

Meeting the Nation's Primary Care Needs

Current and Prospective Roles of
Doctors of Chiropractic and Naturopathic Medicine,
Practitioners of Acupuncture and Oriental Medicine,
and Direct-Entry Midwives

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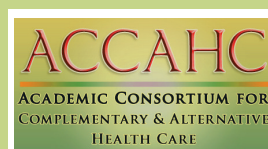
John Weeks

*Academic Consortium for
Complementary and Alternative Health Care*

*Developed through the Primary Care Project of the
Academic Consortium for Complementary and Alternative Health Care*

In Collaboration with the:
Association of Accredited Naturopathic Medical Colleges
Association of Chiropractic Colleges
Council of Colleges of Acupuncture and Oriental Medicine
Midwifery Education Accreditation Council

December 2013



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Each of the discipline-specific chapters was written by authors recommended through the related organization noted. The content of the chapter has been endorsed by that organization. The paper has been endorsed by the Board of Directors of the Academic Consortium for Complementary and Alternative Health Care (ACCAHC).

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Executive Summary

Context: The United States faces a growing shortage of primary care providers. An emergent theme in many, if not most, of the proposals to address this need is the importance of examining the use of non-medical doctor (M.D.) practitioners. However, workforce analyses and healthcare delivery practices have not to date engaged the potential contributions of four licensed disciplines that are already frequently accessed by significant numbers of people as their first choice, primary provider of care. These are the doctors of chiropractic and naturopathic medicine, practitioners and doctors of acupuncture and Oriental medicine, and direct-entry midwives.

Goal: The goal of this paper is to open a dialogue to assist policymakers, regulators, third-party payers, delivery system administrators, practitioners, and other concerned parties as well as the disciplines themselves in considering the optimal use of these professions as part of the nation's primary care matrix.

Methods: The Board of Directors of the Academic Consortium for Complementary and Alternative Health Care (www.accahc.org), the membership of which includes most of the councils of colleges, accreditation agencies and certification and testing organizations from these four disciplines, endorsed the project and named the project directors. These co-directors created partnerships with councils of colleges from three of the professions and the accrediting agency from the fourth field. Each organization named a writing team to represent it on the project. These teams collaborated with the co-directors to set the dimensions of the discipline-specific chapters which would guide the writing teams. The teams developed a template of fourteen fields to be addressed within 5500 words. At least one field worked directly with its national professional organization. Each discipline specific chapter was subsequently endorsed by the relevant partner organizations. The analysis and recommendations were in turn endorsed by the ACCAHC Board of Directors prior to publication.

Findings: The approximately 107,500 licensed practitioners in these fields belong to disciplines with an existing, strong, self-identification as providers of primary care. Most of their clinical encounters are the result of patients seeking out practitioners of these disciplines as their initial choice for dealing with a health concern or problem. The existing accreditation standards for each of the disciplines recognize, to at least some significant degree, a broad scope of practice with educational requirements that encompass prevention and public health and treatment of acute conditions, as well as the management and co-management of chronic conditions. In numerous jurisdictions, some of these disciplines are already legally recognized as primary care providers. Some are currently included in medical home planning and programs to stimulate provision of primary care services to the underserved. As such, these disciplines presently relieve some of the burden on the primary care system. Generally unrecognized by the conventional medical community and workforce planners, these practitioner groups represent a hidden dimension of primary care in the United States.

Recommendations from the Project Co-Directors as Endorsed (abridged*):

To the Leaders of the Disciplines of Chiropractic, Naturopathic Medicine, Acupuncture and Oriental Medicine and Direct-Entry Midwifery:

Clarify your discipline's relationship with primary care in conventional medicine by identifying gaps in training and specify how these gaps might be addressed. Explicitly distinguish those in the discipline who work in primary care from those who prefer to work as specialists. Promote and engage research that will assist all stakeholders in understanding your discipline's role in helping meet primary care needs.

Specify the extent to which your discipline encompasses a distinct model of primary care, and clarify the unique contribution this approach can make to conventional primary care practice and coordinated care provided in patient-centered medical homes.

To Health Workforce Planners, Healthcare Professionals from Other Fields, Policymakers, Public and Private Funders, Government Agencies, and Other Stakeholders:

Prioritize learning about this hidden dimension of primary care delivery via funding and engaging high quality health services and epidemiological research on those individuals and families whose "first choice" for treatment is a licensed practitioner from one of these four disciplines.

Use and examine the contributions of these practitioners to patient satisfaction, quality of life, and cost in limited population primary care strategies (such as for the birth process, or for back pain) and in patient-centered medical homes. Treat the present inclusion of these practitioners as primary care providers as pilot projects from which all stakeholders can learn.

To All Stakeholders:

Utilize the separate chapters delivered in this project as the basis of more multi-stakeholder, inter-professional working summits where each discipline can further develop a strategy that will help guide these professions into a more appropriate relationship with the nation's primary care matrix. Such a summit would optimally be convened by an independent agency. Recommendations would be bilateral: to the disciplines and to each of the principal stakeholders in the healthcare policy, regulatory, payment and delivery system.

*From the full recommendations endorsed by ACCAHC Board of Directors on page 21

A Note on Names of Members of the Disciplines

Various names are used for professionals in each of these disciplines due to such factors as state requirements, professional associations and personal preferences. Most of those are utilized one or more times in this document.

Acupuncture and Oriental medicine: acupuncturist, practitioner of acupuncture and Oriental medicine, practitioner of traditional Chinese medicine, Oriental medical doctor, and acupuncture physician.

Chiropractic (medicine): chiropractor, doctor of chiropractic, chiropractic doctor, chiropractic physician

Midwifery: midwife, direct-entry midwife, certified professional midwife

Naturopathic medicine: naturopathic physician, naturopathic doctor, naturopathic medical doctor, doctor of naturopathic medicine, naturopath

Introduction, Project Description, Analysis and Recommendations

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Introduction: Context

Many possible solutions have been proposed in response to the growing public awareness of the need for more primary care providers.^{1,2,3,4,5} Family doctors urge strategies to increase the percentage of medical school graduates who will choose primary care specialties.⁶ A Robert Wood Johnson-Institute of Medicine study underscored the emerging role of advanced practice nurses as independent providers of primary care.⁷ Federal policies promoting patient-centered medical homes have been offered as a part of the remedy.⁸ Others have proposed increased training and utilization of physician assistants.⁹

To date no consensus has emerged on any single definition of primary care, much less the most effective or efficient approach to resolving the shortage. Battles erupt, with one stakeholder arguing that another hasn't the appropriate competencies or training.^{10,11} This conceptual and strategic diversity was captured by The Institute for Alternative Futures' "Primary Care Project" which described a wide array of scenarios and responses that might become part of how our nation deals with the need for more and better primary care over the coming decades.¹²

¹ Goodell S, Dower C, O'Neill, E. Primary Care Health Workforce in the United States. Research Synthesis Report No. 22, Robert Wood Johnson Foundation; July 2011.

² Bureau of Health Professions. Physician Supply and Demand: Projections in 2020. Washington, DC: Health Resources and Services Administration; 2006.

³ Petterson, SM, et al. Projecting US Primary Care Physician Workforce Needs: 2010-2025. *Ann Fam Med*. 2012;10:503-509. doi:10.1370/afm.1431

⁴ The Kaiser Family Foundation. Nonfederal primary care physicians per 1000 population, 2008. American Medical Association, Physicians Professional Data. Kaiser Family Foundation; 2008. Web. 10 January 2013. <http://statehealthfacts.org/profile.jsp>

⁵ Institute of Medicine, The Future of Nursing: Leading Change, Advancing Health (2010). Web. 10 January 2013. <http://www.iom.edu/Reports/2010/The-Future-of-Nursing-Leading-Change-Advancing-Health.aspx>.

⁶ Goodell S, Dower C, O'Neill, E. Primary Care Health Workforce in the United States. Research Synthesis Report No. 22, Robert Wood Johnson Foundation; July 2011.

⁷ Petterson, SM, et al. Projecting US Primary Care Physician Workforce Needs: 2010-2025. *Ann Fam Med*. 2012;10:503-509. doi:10.1370/afm.1431

⁸ Primary Care for the 21st Century. (2012). Ensuring a Quality, Physician-led Team for Every Patient. *American Academy of Family Physicians*. Web. 10 January 2013. http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CDsQFjAB&url=http%3A%2F%2Fwww.aafp.org%2Fonline%2Fetc%2Fmedialib%2Faaafp_org%2Fdocuments%2Fmembership%2Fnps%2Fprimary-care-21st-century%2Fwhitepaper.Par.0001.File.dat%2FAAFP-PCMHWhitePaper.pdf&ei=Sg70UM-SD5La8ASV14CACw&usg=AFQjCNFFn91SwkvrHtouf1Z6_KRf4YnVDQ&bvm=bv.1357700187,d.eWU.

⁹ Frame PS, Wetterau NW, Parey B. A model for the use of physician's assistants in primary care. *J Fam Pract*. 1978;Dec;7(6):1195-201.

¹⁰ News Staff, AAFP NewsNow. (Sept 18, 2012). Independent practice authority for NPs threatens to splinter care, undermine PCMH, says AAFP report. Web. 10 January 2013. <http://www.aafp.org/online/en/home/publications/news/news-now/inside-aafp/20120918nppolicyreport.html>.

¹¹ Primary Care for the 21st Century. (2012). Ensuring a Quality, Physician-led Team for Every Patient. *American Academy of Family Physicians*. Web. 10 January 2013. http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CDsQFjAB&url=http%3A%2F%2Fwww.aafp.org%2Fonline%2Fetc%2Fmedialib%2Faaafp_org%2Fdocuments%2Fmembership%2Fnps%2Fprimary-care-21st-century%2Fwhitepaper.Par.0001.File.dat%2FAAFP-PCMHWhitePaper.pdf&ei=Sg70UM-SD5La8ASV14CACw&usg=AFQjCNFFn91SwkvrHtouf1Z6_KRf4YnVDQ&bvm=bv.1357700187,d.eWU.

¹² Institute for Alternative Futures. Primary Care 2025: A Scenario Exploration. Alexandria, VA. January 2012. Web. 10 January 2013. <http://www.altfutures.org/pubs/pc2025/IAF-PrimaryCare2025Scenarios.pdf>.

One theme that has emerged in many, if not most, of the proposals and analysis is the importance of non-medical doctor (M.D.) practitioners in meeting this need for more primary care providers.^{13,14,15} Some studies, reports and workforce experts suggest that non-M.D.s may even be preferable for delivering primary care more effectively and efficiently.^{16,17}

Despite this widely acknowledged need for non-M.D.s to assume a role in delivering primary care services, potential contributions from roughly 107,500¹⁸ licensed members of the health professions workforce have rarely been explored by workforce analysts and policymakers. These health professionals hail from four distinct, licensed disciplines. The education for each of these professions meets standards set by a US Department of Education-recognized accrediting agency. Each is included by statute as part of the U.S. healthcare workforce under the terms of the Affordable Care Act.¹⁹

Perhaps most notably, in an era when the healthcare delivery system is struggling to define and create “patient-centered” approaches to care, each of these professions is already typically accessed directly by patients without prior referral. These health professionals are frequently used by patients to oversee their care, facilitate appropriate referrals and guide them through the co-management of a variety of health problems, including some complex chronic conditions.^{20,21} For these patients, these health professionals are already, for at least some conditions, effectively their first choice, primary providers of care.

The professions that together constitute this workforce are: chiropractic (chiropractic medicine), naturopathic medicine, acupuncture and Oriental medicine (AOM), and direct-entry (certified professional) midwifery. US Department of Labor definitions through the O-Net resource recognize the first two professions as doctoral level “physicians.”^{22,23} A subset of the AOM group is also presently educated at a doctoral level.²⁴ Patient satisfaction with care from members of these disciplines is

¹³ *Primary Care Workforce Facts and Stats No. 2: The Number of Nurse Practitioners and Physician Assistants Practicing Primary Care in the United States*. AHRQ Publication No. 12-P001-3-EF, October 2011. Agency for Health Care Policy and Research, Rockville, MD. Web. 10 January 2013. <http://www.ahrq.gov/research/pcwork2.htm>.

¹⁴ Goodell S, Dower C, O'Neill, E. Primary Care Health Workforce in the United States. Research Synthesis Report No. 22, Robert Wood Johnson Foundation; July 2011.

¹⁵ Institute of Medicine, *The Future of Nursing: Leading Change, Advancing Health* (2010). Web. 10 January 2013. <http://www.iom.edu/Reports/2010/The-Future-of-Nursing-Leading-Change-Advancing-Health.aspx>.

¹⁶ Cooper RA, Getzen TE. The coming physician shortage. *Health Affairs*. 2002;21(2):296-299.

¹⁷ Institute of Medicine, *The Future of Nursing: Leading Change, Advancing Health* (2010). Web. 10 January 2013. <http://www.iom.edu/Reports/2010/The-Future-of-Nursing-Leading-Change-Advancing-Health.aspx>

¹⁸ Goldblatt E, Snider P, Quinn S, Weeks J. *Clinicians' and Educators' Desk Reference on the Licensed Complementary and Alternative Healthcare Professions*. Seattle, Washington: Academic Consortium for Complementary and Alternative Health Care; 2009.

¹⁹ Weeks J. *Reference Guide: Language & Sections on CAM and Integrative Practice in HR 3590/Healthcare Overhaul*. May 2010. Web. 10 January 2013. http://theintegratorblog.com/site/index.php?option=com_content&task=view&id=658&Itemid=189.

²⁰ Cherkin DC, Deyo RA, Sherman KJ, Hart LG, Street JH, Hrbek A, Davis RB, Cramer E, Milliman B, Booker J, Mootz R, Barassi J, Kahn JR, Kaptchuk TJ, Eisenberg DM. Characteristics of visits to licensed acupuncturists, chiropractors, massage therapists, and naturopathic physicians. *J Am Board Fam Pract*. 2002;15:463–72. Web. 10 January 2013. <http://www.jabfm.com/content/15/6/463.full.pdf>.

²¹ Goldblatt E, Snider P, Quinn S, Weeks J. *Clinicians' and Educators' Desk Reference on the Licensed Complementary and Alternative Healthcare Professions*. Seattle, Washington: Academic Consortium for Complementary and Alternative Health Care; 2009.

²² Summary Report for Chiropractors. 29-1011.00 O-NET Online. Under the sponsorship of the US Department of Labor/Employment and Training Administration (USDOL/ETA) through a grant to the North Carolina Department of Commerce. Web. 10 January 2013. <http://www.onetonline.org/link/summary/29-1011.00>.

²³ Summary Report for Naturopathic Physicians. 29-1199.04 O-NET Online. Under the sponsorship of the US Department of Labor/Employment and Training Administration (USDOL/ETA) through a grant to the North Carolina Department of Commerce. Web. 10 January 2013. <http://www.onetonline.org/link/summary/29-1199.04>.

²⁴ Accreditation Commission for Acupuncture and Oriental Medicine. Interim Guidelines for the Doctoral Eligibility Report. Originally issued 2005; revised 2008. Web. 10 January 2013. <http://acaom.org/documents/interim-daomelig-032808db.pdf>.

typically high relative to that for conventional care.^{25,26,27,28,29} Given this reality, those concerned with the future of primary care would be remiss not to consider how these established professions might help meet the nation’s primary care needs.

The goal of this project is to open a dialogue that will assist policymakers, healthcare practitioners and other concerned parties in discovering the optimal use of these disciplines as part of the nation’s primary care matrix.

Table 1: Emergence of the Acupuncture and Oriental Medicine, Chiropractic, Direct-Entry Midwifery and Naturopathic Medical Professions

| Profession | Accrediting Agency Established | US Department of Education Recognition | Recognized Schools or Programs | Standardized National Exam Created | State Regulation* | Licensed Practitioners |
|-------------------------|--------------------------------|--|--------------------------------|------------------------------------|-------------------|------------------------|
| Practitioners of AOM | 1982 | 1990 | 61 | 1982 | 44 states | 28,000 |
| Chiropractic Doctors | 1971 | 1974 | 15 | 1963 | 50 states | 72,000 |
| Direct-entry Midwives | 1991 | 2001 | 10 | 1994 | 26 states | 2000 |
| Naturopathic Physicians | 1978 | 1987 | 7 | 1986 | 16 states | 5500 |

* For chiropractors and naturopathic physicians, this category uniformly represents licensing statutes; for acupuncture, a few have certification and registration.

Source: Updated from *Clinicians and Educators Desk Reference on the Licensed Complementary and Alternative Health Care Professions*, page 9. ACCAHC (2009)

²⁵ Hsu C, Bluespruce J, Sherman K, Cherkin D. Unanticipated benefits of CAM therapies for back pain: an exploration of patient experiences. *J Altern Complement Med.* 2010 Feb;16(2):157-63. doi: 10.1089/acm.2009.0188

²⁶ Gemmell HA, Hayes BM. Patient satisfaction with chiropractic physicians in an independent physicians’ association. *J Manipulative Physiol Ther.* 2001 Nov-Dec;24(9):556-9.

²⁷ Puget Sound Health Alliance. (2012). Comparing Local Health Care in Puget Sound. 2012 Community Checkup Overview. Your Voice Matters: the Region’s First Comprehensive Patient Experience Survey. Scores for Bastyr Clinic. Web. 10 January 2013. http://www.wacommunitycheckup.org/Media/Default/Documents/psha_patient_experience_snapshot.pdf.

²⁸ Johnson KC, Daviss, BA. Outcomes of planned home births with certified professional midwives: large prospective study in North America. *BMJ.* 2005;330;1416- doi:10.1136/bmj.330.7505.1416

²⁹ Cassidy, CM. Chinese medicine users in the United States. Part I: Utilization, satisfaction, medical plurality. *J Altern Complement Med.* 1998 Spring;4(1):17-27.

Project Sponsorship, Leadership and Partners

The sponsor and organizer of the project that created this white paper is the Academic Consortium for Complementary and Alternative Health Care (ACCAHC – www.accahc.org). The vision of ACCAHC, a 501(c) 3 nonprofit, charitable organization, is of “... a healthcare system that is multidisciplinary and enhances competence, mutual respect, and collaboration across all healthcare disciplines. This system will deliver effective care that is patient centered, focused on health creation and healing, and readily accessible to all populations.”

ACCAHC’s core membership consists of the councils of colleges, US Department of Education-recognized accrediting agencies, and certification and testing organizations for chiropractic, naturopathic medicine, acupuncture and Oriental medicine, massage therapy and direct-entry midwifery. Membership also includes applicant organizations from emerging complementary and alternative healthcare fields that are beginning to engage self-regulatory and regulatory processes. ACCAHC’s member organizations are linked to 181 accredited programs, schools, colleges and multidisciplinary universities and over 387,000 licensed practitioners. Of these, the 4 disciplines represented in this project reflect a workforce of 107,500 licensed practitioners associated with 93 accredited programs, schools, colleges and universities.³⁰

ACCAHC’s priorities include: enhancing interprofessional education and care internally and with colleagues in conventional medicine; providing resources and developing learning communities to improve competencies for optimal practice in integrated environments; and engaging research, education, clinical care, policy and leadership initiatives to advance a whole person, empowerment, wellness and integrative health focus in health care.

This project was engaged in early 2010 as a collaboration of ACCAHC and Michael Goldstein, PhD, Professor of Public Health at the University of California, Los Angeles’ Fielding School of Public Health and Senior Research Scientist at the UCLA Center for Health Policy Research. Professor Goldstein has over 25 years of experience conducting research and evaluation studies on topics dealing with the organization and development of complementary and alternative medicine. ACCAHC executive director John Weeks, the project co-director, has worked in the field for 29 years in various positions as executive, organizer, journalist and consultant, including service as the director of the 11 discipline National Education Dialogue (NED) to Advance Integrated Health Care: *Creating Common Ground*.³¹ Goldstein and Weeks previously collaborated on the NED project.

This project was initially engaged under the working title of *Innovative Approaches to the Future of Primary Care: An ACCAHC Perspective*. The core of the work product was to be a paper on the relationship to primary care of each of the four disciplines. To ensure that the document reflected the perspective of the profession, rather than that of one or more individual authors, ACCAHC partnered with four of its member organizations to choose author teams. These are the Association of Accredited Naturopathic Medical Colleges, Association of Chiropractic Colleges, Council of Colleges of Acupuncture and Oriental Medicine, and the Midwifery Education Accreditation Council. Each organization named teams from their own discipline to represent their profession in the project’s development and the work of researching and writing their discipline’s chapter. These partner organizations subsequently endorsed the content related to their disciplines. Table 2 lists the organizational partners and teams.

³⁰ Goldblatt E, Snider P, Quinn S, Weeks J. *Clinicians’ and Educators’ Desk Reference on the Licensed Complementary and Alternative Healthcare Professions*. Seattle, Washington: Academic Consortium for Complementary and Alternative Health Care; 2009.

³¹ Weeks J, Snider P, Quinn S, O’Byron D, Haramati A. National Education Dialogue to Advance Integrated Health Care: *Creating Common Ground*. Progress Report, March 2004-September 2005. Integrated Healthcare Policy Consortium Website. 10 January 2013. <http://ihpc.info/resources/NEDPR.pdf>

Table 2: Primary Care Project Organizational Partners and Writing Teams

| | |
|---|---|
| Fielding School of Public Health, University of California, Los Angeles, UCLA Center for Health Policy Research (http://www.healthpolicy.ucla.edu) | Michael Goldstein, PhD (Project Co-Lead) |
| Academic Consortium for Complementary and Alternative Health Care (www.accahc.org) | John Weeks (Project Co-Lead) |
| Association of Accredited Naturopathic Medical Colleges (www.aanmc.org) | Bruce Milliman, ND (Co-Lead) Rita Bettenburg, ND (Co-Lead) Erica Oberg, ND, MPH Elizabeth Pimentel, ND, LM Jamey Wallace, ND Pamela Snider, ND |
| Association of Chiropractic Colleges (www.chirocolleges.org) | William Meeker, DC, MPH (Co-Lead) Joe Brimhall, DC (Co-Lead) Vince DeBono, DC Willard Evans, DC, PhD, CHES Glenn Bub, DC |
| Council of Colleges for Acupuncture and Oriental Medicine (www.ccaom.org) | Belinda Anderson, PhD, LAc (Lead) Steven Given, LAc, DAOM Anne Jeffries, LAc, DAOM William Morris, LAc, DAOM, PhD |
| Midwifery Education Accreditation Organization (www.meacschools.org) | Jo Anne Myers-Ciecko, MPH (Lead) Suzy Myers, LM, CPM Marla Hicks, RN-BC, CPM, LM |

Defining Primary Care

The design of the project was vetted and agreed upon by the respective councils of colleges or, in the case of the certified professional midwives, their U.S. Department of Education-recognized accrediting agency.

From the outset all the project participants realized that the lack of a standard, agreed-upon definition of primary care was problematic. Frequently used definitions of “primary care” were collected and shared: World Health Organization (1978, 1978-short version), Institute of Medicine (1978, 1996), Advanced Practice Nursing (1997), American Academy of Family Physicians (2010), Vanderbilt University (2010), and the Patient Protection and Affordable Care Act (2010.) Each can be found in Appendix A. The 1978 definitions from the Institute of Medicine and the World Health Organization were forwarded as those most widely used and around which there was the strongest consensus.

World Health Organization (1978-short version): “Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology ... It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process.” Declaration of Alma-Ata.³²

Institute of Medicine (1978): “... accessible, comprehensive, coordinated and continual care delivered by accountable providers of personal health services.” A Manpower Policy for Primary Health Care: Report of a Study.³³

³² Declaration of Alma-Ata, International Conference on Primary Health Care, Alma-Ata, USSR, September 1978. Web. 10 January 2013. http://www.who.int/publications/almaata_declaration_en.pdf

³³ Donaldson MS, Yordy KD, Lohr KN, Vanselow, NA. (1996). Committee on the Future of Primary Care. Division of Health Care Services. Institute of Medicine. Primary Care: America's Health in a New Era. (pp 27-51). Washington, DC. National Academy Press. Web. 10 January 2013. http://books.nap.edu/openbook.php?record_id=5152&page=29

Clearly, no single definition has thus far achieved acceptance by broad consensus. Distinct professional groups, government agencies, non-governmental organizations, and individual health systems employ differing definitions. These distinctions are significant. Some restrict the types of practitioners who might provide such care. More inclusive definitions focus on the nature of services provided. It is notable that when the editors sought outside consultation on how to evaluate the array of extant definitions, they were consistently told that the definition is expected to rapidly shift in the years ahead. However, there was little, if any, consensus regarding how the definition might change.

Members of the discipline teams raised additional issues relative to the meaning of primary care within their own professions. Typically, though not universally, a high percentage of practitioners from each of these fields are the first providers consulted by the consumers who use them when a condition arises. As such, they define themselves, and are commonly defined by their clients as “first choice,” “first entrance,” “first contact,” “first access” or “portal-of-entry” providers.

While this direct access may be for a specific type of care, such as childbirth, or a singular condition, such as back pain, these practitioners act as the patient’s provider of choice and primary health consultant, frequently assisting the patient in co-managing or coordinating such care when other practitioners are involved. Alternatively, some consumers use these licensed practitioners for a very broad spectrum of conditions.³⁴ In these cases, health professionals from these disciplines serve essentially as general practitioners, assisting an individual or entire family on a broad array of problems that others would take to a conventional medical practitioner thus acting in the same role as a conventional primary care provider.^{35,36,37}

The group considered starting the project by first deciding upon a mutually agreeable definition of primary care. The consensus view was that this would be a challenging task of its own and was a task best relegated to a subsequent phase of the project. Rather, the specified intent for this phase would focus on how these fields meet, or do not meet, conventionally used definitions of primary care.

All the participants further agreed that the lack of a consensus on a definition of primary care made the imposition of any particular definition on the four distinct professions unwarranted. Instead, chapter authors, insofar as possible, were to reference, from among the eight identified above, the specific definitions they prefer. Each profession was asked to specify how their own understanding of the term primary care differed (if at all) from the way the term is typically understood by conventional providers and health policymakers.

³⁴ Cherkin DC, Deyo RA, Sherman KJ, Hart LG, Street JH, Hrbek A, Davis RB, Cramer E, Milliman B, Booker J, Mootz R, Barassi J, Kahn JR, Kaptchuk TJ, Eisenberg DM. Characteristics of visits to licensed acupuncturists, chiropractors, massage therapists, and naturopathic physicians. *J Am Board Fam Pract.* 2002;15:463–72. Web. 10 January 2013. <http://www.jabfm.com/content/15/6/463.full.pdf>.

³⁵ Dunne N, Benda W, Kim L, et al. Naturopathic medicine: what can patients expect? *J Fam Pract.* Dec 2005;54(12):1067-1072.

³⁶ Sarnat R, Winterstein J. Clinical and cost outcomes of an integrative medicine IPA. *Journal of Manipulative and Physiological Therapeutics* 2004;27:336-347.

³⁷ World Health Organization. *Viewpoint on Acupuncture*. Geneva, Switzerland: World Health Organization, 1979.

The Organization of the Discipline-Based Chapters

Given the project's goal of providing readily accessible, definitive information about the four disciplines that can be most useful to policymakers, healthcare practitioners, and other third parties, the group developed a template to guide content development. One focus of the template is internal. Where and in what ways does the profession or any of its institutions or organizations speak to the role of primary care in the field? The second focus is external. Where and to what extent have regulatory agencies, third-party payers, scientific or policy papers viewed the discipline as appropriate providers of primary care?

A list of 14 sub-headings for each discipline-specific chapter was developed and circulated with paragraph-length descriptors. (See Sidebar #1.) The author groups were charged to address each sub-heading, if only to note that it does not apply to their field, or that no consensus on the topic may exist. Each team had up to 6,000 words for their chapter, which they could distribute as they pleased among the topics. While written to a template, each team had significant decision-making responsibility over how to apportion their words.

Sidebar #1: Template for Author Teams in Developing Discipline-Based Chapters

The following list was created as the template that the chapter authors were to follow in developing the four discipline chapters. The author groups were given a target of 3500 words, later expanded to 6,000. They were asked to distribute the word count as they wished, by section. All were asked to address each topic area. In the case of Direct-Entry Midwives, the charge was to examine evidence relative not to general primary care but in the more limited context of primary maternity care.

- Internal Definition(s) of Primary Care
- Internal Discussions over Primary Care
- Practice Model, Including Referral and Co-management
- Evidence of Patient Use as First Contact Provider
- Evidence of Wellness, Health Promotion and Primary Prevention Services
- Governmental or Regulatory Agency Recognition as Primary Care Providers
- Third-Party Payer Recognition as Primary Care Providers
- Research Relative to Your Profession as Primary Care
- Professional Goals or Objectives Relative to Primary Care
- Comparative Educational Standards for Primary Care Practice
- Educational Standards as a Basis for Primary Care Practice
- Focused Education to Enhance Skills in Primary Care
- Barriers to a Greater Role in Primary Care Practice
- Re-thinking Primary Care

Goals of the White Paper and Individual Chapters

The goals of this phase of the project are twofold. The central purpose is to offer health professionals, policymakers, and other interested parties a single document that can provide as much clarity as possible, at this point in time, on the roles these disciplines might have in meeting the nation's primary care needs. Achieving this goal required that each of these disciplines systematically and seriously consider this matter from within the discipline itself, using the term "primary care" in the way that it is understood outside of the discipline itself.

It is important to note that each of the disciplines has its own, internal, understanding of the term "primary care", often combined with a deeply held appreciation of how this understanding of the term could be used beneficially by all health professionals. Our decision to not focus on this perspective should in no way be seen as an attempt to slight these deeply held views. The validity, utility, and promulgation of these views are simply outside of the purview of this project. Nor does the present project significantly engage the related question of the *optimal* use of each of these professions in meeting the nation's primary care need. Rather, our goal is simply to initiate what we hope will be a fruitful discussion of a neglected dimension for helping the nation attain the quality and quantity of primary care practitioners that it requires.

Analysis and Recommendations

Purpose of the Analysis and Recommendations

The comments and analyses which follow underscore trends, similarities and differences found in these chapters. Our purpose is *not* to make a case for the role of one or another of these fields in primary care. Stakeholders making such real world decisions will make them on a profession-by-profession basis, with profession-centric strategies. Thus the most useful evidence to guide decision makers and planners is contained within each of the discipline-specific chapters. It is noteworthy that the content of each of these chapters has been endorsed by that profession's council of colleges, or in the case of the midwives, accreditation agency. These endorsements heighten the value of the perspectives and data offered to policymakers and others who may seek to bring about changes within the healthcare system.

This analysis is meant to offer an overview of the themes and information reported by each disciplinary team of authors. Our goal here is to open a dialogue that will assist workforce specialists and stakeholders to achieve the optimal utilization of these professionals amidst the shifting boundaries of the primary care matrix. We also view the professions themselves as audience. The endorsements of the individual chapters, noted above, provide license to speak of the discipline-specific information as representative of the views of the academic leadership of that profession.

Self-Identification as Primary Care

Perhaps the most basic belief held among each of the professions is one that may surprise those who are neither providers nor patients of these disciplines: The provision of primary care is already a significant part of the work and self-identification of each of these disciplines. The requirement to be trained to a standard as a "primary care chiropractic physician" is imbedded in the accreditation language of that profession's US Department of Education-recognized accrediting body. Naturopathic physicians define their field as "a distinct method of primary health care." The midwives begin simply: "Midwives are

primary maternity care providers.”The AOM chapter describes that field as a practice “consistent with the definition” of primary care in the World Health Organization’s Alma-Ata declaration. The AOM authors cite studies showing that “patients seek acupuncture treatment for a wide range of ailments for which patients commonly visit primary care medical doctors.”

The chiropractors, naturopathic doctors and acupuncture and Oriental medicine fields each report that members of their professions currently routinely serve in the role of managing or co-managing the care of patients. They do so without any oversight or prior approval. Direct-entry midwives similarly describe managing the entire birth process, from prenatal care to post-partum follow-up along with well-child visits, including referral or transport when complications require.

“First Access,” “First Choice,” “First Contact,” “First Entrance,” and “Portal-of-entry”

A part of each profession’s self-description is that gatekeepers are not required for a patient to access treatment. Terms used by each of the professions to denote their relationship to patients include “first choice,” “first entrance,” “first contact,” “first access” or “portal-of-entry” providers.

AOM authors cite “several surveys of acupuncture users in the US [that] have reported that a significant proportion of survey respondents used an acupuncturist as a first contact provider”. These authors note that acupuncturists “most often function as independent (also known as ‘first contact’) providers who may be consulted by a patient without referral.” While there are exceptions in a few jurisdictions, patient and clients of professionals in both AOM and midwifery already commonly have direct access to these practitioners.

While the midwives note that “formal surveys querying patients about their perception of midwives as first contact providers have not been undertaken,” they state unequivocally: “Women seek midwives and find them without referral.” They add that typically referral to a midwife via a medical ‘gatekeeper’ is not required.”

The chiropractors state that there is “little internal disagreement that all Doctors of Chiropractic should enjoy direct patient or portal-of-entry access for patients, perhaps the single most important attribute of the primary care concept.” Similarly, the naturopathic physicians reference “studies and articles published in recent years indicate that naturopathic medicine is accessed by an increasing number of patients as their first entrance into the medical system by choice.”

Research to date has not, for most of these disciplines, clarified the percentage of patients utilizing each discipline who self-refer or directly access these practitioners. To the extent that this is so, and that individuals who see these practitioners do not also see conventional primary care practitioners in the same episode of care, these choices of outpatient practitioners would appear to be presently relieving the burden on the formal primary care system.

Scope of Education: Acute, Chronic, Co-Management, Referral and Prevention

A widely agreed upon characteristic of primary care is that the practitioner’s role extends from responding to acute conditions to the management and co-management of chronic problems, referral and engagement of patients in prevention and health promotion. It is noteworthy that the accreditation standards recognized by the US Department of Education for each of these disciplines already encompasses this breadth of care.

Chiropractors are trained “in manual procedures including mobilization and manipulation, physical modalities and procedures, lifestyle counseling, nutritional advice and therapy, and other measures that lie within the professional and legally authorized scope.” Their accreditation “requires clinical competencies to be learned by students in primary prevention, health promotion and wellness,” and also for “integrating health care services including treatment, recommendations for self-care, referral, and/or co-management.”

The licensed acupuncture and Oriental medicine professionals note that “one of the theories of Oriental medicine is the view that disease in the early stages can be either prevented or rectified by diet, exercise and other lifestyle factors.”

The midwives report that they must demonstrate competencies in “general healthcare skills, midwifery education, counseling and communication, maternal health assessment, labor, birth and immediate postpartum, postpartum, well-woman care, and well-baby care.” They also recognize and are educated to the need to transport pregnant mothers for hospital care when necessary, while often continuing with post-partum treatment after the birth.

The competencies for naturopathic physicians include “patient counseling on health promotion and disease prevention, patient assessment, diagnosis, treatment, prognosis and management, and referral as appropriate.” The authors reference the IOM primary care definition from 1996 and add: “By philosophy, training and practice, modern naturopathic primary care satisfies these criteria by providing individualized, comprehensive, patient-centered care for all conditions and demographics.”

A significant obstacle to the enhanced use of these professionals for the delivery of primary care may be the language frequently employed by many, if not most, conventional health providers. It is common for these fields to be described as therapies or modalities (e.g. “chiropractic” or “naturopathy”) as opposed to established and licensed professions. (See Sidebar #2: “Therapies,” “Modalities,” “Professions,” and “Physicians” - Language as Obstacle.)

Yet the patient access to care and the recognized educational standards of these disciplines each supports the profession’s case that, at least for certain populations, these practitioners provide “accessible, comprehensive, coordinated and continual care delivered by accountable providers of personal health services.” Those within the profession are acutely aware that what they do coincides with the 1978 Institute of Medicine definition of primary care.

Regulatory Recognition as Primary Care

As a reading of the discipline generated chapters makes clear, the consistently held self-perception and self-assertion of these health professions as primary care providers is validated by the fact that they are referred to in this way in the legal and regulatory codes of many states. Despite significant state-to-state variability, formal recognition of these four disciplines as primary care, or for the direct-entry midwives as primary maternity care, is already a fact across significant parts of the United States.

Statutes delimiting scope of practice of the direct-entry midwives typically name them as “primary maternity care providers.” In an exceptional situation, midwives in the state of Washington are eligible to participate in the Washington State Health Professional Loan Repayment and Scholarship Programs.

Licensed naturopathic physicians in Washington State are also eligible for the loan repayment program. Similarly, naturopathic doctors are part of parallel state programs in Oregon and Vermont where they can serve as primary care providers in “rural, underserved and special needs communities.”

Sidebar #2:

**Therapies,” “Modalities,” “Professions,” “Physicians,” and “Doctors” —
Language as Obstacle to Appropriate Use**

These chapters all make a case that any effort to ascertain the appropriate use of these professionals in meeting the nation’s primary care needs would be facilitated by a change in how certain terms are commonly used by conventional health practitioners as well as healthcare planners and policymakers. The first is the distinction between “modalities” or “therapies” and “professions” or “disciplines.” The other is the how the term “physician” is used.

Currently, as noted above, efforts to integrate “complementary and alternative medicine” with mainstream delivery often sees these professions treated as technicians who deliver “modalities” or “therapies.” Yet the accredited programs of each discipline include training in diverse modalities and practices that range from treatment of acute problems, to chronic conditions, to prevention and wellness. Reductive language obscures why patients choose these professionals as their primary sources of care for diverse conditions or for general wellness. Such inappropriate language may block policymakers and conventionally trained providers from being able to appreciate and utilize the breadth of their potential contributions.

Present understanding of the potential value of these disciplines may be further limited by the common use of “physician” or “doctor” to denote a medical doctor (MD). The chapter authors note that the chiropractic and naturopathic medical disciplines are recognized as “physicians” in US Department of Labor definitions and in multiple public regulations and private uses. In addition, despite what the acupuncture and Oriental medicine authors note as a misalignment with educational standards, legislators in the State of Florida have chosen to bestow this title on that state’s licensed professionals, officially calling them Acupuncture Physicians (AP). Osteopathic doctors and dentists also have formal rights to this title.

Chiropractors, naturopathic physicians and graduates of the Doctor of Acupuncture and Oriental Medicine are “doctors,” as are psychologists, optometrists, podiatrists, subsets of nurses, physical therapists and others. Clearly, confusion will be limited when the terms “physician” and “doctor” are used with a modifier to denote the type of physician under consideration.

An openness to appreciating and utilizing these disciplines as primary care providers may require an effort to restrict the use of language and terminology born out of an earlier context. While such changes are always difficult and initially awkward, it is important that the need for change be recognized and acted upon. The content in these discipline-specific chapters urges that everyone involved in health care engage a conscious effort to abandon language that sets barriers to optimal understanding of the potential value of these professions for emerging healthcare structures and needs.

The naturopathic physicians’ scope of practice includes broad pharmacy rights, including immunization authority, in eight of the 16 jurisdictions in which they were licensed at the time of that chapter’s writing.

The chiropractors note “their professions’ governing statutes emerged prior to the concept of a primary care provider in U.S. health care.” Currently, the states of Iowa and Illinois include chiropractors in their definitions of primary care providers. Regulatory authorities in the states of Florida, California and New Mexico define acupuncturists as primary care providers. The AOM authors add “each gives a definition of how the term primary care applies to the acupuncture profession within that state.”

Given the extent of current legal and regulatory precedents for including these professions as primary care providers, it seems reasonable to conclude that a sufficient number of jurisdictions already exist where pilot programs and research opportunities could easily be established. Recognizing that these

opportunities exist, and utilizing them would appear to be an important strategy for determining the future role of these groups in the evolving primary care delivery matrix.

Inclusion in Patient-Centered Medical Homes

The movement toward patient-centered medical homes (PCMHs) provides additional evidence of the way in which these professions are already formally participating in the primary care landscape. The chiropractors note that Section 3502 of the Patient Protection and Affordable Care Act of 2010 “names Doctors of Chiropractic as potential members of community primary healthcare teams.” The authors state that the potential roles of chiropractors in these new structures was foreseen via the Health Information Technology for Economic and Clinical Health Act (HITECH) of 2009 which “authorizes and supports Doctors of Chiropractic to adopt specified electronic health record systems that will dovetail with the infrastructure needs of PCMHs and other delivery organizations.”

The statutory language in Section 3502, Establishing Community Health Teams to Support Patient Centered Medical Homes, also explicitly states that “licensed complementary and alternative medicine practitioners,” an umbrella term which would extend to the other three disciplines, may be part of these community health teams. Notably, the legislative language is “may” rather than “shall,” so states and health systems will make their own determinations.

The naturopathic medicine chapter reports that doctors in the states of Vermont and Washington are directly included in medical homes acts in those states. These developments further indicate that advanced contexts are emerging that enable research into outcomes of such inclusion.

Internal Issues, External Challenges with Designation as Primary Care

Sentiment within each of these professions in support of an expanded presence in the broader primary care picture is not uniformly positive. Each of the discipline’s chapters speaks to significant challenges that exist if their respective professions are to play more recognized roles in the nation’s primary care matrix. In large part these concerns revolve around the willingness of current and future members of the professions to coordinate their training and standards with those that currently apply to those found among primary care medical doctors, physician assistants, and nurse practitioners. Any resolution of these disagreements will require efforts both within the professions, as well as changes within external environment.

In each of the acupuncture and Oriental medicine, chiropractic and naturopathic medicine professions, a subset of practitioners is clearly not interested in formally taking on the obligations and responsibilities (e.g. 24-hour pagers, electronic health records and significant upfront financial costs) that they associate with the practice of conventional primary care. It is noteworthy that this lack of desire to assume the responsibilities associated with conventional primary care practice co-exists with an expectation that they can continue to treat a broad array of conditions and be directly accessed by patients.

Among the four disciplines, chiropractic doctors and direct entry midwives are more likely to be willing to serve as primary care providers for a limited subset of conditions. The midwives note that a subset is interested in exploring a more extensive involvement in women’s health and well-child care, beyond the birth process. But most are focused on their work in a primary capacity in prenatal, birth and immediate post-partum and well-newborn care.

At a broader, nationwide level, naturopathic doctors are most unified as a profession in endorsing a designation as primary care providers. This field already has secured scope of practice designations in half of the 16 states in which it is licensed that includes services typically associated with primary care: pharmaceutical prescription, vaccine administration and minor surgery. Yet many naturopathic physicians also prefer working as specialists. Percentages of each are not known.

Currently the other disciplines each lack skill sets or scope of practice authority to serve in a conventional primary care model. The authors of the acupuncture and Oriental medicine paper point to an emphasis on the principles and therapeutics of their field rather than on biomedical sciences and Western diagnosis when compared to biomedically-oriented practitioners. Like the chiropractors, they typically lack authority to prescribe pharmaceutical drugs, perform minor surgery or administer vaccinations. While the advent of hospitalists has diminished the importance of admitting privileges, each of these fields lacks this authority. Practitioner education does not typically include training in hospital procedures or significant experience with inpatient culture and practice.

It is clear that any future widespread involvement of these professions into the primary care workforce faces widespread regulatory challenges. Among the four professions, only the chiropractors are licensed in all 50 states. The AOM practitioners are in 44 and the midwives in 26. Naturopathic doctors, whose existing training and scope of practice is most congenial with primary care practice, are confronted by the fact of having achieved licensure in just 16 states and these have uneven scope of practice laws.

For each of the professions, insurance reimbursement patterns and related legal mandates regarding are, at best, highly uneven, inconsistent, and confusing. Chiropractic and, increasingly, acupuncture are most likely to be covered although current practice is typically to severely circumscribe the types of conditions and services that are covered. This has the effect of reducing them to the delivery of a few modalities rather than utilizing their full scope. Federal coverage schemes are also typically quite limited in the few instances where they exist. Medicare allows limited coverage of services performed by chiropractors, related to the spine. Medicaid programs in some states are more inclusive.

Recommendations from the Professions

Chapter authors were asked for their suggestions regarding the most critical next steps to be taken if these professions were to assume a greater role in primary care in the future. Given the societal consensus that the concept of primary care itself is somewhat vague and likely to undergo significant change in the future, they were also asked to specify what their own discipline might add to “re-thinking” and improving primary care.

The naturopathic doctors highlighted the need for enhanced data collection on the utilization and satisfaction with naturopathic primary care by representative samples of health care users. They, correctly in our view, stress that it is not possible to evaluate policy options on the issues discussed in this report without such data. The time for relying on the views of pundits and the ad hoc experiences of both patients and providers is past. Policy in this arena must be evidence-based. In particular, the naturopathic doctors stressed the need to conduct research on the comparative effectiveness of differing approaches and practitioners on primary care outcomes.

Chiropractic physicians placed a strong emphasis on making a reality out of the commonly issued call to improve the quality of primary care by insuring that it is properly delivered by teams of healthcare professionals within a community context. They note that while this has been emphasized by numerous reports from the IOM and other authorities, in practice “primary medical care is dominated by medical

physicians and internally focused on its own institutions and behaviors (and that) primary *health* care explicitly seeks community participation and a wide range of professionals, always working with the patients as partners in the relationship.” They urge exploration of a chiropractic role in this care matrix.

A similar theme is found in the acupuncture and Oriental medicine chapter: “Independent providers working in collaboration with primary care providers constitutes a valuable evolution of medical care.”

Each of the professions repeats, in some fashion, this call that the definition of primary care not merely be focused on medical reaction to presenting problems. Instead, all insist that primary care include various forms of health-focused contributions to meeting primary care needs which must include an increasing emphasis on “prevention, wellness, and health promotion.” Similarly, the “excellent outcomes at lower cost” described by the writers of the midwifery chapter are attributed to “care that emphasizes healthy lifestyles, good nutrition, childbirth preparation, breastfeeding, counseling and support for the mother and family.”

Alignment with Conventional Primary Care Definitions

The writers of the acupuncture and Oriental medicine chapter conclude with this assertion: “Ultimately, acupuncture providers play an important role as first contact providers in the medical system. They are able to provide care and screening within their scope of practice. Independent providers working in collaboration with primary care providers constitutes a valuable evolution of medical care. This is an important aspect of integrative care, and is currently serving an important need of patients.”

Clearly, the evolving, team model of patient-centered primary care medical homes, or health homes, whether located together or in closely knit community networks, should, by definition, have a place for these providers. If between 40% and 70% of patients with chronic condition are exploring “complementary, alternative or integrative” therapies, then those professionals who meet the US Department of Education-recognized standards in such therapies and practices should, by definition, be active parts of these teams. Decisions to not include these practitioners should be understood as contrary to the needs and desires of many, if not most, patients.

Each of the disciplines participating in the creation of this report self consciously aligns themselves with the classic World Health Organization understanding of primary care from 1978, as well as the more recent 1994 definition from the Institute of Medicine. Each of the disciplines indicates an already existing ability to offer many if not all of the core components of primary care as outlined in the Patient Protection and Affordable Care Act’s description of patient-centered medical homes: enhance access and continuity; identify and manage patient population; plan and manage care; provide self-care and community support; track and coordinate care; and measure and improve performance.

Into the Light: A Hidden Dimension of Primary Care in the United States

That these professions are not currently recognized as part of the nation’s primary care providers in the minds and plans of most policymakers does not in any way negate the reality of what is actually happening throughout American communities. Where these providers are licensed and available, they serve as primary access points for the delivery of care to significant subsets of the population. In all likelihood, a combination of demographic factors (e.g. aging of the population resulting in a greater prevalence of chronic conditions; increasing ethnic diversity associated with the use of non-conventional therapies, etc.), along with increasing interest in these approaches to care (especially due to the growing use of the Internet to access information about health care) will mean these trends will continue and expand over the coming years.

Sidebar #3: What is Primary Care in a Patient-Centered Model?

Consider these common experiences.

- A patient wakes with a familiar sensation of pain. He believes that this is not going away on its own and needs the help of a practitioner. He knows who he will call for an appointment.
- A second feels something coming on and is not sure what it is. She picks up a phone and calls her most trusted provider.
- The child of a third breaks out with something new that is not responding to loving care or to home treatments. The parent decides to bring the child to a practitioner that she has used for an altogether different condition, but in whose care she wishes to entrust her child's health with these new symptoms.
- A fourth has a known chronic condition that becomes more bothersome from time to time. He knows what works best for him and picks up the phone to call the professional he has in mind.

In each of these cases, the practitioner who the patient calls could be a chiropractic doctor, or a naturopathic physician, or a practitioner of acupuncture and Oriental medicine. Had the person been a woman who woke with nausea, the first call might have been to a direct-entry midwife. From the patient's perspective, in each of these moments, these practitioners are their first choice providers. The four chapters each underscore this point. The authors describe professional healthcare practices in which patients typically access these practitioners as the primary source of care provision.

In a system that is undergoing increasing self-examination for having been more profit centered than patient focused, policymakers presently struggle to define and shape a patient-centered model. These chapters suggest that a radical resolution might be that a primary care provider is the practitioner the patient chooses as his or her primary provider of care. In effect, these individuals are creating their own healthcare teams.

Notably, the fact that a patient makes choices was the subject of discussion at an August 2012 workshop of the Institute of Medicine Global Forum on Innovation in Health Professional Education. A health plan executive recommended that perhaps developers of professional training and health system care management strategies should place greater attention on patient preferences in constructing provider mixes whether in inpatient or outpatient primary care environments.

These disciplines currently encompass a hidden dimension in the nation's response to the need for primary access to care. Bringing the contribution of these disciplines into the open will likely improve our knowledge about how best to deliver primary care, enable us to deliver it more effectively and efficiently, and move toward the oft-stated goal of true team-based care for a host of chronic and widespread problems.

The discipline-specific chapters created for this project bring to light what has typically been in the shadows of health workforce planning and the assessment of healthcare policy. The chapters provide decision makers with starting points and directions for incorporating the reality of patient behavior with the emerging primary care delivery system. (See Sidebar #3: What is Primary Care in a Patient-Centered Model?)

The year 2010 marked the centennial of the Flexner Report.³⁸ For this anniversary the Institute of Medicine and the Robert Wood Johnson Foundation issued a joint report on The Future of Nursing. Advanced practice nurses, who spent generations in discounted roles and positions, were elevated for their ability to practice independently. Nurses were called to "lead change" and to "advance health."

³⁸ Flexner, Abraham (1910), *Medical Education in the United States and Canada: A Report to the Carnegie Foundation for the Advancement of Teaching*, Bulletin No. 4, New York City: The Carnegie Foundation for the Advancement of Teaching. Web. 10 January 2013.

In these words we see the beginnings of a challenge to the hegemony of the medical (MD) profession beginning to be dismantled at the highest levels of planning and visioning. The substance contained in the four chapters contributed by the disciplines to this report represent an opening for planners and policymakers to take another step in this direction. The time is past when policymakers and other “stakeholders” can simply deny or discount the potential of members of these professions for meeting primary care needs. These papers make a compelling case for health system leaders to openly and affirmatively engage dialogue with professional, academic and research leaders of these disciplines on how to best work with them to optimally contribute to the nation’s primary care matrix.

Recommendations as Endorsed by the ACCAHC Board of Directors

Based upon our review and analysis of the chapters prepared by the disciplinary groups we (MSG, JW) have taken the liberty to set out a series of recommendations to both the disciplines themselves, as well as the larger healthcare policy community. These recommendations are ours alone and do not represent the organizations we serve. Each is made in the spirit of advancing the discussion of how these professions might be effectively brought into the larger healthcare community to assist in the delivery of high quality primary care.

To Academic, Research and Policy Leaders in the Professions of Acupuncture and Oriental Medicine, Chiropractic, Direct-Entry Midwifery and Naturopathic Medicine:

- There is a pressing need for the leadership of each of the professions to communicate clearly with the academic leaders and healthcare policymakers, as well as other stakeholders regarding your profession’s roles relative to primary care, especially with regard to how any gaps or deficiencies in your profession’s relationship to elements of conventional primary care might be remedied for those members of your profession who are interested. To move the discussion forward, a discussion of how and under what circumstances the discipline’s typical educational processes or practices will be modified must be engaged. What specific forms of additional education and competency testing do you recommend to become primary care providers?
- The distinctions internal to each profession between primary care and specialists must be clarified not only for those outside the profession, but internally as well. Absent clarity on this point, other stakeholders and providers will find it difficult to work with you collaboratively. If only a subset of your profession is interested in primary care, clear boundaries need to be agreed upon and followed.
- Support and collaborate with other researchers in conducting outcomes and epidemiological research that can assist your own discipline and other stakeholders in understanding your discipline’s potential for helping meet primary care needs.
- If your discipline believes it encompasses a distinct model of primary care, or can make a unique contribution to conventional primary care practice or patient-centered medical homes, make your case to the larger healthcare community, including identifying and prioritizing supportive evidence-based research strategies.
- Convene a meeting of leaders in your discipline and include significant representation from other stakeholders to clarify and refine your strategy.

To Health Workforce Planners, Healthcare Professionals, Policymakers, Funding Agencies, , Government Agencies, and Other Stakeholders:

- Make it a priority to learn about this “hidden dimension of primary care” by funding and conducting high quality health services & epidemiological research on those individuals and families whose “first choice” for treatment is a licensed practitioner from one of these four disciplines.
- Consider use of these practitioners, as appropriate, in limited population primary care strategies (such as for the birth process, or for back pain), and conduct well designed evaluations of the outcomes in terms of patient satisfaction, quality of life, and cost. Dentistry, podiatry and optometry each provide models.
- Examine the experience in states in which these disciplines are formally included as primary care practitioners. To some significant degree, these jurisdictions are functioning as pilot projects for the nation.
- Include members of these professions in primary care medical or health homes. This low risk form of inclusion offers an exceptional opportunity to both examine outcomes while enhancing the patient-centered nature of these institutions.

To Leaders of these Disciplines and Policy Leaders in Collaboration

- Utilize the papers delivered in this project as the basis of a multi-stakeholder, inter-professional working summit where each discipline can further develop a strategy that will help guide these professions into a more appropriate relationship to the nation’s primary care matrix. The summit should be convened by an independent agency. Participants would include workforce experts, delivery system leaders, researchers and professional and academic leaders from each of these fields. Recommendations would be bilateral: to the profession and to the broader healthcare regulatory, payment and delivery system.

Acupuncture and Oriental Medicine Practitioners and Primary Care

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Endorsed by the
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Introduction

Oriental medicine (also known as Chinese medicine and East Asian medicine) encompasses the practice of acupuncture, Chinese herbal medicine, moxibustion, cupping, tui na massage, dietary modifications, exercise therapy, and other related therapies. It has a history of over 2,000 recorded years of practice in Asia and an extensive literature regarding its theories and applications. This chapter explores the profession of acupuncture and Oriental medicine (AOM), as it is most often referred to in the West, as a primary care healthcare profession in the US.

While there are a number of definitions of primary care currently in use, the World Health Organization (WHO) affirms the Declaration of Alma-Ata, which defines primary health care in terms of public health and healthcare systems. Section VII part 7 states that,

“Primary health care: relies, at local and referral levels, on health workers, including physicians, nurses, midwives, auxiliaries and community workers as applicable, as well as traditional practitioners as needed, suitably trained socially and technically to work as a health team and to respond to the expressed health needs of the community.”¹

The role of AOM practitioners is consistent with this definition in that they provide a sustained partnership with patients and respond to health needs of family and community. This is achieved by using the system of Oriental medicine with a solid understanding of biomedicine. By statute, acupuncturists most often function as independent (also known as “first contact”) providers who may be consulted by a patient without referral from a primary care provider, make diagnoses and provide health care based on AOM theory and are able to make referrals to biomedical practitioners and specialists as needed. While integration through including biomedical diagnosis is allowed in some jurisdictions, in others, AOM providers are not yet permitted to provide a differential biomedical diagnosis or perform other roles of primary care providers, such as health screening, give immunizations, or prescription of pharmaceutical medication.

Internal Definition(s) of Primary Care

The primary care role definition within the AOM profession is currently emerging. The role and scope of practice of the AOM practitioner is defined by each state. Most states define AOM practitioners as independent, first-contact providers of healthcare services. Three states (FL, CA, NM), however, define acupuncturists as primary care providers in their statutes, and each gives a definition of how the term primary care applies to the acupuncture profession within that state. At the publication date of this paper, these three states’ practitioners comprise 40% of the United States practitioners, and while not a majority, represent a significant portion of AOM providers. California, New Mexico, Connecticut, Maryland, Washington DC, and Alaska have included acupuncture as a benefit under the Affordable Care Act. Below are the definitions of the codes for the three states that define acupuncture as primary care.

The state of Florida Legal Code 457.102² defines acupuncture as:

- (1) “Acupuncture” means a form of primary health care, based on traditional Chinese medical concepts and modern oriental medical techniques, that employs acupuncture diagnosis

¹ WHO. Alma Ata 1978: Primary Health Care. www.who.int/hpr/NPH/docs/declaration_almaata.pdf. 1978.

² Florida Legal Code 457.102. http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0400-0499/0457/Sections/0457.102.html.

and treatment, as well as adjunctive therapies and diagnostic techniques, for the promotion, maintenance, and restoration of health and the prevention of disease...

- (2) "Acupuncturist" means any person licensed as provided in this chapter to practice acupuncture as a primary health care provider.

The California Business & Professions Code 4926³ reads as follows:

"In its concern with the need to eliminate the fundamental causes of illness, not simply to remove symptoms, and with the need to treat the whole person, the Legislature intends to establish in this article, a framework for the practice of the art and science of Asian medicine through acupuncture. The purpose of this article is to encourage the more effective utilization of the skills of acupuncturists by California citizens desiring a holistic approach to health and to remove the existing legal constraints which are an unnecessary hindrance to the more effective provision of health care services. Also, as it affects the public health, safety, and welfare, there is a necessity that individuals practicing acupuncture be subject to regulation and control as a primary health care profession."

The California Department of Consumer Affairs' legal office defines primary health care professions in section 4926 of the state's business and professions code. Their November 9, 1999 memorandum states: "Primary care provider means a person responsible for coordinating and providing primary care to members, within the scope of their license to practice, for initiating referrals and for maintaining continuity of care."

The New Mexico legal code 16.2.2.8⁴ defines the practice of Oriental medicine in New Mexico as:

A distinct system of primary health care with the goal of prevention, cure, or correction of any disease, illness, injury, pain or other physical or mental condition by controlling and regulating the flow and balance of energy, form and function to restore and maintain health. Oriental medicine includes all traditional and modern diagnostic, prescriptive and therapeutic methods utilized by practitioners of acupuncture and oriental medicine.

This review of legal codes in the states where acupuncturists are classified as primary care providers suggests a consensus in which the primary care acupuncturist operates independently and serves as a point of entry into the healthcare system.

Internal Discussion over Primary Care

The acupuncture profession in the US has debated the issue of primary care for a number of years. Part of the conflict is a lack of consistent language from state to state defining the practice of acupuncture, with different states designating the practitioner as an independent ("first contact") provider, primary care provider, or a provider who needs referrals from or oversight by a medical doctor. There is, in fact, variation from state to state with regard to ordering lab tests, inclusion in worker's compensation and even use of the term "doctor"⁵ or "physician"⁶ as a professional title rather than a reflection of the education that an acupuncturist has received.

³ California Business and Professions Code Section 4926. 2010.
<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=bpc&group=04001-05000&file=4935-4949>

⁴ New Mexico Legal Code, 16.2.2.8 [database on the Internet]. Available from: <http://www.nmcpr.state.nm.us/nmac/cgi-bin/hse/homepagesearchengine.exe?url=http://www.nmcpr.state.nm.us/nmac/parts/title16/16.002.0002.htm;geturl/terms=16.2.2.8>

⁵ Rhode Island rules and regulations for licensing Doctors of Acupuncture and Acupuncture Assistants.
http://www.rules.state.ri.us/rules/released/pdf/DOH/DOH_191_.pdf

⁶ 2005 Florida Statutes, Ch. 457 – Acupuncture.
http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&URL=Ch0457/ch0457.htm

This issue is also exacerbated in the AOM profession as practitioners with differing levels of biomedical education provide acupuncture services. This includes providers trained as physicians in Asia, who have biomedical education that is recognized as doctoral level in the US educational system and generally meet entry requirements for residency in medical programs. In contrast, AOM practitioners in the US are required to have 450-510 hours of biomedical education in order to sit for the national board exam. National certification in acupuncture and/or Oriental medicine requires passage of a biomedicine examination, in addition to examinations addressing Oriental medicine content.

There are groups within the profession who are actively encouraging the profession to expand its role in primary care. Most of these groups advocate the modification of the educational programs to address a broader scope of primary care competencies and biomedical education. However, there are those in the profession who do not advocate a role for acupuncturists in primary care.

The distinction between an independent provider who serves as a first contact provider, an AOM primary care provider, and a primary care provider within the U.S. healthcare system and the level of biomedical and OM education necessary to function in each setting needs to be clarified in order to further define the relationship between AOM and primary care. The definition of primary care also affects perspectives as to the possible role of AOM practitioners in primary care. If a definition were adopted that focused on primary care with respect to specific conditions or diseases, and there was sufficient high quality research to demonstrate the efficacy of an Oriental medicine therapy (for example, acupuncture), then AOM practitioners could function very effectively as primary care practitioners. A good example of a category of conditions where this would be applicable is musculoskeletal pain conditions, where the efficacy of acupuncture is supported by a large amount of high quality clinical research data. The current education in bioscience and AOM treatment as an integrated practice is sufficient to provide effective primary care for many such conditions.

Practice Model, Including Referral and Co-management

Most acupuncturists in the US function as first contact providers in private practice. The accrediting body for acupuncture schools in the US, the Accreditation Commission for Acupuncture and Oriental Medicine (ACAOM; acaom.org) and the national certification organization, the National Certification Commission for Acupuncture and Oriental Medicine (NCCAOM; nccaom.org), specify that candidates for graduation or certification be able to identify signs or symptoms that suggest conditions that require referrals and/or co-management and the skill to make appropriate referrals for both physical and psychological conditions.^{7,8} In addition, some states have legislation specifying conditions that require referral to

⁷ ACAOM Accreditation Manual, July 2009, <http://www.acaom.org/PdfVersion/Accreditation%20Manual.pdf>

⁸ NCCAOM Examination Study Guide for the Diplomate in Oriental Medicine Certification for the 2010 Examination Administration, http://www.nccaom.org/exams/2010StudyGuides/OM_Study_Guide_Final_1-9-10.pdf

appropriate medical providers.^{9,10} Other states require co-management for all patients,^{11,12,13,14,15,16} and one requires acupuncturists to be employed by and work under the direction of an MD.¹⁷

Evidence of Patient Use as First Contact Provider

Several surveys of acupuncture users in the US have reported that a significant proportion of survey respondents used an acupuncturist as a first contact provider. A survey published in 1998¹⁸ of 575 US acupuncture users reported that 15% of those surveyed only used Chinese medicine for their complaint. A study in 2002¹⁹ collected data on 20 consecutive visits to randomly sampled licensed acupuncturists practicing in Massachusetts and Washington DC. About 50% of the acupuncture visits were from patients who were not receiving care from another medical practitioner. Another study published in 2008²⁰ that surveyed 661 patients at a Chinese medicine-teaching clinic, found that 20.2% of respondents used acupuncturists as first contact providers.

These studies and others have also provided information on the conditions for which patients sought treatment from acupuncture in the US. Several studies report that patients utilize acupuncture for conditions such as musculoskeletal complaints, including back and neck pain, along with anxiety, depression, and other mood disorders, and other conditions including digestive disorders, respiratory disorders, urinary and reproductive disorders, infectious conditions, autoimmune disorders, headaches, fatigue, stress, and allergies, among others.^{18,19,20} These conditions also reflect the findings of the World Health Organization, which conducted a study in 1979 to assess which conditions are often treated with acupuncture in other countries.²¹ Collectively the studies showed that, while pain conditions tend to dominate, patients seek acupuncture treatment for a wide range of ailments for which patients commonly visit primary care medical doctors.

⁹ Washington State Legislature, Acupuncturists Licensing Legislation, <http://apps.leg.wa.gov/wac/default.aspx?cite=246-802-110>

¹⁰ Kentucky Revised Statutes, July 12, 2006, <http://www.lrc.ky.gov/KRS/311-00/680.PDF>

¹¹ Minnesota Office of the Revisor of Statutes, 2010. <https://www.revisor.mn.gov/statutes/?id=147B.06>

¹² District of Columbia Municipal Regulations for Acupuncture, 6/24/2004. <http://hpla.doh.dc.gov/hpla/frames.asp?doc=/hpla/lib/hpla/accupancture/acupuncture.pdf7>

¹³ Iowa State Generally Assembly Code, 2009. <http://www.legis.state.ia.us/IACODE/1999SUPPLEMENT/148E/10.html>

¹⁴ State of Nebraska Regulations Governing the Practice of Acupuncture. 2004. http://www.sos.ne.gov/rules-and-regs/regsearch/Rules/Health_and_Human_Services_System/Title-172/Chapter-89.pdf

¹⁵ The State Board of Ohio Governing Statues, 8/10/2000. <http://med.ohio.gov/chapter4762.htm#%A7%204762.01>

¹⁶ Texas Medical Board, Board Rules. 11/24/2010. http://www.tmb.state.tx.us/rules/docs/Board_Rules_Effective_11-24_2010.pdf

¹⁷ Louisiana Revised Statutes; Title 37, Chapter 15, Part IV, Practice of Acupuncture act. <http://www.lsbme.louisiana.gov/laws/laws%20archive/laws%20archived%2010%2006%2009/chapter15%20part%20iv%20acu.pdf>

¹⁸ Cassidy, CM. Chinese medicine users in the United States. Part I: Utilization, satisfaction, medical plurality. *J Altern Complement Med.* 1998 Spring;4(1):17-27.

¹⁹ Cherkin, DC et al. Characteristics of visits to licensed acupuncturists, chiropractors, massage therapists, and naturopathic physicians. *J Am Board Fam Pract.* 2002 Nov-Dec;15(6):463-72.

²⁰ Maiers M, et al. Patient outcomes at a traditional Chinese medicine teaching clinic: a prospective data collection project. *J Altern Complement Med.* 2008 Nov;14(9):1083-8.

²¹ World Health Organization. *Viewpoint on Acupuncture.* Geneva, Switzerland: World Health Organization, 1979

Evidence of Wellness, Health Promotion and Primary Prevention Services

The practice of AOM includes the concept of wellness, health promotion and preventative medicine. Within this context, one of the theories of Oriental medicine is the view that disease in the early stages can be either prevented or rectified by diet, exercise and other lifestyle factors. Most acupuncture practitioners advise patients about these factors to assist healing and prevent reoccurrence of illness. While educational and certification requirements provide for life-style counseling⁷, there has been very little research examining the role of the profession in patient education, behavior change, health risk assessment, health promotion and primary prevention except the previously mentioned surveys that have collected data on the number of patients that received acupuncture for general wellness. A 1998 study¹⁸ showed that 63% of those surveyed were seeking Chinese medicine for well care defined as using Chinese medicine care for well being, health, and illness prevention. Another study in 2008²⁰ showed that 44% of those surveyed were getting acupuncture treatment for general wellness. In contrast to these studies, a 2002 study¹⁹ reported that only 4% of visits were for wellness. The marked difference between these studies is likely related to the design of the surveys.

Governmental or Regulatory Agency Recognition as Primary Care Providers

In order to examine the status of the AOM field in this regard we need to examine both educational standards and standards of licensure. The ACAOM accredits AOM educational standards in the US, outside of the state of California, and is recognized by the US Department of Education. Its most current accreditation manual, *Structure, Scope, Process, Eligibility Requirements and Standards*⁷, does not include any reference to the subject of primary care. The NCCAOM and California Acupuncture Board (CAB) examinations are designed to ensure entry-level competencies for AOM practitioners.

There are inconsistencies with the current governmental and regulatory agency recognition of acupuncturists as primary care providers. First and foremost, definitions vary in the 44 states and Washington DC that currently license AOM practitioners, as many local acupuncture statutes do not indicate that acupuncture or Oriental medicine providers are primary care providers. Second, the educational standards are not significantly different between acupuncture training in California, New Mexico and Florida when compared with the other states and Washington DC that license acupuncture providers. Furthermore, many AOM colleges outside of CA are CAB-approved because their curriculum meets CAB requirements and graduates of such colleges are eligible to sit for the California acupuncture licensing exam. This suggests that California, New Mexico and Florida differ from other states that license acupuncturists with respect to the designation of acupuncturists as “primary care”, and may suggest a possible trend towards changing scope in the profession. As educational standards in the AOM educational field continue to evolve, these changes may impact the regulatory environment under consideration.

Third-Party Payer Recognition as Primary Care Providers

Acupuncture providers may submit billing to third-party payers such as insurers, employers or governmental agencies when those entities cover acupuncture services, including submitting evaluation and management (E&M) codes and procedure codes where coverage exists. Generally, eligible codes are directed to services other than primary care, and do not cover health screening, vaccination and other primary care related

review and procedures. Limitations on coverage by third party payers are influenced by coverage within individual payers and plans, as well as the status of acupuncture as a separate profession in the state.

Medicaid coverage of acupuncture is uncommon. A 1997 study by Cooper et al reported that no state Medicaid programs cover acupuncture services,²² and a 1999 survey identified only 7 programs in 46 states (15.2%).²³ This conflicting information may be due to general observations that did not specify the disease, services, or type of treatments.

Kaiser Family Foundation and Health Research and Educational Trust published a telephone survey of 3,017 companies in September 2004, which showed a 14% increase of employer coverage for acupuncture between 2002 and 2004.²⁴ The survey found that 47% of all employers surveyed offered acupuncture as a covered health benefit, up from 33 percent in 2002. It also found that acupuncture services were covered more often in point-of-service (POS) plans (52%) than in PPO (47%), conventional (44%) or HMO (41%) plans, and that larger companies were more likely to provide acupuncture coverage.

Research Relative to Acupuncture and Oriental Medicine as Primary Care

In 2012 the American Association of Acupuncture and Oriental Medicine (AAAOM) undertook a Workforce Survey designed to provide data on the perspectives of professional stakeholders (existing and former members, and non-members of the AAAOM) as to their attitudes and opinions on educational standards and primary care. Included were questions about educational standards for the first professional doctorate, which is currently being created as an entry-level program for the profession.²⁵ Email invitations were sent to approximately 23,000 practitioners and students. Of the 1,655 respondents (a response rate of roughly 7%) 1,202 completed the entire survey and 453 completed only a portion of the survey. Of the total respondents 446 (26.9%) were AAAOM members. Outcomes relevant to AOM and primary care are presented below:

| Questions | # Responses | % Agreed | % Not sure | % Disagreed |
|---|-------------|----------|------------|-------------|
| The AOM field should have a definition for primary care | 1,264 | 69.3 | 16.9 | 9.1 |
| Consistent with other comparable healthcare professions, education on Primary Care, as defined by the World Health Organization (WHO) and the Institute of Medicine (IOM), should be included in acupuncture training in the First Professional Doctorate program | 1,319 | 65.5 | 19.2 | 14.3 |
| Accreditation standards for AOM programs should be consistent with standards for other healthcare professions, such as Physician Assistant, Nursing, Chiropractic, Naturopathy and Physical Therapy | 1,327 | 72.6 | 13.4 | 14 |

The significance of these outcomes is limited by the low response rate and lack of statistical analysis. However, the data suggests that there is an interest amongst some of the stakeholders within the AOM profession to play a role in primary care and establish educational standards commensurate with other medical degree programs.

²² Cooper RA HT, Dietrich CL. Roles of nonphysician clinicians as autonomous providers of patient care. *JAMA*. 1998;280(9):795-802.

²³ Steyer TE FG, Lantz PM. Medicaid reimbursement for alternative therapies. *Alternative Therapies in Health & Medicine*. 2002;8(6):84-8.

²⁴ *Employer Health Benefits 2004 Annual Survey*. Menlo Park, Ca, Chicago, Il: Henry J. Kaiser Family Foundation & Health Research and Educational Trust; 2004.

²⁵ Jabbour, M., Ergil, K., Morris, W., Dierauf, B., Gomes, Kang, J., S., Stumpf, S., Carr, C., Auer, K., Johns, M. (2013). *Acupuncture Workforce Study 2012: Findings and Discussion*. American Acupuncturist (in press).

Professional Goals or Objectives Relative to Primary Care

The field of AOM, while maintaining a two millenia literary record of practice, is among the youngest of the licensed health professions in the US. At the national policy level, within the American Association of Acupuncture and Oriental Medicine (AAAOM; aaaomonline.org), which participates in the development of standards and promotes the AOM profession, there remains a need for a consensus process to define such a position to move any potential objectives for primary care forward. However, the acupuncture terrain is rapidly changing and this situation could change within 3-5 years.

Essential to this entire discussion is the definition of primary care. If primary care is defined as meeting the biomedical and health needs of patients, current AOM curriculum would require evaluation to ensure that the western biomedical diagnostic, prescriptive and practice needs of, for example, a general practitioner, are adequately covered. If it refers to practitioners who function as a portal of entry to the healthcare system, trained to treat patients within their scope of practice and to recognize patients that need further referral and treatment outside of their scope, then it is clear that most states already embrace such a definition through their regulations and licensure of AOM practitioners.

Comparative Educational Standards for Primary Care Practice

When comparing the knowledge, skills and abilities required for mainstream primary care providers in the US, it is clear that direct comparison to the AOM profession provides some challenges. If the definition of "primary care" is linked only to bioscience hours, then programs accredited by ACAOM will be seen as different from programs training mainstream primary care providers. This kind of comparison may not be fully informative, as AOM providers are educated in the system of Oriental medicine along with biomedicine and contemporary standards of integrative medicine and patient care.

The Accreditation Commission for Acupuncture and Oriental Medicine (ACAOM) is the accreditation commission recognized by the United States Department of Education to accredit acupuncture and Oriental medical programs. Most states require ACAOM accreditation for entry-level practice. Recognition by the California Acupuncture Board is currently the only requirement needed for an acupuncture program in California. AOM programs in the US range from 3 to 4 calendar years, depending on the specific degree program. The ACAOM requires 2,625 hours of education (1,755 didactic hours) for the master's degree in AOM (including the study of acupuncture and Chinese herbal medicine). It also accredits a master's degree in acupuncture (MSAc) that does not include the study of Chinese herbology, which requires 1,905 hours (1,245 didactic hours). The MSAC degree requires 450 hours of biomedical education and the AOM programs require 510 hours. California AOM programs must be a minimum of 3,000 hours of education (1,548 didactic hours), with 588 hours of biomedical education. Although the number of hours required differ between NCCAOM and CAB, the subject domains listed in the two standards are not significantly different. The biomedical education in AOM programs is directed at the recognition of clinical emergencies and appropriate referral, facilitating communication between AOM and biomedical providers, and to support the AOM curriculum. The education of AOM practitioners focuses appropriately on the skills and knowledge of traditional AOM practice, and the ability to refer to other practitioners when necessary.

ACAOM announced standards for a First Professional Doctorate in 2013. In keeping with the trend in higher education, prescriptive numbers of hours of education have been updated by articulation of professional competencies. The hours at the Master's level have been expressed as 54 competencies and they have been expanded by the addition of 28 new advanced doctoral level competencies which

include utilizing research and evidenced based medicine, incorporating diagnostic studies, working in integrated healthcare teams, and guiding a patient through healthcare systems.

Educational Standards as a Basis for Primary Care

Accredited AOM programs currently have fewer total hours of biomedical education as compared to education programs for conventional medical practitioners. This education provides acupuncturists with the knowledge, skills and abilities to participate in the current healthcare system through their skills and education to assess a patient and implement minimally the following actions as they pertain to primary care:

- Assess and treat the patient
- Refer appropriately for additional diagnostic studies and treatment
- Call 911 or refer for emergency care as required

An acupuncturist is adequately educated as a first contact independent provider. In this role, the acupuncturist is expected to exercise professional judgment in assessing a patient and determining the most appropriate plan, including treatment, referral or initiating an emergency response. Education in an ACAOM accredited or candidate AOM program provides excellent training for this role.

Focused Education to Enhance Skills in Primary Care

The AOM field is currently serving in an independent capacity as a gateway to the healthcare system. AOM providers are recognized for such roles and responsibilities in many licensing jurisdictions. With an expanded curriculum to include additional primary care related competencies, it is reasonable that AOM providers could achieve the necessary skills to provide such services in the community in collaboration with providers with more biomedical and primary care education. Curricular content and assessment of achieved competencies would be the necessary hallmarks of such a transformation.

Barriers to a Greater Role in Primary Care Practice

There are several barriers that keep acupuncturists in the US from taking a greater role as primary care providers. These include additional biomedical education that would be required to function as primary care practitioners, insurance reimbursement²⁶ disparities in comparison to other primary care providers, and limitations based on scope of practice. There are also legislative barriers in some states, including states that do not yet license acupuncturists (ND, OK, SD, WY) or those that require referral from physicians (MS, NE) prior to performing acupuncture. There is also a discussion within the profession, with some advocating additional education in primary care for entry-level, and others advocating decreasing the hours of education necessary to practice acupuncture.²⁷

²⁶ Alderman, Lesley. Acupuncture Is Popular, but You'll Need to Pay. *New York Times*. 5/7/2010. <http://www.nytimes.com/2010/05/08/health/08patient.html>.

²⁷ Weeks, John. "First Professional Doctorate" Exposes Rifts over the Future of Acupuncture and Oriental Medicine (AOM). *The Integrator Blog*. 1/12/2010. http://theintegratorblog.com/index.php?option=com_content&task=view&id=624&Itemid=1

Re-thinking Primary Care

The question remains, what is the relationship between the AOM profession and primary care? Can AOM providers participate in meeting the increasing needs of patients who currently have limited or diminished access to health care? Do acupuncturists have a role to play in meeting the needs of a healthcare system in crisis?

The above analysis suggests that the answer to all three questions is yes. Acupuncturists and Oriental medical providers are trained to provide a high level of care using the principles of AOM. As independent, first-contact providers, acupuncturists in most states may see patients that have not seen a primary care provider, provide appropriate care for those who do not need more intensive biomedical care, and are trained to make appropriate referrals as necessary.

Identifying and distinguishing primary care from other healthcare roles may contribute to the problem of identifying who plays a role in primary care. Acupuncturists perform functions in common with legally recognized primary care providers, including collecting subjective and objective findings, assessing the patient and making appropriate referrals when ominous signs are in evidence. It remains important to distinguish the distinction between primary care and independent acupuncture practice.

Ultimately, acupuncture providers play an important role as first contact providers in the medical system. They are able to provide care and screening within their scope of practice. Independent providers working in collaboration with primary care providers constitutes a valuable evolution of medical care. This is an important aspect of integrative care, and is currently serving an important need of patients.

Doctors of Chiropractic and Primary Care

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Introduction

Evolving continuously from its inception in Iowa in 1895, Chiropractic is now a well-acknowledged health profession routinely used by the public, capable of broad diagnostic activity, conservative treatment, and health promotion. It has developed a respected scientific evidence base and Doctors of Chiropractic (DCs) are embedded in a growing number of health delivery and reimbursement systems, including Workers' Compensation programs, Medicare, the Veteran's Health Administration, and the U.S. Department of Defense. The practice of Chiropractic is a licensed healthcare profession in all fifty states, the District of Columbia, the U.S. Virgin Islands, Puerto Rico, and other territories of the United States. All of these licensing jurisdictions accept or require graduation from a Council on Chiropractic Education (CCE) accredited educational program, and all recognize the CCE Standards as the educational requirements for chiropractic licensure.

Chiropractic care is a systems-based, whole-person approach to health care that focuses primarily on the locomotor system of the body. It incorporates the recognition that all aspects of the body are interrelated and interdependent and that organisms have powerful self-healing mechanisms. The primary aim of chiropractic health care is to support and, when possible, improve the natural functions and processes inherent to life. This is accomplished through manual procedures including mobilization and manipulation, physical modalities and procedures, lifestyle counseling, nutritional advice and therapy, and other measures that lie within the professional and legally authorized scope of practice of Doctors of Chiropractic.

Within the chiropractic profession there are individuals that concentrate their practices in specific domains such as diagnostic imaging, sports, orthopedics, pediatrics, nutritional counseling, and other specialties. Others within the profession have adopted an emphasis on musculoskeletal conditions and/or spinal dysfunctions, and focus their practices accordingly on these disorders. Regardless of the choice of practice focus, practice restriction or theoretical model that individual Doctors of Chiropractic assume, they have all been educated to the CCE definition of primary care.

Internal Definitions of Primary Care

Primary Care Definitions in Chiropractic Educational Standards

The Council on Chiropractic Education (CCE) is the only programmatic accrediting agency for chiropractic that is recognized by the United States Department of Education, and the concept of primary care has been included in CCE standards for over twenty years. In the most recent revision of its accreditation standards which will become effective in January 2012, CCE includes the following.¹

"An accredited DCP [Doctor of Chiropractic degree Program] prepares its graduates to practice as *primary care chiropractic physicians*, and provides curricular and clinical evidence of such through outcome measures. CCE applies the understanding that in order to competently practice as a primary care chiropractic physician, DCP education trains its graduates to:

¹ Council on Chiropractic Education, CCE Accreditation Standards: Principles, Processes & Requirements for Accreditation. http://www.cce-usa.org/uploads/2012-01_CCE_STANDARDS.doc. Accessed November 9, 2011.

- Practice primary health care as a portal-of-entry provider for patients of all ages and genders.
- Assess and document a patient’s health status, needs, concerns and conditions.
- Formulate the clinical diagnosis(es).
- Develop a goal-oriented case management plan that includes treatment, prognosis, risk, lifestyle counseling, and any necessary referrals for identified diagnoses and health problems.
- Follow best practices in the management of health concerns and coordinate care with other healthcare providers as necessary.
- Promote health, wellness and disease prevention by assessing health indicators and by providing general and public health information directed at improving quality of life.
- Serve as competent, caring, patient-centered and ethical healthcare professionals and maintain appropriate doctor/patient relationships.
- Understand and comply with laws and regulations governing the practice of chiropractic in the applicable jurisdiction.”

Primary Care Positions and Policies in Chiropractic Professional Associations

The American Chiropractic Association (ACA) has published a statement referencing and extending the Institute of Medicine’s definition of primary care to the chiropractic profession: *“Primary care is the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community.”* For each of the key concepts in the definition, the ACA position paper makes the logical case that chiropractic physicians are equipped and ready to fulfill the primary care mission.² The International Chiropractors’ Association also has a position that states, *“The DC can provide all three levels of primary care interventions and therefore is a primary care provider, as are MDs and DOs. The doctor of chiropractic is a gatekeeper to the health care system and an independent practitioner who provides primary care services. The DC’s office is a direct access portal of entry to the full scope of service.”*³

Internal Discussion Over Primary Care

There is little internal disagreement that all Doctors of Chiropractic should enjoy direct primary contact or “portal-of-entry” access by patients without the need for referral by another healthcare provider. This is legally codified in all states’ scope of practice regulations. Beyond that there is no single agreed-upon model of care delivery because some Doctors of Chiropractic choose to focus on musculoskeletal disorders, and others choose to practice in a broader context. In clinical practice, chiropractic primary care may be actuated in a variety of ways depending on how the local delivery system is structured. For example, referencing the current discussion on how much of primary care in the U.S. will most likely be delivered in the future, the Foundation for Chiropractic Progress released a monograph entitled, *“The Role of Chiropractic Care in the Patient-Centered Medical Home.”*⁴ In essence, the Patient-Centered Medical Home (PCMH) concept describes primary care as requiring a team of health professionals with

² American Chiropractic Association. Primary Care. (http://www.acatoday.org/level2_css.cfm?T1ID=10&T2ID=117). Accessed November 11, 2011.

³ International Chiropractors’ Association. Primary Care. ICA “Quick Facts” (<http://www.chiropractic.org/index.php?p=chiroinfo/main>). Accessed November 11, 2011.

⁴ The Role of Chiropractic Care in the Patient-Centered Medical Home. Foundation for Chiropractic Progress, 2011. <http://www.foundation4cp.org/files/cp-medicalhome.pdf>. Accessed November 9, 2011.

interrelated and yet distinctive skills and knowledge. Because Doctors of Chiropractic have demonstrated evidence-based skills and specialized knowledge regarding the musculoskeletal system (and its many related health complaints) seen in primary care practice, they can play an important and cost-effective role on community-based primary care teams.⁵ Another recent publication formalized an ongoing discussion regarding the value of establishing a “primary spine care practitioner.”⁶ It further makes the case that Doctors of Chiropractic are best-positioned to tackle a role that has increasingly been identified as a need in westernized healthcare systems in a similar manner to which dentists and optometrists fill primary care niches for oral and vision health.⁷

Variable views on primary care are represented within the chiropractic profession, but there is little data to indicate what fraction of the profession prefers any particular model. In any case, the differences are simply one of degree to the same extent that no single medical or other healthcare provider can meet all attributes of all primary care definitions at all times. Despite definitional nuances and regulatory language, all providers that aspire to primary care status are limited by choice, statute, knowledge, or circumstance. Within their state-mandated legal scope of practice, all Doctors of Chiropractic are trained to appropriately diagnose and manage the majority of healthcare issues that may present to their offices, and evidence exists to support that this is the case, including the referral or co-management of patients that present with problems beyond the legal scope of chiropractic practice or expertise.⁸

Primary Care Practice Model Including Referral and Co-management

As described above, the predominant model of chiropractic primary care practice has been promulgated and articulated by the Council on Chiropractic Education (CCE), which further defines primary health care as follows: “Care that is provided by a health care professional in the patient’s first contact within a health care system that includes an examination and evaluation, diagnosis and health management. A Doctor of Chiropractic practicing primary health care is competent and qualified to provide independent, quality, patient-focused care to individuals of all ages and genders by: 1) providing direct access, portal of entry care that does not require a referral from another source; 2) establishing a partnership relationship with continuity of care for each individual patient; 3) evaluating a patient and independently establishing a diagnosis or diagnoses; and, 4) managing the patient’s health care and integrating health care services including treatment, recommendations for self-care, referral, and/or co-management.”⁹ This model is uniformly addressed by all accredited chiropractic colleges in the U.S. by required adherence to CCE standards.

⁵ Garner MJ, Birmingham M, Aker P, et al. Developing integrative primary healthcare delivery: adding a chiropractor to the team. *Explore*. Jan/Feb 2008;4:18-24.

⁶ Murphy DR, Justice BD, Paskowski IC, Perle SM, Schneider MJ. The establishment of a primary spine care practitioner and its benefits to health care reform in the United States. *Chiropr Man Therap*. 2011;Jul 21;19(1):17.

⁷ Hartvigsen J, Foster NE, Croft PR. We need to rethink front line care for back pain. *BMJ*. 2011;342:d3260.

⁸ Christensen M, Kollasch M, Hyland JK. *Practice analysis of chiropractic: A project report, survey analysis and summary of the practice of chiropractic within the United States*. Greeley, CO: National Board of Chiropractic Examiners, 2010. Available at: <http://www.nbce.org/publication/ordering.asp> Accessed July 29, 2010.

Evidence of Patient Use as First Contact Provider

Utilization and Market Share of Chiropractic

Chiropractic has a significant footprint in the U.S. healthcare system. Approximately 65,000 Doctors of Chiropractic are licensed as first contact healthcare providers making it “the third largest ‘primary’ health profession in the U.S. (behind medicine and dentistry).”⁹ In 2004, there was an estimated 2.39 Doctors of Chiropractic per 10,000 adults in the U.S., a ratio that has remained relatively stable. Depending on the nature of various surveys, somewhere between 8 – 12% of the adult U.S. population seeks chiropractic care annually,^{10,11,12,13,14} generating (in 2005) approximately \$7.3 billion, or 3.3% of national healthcare outpatient service expenditures.¹⁰ In 2006, approximately 12.6 million U.S. adults made 109 million visits to Doctors of Chiropractic.¹⁰ An additional 2.1 million or 2.9% of children in the U.S. received chiropractic/osteopathic care.¹⁴ Surveys of patients seeking professional help for back and neck pain or chronic pain indicate that between 30 and 40% choose chiropractic care.^{15,16,17,18} Approximately 85% of chiropractic patients seek care on a primary care basis, that is, without referral from another healthcare practitioner.^{19,20} The rest are either referred to chiropractic care by other healthcare practitioners, or they receive concurrent care from other practitioners.^{8,19}

Doctors of Chiropractic are distributed throughout the country with a slightly greater concentration in suburban and rural areas compared to urban centers, and with the Midwest over-represented compared to the South.^{9,10} In some rural areas, Doctors of Chiropractic may be the only healthcare providers within a reasonable distance of many patients.²¹ The demographic attributes of chiropractic patients, including the elderly²² and children,²³ are fairly well-distributed across gender, age, occupation, and income level.⁹

⁹ Briggance BB. Chiropractic care in California. University of California San Francisco Center for the Health Professions. 2003:1-8. http://www.futurehealth.ucsf.edu/Content/29/2003-06_Chiropractic_Care_in_California.pdf. Accessed November 9, 2011.

¹⁰ Davis MA, Sirovich BE, Weeks WB. Utilization and expenditures on chiropractic care in the United States from 1997 to 2006. *Health Services Research. Health Research and Educational Trust*. Dec 2009;748. Doi:10.1111/j.1475-6773.2009.01067.x

¹¹ Hurwitz EL, Chiang L. A comparative analysis of chiropractic and general practitioner patients in North America: findings from the joint Canada/United States survey of health, 2002-03. *BMC Health Services Research*. April 6, 2006;6:49. doi:10.1186/1472-6963-6-49.

¹² Lawrence DJ, Meeker WC. Chiropractic and CAM utilization: A descriptive review. *Chiropr Osteopat*. 2007;Jan 22;15:2.

¹³ Barnes PM, Powell-Griner E, McFann K, Nahin RL. Complementary and alternative medicine use among adults: United States, 2002. *Adv Data*. 2004 May 27;(343):1-19.

¹⁴ Barnes PM, Bloom B, Nahin, RL. Complementary and alternative medicine use among adults and children: United States, 2007. *National Health Statistics Reports. U.S. Department of Health and Human Services*. Dec 10, 2008;12.

¹⁵ Chevan J, Riddle DL. Factors associated with care seeking from physicians, physical therapists, or chiropractors by persons with spinal pain: a population-based study. *J Orthop Sports Phys Ther*. 2011 Jul;41(7):46-76.

¹⁶ Breuer B, Cruciani R, Portenoy RK. Pain management by primary care physicians, pain physicians, chiropractors, and acupuncturists: a national survey. *Southern Medical Journal*. Aug 2010;103(8):738-747.

¹⁷ Cote P, Cassidy JD, Carroll L. The treatment of neck and low back pain: who seeks care? who goes where? *Medical Care*. 2001;39(9):956-967.

¹⁸ Feuerstein M, Marcus SC, Huang GD. National trends in non-operative care for nonspecific back pain. *The Spine Journal*. 2004;4:56-63.

¹⁹ Cherkin DC, Deyo RA, Sherman KJ, Hart LG, Street JH, Hrbek A, et al. Characteristics of visits to licensed acupuncturists, chiropractors, massage therapists, and naturopathic physicians. *J Am Board Fam Med*. Nov-Dec 2002;15(6):463-472.

²⁰ Mootz RD, Cherkin DC, Odegard CE, et al. Characteristics of chiropractic practitioners, patients, and encounters in Massachusetts and Arizona. *J Manipulative Physiol Ther*. 2005;28:645-653.

²¹ Smith M, Carber L. Chiropractic Health Care in Health Professional Shortage Areas in the United States. *Am J Public Health*. 2002;92:2001-2009.

²² Evans M, Ndetan H, Hawk C. Use of chiropractic or osteopathic manipulation by adults aged 50 and older: an analysis of the 2007 National Health Interview Survey. *Topics Integrative Health Care* 2010; 2(1): ID:1.2005.

²³ Alcantara J, Ohm J, Kunz D. The chiropractic care of children. *J Alternative Complementary Med*. 2010; 16(6):621-26.

Some differences between medical and chiropractic patients have been observed in terms of attitudes, health status, insurance coverage, and other factors, but the largest difference is the much higher proportion of musculoskeletal complaints in the case-mix of DCs.^{17,24,25,26,27,28}

Conditions Managed by Doctors of Chiropractic

Pain-related health complaints make up one of the largest components of all primary care practices, regardless of profession, and they seem to be getting worse.^{29,30} This point was made again most recently by a high profile report by the Institute of Medicine that calls for a “cultural shift” in the way pain is dealt with, including a recommendation that most care and management of pain should be done through primary care providers, leaving only complex cases to specialists.³¹

Scientific evidence from a variety of sources indicates that the majority of patients seeking chiropractic care have painful conditions of the musculoskeletal system, especially spine and extremity joint related.^{17,19,26,27} A smaller number of patients use chiropractic care for many other ambulatory complaints and to enhance their well-being and quality of life.^{8,12,32,33} A substantial portion of patients come to chiropractic care when medical care is perceived as unhelpful or has proven unsatisfactory.^{12,34}

The question of whether chiropractic care is an expensive add-on to usual medical care or whether it successfully substitutes for medical care was addressed by series of retrospective analyses of large third-party payer databases. This research provides strong evidence that the availability of chiropractic care substitutes for medical care in a cost and clinically effective way.^{35,36,37} In other words, when patients have equal access to chiropractic care and medical care, they will not seek care from medical providers for the same musculoskeletal condition. A monograph published by Mercer came to a similar conclusion on

²⁴ Sharma R, Haas M, Stano M. Patient attitudes, insurance, and other determinants of self-referral to medical and chiropractic physicians. *Am J of Public Health*. December 2003;93(12):2111-2117.

²⁵ Carey TS, Garrett J, Jackman A, McLaughlin C, Fryer J, Smucker DR. The outcomes and costs of care for acute low back pain among patients seen by primary care practitioners, chiropractors and orthopedic surgeons. The North Carolina Back Pain Project. *N Engl J Med*. 1995;333:913-7.

²⁶ Hurwitz EL, Chiang L. A comparative analysis of chiropractic and general practitioner patients in North America: Findings from the joint Canada/United States survey of health, 2002-03. *BNC Health Serv Res*. 2006;6:49.

²⁷ Coulter ID, Hurwitz EL, Adams AH, Genovese BJ, Hays R, Shekelle PG. Patients using chiropractors in North America: who are they, and why are they in chiropractic care? *Spine*. Feb 2002;27(3):291-297.

²⁸ Hurwitz EL, Morgenstern H. The effects of comorbidity and other factors on medical versus chiropractic care for back problems. *Spine* (Phila Pa 1976). 1997 Oct 1;22(19):2254-63.

²⁹ Martin BI, Deyo RA, Mirza SK, Turner JA, Comstock BA, et al. Expenditures and Health Status among adults with back and neck problems. *JAMA*. 2008;299(6):656-664.

³⁰ Martin BI, Turner JA, Mirza SK, Lee MJ, Comstock BA, Deyo RA. Trends in health care expenditures, utilization, and health status among US adults with spine problems, 1997-2006. *Spine*. 2009 Sep 1;34(19):2077-84.

³¹ IOM (Institute of Medicine). 2011. *Relieving Pain in America: A Blueprint for Transforming Prevention, Care Education, and Research*. Washington, DC: The National Academies Press.

³² Hawk C, Long CR, Boulanger KT, Morschhauser E, Fuhr AW. Chiropractic care for patients aged 55 years and older: report from a practice-based research program. *J Am Geriatr Soc*. 2000 May;48(5):534-45.

³³ Rupert R, Manello D, Sandefur R. Maintenance care: health promotion services administered to US chiropractic patients aged 65 and older, part II. *J Manipulative and Physiol Ther*. 2000;23:10-19.

³⁴ Palinkas LA, Kabongo ML. The use of complementary and alternative medicine by primary care patients. *J of Family Practice*. December 2000;49(12):1121-1130.

³⁵ Legorreta AP, Metz RD, Nelson CF, Ray S, Chernicoff HO, DiNubile NA. Comparative analysis of individuals with and without chiropractic coverage: patient characteristics, utilization, and costs. *Arch Intern Med*. 2004;164:1985-1992.

³⁶ Nelson CF, Metz RD, LaBrot TM, Pelletier KR. The selection effects of the inclusion of a chiropractic benefit on the patient population of a managed health care organization. *J Manipulative Physiol Ther*. 2005 Mar-Apr;28(3):164-9.

³⁷ Metz RD, Nelson CF, LaBrot T, Pelletier KR. Chiropractic care: is it substitution care or add-on care in corporate medical plans? *J Occup Environ Med*. 2004;46(8):847-855.

the cost-effectiveness of chiropractic care based on the results of randomized controlled trials.³⁸ Studies in the workers' compensation domain and in corporate settings have also found chiropractic care to be cost-effective.^{39,40,41}

Health Outcomes and Satisfaction with Chiropractic Care

A full discussion of the body of research on the outcomes of chiropractic care is beyond the scope of this paper. However, it is important to note that the treatment procedures most associated with Chiropractic, spinal manipulation and mobilization, have been studied in at least 100 randomized controlled clinical trials and many observational studies. The most and best studies have focused on spine-related pain conditions and headache, but other conditions are being studied as well.^{42,43} The evidence has been summarized in a number of high-quality systematic reviews^{44,45,46,47} and incorporated into practice guidelines developed by many professional groups in many nations.^{48,49,50,51} In one recent important example, spinal manipulation is recommended as a treatment for both acute and chronic back pain in a guideline developed jointly by the American College of Physicians and the American Pain Society.⁴⁸ In another, spinal manipulation/mobilization was acknowledged as one of the most evidence-based treatments for neck pain by the Neck Pain Task Force of the International Bone and Joint Decade.⁵¹ The U.S. National Institutes of Health has funded chiropractic related research for 15 years and now presents a positive conclusion on the value of spinal manipulation and mobilization for common pain conditions.⁵²

³⁸ Choudhry N, Milstein A. Do chiropractic physician services for treatment of low back and neck pain improve the value of health benefit plans? A report prepared for the Foundation for Chiropractic Progress. Mercer Health & Benefits LLC. Oct 12, 2009. http://www.foundation4cp.com/evidence_based_assessment.pdf.

³⁹ Lilledahl RL, Finch MD, Axene DV, Goertz CM. Cost of care for common back pain conditions initiated with chiropractic doctor vs medical doctor/doctor of osteopathy as first physician: experience of one Tennessee-based general health insurer. *J Manipulative Physio Ther.* 2010;1-4.

⁴⁰ Butler RJ, Johnson WG. Satisfaction with low back pain care. *The Spine Journal.* 2008;8:510-521

⁴¹ Nayer C, Sherman B, Mahoney J. Outcomes-Based Contracting: The Value-Based Approach for Optimal Health with Chiropractic Services. St. Louis: Center for Health Value Innovation, 2010.

⁴² Hawk C, Khorsan R, Lisi A, et al. Chiropractic care for nonmusculoskeletal conditions: a systematic review with implications for whole systems research. *J Alternative and Complementary Med.* 2007;13(5):491-512.

⁴³ Bronfort G, Haas M, Evans R, Leininger, Triano J. Effectiveness of manual therapies: the UK evidence report. *Chiropractic & Osteopathy.* 2010;18:3.

⁴⁴ Furlan A, Yazdi F, Tsertsvadze A, Gross A, Van Tulder, M, Santaguida L, Cherkin D, Gagnier J, Ammendolia C, Ansari M, Ostermann T, Dryden T, Doucette S, Skidmore B, Daniel R, Tsouros S, Weeks L, Galipeau J. Complementary and Alternative Therapies for Back Pain II. Evidence Report/Technology Assessment No. 194. (Prepared by the University of Ottawa Evidence-based Practice Center under Contract No. 290-2007-10059-I (EPCIII). AHRQ Publication No. 10(11)E007. Rockville, MD: Agency for Healthcare Research and Quality. October 2010.

⁴⁵ Bronfort G, Haas M, Evans R, Kawchuck G, Dagenais S. Evidence-informed management of chronic low back pain with spinal manipulation and mobilization. *Spine Journal.* 2008;8:213-225.

⁴⁶ Chou R, Huffman LH. Nonpharmacologic therapies for acute and chronic low back pain: A review of the evidence for an American Pain Society/American College of Physicians clinical practice guideline. *Ann Intern Med.* 2008;147:492-504.

⁴⁷ Dagenais S, Gay RE, Tricco AC, et al. NASS contemporary concepts in spine care: spinal manipulation therapy for acute low back pain. *Spine Journal.* 2010;10:918-940.

⁴⁸ Chou R, Qaseem A, Snow V, Casey D, et al. Diagnosis and treatment of low back pain: A joint clinical practice guideline from the American College of Physicians and the American Pain Society. *Ann Int Med.* 2007;147(7):478-91.

⁴⁹ Koes BW, van Tulder M, Lin CC, et al. An updated overview of clinical guidelines for the management of non-specific low back pain in primary care. *Eur Spine J.* 2010;19:2075-2094.

⁵⁰ Dagenais S, Tricco AC, Haldeman S. Synthesis of recommendations for the assessment and management of low back pain from recent clinical practice guidelines. *Spine Journal.* 2010;10:514-529.

⁵¹ Hurwitz EL, Carragee EJ, van der Velde G, Carroll LJ, Nordin M, Guzman J, Peloso PM, Holm LW, Côté P, Hogg-Johnson S, Cassidy JD, Haldeman S; Bone and Joint Decade 2000-2010 Task Force on Neck Pain and Its Associated Disorders. Treatment of neck pain: noninvasive interventions: results of the Bone and Joint Decade 2000-2010 Task Force on Neck Pain and Its Associated Disorders. *Spine (Phila Pa 1976).* 2008 Feb 15;33(4 Suppl):S123-52.

⁵² National Institutes of Health, National Center for Complementary and Alternative Medicine. Spinal Manipulation for Back Pain. http://nccam.nih.gov/health/pain/D409_GTF.pdf. Accessed November 10, 2011.

The health care consuming public has a positive opinion of the value of chiropractic care. One of the largest surveys ever conducted^{30,32} found that 65% of patients who used chiropractic care for back or neck pain reported it “helped a lot,” outranking all other treatments surveyed including prescription medications.⁵³ Similar findings have been repeated in other surveys, observational studies and in randomized controlled trials.^{40,54,55} When directly measured, patients’ satisfaction with chiropractic care consistently outranks that received from other healthcare providers.^{56,57,58,59} Strong support by patients has probably contributed to Chiropractic’s current position as the most widely utilized profession-based complementary and alternative medicine (CAM) practice in the U.S.^{60,61}

Evidence of Wellness, Health Promotion and Primary Prevention

Primary Prevention and Primary Care

Primary prevention is emphasized by virtually all healthcare professionals and has been repeatedly encouraged to be a part of primary care practice.^{62,63,64,65} Integration of complementary and alternative medicine, including Chiropractic, into mainstream health delivery, may yield better overall patient health outcomes.^{66,67} The chiropractic profession is visibly committed to the goals of public health and has embraced the concepts of wellness, health promotion and primary prevention in a number of

⁵³ Consumer Reports. Alternative treatments: More than 45,000 readers tell us what helped. <http://consumerreports.org/health/natural-health/alternative-treatments/overview/index.htm>. Accessed November 10, 2011.

⁵⁴ Stason WB, Ritter G, Shepard DS, Prottas J, Tompkins C, Martin TC, et al. (2010). Report to Congress on the evaluation of the demonstration of coverage of chiropractic services under Medicare. June 16, 2009. Waltham, MA: Brandeis University.

⁵⁵ Wolsko PM, Eisenberg DM, Davis RB, Kessler R, Phillips RS. Patterns and perceptions of care for treatment of back and neck pain: results of a national survey. *Spine*. 2003 Feb 1;28(3):292-7.

⁵⁶ Carey TS, Garrett JM, Jackman A, Hadler N. Recurrence and care seeking after acute back pain: results of a long-term follow-up study. *Medical Care*. Feb 1999;37(2):157-164.

⁵⁷ Nyiendo J, Haas M, Goldberg B, Sexton G. Pain, disability, and satisfaction outcomes and predictors of outcomes: a practice-based study of chronic low back pain patients attending primary care and chiropractic physicians. *J Manipulative Physiol Ther*. 2001 Sep;24(7):433-9.

⁵⁸ Hertzman-Miller RP, Morgenstern H, Hurwitz EL, Yu F, Adams AH, Harber P, Kominski GF. Comparing the satisfaction of low back pain patients randomized to receive medical or chiropractic care: results from the UCLA low-back pain study. *Am J Public Health*. 2002 Oct;92(10):1628-33.

⁵⁹ Gaumer G. Factors associated with patient satisfaction with chiropractic care: Survey and review of the literature. *J Manip Physiol Ther*. 2006;29(6):455-62.

⁶⁰ Kanodia AK, Legedza AT, Davis RB, Eisenberg DM, Phillips RS. Perceived benefit of Complementary and Alternative Medicine (CAM) for back pain: a national survey. *J Am Board Fam Med*. May-June 2010;23(3):354-362.

⁶¹ Meeker WC, Haldeman S. Chiropractic: a profession at the crossroads of mainstream and alternative medicine. *Ann Intern Med*. 2002;136(3):216-227.

⁶² Institute of Medicine. Defining primary care: an interim report. Washington DC. National Academy Press, 1994. Available at: <http://www.iom.edu/Reports/1994/Defining-Primary-Care-An-Interim-Report.aspx> Accessed July 29, 2010.

⁶³ Institute of Medicine. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: National Academies Press; 2001. Available at: http://www.nap.edu/html/quality_chasm/reportbrief.pdf Accessed July 29, 2010.

⁶⁴ Agency for Healthcare Research and Quality. *The Guide to Clinical Preventive Services, 2009*. United States Department of Health and Human Services, 2008. Washington DC. Available at: <http://www.preventiveservices.ahrq.gov> Accessed July 28, 2010.

⁶⁵ United States Department of Health and Human Services. Healthy People 2020: the road ahead. Available at: <http://www.healthypeople.gov/hp2020/> Accessed July 29, 2010.

⁶⁶ Katz, DL, Ali A. *Preventive Medicine, Integrative Medicine and the Health of the Public. Commissioned for the Institute of Medicine Summit on Integrative Medicine and the Health of the Public*, February, 2009. Available at: <http://www.iom.edu/~media/Files/Activity%20Files/Quality/IntegrativeMed/IM20Summit20Background20Paper20Weisfeld2022309.pdf>. Accessed July 29, 2010.

⁶⁷ Willison KD, Mitmaker L, Andrews GJ. Integrating complementary and alternative medicine with primary health care through public health to improve chronic disease management. *J Complementary Integrative Med*. 2005. doi: 10.2202/1553-3840.1012.

ways.^{68,69,70,71} The Chiropractic Health Care Section of the American Public Health Association has been an active participant in the public health professional community since 1995.⁷²

Rationale for Prevention in Chiropractic

Chiropractic students are familiar with tasks related to primary care⁷³ and a focus on primary prevention as primary care is a good fit for Doctors of Chiropractic.^{74,75} In some areas of the country, a Doctor of Chiropractic may be the only provider delivering health promotion services.^{21,76} Doctors of Chiropractic tend to see patients more frequently than family practice or primary care medical providers and develop close doctor-patient relationships.⁷⁷ Consequently, there is a greater opportunity for prevention messages to be delivered and for preventive patient behaviors to be reinforced over time.^{78,79,80} In one study, chiropractic patients over age 65 reported making only half the annual number of visits to medical doctors compared with the national average for this age group.³³ In another, *patients reported choosing chiropractic care for general wellness.*²²

⁶⁸ Johnson C, Baird R, Dougherty PE, Globe G, Green BN, Haneline, M, et al. Chiropractic and public health: current state and future vision. *J Manipulative Physiol Ther.* 2008;31:397-410.

⁶⁹ American Chiropractic Association. Wellness Model. Available at: http://www.amerchiro.org/level2_css.cfm?T1ID=10&T2ID=117 Accessed 10 JUL 2009.

⁷⁰ Association of Chiropractic Colleges. Paradigm on Wellness. Available at: <http://www.chirocolleges.org/history.html> Accessed July 10, 2009.

⁷¹ Haneline MT, Meeker, WC. Introduction to Public Health for Chiropractors. Jones and Bartlett Publishers, Sudbury, MA, 2011.

⁷² American Public Health Association. Chiropractic Health Care. <http://www.apha.org/membergroups/sections/aphasections/chc/>. Accessed November 10, 2011

⁷³ Sandefur R, Febbo TA, Rupert RL. Assessment of knowledge of primary care activities in a sample of medical and chiropractic students. *J Manipulative and Physiol Ther.* 2005;28:336-344.

⁷⁴ Hawk C. Chiropractic and primary care. *Advances in Chiro.* Chicago, Mosby Year Book 1996;3:287-317

⁷⁵ Evans M, Rupert R. The Council on Chiropractic Education's new wellness standard: a call to action for the chiropractic profession. *Chiropr and Osteopathy.* 2006; 14(1):23 doi:10.1186/1746-1340-1.

⁷⁶ Callahan D, Cianculli A. *The chiropractor as a primary care health provider in rural, health professional shortage areas of the US: an exploratory analysis.* Arlington, VA; 1993.

⁷⁷ Woolf SH, Jonas S, Kaplan-Liss E. *Health promotion and disease prevention in clinical practice.* 2nd ed. Philadelphia, PA. Wolters Kluwer-Lippincott, Williams, and Wilkins; 2008; 533-535.

⁷⁸ Evans, M. The abc's of health promotion and disease prevention in chiropractic practice. *J Chiropr Med.* 2003; 2:107-110.

⁷⁹ Axén I, Jensen IB, Eklund A, et al. The Nordic maintenance care program: when do chiropractors recommend secondary and tertiary preventive care for low back pain? *Chiropr and Osteopathy.* 2009;17:1 doi:10.1186/1746-1340-17-1.

⁸⁰ Descarreaux M, Blouin JS, Drolet M, Papadimitriou S, Teasdale N. Efficacy of preventive spinal manipulation for chronic low-back pain and related disabilities: a preliminary study. *J Manipulative Physiol Ther.* 2004 Oct;27(8):509-14.

Co-morbidity of Chronic Spine Patients, Health Promotion and Primary Prevention

Doctors of Chiropractic report seeing a high proportion of patients with musculoskeletal health complaints with co-morbidities suggesting a great need and an opportunity for a variety of primary prevention interventions.^{8,81,82,83} Furthermore, studies of case-management strategies employed by Doctors of Chiropractic indicate that a high proportion currently use one or more methods of primary, secondary and tertiary prevention depending on case presentation.^{8,84,85,86,88}

Chiropractic Education in Wellness, Health Promotion and Primary Prevention

The chiropractic scholarly community supports training and evaluation of public health interventions.⁷¹ Paper presentations on the topic are made annually at the American Public Health Association and at the Association of Chiropractic Colleges – Research Agenda Conference. The Council on Chiropractic Education requires clinical competencies to be learned by students in primary prevention, health promotion and wellness.⁸⁹ Furthermore, the National Board of Chiropractic Examiners, through its required nationally standardized examinations, tests chiropractic students on their ability to understand, advise on, and deliver prevention and health promotion services to patients.

Governmental, Regulatory Agency and Third-Party Payer Recognition as Primary Care Providers

The Council on Chiropractic Education (CCE) is the only chiropractic accrediting agency recognized by the United States Department of Education, and its standards are accepted as required education for all licensing jurisdictions in the U.S. As described above, the CCE standards specifically state that DC students are trained to function as primary care chiropractic physicians. Each state has its own enabling legislation and statutes for regulating the chiropractic profession. In all cases, Doctors of Chiropractic enjoy direct patient or portal-of-entry access for patients, perhaps the single most important attribute of the primary care concept. However, the notion of primary care is relatively historically recent and for that reason was rarely originally introduced into the great majority of statutes governing Chiropractic in the first part of the 20th century. Two states, Illinois and Iowa, do explicitly include Doctors of Chiropractic

⁸¹ Fanuele JC, Birkmeyer NJO, Abdu WA, Tosteson T, Weinstein JN. The impact of spinal problems on the health status of patients: have we underestimated the effect? *Spine*. 2000; 25(12):1509-1514.

⁸² Von Korff M, Crance P, Lane M, et al. Chronic spinal pain and physical-mental comorbidity in the United States: results from the national comorbidity survey replication. *Pain*. 2005;113:331-339.

⁸³ Jhawar BS, Fuchs CS, Colditz GA, Stampfer MJ. Cardiovascular risk factors for physician-diagnosed lumbar disc herniation. *The Spine J* 2006;6:684-691

⁸⁴ Hawk C, Dusio ME. A survey of 492 U.S. chiropractors on primary care and prevention-related issues. *J Manipulative Physiol Ther*. 1995;18(2):57-64.

⁸⁵ Hawk C, Evans M. Does chiropractic clinical training address tobacco use? *J Am Chiropr Assoc* 2005; 42(3) 6-13.

⁸⁶ Evans M, Williams RD, Ndetan H Intentions of chiropractic interns regarding use of health promotion in practice: applying the Theory of Reasoned Action to identify attitudes, beliefs, and influencing factors. *J Chiropr Ed*. 2009;23(1):17-27

⁸⁷ Ndetan, HT, Sejong, B, Evans, M, Rupert, R, Singh KP. Characterization of health status and modifiable risk behavior—United States adults using chiropractic care as compared to general medical care. *J Manipulative and Physiol Therapeutics*. 2009, 32(6):414-422.

⁸⁸ Hawk C, Cambron JA, Pfefer MT. Pilot study of the effect of a limited and extended course of chiropractic care on balance, chronic pain, and dizziness in older adults. *J Manipulative and Physiol Ther*. 2009;32:438-447.

⁸⁹ Council on Chiropractic Education. Manual of Policies, 2011. http://www.cce-usa.org/uploads/2011-01_Manual_of_Policies.pdf. Accessed November 11, 2011.

in definitions of a primary care provider. Doctors of Chiropractic have been direct-access Medicare providers since the 1970s without being explicitly described as primary care providers. The Joint Commission (formerly JCAHO), a powerful accrediting agency, recognizes Doctors of Chiropractic as “physicians,” along with medical doctors, dentists, podiatrists, and optometrists.⁹⁰

Workers’ Compensation laws provide payment for direct access to chiropractic care for injured workers, as well as the great majority of fee-for-service health insurance programs, including those working under various managed care models.⁶¹ The new Patient Protection and Affordable Care Act (PPACA), Section 3502, names Doctors of Chiropractic as potential members of community primary healthcare teams to support the development of Patient-Centered Medical Homes.⁹¹ Relatedly, the Health Information Technology for Economic and Clinical Health Act (HITECH) of 2009 authorizes and supports Doctors of Chiropractic to adopt specified electronic health record systems that will dovetail with the infrastructure needs of PCMHs and other delivery organizations.

Healthcare Quality Initiatives and Chiropractic Care

The chiropractic profession recognizes and supports the healthcare quality movement in a variety of ways. Best practices and clinical practice guidelines have been developed starting in the 1990s⁹² and efforts have continued with, for example, the establishment of the Council on Chiropractic Parameters and Practice Parameters, which publishes and updates best practice documents on a regular basis.⁹³ Four chiropractic colleges have received major funding from the National Institutes of Health to initiate curricular and other educational changes that would increase the learning of evidence-based care (EBC) decision making in chiropractic practice. A recent randomized clinical trial demonstrated the greater effectiveness of guideline-based chiropractic care compared to usual medical care for acute back pain.⁹⁴ The U.S. Army’s Pain Management Task Force, through its PCMH model, supports the use of chiropractic care as effective for low back pain management. The Institute for Clinical Systems Improvement (ICSI) Low Back Pain (Adult) Guideline, 14th Edition, released in 2010, specifically lists Doctors of Chiropractic as appropriate healthcare providers.⁹⁵

⁹⁰ Morgan W. The Joint Commission now recognizes DCs as physicians. American Chiropractic Association. http://www.acatoday.org/content_css.cfm?CID=4038. Accessed May 18, 2011.

⁹¹ The Patient Protection and Affordable Care Act (PPACA). http://www.healthcaredisclosure.org/docs/files/PPACA_Text.pdf. Accessed March 25, 2011.

⁹² Haldeman S, Chapman-Smith, Petersen DM (eds). *Guidelines for Chiropractic Quality Assurance and Practice Parameters*. Gaithersburg, MA: Aspen Publishers, Inc. 1993.

⁹³ Council on Chiropractic Guidelines and Practice Parameters. <http://www.ccgpp.org/>, Accessed November 11, 2011.

⁹⁴ Bishop PB, Quon JA, Fisher CG, Dvorak MS. The chiropractic hospital-based interventions research outcomes (CHIRO) study: a randomized controlled trial on the effectiveness of clinical practice guidelines in the medical and chiropractic management of patients with acute mechanical low pain. *The Spine Journal*. 2010;10:1055-1064.

⁹⁵ Institute for Clinical Systems Improvement (ICSI) Low Back Pain (Adult) Guideline, 14th Ed. November, 2010. http://www.icsi.org/low_back_pain/adult_low_back_pain_8.html. Accessed May 24, 2011.

Research Relative to Chiropractic Primary Care

The issue of primary care has been studied and discussed in the chiropractic profession's scholarly journals for at least two decades.^{74,96,97} Many papers are commentaries on the components of the variety of definitions of primary care and the extent to which Doctors of Chiropractic provide it. Others report data focused on questions around the primary care concept.

In 2000, Teitelbaum⁹⁸ conducted qualitative surveys in four communities and found that, "Current practice models of chiropractors do not include a strong allopathic model of primary care, although they are consistent with consumer preferences and satisfying to chiropractors." Gaumer⁹⁹ facilitated two expert panels that included medical doctors to create a taxonomy of primary care activities. Doctors of Chiropractic were deemed capable of making diagnoses 92% of the time and contributing therapeutically in more than 50%, suggesting opportunity for DCs and MDs to work together on patient care and organizational strategy. An additional paper¹⁰⁰ focused on barriers to expanding primary care roles for DCs. These will be discussed in more detail below, but some state licensing laws have been recognized as potentially challenging.¹⁰¹

A survey of chiropractic organizational leaders and Connecticut DCs in 2003 concluded that DCs in that state qualify as primary care providers by education, licensure, definition, and intra-professional consensus.¹⁰² Knowledge of primary care activities was assessed and compared between final-term chiropractic students and medical students entering residency training. Chiropractic students scored close to but generally lower than medical students, but scored better than their counterparts on the musculoskeletal section of the test.⁷³ Gaumer¹⁰³ analyzed data from a 1998 random survey of users and non-users of chiropractic care with respect to primary care. The lack of knowledge about Chiropractic demonstrated by non-users was striking. At that time over a decade ago, Chiropractic users and non-users were about equally willing to consider using non-MDs as primary providers, but only a minority would choose a DC.

In 2007, Cambron¹⁰⁴ surveyed a small sample of chiropractic patients who "overwhelmingly believed" that DCs could treat their musculoskeletal conditions. However, only 19% saw their DC as their primary care provider despite moderately high agreement that DCs can treat 17 types of non-musculoskeletal conditions seen commonly in primary care medical practice. On the other hand, a convenience sample of chiropractic patients from four practices in New Mexico recently suggested that DCs were perceived as primary care providers and that 85% would prefer that their DC have limited drug prescription

⁹⁶ Kranz KC. An overview of primary care concepts. *Top Clin Chiro.* 1995;2(1):55-65.

⁹⁷ Bowers LJ, Mootz RD. The nature of primary care: The chiropractor's role. *Top Clin Chiro.* 1995;2(1):66-84.

⁹⁸ Teitelbaum M. The role of chiropractic in primary care: findings of four community studies. *J Manipulative Physiol Ther.* 2000;23:601-609.

⁹⁹ Gaumer GL, Walker, A, Su, S. Chiropractic and a new taxonomy of primary care activities. *J Manipulative Physiol Ther.* 2001;24(4), 239-59.

¹⁰⁰ Gaumer G, Koren A, Gemmen E. Barriers to expanding primary care roles for chiropractors: the role of chiropractic as primary care gatekeeper. *J Manipulative Physiol Ther.* 2002;25:427-449.

¹⁰¹ Duenas R. United States chiropractic practice acts and institute of medicine defined primary care practice. *Chiro Med.* Fall 2002;1:155-170.

¹⁰² Duenas R, Carucci GM, Funk MF, Gurney MW. Chiropractic – primary care, neuromusculoskeletal care, or musculoskeletal care? Results of a survey of chiropractic college presidents, chiropractic organization leaders, and Connecticut-licensed doctors of chiropractic. *J Manipulative Physiol Ther.* 2003;26:510-23.

¹⁰³ Gaumer G, Gemmen E. Chiropractic users and nonusers: differences in use, attitudes, and willingness to use nonmedical doctors for primary care. *J Manipulative Physiol Ther.* 2006;29:529-539.

¹⁰⁴ Cambron JA, Cramer GD, Winterstein J. Patient perceptions of chiropractic treatment for primary care disorders. *J Manipulative Physiol Ther.* 2007; 30:11-16.

authority.¹⁰⁵ In an interesting multi-year demonstration, clinical utilization and cost outcomes from an innovative Independent Physician Association that exclusively used DCs and other complementary and alternative clinicians as primary care providers, found that patients experienced more than a 60 percent decrease in hospitalizations, 59 percent fewer hospital days, 62 percent fewer outpatient surgeries and an 85 percent decrease in pharmaceutical costs compared to patients who saw medical doctors. Notably, over a seven year period, the chiropractic primary care providers managed 60% of their enrolled members without a referral.¹⁰⁶

In Canada, Garner¹⁰⁷ investigated the effect on attitudes of adding DCs to two community primary healthcare teams of medical and allied health professionals. Using qualitative and quantitative methods, the original teams showed large and significant increases in trust in shared care, legitimacy, and effectiveness of chiropractic. Further work in this vein found that factors in the categories of communication, practice parameters and service delivery were necessary to promote professional integration of chiropractic care on community-based primary care teams.¹⁰⁸

Professional Goals or Objectives Relative to Primary Care

The goal of the chiropractic profession in the United States is to provide health care in the role of a primary care chiropractic provider, and it is clear that the training a Doctor of Chiropractic receives is consistent with serving in that capacity. This is explicitly described in the January 2012 Council on Chiropractic Education Standards as follows, *“The didactic and clinical education components of the curriculum are structured and integrated in a manner that enables the graduate to demonstrate attainment of all required competencies necessary to function as a primary care chiropractic physician.”*¹⁰⁹

This same concept is shared by the Councils on Chiropractic Education International in the International Chiropractic Accreditation Standards. According to the CCEI, *“the purpose of his/her professional education is to prepare the chiropractor as a primary health care provider.”*¹⁰⁹ Review of the mission statements of accredited chiropractic colleges with particular attention to the educational goals and professional qualifications of graduates provides further support that the professional goals of the colleges are for their graduates to serve as primary care providers. This objective is shared by the profession’s national trade associations, the American Chiropractic Association, and the International Chiropractors’ Association as described previously.

¹⁰⁵Lehman JJ, Suozzi PJ, Simmons GR, Jegtvig SK. Patient perceptions in New Mexico about doctors of chiropractic functioning as primary care providers with limited prescriptive authority. *J Chiropractic Medicine*. 2011;10:12-17.

¹⁰⁶Sarnat RL, Winterstein J, Cambron JA. Clinical utilization and cost outcomes from an integrative medicine independent physician association: An additional 3-year update. *J Manipulative Physiol Ther*. 2007; 30:263-9.

¹⁰⁷Garner MJ, Birmingham M, Aker P, Moher D, Balon J, Keenan D, Manga P. Developing integrative primary healthcare delivery: adding a chiropractor to the team. *Explore*. Jan-Feb 2008;4(1):18-24.

¹⁰⁸Mior S, Barnsley J, Boon H, Ashbury FD, Haig R. Designing a framework for the delivery of collaborative musculoskeletal care involving chiropractors and physicians in community-based primary. *J of Interprofessional Care*. November 2010;24(6):678-689.

¹⁰⁹The Councils on Chiropractic Education International. International Chiropractic Education Standards. http://www.cceintl.org/uploads/2010-04-26_CCEI_International_Chiropractic_Accreditation_Standards_vfd_5_09.pdf. Accessed November 11, 2011.

Comparative Educational Standards for Primary Care

The most recent paper that directly compared the educational standards of chiropractic programs versus allopathic programs appeared in 1998.¹¹⁰ The conclusion of the study revealed that “considerable commonality exists between chiropractic and medical programs.” In regards to the basic sciences portion of the curricula, the programs were more similar than dissimilar. This similarity was in both the content of the subjects offered and the time allotted to each subject. In the clinical sciences some common areas were identified, but this area of the curricula demonstrated the greatest divergence in types of subjects offered and time allotted to topics. The time spent in the clinical practice portion of the educational process demonstrated the greatest difference between chiropractic and allopathic education with medical schools exceeding chiropractic schools. However, the therapeutic interventions in which chiropractic and medical students are educated are quite distinct from one another. The settings in which the interventions are delivered also vary greatly from primarily ambulatory settings for chiropractic interns, to mostly tertiary hospitals for medical students. The comparison revealed that with these similarities and differences established, future studies should examine the quality of the two educational programs in more detail.

Medical educators have decried the demonstrated deficiencies in musculoskeletal clinical competencies in medical education despite the high public health burden of these kinds of disorders and their common prevalence in primary medical practice.¹¹¹ Chiropractic students receive significantly more instruction on musculoskeletal topics and there is evidence that they are more knowledgeable in this domain than medical students.^{73,112}

Educational Standards as a Basis for Primary Care

The Council on Chiropractic Education accreditation Standards, as described above, clearly provide the learning basis for primary care chiropractic practice. The CCE Manual of Policies further specifies educational programs for the Doctor of Chiropractic degree. It minimally requires the equivalent of 4,200 instructional hours which ensures that the program is commensurate with doctoral level professional training in a health science discipline, a portion of which incorporates this training into patient care settings. Mandatory meta-competencies have been identified regarding the skills, attitudes, and knowledge that a Doctor of Chiropractic program provides so that graduates will be prepared to serve as primary care chiropractic physicians. These competencies require a Doctor of Chiropractic to demonstrate that she/he can:

- perform an initial assessment and diagnosis;
- create and execute an appropriate case management/treatment/intervention plan;
- promote health, wellness, safety and disease prevention;
- communicate effectively with patients, doctors of chiropractic and other healthcare professionals, regulatory agencies, third-party payers, and others as appropriate;
- produce and maintain accurate patient records and documentation;

¹¹⁰Coulter, I, Adams, A, Coggan, P, Wilkes, M, Gonyea, M. A comparative study of chiropractic and medical education. *Altern Ther Health Med.* 1998;4(5), 64-75.

¹¹¹Day CS, Ahn CS. Commentary: the importance of musculoskeletal medicine and anatomy in medical education. *Acad Med.* 2010;85:401-402.

¹¹²Tuchin PJ, Bonello R. A comparison of chiropractic student knowledge versus medical residents. *World Federation of Chiropractic 6th Biennial Congress Symposium Proceedings.* May 21-26, 2001;255.

- be proficient in neuromusculoskeletal evaluation, treatment and management;
- access and use health related information;
- demonstrate critical thinking and decision making skills, and sound clinical reasoning and judgment;
- understand and practice the ethical conduct and legal responsibilities of a healthcare provider;
- critically appraise and apply scientific literature and other information resources to provide effective patient care; and
- understand the basic, clinical, and social sciences and seek new knowledge in a manner that promotes intellectual and professional development.

The mandatory meta-competencies and their required components and outcomes, plus recommended sources and types of evidence used to demonstrate student achievement of the meta-competencies and evidentiary guidelines for assessment, are cited in CCE Policy 3.⁸⁹

Focused Education to Enhance Skills in Primary Care

Although DCs receive a broad-based clinical education, the often perceived limitation to comprehensive patient care may be due to the lack of a required post-graduate residency. Unlike medical education, chiropractic students are not required to complete a post-graduate educational program such as the traditional resident training programs that medical and osteopathic physicians often complete. Post-graduate resident programs represent an area that is receiving scrutiny within the profession and preliminary plans are being developed. Barriers to residency positions are many but include finances and the identification of institutional residency positions that can be filled. The development of residency programs for Doctors of Chiropractic may enhance their ability to function confidently as primary care physicians in all settings.

Barriers to a Greater Role in Primary Care Practice

There are a number of challenging barriers to DCs serving in primary care roles that are ably summarized by Gaumer.¹⁰¹ Legal barriers exist because some state practice laws limit the diagnostic and treatment procedures that DCs can provide. Currently, a majority of states prohibit DCs from prescribing medications or performing surgery.^{101,113} Professional barriers exist, including attitudes and behaviors that impede referrals and care coordination.^{114,115} The contentious history of Chiropractic with medicine has had lingering effects. Health delivery systems, including managed care programs are relatively unfamiliar with chiropractic care and are not used to dealing with DCs as part of the delivery mix. Financial challenges exist because some payers are uncertain or unwilling to reimburse DCs for primary care services. An egregious example is Medicare that pays for manipulative treatment, but not for the diagnostic work that must precede it. Competition with other providers for

¹¹³Lamm L, Pfannenschmidt K. Chiropractic scope of practice: What the law allows – update 1999. *J Neuromusculoskeletal System*. 1999;7:102-106.

¹¹⁴Mainous AG, Gill JM, Zoller JS, Wolman MG. Fragmentation of patient care between chiropractors and family physicians. *Arch Fam Med*. May 2000;9:446-450.

¹¹⁵Allareddy V, Greene BR, Smith M, Haas M, Liao J. Facilitators and barriers to improving interprofessional referral relationships between primary care physicians and chiropractors. *J Ambul Care Manage*. Oct-Dec 2007;30(4):347-354.

primary care roles is also a factor. Some DCs may not be interested in the delivery of health promotion, primary prevention, or primary care. Doctors in the field may feel they are inadequately trained, depending on year of graduation or program they attended, and may not provide services for which they are not reimbursed such as health screenings, lab work, or certain types of diagnostic imaging. DCs may not maintain the skill set or self-efficacy to perform many primary prevention or primary care tasks. Finally, the public may not view DCs as primary care providers and therefore, may not choose them for this type of care.

Re-Thinking Primary Care

After more than a century of steady progress, Chiropractic has a significant presence in the healthcare industry, and it has the professional infrastructure in place to substantially assist with the nation's evolving primary care challenges. Perhaps the most important question is what shape will primary care take in the evolving healthcare system? Many definitions, systems, professions and roles are currently in play and the answer relative to this profession's role will be clarified over time. One possibility that is receiving great attention is the notion that primary care can only be completely and properly delivered by teams of healthcare professionals in the community. Primary care has always been seen as patient-centered, but now it must also take responsibility for community health.

In support of this theme, chiropractic authors^{74,96,97,116} make a cogent case for the distinction between primary *medical* care and primary *health* care. The distinction aligns with the holistic biopsychosocial model of health as opposed to the biomedical focus on disease alone, a perspective that Chiropractic has always embraced.

Primary *health* care in this view is different. The approach to care is anticipatory, continuous and preventive, emphasizing health promotion instead of episodic focus on specific conditions and cures. As opposed to primary *medical* care, primary *health* care pays attention to both objective and subjective findings; it is truly patient centered. Instead of medical specialists, the emphasis is on generalist health professionals who are trained and willing to work together. In this view, while *primary* medical care is dominated by medical physicians and internally focused on its own institutions and behaviors, primary *health* care explicitly seeks community participation and a wide range of professionals, always working with the patients as partners in the relationship.

D.D. Palmer, the founder of Chiropractic, once stated that the causes of disease could be summarized in just three categories: trauma, toxins, and auto-suggestion. Today, we can forgive the 19th century language, but also respect the wisdom that underlies the Chiropractic approach to health. The chiropractic profession is now poised to play a greater role as primary healthcare providers for the 21st century.

¹¹⁶Hawk C. What is primary care? *J Chiropr Med.* 2002;4(1):149-154.

Direct-Entry Midwifery and Primary Maternity Care

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Introduction

Midwives are primary maternity care providers. Primary maternity care is not a term widely recognized in the United States but the concept is gaining ground as maternity care reform has become the focus of various federal and private initiatives.¹ In Canada, the Multidisciplinary Collaborative Primary Maternity Care Project provides the following definition:

“Primary maternity health care is the umbrella term for the fundamental healthcare services that women access during pregnancy, childbearing and the postpartum period. Primary maternity health care takes a holistic, women-centered approach to service delivery, health promotion and the prevention and treatment of disease and illness. Primary maternity care is the first contact with our health care system for maternity care needs. Primary maternity health care is part of a comprehensive maternity care system for a community and includes plans for addressing the needs of women and their infants who need care from other providers. It is based on the philosophy that pregnancy and childbirth are natural processes that require a focus on health and should be individualized. Within the context of primary health care, it is an important way of working towards developing health communities.”²

In 1986, a World Health Organization (WHO) report affirmed the value of primary care provided by midwives for every birth setting, including home birth, stating:

“Midwives are the most cost-effective and appropriate primary care givers for all childbearing women in all instances and in all settings. Home is the most appropriate setting for most childbearing women. Women choosing this option must be provided with necessary diagnostic, consultative, emergency and other services as required, regardless of the place of birth.”³

In 2008, the Cochrane Collaborative conducted a systematic review of the international literature to compare midwife-led models of care with other models of care for childbearing women and their infants. The authors found that “Midwife-led care confers benefits and shows no adverse outcomes. It should be the norm for women classified at low and high risk of complications. . . . Policymakers who wish to achieve clinically important improvements in maternity care, particularly around normalizing and humanizing birth, should consider midwife-led models of care.”⁴

Increasing women’s access to quality midwifery care has become a focus of global efforts to realize the right of every woman to the best possible health care during pregnancy and childbirth. The UNFPA and 30 partner organizations produced *The State of World’s Midwifery 2011: Delivering Health, Saving Lives*

¹ Romano, Amy. (2012) What is a maternity care home? <http://transform.childbirthconnection.org/2012/03/what-is-a-maternity-care-home/> Downloaded September 18, 2012.

² Multidisciplinary Collaborative Primary Maternity Care Project. Primary Maternity Health Care Definition. http://www.mcp2.ca/english/documents/PrimaryMaternityHealthCareDefinition-Final_000.pdf Downloaded June 2, 2011.

³ World Health Organization. North American and European consulting groups: WHO report on health promotion and birth. Geneva, World Health Organization (1986).

⁴ Hatem M, Sandall J, Devane D, Soltani H, Gates S. Midwife-led versus other models of care for childbearing women. *Cochrane Database of Systematic Reviews* 2008, Issue 4. Art. No.: CD004667. Page 17. DOI: 10.1002/14651858.CD004667.pub2. Available at <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD004667.pub2/abstract;jsessionid=2DCAAB248C0D9849B4A87B28BAD60A6D.d03t02>. Accessed July 28, 2013.

with a call to strengthen and expand the profession.⁵ Responding to the challenge, the International Confederation of Midwives has adopted global standards for midwifery education and regulations which are now being used as core references in countries around the world.⁶

In the United States, there are two broad categories of midwives – direct-entry midwives and nurse-midwives. Both types of midwives provide primary maternity care. Certified Nurse-Midwives may also provide primary care to women in all jurisdictions; while direct-entry midwives may, in certain jurisdictions, provide well-woman care and family planning services beyond the childbearing period. This chapter focuses on direct-entry midwives, particularly Certified Professional Midwives, and their role in primary maternity care.

Most direct-entry midwives in the U.S. are state licensed midwives and/or nationally-certified by the North American Registry of Midwives (NARM) as Certified Professional Midwives (CPM). Direct-entry midwives generally practice independently; provide care for women throughout the childbearing cycle; attend births at home or in freestanding birth centers; conduct postpartum home visits for the mother and newborn; and provide breastfeeding support. Their scope of practice in some states includes well-woman care and family planning services. Direct-entry midwives consult with other healthcare professionals and transfer care when indicated.

Internal Definitions of Primary Maternity Care

“Certified Professional Midwives are trained and credentialed professionals who offer primary maternity care to women and families across the United States,” according to an issue brief published in 2008 by the leading organizations in the field.⁷

The North American Registry of Midwives is the credentialing agency for CPMs. All candidates for the CPM credential must demonstrate competence in the knowledge, skills and abilities necessary to midwifery practice, which encompass general healthcare skills; midwifery education, counseling and communication; maternal health assessment; labor, birth and immediate postpartum care, including newborn assessment; postpartum care, including well-baby care. The specific requirements are based on a national job analysis, first conducted in 1995 when several hundred practicing midwives were asked about the types of care that they provided; the results of that comprehensive survey ultimately served to define entry-level standards of midwifery competency. The CPM competencies specifically addressed the primary maternity care functions provided by direct-entry midwives to mothers and newborns, and the CPM credential quickly became a recognized standard for midwives practicing in out-of-hospital settings. The CPM competencies, updated by subsequent job analyses, also became an essential framework for the accreditation of formal direct-entry midwifery education programs.^{8,9}

⁵ UNFPA, et al. (2011) *The State of the World's Midwifery 2011: Delivering Health, Saving Lives*. http://www.unfpa.org/sowmy/resources/docs/main_report/en_SOWMR_Full.pdf Downloaded September 18, 2012.

⁶ International Confederation of Midwives (2011) *ICM Global Standards, Competencies and Tools*. <http://www.internationalmidwives.org/Whatwedo/Policyandpractice/ICMGlobalStandardsCompetenciesandTools/GlobalStandardsEnglish/tabid/980/Default.aspx> Downloaded September 28, 2012.

⁷ North American Registry of Midwives, Midwifery Education Accreditation Council, National Association of Certified Professional Midwives, and the Midwives Alliance of North America. *Certified Professional Midwives in the United States: An Issue Brief* (June 2008) <http://mana.org/pdfs/CPMIssueBrief.pdf> Downloaded June 2, 2011.

⁸ North American Registry of Midwives, “The Development of the Certified Professional Midwife (CPM) Credential by the North American Registry of Midwives,” (2006) <http://www.narm.org/pdffiles/DevelopmentCPMProcess.pdf>

⁹ North American Registry of Midwives, “Report of the 2008-2009 Job Analysis and Test Specifications Revision Project,” (2010) <http://www.narm.org/pdffiles/2010-Job-Analysis.pdf>

The Midwives Alliance of North America (MANA), a broad-based alliance representing midwives from diverse educational backgrounds and credentialing status, first adopted core competencies in 1994 and revised the document in 2011. The core competencies include a set of guiding principles regarding health, pregnancy and childbirth, and related statements regarding the role and responsibilities of the midwife, described as an autonomous practitioner who works in partnership with women and collaborates with other healthcare and social service providers when necessary. The core competencies, like the knowledge, skills and abilities identified by NARM, address the scope of practice of the midwife and clearly situate the practice within primary maternity care.¹⁰

The Midwifery Education Accreditation Council (MEAC) is an accrediting agency for direct-entry midwifery education recognized by the U.S. Department of Education. MEAC Standards for Accreditation include curriculum requirements which are based on the essential knowledge and skills identified by NARM and core competencies articulated by MANA.¹¹

The National Association of Certified Professional Midwives (NACPM) is the professional association that represents CPMs. In 2004, the NACPM adopted essential documents that describe the philosophy, scope of practice, and standard of care for CPMs. Again, the role of the midwife described in these documents clearly establish the midwife as a primary maternity care provider, a professional who assumes responsibility for the care of childbearing women, has a role in health promotion and education, and practices within a network of relationships with other care providers who can provide service outside the scope of midwifery practice when needed.¹²

The International Confederation of Midwives describes the midwife thus:

“The midwife is recognized as a responsible and accountable professional who works in partnership with women to give the necessary support, care and advice during pregnancy, labor and the postpartum period, to conduct births on the midwife’s own responsibility and to provide care for the newborn and the infant. This care includes preventative measures, the promotion of normal birth, the detection of complications in mother and child, the accessing of medical care or other appropriate assistance and the carrying out of emergency measures.”

“The midwife has an important task in health counseling and education, not only for the woman, but also within the family and the community. This work should involve antenatal education and preparation for parenthood and may extend to women’s health, sexual or reproductive health and child care. A midwife may practice in any setting including the home, community, hospitals, clinics or health units.”¹³

¹⁰ Midwives Alliance of North America, “Core Competencies for Basic Midwifery Practice,” (2011) <http://mana.org/manacore.html> Downloaded September 18, 2012.

¹¹ Midwifery Education Accreditation Council. (2007) MEAC Standards for Institutional Accreditation. <http://meacschools.org/about.php?ID=16> Downloaded June 3, 2011.

¹² National Association of Certified Professional Midwives (2007) Essential Documents of the National Association of Certified Professional Midwives. <http://nacpm.org/Resources/nacpm-standards.pdf> Downloaded June 3, 2011.

¹³ International Confederation of Midwives. Definition of the Midwife. (2011) <http://www.internationalmidwives.org/Portals/5/2011/Definition%20of%20the%20Midwife%20-%202011.pdf> Downloaded September 18, 2012.

This definition is consistent with the Midwives Model of Care™ which has been endorsed by all the leading organizations involved in direct-entry midwifery education and certification, and professional issues in the U.S. The Midwives Model of Care™ asserts that pregnancy and birth are normal life events. It includes:

- Monitoring the physical, psychological and social well-being of the mother throughout the childbearing cycle;
- Providing the mother with individualized education, counseling and prenatal care, continuous hands-on assistance during labor and birth, and postpartum support;
- Minimizing technological interventions; and
- Identifying and referring women who require obstetrical attention.

The application of this model has been proven to reduce the incidence of birth injury, trauma and cesarean section.¹⁴

Internal Discussions over Primary Maternity Care

There appears to be widespread agreement within the profession when describing midwives as primary *maternity care* providers. There is much less agreement about the role that midwives could play, should play or, in some cases, actually do play in the provision of primary care beyond the childbearing cycle.

In the 1990s, Certified Nurse-Midwives moved to expand their scope of practice to include primary care for women across the lifespan from adolescence beyond menopause, with a special emphasis on pregnancy, childbirth, and gynecologic and reproductive health. The Core Competencies for Basic Midwifery Practice of the American College of Nurse-Midwives include primary health care for women and management of common health problems.¹⁵ Educational programs that prepare Certified Nurse-Midwives must incorporate a certain number of clinical experiences specific to primary care, including common health problems, family planning and gynecologic visits.¹⁶ It is unclear what percentage of practicing Certified Nurse-Midwives is actually providing primary care beyond the childbearing period.

Certified Professional Midwives may also provide family planning and gynecologic care in certain jurisdictions and many would like to see the scope of practice and training expanded in order to serve women's health needs more broadly. While most licensed CPMs have access to a specific list of drugs, none currently have prescriptive privileges. There are some who argue that one cannot be an effective primary maternity care provider without the ability to treat certain infections and diseases without referring to another provider. It would certainly be helpful if the scope of practice was expanded as above.

¹⁴ Citizens for Midwifery, "The Midwives Model of Care," (2005) <http://cfmidwifery.org/mmoc/define.aspx> Downloaded June 3, 2011.

¹⁵ American College of Nurse-Midwives. Core Competencies for Basic Midwifery Practice. (2008) <http://www.midwife.org/index.asp?bid=59&cat=2&button=Search&rec=50> Downloaded June 3, 2011.

¹⁶ Accreditation Commission for Midwifery Education. Criteria for Programmatic Accreditation. (2010) <http://www.midwife.org/ACNM/files/cclibraryFiles/Filename/000000000721/ACME.Programmatic.Criteria.final.Nov.2010.pdf> Downloaded June 3, 2011.

Practice Model, Including Referral and Co-management

Professional midwifery's independent scope of practice generally limits care to normal, low-risk women and newborns and mandates the timely and appropriate utilization of obstetrical experts and facilities when indicated, in the form of consultation, referral, transfer or co-management of care.

NACPM states that "Certified Professional Midwives are trained and credentialed to offer expert care and support to women and their babies for pregnancy, birth and the postpartum period. CPMs practice as autonomous health professionals working within a network of relationships with other maternity care professionals who can provide consultation and collaboration when needed."¹⁷ The NACPM Scope of Practice notes that the midwife must have a plan for consultation and referral when these conditions arise. When needed, the midwife can provide emergency care and support for mothers and babies until additional assistance is available.¹⁸

NARM further expects that each midwife provides her clients with a care plan that is informed by her training, competency, practice guidelines, regional community standards of both medical and midwifery maternity care providers, and legal requirements. The Plan of Care includes both written and verbal communication and is revisited throughout the course of care as changes occur.

CPMs screen women throughout their pregnancy, labor, birth and postpartum for signs of illness or complications that require care beyond the scope of midwifery, the individual midwife's guidelines, and/or the relevant state laws.¹⁹ Guidelines specifying clinical conditions necessitating involvement of an obstetrical specialist might include complications such as chorioamnionitis, gestational diabetes uncontrolled by diet and exercise, preeclampsia, fetal distress, prolonged labor, and severe postpartum hemorrhage. Certain states such as Vermont have adopted very specific regulations for midwifery practice and referral while others such as Montana allow for more discretion.^{20,21} In other cases, state midwifery professional associations like the Midwives Association of Washington State have adopted guidelines for consultation and referral.²²

The majority of women seeking care by a CPM are planning to have their babies at home or in a freestanding birth center. Therefore, the CPM must also be prepared to make appropriate referrals and arrange transport when a woman under her care requests or requires services that can only be provided in hospital. According to data collected from CPMs, approximately 12% of women who begin the process of a planned out-of-hospital birth require transfer to an acute-care hospital either during labor, or during the immediate postpartum period. Most of these transfers are for non-emergent conditions.²³

¹⁷ National Association of Certified Professional Midwives. What is a Certified Professional Midwife? <http://nacpm.org/what-is-cpm.html> Downloaded June 3, 2011.

¹⁸ National Association of Certified Professional Midwives (2007) Essential Documents of the National Association of Certified Professional Midwives. <http://nacpm.org/Resources/nacpm-standards.pdf> Downloaded June 3, 2011.

¹⁹ North American Registry of Midwives. Position Statement on Shared Decision-Making and Informed Consent. <http://narm.org/accountability/informed-consent/#> Downloaded June 3, 2011.

²⁰ Vermont Office of Professional Regulation. Administrative Rules for Midwives. (2001) http://vtprofessionals.org/opr1/midwives/rules/LMW_Rules.pdf Downloaded June 3, 2011.

²¹ Montana Annotated Code. Direct-entry midwifery. http://data.opi.mt.gov/bills/mca_toc/37_27.htm Downloaded June 3, 2011.

²² Midwives Association of Washington State. Indications for Consultation in an Out-of-Hospital Midwifery Practice (revised 2008). <http://washingtonmidwives.org/for-midwives/indications-consultation.html> Downloaded September 18, 2012.

²³ Johnson, KC. and Daviss, B. Outcomes of planned home births with certified professional midwives: large prospective study in North America. *British Medical Journal*. 2005; 330:1416.

To strengthen the integration of home birth services and improve collaboration and referral among providers, a Home Birth Consensus Summit was convened in October 2011. The summit brought together a cross section of stakeholders, including midwives, physicians, public health researchers and consumers, for three days of consensus building dialogue which resulted in nine common ground statements. Topics included collaboration, regulation and licensure, physiologic birth, health disparities and equity, liability, research and data collection, and interprofessional education. As a result, several multidisciplinary projects have been initiated to take action on the consensus statements by various means, including development of transport protocols, enhancing access to Medicaid coverage across maternity care settings, developing birth place decision aids for women, home birth data collection and research, and development of curricula to expose all maternity professionals to all settings and types of providers.²⁴

Evidence of Patient Use as First Contact Provider

Women seek midwives and find them without referral. Typically referral to a midwife via a medical “gatekeeper” is not required.

Formal surveys querying patients about their perception of midwives as first contact providers have not been undertaken. However, conversations with midwives and midwifery clients demonstrate that midwifery clients consistently express a strong preference for receiving pregnancy-related care, well-woman gynecologic exams and family planning care from their midwives. Where midwives do not or cannot receive third-party reimbursement, clients frequently pay out-of-pocket for midwifery care, in spite of the fact that they could obtain that same care at a reduced cost within their own health maintenance organization, insurance network, or even Medicaid.

Evidence of Wellness, Health Promotion and Primary Prevention Services

Patient education, behavioral change, risk assessment, health promotion and primary prevention are at the heart of the Midwives Model of Care™. Commitment to the values inherent in this model of care is demonstrated in the NARM Skills and MANA Core Competencies as well as the NACPM Standards of Practice.

In a report summarizing the best available research on maternity care, the authors remarked that “by learning from those with the skills and knowledge to enhance the innate physiologic capacities of the childbearing process, we can refrain from exposing mothers and babies to the harm and expense of avoidable interventions and use medical interventions appropriately as needed.” They described the results of a large prospective study of American women who gave birth with CPMs and remarked on the striking differences in the rates of interventions when compared to low-risk American women who received the usual (non-midwife) care. “The low CPM study rates of intervention are benchmarks for what the majority of childbearing women and babies who are in good health might achieve.”^{25,26}

²⁴ Home Birth Consensus Summit. <http://www.homebirthsummit.org/> Downloaded September 18, 2012.

²⁵ Sakala, C. and Corry, M. Evidence-Based Maternity Care: What It Is and What It Can Achieve. Milbank Memorial Fund. (2008) Page 29. <http://www.milbank.org/uploads/documents/0809MaternityCare/0809MaternityCare.pdf> Downloaded July 28, 2013.

²⁶ Johnson, KC. and Daviss, B. Outcomes of planned home births with certified professional midwives: large prospective study in North America. (2005) 330(7505):1416. Available at <http://www.bmj.com/content/330/7505/1416..>

The Coalition for Improvement of Maternity Services recommends that all birthing mothers should be offered unrestricted access to professional midwifery care. This recommendation is supported by a two-year research project by a team of maternity care experts that conducted a comprehensive review of the scientific literature. The researchers found that the use of midwives was associated with:

- Increased length of prenatal visits, more education and counseling during prenatal care, and fewer hospital admissions.
- Less need for analgesia and/or epidural anesthesia and increased use of alternative pain relief methods, as well as more freedom of movement in labor and intake of food and drink.
- Decreased use of amniotomy (membrane rupture), IVs, electronic fetal monitoring; fewer inductions and augmentations of labor; and fewer injuries of the perineum (tissue between vagina and anus) as shown by fewer episiotomies, fewer rectal tears, and more intact perineae.
- Fewer cesareans overall, including fewer emergency cesareans for fetal distress or for inadequate progress in labor, and more vaginal births after cesareans (VBACs).
- Fewer infants born preterm, low birth weight or with complications such as birth injury or requiring resuscitation after birth, and more infants exclusively breastfeeding at 2-4 months after birth.²⁷

The International Confederation of Midwives further elucidates the contributions made by midwives in their *Essential Competencies for Basic Midwifery Practice*, revised in 2011:

“There are a number of key midwifery concepts that define the unique role of midwives in promoting the health of women and childbearing families. These include:

- Partnership with women to promote self-care and the health of mothers, infants, and families;
- Respect for human dignity and for women as persons with full human rights;
- Advocacy for women so that their voices are heard;
- Cultural sensitivity, including working with women and healthcare providers to overcome those cultural practices that harm women and babies; and
- A focus on health promotion and disease prevention that views pregnancy as a normal life event.”²⁸

Governmental or Regulatory Agency Recognition as Primary Maternity Care Providers

Direct-entry midwives, including CPMs, are currently licensed in 26 states. In most states they are licensed to provide primary maternity care as independent providers. The language of the laws may not specifically refer to primary maternity care but the scope of practice clearly establishes the midwife as a primary maternity care provider. Twenty states utilize the CPM credential or recognize the CPM credential plus state-specific requirements as the basis for state licensure, certification or registration. Several states refer specifically to the NACPM Standards of Practice in statute or regulations.²⁹

²⁷ Sagady Leslie, M. and Storton, S. (2007) Step 1: Offers All Birthing Mothers Unrestricted Access to Birth Companions, Labor Support, Professional Midwifery Care. *Journal of Perinatal Education*, Issue 16, Special Supplement: Evidence Basis for the Ten Steps of Mother-Friendly Care. Pages 135-195. Available at http://motherfriendly.org/Resources/Documents/CIMS_Evidence_Basis.pdf. Downloaded July 28, 2013.

²⁸ International Confederation of Midwives, “Essential Competencies for Basic Midwifery Practice 2010,” (2011) <http://www.internationalmidwives.org/Portals/5/2011/DB%202011/Essential%20Competencies%20ENG.pdf> Downloaded September 18, 2012.

²⁹ Midwives Alliance of North America. Direct-entry State Laws and Regulations. <http://mana.org/laws.html> Downloaded June 2, 2011.

In Washington State, Licensed Midwives are recognized as primary care health professionals eligible to participate in the Washington State Health Professional Loan Repayment and Scholarship Programs. Both programs were created to attract and retain health professionals to serve in critical shortage areas in the state.³⁰ It does not appear that anyone has undertaken an investigation of state laws or state agencies to determine whether Licensed and/or Certified Professional Midwives are specifically recognized as primary care providers in other states.

Third-Party Payer Recognition as Primary Maternity Care Providers

In several states, such as Virginia, Licensed and/or Certified Professional Midwives may enroll as Medicaid (or in California, Medi-Cal) providers.^{31,32}

Insurance companies often reimburse for care by Licensed Midwives at out-of-network rates and, at times, a client can secure in-network coverage for an out-of-network provider. Such an exception is generally classified as either medical (i.e., no providers within the network provide out-of-hospital maternity services) or geographical (providers within the network who provide out-of-hospital services are geographically too far away to be feasible choices for the insured).

In the State of Washington, an “every category of provider law” mandates that health plans must include Licensed Midwives if the services within their scope of practice are covered by the plan.³³ Health carriers must also allow women direct access to the type of healthcare practitioner of their choice for women’s healthcare services, including Licensed Midwives, without requiring a prior referral.³⁴ Midwives and clients in other states are working to ensure mandatory third-party reimbursement for Licensed and/or Certified Professional Midwives.

At the federal level, CPMs are gaining visibility and received an early indication of recognition in the Patient Protection and Affordable Care Act passed in March 2010, which mandates Medicaid reimbursement of all licensed providers, including licensed midwives, working in licensed birth centers. In March 2011, Congresswoman Chellie Pingree (ME) introduced the “Access to Certified Professional Midwives Act” which would amend Title XIX of the Social Security Act to provide access to Certified Professional Midwives for women enrolled in the Medicaid program.³⁵

³⁰ Washington Higher Education Coordinating Board. Health Professional Loan Repayment and Scholarship Programs <http://www.hecb.wa.gov/paying/waaidprgm/health.asp> Downloaded June 2, 2011.

³¹ Midwives Alliance of North America. Direct Entry Midwifery: State-by-State Legal Status (2010) <http://mana.org/statechart.html> Downloaded June 2, 2011.

³² Virginia Department of Medical Assistance Services. (2007) Medicaid Memo: Medicaid Enrollment and Coverage of Certified Professional Midwives. http://www.dmas.virginia.gov/downloads/pdfs/mm_ServCert_Midwives.pdf Downloaded June 2, 2011.

³³ Washington Administrative Code. Every Category of Health Care Providers. <http://apps.leg.wa.gov/WAC/default.aspx?cite=284-43-205> Downloaded June 2, 2011.

³⁴ Washington Administrative Code. Health carrier standards for women’s right to directly access certain health care practitioners for women’s health care services. <http://apps.leg.wa.gov/WAC/default.aspx?cite=284-43-250> Downloaded June 2, 2011.

³⁵ 112th Congress, 1st Session H. R. 1054: To amend title XIX of the Social Security Act to provide access to certified professional midwives for women enrolled in the Medicaid program. <http://thomas.loc.gov/cgi-bin/query/z?c112:H.R.1054>: Downloaded June 2, 2011.

Research Relative to Midwives as Primary Maternity Care Providers

Published research on direct-entry midwifery and CPMs has focused on safety, quality, and cost-effectiveness. The largest study undertaken on practices by Certified Professional Midwives found that planned home births with Certified Professional Midwives in the United States “had similar rates of intrapartum and neonatal mortality to those of low risk hospital births” and that “medical intervention rates for planned home births were lower than for planned low risk hospital births.” The authors stated:

“Our study of certified professional midwives suggests that they achieve good outcomes among low risk women without routine use of expensive hospital interventions. Our results are consistent with the weight of previous research on safety of home birth with midwives internationally. This evidence supports the American Public Health Association’s recommendation to increase access to out of hospital maternity care services with direct entry midwives in the United States. We recommend that these findings be taken into account when insurers and governing bodies make decisions about home birth and hospital privileges with respect to certified professional midwives.”³⁶

Even more recently, the Department of Health of the State of Washington contracted with a private consulting group to conduct a study weighing the economic costs and benefits of licensed midwifery to the state’s Medicaid program. The cost-benefit analysis, released in 2008, reviewed the relevant published research literature and data from Washington and found that planned out-of-hospital births attended by Licensed Midwives in the United States and the State of Washington had rates of intrapartum and neonatal mortality similar to those of low-risk hospital births in the U.S. generally. Moreover, medical intervention rates for planned out-of-hospital births were significantly lower than those of planned low-risk hospital births. Using Medicaid claims data from Washington, the report concluded:

“The economic benefits of the midwifery program to the State of Washington far exceed the costs of operating the Program in estimating cost of deliveries, using the most conservative assumptions regarding c-section rates. These figures exclude prenatal care costs, newborn costs, and potential long-term costs related to morbidity.”

“The estimated cost savings for deliveries to Medicaid FFS in the most recent biennium is \$488,147; about 1.8 times the cost of operating the state program which is \$277,400.82. Cost savings to the health care system (Medicaid and private insurance) are much greater, about \$2.7 million and this savings is close to 10 times the cost of operating the state program.”^{37,38}

Data collected for a prospective cohort study of women receiving care in 79 midwifery-led birth centers in 33 US states from 2007 to 2010 included care provided by Certified Nurse-Midwives and Certified Professional Midwives. The study “demonstrated the safety of the midwifery-led birth center model of collaborative care as well as continued low obstetric intervention rates, similar to previous studies of birth center care. These findings are particularly remarkable in an era characterized by increases in obstetric intervention and cesarean birth nationwide.”³⁹

³⁶ Johnson, KC. and Daviss, B. Outcomes of planned home births with certified professional midwives: large prospective study in North America. . (2005) 330(7505):1416. Available at <http://www.bmj.com/content/330/7505/1416>.

³⁷ Health Management Associates, “Midwifery Licensure and Discipline Program in Washington State: Economic Costs and Benefits.” (2007) http://www.washingtonmidwives.org/assets/Midwifery_Cost_Study_10-31-07.pdf Downloaded June 2, 2011.

³⁸ Midwives Association of Washington State. Department of Health Cost Benefit Analysis—A Summary” (2008). <http://www.washingtonmidwives.org/DOH-costbenefit-analysis.shtml> Downloaded June 2, 2011.

³⁹ Stapleton, SR, Osborne, C, and Illuzzi, J. (2013) Outcomes of Care in Birth Centers: Demonstration of a Durable Model. *Journal of Midwifery and Women’s Health*. 8(1):3-14. Available at <http://onlinelibrary.wiley.com/doi/10.1111/jmwh.12003/pdf>. Accessed July 28, 2013.

A review of the benefits of midwife-led care more generally appears in the book *Optimal Care in Childbirth: The Case for a Physiologic Approach*.⁴⁰ The authors explore how midwives, who are experts in the provision of physiologic care, can form the backbone of an integrated, woman-centered system that maximizes safety, efficiency, quality, and satisfaction.

Professional Goals or Objectives Relative to Primary Maternity Care

Certified Professional Midwives are primary maternity care providers. As described above, there are a few jurisdictions within which state Licensed Midwives also provide well-woman and/or family planning services. For example, midwives in Texas with documentation of additional education and training are allowed to assist with clients' family planning needs.⁴¹ Midwives in Washington State have created specific mechanisms for expanding clinical procedures within the legal scope of midwifery practice.⁴² When the California Licensed Midwifery Practice Act was passed in 1993, the law mandated that direct-entry midwifery education programs are required to provide education and training in well-woman care and family planning. As a result, California student midwives complete extensive well-woman gynecologic and family planning education and training in order to obtain licensure from their regulatory authority, the Medical Board of California.⁴³

There is no discussion within the profession at this time regarding expanding the scope to include primary health care beyond these primary maternity care services.

Comparative Educational Standards for Primary Maternity Care Practice

Entry to the profession of midwifery is based on assessment of competency. Certified Professional Midwives may acquire the requisite knowledge and skills through a variety of pathways. A content analysis comparing the core competencies of the American College of Nurse-Midwives and the Midwives Alliance of North America showed nearly identical competencies for pregnancy, birth and postpartum care according to one author. She also found that the tools to assess skills and knowledge elaborated by the Accreditation Council for Graduate Medical Education were the same used in the evaluation process for Certified Professional Midwives. This is the only published work which compares the educational content standards for direct-entry midwifery and Certified Nurse-Midwifery.⁴⁴ There are no published comparisons of the basic educational standards for midwives and physicians who provide primary maternity care in the United States. In 2009-2010, the International Confederation of Midwives completed two comprehensive studies involving surveys conducted in 90 countries. The purpose of

⁴⁰ Goer, H. and A. Romano. (2012) *Optimal Care in Childbirth: The Case for a Physiologic Approach*. Chapter 19: Midwife-Led Care: Organizing an Optimal Maternity Care System. Classic Day Publishing.

⁴¹ Texas Department of State Health Services. Midwifery Board Basic Information and Instructor Manual. (2010) http://www.dshs.state.tx.us/midwife/mw_instructor.pdf Downloaded June 2, 2011.

⁴² Midwives Association of Washington State. Mechanism for Introducing Expanded Clinical Procedures into Midwifery Practice. (2008) <http://washingtonmidwives.org/for-midwives/clinical-procedures.html> Downloaded September 18, 2012.

⁴³ California Business and Professions Code, Section 2505-2521. <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=bpc&group=02001-03000&file=2505-2521> Downloaded June 2, 2011.

⁴⁴ Peterson, C. Midwifery and the Crowning of Health Care Reform. *Journal of Midwifery Women's Health* (2010) Jan-Feb;55(1):5-8.

the first study was to update the core competencies for basic midwifery practice, first delineated by the ICM in 2002, and the second was to develop global standards for midwifery education. The ICM adopted Global Standards for Midwifery Education in 2011.^{45,46,47}

Focused Education to Enhance Skills in Primary Maternity Care

Certified Professional Midwives already provide primary maternity care and their training currently focuses on the critical knowledge and skills necessary to wellness promotion, preventative services, screening and referral as needed. Additional training to enhance skills in primary maternity care is provided through continuing education programs. As more states recognize the valuable role that CPMs can play in improving outcomes and reducing costs, it's possible that they may be asked to take on expanded roles in well-woman health care.

Barriers to a Greater Role in Primary Maternity Care Practice

The major barriers to Certified Professional Midwives playing a more significant role in the provision of primary maternity care are the absence of state licensure in 24 states, limited third-party reimbursement, and opposition from conventional medicine. Nevertheless the number of CPMs is growing and the number of women choosing to give birth at home or in freestanding birth centers is increasing. Nationally, home birth rates rose 20% in the four year period 2004-2008.⁴⁸ In Washington State, the home birth rate did not change significantly, but the percentage of births taking place in freestanding birth centers owned by Licensed Midwives increased by more than 50% between 2000 and 2009.⁴⁹

State licensure and federal recognition are top priorities for the direct-entry midwifery profession and these will, in turn, open doors to Medicaid and other third-party reimbursement, employment in the public sector, funding for midwifery education, participation in scholarship and loan repayment programs, and so on.

⁴⁵ Fullerton JT, Thompson JB, Severino R. Midwifery. The International Confederation of Midwives Essential Competencies for Basic Midwifery Practice. An update study: 2009-2010. 2011 May 19. [Epub ahead of print] <http://www.ncbi.nlm.nih.gov/pubmed/21601321> Downloaded June 2, 2011.

⁴⁶ Thompson JB, Fullerton JT, Sawyer AJ. The International Confederation of Midwives: Global Standards for Midwifery Education (2010) with Companion Guidelines. 2011 May 5. Midwifery. [Epub ahead of print] <http://www.ncbi.nlm.nih.gov/pubmed/21550149> Downloaded June 2, 2011.

⁴⁷ International Confederation of Midwives. (2011) Global Standards for Midwifery Education. <http://www.internationalmidwives.org/Portals/5/2011/DB%202011/MIDWIFERY%20EDUCATION%20PREFACE%20&%20STANDARDS%20ENG.pdf> Downloaded September 18, 2012.

⁴⁸ MacDorman, M. F., Declercq, E. and Mathews, T. J. (2011), United States Home Births Increase 20 Percent from 2004 to 2008. *Birth*, 38: no. doi: 10.1111/j.1523-536X.2011.00481.x <http://onlinelibrary.wiley.com/doi/10.1111/j.1523-536X.2011.00481.x/abstract> Downloaded June 3, 2011.

⁴⁹ Washington State Department of Health. Birth Data Tables. <http://www.doh.wa.gov/DataandStatisticalReports/VitalStatisticsData/BirthData/AllTablesForYear.aspx> Downloaded September 18, 2012.

Re-thinking Primary Maternity Care

Certified Professional Midwives achieve excellent outcomes at lower cost because their care emphasizes healthy lifestyles, good nutrition, childbirth preparation, breastfeeding, counseling and support for the mother and family. Prenatal visits are typically 30 to 60 minutes long to allow time for client education, risk assessment, counseling and support. The midwife cares for the woman throughout her entire labor and birth. Home visits are made during the early postpartum period and follow-up continues for at least six weeks to monitor and support the successful establishment of breastfeeding and the transitions in family life. Women who give birth at home or in freestanding birth centers avoid unnecessary and expensive medical interventions and the facility fees associated with hospitalization. Fewer babies are compromised by prematurity, low birth weight and the effects of overused medical interventions, such as induction and cesarean section, which can lead to costly stays in neonatal intensive care units and future health challenges.

CPMs embrace the philosophy that pregnancy and childbirth are natural processes that require a focus on health as described by the Canadian Multidisciplinary Collaborative Primary Maternity Care Project. The care provided by CPMs takes the holistic, individualized, women-centered approach to service delivery, health promotion and the prevention and treatment of disease and illness which should be the hallmarks of a primary maternity care system.

Conclusion

The United States today does not have a system of primary maternity care. However, as health care costs escalate, national maternal-neonatal outcomes continue to deteriorate and public discontent with medicalized birth increases, policymakers and payers are searching for new, more effective models of care. A diverse set of stakeholders has been involved in a multi-year project, facilitated by Childbirth Connection, to articulate a vision for a high quality, high value maternity care system, create a blueprint for action, and support specific action steps being taken at the local, state and national level.⁵⁰ The blueprint includes more than 40 major recommendations and specifically calls for expanding access to midwives with nationally-recognized credentials.⁵¹ Certified Professional Midwives are well-positioned and well-prepared to step into a larger role in the provision of primary maternity care.

⁵⁰ Childbirth Connection. Transforming Maternity Care. <http://transform.childbirthconnection.org/> Downloaded June 3, 2011.

⁵¹ Transforming Maternity Care Symposium Steering Committee. Blueprint for Action Steps Toward a High-Quality, High-Value Maternity Care System. *Women's Health Issues* Volume 20, Issue 1, Supplement, Pages S18-S49 (January 2010).

Naturopathic Physicians and Primary Care

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Internal Definitions of Primary Care

The American Association of Naturopathic Physicians defines naturopathic primary care as "... a distinct method of primary health care — an art, science, philosophy and practice of diagnosis, treatment and prevention of illness. Naturopathic physicians seek to restore and maintain optimum health in their patients by emphasizing nature's inherent self-healing process, the *vis medicatrix naturae*. This is accomplished through education and the rational use of natural therapeutics.

Naturopathic medicine is distinguished by the principles upon which its practice is based. These principles are continually reexamined in the light of scientific advances. The techniques of naturopathic medicine include modern and traditional, scientific and empirical methods."^{1,2}

The naturopathic profession established primary care as its foundational training and scope of practice consistent with the Institute of Medicine (IOM) definition, when the term first came into usage. The term, "primary care," and its implications for the clinician's scope of practice and responsibility was formally incorporated by the American Association of Naturopathic Physicians (AANP) House of Delegates in its *Definition of Naturopathic Medicine* position paper adopted in 1989.

Internal Discussions Regarding Primary Care

There has been considerable discussion regarding the distinction between "primary care" and "specialty care." After much debate in the 1990s, naturopathic medical schools determined that training would focus on primary care, rather than specialty care. A solid foundation in primary care was determined to be essential for practicing medicine at the physician level. Some NDs do not wish to practice as primary care providers (PCP's) and have expressed concern about being held to a PCP standard. In practice, an ND can choose to specialize, using the process of informed consent with patients to define the scope of practice or specialty offered.

Those NDs who specialize may augment their training through additional professional degrees or certifications (e.g., Master of Public Health or Certificate of Midwifery) or may choose to emphasize specific areas of practice. Specialties in naturopathic care are based upon *conditions or systems* (i.e., cancer, environmental medicine, or the cardiovascular system), on *population groups* (e.g., naturopathic midwifery or pediatrics), or upon treatment *modalities* (e.g., homeopathic or physical medicine).

Because naturopathic clinical education is conducted in outpatient settings, there is some debate that naturopathic students may not observe sufficient hospital-managed pathology to practice effectively as PCPs. The strong safety record of practicing naturopathic physicians suggests that this is not the case.^{3,4} Most hospital-based care is provided by specialist "hospitalist" physicians, not by primary care providers, who are most optimally trained to deliver care where it is provided: in the community, on an outpatient basis.

¹ Naturopathic Medicine. 2011; www.naturopathic.org. Accessed May 5, 2011.

² Zeff J, Snider P, Myers S. A hierarchy of healing: the therapeutic order. In: Pizzorno J, Murray M, eds. *Textbook of Natural Medicine*. Vol 1. 3 ed. St Louis, MO: Churchill Livingstone Elsevier; 2006:27-39.

³ Bradley R, Kozura E, Buckle H, Kaltunas J, Tais S, Standish LJ. Description of clinical risk factor changes during naturopathic care for type 2 diabetes. *J Altern Complement Med*. Jun 2009;15(6):633-638.

⁴ Stewart D, Weeks J, Bent S. Utilization, patient satisfaction, and cost implications of acupuncture, massage, and naturopathic medicine offered as covered health benefits: a comparison of two delivery models. *Altern Ther Health Med*. Jul-Aug 2001;7(4):66-70.

Challenges in defining primary care are more evident when comparing different medical environments, such as those posed by medical priorities established in Canada and the United States.

Practice Model, Including Referral and Co-management

Naturopathic primary care is guided by: i) application of the professions' principles and clinical theory, and ii) by employment of the profession's Therapeutic Order and the Determinants of Health.² Employing this clinical approach (treating disease by working with nature to restore health) also drives naturopathic evaluation and management decisions.

The Naturopathic Principles

Naturopathic physicians understand illness as a disruption of normal orderly function, and healing as a process by which living systems return to equilibrium. The guiding principles of naturopathic medical practice (below) are based on the premise that healing is intrinsic to the nature of living organisms.

1. *Vis medicatrix naturae* (the healing power of nature): the inherent organizing forces underlying this process, such as homeostasis, adaptation, metabolism or tissue repair.
2. *Primum non nocere* (do no harm): first choose interventions that do the least harm to the patient and that do not further disrupt a system attempting to regain homeostasis. This principle is fundamental to the restoration of health.
3. *Tolle causam* (treat the cause): when confronted with an ill patient, seek to understand the totality of fundamental causes disrupting the patient's optimal equilibrium.
4. *Tolle totum* (treat the whole person): required in order to remove the cause of the illness.
5. *Docere* (doctor as teacher): while removing or moderating insults and stressors that result in harm to patients, NDs engage patients in the essential responsibilities of self-care.
6. *Preventir* (prevention): mutual efforts at prevention and health promotion predominate in the physician-patient relationship.

These principles do not replace the biological foundation of pathology, but offer practitioners an expanded perspective when treating individual patients. Although these practice principles form the foundation of the naturopathic approach to health and health care, scientific advances in physics, genomics, epigenetics, medical ecology, systems biology, and public health underpin these concepts, and are increasing understanding of health and healing across many disciplines.⁵

Therapeutic Order

In naturopathic clinical theory, the wisdom of the body always seeks to optimize health and wellness. Illness is considered a process of disturbance to health. Recovery occurs within the context of natural systems, including socioeconomic, cultural, and environmental systems. Disturbances such as infection, poor nutrition, chronic stress or toxic exposures are identified and minimized by naturopathic physicians

⁵ Cramer EH, Jones P, Keenan NL, Thompson BL. Is naturopathy as effective as conventional therapy for treatment of menopausal symptoms? *J Altern Complement Med.* Aug 2003;9(4):529-538.

in partnership with patients, in order to restore health. To accomplish this, NDs first recognize the factors that determine health. A “determinant of health” becomes a disturbance when it is compromised in some way. In working to restore health, NDs employ the following “therapeutic order,” beginning with minimal intervention and proceeding to higher levels of intervention, as necessary:

1. Incorporate behaviors to re-establish conditions for health, (stress management, whole food diet, physical activity, health-promoting lifestyle).
2. Stimulate the body’s natural healing mechanisms through techniques, such as hydrotherapy, which can increase blood and lymph circulation.
3. Support weakened or damaged systems (with homeopathy, nutritional prescriptions, botanical medicines, specific exercises, mind body techniques, or other interventions).
4. Correct structural integrity (through physical medicine techniques, including soft tissue and osseous manipulation).
5. Address pathology using specific natural substances, such as dietary supplements.
6. Address pathology using pharmaceutical or synthetic substances.
7. Employ surgical correction and “higher force” therapies with greater physiological side effects, as necessary.

The order is specific, but is not fixed — it is adapted to each patient’s need for safe and effective acute and chronic care.^{2,6}

Determinants of Health

Determinants of health may be either health promoting or health disturbing factors. Determinants include modifiable behavioral factors, such as drug and alcohol use, poor diet or frank malnutrition, a sedentary lifestyle, lack of exercise, unsafe sexual practices, and/or environmental and socioeconomic factors. Many of the behavioral factors include psychological and spiritual components. Disruptions in these areas create increased stress on individuals, families, and communities, with attendant consequences. Naturopathic physicians evaluate patients with these areas in mind, looking for aspects of disturbance in diet, digestion, spirit, mental-emotional health, environment and stress. In this evaluation, NDs employ a body of knowledge somewhat unique to naturopathic medicine, to evaluate not solely in terms of pathologic entity, but in terms of normal function and subclinical functional disturbance.²

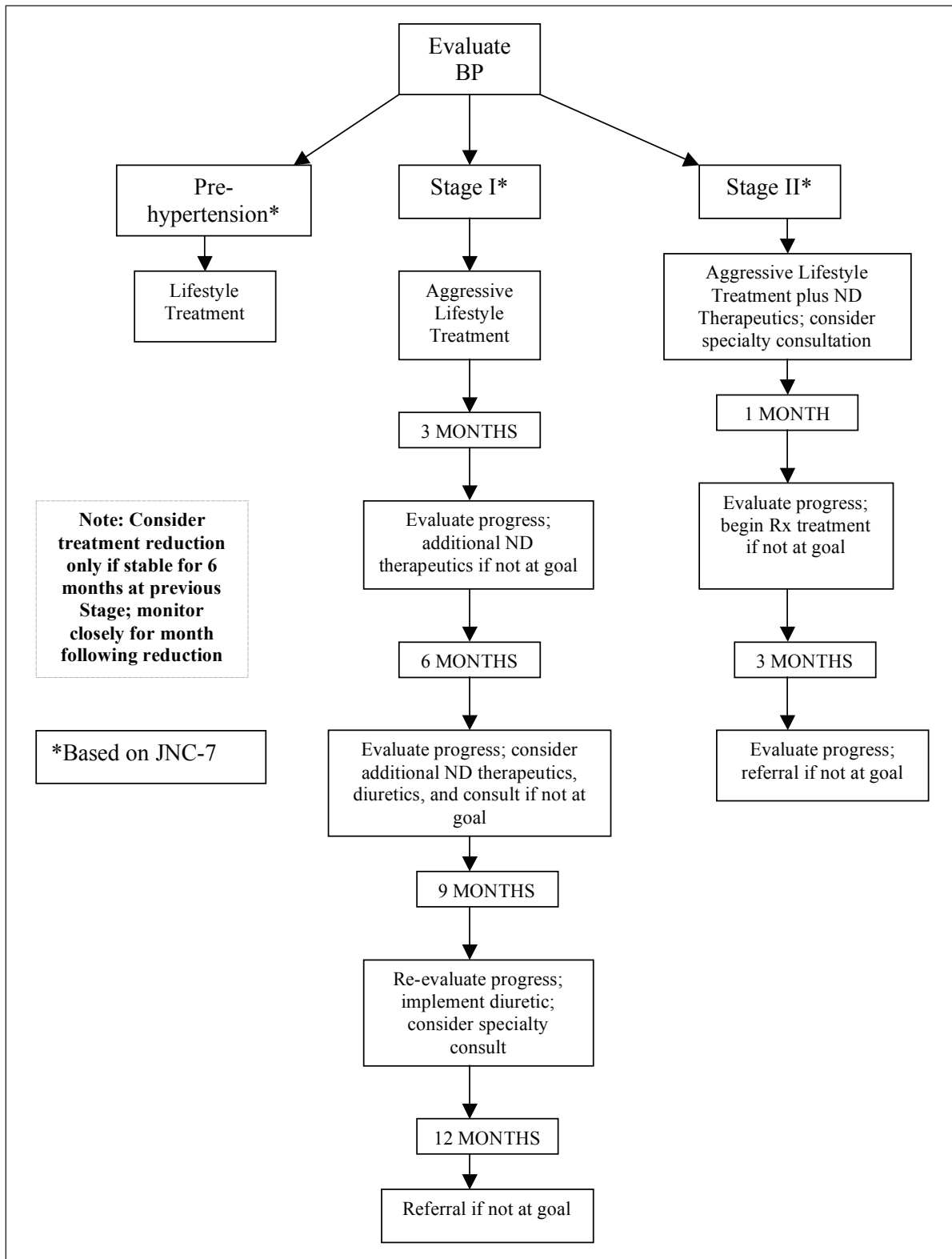
Naturopathic medicine ascribes to a therapeutic hierarchy that integrates a full spectrum of modern biomedicine within a continuum that includes mental, emotional, and spiritual therapies, as appropriate to each patient’s needs. Applied in this context, biomedical science is highly valued, both diagnostically and therapeutically.⁷

Condition-specific treatment guidelines present a challenge, because naturopathic primary care is guided by theory and philosophy, and employs a varied and complex array of therapeutic modalities. Given that naturopathic medicine embodies the whole person, each patient’s treatment is, by definition, individualized. This makes developing a single practice model a challenging endeavor.

⁶ Fleming SA, Gutknecht NC. Naturopathy and the primary care practice. *Prim Care*. Mar 2009;37(1):119-136.

⁷ Dunne N, Benda W, Kim L, et al. Naturopathic medicine: what can patients expect? *J Fam Pract*. Dec 2005;54(12):1067-1072.

Figure 1. Algorithmic Approach to Naturopathic Hypertension Management



TLC: Therapeutic Lifestyle Change/ health behavior modification
 Courtesy of Ryan Bradley, ND, MPH.

Addressing condition-specific care standards

Two main models of care are employed to develop, investigate, apply and teach condition-specific standards. These models articulate the application of naturopathic principles and philosophy to the practice of primary care.

Clinical management process model: practitioners define a sequential process for thorough patient evaluation and flexibility in therapeutic approach to optimize patient adherence and treatment success. If a patient requires or prefers treatment options beyond the experience or scope of the ND, then consultation with another provider may ensue. If the patient's condition does not improve according to expectations and prudent timelines, the ND PCP may consider either co-management and/or referral, with transference of care. This is taught and implemented as part of the clinical curriculum in naturopathic medical schools within the rubric of clinical judgment.⁸

Outcomes process model: this is used especially within research and is exemplified in the Seventh Joint National Committee guidelines (JNC7) for conventional medical management of hypertension.⁹ In this model, the ND PCP tracks and targets conventional biomarkers of disease (e.g., blood pressure readings) while utilizing individualized therapeutic interventions to reach the general guideline-directed goals (Figure 1). As scientific knowledge evolves, guidelines and recommended treatment goals are also updated; yet, therapeutic strategies to reach the goals remain the discretion of the ND PCP. Similarly, when outcomes are not achieved, the treatment protocol must be modified.

Evidence of Patient Use as First Contact Provider

The number of patients selecting an ND as their PCP is unknown, but information from insurance claims data and national surveys provides an estimate. In 2006, there were 4,010 licensed NDs in the US and Canada — a 91% increase from 2001.⁶ Studies and articles published in recent years indicate that naturopathic medicine is accessed by an increasing number of patients as their first entrance into the medical system by choice.^{6,10}

Evidence of Wellness, Health Promotion and Primary Prevention Services

The Institute of Medicine (IOM) defines primary care as "...the provision of integrated, accessible healthcare services by clinicians who are accountable for addressing a large majority of personal healthcare needs, developing a sustained partnership with patients, and practicing in the context of

⁸ Nahin RL, Dahlhamer JM, Taylor BL, et al. Health behaviors and risk factors in those who use complementary and alternative medicine. *BMC Public Health*. 2007;7:217.

⁹ Chobanian AV, Bakris GL, Black HR, et al. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure: the JNC 7 report. *Jama*. May 21 2003;289(19):2560-2572.

¹⁰ Litchy A. Naturopathic Physicians: holistic primary care and integrative medicine specialists. *Journal of Dietary Supplements*. 2011;8(4):369-377.

family and community.”¹¹ The 2001 IOM report, *Crossing the Quality Chasm*, called for extensive overhaul and redesign of US health care.⁴ A key strategy identified by the IOM is to provide patient-centered care that is respectful of and responsive to individual patient needs and preferences, and to ensure patient values guide clinical decisions. By philosophy, training and practice, modern naturopathic primary care satisfies these criteria by providing individualized, comprehensive, patient-centered care for all conditions and demographics.

Governmental or Regulatory Agency Recognition as Primary Care Providers

Historically, naturopathic physicians were licensed as “drugless healers” (WA State “Drugless Healing Act, 1919”; Connecticut Statutes Chapter 373 Naturopathy, Section 20-34, also passed in the early 1900’s) who primarily used non-invasive therapeutics, including diet, lifestyle changes, botanicals, homeopathic medicines, manual techniques and hydrotherapy. By contrast, a recent law passed in California in 2003 defines naturopathic medicine as a “distinct and comprehensive system of primary health care practiced by a naturopathic doctor for the diagnosis, treatment and prevention of human health conditions, injuries, and disease.” (California Statutes, Business and Professions Code Section 3613.c and 3640) California, Hawaii, Montana, Oregon, New Hampshire, Utah, Vermont, Washington and other states now license naturopathic physicians as PCPs with broad scope (see Table 1). All other naturopathic licensing acts authorize a broad range of diagnostic and therapeutic procedures and responsibilities in the naturopathic scope of practice, implicitly primary care.

As the naturopathic profession has evolved, its scope of practice has evolved to include prescriptive authority for legend drugs and for office procedures, minor surgery, and intravenous therapy, which were absent in older laws but included in recently passed or rewritten state laws. Differences in both the era in which the law was first passed and in the degree to which the practice is defined prevent consistent licensing and practice across states and provinces.

State programs in Washington (Health Professional Loan Repayment and Scholarship Program), Oregon (Oregon Rural Health Coordinating Council), and Vermont (Medicaid and Medical Homes) authorize NDs as PCPs for services to rural, underserved, and special needs communities. Washington and Oregon provide student loan forgiveness to ND graduates for these services. Washington State’s Medical Home Act authorizes NDs as PCPs in Medical Homes.

In states where naturopathic physicians are licensed, federal programs [e.g., the Breast and Cervical Cancer Program (BCCP) and Federally Qualified Healthcare Clinics program (FQHC)] accept naturopathic physicians as PCPs in their grants for service to medically underserved populations].

In Canada, three of the 10 provinces and 3 territories (British Columbia, Alberta and Ontario), have comprehensive regulations that allow for a broad scope of primary care practice for naturopathic doctors. Manitoba, Saskatchewan and Nova Scotia, while regulated, provide a limited scope of practice due to the restrictions of the legislation. All are in the process of updating their regulations to reflect the scope of practice granted to naturopathic physicians in British Columbia as are the naturopathic associations in the remaining provinces and territories that as yet do not have regulation.

¹¹ *Primary Care: America's Health in a New Era*. Washington D.C.: Institute of Medicine;1996.

Third-party Payer Recognition as Primary Care Providers

Three states mandate insurance coverage of NDs: Connecticut, Washington and Vermont. Coverage in other states often is available at the insurer's discretion. In the past, insurance systems relied on PCPs as gatekeepers. In this context, payer-recognition of PCP status conferred specific recognition of the rights and responsibilities of primary care. Currently, many insurers offer patients the option of direct access to an ND as their PCP. Patients also may self-refer to a naturopathic physician for specialist care, without pre-authorization.

A study of insured patients from three major insurers in Washington State found that 1.6% of 600,000 enrollees from three major insurance companies in Washington filed claims for naturopathic services in 2002.¹² National data from the National Health Statistics Reports (NHSR) estimates 0.2% for naturopathic services in 2002 and 0.3% in 2007.¹³

Research Relative to Naturopathic Medicine as Primary Care

The Naturopathic Medical Research Agenda (NMRA) (2006) outlines priorities for research in key clinical areas and methodologies.¹⁴ Classic research designs, such as randomized controlled trials, are not always appropriate for naturopathic or primary care research.^{15,16,17,18} The 2005 Institute of Medicine (IOM) report *Complementary and Alternative Medicine in the United States* identified important gaps in knowledge for CAM effectiveness and utilization, and recommended addressing these gaps through outcomes research on routine care delivery.¹⁹

Although the literature based on naturopathic outcomes in disease and health is limited, there is increasing evidence demonstrating effectiveness and cost-effectiveness. Studies in these areas are underway at all seven North American naturopathic medical schools and are reported by the nonprofit organization, Naturopathic Physician's Research Institute (<http://nprinstitute.org>).

¹² Cherkin DC, Deyo RA, Sherman KJ, et al. Characteristics of visits to licensed acupuncturists, chiropractors, massage therapists, and naturopathic physicians. *J Am Board Fam Pract.* Nov-Dec 2002;15(6):463-472.

¹³ Barnes PM, Bloom B, Nahin RL. Complementary and alternative medicine use among adults and children: United States, 2007. *Natl Health Stat Report.* Dec 10 2008(12):1-23.

¹⁴ Standish LJ, Calabrese C, Snider P. The naturopathic medical research agenda: the future and foundation of naturopathic medical science. *J Altern Complement Med.* Apr 2006;12(3):341-345.

¹⁵ Verhoef MJ, Mulkins A, Kania A, Findlay-Reece B, Mior S. Identifying the barriers to conducting outcomes research in integrative health care clinic settings—a qualitative study. *BMC Health Serv Res.* 10:14.

¹⁶ Ritenbaugh C, Aickin M, Bradley R, Caspi O, Grimsgaard S, Musial F. Whole systems research becomes real: new results and next steps. *J Altern Complement Med.* Jan;16(1):131-137.

¹⁷ Khorsan R, York A, Coulter ID, Wurzman R, Walter JA, Coeytaux RR. Patient-based outcome assessment instruments in acupuncture research. *J Altern Complement Med.* Jan;16(1):27-35.

¹⁸ Aickin M. Comparative effectiveness research and CAM. *J Altern Complement Med.* Jan;16(1):1-2.

¹⁹ *Complementary and Alternative Medicine in the United States.* Washington D.C: Institute of Medicine. National Academies Press; 2005.

16 Whole Systems Naturopathic Medicine Research Studies

1. Bradley, RB, Sherman, KJ, Catz, S, Calabrese C, Oberg, E, Jorndan L, Grothaus L, Cherkin, D. Adjunctive Naturopathic Care for Type 2 Diabetes: patient-reported and clinical outcomes after one year. *BMC Complement Altern Med.* 2012 Apr 18;12:44. doi: 10.1186/1472-6882-12-44.
2. Bradley RD, Kozura EV, Oberg EB, Fitzpatrick AL, Probsfield J. Observed Changes in Risk During Naturopathic Treatment of Hypertension. *Evidence-based Complementary and Alternative Medicine* 2010;doi:10.1093/ecam/nep219.
3. Bradley R, Kozura E, Buckle H, Kaltunas J, Tais S, Standish LJ. Description of clinical risk factor changes during naturopathic care for type 2 diabetes. *J Altern Complement Med.* Jun 2009;15(6):633-638.
4. Cooley K, Szczurko O, Perri D, et al. Naturopathic care for anxiety: a randomized controlled trial ISRCTN78958974. *PLoS One.* 2009;4(8):e6628.
5. Cramer EH, Jones P, Keenan NL, Thompson BL. Is naturopathy as effective as conventional therapy for treatment of menopausal symptoms? *J Altern Complement Med.* Aug 2003;9(4):529-538.
6. Greenlee H, Atkinson C, Stanczyk FZ, Lampe JW. A pilot and feasibility study on the effects of naturopathic botanical and dietary interventions on sex steroid hormone metabolism in premenopausal women. *Cancer Epidemiol Biomarkers Prev.* Aug 2007;16(8):1601-1609.
7. Herman PM, Szczurko O, Cooley K, Mills EJ. Cost-effectiveness of naturopathic care for chronic low back pain. *Altern Ther Health Med.* Mar-Apr 2008;14(2):32-39.
8. Milliman WB, Lamson DW, Brignall MS. Hepatitis C; a retrospective study, literature review, and naturopathic protocol. *Altern Med Rev.* Aug 2000;5(4):355-371.
9. Oberg EB, Bradley RB, Allen J, McCrory MA. Evaluation of a naturopathic nutrition program for type 2 diabetes. *Complement Ther Clin Pract.* March 2011;doi:10.1016/j.ctcp.2011.02.00.
10. Ritenbaugh C, Hammerschlag R, Calabrese C, et al. A pilot whole systems clinical trial of traditional Chinese medicine and naturopathic medicine for the treatment of temporomandibular disorders. *J Altern Complement Med.* Jun 2008;14(5):475-487.
11. Shinto L, Calabrese C, Morris C, et al. A randomized pilot study of naturopathic medicine in multiple sclerosis. *J Altern Complement Med.* Jun 2008;14(5):489-496.
12. Secor ER, Markow MJ, Mackenzie J, Thrall RS. Implementation of outcome measures in a complementary and alternative medicine clinic: evidence of decreased pain and improved quality of life. *J Altern Complement Med.* Jun 2004;10(3):506-513.
13. Szczurko O, Cooley K, Busse JW, et al. Naturopathic care for chronic low back pain: a randomized trial. *PLoS One.* 2007;2(9):e919.
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15. Seely D, Szczurko O, Cooley K, Fritz H, Aberdour S, Herrington C, Herman P, Rouchotas P, Lescheid D, Bradley R, Gignac T, Berhnardt B. Naturopathic medicine for the prevention of cardiovascular disease: a randomized clinical trial. *BMC Complementary and Alternative Medicine* June 2012; 12:O26.

Professional Goals or Objectives Relative to Primary Care

The range of health conditions for which naturopathic physicians administer care reflects a similar diversity and frequency as that seen in conventional primary care.^{20,21} Naturopathic pediatric case mix reflects primary care responsibilities: health supervision visits (27.4%), infectious disease (20.6%), mental health conditions (12.7%), and immunizations (18-27% of visits by children).²² In another study, almost 75% of all general naturopathic visits were for chronic complaints, most frequently fatigue, headache, and back symptoms. Screening lab tests were ordered at 4-10% of visits.²³

Prevention and health promotion are key responsibilities of PCPs, a fact increasingly emphasized as conventional family medicine attempts to redefine itself through initiatives such as Medical Home demonstration projects and Chronic Care Model,^{24,25} which acknowledge the importance of “patient-centered” primary care. Principles of healthy lifestyles are now incorporated in the national guidelines and standards of care of every major disease organization.²⁶ Health promotion is a cornerstone of naturopathic medicine, both philosophically and in care delivery.^{8,27}

Overall, rates of health promotion counseling in conventional primary care have been low. Naturopathic physicians exemplify a way in which this can be accomplished in a primary care setting. Analysis of the 2000 National Ambulatory Medical Care Survey revealed that among conventional primary care providers, few PCPs provided health counseling about diet (21.7%), physical activity (15.7%), or stress reduction (2.5%); hospital-based outpatient care is even lower.²⁸ In comparison, a study of naturopathic physician practices specific to diabetes care found 100% of patients received dietary counseling, 94% received instruction about increasing physical activity, and 69% received counseling for stress reduction.²⁹

The settings in which naturopathic physicians practice reflect their role as primary care providers. Work in public health clinics, hospitals, school-based clinics, academic health centers, and medical schools indicate that the primary care needs of patients are being effectively met by naturopathic physicians.³⁰

²⁰ Hing E, Cherry DK, Woodwell DA. National Ambulatory Medical Care Survey: 2004 summary. *Adv Data*. Jun 23 2006(374):1-33. Hing E, Cherry DK, Woodwell DA. National Ambulatory Medical Care Survey: 2004 summary. *Adv Data*. Jun 23 2006(374):1-33.

²¹ Boon H, Stewart M, Kennard MA, Guimond J. Visiting family physicians and naturopathic practitioners. Comparing patient-practitioner interactions. *Can Fam Physician*. Nov 2003;49:1481-1487.

²² Weber W, Taylor JA, McCarty RL, Johnson-Grass A. Frequency and characteristics of pediatric and adolescent visits in naturopathic medical practice. *Pediatrics*. Jul 2007;120(1):e142-146.

²³ Boon HS, Cherkin DC, Erro J, et al. Practice patterns of naturopathic physicians: results from a random survey of licensed practitioners in two US States. *BMC Complement Altern Med*. Oct 20 2004;4:14.

²⁴ Ferrante JM, Balasubramanian BA, Hudson SV, Crabtree BF. Principles of the patient-centered medical home and preventive services delivery. *Ann Fam Med*. Mar-Apr;8(2):108-116.

²⁵ Wagner EH, Bennett SM, Austin BT, Greene SM, Schaefer JK, Vonkorff M. Finding common ground: patient-centeredness and evidence-based chronic illness care. *J Altern Complement Med*. 2005;11 Suppl 1:S7-15.

²⁶ Deckelbaum RJ, Fisher EA, Winston M, et al. Summary of a scientific conference on preventive nutrition: pediatrics to geriatrics. *Circulation*. Jul 27 1999;100(4):450-456.

²⁷ Herman PM, Sherman KJ, Erro JH, Cherkin DC, Milliman B, Adams LA. A method for describing and evaluating naturopathic whole practice. *Altern Ther Health Med*. Jul-Aug 2006;12(4):20-28.

²⁸ Lin SX, Hyman D, Larson E. Provision of health counseling in office-based practices and hospital outpatient clinics. *Prev Med*. May 2005;40(5):542-546.

²⁹ Bradley RD OE. Naturopathic Medicine & Type 2 Diabetes: a Retrospective Analysis from an Academic Clinic. *Alternative Medicine Review*. Mar 2006;11(1):30-39.

³⁰ Nedrow A. Status of credentialing alternative providers within a subset of U.S. academic health centers. *J Altern Complement Med*. Apr 2006;12(3):329-335.

Comparative Educational Standards for Primary Care Practice

Naturopathic medical education in the US requires 4-5 years and a bachelor's degree with science prerequisites for admission. The first two years include biomedical and diagnostic sciences. Subsequent years include clinical sciences and therapeutic modalities. Upon successful completion of the biomedical portion of the program, students are eligible to sit for Part I of the Naturopathic Physicians Licensing Examination (NPLEX) administered by the North American Board of Naturopathic Examiners (NABNE). Graduates who have passed NPLEX, Part I must then pass the clinical portion of NPLEX, Part II, to obtain licensure.⁶

All licensing jurisdictions require naturopathic physicians to have graduated from a college accredited by the Council on Naturopathic Medical Education (CNME) and to have passed the Naturopathic Physicians Licensing Examinations (NPLEX) in order to become licensed. The CNME is the professional accrediting agency for naturopathic medicine, certified by the US Department of Education.

Educational Standards as a Basis for Primary Care Practice

Clinical education in naturopathic medical schools includes assessment, diagnosis, and treatment of disease from pediatrics to end-of-life care. Prevention and health promotion are a routine part of all patient care. Emphasis is placed on naturopathic therapeutics, including nutrition, physical medicine, lifestyle counseling, pharmacology, and minor surgery. Students are exposed to a variety of patients and conditions in supervised clinical education, including acute and chronic conditions affecting the medically underserved. Clinical training includes rotations in community health centers, homeless clinics, senior center/retirement homes, and a variety of private and institutional settings.

Before graduation, all medical schools use outcomes-based assessments to evaluate students' clinical skills in clinical practice areas, including organ systems (e.g., cardiology), special populations (e.g., pediatrics), diagnostic evaluation, clinical judgment, application of therapeutic modalities, and patient management. Students are required to precept with experienced practitioners in varying practice settings, in addition to attending grand rounds, topical lectures, demonstrations, and case presentations. Members of the Council of Chief Academic and Clinical Officers (CCACO), representing administrators from the seven current North American naturopathic medical schools, meet regularly to discuss issues relevant to education and outcomes assessment and to revise naturopathic educational outcome standards.

Focused Education to Enhance Skills in Primary Care

The federally recognized Council on Naturopathic Medical Education (CNME) has established primary care as the academic and clinical training standard for naturopathic physicians:

"[The naturopathic medical curriculum] [s]upports students in becoming clinically competent, caring and ethical primary care/general practice physicians/doctors with a well-developed sense of personal wellness, knowledge of their unique skills as healers, and full understanding of their scope of practice and its strengths and limitations."⁵

“A clinical experience that provides students with the opportunities to develop the clinical knowledge, skills and critical judgment necessary for safe and effective practice as a primary care/general practice naturopathic physician/doctor, including patient counseling on health promotion and disease prevention, patient assessment, diagnosis, treatment, prognosis and management, and referral as appropriate.”³¹

Recently, the number of residencies in naturopathic family practice has increased; yet, residency opportunities remain too few to accommodate all graduates. This will continue to be a problem as long as the majority of residencies remain self-funded by the medical schools and private residency sites. In comparison, federally subsidized conventional medical residencies are available through Medicare. Currently, all residencies are currently certified by the CNME. The Post Graduate Naturopathic Medical Residency Society is actively pursuing residency site expansion, to meet current demand.

Licensure requirements for continuing medical education vary by state, and are offered by regional and national naturopathic professional organizations.

Barriers to a Greater Role in Primary Care Practice

Patient access is the primary barrier limiting the role of naturopathic primary care in North America. This has been partially improved by incorporation into third-party payment schemes in many jurisdictions. Most patients currently pay out-of-pocket for naturopathic medicine and this disproportionately affects access by patients of lower socioeconomic status. When this barrier is removed and third-party insurers reimburse naturopathic services, utilization increases. However, even in geographic regions where insurance coverage has been obtained, additional obstacles are present:

- a) use of “caps”: a dollar limit placed on the expenditure allowable for all CAM care.
- b) limiting the number of visits to any CAM provider.
- c) restricting care to specified diagnoses.
- d) limiting diagnostic procedures that may be ordered by CAM providers.
- e) exclusion from federal programs, such as Medicare.
- f) unequal reimbursement rates for equal services.

Some of these strategies have been successfully litigated in Washington State and Vermont in favor of patient access and provider rights (WAC 284-43-205). Other states have had varied success in overcoming these barriers. Some licensing jurisdictions are operating under laws that have not kept pace with the changing healthcare landscape. NDs in these jurisdictions may be prevented from practicing as PCPs by default. For example, in Connecticut, NDs are not recognized as PCPs by law, and third-party payers in that state have defined NDs as specialists.

In Canada, the healthcare system is publicly funded and NDs are not included with the exception of those practicing in British Columbia which provides minimal coverage for those patients that qualify for assistance. This creates a barrier for patients to access primary care services from naturopathic doctors in three significant ways. First, people may not access NDs because, in a universal healthcare system, third-party insurance often provides insufficient coverage. Second, many people do not have access to third-party insurance and simply cannot afford the cost of naturopathic medical care. Third, in a system where

³¹ *Handbook of Accreditation: Council on Naturopathic Medical Education; 2007 p12 B. Academic Component; p14, Clinical Component.*

health care is perceived as being free, patients do not prioritize 'fee for service' care from a naturopathic doctor as part of their medical care.

Access has been defined as a barrier, as indicated above. Several recent papers have been published discussing these concerns and defining the role of naturopathic medicine in primary care.^{32,33,34,35,36}

Re-thinking Primary Care

Consistent with the goals of primary care, naturopathic medicine contributes to improved health and wellness of the US population through delivery of high quality, patient-centered, primary care that prioritizes prevention of disease and restoration of optimal health using natural, minimally invasive therapies. The profession represents a workforce of approximately 6000 licensed physicians, nationwide, with hundreds more being added annually.³⁷

The future of the naturopathic profession will in large part be determined by its success in legislative efforts to expand public access to naturopathic care through state licensure and inclusion of naturopathic physicians in federal programs such as Medicare, Indian Health Services, the Veterans Administration, and future programs. Clinical outcomes research is increasingly emphasized as a professional goal in order to:

- provide health services data to policymakers in order to quantify the impact of naturopathic primary care on the nation's health
- study comparative effectiveness of different aspects of naturopathic medicine
- apply findings for broader dissemination and quality improvement. This is exemplified by recent large NIH-funded research studies focusing on clinical outcomes of whole practice naturopathic medicine and the formation of the practice-based Naturopathic Physician's Research Network (<http://nprinstitute.org/nprn>)

The US and Canada currently face a serious shortage of physician-level PCPs, exponentially escalating healthcare costs, epidemics of lifestyle-related chronic disease and obesity, and increasing dissatisfaction with conventional medicine. Naturopathic physicians are a valuable resource for modeling sustainable, efficacious primary care in light of these critical shortages. As naturopathic approaches to these public health challenges are found effective through research, then naturopathic primary care and its emphasis on direct care, prevention, wellness, and health promotion will shape a new therapeutic order for these nations' public health policies.

³² Barrett B, Marchand L, Scheder J, et al. Themes of holism, empowerment, access, and legitimacy define complementary, alternative, and integrative medicine in relation to conventional biomedicine. *J Altern Complement Med*. Dec 2003;9(6):937-947.

³³ Oberg, E.B.; Thomas, M.S; McCarty, M.; Braldehy, R. Older adults' perspectives on naturopathic medicine's impact on healthy aging" submitted to *American Journal of Health Promotion*, April 2012.

³⁴ Hawk C, Ndetan H, Evans MW, Jr. Potential role of complementary and alternative health care providers in chronic disease prevention and health promotion: An analysis of National Health Interview Survey data. *Prev Med*. Jul 13 2011.

³⁵ Chamberlain, S.; Oberg, E.B.; Calabrese, C. "Naturopathic Clinical Practice at North American Academic Institutions: 291,369 Visits Between 2006 and 2010" to be presented at ICRIMR May 2012, Portland, OR.

³⁶ Albert D, Martinez D. The supply of naturopathic physicians in the United States and Canada continues to increase. *Complementary Health Practice Review*. 2006;11(2):120-122.

³⁷ Milliman B., Ryciak E. Wardle J., et al. Naturopathic Primary Care (ed) Snider P. Zeff J, Pizzorno, J, Sensenig J, Newman Turner R, Myers S, Warren D. Foundations of Naturopathic Medicine. (in press). Elsevier. 2013

Table 1: Current Primary Care in State Licensing and Practice Acts for Naturopathic Physicians

| State | Legislation title / # | Purpose |
|-------|--|--|
| CA | Business and Professions Code, Section 3613(c) | Insurance coverage |
| CA | SB907 | Practice |
| HI | §455-8; §16-88-81 | Practice |
| MT | 37-26-103 | Practice |
| NH | 3.28E-01 | Practice |
| OR | Oregon Rural Health Coordinating Council | Rural Primary Health Care – Student Loan Forgiveness |
| UT | 58-71-102: Definitions #11 | Practice |
| VT | Ch. 107. 8 V.S.A. § 4088d. Coverage for covered services provided by naturopathic physicians | Insurance coverage |
| VT | Ch. 107. 18 V.S.A. § 704. Medical home | Medical Homes Act |
| VT | Ch. 107. 8 V.S.A. § 4088d. Coverage for covered services provided by naturopathic physicians | Medicaid |
| WA | WA State Dept. of Health: “Staffing the New Health Care System” 1995 | Practice |
| WA | RCW 74.09.470 (Public assistance; DSHS) Children’s affordable health coverage | Children’s health care |
| WA | SB 5093 - 2007- Concerning access to health care services for children | Children’s health care |
| WA | HB 2549 (2008) Establishing a patient-centered primary care-collaborative program. | Medical Homes Act |

Appendix A: Definitions of Primary Care for Consideration by Chapter Authors

Institute of Medicine (1978): "... accessible, comprehensive, coordinated and continual care delivered by accountable providers of personal health services." A Manpower Policy for Primary Health Care: Report of a Study: http://books.nap.edu/openbook.php?record_id=5152&page=29

World Health Organization (1978): "Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process." Declaration of Alma Ata: http://www.who.int/topics/primary_health_care/en/

World Health Organization (1978-short version): "Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology ... It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process." Declaration of Alma Ata http://www.who.int/topics/primary_health_care/en/

Institute of Medicine (1994): "... the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients and practicing within the context of family and community." Committee on the Future of Primary Care http://books.nap.edu/openbook.php?record_id=9153&page=1

Advanced Practice Nurses [Review article] "APNs are uniquely qualified to resolve unmet needs in primary health care by serving as an individual's point of first contact with the health care system. This contact provides a personalized, client-oriented, comprehensive continuum of care and integrates all other aspects of health care over a period of time. Care should be provided as much as possible by the same health care professional, with referrals coordinated as appropriate. The focus of care is on health surveillance (promotion and maintenance of wellness), but it also provides for management of acute and stable chronic illness in order to maintain continuity." <http://www.ispub.com/ostia/index.php?xmlFilePath=journals/ijanp/vol1n2/scope.xml>

American Academy of Family Physicians (2010): "Primary care is that care provided by physicians specifically trained for and skilled in comprehensive first contact and continuing care for persons with any undiagnosed sign, symptom, or health concern (the "undifferentiated" patient) not limited by problem origin (biological, behavioral, or social), organ system, or diagnosis. Primary care includes health promotion, disease prevention, health maintenance, counseling, patient education, diagnosis and treatment of acute and chronic illnesses in a variety of health care settings (e.g., office, inpatient, critical care, long-term care, home care, day care, etc.). Primary care is performed and managed by a personal physician often collaborating with other health professionals, and utilizing consultation or referral as appropriate. Primary care provides patient advocacy in the health care system to accomplish cost-

effective care by coordination of health care services. Primary care promotes effective communication with patients and encourages the role of the patient as a partner in health care.”

(Note that the AAFP presents this definition as one of an intermeshed set on the AAFP website, including also “Primary Care Practice”, “Primary Care Physician”, “Non-Primary Care Physicians Providing Primary Care” and “Non-Physician Primary Care Providers”. The latter definition is: “There are providers of health care other than physicians who render some primary care services. Such providers may include nurse practitioners, physician assistants and some other health care providers. These providers of primary care may meet the needs of specific patients. They should provide these services in collaborative teams in which the ultimate responsibility for the patient resides with the primary care physician.” Physician is designated as MD or DO in this document. <http://www.aafp.org/online/en/home/policy/policies/p/primarycare.html>)

Vanderbilt University (2010) Primary Medical Care An essential element of any health care system is primary medical care. All Americans should have access to a health professional trained to provide quality primary medical care as their entry point to the system. Such primary care physicians provide:

- first-contact care for persons with any undiagnosed sign, symptom, or health concern;
- comprehensive care for the person which is not organ- or problem- specific;
- longitudinal or continuous care for the patient;
- responsibility for coordinating other health services as they relate to the patient’s care.

Primary Care Competencies Physicians who deliver comprehensive primary medical care are uniquely trained in how to:

- recognize early symptoms of serious disease;
- distinguish between self-limited illnesses and problems requiring further medical intervention;
- perform time-efficient histories, physicals, and diagnoses carried out at the quick pace required in most ambulatory care settings;
- provide screening and counseling to prevent disease;
- communicate with a variety of patients in a long-term relationship;
- access and utilize social and financial resources for patients.

https://medicine.mc.vanderbilt.edu/primarycaremedicine_definition

Patient Protection and Affordable Care Act (2010): [From Section 3502, on Medical Homes] “ ... provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community.”

<https://housedocs.house.gov/energycommerce/ppacacon.pdf>

Appendix B: Charge to Authors on Segments in Discipline-Specific Chapters

The project co-directors developed a draft outline for the chapters which the author teams discussed and amended and agreed to follow. The following 14 sub-headings and descriptors were developed and circulated.

Internal Definition(s) of Primary Care

Does the profession have any formal documents (professional association, accrediting agency, special task force, etc.) that define or establish the profession as providing “primary care”? To what extent are these definitions generally accepted within the field? Has a related set of competencies addressing primary care been developed and published? If so, what are these, and how and to what extent have they been codified into the profession through professional associations, the accreditation process, publications and other official documents?

Internal Disagreements over Primary Care

What, if any, are the major disagreements within the profession regarding how the term “primary care” should be understood as is related to your profession? What are the disagreements relative to pursuing primary care status?

Practice Model, Including Referral and Co-management

To what extent does your profession specify a model of primary care delivery, including how and when patients should be referred to other providers and/or co-managed by professionals from other fields?

Evidence of Patient Use as First Contact Provider

What evidence from surveys of patients indicates that patients view the services that you offer as first contact providers? What do we know about patient perspectives on how and when and for what conditions they seek your services first? Do they view you as general practitioners for limited services? What care do they seek?

Evidence of Wellness, Health Promotion and Primary Prevention Services

What does research on your professions offer in understanding the roles of your profession in patient education, behavior change, health risk assessment, health promotion and primary prevention?

Governmental or Regulatory Agency Recognition as Primary Care Providers

Is your profession recognized by any state law, state agency, federal law or federal agency, or any other governmental agency as a primary care provider? If yes, please provide examples and precise citations of such recognition.

Third-Party Payer Recognition as Primary Care Providers

Do any third-party payers – insurers or employers or governmental agencies – recognize your profession as a primary care provider? If so, please provide examples and precise citations of such recognition.

Research Relative to Your Profession as Primary Care

Is there any published evidence which has examined your profession as a primary care provider? If so, please summarize, give precise citations and provide copies of the articles.

Professional Goals or Objectives Relative to Primary Care

Does the profession or any significant subset of the profession have a position on its members becoming certified and reimbursed as “primary care providers” within the scope of practice with which that term is commonly understood in conventional health care? If so, what is that position and how has it been documented within the profession? If there is no widely held consensus on this question, please describe any discussions or consideration of the question that have occurred within the profession over the past few years.

Comparative Educational Standards for Primary Care Practice

Has your profession published any comparisons of its basic educational standards with standards of any profession which is currently better accepted as primary care? If so, please comment on findings, and send a copy.

Educational Standards as a Basis for Primary Care Practice

Are your present standards adequate to equip students for taking on the role of primary care as is understood in conventional health care? Do typical graduates have sufficient clinical experience of diverse patient populations and pathologies to serve in primary care capacity? If not, what supplemental education or certification would be necessary for members of the profession to take on such a conventionally defined role? To what extent would such additional training be required at the pre-clinical level, the clinical level, or at the post-graduate level? If a specialty certification was created for this purpose, what requirements would it include?

Focused Education to Enhance Skills in Primary Care

Please comment on the likely and ideal locale(s) for additional training. Would such training be located within existing programs, conventional medical institutions, or in new settings created especially to train an array of CAM health professionals who were seeking to expand their scope of practice?

Barriers to a Greater Role in Primary Care Practice

What are the major barriers to the profession taking on a role, or a more significant role, of primary care providers in the near future? Describe the extent to which the barriers may arise from factors within the profession itself. Are the barriers in any way created or influenced by other CAM professions? To what extent do the barriers arise from relations with conventional medical professions? To what extent do the barriers arise from such sources as insurance companies or governmental agencies?

Re-thinking Primary Care

Summarize any ways that your profession would propose to view primary care that it believes would be beneficial to patients but which is at significant variance to conventional definitions and practices.

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