

Training

- What does the APA-Designated Master of Science in Clinical Psychopharmacology (MSCP) training entail?
 - MSCP training takes between 2 and 2.5 years. Faculty members include Nurse Practitioners, Physicians, Psychiatrists, Prescribing/Medical Psychologists, Pharmacists and Psychologists. All APA-Designated Programs require a practical experience in physical assessment and may be conducted under the supervision of Nurse Practitioners and/or Physicians. Clinical fellowships, also under the supervision of Nurse Practitioners and/or Physicians, range from 400 hours to 1620 hours depending on individual state licensure requirements. (See https://psycnet.apa.org/fulltext/2020-81524-001.pdf?auth_token=b1e794b4203fc68534f592a61854eadb0c52c516). All states require passage of a national credentialing examination (the Psychopharmacology Examination for Psychologists or PEP) administered by the Association of State and Provincial Psychology Boards (ASPPB).
 - APA requirements for MSCP-designated programs cover the following topics over the 2 – 2.5 years of coursework. With the goal of maintaining patient safety while prescribing psychotropic medication, the trainee is expected to demonstrate knowledge in the following domains (I-XIII), with clinical competence obtained by the completion of the fellowship in those indicated with an asterisk (*). (<https://www.apa.org/education-career/grad/designation>):
 - I. Basic science
 - a. Human anatomy
 - b. Human physiology
 - c. Biochemistry
 - d. Genetics
 - II. Functional neuroscience
 - a. Neuroanatomy
 - b. Neurophysiology
 - c. Neurochemistry
 - III. Physical examination
 - a. Measurement and interpretation of vital signs*

- b. Neurological exam*
 - c. Cardiovascular exam
 - d. Respiratory exam
 - e. Abdominal examination
 - f. Eye, ear, nose, and throat (EENT)
 - g. Gastrointestinal (GI)
 - h. Genitourinary (GU)
 - i. Integumentary
 - j. Allergic/immunologic
 - k. Musculoskeletal
- IV. Interpretation of laboratory tests
- a. Therapeutic drug monitoring*
 - b. Other blood and urine tests
 - c. Radiology
 - d. Electrocardiogram (EKG) and brain electrophysiology
 - e. Neuroimaging techniques [e.g., magnetic resonance imaging {MRI}, functional MRI {fMRI}, computerized tomography {CT}]
 - f. Applied genetics
- V. Pathological basis of disease
- a. Pathophysiology of common clinical cardiovascular, respiratory, gastrointestinal, hepatic, neurological, and endocrine conditions
- VI. Clinical medicine
- a. Clinical manifestations, differential diagnosis, and laboratory or radiological evaluation of commonly encountered medical conditions
 - b. Special cases: children, women, and older adults, health related conditions (e.g., pregnancy hormone therapy), and people living with chronic health conditions, (e.g., hypertension, diabetes, HIV/AIDS, Hep C, breast and hematological cancers and conditions)
 - c. Medical emergencies and their management
- VII. Clinical neurotherapeutics
- a. Electrophysiology (e.g., quantitative electroencephalogram {EEG}, neurofeedback)

- b. Non-invasive interventions (e.g., transcranial magnetic stimulation, EEG neurofeedback, biofeedback)
 - c. Electroconvulsive therapy (ECT)
- VIII. Systems of care*
 - a. Coordination of care with other medical specialties
 - b. Consultations and referrals
 - c. Coordination and consultation in long-term care
- IX. Pharmacology*
 - a. Pharmacokinetics and drug delivery systems
 - b. Pharmacodynamics
 - c. Neuropharmacology
 - d. Toxicology
 - e. Mechanisms of medication interactions
- X. Clinical pharmacology*
 - a. Major drug classes
 - b. Nutritional supplements
 - c. Special cases: children, women, and older adults, health related conditions (e.g. pregnancy, hormone therapy), and people living with chronic health conditions, (e.g., hypertension, diabetes, HIV/AIDS, Hep C, breast and hematological cancers and conditions)
- XI. Psychopharmacology*
 - a. Sedatives/hypnotics
 - b. Antidepressants
 - c. Antipsychotics
 - d. Mood stabilizers
 - e. Anxiolytics
 - f. Stimulants
 - g. Medications for drug dependence
 - h. Medications for drug adverse effects
 - i. Pediatric psychopharmacology
 - j. Geriatric psychopharmacology (including medications for cognitive impairment, polypharmacy)
 - k. Issues of diversity and cultural competence in pharmacological practice (e.g., sex assigned at birth, gender identity, race, ethnicity, culture,

socioeconomic status, disability, nationality of origin, generational status, citizen status, other forms of population diversity, traditional practices, and lifespan factors related to drug metabolism access

- These topics are covered in each program in core courses that include:
 - Clinical Biochemistry
 - Neuroscience (Neurochemistry, Neuroanatomy, Neuropathology)
 - Physical Assessment
 - Pharmacotherapeutics
 - Clinical Pharmacology
 - Clinical Medicine
 - Special Populations
 - Advanced Psychopharmacology and Molecular Nutrition

- To summarize the different levels of training:
 - Psychologists need to complete a doctoral program (PhD or PsyD)
 - Prescribing/Medical Psychologists need to complete a doctoral program AND a masters' program (MSCP) AND a national licensing exam (PEP)
 - There are a total of six programs that have achieved APA designation (two are embedded in pharmacy schools) and three incoming programs (one embedded in a medical school and two embedded in a nursing school)
 - APA Designated MSCP programs:
 - CSPP-Alliant International University
 - Drake University School of Pharmacy
 - Fairleigh Dickinson University
 - Idaho State University School of Pharmacy
 - New Mexico State University
 - The Chicago School of Professional Psychology

- A head to head comparison of didactic and clinical training of the different prescribing professions shows that Prescribing/Medical Psychologists receive training very similar to that of Psychiatrists and more than Nurse Practitioners, Physician Assistants, Podiatrists, Dentists and Optometrists:*

Table 1
Comparison of Entry-Level Training Models Leading to Prescriptive Authority

Profession	Minimum years post-baccalaureate	Graduate contact hours mean (and standard deviation)						
		Biochemistry-neuroscience	Pharmacology	Clinical practicum	Research-statistics	Behavioral assessment/diagnosis & psychometrics	Psychosocial interventions-psychotherapy	Other mental health/psychology course work
Psychiatric nurse practitioner ^a	2.5	48 (7)	56 (7)	146 (33)	99 (41)	30 (23)	32 (29)	128 (77)
Medicine ^b	4	216 (20)	59 (28)	855 (101)	33 (20)	18 (25)	9 (20)	15 (21)
Psychology ^c	6.5	161 (43)	288 (63)	680 (83)	225 (64)	267 (61)	255 (161)	351 (152)

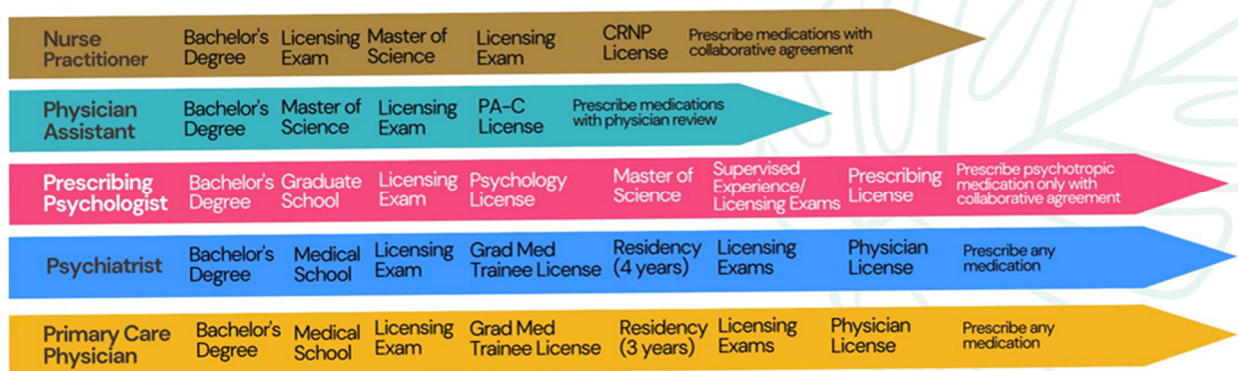
Note. Values were computed equating one academic credit with 15 contact hours.

^aBased on nurse practitioner master's degree programs at the Medical University of North Carolina, St. Joseph's College, University of Virginia, Vanderbilt University, and Yale University.

^bBased on M.D. or D.O. programs, without further specialization residency, at the Mayo College of Medicine, Yale University, Tufts University, Stanford University, and A.T. Still University.

^cBased on Ph.D., Ed.D., or Psy.D. programs plus the postdoctoral M.S. program at Alliant University, Fairleigh Dickinson University, the Massachusetts School of Professional Psychology, New Mexico State University, and NOVA Southeastern University.

To summarize the amount of training for different prescribing professions:



*mcgrath paper on training, Pennsylvania Psychological Association White Paper, 2022

(https://cdn.ymaws.com/www.papsy.org/resource/resmgr/rxp/ppa_white_paper_2023_final.pdf);

Details about the 30+ year development of training psychologists to prescribe psychotropic medication can be found here:

<https://web.archive.org/web/20150909172759id/http://rxpsychology.fdu.edu/Resources/McGrath2010.pdf>

Aptitude

- Prescribing/Medical psychologists prescribe less¹
- Psychologists make fewer errors²
- We test the same as psychiatrists & psychiatric nurse practitioners on an objective exam developed by a psychiatrist from Harvard³
- Insurance Claims⁴
 - There have been three payouts, none higher than \$100,000
 - There have been approximately two dozen cases that have been dismissed or no longer pursued.
 - No case has gotten a jury verdict
- Suicide rates reduced 5-7% in NM & LA since Prescribing Psychologists began practicing⁵

¹ See letter from Phillip Hughes summarizing RxP publications

² See letter from Phillip Hughes summarizing RxP publications

³ Cooper, Ryan R. 2020. Comparing Psychopharmacological Prescriber Training Models via Examination of Content-Based Knowledge. Master's thesis, Harvard Extension School. <https://www.apadivisions.org/division-55/about/comparing-psychopharmacological-prescriber-training-models.pdf>

⁴ The Trust, Personal Communication

⁵ Phillip M. Hughes, Robert E. McGrath, Kathleen C. Thomas. In press. Evaluating the impact of prescriptive authority for psychologists on the rate of deaths attributed to mental illness. *Research in Social and Administrative*

Physicians, including psychiatrists, support prescriptive authority for psychologists. A few published comments are provided here, in addition to written testimony submitted by physicians Jeffrey Singer and Lee Evlsin for SB677

(https://www.capitol.hawaii.gov/sessions/Session2023/Testimony/SB677_TESTIMONY_HHS_02-13-23_.PDF) and SB760

(https://www.capitol.hawaii.gov/sessions/session2024/Testimony/SB760_TESTIMONY_HHS_01-26-24_.PDF).

Surgeon Jeffrey Singer

“State lawmakers should remove regulatory barriers that block competent clinical psychologists from prescribing medications to their patients.”

<https://www.cato.org/briefing-paper/expand-access-mental-health-care-remove-barriers-psychologists-prescribing>

<https://www.cato.org/events/can-prescribing-psychologists-help-solve-national-mental-health-crisis>

<https://www.cato.org/blog/new-evidence-prescribing-psychologists-can-save-lives>

Psychiatrist Dan Karlat (<https://www.psychologytoday.com/intl/blog/the-new-psychiatry/201003/psychologists-and-prescription-privileges-conversation-part-one>)

“...each profession has a training program that incorporates enough elements of medical school to allow them to prescribe safely.”

Physician John Kurap, MD

Letter to the Editor

Hawaii Tribune-Herald

April 20, 2015

Pharmacy. Choudhury AR, Plemmons A. Deaths of despair: prescriptive authority of psychologists and suicides. Published online <https://www.thecgo.org/research/deaths-of-despair/> ; September 28, 2021.

“Another objection is that Psychologists are not trained to be Physicians, but it misses a critical aspect of prescribing psychology. Psychologists are not being trained to replace Physicians; they are being educated to hone their excellent diagnostic and therapeutic training to improve integrated patient care. When a patient with diabetes, hypertension and depression presents, the medical staff may prescribe medications for each problem but it is time to cast the net of providers wider to include Prescribing Psychologists so that many of the biopsychosocial ills associated with mental health and drug abuse can be effectively dealt with and those patients with mental health concerns aren’t allowed to fall through the cracks. It is time for residents of Hawai’i to receive the access to care that they deserve.”