



The Nelson A. Rockefeller Center at Dartmouth College

The Center for Public Policy and the Social Sciences

Policy Research Shop

Naturopathy in Vermont

Evaluating Education Differences and the Role of Naturopathic Doctors (NDs) as Primary Care Providers

**Presented to the Vermont Senate Government Operations
Committee**

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EXECUTIVE SUMMARY

Vermont is currently undergoing both a shortage of primary care physicians and a reevaluation of policies in the state related to the practice of naturopathy by naturopathic doctors (NDs). This report details the policy history and current policy environment on naturopathy, identifies the areas of need for primary care, and evaluates the educational training and accreditation of naturopathic practitioners in Vermont. The six areas of concern in naturopathic education are: the undergraduate prerequisites to entering ND programs, the teaching of homeopathy, medical coursework, the lack of ND residencies, the licensing examination, and the continuing education policies.

This paper discusses options for the State of Vermont, including stricter regulations on the practice of homeopathy, providing quality ND internships and residencies, formulating an additional examination for new ND practitioners, requiring more continuing education hours, and improving the integration of NDs into existing hospital systems. The result of such policy changes may yield improved quality of care provided by NDs, broader patient access to naturopathic practices, increased alignment of ND and MD care through Blueprint for Health teams, and the drawing in of more primary care practitioners to Vermont. Properly trained naturopaths as primary care providers can contribute to reduced healthcare costs in Vermont and personalized care for patients. MDs can learn from NDs about holistic evaluations of disease while NDs can learn about modern technologies for improving the efficacy of care.

1. NATUROPATHS IN VERMONT

1.1 Background

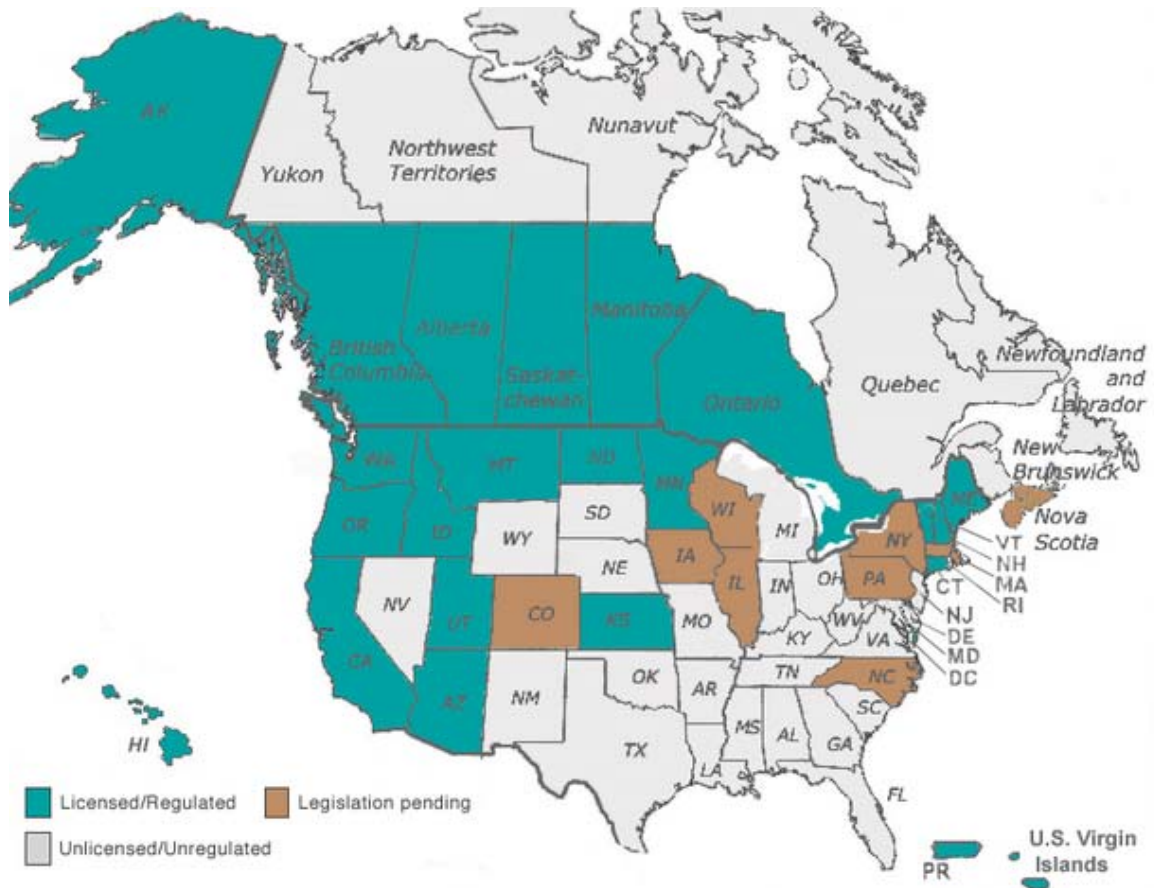
Naturopathic medicine is a system of primary health aimed at preventing, diagnosing, and treating conditions of the human mind and body. Naturopathy favors a holistic approach with non-invasive treatment and, similar to conventional medicine, encourages minimal use of surgery and drugs. There are two types of naturopathic practitioners: traditional naturopaths and naturopathic physicians (NDs). NDs employ the principles of naturopathy within the context of conventional medical practices. NDs work with their patients to prevent and treat acute and chronic illness and disease, restore health, and establish optimal fitness by supporting the person's inherent self-healing process.¹ Modalities utilized by NDs include diet and clinical nutrition, behavioral change, hydrotherapy, homeopathy, botanical medicine, physical medicine, pharmaceuticals, and minor surgery.²

Naturopathic medicine is represented in the United States by the American Association of Naturopathic Physicians (AANP), which was founded in 1985 and has 2,000 student, physician, supporting, and corporate members.³ The licensing of NDs is determined at



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the state level. Currently, 16 states, the District of Columbia, and the United States territories of Puerto Rico and the United States Virgin Islands have licensing laws for NDs.⁴



Source: Association of Accredited Naturopathic Medical Colleges⁵

For licensure in these jurisdictions, NDs are required to graduate from an accredited four-year residential naturopathic medical school and pass an extensive postdoctoral board examination (NPLEX). Licensed NDs must fulfill state-mandated continuing education requirements annually, and have a specific scope of practice defined by their state's law. NDs are trained as primary care physicians, with an emphasis in natural medicine. Depending on the state, NDs may also be licensed to perform minor office procedures and surgery, administer vaccinations, and prescribe many prescriptive drugs.⁶ NDs work in private practice, community health centers, universities, and private industry. They often collaborate with conventional physicians in the co-management and mutual referral of patients.



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1.2 Vermont Policy History

Chapter 81 of Title 26 in the Vermont statutes details the underlying state policies concerning the practice of naturopathic medicine. Vermont defines naturopathic medicine as “a system of health care that utilizes education, natural medicines, and natural therapies to support and stimulate a patient’s intrinsic self-healing processes and to prevent, diagnose, and treat human health conditions, injuries, and pain.”⁷ Practitioners are allowed to administer a variety of diagnostic techniques and nonprescription treatments as well as an approved set of prescription medications. As with other states, Vermont requires practitioners of naturopathic medicine to have an ND degree from a naturopathic medical college certified by the Council of Naturopathic Medical Education and the Department of Education. State licenses are granted upon completion of a Vermont-specific examination separate from the NPLEX professional accreditation exam.⁸ Moreover, NDs must obtain special licenses to dispense prescription drugs or perform naturopathic childbirth. They are also prohibited from performing surgeries unrelated to naturopathic childbirth and using non-FDA-approved devices for therapeutic purposes. They are subject to the same laws about reporting disease outbreaks, births, and deaths as other physicians. NDs licensed in other states and current ND students can only practice if working in conjunction with a VT-licensed naturopathic physician. To maintain their licenses, Vermont naturopathic physicians are required to submit a renewal application every two years and complete 30 hours of continuing education during this period.⁹

The Vermont Secretary of State assigns the following responsibilities to the Office of Professional Regulation, to be carried out by a director with the support of two appointed, experienced naturopathic physicians:¹⁰

1. Providing licensure and application information
2. Administering licensing examinations and pharmacology examinations
3. Collecting, reviewing, accepting, revoking, and renewing licensing applications
4. Managing disciplinary measures and public complaints
5. Issuing special licenses for prescription drugs and naturopathic childbirth

The Office of Professional Regulation maintains a comprehensive set of administrative rules as well as a prescription medicine formulary for naturopaths.¹¹ These online documents detail the specific laws for licensure and renewals, scope of permitted care practices and prescribed drugs, and miscellaneous information and accountability protocols.

The most recent legislation affecting the practice of naturopathic medicine in Vermont was Act No. 96 (S.209), *An Act Relating to Naturopathic Physicians*, passed on May 2, 2012. The act made several amendments throughout the Vermont statutes that sought to better clarify the role of naturopathic physicians in the primary care system, primary care



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being defined as “first-contact and continuing care for individuals with signs, symptoms, or health concerns, not limited by problem origin, organ system, or diagnosis.”¹² First, the act mandates that health insurance plans recognize the general primary care services of naturopathic providers to be equivalent to the services provided by primary care physicians with MDs, including setting “reasonable deductibles, co-payments and co-insurance amounts, and fee or benefit limits.”¹³ This nondiscriminatory policy extends to any “practice parameters, cost-effectiveness and clinical efficacy standards, and utilization review”¹⁴ to which NDs may be subject. Health insurance plans are allowed to restrict normal coverage to those services provided by naturopathic physicians under contract with the insurance company, so long as unbiased out-of-network provider reimbursement policies are applied to non-contract naturopathic services.¹⁵ Act No. 96 also clarifies the independence of ND practitioners by stating that although naturopathic physicians do not require supervision by other health care professionals in their practices, this does not supersede the regulatory capabilities of the Office of Professional Regulation. To achieve parity in information technology, the act urges increased financial support for electronic health record system upgrades in naturopathic practices.

Lastly, naturopathic physicians are given authorization to serve as the patient’s “medical home” under the Blueprint for Health Program, meaning that they will receive per-person, per-month payments from insurers and Medicaid for their qualifying patients and community health contributions. In an effort to reform the Vermont healthcare system, one major element of the Blueprint for Health initiative is to provide better primary care. The program fosters collaboration between previously isolated primary care providers in forming practice teams, and the new “medical home” system gives patients a more significant role in managing their own health goals, education, and decisions.¹⁶ As a result of this act, naturopathic physicians will become integrated into community health teams to better meet patient needs, reduce health spending costs, and strive towards universal healthcare coverage in Vermont.¹⁷

1.3 Naturopathic Physicians in Vermont

Appendix A contains information collected for all naturopathic practitioners in the state of Vermont that are registered with the Vermont Association of Naturopathic Physicians¹⁸ (VANP) or with the American Association of Naturopathic Physicians¹⁹ (AANP). Of the 52 practitioners who are members of at least one of these professional organizations, most practice in Brattleboro, Burlington, South Burlington, and Montpelier. However, there is a relatively wide geographical spread of practicing naturopaths across the state (refer to Table 1 and Figure 1).



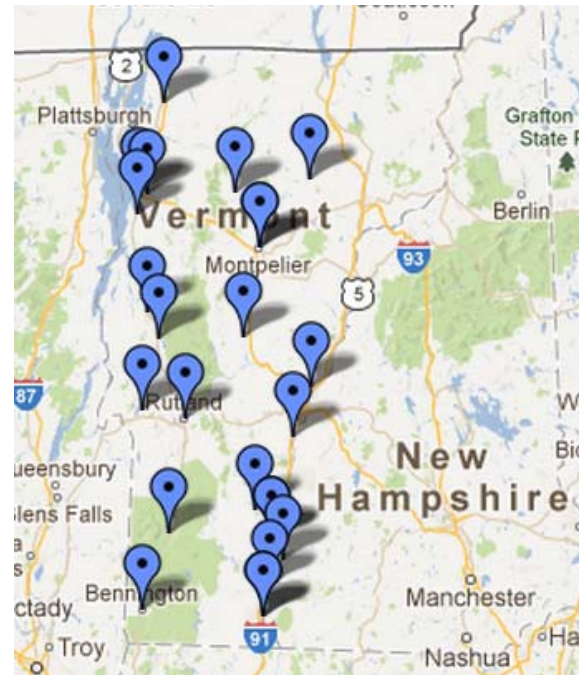
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Table 1: Practicing NDs in VT

locale	Freq.	Percent
Bennington, VT	3	5.77
Bomoseen, VT	1	1.92
Brattleboro, VT	10	19.23
Burlington, VT	6	11.54
Chester, VT	1	1.92
East Hardwick, VT	1	1.92
Hartland, VT	1	1.92
Manchester Center, VT	1	1.92
Middlebury, VT	3	5.77
Montpelier, VT	6	11.54
Norwich, VT	1	1.92
Putney, VT	1	1.92
Randolph, VT	2	3.85
Rutland, VT	1	1.92
Salisbury, VT	1	1.92
Saxtons River, VT	1	1.92
Shelburne, VT	1	1.92
South Burlington, VT	6	11.54
St. Albans, VT	1	1.92
Stowe, VT	1	1.92
Westminster, VT	3	5.77
Total	52	100.00

Source: Google Maps

Figure 1: Geographical spread of practicing naturopaths



In Vermont, the majority of NDs were trained at Bastyr University or the National College of Naturopathic Medicine (NCNM) (refer to Table 2). NCNM has a limited selection of graduate programs and does not offer undergraduate programs while Bastyr only offers health-specific bachelor's degrees. Therefore, practitioners generally attended other schools for their B.A. and/or additional graduate degrees.

Table 2: Schools attended by VT NDs

accreditation	Freq.	Percent
Bastyr University	18	36.73
Canadian College of Naturopathic Medicine	2	4.08
National College of Natural Medicine	19	38.78
Southwest College of Naturopathic Medicine	6	12.24
University of Bridgeport	4	8.16
Total	49	100.00



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Forty out of the 49 naturopathic physicians run private practices, and usually team up with other NDs and/or MDs. In a few cases, the practitioners work in a community health clinic. Under the current health infrastructure, no registered Vermont NDs work in a hospital.

Because some practitioners do not list their educational histories, data for this part of our analysis is incomplete. One possible avenue for future research is to examine educational background and training through interviews or surveys. Data is also unavailable for the size of the practice, involvement in teams of medical professionals, qualification for special licenses of prescription medications, contracts with insurance companies, and other characteristics that would be useful in evaluating the relationship between efficacy and education of Vermont's naturopathic physicians.

1.4 Shortage of Primary Care in Vermont

To set up a framework for how to proceed with naturopathy in Vermont, it is useful to first evaluate Vermont's current primary care situation. The data on primary care makes it clear that Vermont currently does not have enough primary care practitioners to meet the level of patient need. The Vermont Primary Care Workforce 2012 Snapshot generated by the Vermont Area Health Education Centers (AHEC) Program provides a comprehensive picture of primary care in the state. The report looks at primary care practitioner data for "MD/DOs, advanced practice registered nurses (APRNs), certified nurse midwives (CNMs), and certified physician assistants (PA-Cs) in primary care practices."²⁰ In 2012, Vermont had 814 non-naturopathic primary care practitioners, with 80 percent of practices having between one and five practitioners (mean of four, median of three). Also, 80 percent of practices had only one of four primary care specialties represented: family medicine, internal medicine, pediatrics, or obstetrics-gynecology.²¹

The main finding from the report was that although there were small increases in the aggregate number of non-naturopathic primary care practitioners, the need for primary care services is rising for the following reasons:²²

1. Financial pressures have been causing healthcare trainees and medical students to choose more lucrative and stable sub-specializations rather than practicing in primary care.
2. In some primary care specialties, especially internal care, physicians are aging and retiring from practice, leading to gaps in specific services.
3. The elderly in Vermont are becoming an increasingly large share of the population, and these are generally the people who have the most need for primary care.
4. Primary care practitioners are drawn to other states, which are competing for the primary care workforce.



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5. Due to lowered reimbursements and workload pressures, a staggering number of primary care practitioners are closing or limiting their practices to new patients. Statewide, 40 percent of MD/DOs and 28 percent of other non-naturopathic professions are closing or limiting their practice. In family medicine, these statistics increase to 47 percent for MD/DOs and 32 percent for APRNs, CNMs, and PA-Cs. For internal medicine, the change is more drastic, with increases to 66 percent of MD/DOs closing or limiting the inflow of new patients and 61 percent of the other professions.

The AHEC primary care snapshot also includes primary care shortages disaggregated by county and region, using changes in values of full-time equivalents (FTEs) of primary care practitioners because some practitioners decreased services without leaving their practice entirely. In 2012, only four of the 14 counties (Washington, Chittenden, Bennington, and Windham) experienced an increase in primary care services. Overall, Vermont had a net loss of 20 FTEs in MD/DOs and a net gain of 7 in APRNs, CNMs, and PA-Cs. While these numbers are an improvement from 2010 and 2011, there is a still concern for the many patients who are unable to access quality primary care services.

By overlaying the maps of Health Professional Shortage Areas (HPSAs), Rural Shortage Areas (GCRSAs), and the various distinctions of medically underserved areas from the Vermont Department of Health (i.e. dental care and mental health),²³ it is possible to see whether or not the AHEC's primary care shortage areas line up with other state-level data (See Appendix B). The map divides Vermont into service areas, generally corresponding to townships. Although shortages of care are spread throughout the state, there is more overlap in the north and northeast (color coding is retained from the original maps and are not significant in the overlay). Additionally, it is possible to determine whether current naturopathic physicians could fill the primary care gap given their distribution across the state (see Section 1.3). Unfortunately, NDs seem to be concentrated primarily in larger cities and are not more accessible to the rural or poor populations in designated shortage and underserved areas. Increased integration into the hospital system may allow the currently concentrated ND practices to diffuse into regions of medical need.

2. EDUCATION AND ACCREDITATION OF NDS

2.1 Education at ND-Granting Institutions

To evaluate the role and ability of naturopaths to prescribe medication, it is useful to first examine their education requirements, training, and continuing education procedures. Doing so also allows us to draw comparisons between ND-training and MD-training, and to highlight differences or synergies that may be present.



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All licensed naturopathic physicians complete a minimum of three years university level pre-medical training (must be equivalent in coursework to a four-year degree) and then four years at an accredited naturopathic medical college. There are two such colleges in Canada (Boucher Institute of Naturopathic Medicine, Canadian College of Naturopathic Medicine) and five in the United States (Bastyr University, National College of Natural Medicine, National University of Health Science, Southwest College of Naturopathic Medicine and Health Sciences, University of Bridgeport College of Naturopathic Medicine). Students of naturopathy study subjects such as systems physiology, microbiology and botany, pharmacology, and pathology. They also study health counseling and basic management, both of which are needed to run an independent, patient-directed practice.

For the seven accredited ND-granting institutions, all candidates for admission must have completed a bachelor's degree from an accredited, degree-granting institution. Successful applicants are expected to have a GPA of 3.0-3.5 or greater. Undergraduate course requirements vary greatly in quantity between the schools, but in general, applicants must have completed two semesters of general chemistry and general biology, one semester each of organic chemistry, biochemistry, psychology, and math/physics, and up to five credits in the social sciences and humanities. Credit hours are comprised of: 1) classroom instruction (3,200 hours) and 2) clinical training (1,200 hours); (see Appendix C). Some more specific courses in a naturopathic education include acupuncture and Oriental medicine, Ayurvedic sciences, exercise science and wellness, health psychology, homeopathy, herbal medicine, integrated human biology, midwifery, naturopathic history, and nutrition.

The AANMC's Council of Chief Academic and Clinic Officers (CCACO), which is comprised of deans and assistant deans from all the schools, create knowledge and practice-based competency requirements for ND program graduates.²⁴ Additionally, the Council on Naturopathic Medical Education (CNME), the programmatic accrediting body of the ND schools, sets and enforces high academic standards. Currently, the CNME is encouraging schools to perform more outcome-based assessments, which are used to support curriculum development.²⁵

2.2 Testing, Accreditation, and Reaccreditation

The Naturopathic Physicians Licensing Examinations (NPLEX) is a two-part professional licensing exam administered by the North American Board of Naturopathic Examiners (NABNE).²⁶ Graduates of the accredited four-year naturopathic medical schools are required to pass the NPLEX before receiving permission to practice naturopathic medicine in the United States or Canada. However, in addition to the core NPLEX exam, each state or Canadian province can require different Part II sections to be completed as well for licensure.²⁷ If a naturopathic physician graduated before the NPLEX was implemented, licensure is considered on a state-by-state basis.



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Table 3: NPLEX requirements by state or province

NPLEX EXAMINATION	AB	AK	AZ	BC	CA	CT	HI	DC	KS	ME	MB	MN	MT	NH	ON	OR	PR	SK	UT	VT	WA
Part I – Biomedical Science	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Part II – Core Clinical Science	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Part II – Clinical Elective Minor Surgery	Opt ¹		*	*			*			*			*	*		*			*		*
Part II – Clinical Elective Acupuncture	Opt ¹	*						*						*			*				

Source: North American Board of Naturopathic Examiners²⁸

The NPLEX Part I is a basic science examination that tests anatomy, biochemistry, microbiology, pathology, and physiology, with 50 questions per section. A score of 75 percent or higher is needed to pass. Part II of the NPLEX has a core portion consisting of a three-day clinical science examination that tests botanical medicine, clinical nutrition, diagnostic imaging, emergency medicine, homeopathy, pharmacology, physical and clinical diagnosis, physical medicine, psychology, lab diagnosis, and medical procedures. There are three clinical elective sections for certificate or license: acupuncture, minor surgery, and homeopathy.

The American Naturopathic Medical Certification Board (ANMCB) requires Board Certified professionals to renew each year by completing 20 hours of natural health care continuing education units every year and submit documentation along with a renewal fee in order to keep the certification current.²⁹ Licensed naturopathic physicians who pass the NPLEX must also fulfill state-mandated continuing education requirements annually, and will have a specific scope of practice defined by their state's law.

In Maine, applicants for renewal must complete 37 hours of continuing education annually, with 15 of those hours specific to their specialties. At least seven hours must be in pharmacology, and no more than 10 hours may be in any single topic.³⁰ Oregon requires 50 hours of continuing education each year, 10 of which must be in pharmacology, and two in ethics.³¹ New Hampshire requires documentation of completion of 150 hours of continuing education every three years. At least 60 of those hours must be taken in a professionally supervised setting with 24 hours in pharmacology.³² Vermont currently requires the license to practice naturopathic medicine to be renewed every two years, with no more than 30 hours of continuing education biennially.³³ This is lower than the number of hours recommended by the ANMCB (40 per two years) and is the lowest of all the states except Wisconsin, which also requires 30 hours per two years.



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Table 4: Comparison of continuing education hours by state

	ANMCB (recommended)	VT	ME	OR	NH
Continuing Education Hours per year	20	15	37	50	50

2.3 Differences in Education Compared to MDs

Physician education in the United States includes undergraduate premedical requirements, medical school, and clinical medical education (i.e., residencies and fellowship training).³⁴ Licensed physicians must complete four years at a college or university to earn a BS or BA degree, usually with a strong emphasis on basic sciences, such as biology, chemistry, and physics. They then must complete four years of education at one of the U.S. medical schools accredited by the Liaison Committee on Medical Education (LCME), consisting of preclinical and clinical parts. After completing medical school, students earn their doctor of medicine degrees (MDs), although they must complete additional training before practicing on their own as a physician. Some physicians receive a doctor of osteopathic medicine (DO) degree from a college of osteopathic medicine; (see Section 3.2 for additional information). Newly graduated MDs enter into a residency program that is three to seven years of professional training under the supervision of senior physician educators.

After completing a series of exams and four years of graduate medical education, physicians obtain a license to practice medicine from a state or jurisdiction of the United States in which they plan to practice.³⁵ The majority of physicians also choose to become board certified, which is an optional, voluntary process. Most certifications must be renewed after six to ten years, depending on the specialty. Once physicians begin practicing, they must continue to receive credits for continuing medical education (CME).³⁶ CME requirements vary by state, professional organizations, and hospital medical staff organizations.

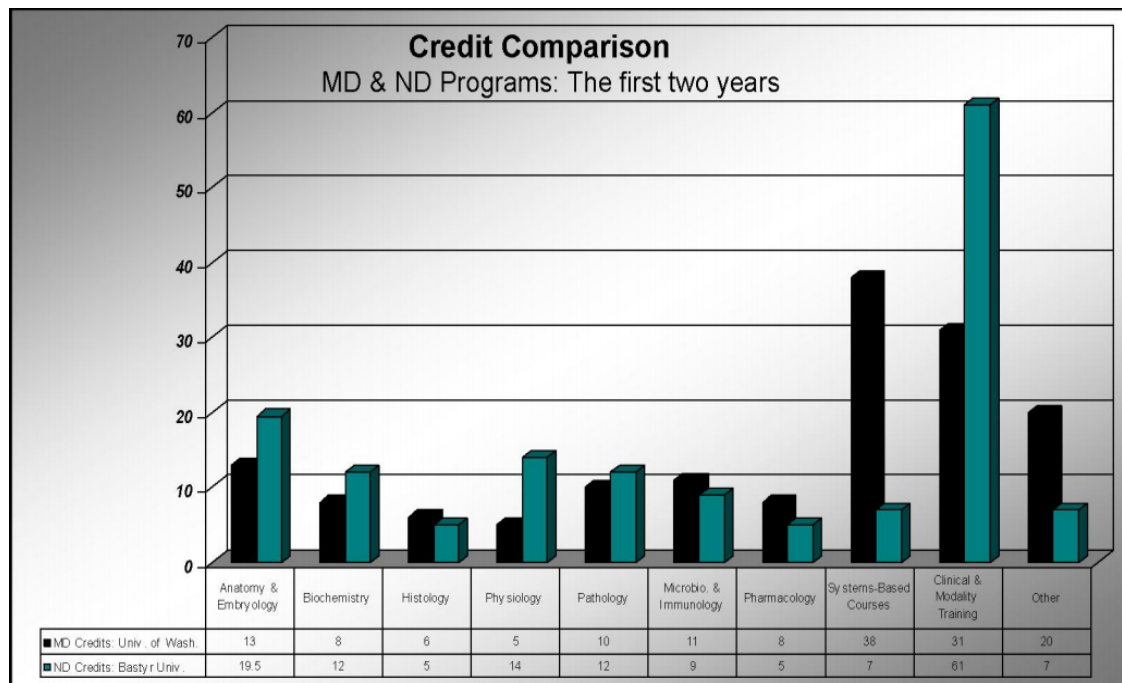
Beginning with the 2014 license renewal, Vermont will require medical physicians to complete a minimum of at least 30 hours of qualifying CME during each two-year licensing period.³⁷ At least one of these hours must be on prescribing controlled substances. Currently, medical physicians in Vermont are required only to complete 10 hours of CME biannually. In Maine, medical doctors are required to complete 100 credits of CME biannually, while Oregon medical doctors are required to complete 60 hours of CME biannually.³⁸ Although programs vary in quality (low relevance, online, quick-to-complete) for both NDs and MDs, there is a marked difference in CME topics between the two professions. A substantial number of naturopathic continuing education programs focus on applications of alternative medicine rather than modern advancements in medical understanding and technology. For example, the continuing education courses offered by NCNM include herbal formulations and Chinese medical astrology.³⁹ Both



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types of providers do have options to learn about health policy and holistic patient care as a part of continuing education.

Table 5: Credit comparison of MD & ND programs—the first two years



Source: American Association of Accredited Naturopathic Medical Colleges⁴⁰

Both NDs and MDs attend a four-year medical school after completing pre-medical classes and a bachelor's degree. However, unlike medical schools, the first two years of the ND curriculum also includes an early introduction to naturopathic modalities, such as homeopathy, nutrition and botanical medicine. While medical school courses divide material by systems (circulatory, nervous, digestive, etc.), classes in a typical ND program are not divided by system, but rather focus on how a symptom in one part of the body may affect the patient's entire anatomy and wellbeing. Third and fourth-year MD students complete clerkships and rotations, while third and fourth-year ND students have increasing opportunities for hands-on clinical training and practice, often at their schools' teaching clinics and off-site clinics, which offer diverse patient populations. Training in clinical practice is absolutely essential to a naturopathic education, so this is becoming introduced much earlier at several AANMC-member schools. Thus, during the first two years, NDs receive more clinical training than MDs while MDs continue to take more systems-based courses.⁴¹ MD students also are required to complete a clinical residency after graduation in order to practice. NDs are not required to complete residencies, though such programs are available and approved by the CNME. Only five to ten percent of new NDs participate in formally approved residency positions.



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MDs obtain board certification through the United States Medical Licensing Examination (USMLE) while NDs take the NPLEX. The USMLE is longer and includes more content than the ND examination.⁴² Like the NPLEX, the USMLE is divided into different sections. Unlike the NPLEX, which is taken only after receiving the ND degree, Step 1 of the USMLE is taken after the second year of medical school, Step 2 is taken during the fourth year, and Step 3 is taken during the residency.⁴³

Another area of difference in education is the training focus and treatment approaches. ND training is focused on treating and preventing illness by strengthening the body's natural defense and repair system. NDs draw from a variety of health disciplines when creating personalized treatment plans for patients. Therapies may include changes in diet, nutritional supplementation, plant medicine (herbal and homeopathic), and physical therapy (especially hot/cold spa therapies). In comparison, an MD's training is focused on treating illness by controlling the disease process with more aggressive pharmaceutical and surgical strategies. Should a patient's condition require more specialized care, NDs often will refer the patient to other practitioners, including MDs, chiropractors, acupuncturists, and counselors.

3. NATIONAL NATUROPATHIC PRIMARY CARE EFFORTS

3.1 Other States' Legislative Histories on NDs

As noted previously, naturopathic doctors are licensed as primary care doctors in 16 states. As primary care providers, NDs have the right to prescribe medication, order X-rays and blood work, and perform physical examinations. If the Affordable Care Act (ACA) is implemented as intended, NDs in all 16 states will be covered immediately by insurance. Currently, the states that mandate naturopathic services to be covered by health insurance include: Vermont, Washington, New Hampshire, Connecticut, Hawaii, and Alaska.⁴⁴ The American Association of Naturopathic Physicians (ANNP) recently announced its goal of licensure in 11 more states for 2013. To date, licensing legislation has been introduced in six states: Arkansas, Colorado, Illinois, Maryland, Massachusetts, and Michigan.

In the United States, 11 of 16 jurisdictions that license naturopathic medicine have given naturopathic doctors prescribing authority.⁴⁵ Although the pharmaceutical formulary varies in different states, it is extremely broad in Hawaii, California and Washington. In Arizona and Oregon, naturopaths are allowed to prescribe most pharmaceuticals except some therapeutics and narcotics. In Utah, they may prescribe and dispense all non-controlled drugs, while in Maine, they must first complete a one-year collaborative relationship with a medical doctor.⁴⁶

In June 2009, a bill passed in Oregon that allows naturopaths to prescribe drugs. The original bill would have allowed naturopaths to prescribe almost any drug, but with the



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medical lobby in opposition, the bill lacked votes. The bill was amended to apply to only a list of drugs approved by the state regulatory board, eventually passing the Senate 22-7 and the House unanimously.⁴⁷ Oregon has a shortage of primary care doctors, especially in rural areas. Medical doctors in Oregon occasionally work with NDs.

3.2 Comparisons between DOs and NDs

NDs face a similar challenge within the health care system as osteopathic physicians, who receive their training from osteopathic colleges for a DO degree. Like naturopathy, osteopathy is characterized by some traditional practices that have little scientific backing, the most controversial of these being osteopathic manipulative treatment (OMT). Like NDs, DOs are primary care physicians that focus on preventative care using a “whole person” approach. Unlike NDs and MDs, they receive special training in musculoskeletal system health, OMT being a part of this training. Currently, the DO education process is nearly equivalent to that of MDs, with four years of osteopathic medical education and the completion of either DO or MD residencies afterward that prepare the physician in a specialty like “pediatrics, family medicine, psychiatry, surgery, or ophthalmology.”⁴⁸

Criticisms of osteopathy in the past have included its continued use of outdated treatments, the lower competitiveness of osteopathic programs compared to MD programs, the lower prestige of osteopathic schools in research and teaching, and the lower GPAs of DO applicants.⁴⁹ However, what used to be major gaps in quality have been quickly closing following the large increase in the number of health professionals who choose osteopathy. Moreover, osteopathic physicians recently have been crucial in filling primary care gaps, especially in rural areas.

3.3 Insurance Policies for Naturopathic Care

Due to Vermont Act No. 96 (S.209), all insurance companies regulated by the state of Vermont must cover naturopathic physicians under the same policies it uses for other primary care providers. This policy applies to Blue Cross/Blue Shield of Vermont, MVP, Medicaid, VHAP, Dr. Dynasaur, and others.⁵⁰ CIGNA currently does not allow naturopathic physicians to serve as primary care providers, and the policy does not apply to Medicare, out-of-state plans, and certain self-insured employers. Most insurance plans also do not cover unique naturopathic services like acupuncture and allergy neutralization treatments, natural medicines like nutritional supplements and herbal formulas, and homeopathic remedies.



4. IMPLICATIONS FOR VERMONT PRIMARY CARE

4.1 Addressing the Education Gap

Based on the information available about education, licensing, and continued education, our research suggests that there are several educational differences between NDs and MDs:

- **Prerequisites:** The college course prerequisites for enrollment in an ND-granting program are currently inconsistent across the seven institutions, much more so than the premed requirements for applying to MD programs.
- **Medical Coursework:** ND-granting institutions teach homeopathy with classes in acupuncture, herbal medicine, and other alternative medical practices. It is useful to keep in mind that NDs treat patients holistically, and can refer patients to MDs for specialized care.
- **Residencies:** NDs are not required to complete residencies, while MDs must complete between three to seven years of residency.⁵¹ The purpose of a residency is to engage in a particular field of practice under the supervision of an experienced physician, and the rigorous work often helps teach new MDs and DOs best practices for when they begin to practice independently.
- **Continuing Education:** NDs in Vermont are undertaking fewer continuing education hours than NDs in all other states except for Wisconsin. This is true for MDs in Vermont as well, who also need only 30 hours biennially for reaccreditation. Moreover, the continuing education programs available for naturopaths are often less relevant to modern health applications than the standard programs for MDs.

Given these educational differences, the State of Vermont can consider several options as part of an effort to address the quality of education and service provided by naturopathic practitioners:

- **Prerequisites and Medical Coursework:** Because NDs in Vermont will have received their degree in another state and moved here to practice, they likely took the NPLEX examination in another state. This means that while some practitioners will have taken additional clinical elective exams, others will have only passed the core sections. Similar to New Hampshire, one option for Vermont is to mandate at least one of the clinical elective exams. With time, an additional state-specific examination can be constructed and administered to newly practicing NDs as a means of quality control.



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- **Residencies:** While NDs are not required to complete residencies, Vermont can create policies that encourage NDs to complete residencies. The Council on Naturopathic Medical Education (CNME) has approved several residency programs around the nation, with one program located in Westminster, VT (Sojourns Community Health Clinic).⁵² Also, the Office of Professional Regulation can partner with the Vermont Association of Naturopathic Physicians to create more ND internships and residencies at naturopathic clinics in the state. Not only will this bring in more primary care naturopathic practitioners to Vermont, but also the mentorship of successful NDs can ensure that naturopathic practices are better standardized across the state.
- **Continuing Education:** To better match the standards set in other states, Vermont can consider increasing the mandated number of continuing education hours. NDs need to be kept up to date on the most recent peer-reviewed research on homeopathy and other alternative medical techniques. As a comparison, New Hampshire currently requires NDs to complete 100 hours biennially. This could be supplemented by an increased scope of courses offered in naturopathic continuing education programs to include topics that will aid further MD/ND collaboration.

Furthermore, the Office of Professional Regulation in conjunction with VANP can promote continuing education programs that share information about cutting-edge medical innovation and procedures among MDs and NDs. Academic partners could take the lead in designing joint MD and ND continuing education programs and conferences, and the increased interaction between the two professions may help to bridge the differences in education.

- **Integration of Alternative Medicine:** In order to attract more primary care NDs to the state, hospitals can develop strategies for integrating alternative medicine divisions. Increased integration may help regulate the efficacy of naturopathic treatments used on patients and improve bilateral understanding between MD and ND practices. This process has been observed previously among DOs and MDs who have increased collaboration in recent years.

4.2 Addressing NDs as Insured Primary Care Providers

Given the current shortage of primary care in Vermont, there are many benefits to improving the integration of NDs in the existing healthcare infrastructure. Despite potential gaps in education, naturopathic physicians have the potential to be among the most effective players in Vermont's primary care system. The naturopathic philosophy of patient-driven health gives NDs a critical role in the success of the Blueprint for Health community health teams. By creating holistic treatment plans for patients that includes naturopathic and allopathic medicine, the program aims to lower healthcare costs by



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reducing the number of expensive operations and medications. In synergizing naturopathic and specialist care, the team-care approach allows the patient to receive the best overall treatment appropriate to his or her specific medical condition. Many NDs currently operate joint clinics with MDs, and have experience in bridging specialized care with holistic primary care, providing a valuable perspective to the Blueprint for Health. Increased integration of NDs into hospitals and increased ND internships and residencies can help attract more primary care providers to Vermont while providing a quality control measure because of supervision by MDs or experienced NDs.

A challenge that naturopathic practitioners continue to face is setting up contracts with insurance companies to become in-network providers, and establishing referral networks with hospitals to guarantee that seriously ill patients get the treatments they need. With the continued implementation of Act 96, The State of Vermont may choose to work with insurance companies to promote the inclusion of NDs, as equal insurance coverage is a necessary part of the Blueprint for Health teams.



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APPENDICES

Appendix A. VT ND Database

Name	Locale	Accreditation	Previous Degree	College	Clinic/Company
<i>from the AANP directory:</i>	http://www.naturopathic.org/AF_MemberDirectory.asp				
Bernie Noe	Montpelier, VT	Bastyr University	Bachelor of Science in electrical engineering	Virginia Tech	Green Mountain Natural Health
Lydia Faesy	Montpelier, VT	Bastyr University			
Melanie Meyer	Montpelier, VT	University of Bridgeport			Well-Natured PLLC
Lorilee Schoenbeck	South Burlington, VT	National College of Natural Medicine	BA in Nutrition	Goddard College	Mountain View Natural Medicine
Jessica Stadtmayer	South Burlington, VT	National College of Natural Medicine	Bachelor of Arts	The University of Minnesota - Twin Cities	Mountain View Natural Medicine
Catharine Guaraldi	South Burlington, VT	National College of Natural Medicine	BA in Italian and Biochemistry	Middlebury College	Mountain View Natural Medicine
Bill Warnock	Shelburne, VT	Bastyr University	BS in Botany	University of Washington	Champlain Center for Natural Medicine
Michelle Haff	Burlington, VT	Southwest College of Naturopathic Medicine	Bachelor of Arts	Smith College	Avalon Natural Medicine
Jen Williamson	Burlington, VT	Southwest College of Naturopathic Medicine	Bachelor of Science	Gannon University	
Teri March	Burlington, VT	Southwest College of Naturopathic Medicine			Maplewood Natural Medicine
Susan B. Kowalsky	Norwich, VT	National College of Natural Medicine			
Greg Burkland	Rutland, VT	Bastyr University			Sanctuary Integrative Medicine
Rebecca Chollet	Hartland, VT	Bastyr University		Middlebury College	Upper Valley Natural Health Center
Samantha Kane Eagle	Brattleboro, VT	University of Bridgeport	Masters Degree in Human Nutrition	University of Bridgeport	Biologic Integrative Healthcare
Liz Kaltman	Brattleboro, VT	National College of Natural Medicine	MPH	University of California at Berkeley	Biologic Integrative Healthcare
Jody E. Noé	Brattleboro, VT	Bastyr University	MS	Old Dominion University	Biologic Integrative Healthcare
Cheryl D. Proctor	Brattleboro, VT	Canadian College of Naturopathic Medicine in Toronto	Masters Degree in Ecopsychology	Naropa University	Biologic Integrative Healthcare
Mary Louise Bove	Brattleboro, VT	Bastyr University	Diploma of Phytotherapy/Herbal Medicine	School of Phytotherapy in Great Britain	Brattleboro Naturopathic Clinic
Thomas DeClemente	Brattleboro, VT	Bastyr University			Brattleboro Naturopathic Clinic
Emily Maiella	Brattleboro, VT	Bastyr University	BS	University of Massachusetts, Amherst	Brattleboro Naturopathic Clinic
Michele Sayball	Brattleboro, VT	Bastyr University	BS in Herbal Medicine	Bastyr University	Brattleboro Naturopathic Clinic
Glenn R. Finley	Manchester Center, VT	National College of Natural Medicine			New Leaf Holistic Health (satellite clinic)
Ileana Tecchio	Bennington, VT	National College of Natural Medicine			New Leaf Holistic Health (satellite clinic)
<i>from the VANP directory:</i>	http://www.vanp.org/member_directory.php				
Anna R. Abele	Brattleboro, VT	Bastyr University	BA in Psychology	Mariboro College	A Natural Path
Thauna Abrin	East Hardwick, VT	National College of Natural Medicine	BA in Anthropology	University of California at Santa Cruz	Whole Family Wellness
Gabriel T. Archdeacon	Montpelier, VT	National College of Natural Medicine	BA in Biotechnology	Rochester Institute of Technology	Tree of Life Medicine
Susanne Booth	Westminster, VT				Sojourns Community Health Clinic
Alexis Chesney	Westminster, VT	University of Bridgeport	MS in Acupuncture	University of Bridgeport Acupuncture Institute	Sojourns Community Health Clinic
Clif Steinberg	Westminster, VT				Sojourns Community Health Clinic
Korey DiRoma	Bennington, VT	Southwest College of Naturopathic Medicine	BS in Molecular and Cellular Biology	University of Arizona	The Center for Integrative Health and Healing
Kirsten Carle	Bennington, VT	National College of Natural Medicine	BS in Biology	Marist College	The Center for Integrative Health and Healing
Jennifer Edlund	St. Albans, VT	Bastyr University			
Casey Lynn Ellison	Montpelier, VT	Bastyr University	BA in Fine Arts	University of Colorado at Boulder	Vermont Natural Health
Maxine Fidler	Middlebury, VT	Bastyr University	Masters Degree in Acupuncture and Oriental Medicine	Bastyr University	Acorn Natural Medicine
Jillian Finker	Bomoseen, VT	Southwest College of Naturopathic Medicine			Finker Wellness, Inc.
Molly Fleming	Burlington, VT	National College of Natural Medicine	BS in Biology and Psychology	Southern Oregon State College	Health Resolutions
Donna Powell	Burlington, VT				Health Resolutions
Michael Friedman	Montpelier, VT	Canadian College of Naturopathic Medicine			Association for the Advancement of Restorative Medicine
Joshua Green	Burlington, VT	National College of Natural Medicine	BS in Whole Foods Nutrition		Vermont Natural Family Medicine
Ani Hawkinson	Putney, VT	University of Bridgeport	PhD in Linguistics	University of California, Berkeley	HeartSong Health In Community, Inc.



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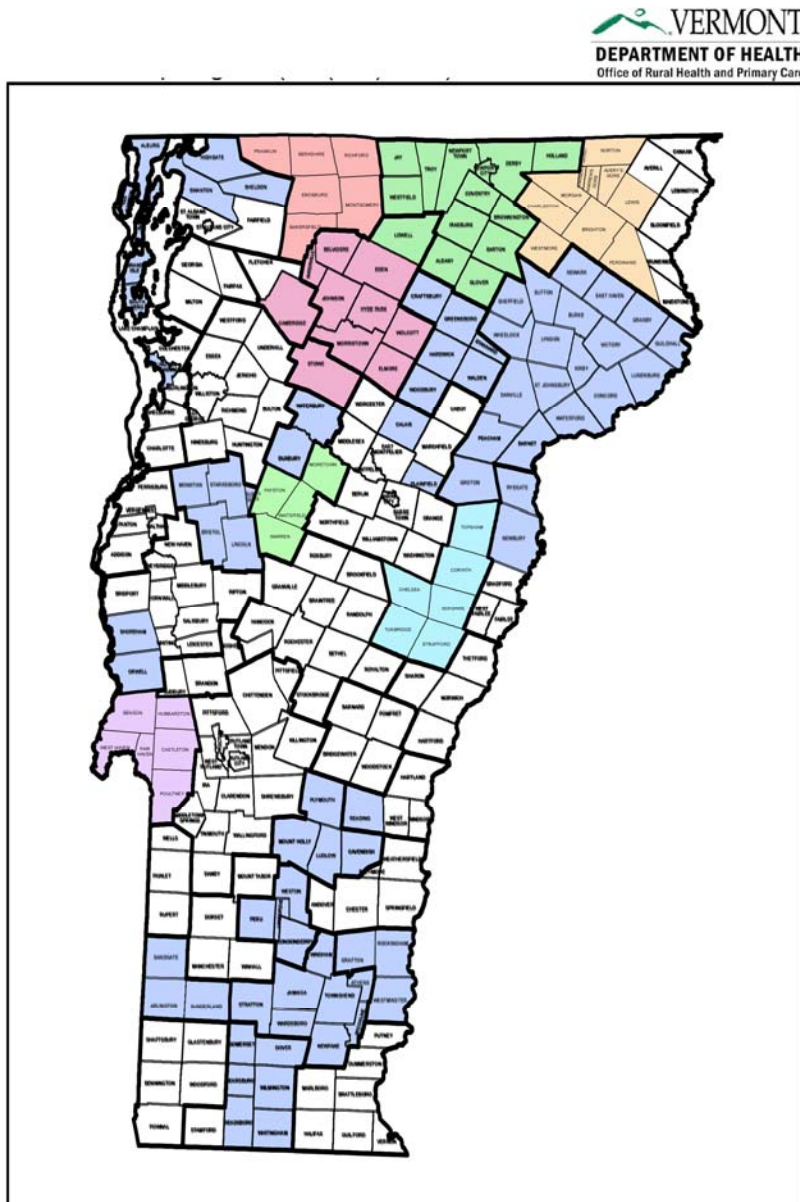
Appendix A Continued. VT ND Database

Christopher Hollis	Randolph, VT	National College of Natural Medicine	MS in Oriental Medicine	National College of Natural Medicine	Integrative Health
Erica Koch	Randolph, VT	National College of Natural Medicine	Master of Education	Rutgers University	Integrative Health
Aimee Knauff	Chester, VT	Southwest College of Naturopathic Medicine			Chester Community Acupuncture
Amy Voishan Littlefield	South Burlington, VT	National College of Natural Medicine			Vermont Naturopathic Clinic
Sam Russo	South Burlington, VT	Bastyr University	Masters Degree in Acupuncture	Bastyr University	Vermont Naturopathic Clinic
Michael Stadtmauer	South Burlington, VT	National College of Natural Medicine		University of Vermont College of Agriculture and Life Science	Vermont Naturopathic Clinic
Emily Mahar Cannon	Middlebury, VT	National College of Natural Medicine	BA in Biology and Environmental Science	Dartmouth College	Integrated Medicine
Katina Martin	Salisbury, VT	National College of Natural Medicine		Bowdoin College	Salisbury Natural Family Health
Karen Miller-Lane	Middlebury, VT	Bastyr University	Masters Degree in Acupuncture	Bastyr University	Natural Medicine of Vermont, P.C.
Angela J. Robens	Stowe, VT	Bastyr University	Bachelors of Nursing	West Virginia University	Stowe Natural Family Wellness
Laura Senes	Saxtons River, VT	National College of Natural Medicine	BA in Religious Studies	Hamilton College	Rockingham Natural Health Clinic
Rebecca S. Schwartz	Brattleboro, VT	Bastyr University	BA in Biology and Environmental Science	Oberlin College	



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Appendix B. VT Overlay of Areas of Primary Care Need





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Appendix C. Database of ND-Granting Institutions

Curriculum Comparison Between Accredited Naturopathic Medical Schools

All licensed naturopathic physicians complete the equivalent of four years of undergraduate work and then four years at an accredited naturopathic medical college. There are two such colleges in Canada*, and four in the United States. Topics of study generally include systems physiology, pathology, nutrition, pharmacology, health counseling, business management, and naturopathic history practices.

	Bastyr University	Boucher Institute of Naturopathic Medicine*	Canadian College of Naturopathic Medicine*	National College of Natural Medicine	National University of Health Sciences	Southwest College of Naturopathic Medicine & Health Sciences	University of Bridgeport College of Naturopathic Medicine
<u>4-Year Course Design</u>	Fall, Winter, and Spring for Years 1 and 2 with about 345 credit hours per quarter; Summer, Fall, Winter, and Spring for Years 3 and 4 with much fewer core credits but with preceptorship and more clinical hours	Five categories of instruction (Biomedical Sciences, Professional Development, Naturopathic Therapeutic Modalities, Clinical Science, and Clinical Practice and Integration) interwoven into four years	Biomedical Sciences, Clinical Sciences, and Art and Practice of Naturopathic Medicine are interwoven into four years with a 3rd year summer	Fall, Winter, and Spring for Years 1,2, and 3 with 300-400 credit hours per quarter, but many more clinical rotations in the third year Summer, Fall, Winter, and Spring for Year 4 with nearly just clinical rotations	Three phases (Basic Sciences, Clinical Sciences, and Clinical Practice) with 4 trimesters each that can be completed in 3 years and four months if continuous	Three quarters in Years 1 and 4 and four quarters in Years 2 and 3 with clinical clerkships in Years 3 and 4	8 semesters of courses with fieldwork and clinical work during several summer terms
<u>Core Credit Hours</u>	3,130	3,500	3,000	2,304	109, 107, and 35 credits in each phase, respectively Applied Southwest College credits-to-credit hours calculation	3,720	3,519
<u>Clinical Training Credit Hours</u>	1,208	1,400	1,200	1,548	10 hours per course credit, 20 hours per clinical credit	1,340	1,396
<u>Elective/Other Credit Hours</u>	88			756			
<u>Total Credit Hours</u>	4,426	4,900	4,200	4,608	2,860	5,060	4,915
<u>Prior Coursework Required (# of semesters)</u>	Algebra: 1 Chemistry: 2 Organic Chemistry: 2	Biology: 2 Chemistry: 2 Biochem: 1	Biology: 2 Physiology: 2 Biochemistry: 1	Mathematics: 1 Chemistry: 2 Organic Chemistry/Biochemistry: 2	English: 2 Psychology: 1 Social Sciences/Humanities: 5	Biology: 4 Organic Chemistry: 1 Biochemistry: 1	Communication/Language: 2 Psychology: 1 Social Science/Humanities: 5
	Biology: 2 Physics: 1 Psychology: 1	Psychology/Counseling: 2 English/Humanities: 2	Organic Chemistry: 1 Psychology: 2 Humanities: 2	Biology: 2 Physics: 1 Social Science: 2 English/Humanities: 2	Biology: 2 Chemistry: 2 Organic Chemistry/Biochemistry: 2 Physics/Statistics/Biochemistry: 2	Biology: 2 English: 2 Humanities: 2	Biology: 2 Chemistry: 2 Organic Chemistry: 2 Physics: 1



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