

Compare the Education Gaps Between Primary Care Physicians and Nurse Practitioners

While nurse practitioners are trained to emphasize health promotion, patient education, and disease prevention, they lack the broader and deeper expertise needed to recognize cases in which multiple symptoms suggest more serious conditions. The primary care physician is trained to provide complex differential diagnosis, develop a treatment plan that addresses multiple organ systems, and order and interpret tests within the context of the patient's overall health condition.

This expertise is earned through the deep, rigorous study of medical science in the classroom and the thousands of hours of clinical study in the exam room that medical students and residents must complete before being allowed to practice medicine independently.

Because primary care physicians throughout the United States follow the same highly structured educational path, complete the same coursework, and pass the same licensure examination, you know what you're getting with a physician. There is no such standard to achieve nurse practitioner certification, as their educational requirements vary from program to program and from state to state.

DEGREES REQUIRED AND TIME TO COMPLETION

	Undergraduate degree	Entrance exam	Post-graduate schooling	Residency and duration	TOTAL TIME FOR COMPLETION
Family physician (M.D. or D.O.)	Standard 4-year BA/BS	Medical College Admissions Test (MCAT)	4 years, doctoral program (M.D. or D.O.)	REQUIRED, 3 years minimum	11 years
Nurse practitioner	Standard 4-year BA/BS*	Graduate Record Examination (GRE) & National Council Licensure Exam for Registered Nurses (NCLEX-RN) required for MSN programs	1.5 – 3 years, master's program (MSN)	NONE	5.5 – 7 years

MEDICAL/PROFESSIONAL SCHOOL AND RESIDENCY/POST-GRADUATE HOURS FOR COMPLETION

	Lecture hours (pre-clinical years)	Study hours (pre-clinical years)	Combined hours (clinical years)	Residency hours	TOTAL HOURS
Family physician	2,700	3,000**	6,000	9,000 – 10,000	20,700 – 21,700
Doctorate of Nursing Practice	800 – 1,600	1,500 – 2,250**	500 – 1,500	0	2,800 – 5,350
Difference between FP and NP hours of professional training	1,100 – 1,900 more for FPs	750 – 1,500 more for FPs	4,500 – 5,500 more for FPs	9,000 – 10,000 more for FPs	15,350 – 18,900 more for FPs

* While a standard 4-year degree, preferably a BSN, is recommended, alternate pathways exist for an RN without a bachelor's degree to enter some master's programs.

** Estimate based on 750 hours of study dedicated by a student per year.

Sources: Vanderbilt University Family Nurse Practitioner Program information, http://www.nursing.vanderbilt.edu/msn/fnp_plan.html, and the Vanderbilt University School of Nursing Handbook 2009-2010, <http://www.nursing.vanderbilt.edu/current/handbook.pdf>. American Academy of Family Physicians, Primary Health Care Professionals: A Comparison, <http://www.aafp.org/online/en/home/media/kits/fp-np.html>.

CLINICAL TRAINING HOURS DURING A FAMILY PHYSICIAN'S EDUCATION



CLINICAL TRAINING HOURS DURING A NURSE PRACTITIONER'S EDUCATION



Physicians are not allowed to diagnose, treat, or prescribe independently until they have logged 15,000 to 16,000 clinical hours.

Nurse practitioner organizations argue that APNs are prepared to diagnose and prescribe independently after logging between 500 and 1,500 clinical hours.

Nurse practitioners can achieve certification by completing an associate's degree program or nursing diploma program, and go directly into a master's degree program—some of which can be completed online—or they can complete their Bachelor of Science degree in nursing. At the point of certification, a new nurse practitioner has acquired between 500 and 1,500 hours of clinical training, fewer than a third-year medical student. A new family physician has acquired more than 15,000 hours of clinical training.

- A 2004 survey of practicing nurse practitioners published in the *Journal of the American Academy of Nurse Practitioners* reported that in the area of pharmacology, 46% reported they were not “generally or well prepared.”¹
- From the study: “In no uncertain terms, respondents indicated that they desired and needed more out of their clinical education, in terms of content, clinical experience, and competency testing.”¹
- Also from the study: “Our results indicate that formal NP education is not preparing new NPs to feel ready for practice and suggests several areas where NP educational programs need to be strengthened.”¹

The complex chemistry and powerful therapeutics of modern pharmaceuticals require substantial expertise to carefully titrate dosages and account for the very real risks of toxicity, therapeutic failure, chemical dependency, adverse side effects from drug interactions, and simply wasting scarce health care resources through over- or under-prescribing. Pharmacology and pharmacotherapy are closely integrated into every aspect of medical training, providing an educational foundation that far exceeds the nominal exposure nurse practitioner programs offer.

- A study on antibiotic prescribing published in the *American Journal of Medicine* in 2005 found that non-physician clinicians were more likely to prescribe antibiotics than were practicing physicians (26.3% and 16.2%, respectively) in outpatient settings.²
- Another study suggested that many nurse practitioners had not received enough education in microbiology, knowledge integral to effective treatment for bacterial, fungal, as well as viral disease.³
- A six-year study published in 2006 found that rural nurse practitioners were writing more prescriptions than their urban nurse practitioner counterparts, physicians, and physician assistants.⁴

1. Hart A and Macnee C. “How well are nurse practitioners prepared for practice: results of a 2004 questionnaire study.” *Journal of the American Academy of Nurse Practitioners*. 2007, Vol. 19, No. 1, p. 37.

2. Roumie C and Halasa N. “Differences in antibiotic prescribing among residents, physicians and non-physician clinicians.” *American Journal of Medicine*. June 2005, Vol. 118, No. 6, pp. 641-648.

3. Sym D et al. “Characteristics of nurse practitioner curricula in the United States related to antimicrobial prescribing and resistance.” *Journal of the American Academy of Nurse Practitioners*. September 2007, Vol. 19, No. 9, pp. 477-485.

4. Ciper D and Hooker R. “Prescribing trends by nurse practitioners and physician assistants in the United States.” *Journal of the American Academy of Nurse Practitioners*. June 2006, Vol. 18, No. 6, p.6.