett MJ. Are Female Pharmacy Faculty from Venus and Males from Mars? American Association of Colleges of Pharmacy Annual Meeting, Anaheim, CA, July 2016.

Ip EJ, Nguyen K, Bidwal MJ, Doroudgar S, Shah BM. Do Pharmacy Students Cheat? A Survey of Motivations and Predictors of Cheating. American Association of Colleges of Pharmacy Annual Meeting, Anaheim, CA, July 2016.

Linfelt TA, **Ip EJ**, Lau S, Barnett MJ. Factors Impacting Job Retention and Turnover among Pharmacy School Faculty. American Association of Colleges of Pharmacy Annual Meeting, Anaheim, CA, July 2016.

Al-Saiegh, S, **Ip, EJ**, Bergeron, N. Lifestyle habits of pharmacy and medical students in California: differences between Caucasian and Asian students. American Society of Health-System Pharmacist (ASHP) Midyear Meeting, New Orleans, LA, December 2015

Shah DM, Mezzio D, Ho J, **Ip E**. Impact of Depression on ABC Goal Attainment & Health-Related Quality of Life among Adults with Type 2 Diabetes. ISPOR 20th Annual International Meeting, Philadelphia, PA, May 2015. [Poster awarded Finalist]

Nguyen K, **Ip EJ**, Bidwal M, Doroudgar S, Shah B. Academic dishonesty in pharmacy schools. 49thAmerican Society of Health-System Pharmacy (ASHP) Midyear Clinical Meeting and Exhibition. Anaheim, CA, December 2014.

Shah BM, **Ip EJ**, Mezzio D, Ho J. Impact of depressive symptoms on ABC goal attainment & health-related quality of life among adults with type 2 diabetes. 49thAmerican Society of Health-System Pharmacy (ASHP) Midyear Clinical Meeting and Exhibition. Anaheim, CA, December 2014.

Linfelt TA, Vuong H, Ellingrod V, **Ip EJ**, Perry PJ. Comparison of the prevalence rates of the KCNJ11 polymorphism (rs5219) between diabetes and non-diabetes patients using second-generation antipsychotic medications. 48thAmerican Society of Health-System Pharmacy (ASHP) Midyear Clinical Meeting and Exhibition. Orlando, FL, December 2013.

Cheongsiatmoy DS, Cheng V, **Ip E**, Tang T, Yu J. Survey of Patient Acetaminophen Knowledge and the Impact of a Condensed Educational Consultation. 47thAmerican Society of Health-System Pharmacy (ASHP) Midyear Meeting. Las Vegas, NV. December 2012.

Ip EJ, Shah BM, Yu J, Chan J, Nguyen LT, Bhatt DC. Effectiveness of Adding a Pharmacist to the Primary Care Team Compared to Usual Care: Clinical Markers and Long-Term Cardiovascular Risk. American Diabetes Association (ADA) 72nd Scientific Sessions. Philadelphia, PA, June 2012. (selected to be presented as a guided audio tour)

Ip EJ, Shah BM, Yu J, Chan J, Nguyen LT, Bhatt DC. Effectiveness of Adding a Pharmacist to the Primary Care Team Compared to Usual Care: Clinical Markers and Long-Term Cardiovascular Risk. Diabetes. June 2012; 61:A212-A344.
http://diabetes.diabetesjournals.org/content/61/Supplement_1/A212.full.pdf

Yu J, Shah BM, **Ip EJ**, Chan J. Cost Effectiveness of Adding a Pharmacist to the Primary Care Team for the Management of Type 2 Diabetes Patients. International Society for Pharmacoeconomics and Outcomes Research (ISPOR) 17th Annual International Meeting. Washington DC, 2012.

Ip EJ, Bidwal MK, Serino MJ, Shah BM. A Survey of Prescription Stimulant, Illicit Drug, and Alcohol Use in Healthcare Professional Students Across California. 46th American Society of Health-System Pharmacy (ASHP) Midyear Clinical Meeting and Exhibition. New Orleans, LA, December 2011.

Truong JT, Barnett MJ, **Ip EJ**, Tang TLT, Teeters JL, Knapp KK. Self-Perceived Readiness for Residency: Results of a National Postgraduate Year 1 Survey. American Association of Colleges of Pharmacy (AACP) Annual Meeting. San Antonio, TX, 2011.

Shah BM, **Ip EJ**, Chan J, Yu J. Impact of a Pharmacist-Managed Diabetes Clinic to Improve Glycemic and Cardiovascular Care. American Association of Colleges of Pharmacy (AACP) Annual Meeting. San Antonio, TX, 2011.

Ip EJ, Shah BM, Chan J, Yu J. Impact of a Pharmacist-Managed Diabetes Clinic to Improve Glycemic and Cardiovascular Care. American Diabetes Association (ADA) 71st Scientific Sessions. San Diego, CA, 2011.

Ip EJ, Shah BM, Chan J, Yu J. Impact of a Pharmacist-Managed Diabetes Clinic to Improve Glycemic and Cardiovascular Care. Diabetes. July 2011; 60:A195-A235.

http://diabetes.diabetesjournals.org/content/60/Supplement_1/A195.full.pdf+html

Ip EJ, Barnett MJ, Tenerowicz MJ, Perry PJ. The Touro 500: An In-depth Analysis of 506 Steroid Users and 771 Non-Steroid Users. American College of Sports Medicine (ACSM) 58th Annual Meeting and 2nd World Congress on Exercise is Medicine. Denver, CO, 2011.

Lee MT, Gonzales J, **Ip EJ**, Ly W. Impact of pharmacy resident facilitation of small group discussions on pharmacy student oral exam performance. 45th American Society of Health-System Pharmacy (ASHP) Midyear Clinical Meeting and Exhibition. Anaheim, CA, 2010.

Barnett M, Frank J, Shah BM, **Ip E**, Newland B, Shane P, Knapp KK. Characteristics of Part D Patients Receiving Medication Therapy Management (MTM) Services: Early Support and Findings from Three Open Enrollment Plans. Academy of Managed Care Pharmacy Educational Symposium. St Louis, MO, 2010.

Ip EJ, Troxell LS. Effectiveness of pharmacist telephone follow-up in improving medication adherence of oral bisphosphonates in osteoporosis patients. 41st American Society of Health-System Pharmacy (ASHP) Midyear Clinical Meeting and Exhibition. Anaheim, CA, 2006.

State-Level

- Abstracts and Posters Presented at Professional Meetings-

Ip EJ, Yadao MA, Shah BM, Doroudgar S, Perry PJ, Tenerowicz MJ, Do A, Collum A, Ortanez M, Pope HG Jr. The Castro 200: Anabolic Steroid Use and Risk of HIV among Homosexual Men in the San Francisco Castro District. California Society of Health-System Pharmacists (CSHP) Seminar 2015. San Diego, CA, October 2015.

Ip EJ, Lindfelt TA, Tran AL, Do AP, Barnett MJ. Are Female Pharmacy Faculty from Venus and Males from Mars? Contrasts in Career Satisfaction, Work-Life Balance, & Stress. California Society of Health-System Pharmacists (CSHP) Seminar 2015. San Diego, CA, October 2015.

Linfelt T, **Ip EJ**, Barnett M, Lau S. Factors Impacting Career Satisfaction and Work-Life Balance among Pharmacy School Faculty. California Society of Health-System Pharmacists (CSHP) Seminar 2015. San Diego, CA, October 2015.

Palisoc AJL, Matsumoto RR, Ho J, Perry PJ, Tang TT, **Ip EJ**. Relationship between Grit with Academic

Performance and Attainment of Postgraduate Training. California Society of Health-System Pharmacists (CSHP) Seminar 2015. San Diego, CA, October 2015.

Al-Saiegh S, **Ip EJ**, Fong A, Bergeron. Lifestyle Habits of Pharmacy and Medical Students in California: How Well Do We Follow Our Own Recommendations? California Society of Health-System Pharmacists (CSHP) Seminar 2015. San Diego, CA, October 2015.

Ip EJ, Mann AA, Mkrtchyan H, Newsom L, Tenerowicz MJ, Perry PJ, Doroudgar S, Shah BM, Yadao M, Pope HG Jr. The Anabolic 1000: A Survey of Anabolic Steroid User, Psychiatric Traits, and HIV among Gay Males. California Society of Health-System Pharmacists (CSHP) Seminar 2014. San Francisco, CA, November 2014.

Ip EJ, Nguyen K, Bidwal M, Dourdgar S, Shah B. Academic Dishonesty in Pharmacy Schools. California Society of Health-System Pharmacists (CSHP) Seminar 2014. San Francisco, CA, November 2014.

Ho J, Bidwal MK, Lopes IC, Shah BM, **Ip EJ**. Implementation of Accelerated Physical Examination Course in a Doctor of Pharmacy Program: A Flipped Approach. California Society of Health-System Pharmacists (CSHP) Seminar 2014. San Francisco, CA, November 2014.

Shah BM, **Ip EJ**, Mezzio DJ, Ho J. Predictive Characteristics Associated with Simultaneous ABC Goal Attainment among a National Sample of Type 2 Diabetes Patients. California Society of Health-System Pharmacists (CSHP) Seminar 2014. San Francisco, CA, November 2014.

Ip EJ, Trinh K, Tenerowicz MJ, Pal J, Lindfelt TA, Perry PJ. Characteristics of Anabolic-Androgenic Steroid Users versus Nonusers Over 40 Years Old: A Cross-sectional Study. California Society of Health-System Pharmacists (CSHP) Seminar 2013. Anaheim, CA, November 2013.

Ip EJ, Singh P, Do A, Bergeron N. A Web-Based Survey Analyzing the Dietary Practices of Pharmacy and Medical Students in California. California Society of Health-System Pharmacists (CSHP) Seminar 2013. Anaheim, CA, November 2013.

Linfelt T, **Ip EJ**, Barnett M, Chou T. Stress, Lifestyle, and Drug Use among Pharmacy School Faculty in the United States. California Society of Health-System Pharmacists (CSHP) Seminar 2013. Anaheim, CA, November 2013.

Ip EJ, Lee J, Yu J, Chu EY, Kim S, Eghbali B, Lopes I, Perry PJ. Effects of Hands-Free Cell Phone Use on Driving Performance. California Society of Health-System Pharmacists (CSHP) Seminar 2012, Las Vegas, NV. October 2012.

Ip EJ, Tang TT-L, Cheng V*, Cheongsiatmoy DS, Yu J. Survey of Patient Acetaminophen Knowledge and the Impact of a Condensed Educational Consultation. California Society of Health-System Pharmacists (CSHP) Seminar 2012, Las Vegas, NV. October 2012.

Ip EJ, Shah BM, Yu J, Chan J, Nguyen LT, Bhatt DC. Effectiveness of Adding a Pharmacist to the Primary Care Team Compared to Usual Care: Clinical Markers and Long-Term Cardiovascular Risk. California Society of Health-System Pharmacists (CSHP) Seminar 2012, Las Vegas, NV. October 2012.

Wong T, **Ip EJ**, Rajagopalan V, Lopes I. The "Flipped" Teaching Method: An Analysis of Academic Outcomes and a Survey of Student Perceptions. California Society of Health-System Pharmacists (CSHP) Seminar 2012, Las Vegas, NV. October 2012.

Ip EJ, Bui Q, Barnett MJ, Lu D, Kazani A, Wright R, Serino M, and Perry PJ. The Effects of Trazodone on the Standardized Field Sobriety Test. California Society of Health-System Pharmacists (CSHP) Seminar. Anaheim, CA, November 2011.

Ip EJ, Bidwal MK, Serino MJ, Shah BM. A Survey of Prescription Stimulant, Illicit Drug, and Alcohol Use in Healthcare Professional Students Across California. California Society of Health-System Pharmacists (CSHP) Seminar. Anaheim, CA, November 2011.

Ip EJ, Barnett MJ, Tenerowicz MJ, Perry PJ. The Touro 500: An In-depth Analysis of 506 Steroid Users and 771 Non-Steroid Users. California Society of Health-System Pharmacists (CSHP) Seminar. Anaheim, CA, November 2011.

Ip EJ, Barnett MJ, Tenerowicz MJ, Kim JA, Wei H, and Perry PJ. Women and Anabolics: A Comparative Look at Female and Male Steroid Users. California Society of Health System Pharmacists (CSHP) Seminar. San Diego, CA, October 2009.

Ip EJ, Lee-Ma A, Troxell LS, and Chan J. Effectiveness of low-dose filgrastim (G-CSF) in cancer chemotherapy. California Society of Health System Pharmacists (CSHP) Seminar. Palm Springs, CA, October 2007. **(Awarded Winning Research Poster)**

- Book Chapters-

Ip EJ, Patel PB, Hsu I, Lau B, Beta-Adrenoceptor Antagonists and Antianginal Drugs. In Sidhartha Ray, editor: Side Effects of Drugs Annual, Vol 38, SEDA, UK: Elsevier, 2016, pp. 173-178.

Ip, EJ (2014). Diabetes. In K. Shapiro, S.A. Brown, & D. McNatty (Eds.), *RxPrep Course Book- A Comprehensive Course for the NAPLEX® & CPJE* (pp. 393-428). San Diego, CA. RxPrep, Inc.

Jackevicius C. & **Ip EJ** (2014). Chronic Stable Angina. In K. Shapiro, S.A. Brown, & D. McNatty (Eds.), *RxPrep Course Book- A Comprehensive Course for the NAPLEX® & CPJE* (pp. 642-650). San Diego, CA. RxPrep, Inc.

- Non-Peer Reviewed Articles-

Ip EJ. Keep Diabetes Under Your Control. *Vallejo Times-Herald*. June 26, 2010.

Mann AA, **Ip EJ**. Debate on Canagliflozin's Role for Type 2 Diabetes. *Pharmacy Practice News*. Volume 40, Nov 2013.

- Research Support-

Funded Extramural Grants

2011: Adding Pharmacists to Primary Care Teams: Evidence of Clinical and Economic Outcomes in Diabetes Management. American Association of Colleges of Pharmacy (AAPC) New Pharmacy Faculty Research Award, Total Costs: \$9,775. Shah BM (Principal Investigator), **Ip EJ (Co-Investigator)**

Funded Intramural Grants

2012: Survey of Patient Acetaminophen Knowledge and the Impact of a Condensed Educational Consultation. Touro University California Intramural IRAP Grant. Total Costs: \$3483. **Ip EJ (Principle Investigator)**, Tang TTL, Cheongsiatmoy D.

2011: Effects of "Hands-free" Cell Phone Use on Driving Tests. Touro University- California Intramural IRAP Grant. Total Costs: \$1619. **Ip EJ (Principle Investigator)**, Barnett MJ, Perry PJ.

Submitted/Unfunded Grants

2010-2011 AACP New Investigator Grant: Anabolic Steroids and Performance Enhancing Drugs

2010-2011 ASHP Junior Investigator Grant: Clinical and Economic Impact of Adding a Pharmacist to the Primary Care Team

- Ongoing Research-

1. CASTRO Study: Potential spread of HIV virus and infectious disease among gay male anabolic steroid users (submitted for publication and multiple manuscripts in process)
2. Effects of Famotidine on Alcohol-Related Flushing (co-investigator/mentor; manuscripts in progress)
3. Academic Dishonesty (primary investigator; 1 manuscript in press; 2nd manuscript in progress)
4. Infant Teething Survey (primary investigator; manuscript in progress)
5. Pharmacy Faculty study (co-investigator/lead on 1 manuscript; 1 manuscript published, 2 manuscripts in progress)
6. Assessing Dietary Trends in Pharmacy and Medical Students in California (senior investigator, data collection/analysis ongoing; poster presented; submitted for publication)
7. GoAnimate to Enhance SOAPing Skills (senior investigator; poster presentation; submitted for publication)
8. Cost-benefit of establishing a shingles vaccine service in an independent pharmacy (co-investigator, manuscript in process)
9. Flipped Pharmaceutical Calculations (senior investigator; submitted for publication)
10. Association between GRIT and APPE performance (co-investigator; study in progress)

- Invited Lectures and Seminars-

National

- 6/2013 **Ip EJ.** Optimizing Insulin Therapy and Cardiovascular Care in Type 2 Diabetes Patients. ASHP Summer Meeting, Minneapolis, MN, June 2013.(ACPE-accredited CE)
- 5/2012 **Ip EJ.** Optimizing Insulin Therapy and Cardiovascular Care in Type 2 Diabetes Patients. ASHP GreatXeConference, May 2012.(ACPE-accredited CE)
- 12/2011 **Ip EJ.** Bigger, Stronger, Faster: A Revealing Look into Performance Enhancing Drug Use.American Society of Health-System Pharmacists Midyear Meeting. New Orleans, LA, December 2011. (ACPE-accredited CE)
- 7/2010 Barnett MJ,**Ip EJ**, Tang TTL, McCarter G, Meszaros K, Goldsmith PC, Knapp KK. Special Session: Utilizing AACP Curriculum Quality Survey Results for Benchmarking: Non-Parametric Analyses for Non-Mathematicians. American Association of College of Pharmacy Annual Meeting. Seattle, WA, July 2010.

State

- 11/2013 **Ip EJ.** Let's Get BIG! An In-Depth Look at the Anabolic Steroid Abuser. CSHP Seminar. Anaheim, CA, November 2013. (ACPE-accredited CE)
- 10/2010 **Ip EJ.** Bigger, Stronger, Faster: A Revealing Look into Performance Enhancing Drug Use.CSHP Seminar, San Francisco, CA, October 2010. (ACPE-accredited CE)

Regional/Local

- 7/2016 **Ip EJ.** Optimizing Insulin Therapy and Cardiovascular Care in Type 2 Diabetes Patients. Alameda Alliance for Health. Alameda, CA, July 2016. (CAPE-accredited CE)
- 5/2016 **Ip EJ.** Current Trends in Anabolic Steroids and Performance Enhancing Drug Use. Diablo Society of Health Systems Pharmacists' Night Out With Industry (NOWI). Walnut Creek, CA, May 2016. (CAPE-accredited CE)
- 8/2014 **Ip EJ.** Clinical Applications of JNC8. Golden Gate CSHP. Burlingame, CA, August 2014. (CAPE-accredited CE)

- 4/2014 **Ip EJ.** Optimizing Insulin Therapy and Cardiovascular Care in Type 2 Diabetes Patients. Quatra County Society of Health-System Pharmacists Weekend Breakfast Clinical Series. Santa Clara, CA, April 2014. (ACPE-accredited CE)
- 1/2014 **Ip EJ,** Lope I, Wong T. Flipped Teaching in Pharmacy School. Touro University California Faculty Development Session. Vallejo, CA, January 2014.
- 10/2013 **Ip EJ.** Optimizing Insulin Therapy in Type 2 Diabetes Mellitus. Golden Gate Health Systems Pharmacists. San Francisco, CA, October 2013. (CAPE-accredited CE)
- 1/2013 **Ip EJ.** Anabolic Steroids and Performance Enhancing Drugs. UCSF School of Pharmacy. San Francisco, CA, January 2013.
- 12/2012 **Ip EJ.** Diabetes Management Tips. Kaiser Permanente Mountain View Medical Clinics, Mountain View, CA, December 2012. (CME)
- 10/2010 **Ip EJ.** Optimizing Insulin Therapy in Type 2 Diabetes Mellitus. Diablo Society of Health Systems Pharmacists' Night Out With Industry (NOWI). Walnut Creek, CA, October 2010. (CAPE-accredited CE)
- 12/2009 **Ip EJ.** Anabolic Steroids and Performance Enhancing Drugs. Kaiser Permanente Mountain View Medical Clinics, Mountain View, CA, December 2009. (CME)
- 10/2009 **Ip EJ.** Bigger, Stronger, Faster: A Revealing Look into Performance Enhancing Drug Use. Diablo Society of Health Systems Pharmacists' Night Out With Industry (NOWI). Walnut Creek, CA, October 2009. (CAPE-accredited CE)
- 9/2009 **Ip EJ.** Optimizing Insulin Therapy in Type 2 Diabetes. Kaiser Permanente Mountain View Medical Clinics, Mountain View, CA, September 2009.
- 4/2009 **Ip EJ.** Treatment and Management of Hypertension. Salinas Valley Memorial Hospital, Salinas, CA, April 2009.
- 11/2007 **Ip EJ.** Optimizing Insulin Therapy. Kaiser Permanente Northern California, Oakland, CA, November 2007. (CE)
- 6/2007 **Ip EJ.** Updates in Medications for Diabetes, Asthma, and More. Kaiser Permanente Campbell Medical Clinics, Campbell, CA, June 2007. (CME)
- 5/2007 **Ip EJ.** Effectiveness of Low-Dose Filgrastim in Cancer Chemotherapy Western States Conference/Pacific Grove, CA, May 2007. (CE)
- 11/2006 **Ip EJ.** Pharmacology for Occupational Therapists, Speech Therapists and Physical Therapists Salinas Valley Memorial Hospital, Salinas, CA, November 2006.
- 11/2006 **Ip EJ.** Pharmacology for Physical Therapists. Salinas Valley Memorial Hospital, Salinas, CA, November 2006.

University Level

- 3/2008 Padilla-Valverde, L, **Ip EJ,** Ryan L, Wempe R, Landau SC. Emergency Contraception. Touro University, Vallejo, CA, March 2008.

UNIVERSITY AND PROFESSIONAL SERVICE

- Touro University-

Eric Ip, Pharm.D.,BCPS, CSCS, CDE, FCSHP
Curriculum Vitae
Current as of 11/28/16

2013-2014 Touro University College of Pharmacy Dean Search Committee
2012-2013 Touro University/Solano County Research Subcommittee

- Touro University College of Pharmacy-

Administrative

2013-present College of Pharmacy Management/Leadership Team
2016 Touro University College of Pharmacy Associate Dean for Assessment and Curricular Innovation Search Committee, Member
2016 2016 ACPE Standards Update (author of Standard 10.8- Pharmacists' Patient Care Process Model)
2014-2015 ACPE Self-Study Committee Chair (Standards 14 and 15, Experiential Education)
2010-2015 **Residency/Fellowship Director of Teaching**
2009-2013 **Clinical Sciences Department Director of Curriculum**
2009-present Small Group Discussion Clinical Mega Case Day's Coordinator
Spring 2008 College of Pharmacy Triple Jump Exam OSCEs Coordinator

Committees

2011-present Residency Steering Committee Member, Director of Residency/Fellowship Teaching, Interviewer, Clinical Case Writer
2010-present Curriculum Committee
Curriculum Committee Chair (2015-present)
Curriculum Committee Vice Chair (2012-2013; 2014-2015)
Ad Hoc Curriculum Calendar Committer; Ad Hoc Curricular Enhancement Committee Chair (2015)
Curricular Enhancement Committee Chair (2015)
Member (2010-present)
2009-2010 Admissions Committee
Member (2009-2010)
2007-2009 Faculty Development and Promotion Committee
Co-authored 2008 ACPE Self Study (Standard 26)
Member (2007-2009)
2015-2016 Associate Dean of Assessment and Curricular Innovation Search Committee Member

Student Organization Advisor

2011-2015 **ASHP/CSHP Touro University Chapter Faculty Advisor**
Eric Ip, Pharm.D., BCPS, CSCS, CDE, FCSHP
Curriculum Vitae
Current as of 11/28/16

2007-present Touro Clinical Skills Competition and Patient Counseling Competition Faculty Advisor/Mentor; Clinical Skills Competition Coordinator (CSHP 2009, 2010, 2013 State Clinical Skills Competition Champions; CPhA 2011 State Patient Counseling Competition Champion; 2012 APhA National Patient Counseling Competition Top 10 Finalist)

Student Advisor

2010-present Serve as faculty advisor for 15 Touro University 3rd and 4th year pharmacy rotational students

2007-2013 Serve as faculty advisor for eight 1st or 2nd year Touro University pharmacy students

2008-2009 Faculty advisor for Medicare Part D Outreach

Other Service to the School

2007-present Admissions Interviewer

- Kaiser Permanente Clinical Pharmacy Service-

2007-2013 Residency Steering Committee, Interviewer, Clinical Case Writer

- Professional Service-

Professional Publications

2016-present Invited Reviewer, Journal of Substance Use

2014-present Invited Reviewer, Journal of Adolescent Health

2014-present Invited Reviewer, American Journal of Managed Care

2013-present Invited Reviewer, Pediatrics

2012-present Invited Reviewer, Journal of American Pharmacists Association

2012-present Invited Reviewer, American Journal of Health-System Pharmacy

2012-present Invited Reviewer, Pharmacotherapy

2011-present Invited Reviewer, Journal of Managed Care Pharmacy

2011-present Invited reviewer, Medical Principles and Practice

2008-2009 Invited reviewer, Chemotherapy: International Journal of Experimental and Clinical Chemotherapy

National Level

2012 American Society of Health-System Pharmacy (ASHP) Midyear Meeting Clinical Education Program Reviewer

- 7/2008 Alternate Delegate at the American Association of College of Pharmacy (AACP) Meeting in Chicago, IL
- 3/2007 Judge for the American Pharmacists Association (APhA) National Patient Counseling Competition in Atlanta, GA

State Level

- 2010-2011 Delegate for the California Society of Health System Pharmacists (CSHP) Diablo Chapter at the 2011 CSHP Seminar Meeting
- 2009-2010 **Research Poster Session Chair for the 2010 CSHP Seminar Meeting**
- 2010 Continuing Education Room Monitor at 2010 CSHP Seminar Meeting
- 2009-2010 Delegate for the California Society of Health System Pharmacists (CSHP) Diablo Chapter at the 2009 CSHP Seminar Meeting
- 2009 Continuing Education Room Moderator at 2009 CSHP Seminar Meeting
- 2008 Clinical Skills Competition Judge at the 2008 CSHP Seminar Meeting

Regional Level

- 2009-2011 Secretary for California Society of Health System Pharmacists (CSHP) Diablo Chapter
- 2008-2012 Community Outreach Chair for California Society of Health System Pharmacists (CSHP) Diablo Chapter
 ➤ Author of CSHP Cardiovascular Services Grant: Diablo chapter awarded \$1000
- 9/2008 Residency Panel Discussion/Roundtable Leader for NCCCP in Walnut Creek, CA

-Community Service-

- November 2014 Touro University Flu Vaccine Clinic, Vallejo, CA
- October 2013 Touro University Flu Vaccine Clinic, Vallejo, CA
- October 2012 Touro University Flu Vaccine Clinic, Vallejo, CA
- February 2010 Walnut Creek Farmer's Market Diabetes/Blood Pressure Screening, Walnut Creek, CA
- December 2009 Solano County H1N1 Immunization Clinic, Vallejo, CA
- November 2009 Fremont Sikh Temple Health Fair, Fremont, CA
- Fall 2009 Benecia Senior Center Health Fair
- Spring 2009 Concord Senior Center Health Fair Blood Pressure Screening and Medication Brown Bag
- Fall 2008 Oakland Hotel Senior Center Medicare Part D/Partners in D Outreach, Oakland, CA

Spring 2008	Touro University College of Pharmacy 2 nd Annual Health Fair, Vallejo, CA
Winter 2008	Berkeley Suitcase Clinic, Berkeley, CA
Winter 2008	Fairfield High School HIV/STD Awareness Booth, Fairfield, CA
Winter 2008	Teen Life Clinic Hypertension Booth, Vallejo, CA
Fall 2007	Influenza Vaccine Service at Papyrus Headquarters, Fairfield, CA
Fall 2007	Taking Care of Your Diabetes Fair, Santa Clara, CA
Fall 2006	Kaiser Permanente's Men's Health Fair, Santa Clara, CA

HONORS & AWARDS

5/2016	Touro University- California College of Pharmacy- Clinical Sciences Professor of the Year
11/2014	Awarded Fellow of the California Society of Health-System Pharmacists (CSHP)
2/2014	Journal of Managed Care Pharmacy (JMCP) 2013 Award for Excellence Honorable Mention
5/2013	Touro University- California College of Pharmacy- Professor of the Year
5/2012	Touro University- California College of Pharmacy- Professor of the Year
5/2012	Touro University- California College of Pharmacy- Best Lecturer (Clinical Sciences)
5/2011	Touro University-California College of Pharmacy- Professor of the Year
7/2010	Recognized at the Annual American Association of Colleges of Pharmacy (AACP) "Teacher of the Year Luncheon" in Seattle, WA
6/2010	Touro University-California College of Pharmacy- Clinical Preceptor of the Year
5/2010	Touro University-California College of Pharmacy- Professor of the Year
7/2008	Recognized at the Annual American Association of Colleges of Pharmacy (AACP) "Teacher of the Year Luncheon in Chicago, IL
5/2008	Touro University-California College of Pharmacy- Professor of the Year
4/2008	Touro University-California College of Pharmacy- Best Lecturer

University of California, San Francisco (UCSF) School of Pharmacy

5/2006	UCSF Bowl of Hygeia Award Recipient ➤ "The highest honor given to a graduating student in the school of pharmacy at the University of California, San Francisco"
5/2006	TEVA Pharmaceuticals USA Outstanding Student Award
5/2006	Drug Facts and Comparisons Excellence in Clinical Communications

- 5/2006 Longs Drug Stores Senior Research Award
 ➤ Titled "Community Pharmacists' Readiness in the Implementation of an Asthma Management Service: A Prospective, Descriptive Study"
- 3/2006 **APhA-ASP Patient Counseling Competition- National Champion**
 ➤ 1st Place (among 92 pharmacy school representatives)
http://www.pharmacist.com/AM/Template.cfm?section=Past_Recipients3
- 2/2006 **CPhA Patient Counseling Competition- State Champion**
- 3/2006 ASSP Outstanding Student of the Quarter
University of California, San Francisco
- 11/2005 **Inducted into Rho Chi Pharmaceutical Honor Society**
University of California, San Francisco
- 09/2005 **CSHP Clinical Skills Competition- State Champion**
- 5/2005 ASSP Outstanding Student of the Year Nominee
University of California, San Francisco
- 2/2005 **Inducted into Phi Lambda Sigma Pharmaceutical Leadership Society**
University of California, San Francisco
- 5/2004 Professional Development Grant Recipient
University of California, San Francisco
- 5/2003 Community Service Appreciation Award
University of California, San Francisco

University of California, Davis

- 6/2002 Division of Biological Sciences Citation Award in Exercise Science
University of California, Davis
- 11/2001 Golden Key International Honour Society
University of California, Davis
- 2/1999 Sigma Phi Epsilon's Balanced Man Scholarship
University of California, Davis
 ➤ 1st Place among all freshman males at UC Davis for leadership, academics, athletics, and community involvement

CURRENT MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS

American Pharmacists Association (APhA)
 American Society of Health Systems Pharmacists (ASHP)
 California Society of Health Systems Pharmacists (CSHP)
 Quatra Society of Health Systems Pharmacists
 American Association of Colleges of Pharmacy (AACP)
 American College of Clinical Pharmacy (ACCP)
 American Diabetes Association (ADA)
 National Strength and Conditioning Association (NSCA)
 Rho Chi Pharmaceutical Honor Society
 Phi Lambda Sigma Pharmaceutical Leadership Society
 Kappa Psi Pharmaceutical Fraternity

PROFESSIONAL MEETINGS

AACP Annual Meeting, 2016- Anaheim, California
CSHP Seminar 2015- San Diego, California
CSHP Seminar 2014- San Francisco, California
CSHP Seminar 2013- Anaheim, California
CSHP Seminar 2012- Las Vegas, Nevada
ADA 72nd Scientific Sessions, 2012- Philadelphia, Pennsylvania
ASHP Midyear Meeting 2011, New Orleans, Louisiana
CSHP Seminar 2011- Anaheim, California
ADA 71st Scientific Sessions, 2011- San Diego, California
ACSM 58th Annual Meeting and 2nd World Congress on Exercise is Medicine 2011- Denver, Colorado
CSHP Seminar 2010- San Francisco, California
AACP Annual Meeting, 2010- Seattle, Washington
APhA Annual Meeting, 2010- Washington DC
CSHP Seminar 2009- San Diego, California
ACCP FIT Workshop, 2009- Salt Lake City, Utah
NIH Annual Seminar, 2009- Las Vegas, Nevada
APhA Annual Meeting, 2009- San Antonio, Texas
CSHP Seminar 2008- Anaheim, California
AACP Annual Meeting, 2008- Chicago, Illinois
APhA Annual Meeting, 2008- San Diego, California
ASHP Midyear, 2007- Las Vegas, Nevada
CSHP Seminar 2007- Palm Springs, California
APhA Annual Meeting, 2007- Atlanta, Georgia
ASHP Midyear, 2006- Anaheim, California
CSHP Seminar, 2006- Sacramento, California
APhA Annual Meeting, 2006- San Francisco, California
CPhA Outlook Meeting, 2006- Palm Springs, California
ASHP Midyear, 2005- Las Vegas, Nevada
CSHP Seminar, 2005- Anaheim, California
CSHP Seminar, 2004 - Long Beach, California
APhA Annual Meeting, 2003- New Orleans, Louisiana

MELISSA KIRKPATRICK, PHARM.D., BCACP

623.341.4117 ♦ Melissa.Kirkpatrick@tu.edu

CAREER OBJECTIVE

To provide quality patient care by enabling patients to take an active role in the management of their health; to advance the profession of pharmacy by promoting wellness, providing counseling and compassion to patients, and developing knowledge in future pharmacists.

EDUCATION

Doctor of Pharmacy
2013

University of North Carolina – Chapel Hill
Eshelman School of Pharmacy

Bachelor of Science
2009

University of Arizona
Molecular & Cellular Biology
Nutritional Sciences

WORK EXPERIENCE

**Assistant Professor of
Clinical Sciences**
(Nov 2014 - present)

Touro University California
College of Pharmacy

**Health Sciences Assistant
Clinical Professor**
(March 2015 - present)

University of California San Francisco
College of Pharmacy

Clinical Pharmacist
(Aug 2016 - present)

Highland Hospital

- Managed anticoagulation, diabetes, and hypertension in a federally qualified healthcare center
- Managed medication requests (refill and prior authorizations) for physicians within an adult medicine clinic

Clinical Pharmacist
(Nov 2014 - Feb 2016)

San Francisco General Hospital

- Managed anticoagulation, chronic pain, and CKD anemia in a federally qualified healthcare center
- Managed medication requests (refill and prior authorizations) for approximately 30 physicians in a general medicine clinic

**PGY1 Ambulatory Care
Pharmacy Resident**
(July 2013 – June 2014)

UC San Diego Health System
(See residency experiences below)

Pharmacy Intern
(July 2010 – June 2013)

Wal-Mart Pharmacy

PCAT/DAT Instructor
(Nov 2007 – June 2013)

Kaplan Test Prep & Admissions

TEACHING EXPERIENCE

Lecturer

Fall 2014 - present

Participating faculty member, delivering clinical sciences content to approximately 100 first-year and 100 second-year pharmacy students

Clinical Sciences I:

- Clinical Lab Medicine #2 (focus: hepatic and endocrine labs)

Clinical Sciences II:

- Contact & Atopic Dermatitis
- Acne & Scaly Dermatoses
- Gastrointestinal Infections

Clinical Sciences III:

- Asthma
Headache

Clinical Sciences IV:

- Opportunistic Infections

Acute Care Elective:

- Transitions of Care

Residency Preparation Elective:

- Curriculum Vitae

Pharmacy Practice Experience:

- Smoking Cessation

Course Co- Coordinator

Fall 2014 - Present

PHRM 604: Clinical Sciences I

- Supervised student presentations of OTC devices and supplies
- Coordinated administrative components for first-year pharmacy course in clinical sciences
- Authored case for end-of-semester cumulative exam

Palliative Care Elective

- Co-developed an interprofessional elective with the school of medicine

Facilitator

Asthma/COPD Mega Case (September 2015; August 2016)

- Co-authored a comprehensive patient case activity focused on chronic pulmonary conditions

Headache/Pain Mega Case (November 2016)

- Co-authored a comprehensive patient case activity focused on chronic pulmonary conditions

Acute/Ambulatory Care Transitions PPC (March 2014)

- Collaborated with acute care faculty to create a practicum experience involving issues surrounding care transitions
- Designed mock electronic medical record, including submission of an electronic progress note

Pharmacy Practice Center (Fall 2014 – present)

- Served as facilitator for small groups in various practicum experiences, including MTM, Intro to EMR, Ambulatory Care

Preceptor

APPE: Ambulatory Care I & II (November 2014-present)

- Precepted APPE students in a general medicine clinic
- Facilitated topic discussions on relevant disease states
- Supervised student-presented journal clubs and clinical pearls

PGY1 Residency (June 2015-February 2016)

- Primary clinical contact for Touro PGY1 Ambulatory Care resident at San Francisco General Hospital
- Co-preceptor for UCSF PGY1 Pharmacy Practice residents on ambulatory care rotations at San Francisco General Hospital

IPPE: Non-traditional Practice Site (March 2015 – present)

- Designed one-day experience for first- and second-year pharmacy students on IPPE rotations in an ambulatory care clinic

Service

College Committees

- Faculty Development (November 2014 – August 2015)
- Admissions Committee (August 2015 – present)
- Residency Steering Committee (June 2015- February 2016)
- Ad Hoc Committee for Residency Application Review

Co-advisor – CSHP/ASHP student chapter

LICENSURES, CERTIFICATIONS, and SKILLS

Licensed Pharmacist – State of California (#69602)

Board Certified Ambulatory Care Pharmacist – Board of Pharmacy Specialties

Basic Life Support for Healthcare Providers – American Heart Association

SDPRL Teaching Certificate – UC San Diego Health System

Proficient in Spanish - speaking, reading, and writing

SELECT PRESENTATIONS AND PUBLICATIONS

New Medications in ESRD

National Kidney Foundation - 48th Annual Medical Symposium
Foster City, CA - September 23, 2016

- Presentation to physicians, nurses, transplant coordinators and other health care professionals
- Discussion of: newly-approved agents for hyperkalemia and hyperphosphatemia; use of novel oral anticoagulants in patients with ESRD

Effects of a Student-Generated Practice Exam in a Clinical Sciences Course

Kirkpatrick ML, Thomas K, Doroudgar S.

- Retrospective review determining the impact of student-written questions for a practice exam for Neuro/Psych topics in a clinical sciences course; subsequent analysis of exam performance and long-term retention of material compared to prior students, as well as student perceptions of the educational intervention
- Research role: study design, data collection and analysis, manuscript preparation
- Status: Data collection and manuscript preparation ongoing

Current practices for long-term patient monitoring on target specific oral anticoagulants: a Delphi consensus study. Lau R, Lee SY, *Kirkpatrick ML.*

- Survey of experts practicing in anticoagulation to determine current clinical practices regarding monitoring of target-specific oral anticoagulants and utilization of the Delphi method to establish a consensus for best practices for monitoring these agents
- Research role: study design, advisement and guidance for resident primary investigator
- Status: Manuscript preparation ongoing

Evaluation of Antipsychotic Therapy in Patients with Symptoms of Metabolic Syndrome Upon Inpatient Psychiatric Admission

Kirkpatrick ML, Amin P, Lane J, Lee K, Strack D.

- Retrospective review characterizing antipsychotic prescribing practices when treating patients with co-morbid symptoms of metabolic syndrome; subsequent analysis of changes in prescribing practices after implementation of a metabolic monitoring guideline
- Research role: study design, design and implementation of a guideline for metabolic monitoring, data analysis & collection, manuscript preparation
- Platform presentation at Western States Conference

Impact of Medicare Part D vs. Medicare Part B Billing for Insulin Used in Continuous Subcutaneous Insulin Pumps: A Case Series.

Gardner KN, Assiri A, Cotterman ML, Misita CP.

- Retrospective review of patient spending to determine if billing of insulin used in a subcutaneous infusion pump to Medicare Part B instead of part D results in overall decreased patient cost
- Research Role: study design, submission of IRB, initial abstract synthesis
- Poster presentation at ASHP Midyear Clinical Meeting

RESIDENCY EXPERIENCES

Anticoagulation Clinic/Family Medicine

- Managed patients with point-of-care testing in a pharmacist-run anticoagulation clinic
- Supervised and educated pharmacy and medical students while verifying prescriptions in a student-run free clinic
- Taught group diabetes self-management classes

Solid Organ Transplant

- Participated in direct patient care within multidisciplinary kidney, liver, lung, and heart transplant clinics, including medication management, laboratory monitoring, and medication education
- Promoted access to and provided education for novel direct-acting Hepatitis C therapies
- Managed anticoagulation in patients with left ventricular assist devices

Transitions of Care – Heart Failure

- Participated in multidisciplinary inpatient rounds with the cardiomyopathy service
- Performed admission and discharge medication reconciliation and counseling
- Performed post-discharge follow-up phone calls to ensure proper medication usage
- Provided medication management for recently-discharged patients in an outpatient heart failure clinic

Owen Clinic

- Counseled patients on the HIV life cycle, focusing on targets for drug therapy
- Assisted patients with strategies to improve compliance
- Assessed patient's prior drug exposure and genotypic history to make therapeutic recommendations
- Managed patients with Hepatitis C and HIV coinfection

Administration

- Redesigned process for documentation of non-sterile compounding
- Developed a therapeutic interchange protocol to allow for pharmacist authority to make a switch to a more cost-effective agent
- Performed a drug class review and presented results to the Pharmacy & Therapeutics committee

Transitions of Care – HIV

- Participated in daily inpatient rounds with the Owen Service (HIV) attending, focusing on treatment of opportunistic infections
- Performed admission and discharge medication reconciliation and counseling
- Performed post-discharge follow-up phone calls to ensure proper medication usage

Pain & Palliative Care

- Dispensed medications from an oncology specialty pharmacy
- Provided patient counseling on oral chemotherapeutic agents
- Managed pain, nausea/vomiting, constipation, and other adverse effects in an outpatient palliative care clinic

Chronic Kidney Disease

- Optimized medications for hypertension, diabetes, electrolyte abnormalities, and secondary hyperparathyroidism in a multidisciplinary chronic kidney disease clinic
- Ensured appropriate vaccinations for patients beginning dialysis

Keith Yoshizuka, PharmD, MBA, JD, FCSHP

Curriculum Vitae
411 Shirlee Drive
Danville, California 94526

E-mail: keith.yoshizuka@tu.edu

Telephone/Voicemail: 707-638-5992

FORMAL EDUCATION -

University of San Francisco San Francisco, California	JD	1991-1995
California State University, Sacramento Sacramento, California	MBA	1977-1981
University of the Pacific Stockton, California	PharmD	1973-1976

PROFESSIONAL TRAINING

Boston University School of Management Boston, Massachusetts	ASHP Pharmacy Leadership Institute	2006
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BOARD CERTIFICATION AND CREDENTIALS

Registered Pharmacist, California	#30125	1976
Registered Pharmacist, Nevada	#06605	1976
Registered Pharmacist, Hawaii	#591	1976
State Bar of California	#225709	2003
United States District Court, Northern District of California		2003
United States Court of Appeals, 9 th District		2003

PROFESSIONAL EXPERIENCE

Asst Dean for Administration Touro University-California, College of Pharmacy Responsible for all contracts for the College of Pharmacy, evaluating risk and liability for new ventures, responsible for assisting with budget development, strategic planning, and general management of the college.	2011-present Vallejo, California
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Chair- Social, Behavioral, & Administrative Sciences Department Touro University-California, College of Pharmacy Responsible for 5 FTE department responsible for teaching pharmacoeconomics, epidemiology, health systems, law, and other noon-science aspects required for ACPE accreditation	2010-present Vallejo, California
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Director of Acute/Ambulatory Care Experiential Education Touro University-California, College of Pharmacy Responsible for recruiting and maintaining adequate clinical rotation sites in hospitals and clinics, assuring quality educational experiences through a process of continuous quality improvement, preceptor development, and maintenance of external relations with our preceptors.	2006-present Vallejo, California
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Associate Professor Touro University – California, College of Pharmacy	2013-present Vallejo, California
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Assistant Professor Touro University – California, College of Pharmacy	2005-2013 Vallejo, California
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Director of Pharmacy Services Sutter Health St. Luke's Hospital Managed 26 FTE in 2 pharmacies (325 bed acute care facility and 160 rx/day clinic pharmacy)	2002-2006 San Francisco, California
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Director of Pharmacy 2000-2001
Ocadian Care Centers/Tice Valley Pharmacy/San Ramon Rehabilitation Hospital San Ramon, CA
Managed pharmacy operations in 2 pharmacies servicing 60 LTC facilities within a 200 mile radius and a 50 bed acute care rehabilitation hospital.

Pharmacy Services Director/Area Manager 1996-1999
Kaiser Permanente Hayward/Union City/Fremont
Responsible for 10 pharmacies and 200 employees over a 3 city area including service for a 350 bed acute care hospital, outpatient pharmacies with a prescription volume ranging from 350 – 2,000 rx/day, and pharmacists in ambulatory care services in the medical clinics of all 3 campuses.

Chief Pharmacist/Pharmacy Service Manager 1988-1996
Kaiser-Permanente Medical Center Hayward, California
Responsible for 6 pharmacies and 124 employees over a 2 city area including service for a 350 bed acute care hospital, outpatient pharmacies with a prescription volume ranging from 500 – 2,000 rx/day, and pharmacists in ambulatory care services in the medical clinics of 2 campuses.

Asst Chief Pharmacist 1984-1988
Kaiser-Permanente Medical Center Hayward, California
Managed at various times pharmacy services for s 350 bed acute care hospital with 28 FTE and a 2,000 rx/day outpatient pharmacy with 47 FTE.

Asst Director of Pharmacy/Pharmacy Manager 1977-1984
Methodist Hospital of Sacramento/Timberlake Corporation Sacramento, California
Managed daily operations for a 150 bed acute care community hospital

Staff Pharmacist 1976
University of California Hospital, San Francisco San Francisco, California
Provided pharmaceutical care as part of the team in a large teaching medical center.

TEACHING EXPERIENCE

Classroom Teaching Experience:

Touro University California, College of Pharmacy PHRM 603 (3 units) course co-coordinator, taught Introduction to Pharmacy Law, 6 lectures, 60-100 students	Vallejo, California 2005-present
PHRM 607 (4 units) course co-coordinator, taught State and Federal law governing Controlled Substances and laws and standards governing sterile compounding, 6 lectures, 60-100 students	2006-present
PHRM 611 (3 units) course co-coordinator, taught Introduction to Pharmacist Liability, 3 x 3 hour lectures, 60-100 students	2006-present
PHRM 615 (4 units) course coordinator, Pharmacy Management, Ethics 20 x 3 hours classes, 60-100 students	2007-present

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Clinical Teaching Experience:

Touro University California, College of Pharmacy
PHRM 864 (6 units) course co-coordinator, Forensic Toxicology
6-week elective rotation, 8 students
Vallejo, California
2009-present

Mentor Teaching Experience:

Touro University California, College of Pharmacy
PHRM 865 (6 units) preceptor, Academic Rotation
6-week elective rotation
Vallejo, California
2010

Teaching Awards and Honors

Touro University California, College of Pharmacy
Yoda Award
Vallejo, California
2012

RESEARCH AND SCHOLARLY ACTIVITY

Publications

Inserting Pharmacists in Primary Care Roles in an Ambulatory Care Setting; Yoshizuka, K; Knapp, K.; Shane, P; Lu, D.; California J Health-System Pharm; Jan/Feb 2015, 15-28

Marijuana and Pharmacy Practice: A Call for Action; Malcolm, B; Yoshizuka, K; Perry, PJ; California J Health-System Pharm Sept/Oct 2014, 139-145

Bullying in the Clinical Training of Pharmacy Students; Knapp, K, Shane, P, Sasaki-Hill, D, **Yoshizuka, K**, Chan, P, Vo, T; Am J Pharm Educ, 2014 August, Vol 78, Iss. 6, doi: 10.5688/ajpe786117

Standardized Field Sobriety Test: False Positive Test Rate among Sober Subjects, **Yoshizuka, K**, Perry PJ, Upton, G, Lopes, I, and Ip, E; J Forensic Tox & Pharm; 2014 3:2, <http://dx.doi.org/10.4172/2325-9841.1000120>

Drug Testing in the Workplace, Phan, H., **Yoshizuka, K**, Murray, DJ, and Perry, PJ, Pharmacotherapy 2012; 32(7):649–656

The Association between Pharmacologic Drug Intoxication and Forensic-Specific Intent, **Yoshizuka, K** and Perry, P, J Pharm Pract 2012 Feb 7, PubMed ID 22318915

Grassroots Advocacy through the Eyes of CSHP's GAAC Chair, **Yoshizuka, K**, CSHP InfoSource, 2011, May 13, <http://archive.constantcontact.com/fs091/1102078811954/archive/1105466133560.html>

In reply to “Why We Banned Use of Laptops and ‘Scribe Notes’ in Our Classroom”, Wright, R, Perry, PJ, and **Yoshizuka, K**, Am J Pharm Educ. 2011 March 10; 75(2): 38b

Pharmacy Law Examination and Board Review, William Feinberg, McGrawHill 2014 ISBN 978-0-07-174751-6, chapter n California law

Pharmacy Management, Leadership, Marketing, and Finance” by Chisholm-Burns, Villaincourt, & Shepherd for Jones & Bartlett Publishing in 2012, reviewed the chapters on Pharmacy Operations and Managing Purchasing and Inventory

Presentations

California Society of Health System Pharmacists Webinar, SB 493 Update, Willick, G, Benton, D, Kalpage, R, and Yoshizuka, K, January 2015

California Society of Health System Pharmacists Seminar 2014, How to Apply for an Advanced Practice Pharmacist License and More..., Yoshizuka, K. San Francisco, California November 2014

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California Society of Health System Pharmacists Seminar 2012, Forensic Toxicology of Alcohol and Drug Intoxication, Perry, PJ and Yoshizuka, K, Las Vegas, Nevada, October 2012,

Symposium: Legal and Ethical Issues Facing Health Care Providers during a Public Emergency; University of California, San Francisco, San Francisco, California, February 2009

California Pharmacists Association Outlook 2008, Pharmacists' Liability, Sacramento, California, February 2008

American Society of Hospital Pharmacists Midyear Clinical Meeting, Safety Pearls, Las Vegas, Nevada, December 2007

American Society of Hospital Pharmacists Midyear Clinical Meeting, Management Pearls, Anaheim, California, December 2006

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Research Support

Cost shifting in pharmaceutical pricing, **Yoshizuka, K** and Yu, J, Touro University Intramural Grant, 2012, \$2,000

Impact of pharmacy benefit managers on drug pricing, Yu, J and **Yoshizuka, K**, Touro University Intramural Grant, 2012, \$4,000

UNIVERSITY AND PROFESSIONAL SERVICE

University Service FTAC (Faculty Technology Advisory Committee) 2010 - present
Experiential Oversight Committee (COM/COP/CEHS)
Performance Improvement Committee (COM/COP/CEHS)
COP Academic Standards Committee (2009 - present)
COP Curricular Assessment Committee (2007 – 2011)
COP Admissions Interviews
COP Acute/Ambulatory Care Experiential Oversight Committee

Professional Service Precept students for influenza vaccine administration (2008-13)
Precept students for Tdap immunization (2011)
California Society of Health-System Pharmacists (CSHP)
Government Affairs Advisory Committee (GAAC) (2008-present)
Chair 2010-11, Chair elect 2015
Diablo Chapter CSHP – GAAC liaison (2008-2010, 2012-present)

Community Service Shinyo-En temple gohoshi, Redwood City, CA June 2012
Japanese American Citizens League (JACL) Diablo Chapter (2010-present)
Japanese American Citizens League (JACL) Tri Valley Chapter (2003-2009)
President (2007-2009)

AWARDS AND HONORS

California Society of Health System Pharmacists – Platinum level Advocacy recognition November 2014

California Society of Health System Pharmacists – Fellow, 2013

California Society of Health System Pharmacists – Gold level Advocacy recognition, October 2012

California Society of Health System Pharmacists – Gold level Advocacy recognition, October 2011

American Society of Health System Pharmacists - invitation to attend the Pharmacy Leadership Institute 2006

Attachment 2

B&PC Section 4040.5.

"Reverse distributor" means every person who acts as an agent for pharmacies, drug wholesalers, third-party logistics providers, manufacturers, and other entities by receiving, inventorying, warehousing, and managing the disposition of outdated or nonsaleable dangerous drugs.

B&PC Section 4043.

"Wholesaler" means and includes a person who acts as a wholesale merchant, broker, jobber, customs broker, reverse distributor, agent, or a nonresident wholesaler, who sells for resale, or negotiates for distribution, or takes possession of, any drug or device included in Section 4022. Unless otherwise authorized by law, a wholesaler may not store, warehouse, or authorize the storage or warehousing of drugs with any person or at any location not licensed by the board.

B&PC Section 4053.

(a) Notwithstanding Section 4051, the board may issue a license as a designated representative to provide sufficient and qualified supervision in a wholesaler or veterinary food-animal drug retailer. The designated representative shall protect the public health and safety in the handling, storage, and shipment of dangerous drugs and dangerous devices in the wholesaler or veterinary food-animal drug retailer.

(b) An individual who is at least 18 years of age may apply for a designated representative license. In order to obtain and maintain that license, the individual shall meet all of the following requirements:

(1) He or she shall be a high school graduate or possess a general education development certificate equivalent.

(2) He or she shall have a minimum of one year of paid work experience in a licensed pharmacy, or with a drug wholesaler, drug distributor, or drug manufacturer, in the past three years, related to the distribution or dispensing of dangerous drugs or dangerous devices or meet all of the prerequisites to take the examination required for licensure as a pharmacist by the board.

(3) He or she shall complete a training program approved by the board that, at a minimum, addresses each of the following subjects:

(A) Knowledge and understanding of California law and federal law relating to the distribution of dangerous drugs and dangerous devices.

(B) Knowledge and understanding of California law and federal law relating to the distribution of controlled substances.

(C) Knowledge and understanding of quality control systems.

(D) Knowledge and understanding of the United States Pharmacopoeia standards relating to the safe storage and handling of drugs.

(E) Knowledge and understanding of prescription terminology, abbreviations, dosages, and format.

B&PC Section 4053.1.

(a) Notwithstanding Section 4051, the board may issue a license to a qualified individual as a designated representative-3PL to provide sufficient and qualified supervision of a third-party logistics provider's place of business. The designated representative-3PL shall protect the public health and safety in the handling, storage, warehousing, distribution, and shipment of dangerous drugs and dangerous devices in the third-party logistics provider's place of business.

(b) An individual who is at least 18 years of age may apply for a designated representative-3PL license. In order to obtain and maintain that license, the individual shall meet all of the following requirements:

(1) He or she shall be a high school graduate or possess a general education development certificate equivalent.

(2) He or she shall meet one of the following requirements:

(A) Have a minimum of one year of paid work experience in the past three years with a third-party logistics provider.

(B) Have a minimum of one year of paid work experience in the past three years in a licensed pharmacy, or with a drug wholesaler, drug distributor, or drug manufacturer, performing duties related to the distribution or dispensing of dangerous drugs or dangerous devices.

(C) Meet all of the prerequisites to take the examination required for licensure as a pharmacist by the board.

(3) (A) He or she shall complete a training program approved by the board that, at a minimum, addresses each of the following subjects:

(i) Knowledge and understanding of California law and federal law relating to the distribution of dangerous drugs and dangerous devices.

(ii) Knowledge and understanding of California law and federal law relating to the distribution of controlled substances.

(iii) Knowledge and understanding of quality control systems.

(iv) Knowledge and understanding of the United States Pharmacopoeia or federal Food and Drug Administration standards relating to the safe storage, handling, and transport of dangerous drugs and dangerous devices.

(B) The board may, by regulation, require the training program required under this paragraph to include additional material.

(C) The board shall not issue a license as a designated representative-3PL until the applicant provides proof of completion of the training required by this paragraph to the board.

(c) A third-party logistics provider shall not operate without at least one designated representative-3PL present at each of its licensed places of business as required under Section 4160.

B&PC Section 4160.

(a) A person shall not act as a wholesaler or third-party logistics provider of any dangerous drug or dangerous device unless he or she has obtained a license from the board.

(b) Upon approval by the board and the payment of the required fee, the board shall issue a license to the applicant.

(c) (1) A separate license shall be required for each place of business owned or operated by a wholesaler or third-party logistics provider. Each place of business may only be issued a single license by the board, except as provided in paragraph (2). Each license shall be renewed annually and shall not be transferable. At all times during which a place of business is open for business, at least one designated representative, in the case of a wholesaler, or designated representative-3PL in the case of a third-party logistics provider, shall be present.

(2) A wholesaler and a third-party logistics provider under common ownership may be licensed at the same place of business provided that all of the following requirements are satisfied:

(A) The wholesaler and the third-party logistics provider each separately maintain the records required under Section 4081.

(B) Dangerous drugs and dangerous devices owned by the wholesaler are not commingled with the dangerous drugs and dangerous devices handled by the third-party logistics provider.

(C) Any individual acting as a designated representative for the wholesaler is not concurrently acting as a designated representative-3PL on behalf of the third-party logistics provider. Nothing in this subparagraph shall be construed to prohibit an individual from concurrently holding a license to act as a designated representative and to act as a designated representative-3PL.

(D) The wholesaler has its own designated representative-in-charge responsible for the operations of the wholesaler and the third-party logistics provider has its own responsible manager responsible for the operations of the third-party logistics provider. The same individual shall not concurrently serve as the responsible manager and the designated representative-in-charge for a wholesaler and a third-party logistics provider licensed at the same place of business.

(E) The third-party logistics provider does not handle the prescription drugs or prescription devices owned by a prescriber.

(F) The third-party logistics provider is not a reverse third-party logistics provider.

(G) The wholesaler is not acting as a reverse distributor.

(d) Every wholesaler shall be supervised or managed by a designated representative-in-charge. The designated representative-in-charge shall be responsible for the wholesaler's compliance with state and federal laws governing wholesalers. As part of its initial application for a license, and for each renewal, each wholesaler shall, on a form designed by the board, provide identifying information and the California license number for a designated representative or pharmacist proposed to serve as the designated representative-in-charge. The

proposed designated representative-in-charge shall be subject to approval by the board. The board shall not issue or renew a wholesaler license without identification of an approved designated representative-in-charge for the wholesaler. The designated representative-in-charge shall maintain an active license as a designated representative with the board at all times during which he or she is designated as the designated representative-in-charge.

(e) Each place of business of a third-party logistics provider shall be supervised and managed by a responsible manager. The responsible manager shall be responsible for the compliance of the place of business with state and federal laws governing third-party logistics providers and with the third-party logistics provider's customer specifications, except where the customer's specifications conflict with state or federal laws. As part of its initial application for a license, and for each renewal, each third-party logistics provider shall, on a form designated by the board, provide identifying information and the California license number for a designated representative-3PL proposed to serve as the responsible manager. The proposed responsible manager shall be subject to approval by the board. The board shall not issue or renew a third-party logistics provider license without identification of an approved responsible manager for the third-party logistics provider. The responsible manager shall maintain an active license as a designated representative-3PL with the board at all times during which he or she is designated as the responsible manager.

(f) A wholesaler shall notify the board in writing, on a form designed by the board, within 30 days of the date when a designated representative-in-charge ceases to act as the designated representative-in-charge, and shall on the same form propose another designated representative or pharmacist to take over as the designated representative-in-charge. The proposed replacement designated representative-in-charge shall be subject to approval by the board. If disapproved, the wholesaler shall propose another replacement within 15 days of the date of disapproval, and shall continue to name proposed replacements until a designated representative-in-charge is approved by the board.

(g) A third-party logistics provider shall notify the board in writing, on a form designed by the board, within 30 days of the date when a responsible manager ceases to act as the responsible manager, and shall on the same form propose another designated representative-3PL to take over as the responsible manager. The proposed replacement responsible manager shall be subject to approval by the board. If disapproved, the third-party logistics provider shall propose another replacement within 15 days of the date of disapproval, and shall continue to name proposed replacements until a responsible manager is approved by the board.

(h) A drug manufacturer premises licensed by the Food and Drug Administration or licensed pursuant to Section 111615 of the Health and Safety Code that only distributes dangerous drugs and dangerous devices of its own manufacture is exempt from this section and Section 4161.

(i) The board may issue a temporary license, upon conditions and for periods of time as the board determines to be in the public interest. A temporary license fee shall be required in an amount established by the board as specified in subdivision (f) of Section 4400. When needed to protect public safety, a temporary license may

be issued for a period not to exceed 180 days, subject to terms and conditions that the board deems necessary. If the board determines that a temporary license was issued by mistake or denies the application for a permanent license, the temporary license shall terminate upon either personal service of the notice of termination upon the licenseholder or service by certified mail, return receipt requested, at the licenseholder's address of record with the board, whichever occurs first. Neither for purposes of retaining a temporary license, nor for purposes of any disciplinary or license denial proceeding before the board, shall the temporary licenseholder be deemed to have a vested property right or interest in the license.

(4) The board may, by regulation, require training programs to include additional material.

(5) The board may not issue a license as a designated representative until the applicant provides proof of completion of the required training to the board.

(c) The veterinary food-animal drug retailer or wholesaler shall not operate without a pharmacist or a designated representative on its premises.

(d) Only a pharmacist or a designated representative shall prepare and affix the label to veterinary food-animal drugs.

(e) Section 4051 shall not apply to any laboratory licensed under Section 351 of Title III of the Public Health Service Act (Public Law 78-410).

Proposed Addition of B&PC 4022.6

4022.6. Designated Representative Reverse Distributor

"Designated representative reverse distributor" means an individual to whom a license has been granted pursuant to Section 4053.2. A pharmacist fulfilling the duties of Section 4053.2 shall not be required to obtain a license as a designated representative reverse distributor.

Proposed Addition to B&PC 4053.2

4053.2. Designated Representative Reverse Distributor

(a) Notwithstanding Section 4051, the board may issue a license to a qualified individual as a designated representative reverse distributor to provide sufficient and qualified supervision of a licensed wholesaler who only acts as a reverse distributor as defined in Section 4040.5. The designated representative reverse distributor shall protect the public health and safety in the handling, storage, warehousing and destruction of outdated or nonsaleable dangerous drugs and pharmaceutical waste.

(b) An individual who is at least 18 years of age may apply for a designated representative reverse distributor license. In order to obtain and maintain that license, the individual shall meet all of the following requirements:

(1) He or she shall be a high school graduate or possess a general education development certificate equivalent.

(2) He or she shall meet one of the following requirements:

(A) Have a minimum of one year of paid work experience in the past three years with licensed wholesaler, third party logistics provider or pharmacy performing duties related to the distribution, dispensing or destruction of dangerous drugs or dangerous devices.

(B) Meet all of the prerequisites to take the examination required for licensure as a pharmacist by the board.

(3) (A) He or she shall complete a training program approved by the board that, at a minimum, addresses each of the following subjects:

(i) Knowledge and understanding of California law and federal law relating to the distribution of dangerous drugs and dangerous devices.

(ii) Knowledge and understanding of California law and federal law relating to the distribution of controlled substances.

(iii) Knowledge and understand of California law and federal law relating to the removal and destruction of dangerous drugs, dangerous devices, and pharmaceutical waste.

(iv) Knowledge and understanding of the United States Pharmacopoeia or federal Food and Drug Administration standards relating to the safe storage, handling, and transport of dangerous drugs and dangerous devices.

(B) The board may, by regulation, require the training program required under this paragraph to include additional material.

(C) The board shall not issue a license as a designated representative reverse distributor until the applicant provides proof of completion of the training required by this paragraph to the board.

(c) A reverse distributor shall not operate without at least one designated representative or designated representative reverse distributor present at each of its licensed places of business as required under Section 4160.

Proposed Amendment to B&PC 4400

...(h) (1) The fee for application, investigation, and issuance of a license as a designated representative pursuant to Section 4053, ~~or as a designated representative-3PL pursuant to Section 4053.1, or as a~~

designated representative reverse distributor pursuant to Section 4053.2 shall be three hundred thirty dollars (\$330) and may be decreased to no less than two hundred fifty-five dollars (\$255).

(2) The fee for the annual renewal of a license as a designated representative, ~~or~~ designated representative-3PL, or designated representative reverse distributor shall be one hundred ninety-five dollars (\$195) and may be decreased to no less than one hundred fifty dollars (\$150)...

Attachment 3

B&PC section 4029.

(a) "Hospital pharmacy" means and includes a pharmacy, licensed by the board, located within any licensed hospital, institution, or establishment that maintains and operates organized facilities for the diagnosis, care, and treatment of human illnesses to which persons may be admitted for overnight stay and that meets all of the requirements of this chapter and the rules and regulations of the board.

(b) A hospital pharmacy also includes a pharmacy that may be located outside of the hospital in another physical plant that is regulated under a hospital's consolidated license issued pursuant to Section 1250.8 of the Health and Safety Code. As a condition of licensure by the board, the pharmacy in another physical plant shall provide pharmaceutical services only to registered hospital patients who are on the premises of the same physical plant in which the pharmacy is located, except as provided in Article 7.6 (commencing with Section 4128). The pharmacy services provided shall be directly related to the services or treatment plan administered in the physical plant. Nothing in this subdivision shall be construed to restrict or expand the services that a hospital pharmacy may provide.

B&PC section 4127.1.

(a) A pharmacy shall not compound sterile drug products unless the pharmacy has obtained a sterile compounding pharmacy license from the board pursuant to this section. The license shall be renewed annually and is not transferable.

(b) A license to compound sterile drug products shall be issued only to a location that is licensed as a pharmacy and shall be issued only to the owner of the pharmacy licensed at that location.

(c) A license to compound sterile drug products shall not be issued or renewed until the location is inspected by the board and found in compliance with this article and regulations adopted by the board.

(d) A license to compound sterile drug products shall not be issued or renewed until the board does all of the following:

(1) Reviews a current copy of the pharmacy's policies and procedures for sterile compounding.

(2) Reviews the pharmacy's completed self-assessment form required by Section 1735.2 of Title 16 of the California Code of Regulations.

(3) Is provided with copies of all inspection reports conducted of the pharmacy's premises, and any reports from a private accrediting agency, conducted in the prior 12 months documenting the pharmacy's operations.

(4) Receives a list of all sterile medications compounded by the pharmacy since the last license renewal.

(e) A pharmacy licensed pursuant to this section shall do all of the following:

(1) Provide to the board a copy of any disciplinary or other action taken by another state within 10 days of the action.

- (2) Notify the board within 10 days of the suspension of any accreditation held by the pharmacy.
- (3) Provide to the board, within 12 hours, any recall notice issued by the pharmacy for sterile drug products it has compounded.
- (f) Adverse effects reported or potentially attributable to a pharmacy's sterile drug product shall be reported to the board within 12 hours and immediately reported to the MedWatch program of the federal Food and Drug Administration.
- (g) The reconstitution of a sterile powder shall not require a license pursuant to this section if both of the following requirements are met:
 - (1) The sterile powder was obtained from a manufacturer.
 - (2) The drug is reconstituted for administration to patients by a health care professional licensed to administer drugs by injection pursuant to this division.
- (h) This section shall become operative on July 1, 2014.

Amend 4029.

(a) "Hospital pharmacy" means and includes a pharmacy, licensed by the board, located within any licensed hospital, institution, or establishment that maintains and operates organized facilities for the diagnosis, care, and treatment of human illnesses to which persons may be admitted for overnight stay and that meets all of the requirements of this chapter and the rules and regulations of the board.

(b) A hospital pharmacy also includes a pharmacy that may be located outside of the hospital in another physical plant that is regulated under a hospital's ~~consolidated~~ license issued pursuant to Section 1250.8 of the Health and Safety Code. As a condition of licensure by the board, the pharmacy in another physical plant shall provide pharmaceutical services only to registered hospital patients who are on the premises of the same physical plant in which the pharmacy is located, except as provided in Article 7.6 (commencing with Section 4128). The pharmacy services provided shall be directly related to the services or treatment plan administered in the physical plant. Nothing in this subdivision shall be construed to restrict or expand the services that a hospital pharmacy may provide.

(c) A hospital satellite compounding pharmacy may be separately licensed by the board that compounds sterile drug products located outside of the hospital in another physical plant that is regulated under a hospital's license issued pursuant to Section 1250.8 of the Health and Safety Code. As a condition of licensure by the board, a hospital satellite compounding pharmacy shall only dispense compounded sterile drug products for administration to registered hospital patients who are on the premises of the same physical plant in which the hospital satellite compounding pharmacy is located. The pharmacy services provided shall be directly related to the services or treatment plan administered in the physical plant.

Add 4127.15

- (a) A hospital satellite compounding pharmacy license shall not be issued or renewed until the location is inspected by the board and found in compliance with this article and regulations adopted by the board.
- (b) A hospital satellite compounding pharmacy license shall not be issued or renewed until the board does all of the following:
 - 1. Reviews a current copy of the hospital satellite compounding pharmacy's policies and procedures for sterile compounding.
 - 2. Reviews the hospital satellite compounding pharmacy's completed self-assessment form required by Section 1735.2 of Title 16 of the California Code of Regulations.
 - 3. Receives a list of all sterile drug products compounded by the hospital satellite compounding pharmacy since the last license renewal.
- (c) A hospital satellite compounding pharmacy shall do all of the following:
 - 1. Purchase, procure, or otherwise obtain all components through the license of the hospital pharmacy, as defined in 4029(a) .

2. Satisfy the ratio of not less than one pharmacist on duty for a total of two pharmacy technicians on duty as required by Section 1793.7(f) of Title 16 of the California Code of Regulations.
3. Ensure immediate supervision, as defined in Title 22, California Code of Regulations section 70065, by a pharmacist of licensed ancillary staff involved in sterile compounding.
4. Provide to the board, within 12 hours, any recall notice issued by the hospital satellite compounding pharmacy for sterile drug products it has compounded.
5. Report to the board, within 12 hours, adverse effects reported or potentially attributable to the sterile drug products compounded by the hospital satellite compounding pharmacy. Adverse effects must also be immediately reported to the MedWatch program of the federal Food and Drug Administration.

Attachment 4

Proposed Addition of Section 4034

4034. Emergency Medical Services Automated Drug Delivery System

An emergency medical services automated drug delivery system is a mechanical system that performs operations or activities relative to the storage and distribution of drugs for the sole purpose of restocking a secured emergency pharmaceutical supplies container that is used by an emergency medical services agency to provide emergency trauma medical services. The automated drug delivery system shall collect, control, and maintain all transaction information necessary to accurately track the movement of drugs into and out of the system for security, accuracy and accountability purposes.

Proposed Amendment to Section 4119

4119. Furnish Prescription Drug to Licensed Health Care Facility – Secured Emergency Supplies

(a) Notwithstanding any other provision of law, a pharmacy may furnish a dangerous drug or dangerous device to a licensed health care facility for storage in a secured emergency pharmaceutical supplies container maintained within the facility in accordance with facility regulations of the State Department of Public Health set forth in Title 22 of the California Code of Regulations and the requirements set forth in Section 1261.5 of the Health and Safety Code. These emergency supplies shall be approved by the facility's patient care policy committee or pharmaceutical service committee and shall be readily available to each nursing station. Section 1261.5 of the Health and Safety Code limits the number of oral dosage form or suppository form drugs in these emergency supplies to 24.

(b) Notwithstanding any other provision of law, a pharmacy may furnish a dangerous drug or a dangerous device to an approved service provider within an emergency medical services system for storage in a secured emergency pharmaceutical supplies container, in accordance with the policies and procedures of the local emergency medical services agency, if all of the following are met:

(1) The dangerous drug or dangerous device is furnished exclusively for use in conjunction with services provided in an ambulance, or other approved emergency medical services service provider, that provides prehospital emergency medical services.

(2) The requested dangerous drug or dangerous device is within the licensed or certified emergency medical technician's scope of practice as established by the Emergency Medical Services Authority and set forth in Title 22 of the California Code of Regulations.

(3) The approved service provider within an emergency medical services system provides a written request that specifies the name and quantity of dangerous drugs or dangerous devices.

(4) The approved emergency medical services provider administers dangerous drugs and dangerous devices in accordance with the policies and procedures of the local emergency medical services agency.

(5) The approved emergency medical services provider documents, stores, and restocks dangerous drugs and dangerous devices in accordance with the policies and procedures of the local emergency medical services agency. Records of each request by, and dangerous drugs or dangerous devices furnished to, an approved service provider within an emergency medical services system, shall be maintained by both the approved service provider and the dispensing pharmacy for a period of at least three years. The furnishing of controlled substances to an approved emergency medical services provider shall be in accordance with the California Uniform Controlled Substances Act.

(c) Notwithstanding any other provision of law, a pharmacy or wholesaler may furnish dangerous drugs and or dangerous devices into a emergency medical services automated drug delivery system located within a county owned fire department. Dangerous drugs and devices distributed by an emergency medical services automated drug delivery system shall be for sole purpose of restocking a secured emergency pharmaceutical supplies container and may only be used if all of the following conditions are met.

(1) The county fire department obtains licensure from the board to maintain the emergency medical services automated drug delivery system on the premises of any of its fire stations. As part of the application, the county must provide the address of each fire station, the name of the county medical director responsible for overseeing the emergency medical services system, the name of a designated consultant pharmacist responsible for monthly review, the copy of the policies and procedures detailing the provisions under which the emergency medical services automated drug delivery system will operate, and the name and license number of the pharmacy or wholesaler that is furnishing the dangerous drugs and dangerous devices to the emergency medical services automated drug delivery system. A separate license shall be required for each location.

(2) Stocking and inventory controls of dangerous drugs and devices in the emergency medical services automated drug delivery system is completed by a pharmacist.

(3) Monthly review of the emergency medical services automated drug delivery system is completed by a designated consulting pharmacist who shall be responsible for reviewing compliance with inventory controls specified in the policies and procedures. The medical director and designated consulting pharmacist shall be jointly responsible for the monthly review of the county fire department's training, storage and security of dangerous drugs and dangerous devices, and the dispensing and administration procedures which shall include a review of the use of emergency medical services automated drug delivery systems to ensure safeguards are in place allowing only authorized staff, as defined in this section, to have the ability to access and remove dangerous drugs and dangerous devices from the emergency medical services automated drug delivery systems.

(4) County fire department access to the emergency medical services automated drug delivery system shall be limited to only employees of the county that are licensed by the state as a paramedic or the county medical director.

(5) A record of each access to the emergency medical services automated drug delivery system must be maintained for at least three years in a readily retrievable form. The records must include the identity of the licensed paramedic and medical director accessing the system as well as the drug, dosage form and quantity obtained.

(6) Violations of the provisions in subdivision (c)(1)-(5) shall constitute unprofessional conduct and shall provide the board the authority to take action against the County Fire Department's licensure of the emergency medical services automated drug delivery systems.



California's Emergency Medical Services Personnel Programs

**Emergency Medical Services Authority
California Health and Human Services Agency**

EMSA #131
5th Revision - December 2013





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Table of Contents

INTRODUCTION.....	1
LOCAL EMS AGENCIES.....	1
CALIFORNIA EMS PERSONNEL.....	1
EMERGENCY MEDICAL TECHNICIAN (EMT).....	4
ADVANCED EMERGENCY MEDICAL TECHNICIAN (AEMT)	5
PARAMEDIC.....	7
MOBILE INTENSIVE CARE NURSE (MICN).....	8
PUBLIC SAFETY PERSONNEL	8
ADDITIONAL INFORMATION.....	9
LOCAL EMS AGENCY REGIONAL MAP	10
LOCAL EMS AGENCY LISTING.....	11

INTRODUCTION

This document is intended to provide an overview of California's EMS Personnel, including eligibility, training requirements and scope of practice highlights for each personnel category. Information about local EMS agencies and certifying entities will assist individuals who are interested in becoming an EMS provider in California.

The California Emergency Medical Services Authority (EMS Authority) is the department within California state government that is empowered to develop and implement regulations governing the medical training and scope of practice standards for the following emergency medical care personnel:

1. Emergency Medical Technician (EMT)
2. Advanced Emergency Medical Technician (AEMT)
3. Paramedic
4. Mobile Intensive Care Nurse (MICN)
5. Public Safety Personnel:
 - a) Firefighters
 - b) Peace Officers
 - c) Lifeguards

Additionally, the EMS Authority operates California's paramedic licensure program. This program coordinates with the National Registry of EMTs to administer written and skills exams to all initial applicants for paramedic licensure in California, and also issues licenses to all qualified initial and renewal paramedic applicants.

LOCAL EMS AGENCIES

Actual day-to-day EMS system operations are the responsibility of the local EMS agencies. EMS systems are administered by either single county or multi-county EMS agencies, which follow regulations and standards established by the State EMS Authority. Local EMS agencies are responsible for certifying EMTs and AEMTs (however, EMTs employed by public safety agencies, such as fire departments and law enforcement agencies, may be certified by their own departments if those agencies maintain an approved EMT training program). Local EMS agencies' certification and accreditation requirements are explained on the following pages.

CALIFORNIA EMS PERSONNEL

In California, public safety personnel (firefighters, peace officers, and lifeguards) often administer prehospital medical assistance. These professionals are required by law to be trained, at a minimum, in first aid and cardiopulmonary resuscitation (CPR).

An emergency medical technician, or EMT, as part of an EMS system, is a specially trained and certified professional who renders immediate medical care in the prehospital setting to seriously ill or injured individuals. The Authority develops and implements regulations governing the medical training and scope of practice standards for the following emergency medical care personnel:

- An Emergency Medical Technician (EMT) is trained and certified in basic life support practices. California law requires all ambulance attendants to be trained and certified to the EMT level and many fire agencies require firefighters to be EMT certified. EMTs are often used as the first dispatched medical responder in an emergency medical system. There are more than 60,000 EMTs certified in California.
- An Advanced EMT (AEMT) is trained and certified in limited advanced life support (LALS) practices. AEMT is used primarily in rural areas, where they may be the only EMS responders. California currently has fewer than 100 AEMTs.
- Paramedics are trained in advanced life support and licensed by the State. A paramedic also must be locally *accredited* in order to practice in any California county. Accreditation includes orientation to local protocols. There are approximately 20,000 licensed paramedics in California.
- Public Safety Personnel (Firefighters, Peace Officers, and Lifeguards) have minimum training standards that include first aid and CPR (and automated external defibrillation when approved by the local EMS medical director).

The following chart provides further information regarding the substantive differences between each of the three EMT categories. However, keep in mind the chart only summarizes the qualifications and requirements for each category.

TABLE 1. Eligibility, Training, and Skill Requirements for Emergency Medical Technicians and Paramedics

	EMT	AEMT	PARAMEDIC
Student Eligibility	<ul style="list-style-type: none"> • 18 years of age 	<ul style="list-style-type: none"> • 18 years of age • High School diploma or equivalent • EMT certificate • CPR Card 	<ul style="list-style-type: none"> • 18 years of age • High School diploma or equivalent • EMT certificate • CPR Card
Minimum Training Requirements	<ul style="list-style-type: none"> • 160 hours total • 136 hours didactic • 24 hours clinical • 10 patient contacts 	<ul style="list-style-type: none"> • 160 hours total • 80 hours didactic & skills lab • 40 hours hospital clinical training • 40 hours field internship • 15 ALS patient contacts 	<ul style="list-style-type: none"> • 1090 hours total • 450 hours didactic & skills lab • 160 hours hospital clinical training • 480 hours field internship • 40 ALS patient contacts

	EMT	AEMT	Paramedic
Minimum Scope of Practice	<ul style="list-style-type: none"> • Patient Assessment • Advanced first aid and OTC Medications with LEMSA approval • Transportation of ill & injured persons • Use of adjunctive breathing aids, administration of oxygen • Automated external defibrillator • Cardiopulmonary resuscitation • Use of tourniquets and hemostatic dressings for bleeding control • Pulse oximetry • Humidifiers • Continuous positive airway pressure 	<ul style="list-style-type: none"> • All EMT skills • Perilaryngeal airways • Tracheo-bronchial suctioning • Institute intravenous (IV) catheters, saline locks, needles or other cannulae (IV lines) • Administer 4 drugs/solutions intravenously • Glucose measuring • Establish and maintain pediatric intraosseous access • Obtain venous and/or capillary blood samples • Measure blood glucose • Administer 7 drugs in a route other than intravenous 	<ul style="list-style-type: none"> • All EMT & AEMT skills and medications • Laryngoscope • Endotracheal (ET) intubation (adults, oral) • Valsalva's Maneuver • Needle thoracostomy & cricothyrotomy • Naso/orogastric tube insertion/suction • Monitor thoracostomy tubes • Monitor/adjust potassium (≤ 40 mEq/L) IV lines • Utilization & monitoring of electrocardiographic devices • Administer 25 medications • BPAP (Bi-level positive airway pressure)/PEEP (Positive end-expiratory pressure)
Notable Optional Skills (added at the local level)	<ul style="list-style-type: none"> • Perilaryngeal airways • Epi pens • Duodote kits • Naloxone 	<ul style="list-style-type: none"> • Previously certified EMT-IIs have additional medications approved by the local EMS agency. 	<ul style="list-style-type: none"> • Local EMS Agencies may add additional skills and medications if approved by the EMS Authority.
Written and Skills Exams	<ul style="list-style-type: none"> • Administered by the National Registry of EMTs 	<ul style="list-style-type: none"> • Administered by the National Registry of EMTs 	<ul style="list-style-type: none"> • Administered by the National Registry of EMTs
Length of Certification or Licensure	<ul style="list-style-type: none"> • 2 year certification with verification of skills competency every 2 years 	<ul style="list-style-type: none"> • 2 year certification with verification of skills competency every 2 years 	<ul style="list-style-type: none"> • 2 year licensure without retesting
Refresher Course/ Continuing Education	<ul style="list-style-type: none"> • 24 hour refresher course or 24 hours of CE every two years 	<ul style="list-style-type: none"> • 36 hours of CE every 2 years 	<ul style="list-style-type: none"> • 48 hours of CE every 2 years
Certification & License Provisions	<ul style="list-style-type: none"> • Certified locally • valid statewide 	<ul style="list-style-type: none"> • Certified locally • valid statewide 	<ul style="list-style-type: none"> • Licensed by State • valid statewide • local accreditation

EMERGENCY MEDICAL TECHNICIAN (EMT)

California law requires all ambulance attendants to be trained and certified to the EMT level. Many fire agencies also require firefighters to be EMT certified. EMTs are often used as the first dispatched medical responder in a tiered emergency medical system.

Training

Training for EMTs is offered at the local level by approved training programs. A list of approved training programs may be obtained through the EMS Authority via telephone, mail, or from our web page. Training hours consist of 160 hours, broken down into 136 classroom and laboratory hours and 24 hours of supervised clinical experience.

Testing

In order to practice as an EMT, an individual is eligible for certification after passing the National Registry of EMTs' written and skills exams.

Certification

After passing the written and skills certification exams and obtaining a criminal background check, an applicant may be certified through the local EMS agency or through a public safety agency that has been approved as a certifying entity, both of which issue an EMT certification card. Certification is valid for two years from the date of issue and is recognized statewide.

Military personnel with a current NREMT-EMT card or with documentation of successful completion of an emergency medical service training program of the Armed Forces of the United States within the preceding two (2) years that meets the U.S. DOT National EMS Education Standards (DOT HS 811 077A, January 2009) may be eligible for certification as an EMT in California. Interested military personnel are encouraged to contact the local EMS agency for information on taking the course completion challenge exam and exploring other pathways to certification.

Recertification

Every two years, an EMT must provide the certifying entity with proof of 24 hours of refresher course work or 24 hours of EMS approved continuing education units (CEUs), and have documented competency in 10 skills. Proof of completion of these requirements allows the certifying entity to recertify an EMT.

Reciprocity

Individuals from out-of-state who meet one of the following criteria and complete the application requirements of a certifying entity are eligible for certification:

- 1) Pass the NREMT written and skills examination and have either:

- a. Documentation of successful completion of an approved out-of-state initial EMT training course, within the last two (2) years that meets California’s EMT training requirements, or
- b. A current and valid out-of-state EMT certificate.
- 2) Possess a current and valid National Registry EMT-Basic registration certificate.
- 3) Possess a current and valid out-of-state or National Registry EMT-Intermediate or Paramedic certificate.

Scope of Practice

An EMT is trained and certified in basic life support practices. Basic life support (BLS) means emergency first aid and CPR procedures which, at a minimum, include recognizing respiratory and cardiac arrest and starting the proper application of CPR to maintain life without invasive techniques until the patient can be transported or until advanced life support (ALS) is available. Automated external defibrillator (AED) training is also part of the basic scope of practice.

Optional Skills

EMTs may obtain additional training to supplement their standard scope of practice. EMTs may become locally-approved to use certain medications and skills. The local EMS medical director for each county determines the use of these optional scope items.

ADVANCED EMERGENCY MEDICAL TECHNICIAN (AEMT)

An AEMT is trained and certified in limited advanced life support (LALS) practices. In rural or sparsely populated areas of California, AEMTs may be the only responders who provide immediate medical intervention. California has fewer than 100 AEMTs; contact the county you are interested in working to determine if they use AEMTs, or refer to the attached list on pages 8-11.

Training

Training programs for AEMTs are limited, because AEMTs are not utilized throughout California. To learn which counties use AEMTs refer to pages 11-12. The minimum training hours for AEMTs is 160. The minimum number of hours for each portion of the training program is listed below, although most programs exceed this amount:

Didactic and skills	80 hours
Clinical Training	40 hours
Field Internship	<u>40 hours</u>
TOTAL	160 hours

Testing

In order to practice as an AEMT, an individual is eligible for certification after passing the National Registry of EMTs' written and skills exams.

Certification

After passing both the written and skills exams, an applicant must obtain a criminal background check and may be certified through the local EMS agency. Certification is valid for two years from the date of issue. A small number of EMS agencies recognize AEMTs in their jurisdiction. Certification of AEMTs is recognized only by the local EMS agency that has policies, procedures & protocols for AEMTs. Therefore, AEMT certification is not valid statewide. In order to be certified in a different area by a different EMS agency, an applicant must provide proof of current AEMT certification and employment with a provider in the new area. Be sure to contact the local EMS agency to confirm the availability of practicing as an AEMT in that agency's area of jurisdiction.

Military personnel with a current NREMT- AEMT card, or who are in possession of a course completion record or other documentation of training equivalent to an approved AEMT training program, may be eligible for certification as an AEMT in California. Interested military personnel are encouraged to contact the local EMS agency for information on taking the course completion challenge exam and exploring other pathways to certification.

Recertification

Every 2 years, an AEMT must provide the local EMS agency with proof of completion of 36 hours of EMS approved continuing education units (CEUs), and provide documented competency in 6 skills.

Reciprocity

An individual who possesses or has possessed a valid EMT-Intermediate or Paramedic license from another state or the National Registry of EMTs may be eligible for certification. Again, please contact the local EMS agency in the area you are interested in working, because AEMT certification is not accepted in all jurisdictions.

Scope of Practice

AEMTs are certified in the use of limited advanced life support (LALS) skills. LALS includes all EMT skills, perilyngeal airways, tracheo-bronchial suctioning, institute intravenous (IV) catheters, saline locks, needles or other cannulae (IV lines), administer the 4 drugs/solutions intravenously, establish and maintain pediatric intraosseous access, obtain venous and/or capillary blood samples, measure blood glucose, administer 7 drugs in a route other than intravenous (jurisdictional scope of practice may vary).

Optional Skills

In addition to the LALS scope of practice, AEMTs who were previously certified as EMT-IIs may practice additional skills and administer certain medications. These additional optional skills and medications may be utilized in limited jurisdictions and are approved by the local EMS agency.

PARAMEDIC

A paramedic is trained and licensed in advanced life support (ALS) practices, which include the use of expanded skills and medications. The paramedic is typically employed by public safety agencies, such as fire departments, and by private ambulance companies. Paramedics are employed throughout the state's EMS system to provide ALS prehospital care.

Training

The minimum number of hours for each portion of the training program is listed below, although most programs exceed these amounts:

Didactic and skills	450 hours
Hospital and clinical training	160 hours
Field internship	<u>480 hours</u>
TOTAL	1,090 hours

Testing

In order to become licensed as a paramedic, an individual must pass the National Registry of EMTs' written and skills exams. Tests are given on a regular basis throughout California; contact the EMS Authority or look on our web site to obtain a California test schedule.

Licensure

California law requires an individual to be licensed by the EMS Authority in order to practice as a paramedic. Licensure is valid statewide. Individuals seeking licensure should apply directly to the EMS Authority. All licensees must undergo a California background check and submit proof of U.S. citizenship or legal residency.

Military personnel with a current NREMT-P card, who can provide a paramedic course completion record, or other documented proof of successful completion of an approved paramedic training program within the last 2 years, including approved military paramedic training programs, may be eligible for licensure as a Paramedic in California. Interested military personnel are encouraged to contact the EMS Authority for more information on the steps required for licensure.

Accreditation

In addition to State licensure, a paramedic must be locally accredited in order to practice in any California county. Accreditation is orientation to local protocols and training in any local optional scope of practice for the particular local EMS agency jurisdiction. Paramedics must apply for accreditation directly to the local EMS agency.

License Renewal

Paramedics must complete a minimum of 48 hours of approved continuing education units (CEUs) every two years to maintain licensure.

Reciprocity

Individuals, who possess a current paramedic certificate/license from the National Registry of EMTs, are eligible for paramedic licensure in California when they submit proof of successful completion of a field internship and complete all license requirements.

Scope of Practice

Paramedics are trained and licensed in the use of advanced life support (ALS) skills. ALS includes all EMT and AEMT skills; use of laryngoscope; endotracheal and nasogastric intubation; utilization and monitoring of electrocardiographic devices; external cardiac pacing; use of perilaryngeal airways; CPAP (continuous positive airway pressure); BPAP (Bi-level positive airway pressure); PEEP (positive end-expiratory pressure); use of intraosseous (IO) needles and catheters; use of laboratory devices, including prehospital point of care testing such as glucose, capnometry, capnography, and carbon monoxide when appropriate authorization is received from State and Federal agencies; performance of nasogastric and orogastric tube insertion and suction; Valsalva's maneuver; needle thoracostomy; administration of 25 drugs, and other skills listed in Table 1.

Optional Skills

The EMS Authority can approve the use of additional skills and administration of additional medications by paramedics upon the request of a local EMS medical director.

MOBILE INTENSIVE CARE NURSE (MICN)

Some local EMS agencies also certify Mobile Intensive Care Nurses. Since a State standard for training and scope of practice for this classification has not been established, information concerning this category of prehospital care personnel should be directed to the respective local EMS agency.

PUBLIC SAFETY PERSONNEL

(This includes firefighters, peace officers, and lifeguards.) Minimum training standards are 15 hours of first aid and 6 hours of cardiopulmonary resuscitation (CPR). Training and certification questions should be addressed to the employing state public safety

agency. In addition to first aid and CPR, public safety personnel may also perform the optional skill of defibrillation when approved by the local EMS medical director for the jurisdiction in which the public safety personnel practice.

ADDITIONAL INFORMATION

It is recommended that once an individual has decided where in California he/she wants to work, the individual should contact the local EMS agency in that area to request further information regarding any additional requirements for training, exams, certification, licensing, and accreditation, as well as to obtain information on employment opportunities.

LOCAL EMS AGENCY REGIONAL MAP



LOCAL EMS AGENCY LISTING

MULTI-COUNTY EMS SYSTEMS

Central California (Fresno, Kings, Madera, Tulare)
(EMT, AEMT, Paramedic)
P.O. Box 11867
1221 Fulton Mall, 5th floor
Fresno, CA 93775-1867
(559) 600-3387
www.ccemsa.org

Inland Counties (San Bernardino, Inyo, Mono)
(EMT, Paramedic)
515 N. Arrowhead Ave.
San Bernardino, CA 92415-0060
(909) 388-5823
www.sbcounty.gov/icema/

Mountain-Valley (Alpine, Amador, Calaveras, Mariposa, and Stanislaus)
(EMT, Paramedic)
1101 Standiford Avenue, #D1
Modesto, CA 95350
(209) 529-5085
www.mvemsa.com/

North Coast (Del Norte, Humboldt, and Lake)
(EMT, AEMT, Paramedic)
3340 Glenwood Ave.
Eureka, CA 95501
(707) 445-2081
www.northcoastems.com

Northern California (Glenn, Lassen, Modoc, Plumas, Sierra, and Trinity)
(EMT, AEMT, Paramedic)
457 Knollcrest Drive, Suite 120
Redding, CA 96002 - 0121
(530) 229-3979
www.norcalems.org/

Sierra-Sacramento Valley (Butte, Colusa, Nevada, Placer, Shasta, Siskiyou, Sutter, and Yuba)
(EMR, EMT, AEMT, Paramedic)
5995 Pacific Street
Rocklin, CA 95677
(916) 625-1701
www.ssvems.com/

Coastal Valleys EMS (Sonoma, Mendocino)
(EMT, AEMT, Paramedic)
625 5th Street
Santa Rosa, CA 95404
(707) 565-6501
www.coastalvalleysems.org

SINGLE COUNTY EMS SYSTEMS

Alameda County
(EMT, Paramedic)
1000 San Leandro Blvd. San Leandro, CA 94577
(510) 618-2050
www.acphd.org/ems

Contra Costa County
(EMT, Paramedic)
1340 Arnold Drive, Suite 126
Martinez, CA 94553
(925) 646-4690
www.cchealth.org/groups/ems/

El Dorado County
(EMT, Paramedic)
415 Placerville Drive, Suite J Placerville, CA 95667
(530) 621-6500
www.co.el-dorado.ca.us/ems/

Imperial County
(EMT, AEMT, Paramedic)
935 Broadway
El Centro, CA 92243
(760) 482-4768
www.icphd.org/sub.php?idm=103

Orange County
(EMT, Paramedic)
405 West Fifth Street, Suite 301A Santa Ana, CA 92701
(714) 834-3500
www.ochealthinfo.com/medical/ems/

Kern County
(EMT, Paramedics)
1800 Mt. Vernon Ave. 2nd Floor
Bakersfield, CA 93306
(661) 321-3000
www.co.kern.ca.us/ems/

Riverside County

(EMT, Paramedic)
 4065 County Circle Drive, Suite 102
 Riverside, CA 92503
 (951) 358-5029
www.rivcoems.org/home/

Los Angeles County

(EMT, Paramedic)
 10100 Pioneer Blvd., Suite 200
 Santa Fe Springs, CA 90670
 (562) 347-1500
www.ems.dhs.lacounty.gov/

Marin County

(EMT, Paramedic)
 899 Northgate Dr., Suite 104
 San Rafael, CA 94903
 (415) 473-6871
www.co.marin.ca.us/depts/HH/main/ems

Merced County

(EMT, Paramedic)
 260 East 15th Street Merced, CA 95341
 (209) 381-1250
www.co.merced.ca.us/index.aspx?NID=581

Monterey County

(EMT, Paramedic)
 1270 Natividad Road Salinas, CA 93906
 (831) 755-5013
www.mtyhd.org Click 'Emergency Medical Services'

Sacramento County

(EMT, Paramedic)
 9616 Micron Avenue, Suite 960
 Sacramento, CA 95827
 (916)875-9753
www.sacdhhhs.com/default.asp?WOID=EMS

San Benito County

(EMT, Paramedic)
 1111 San Felipe Road, Suite 102
 Hollister, CA 95023
 (831) 636-4066
www.sanbenitocounty.org/ems/

San Diego County

(EMT, AEMT, Paramedic)
 6255 Mission Gorge Road
 San Diego, CA 92120
 (619) 285-6429
www.sdcounty.ca.gov/hhsa/program/phs/emergency_medical_services/index.html

City and County of San Francisco

(EMT, Paramedic)
 30 Van Ness Avenue, Suite 3300
 San Francisco, CA 94102
 (415) 487-5000
<http://www.sfdem.org/index.aspx?page=58>

San Joaquin County

(EMT, Paramedic)
 500 West Hospital Road
 Benton Hall, Room 47
 French Camp, CA 95231
 (209) 468-6818
www.sjgov.org/ems/default.aspx

Santa Cruz County

(EMT, Paramedic)
 1080 Emeline Avenue Santa Cruz, CA 95060
 (831) 454-4000
www.santacruzhealth.org/phealth/ems/3ems.htm

San Luis Obispo County

(EMT, Paramedic)
 2156 Sierra Way
 San Luis Obispo, CA 93401
 (805) 788-2517
www.sloemsa.org/index.html

Solano County

(EMT, Paramedic)
 275 Beck Avenue, MS5-240
 Fairfield, CA 94533
 (707) 784-8155
www.co.solano.ca.us/depts/ems/

San Mateo County

(EMT, Paramedic)
225 37TH Avenue
San Mateo, CA 94403
(650) 573-2564
www.co.sanmateo.ca.us
Click on A-Z services, then "Health", then
follow links to EMS.

Santa Barbara County

(EMT, Paramedic)
300 North San Antonio Road Santa
Barbara, CA 93110-1316
(805) 681-5274
www.countyofsb.org/phd/ems.aspx?id=20620

Santa Clara County

(EMT, Paramedic)
976 Lenzen Avenue, Suite 1217
San Jose, CA 95126
(408) 885-4250
www.sccemsagency.org/portal/site/ems/

Tuolumne County

(EMT, Paramedic)
20111 Cedar Road North
Sonora, CA 95370
(209) 533-7460
www.portal.co.tuolumne.ca.us/ps/ps/TUP_HEALTH_EMS/ENTP/h/?tab=DEFAULT

Ventura County

(EMT, Paramedic)
2220 E. Gonzalez Road, Suite 130
Oxnard, CA 93036-0619
(805) 981-5301
www.vchca.org/emergency-medical-services/emergency-medical.aspx

Yolo County

(EMT, Paramedic)
137 N Cottonwood Street, Suite 2601
Woodland, CA 95695
(530) 666-8645
www.yolocounty.org/Index.aspx?page=2411

California's Emergency Medical Services Personnel Programs

**Edmund G. Brown, Jr.
Governor
State of California**

**Diana S. Dooley
Secretary
Health and Human Services Agency**

**Howard Backer, MD, MPH, FACEP
Director
Emergency Medical Services Authority**

EMSA Publication #131
Updated December 2013

www.emsa.ca.gov

Attachment 5

Board of Pharmacy Licensing Statistics - Fiscal Year 2016/17

APPLICATIONS

Received

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	FYTD
Designated Representatives (EXC)	34	52	37	44	23								190
Designated Representatives Vet (EXV)	2	0	2	0	1								5
Designated Representatives-3PL (DRL)	7	10	6	8	6								37
Intern Pharmacist (INT)	62	564	597	393	67								1683
Pharmacist (exam applications)	187	203	217	182	123								912
Pharmacist (initial licensing applications)	133	132	686	115	253								1319
Pharmacy Technician (TCH)	507	576	465	502	407								2457
Centralized Hospital Packaging (CHP)	0	0	0	0	0								0
Clinics (CLN)	6	7	20	8	3								44
Clinics Exempt (CLE)	6	1	14	1	0								22
Drug Room (DRM)	0	0	0	0	0								0
Drug Room -Temp	0	0	0	0	0								0
Drug Room Exempt (DRE)	0	0	0	0	0								0
Hospitals (HSP)	1	1	1	1	1								5
Hospitals - Temp	1	2	1	0	1								5
Hospitals Exempt (HPE)	0	0	0	0	0								0
Hypodermic Needle and Syringes (HYP)	2	1	0	0	3								6
Hypodermic Needle and Syringes Exempt (HYE)	0	0	0	0	0								0
Correctional Pharmacy (LCF)	0	0	1	0	0								1
Pharmacy (PHY)	44	567	85	136	40								872
Pharmacy - Temp	14	540	56	25	93								728
Pharmacy Exempt (PHE)	0	1	0	0	0								1
Pharmacy Nonresident (NRP)	10	9	14	8	13								54
Pharmacy Nonresident Temp	1	1	4	2	5								13
Sterile Compounding (LSC)	4	5	8	5	4								26
Sterile Compounding - Temp	2	3	2	0	0								7
Sterile Compounding Exempt (LSE)	0	0	0	0	0								0
Sterile Compounding Nonresident (NSC)	3	2	4	1	2								12
Sterile Compounding Nonresident Temp	1	1	1	1	0								4
Surplus Medication Collection Distribution Intermediary (SME)	0	0	0	0	0								0
Third-Party Logistics Providers (TPL)	1	0	0	3	0								4
Third-Party Logistics Providers - Temp	1	0	0	0	0								1
Third-Party Logistics Providers Nonresident (NPL)	2	1	1	3	1								8
Third-Party Logistics Providers Nonresident Temp	0	0	0	0	0								0
Veterinary Food-Animal Drug Retailer (VET)	0	0	0	0	1								1
Veterinary Food-Animal Drug Retailer - Temp	0	0	0	0	0								0
Wholesalers (WLS)	4	4	11	3	7								29
Wholesalers - Temp	1	0	4	0	0								5
Wholesalers Exempt (WLE)	0	0	0	0	0								0
Wholesalers Nonresident (OSD)	4	10	10	17	10								51
Wholesalers Nonresident - Temp	0	0	5	4	1								10
Total	1040	2693	2252	1462	1065	0	0	0	0	0	0	0	8512

All change of location applications are reported under the license type as a new license is issued effective 11/1/2014

Board of Pharmacy Licensing Statistics - Fiscal Year 2016/17

APPLICATIONS (continued)													
Issued	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	FYTD
Designated Representatives (EXC)	25	26	30	32	35								148
Designated Representatives Vet (EXV)	0	3	0	1	0								4
Designated Representatives-3PL (DRL)	6	13	8	8	9								44
Intern Pharmacist (INT)	100	389	327	658	141								1615
Pharmacist (initial licensing applications)	17	244	291	505	167								1224
Pharmacy Technician (TCH)	453	672	490	445	577								2637
Centralized Hospital Packaging (CHP)	2	0	0	0	0								2
Clinics (CLN)	26	12	10	28	7								83
Clinics Exempt (CLE)	0	3	2	11	1								17
Drug Room (DRM)	0	0	0	0	0								0
Drug Room-Temp	0	0	0	0	1								1
Drug Room Exempt (DRE)	0	0	0	0	0								0
Hospitals (HSP)	1	2	2	1	0								6
Hospitals - Temp	0	5	2	0	0								7
Hospitals Exempt (HPE)	1	1	0	0	0								2
Hypodermic Needle and Syringes (HYP)	1	2	0	0	0								3
Hypodermic Needle and Syringes Exempt (HYE)	0	0	0	0	0								0
Correctional Pharmacy (LCF)	0	0	0	1	1								2
Pharmacy (PHY)	24	27	36	41	22								150
Pharmacy - Temp	4	12	6	7	7								36
Pharmacy Exempt (PHE)	2	0	0	0	1								3
Pharmacy Nonresident (NRP)	5	3	5	5	4								22
Pharmacy Nonresident Temp	1	1	0	4	4								10
Sterile Compounding (LSC)	4	6	3	7	2								22
Sterile Compounding - Temp	0	7	5	1	1								14
Sterile Compounding Exempt (LSE)	2	0	0	0	0								2
Sterile Compounding Nonresident (NSC)	4	3	0	1	0								8
Sterile Compounding Nonresident Temp	0	1	1	1	0								3
Surplus Medication Collection Distribution Intermediary (SME)	0	0	0	0	0								0
Third-Party Logistics Providers (TPL)	0	0	0	0	1								1
Third-Party Logistics Providers-Temp	0	0	0	0	0								0
Third-Party Logistics Providers Nonresident (NPL)	1	0	0	0	2								3
Third-Party Logistics Providers Nonresident Temp	0	0	0	0	0								0
Veterinary Food-Animal Drug Retailer (VET)	0	1	0	0	0								1
Veterinary Food-Animal Drug Retailer - Temp	0	0	0	0	0								0
Wholesalers (WLS)	3	5	4	9	7								28
Wholesalers - Temp	0	0	0	0	0								0
Wholesalers Exempt (WLE)	0	0	0	0	0								0
Wholesalers Nonresident (OSD)	5	9	1	9	3								27
Wholesalers Nonresident - Temp	0	0	0	1	2								3
Total	687	1447	1223	1776	995	0	0	0	0	0	0	0	6128

Board of Pharmacy Licensing Statistics - Fiscal Year 2016/17

APPLICATIONS (continued)

Pending

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
Designated Representatives (EXC)	247	258	263	281	268							
Designated Representatives Vet (EXV)	6	1	3	2	3							
Designated Representatives-3PL (DRL)	100	94	90	90	86							
Intern Pharmacist (INT)	156	218	557	283	175							
Pharmacist (exam applications)	1253	1169	1292	1160	1248							
Pharmacist (eligible exam)(Status A)	2107	2061	1713	1425	1226							
Pharmacy Technician (TCH)	1574	1378	1417	1488	1261							
Centralized Hospital Packaging (CHP)	6	6	6	6	6							
Clinics (CLN)	73	66	70	46	42							
Clinics Exempt (CLE)	21	20	28	12	11							
Drug Room (DRM)	4	4	4	4	3							
Drug Room Exempt (DRE)	0	0	0	0	0							
Hospitals (HSP)	16	8	5	5	7							
Hospitals Exempt (HPE)	1	0	0	0	0							
Hypodermic Needle and Syringes (HYP)	11	6	6	6	9							
Hypodermic Needle and Syringes Exempt (HYE)	0	0	0	0	0							
Correctional Pharmacy (LCF)	1	1	2	1	0							
Pharmacy (PHY)	171	693	728	820	826							
Pharmacy Exempt (PHE)	4	5	5	5	3							
Pharmacy Nonresident (NRP)	120	128	135	130	134							
Sterile Compounding (LSC)	43	33	31	27	28							
Sterile Compounding - Exempt (LSE)	4	4	4	3	3							
Sterile Compounding Nonresident (NSC)	35	32	31	30	30							
Surplus Medication Collection Distribution Intermediary (SME)	0	0	0	0	0							
Third-Party Logistics Providers (TPL)	11	12	12	14	13							
Third-Party Logistics Providers Nonresident (NPL)	42	41	42	42	41							
Veterinary Food-Animal Drug Retailer (VET)	2	1	1	1	1							
Wholesalers (WLS)	71	70	76	60	56							
Wholesalers Exempt (WLE)	0	0	0	0	0							
Wholesalers Nonresident (OSD)	118	119	127	129	119							
Total	6197	6428	6648	6070	5599	0	0	0	0	0	0	0

The number of temporary applications are included in the primary license type.

Board of Pharmacy Licensing Statistics - Fiscal Year 2016/17

APPLICATIONS (continued)

Withdrawn

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	FYTD
Designated Representatives (EXC)	6	8	1	2	0								17
Designated Representatives Vet (EXV)	0	1	0	0	0								1
Designated Representatives-3PL (DRL)	1	1	1	0	0								3
Intern Pharmacist (INT)	0	0	1	2	30								33
Pharmacist (exam applications)	0	0	0	0	2								2
Pharmacist (initial licensing applications)	0	0	0	0	0								0
Pharmacy Technician (TCH)	14	3	6	5	5								33
Centralized Hospital Packaging (CHP)	0	0	0	0	0								0
Clinics (CLN)	0	0	3	6	1								10
Clinics Exempt (CLE)	0	0	0	5	0								5
Drug Room (DRM)	0	0	0	0	0								0
Drug Room Exempt (DRE)	0	0	0	0	0								0
Hospitals (HSP)	2	2	0	0	0								4
Hospitals Exempt (HPE)	0	0	0	0	0								0
Hypodermic Needle and Syringes (HYP)	0	4	0	0	0								4
Hypodermic Needle and Syringes Exempt (HYE)	0	0	0	0	0								0
Correctional Pharmacy (LCF)	0	0	0	0	0								0
Pharmacy (PHY)	4	6	4	1	1								16
Pharmacy Exempt (PHE)	1	0	0	0	1								2
Pharmacy Nonresident (NRP)	1	1	1	5	1								9
Sterile Compounding (LSC)	0	2	0	0	0								2
Sterile Compounding Exempt (LSE)	0	0	0	0	0								0
Sterile Compounding Nonresident (NSC)	0	0	3	0	1								4
Surplus Medication Collection Distribution Intermediary (SME)	0	0	0	0	0								0
Third-Party Logistics Providers (TPL)	0	0	0	0	0								0
Third-Party Logistics Providers Nonresident (NPL)	0	2	1	1	0								4
Veterinary Food-Animal Drug Retailer (VET)	0	0	0	0	1								1
Wholesalers (WLS)	1	0	0	3	4								8
Wholesalers Exempt (WLE)	0	0	0	0	0								0
Wholesalers Nonresident (OSD)	1	1	0	6	11								19
Total	31	31	21	36	58	0	0	0	0	0	0	0	177

The number of temporary applications withdrawn is reflected in the primary license type.

Board of Pharmacy Licensing Statistics - Fiscal Year 2016/17

APPLICATIONS (continued)													
Denied	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	FYTD
Designated Representatives (EXC)	0	0	0	0	0								0
Designated Representatives Vet (EXV)	0	0	0	0	0								0
Designated Representatives-3PL (DRL)	0	0	0	0	0								0
Intern Pharmacist (INT)	0	0	0	0	1								1
Pharmacist (exam applications)	1	0	1	0	0								2
Pharmacist (initial licensing applications)	0	0	0	0	0								0
Pharmacy Technician (TCH)	1	2	2	4	1								10
Centralized Hospital Packaging (CHP)	0	0	0	0	0								0
Clinics (CLN)	0	0	0	0	0								0
Clinics Exempt (CLE)	0	0	0	0	0								0
Drug Room (DRM)	0	0	0	0	0								0
Drug Room Exempt (DRE)	0	0	0	0	0								0
Hospitals (HSP)	0	0	0	0	0								0
Hospitals Exempt (HPE)	0	0	0	0	0								0
Hypodermic Needle and Syringes (HYP)	0	0	0	0	0								0
Hypodermic Needle and Syringes Exempt (HYE)	0	0	0	0	0								0
Correctional Pharmacy (LCF)	0	0	0	0	0								0
Pharmacy (PHY)	1	0	0	1	0								2
Pharmacy Exempt (PHE)	0	0	0	0	0								0
Pharmacy Nonresident (NRP)	0	0	1	0	0								1
Sterile Compounding (LSC)	0	0	0	0	0								0
Sterile Compounding Exempt (LSE)	0	0	0	0	0								0
Sterile Compounding Nonresident (NSC)	0	0	1	0	0								1
Surplus Medication Collection Distribution Intermediary (SME)	0	0	0	0	0								0
Third-Party Logistics Providers (TPL)	0	0	0	0	0								0
Third-Party Logistics Providers Nonresident (NPL)	0	0	0	0	0								0
Veterinary Food-Animal Drug Retailer (VET)	0	0	0	0	0								0
Wholesalers (WLS)	0	0	0	0	0								0
Wholesalers Exempt (WLE)	0	0	0	0	0								0
Wholesalers Nonresident (OSD)	0	0	0	0	0								0
Total	3	2	5	5	2	0	0	0	0	0	0	0	17

Board of Pharmacy Licensing Statistics - Fiscal Year 2016/17

RESPOND TO STATUS REQUESTS

A. Email Inquiries	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	FYTD
Pharmacist/Intern Received	566	675	691	552	429								2913
Pharmacist/Intern Responded	402	508	515	417	388								2230
Pharmacy Technician Received	421	433	482	424	386								2146
Pharmacy Technician Responded	441	529	535	355	277								2137
Pharmacy Received	575	516	760	651	579								3081
Pharmacy Responded	555	517	709	636	549								2966
Sterile Compounding Received	334	499	401	460	335								2029
Sterile Compounding Responded	312	427	341	594	401								2075
Wholesale/Clinic/Hypodermic/3PL Received	538	619	355	451	450								2413
Wholesale/Clinic/Hypodermic/3PL Responded	479	446	446	373	391								2135
Pharmacist-in-Charge Received	135	209	191	139	52								726
Pharmacist-in-Charge Responded	94	113	130	115	21								473
Change of Permit Received	364	251	411	463	403								1892
Change of Permit Responded	321	218	258	359	320								1476
Renewals Received	293	297	349	354	324								1617
Renewals Responded	227	261	291	282	220								1281

B. Telephone Calls Received	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	FYTD
Pharmacist/Intern	109	128	50	30	13								330
Pharmacy	89	100	135	108	94								526
Sterile Compounding	74	54	63	108	66								365
Wholesale/Clinic/Hypodermic/3PL	75	103	117	75	96								466
Pharmacist-in-Charge	70	90	86	68	76								390
Change of Permit	63	46	70	63	93								335
Renewals	565	591	647	741	643								3187

Board of Pharmacy Licensing Statistics - Fiscal Year 2016/17

UPDATE LICENSING RECORDS

A. Change of Pharmacist-in-Charge

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	FYTD
Received	175	194	199	195	206								969
Processed	235	190	208	181	192								1006
Approved	242	189	195	161	223								1010
Pending	231	240	238	269	247								247

B. Change of Desig. Representative-in-Charge

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	FYTD
Received	17	14	19	8	18								76
Processed	17	12	22	6	18								75
Approved	17	9	21	9	11								67
Pending	19	28	28	28	35								35

C. Change of Responsible Manager

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	FYTD
Received	3	0	1	0	3								7
Processed	1	3	0	1	0								5
Approved	0	1	0	4	0								5
Pending	7	4	5	1	4								4

D. Change of Permits

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	FYTD
Received	122	150	86	203	105								666
Processed	192	40	115	182	76								605
Approved	138	57	225	126	73								619
Pending	844	892	752	888	852								852

E. Discontinuance of Business

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	FYTD
Received	22	32	28	31	42								155
Processed	35	24	37	18	43								157
Approved	39	17	47	19	27								149
Pending	86	91	85	98	113								113

F. Requests Approved

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	FYTD
Address/Name Changes	1154	1247	975	1005	833								5214
Off-site Storage		41			97								138
Transfer of Intern Hours	0	19	3	15	2								39
License Verification	158	83	134	255	105								735

Board of Pharmacy Licensing Statistics - Fiscal Year 2016/17

Revenue Received													
(Revenue available through August 2016)													
A. Revenue Received	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	FYTD
Applications	139,305	288,693	193,150	11,710									\$632,858
Renewals	679,896	1,674,124	1,158,389	1,395,199									\$4,907,608
Cite and Fine	84,702	67,793	201,577	153,811									\$507,883
Probation/Cost Recovery	50,102	28,646	46,712	75,913									\$201,372
Request for Information/Lic. Verification	2,330	1,770	1,590	2,790									\$8,480
Fingerprint Fee	4,704	7,514	9,408	7,497									\$29,123
B. Licenses Renewed													
	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	FYTD
Designated Representatives (EXC)	166	266	171	199	170								972
Designated Representatives Vet (EXV)	5	7	5	2	1								20
Designated Representatives-3PL (DRL)	13	18	26	6	12								75
Pharmacist (RPH)	1565	1988	1735	1504	1314								8,106
Pharmacy Technician (TCH)	2533	3080	2381	2684	2109								12,787
Centralized Hospital Packaging (CHP)	0	0	0	0	0								0
Clinics (CLN)	67	101	70	98	45								381
Clinics Exempt (CLE)	2	1	90	97	10								200
Drug Room (DRM)	4	1	2	0	1								8
Drug Room Exempt (DRE)	0	0	6	4	1								11
Hospitals (HSP)	17	23	23	78	30								171
Hospitals Exempt (HPE)	0	3	49	25	5								82
Hypodermic Needle and Syringes (HYP)	12	31	20	27	21								111
Hypodermic Needle and Syringes Exempt (HYE)	0	0	0	0	0								0
Correctional Pharmacy (LCF)	0	1	33	17	3								54
Pharmacy (PHY)	182	287	693	1095	191								2,448
Pharmacy Exempt (PHE)	0	0	80	36	2								118
Pharmacy Nonresident (NRP)	26	30	40	30	37								163
Sterile Compounding (LSC)	51	39	46	154	52								342
Sterile Compounding Exempt (LSE)	0	4	1	100	3								108
Sterile Compounding Nonresident (NSC)	5	4	4	9	7								29
Surplus Medication Collection Distribution Intermediary (SME)	0	0	0	0	0								0
Third-Party Logistics Providers (TPL)	4	0	5	0	1								10
Third-Party Logistics Providers Nonresident (NPL)	4	6	8	7	3								28
Veterinary Food-Animal Drug Retailer (VET)	0	1	2	2	1								6
Wholesalers (WLS)	50	51	27	40	25								193
Wholesalers Exempt (WLE)	0	1	5	4	1								11
Wholesalers Nonresident (OSD)	46	53	52	67	49								267
Total	4752	5996	5574	6285	4094	0	0	0	0	0	0	0	26701

Board of Pharmacy Licensing Statistics - Fiscal Year 2016/17

Current Licensees													
	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	FYTD
Designated Representatives (EXC)	3008	3040	3062	3091	3126								3126
Designated Representatives Vet (EXV)	63	66	66	67	67								67
Designated Representatives-3PL (DRL)	204	221	225	233	241								241
Intern Pharmacist (INT)	6377	6607	6625	6859	6783								6783
Pharmacist (RPH)	43802	43974	44167	44621	44836								44836
Pharmacy Technician (TCH)	73277	73318	73173	73177	73064								73064
Centralized Hospital Packaging (CHP)	8	8	8	8	8								8
Clinics (CLN)	1101	1102	1102	1089	1092								1092
Clinics Exempt (CLE)	237	236	237	237	237								237
Drug Room (DRM)	23	23	23	22	22								22
Drug Room Exempt (DRE)	13	13	12	11	11								11
Hospitals (HSP)	396	395	397	396	396								396
Hospitals Exempt (HPE)	86	87	87	85	85								85
Hypodermic Needle and Syringes (HYP)	286	287	287	285	286								286
Hypodermic Needle and Syringes Exempt (HYE)	0	0	0	0	0								0
Correctional Pharmacy (LCF)	55	55	55	56	56								56
Pharmacy (PHY)	6442	6444	6442	6455	6456								6456
Pharmacy Exempt (PHE)	124	124	124	123	122								122
Pharmacy Nonresident (NRP)	508	510	511	502	505								505
Sterile Compounding (LSC)	788	787	786	787	782								782
Sterile Compounding Exempt (LSE)	121	121	121	122	122								122
Sterile Compounding Nonresident (NSC)	95	93	93	92	91								91
Surplus Medication Collection Distribution Intermediary (SME)	1	1	1	1	1								1
Third-Party Logistics Providers (TPL)	16	16	16	17	18								18
Third-Party Logistics Providers Nonresident (NPL)	61	61	61	61	63								63
Veterinary Food-Animal Drug Retailer (VET)	23	23	23	23	23								23
Wholesalers (WLS)	556	553	553	561	539								539
Wholesalers Exempt (WLE)	16	16	16	16	16								16
Wholesalers Nonresident (OSD)	731	734	726	735	714								714
Total	138418	138915	138999	139732	139762	0	0	0	0	0	0	0	139762