Chapter 1

The Chiropractic Profession

One of health care's fastest growing professions, chiropractic has earned recognition for its remarkable effectiveness and has thrived along with a growing public awareness of and desire for natural, nonsurgical, and drugless methods of treatment.

Chiropractic is the nation's third largest primary health care profession, surpassed in numbers only by practitioners of medicine and dentistry. As of this writing, there are approximately 62,000 chiropractors in North America alone, with many more throughout the world. An estimated 7-to-16 percent of Americans consult a chiropractor for treatment each year (American Chiropractic Association 1998).

All 50 states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands officially recognize chiropractic as a health profession. The following list has been adapted from the World Federation of Chiropractic's listing of the countries in which national health authorities recognize chiropractic.

African Region
Botswana*
Ethiopia**
Kenya**
Lesotho*
Mauritius**
Namibia*
Nigeria**
South Africa*
Swaziland*
Zimbabwe*

Asian Region
China-Hong Kong*
Japan**
Malaysia**
Philippines*
Singapore**
Thailand***

Central American Region
Belize**
Costa Rica**
El Salvador**
Guatemala**
Honduras**
Panama*

European Region
Belgium***
Croatia**
Denmark*
Finland**
France***
Germany**
Hungary**
Iceland*
Ireland**
Italy***
Liechtenstein*
Netherlands**
Norway*
Portugal***
Russian Federation**
Slovakia**
Slovenia**
Sweden*
Switzerland*
United Kingdom*

Mediterranean Region
Cyprus*
Egypt**
Greece**
Israel**
Jordan**
Lebanon**
Libya**
Morocco**
Qatar**
Turkey**

North American Region
Bahamas**
Barbados*
Bermuda**
British Virgin Islands**
Canada*
Cayman Islands**
Jamaica**
Leeward Islands*
Mexico*
Puerto Rico*
Trinidad and Tobago**
United States*
U.S. Virgin Islands**

Pacific Region
Australia*
Fiji**
Guam*
New Caledonia**
New Zealand*
Papua New Guinea**

Persian Gulf Region
Saudi Arabia*
United Arab Emirates**

South American Region
Argentina**
Bolivia**
Brazil**
Chile**
Colombia**
Ecuador**
Peru**
Venezuela**

*recognized pursuant to legislation
**recognized pursuant to general law
***de facto recognition

Table 1.1. Countries in which Chiropractic is Recognized as a Health Profession (Adapted from Chapman-Smith 1997, 582)

All individual state licensing authorities within the United States recognize chiropractic as a primary health care profession distinct from medicine.

Principles of Chiropractic

Chiropractic is a natural, conservative, medication-free, and nonsurgical form of health care. The writings of Hippocrates (460-370 B.C.), Galen (130-200 A.D.), and even ancient manuscripts of the Egyptians, Hindus, and Chinese reveal some principles common to chiropractic. Its place in modern health care is largely attributed to Dr. Daniel David Palmer who founded the first chiropractic college in Davenport, Iowa, in 1895.

Doctors of chiropractic refer patients to and receive referrals from medical practitioners, and in many instances, chiropractic can provide a viable alternative to drugs and surgery. Chiropractic principles are applicable to a wide range of conditions.

The chiropractic approach to wellness typifies a changing attitude toward health care in the United States. Chiropractic philosophy begins with the principle that an individual's health is determined largely by his or her nervous system and that interference with this system impairs normal functions and lowers the body's resistance to disease. The study of chiropractic includes the mechanisms by which the nervous system may be compressed, stretched, or otherwise irritated and result in aberrant reflexes. Chiropractic practice incorporates techniques for the correction of these pathological mechanisms.

Chiropractic is also based on the premise that the body is capable of achieving and maintaining health through its own natural recuperative powers, provided it receives the necessary ingredients, including proper food, water, adequate rest, exercise, clean air, adequate nutrition, and a properly functioning nervous system.

Chiropractic Case Management

Doctors of chiropractic address various physiological and biomechanical aspects of their patients, including structural, spinal, musculoskeletal, neurological, vascular, nutritional, emotional, somatic, and environmental relationships. Case management of problems in any of these areas may include, but may not be limited to, such procedures as adjustment and manipulation of the articulations and adjacent tissues of the human body, particularly the spinal column. In many cases, spinal radiographs and other diagnostic procedures, such as physical examination and questions concerning medical history, diet, and lifestyle, are used to identify the source of a patient's complaint.

Central to chiropractic is the corrective structural adjustment or manipulation of vertebrae or pelvic segments which have become displaced and/or have restricted movement, in some cases with signs of neurological and/or vascular involvement. Chiropractors use several terms to describe this concept, most commonly *joint dysfunction* and/or *spinal subluxation*. The causative factors resulting in these joint dysfunctions (static or dynamic) include various stressors or congenital anomalies.

By manually manipulating vertebrae into their normal physiological relationship, chiropractic practitioners relieve interference with the nervous system along with accompanying symptoms. This correction of joint dysfunction reestablishes normal mobility and comfort. A chiropractic corrective adjustment requires specially acquired palpation skills to deliver a precise, delicate maneuver to achieve a predetermined goal.

Over time, chiropractic methods evolved along with medical science. Some studies indicate that, in addition to orthopedic conditions such as backache, headache, and whiplash, those conditions that involve organs and internal glands of the body might also respond to chiropractic adjustments (Plaugher 1993). In many instances, modern chiropractic care includes the supplementing of spinal adjustments with a variety of extremity joint adjustments or certain physiotherapeutic modalities, exercise, and nutritional counseling.

Chiropractic Requisites

By law, licensed chiropractors are entitled to use the titles "Doctor of Chiropractic," "D.C.," or "Chiropractic Physician." The chiropractic physician is engaged in the treatment and prevention of disease as well as in the promotion of public health and welfare. As such, doctors of chiropractic must meet stringent testing, educational, and performance standards before being granted a license to practice.

Currently, there are four major steps an individual must complete in order to become a practitioner of chiropractic (Figure 1.1). Completion of these same four steps formed the qualifications for many respondents to the NBCE Job Analysis Survey of Chiropractic Practice. An individual chiropractic practitioner must generally have: 1) successfully completed a minimum of two years of pre-professional college education, 2) graduated from chiropractic college, 3) passed the National Board or other examinations--such as ethics and jurisprudence examinations--required by the state in which he/she practices, and 4) met individual state chiropractic licensing requirements.

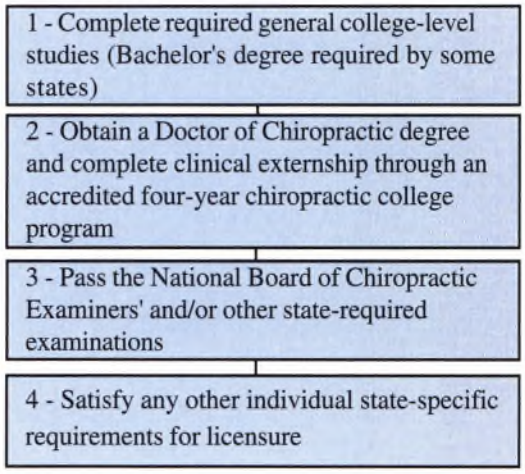

Figure 1.1.

Steps Leading to Chiropractic Practice

Education

Government inquiries, as well as independent investigations by medical researchers, have affirmed that today's chiropractic training is of equivalent standard to medical training in all pre-clinical subjects (Chapman-Smith 1988). A doctor of chiropractic's training generally requires a minimum of six years of college study and an externship prior to entering private practice.

In the United States, the primary accrediting agency for the chiropractic profession is the Council on Chiropractic Education (CCE) Commission on Accreditation, which is authorized by the United States Department of Education to accredit chiropractic programs and institutions. Currently, sixteen chiropractic colleges in the U.S. are accredited, along with six programs outside of the U.S. through affiliated councils (in Australia, Canada, England, and France). A chiropractic program in Japan is currently pursuing accreditation.

To ensure that high standards in education are maintained, all accredited chiropractic colleges must meet stringent requirements. Criteria address, among other areas, the program's mission and goals,

effectiveness in achieving the mission and goals, an on-going system of evaluation and planning, incorporation, governance, administration, faculty and staff, learning resources, finance, student services, and doctor of chiropractic degree program curriculum. Each program's curriculum must be comprised of a minimum of 4,200 hours of semester/quarter course credits, and course offerings must address specific subjects set out by the CCE (Council on Chiropractic Education 1998).

In addition, incoming students must furnish proof of having acquired at least 60 semester hours, or equivalent, of college credit leading to a baccalaureate degree at an institution, or institutions, accredited at the college level by an accrediting body that has been nationally recognized by the U.S. Department of Education. Applicants must have a cumulative grade point average of at least 2.50 on a 4.00 scale. In the chemistry, physics, and biology classes required for admission, no grade below 2.00 on a 4.00 scale is acceptable, and only grades earned in a course and its corresponding laboratory may be averaged. Following are the required minimum prerequisites:

Communication and/or Language Skills...6 semester hours
Psychology...3 semester hours
Social Sciences or Humanities...15 semester hours
Biological Sciences with Laboratory...6 semester hours
General or Inorganic Chemistry with Laboratory...6 semester hours
Organic Chemistry with Laboratory...6 semester hours
Physics with Laboratory...6 semester hours

According to the 1997-1998 *Chiropractic College Directory,* the academic focus of 83.1% of the students entering chiropractic college was Life Science/Biology. The remaining 16.9% had backgrounds of liberal arts, business/economics, physical science/engineering, and education (McNamee 1997, 6).

The chiropractic curriculum typically consists of either four or five academic years. In a typical trimester-based chiropractic program, courses that a first-year chiropractic student can expect to study are the following:

General Anatomy
Histology
Chiropractic Principles
Palpation
Human Physiology
Chiropractic Procedures
Introduction to Physical Examination Skills
Human Biochemistry
Clinical Chiropractic
Neuroanatomy and Neurophysiology
Normal Radiographic Anatomy
Fundamentals of Nutrition
Functional Anatomy/Biomechanics

Second-year coursework often includes the following:

- Pharmatoxicology
- Pathology
- Chiropractic Procedures
- Clinical Orthopedics and Neurology
- Community Health
- Clinical Nutrition
- Practice Management
- Differential Diagnosis
- Clinical Microbiology
- Chiropractic Principles
- Physics and Clinical Imaging
- Nutritional Assessment
- Physiological Therapeutics
- Research Methods
- Imaging Interpretation
- Applied Clinical Chiropractic

Third-year coursework often includes the following:

- Integrated Chiropractic Clinical Application
- Chiropractic Principles
- Radiological Positioning and Technique
- Clinical Application of Manual Procedures
- Clinical Internship
- Clinical Psychology
- Pediatrics
- Clinical Laboratory Clerkship
- Physiological Therapeutics
- Practice Management
- Imaging Interpretation
- Differential Diagnosis
- Dermatology
- Obstetrics/Gynecology
- Geriatrics

The fourth year often consists of a Clinical Externship. The Doctor of Chiropractic (D.C.) degree is awarded upon graduation, signifying successful completion of the required program.

Specialization

Postdoctoral training is available in a variety of clinical disciplines and specialties. Accredited U.S. chiropractic colleges offer specialty training through either part-time postgraduate education programs or full-time residency programs. Postgraduate education programs are available in the following areas:

- Family Practice
- Clinical Neurology
- Sports Chiropractic
- Nutrition
- Industrial Consulting
- Applied Chiropractic Sciences
- Orthopedics
- Pediatrics
- Rehabilitation
- Radiology

Residency programs include:

Radiology	Orthopedics
Family Practice	Clinical Sciences

Both postgraduate and residency programs lead to eligibility to sit for competency examinations offered by specialty boards recognized by the American Chiropractic Association, the International Chiropractors' Association, and the American Board of Chiropractic Specialties. Specialty boards may confer "Diplomate" status in a given area of focus upon successful examination. The most common specialty certifications are chiropractic orthopedics and sports chiropractic (Cherkin et al. 1997).

National Board Exams

In addition to holding a D.C. degree, a chiropractic practitioner is generally required to pass the National Board examinations prior to applying to a state for evaluation and licensure. Some of the required examinations are taken prior to graduation from a chiropractic college.

The National Board of Chiropractic Examiners (NBCE) is the international testing agency for the chiropractic profession. NBCE examinations are administered at 18 chiropractic college test sites.

In its assessment role, the NBCE develops, administers, and scores standardized examinations which assess knowledge and higher-level cognitive abilities in various basic science and clinical science subjects relative to chiropractic, and also assess problem-solving and psychomotor skills. The NBCE examinations currently consist of the following:

PART I	Six basic science areas (general anatomy, spinal anatomy, physiology, chemistry, pathology, and microbiology and public health)
PART II	Six clinical science areas (general diagnosis, neuromusculoskeletal diagnosis, diagnostic imaging, principles of chiropractic, chiropractic practice, and associated clinical sciences)
PHYSIOTHERAPY	An elective single-subject examination
PART III	Nine clinical competency areas (case history, physical examination, neuromusculoskeletal examination, radiological examination, clinical laboratory and special studies examination, diagnosis or clinical impression, chiropractic techniques, supportive techniques, and case management)
PART IV	An objective structured clinical examination which tests radiological diagnosis and interpretation, chiropractic technique, and case management (including patient-centered skills, clinical judgement, and patient care)
SPEC (Special Purposes Examination for Chiropractic)	This examination is designed for previously licensed individuals and is primarily used for reciprocity/endorsement; however, it is also utilized in cases of revoked or suspended licenses or any special circumstances requiring an objective assessment of clinical knowledge.

Scores from NBCE examinations are made available to licensing agencies within and outside the United States.

State or National Licensing

Approximately 800 occupations in the United States are regulated by state licensing authorities. Legislation regulating the practice of chiropractic is established in the United States and in over 75 nations worldwide.

The chiropractic regulatory agency that exists in each state (or nation) has an examining board on which doctors of chiropractic, consumer members, and other healing arts professionals serve. These individuals assess the qualifications of those who wish to administer chiropractic care within their jurisdictions. The requirements for chiropractic licensure vary from state to state (and from nation to nation).

To assist the various states in assessing candidates for licensure, NBCE examinations are administered semi-annually according to a published schedule. Individuals who are in a chiropractic educational system or who have completed a chiropractic educational program take the NBCE examinations. Transcripts of scores from National Board examinations are utilized by licensing authorities in evaluating the qualifications of candidates for licensure.

A directory of state-mandated requirements and procedures is compiled and published annually by the Federation of Chiropractic Licensing Boards (FCLB). Established in 1933, the FCLB promotes unified standards for chiropractic licensing boards and colleges and maintains a computerized record of chiropractic licensure violations and disciplinary actions nationwide. The FCLB also provides a forum in which state licensing board members may meet and address common areas of interest and concern, thereby strengthening the licensing process.

Reimbursement for Chiropractic Services

Chiropractic care is covered by private insurance plans/programs and by most automobile insurance companies. Medicare, medicaid, and various managed care programs including preferred provider organizations (PPOs) and health maintenance organizations (HMOs) also offer chiropractic benefits. Most state workers' compensation systems include chiropractic care. The federal workers' compensation system, the Longshore Harbor Workers' Act, and other federal employees' health benefits programs cover chiropractic care (Cherkin et al. 1997).

In 1995, a congressional mandate to determine the feasibility and advisability of providing chiropractic care for all military personnel and their families was enacted. Chiropractic services were then integrated into the military health care system at ten installations throughout the United States. This demonstration project was successful in terms of integration, acceptance, and use of chiropractic services and was later extended to September 1999, with three additional sites participating in a randomized controlled trial comparing outcomes of chiropractic and medical care for selected musculoskeletal conditions. The three new sites are the National Naval Medical Center, Bethesda, Maryland, the Walter Reed Army Medical Center, Washington D.C., and the Wilford Hall Medical Center, San Antonio, Texas (Chapman-Smith 1998).