New Information and Trends in Chiropractic Practice
1991 through 2014

- The proportion of practicing chiropractors who have a bachelor's, master's or Ph.D. degree has risen steadily from 53.7% in 1991 to 78.8% in 2014.

- Both the quantity and quality of chiropractic research have increased substantially since the first NBCE survey in 1991, permitting doctors of chiropractic to use empirical evidence to help guide their treatment of patients.

- The typical practitioner now spends more than a quarter (26.3%) of his or her work time documenting patient care; this amount has almost doubled since 1998 (13.8%).

- Virtually all chiropractors report providing health promotion and wellness care in addition to spinal and extremity adjustments.

- Half of practicing doctors of chiropractic (50.1%) have their own radiographic equipment; the percentage was 59.4% in 2009. The portion of chiropractors with radiographic equipment who use digital imaging has more than doubled in 5 years — from 11.6% in 2009 to 28.1% in 2014.

- A smaller proportion of chiropractors now report working more than 50 hours weekly — 10.2% in 1991 and 6.1% in 2014.

- The percentage of female doctors of chiropractic has essentially doubled — from 13.3% in 1991 to 27.1% in 2014.

- Doctors of chiropractic reported co-management of a greater proportion of health conditions with other professionals in 2014 than in 1998; this suggests an increasingly integrated approach to patient care.

- One in fifteen (6.7%) chiropractors responding to the 2014 survey reported that they were employed under contract to provide chiropractic care to active or retired military personnel. This is a substantial increase from 2009, when it was 4.4%.

- Both the frequency and the risks of professional functions were rated very consistently in 2014 and in 2009; this is a useful indicator of the uniformity with which chiropractic occupational tasks are performed.

- One in six (14.6%) chiropractors reporting in 2014 described their practice location as a rural small town or a rural area; the percentage was 15.9% in 2009.

- More than four of five chiropractors (83.0%) described their work role as the sole proprietor or a partner of a chiropractic practice; only 13.5% reported being an associate or employee.
PRACTICE ANALYSIS
of Chiropractic
2015

A project report, survey analysis, and summary of the practice of chiropractic within the United States

Produced by the
National Board of Chiropractic Examiners
901 54th Avenue, Greeley Colorado
(970) 356-9100
www.nbce.org

January 2015
Editorial Staff

Mark G. Christensen, Ph.D., Project Director, Author and Editor
John K. Hyland, D.C., M.P.H., Co-author and Assistant Editor
Christine M. Goertz, D.C., Ph.D., Co-author and Researcher
Martin W. Kollasch, D.C., Ph.D. (c), Co-author and Assistant Editor
Bruce L. Shotts, D.C., Dipl Ac, M.S., Assistant Editor
Nancy L. Blumlein, Production Coordinator
Jeannette M. Johnson, Assistant Production Coordinator
Alison A. Day, M.S., Design and Final Production
Margaret M. Smith, Data Analysis

This study was approved for human subjects’ research by the Institutional Review Board of Palmer College of Chiropractic.

IRB Assurance Number: X2013-11-11-C

Library of Congress Cataloging-in-Publication Data

Christensen, Mark G., Hyland, John K., Goertz, Christine M., and Kollasch, Martin W.
Practice Analysis of Chiropractic 2015
A project report, survey analysis, and summary of chiropractic practice in the United States.
Includes bibliographical references and index.
ISBN 978-0-9844740-1-1

©2015 National Board of Chiropractic Examiners, All Rights Reserved.

No portion of this book may be reproduced in any manner without prior written approval from the National Board of Chiropractic Examiners.
Acknowledgements

The National Board of Chiropractic Examiners (NBCE) wishes to express appreciation to Mark Christensen, Ph.D., and the editorial staff, who helped guide the NBCE Practice Analysis of Chiropractic 2015 project from its inception. The NBCE would also like to acknowledge the significant contributions of Paul Townsend, D.C., for his assistance in developing the initial survey form and Greg Crawford, D.C., for his work in the development of the diagnosis and management scales used in the survey forms. We appreciate the helpful participation of Christine Goertz, D.C., Ph.D., and the staff at the Palmer Center for Chiropractic Research; in particular Nicole Homb, D.C., M.S., William Reed, D.C., Ph.D., Elissa Twist, D.C., M.S., and Robert Vining, D.C. Also of assistance was Dana Lawrence, D.C., M.Med.Ed., M.A., at the Institutional Review Board of Palmer College of Chiropractic. Paul Morin, D.C., is gratefully acknowledged for his assistance in reviewing and editing the many components that make up this report. Appreciation is also extended to the more than 1,540 chiropractors who responded to the 2014 Survey of Chiropractic Practice.

In addition, thanks are expressed to Sandi Wakeman for her role in obtaining the state lists of licensed chiropractors, carefully refining the lists to exclude those not residing in each state, tracking the written survey responses, scanning the written surveys to enable machine scoring, and various other follow-up efforts. The NBCE also extends thanks to Nancy Blumlein and Jeannette Johnson for their assistance with the writers and reviewers at various stages of the production of the manuscript. We thank Alison Day for her talents and efforts in the design and readability of this report; she patiently worked through numerous drafts before the final production.

The NBCE recognizes Tony Golobic for his computer assistance in placing the survey on the internet, tracking survey completion, and compiling the final survey responses. In addition, Margaret Smith is recognized for her computer assistance in tracking survey results and analyzing survey data. Gratitude is also expressed to Joanne Monath for her assistance in coordinating the follow-up telephone campaign.

To all of you we owe a debt of gratitude. Thank you.

Donna L. Craft, D.C., President
National Board of Chiropractic Examiners
This publication is presented on behalf of

The National Board of Chiropractic Examiners

Officers and Board of Directors

Donna L. Craft, D.C., President
Paul N. Morin, D.C., Vice President
Salvatore D. LaRusso, D.C., Treasurer
Steven R. Conway, D.C., J.D., Secretary
Daniel M. Côté, D.C.
Farrell I. Grossman, D.C.
Lawrence O’Connor, D.C.
LeRoy F. Otto, D.C.
Norman E. Ouzts, Jr., D.C.
Gary R. Pennebaker, D.C. (deceased)
Ronald B. Tripp, Jr., D.C.
Martin W. Kollasch, D.C., Ph.D. (c), Executive Vice President
Preface

To ensure that the assessment of chiropractic students and doctors of chiropractic accurately represents what chiropractors do in practice, it is necessary to conduct a practice analysis of chiropractors around the nation. The study results also provide legislators, insurance representatives, educators, and the general public with an overview of chiropractic's growing importance and effectiveness as a healthcare profession.

This survey report contains data collected in 1991, 1998, 2003, 2009, and 2014 by the National Board of Chiropractic Examiners (NBCE). Contained herein are important survey findings that reveal practitioner and patient demographics, patient health issues, and treatment procedures common to the chiropractic profession nationwide. This book also contains recent reports of research investigating chiropractic’s efficacy in the treatment of a wide variety of health concerns and provides descriptions and explanations of how this large-scale survey of U.S. chiropractors was conducted and reported.

Like the previous four practice analyses conducted in 1991, 1998, 2003, and 2009, this most recent analysis presents the findings in a clear, organized format; such a presentation can only be achieved by the significant efforts of many people. These individuals include: private chiropractic practitioners, statisticians, editors, and NBCE staff members. Special thanks must also be given to the chiropractors who responded to the survey so that an accurate and representative picture of the profession might emerge.

A commitment to excellence by our nation's chiropractors and by the National Board of Chiropractic Examiners is a distinguishing mark of our profession and expands public awareness of the importance of chiropractic in this nation's healthcare system.

Martin W. Kollasch, D.C., Ph.D. (c), Executive Vice President
National Board of Chiropractic Examiners
Introduction

The chronology of tests and measurements can be traced to the beginning of recorded history. Early writings describe processes including rituals that gauged the knowledge, wisdom, physical endurance, or bravery of ancient peoples.

At one time or another, through one form or another, human beings have always devised methods to assess the knowledge, skills, and abilities of those seeking to meet recognized standards. As society has become more complex and specialized, and as the consequences of assessment decisions have become more significant, with procedures and results increasingly scrutinized, strict guidelines for obtaining reliable and valid test results have emerged. Today, these guidelines are established and refined by individuals, testing organizations, and the United States government.

In its role as the national and international testing agency for the chiropractic profession, the National Board of Chiropractic Examiners adheres to recognized standards that require the preparation and administration of fair, uniform, and valid tests. Specifically, testing guidelines clearly state that, “Typically, some form of job or practice analysis provides the primary basis for defining the content domain” (American Educational Research Association, American Psychological Association, National Council on Measurement in Education, 2014, p. 182).

Organization of the Report

While compiling data for the NBCE Practice Analysis of Chiropractic, the authors were committed to providing comprehensive and accurate documentation of every aspect of the practice analysis project. Repeatedly surfacing during the compilation process was the reminder that the readers of this report will include individuals with varying degrees of familiarity with the fields of chiropractic and/or testing. This prevailing awareness affected the construction of the report in both content and format.

At every step, the authors presented the relevant data, then stepped back to assess whether the body of information offered previously in the text was sufficient to afford and facilitate comprehension by a full range of readers. In many cases, the authors resolved this question by including clarifying background information.

Additionally, entering into the decision to include some passages of text was the need to acquaint readers with licensed practitioners of chiropractic, who provided the data upon which the practice analysis report is based. Thus, the authors have attempted to present an objective and well-rounded picture of present-day chiropractors and their practices. Also addressed is the historical background of the profession and current information including educational requirements for becoming a chiropractor.
The information is often presented as a general overview, followed by a more detailed topical discussion presented chronologically. The editors have attempted to convey information through visual means where appropriate. A glossary of terms can also be found at the end of this report.

The first two chapters serve to familiarize the reader with the chiropractic profession and its practitioners, including the personal, educational, and professional criteria these individuals met in becoming licensed practitioners of chiropractic. Also presented is research addressing the efficacy of chiropractic health care.

Chapter 3 provides background information relative to occupational licensing. Here, readers are given general information concerning licensure and certification testing and some legal aspects that shape regulatory agency requirements.

In Chapter 4, we present the procedures necessary to have project validity. This chapter discusses the organization and design of the final survey form used in the practice analysis project.

Chapter 5 describes the methods and factors utilized in compiling the survey mailing list, tracking all components, tabulating the data, etc. A number of the many steps taken to encourage a higher rate of response are presented in this chapter.

Chapter 6 provides an overview of the respondent chiropractors and their practice characteristics. Included is a summary of conditions, treatments, and professional activities within chiropractic practice. The subsequent chapters provide a detailed breakdown of the characteristics of the “typical” chiropractic practitioner (Chapter 7) and the “typical” chiropractic patient, patient conditions and chiropractic management of those conditions (Chapter 8) as indicated by the survey response data.

The final chapter of the Practice Analysis of Chiropractic 2015 report (Chapter 9) summarizes the response data relative to professional functions, knowledge, and treatment procedures performed by the practitioners participating in the survey.

The appendices include a copy of the 2014 Survey of Chiropractic Practice and lists of survey participants and organizations mentioned in this publication. Also included in the appendices are the American Chiropractic Colleges' Chiropractic Paradigm and its Chiropractic Scope and Practice. The appendices are followed by a bibliography, a glossary of terms, and an index.

Mark G. Christensen, Ph.D., Director of Testing
National Board of Chiropractic Examiners
Table of Contents

Chapter 1
The Chiropractic Profession ................................................................. 1
  In the United States .................................................................................. 1
  Outside the United States ......................................................................... 1
  Principles of Chiropractic ........................................................................ 4
  Chiropractic Case Management ................................................................ 5
  Chiropractic Requisites ............................................................................ 6
    Education .................................................................................................. 7
    Specialization ............................................................................................ 9
    National Board Examinations .................................................................. 10
    International Board of Chiropractic Examiners ..................................... 11
    Ethics and Boundaries Assessment Services .......................................... 11
    State or National Licensure/Registration ............................................... 11
    Federation of Chiropractic Licensing Boards ....................................... 12
  Reimbursement for Chiropractic Services ............................................. 13
  Sports Chiropractic .................................................................................. 13
  Conclusions .............................................................................................. 14

Chapter 2
Chiropractic Research ............................................................................. 15
  Introduction ............................................................................................... 15
  Clinical Effectiveness ............................................................................... 16
    Back Pain ................................................................................................ 16
      Efficacy of Manipulation versus Sham or No Treatment .................... 16
      Efficacy of Manipulation versus Usual Care or Other Interventions .... 16
      Efficacy of Adding Chiropractic Treatment to Standard Medical Care .. 17
      Efficacy of Numbers of Sessions ......................................................... 18
      Recommendations from Guidelines ................................................. 18
      Summary of Evidence ............................................................................ 18
Chapter 6

Overview of Survey Responses ................................................................. 55
  The “Typical” Chiropractor ................................................................. 55
    Routine Activities and Procedures .................................................. 56
  Patient Conditions .............................................................................. 57
    Frequency of Professional Functions ............................................ 62
  Perceived Risk Associated with Professional Functions .................. 66
  Importance of Professional Functions .......................................... 67
  Treatment Procedures ......................................................................... 71
  Interprofessional Referrals and Weekly Patient Care ..................... 72
  The “Typical” Patient ....................................................................... 73

Chapter 7

The Chiropractic Practitioner ............................................................. 77
  Personal Demographics ................................................................. 78
    Gender ..................................................................................... 78
    Ethnic Origin ........................................................................... 78
    Level of Non-Chiropractic Education ........................................ 79
    Post-Graduate Diplomate Status ................................................ 79
  Chiropractic Colleges Represented ................................................. 80
  The Chiropractic Work Environment ................................................ 82
    Hospital and Military Practice ..................................................... 82
    Practice Location by Community Size and Use of Radiography .... 82
    Patient Workload, Gender, and Ages .......................................... 82
    Interprofessional Referrals .......................................................... 84
  Experience and Orientation .............................................................. 85
    Years in Practice ....................................................................... 85
    Components of Chiropractic Practice ....................................... 85
    Practice Setting and Work Role ................................................ 86
  Survey Concerning Chiropractic Assistants ................................. 87
Chapter 8

Patient Conditions ................................................................. 89

Introduction .............................................................................. 89

Chief Complaint & Primary Etiology ............................................. 89

Conditions .................................................................................. 91

  Neurological Conditions ......................................................... 91
  Discussion ................................................................................ 92

  Articular/Joint Conditions ....................................................... 93
  Discussion ................................................................................ 93

  Muscular Conditions .............................................................. 95
  Discussion ................................................................................ 95

  Skeletal Conditions ............................................................... 96
  Discussion ................................................................................ 96

  Respiratory Conditions .......................................................... 97
  Discussion ................................................................................ 97

  Gastrointestinal Conditions .................................................... 98
  Discussion ................................................................................ 98

  Dermatological Conditions ..................................................... 99
  Discussion ................................................................................ 99

  Renal/Urological Conditions ................................................... 100
  Discussion ............................................................................... 100

  Cardiovascular Conditions ..................................................... 101
  Discussion ............................................................................... 101

  Endocrine/Metabolic Conditions ............................................. 102
  Discussion ............................................................................... 102

  Female and Male Reproductive Disorders ............................... 103
  Discussion ............................................................................... 103

  Eye, Ear, Nose, and Throat Conditions .................................... 104
  Discussion ............................................................................... 104

  Childhood Disorders ............................................................. 105
  Discussion ............................................................................... 105

  Miscellaneous Conditions ...................................................... 106
  Discussion ............................................................................... 106

  Diagnosis and Management of Conditions ............................. 107
List of Tables

Chapter 1

The Chiropractic Profession ................................................................. 1

Table 1.1 Countries in Which Chiropractic is Recognized as a Health Profession......................... 2-4
Table 1.2 Steps Leading to Chiropractic Practice ................................................................. 7
Table 1.3 First Year Coursework ......................................................................................... 8
Table 1.4 Second Year Coursework ...................................................................................... 8
Table 1.5 Third Year Coursework ....................................................................................... 9
Table 1.6 Specialty Training Programs ............................................................................... 9
Table 1.7 NBCE Pre-licensure Examinations .................................................................. 10
Table 1.8 Optional NBCE Examinations .......................................................................... 11

Chapter 5

Administering the Survey of Chiropractic Practice ........................................ 43

Table 5.1 Response by State ......................................................................................... 50-53

Chapter 6

Overview of Survey Responses ....................................................................... 55

Table 6.1 Years in Practice ......................................................................................... 56
Table 6.2 Patient Conditions by Frequency ............................................................... 57-61
Table 6.3 Frequency of Professional Functions ......................................................... 62-65
Table 6.4 Professional Functions Having Significant Risk ....................................... 66
Table 6.5 Professional Functions Having Little Risk .................................................. 67
Table 6.6 Professional Functions Having Highest Importance ............................. 68
Table 6.7 Professional Functions Having Significant Importance ......................... 69
Table 6.8 Professional Functions Having Moderate Importance ............................ 70
Chapter 7

The Chiropractic Practitioner ........................................................................................ 77

Table 7.1  Ethnic Origin .......................................................................................................... 78

Table 7.2  Post-graduate Diplomate Status ........................................................................... 80

Table 7.3  Chiropractic Colleges Represented ................................................................ 80-81

Table 7.4  Number of Patients Per Week ............................................................................... 82

Table 7.5  Years in Practice ...................................................................................................... 85

Table 7.6  Practice Setting ....................................................................................................... 86

Table 7.7  Role in Practice Setting .......................................................................................... 87

Table 7.8  Duties of Chiropractic Assistants Who Provide Patient Care .......................... 88

Chapter 8

Patient Conditions ......................................................................................................... 89

Table 8.1  Neurological Conditions ....................................................................................... 92

Table 8.2  Articular Joint Conditions .................................................................................... 94

Table 8.3  Muscular Conditions ............................................................................................. 95

Table 8.4  Skeletal Conditions ............................................................................................... 96

Table 8.5  Respiratory Conditions ......................................................................................... 97

Table 8.6  Gastrointestinal Conditions .................................................................................. 98

Table 8.7  Dermatological Conditions ................................................................................... 99

Table 8.8  Renal/Urological Conditions .............................................................................. 100

Table 8.9  Cardiovascular Conditions ................................................................................. 101

Table 8.10  Endocrine/Metabolic Conditions .................................................................... 102

Table 8.11  Reproductive Disorders ..................................................................................... 103

Table 8.12  Eye, Ear, Nose, and Throat Conditions............................................................ 104

Table 8.13  Childhood Disorders ......................................................................................... 105

Table 8.14  Miscellaneous Conditions ................................................................................. 106
Chapter 9

Professional Functions and Treatment Procedures ..................................................... 111

Table 9.1 Case History .................................................................................................. 113
Table 9.2 Physical and Orthopedic/Neurologic Examinations ................................... 114
Table 9.3 Imaging, Laboratory, and Diagnostic Studies ........................................... 115-116
Table 9.4 Analysis of Diagnostic Studies ................................................................. 117
Table 9.5 Diagnosis and Case Management .............................................................. 118
Table 9.6 Communication and Documentation ......................................................... 119
Table 9.7 Initial Patient Care ....................................................................................... 120-121
Table 9.8 Continued Care ........................................................................................ 122
Table 9.9 Health Promotion/Wellness Care ............................................................... 123
Table 9.10 Percentage of Chiropractors Using Health Promotion and Wellness Care Procedures ........................................................................................................... 124
Table 9.11 Percentage of Chiropractors Using Passive Adjunctive Procedures (2009) ........................................................................................................................................... 125
Table 9.12 Percentage of Chiropractors Using Active Adjunctive Procedures (2009) ........................................................................................................................................... 126
List of Figures

Chapter 6

Overview of Survey Responses ................................................................. 55
  Figure 6.1 Components of Chiropractic Practice ........................................... 57
  Figure 6.2 Number of Patients per Week (2014) ............................................. 72
  Figure 6.3 Patient Age (2014) ........................................................................ 73
  Figure 6.4 Chief Complaint (2003) ................................................................. 74
  Figure 6.5 Etiology of Patient Condition (2003) .............................................. 75

Chapter 7

The Chiropractic Practitioner .................................................................. 77
  Figure 7.1 Hours Worked Per Week ............................................................... 77
  Figure 7.2 Practitioner Gender ...................................................................... 78
  Figure 7.3 Non-chiropractic Education ........................................................... 79
  Figure 7.4 Percent of Patients by Age ............................................................. 83
  Figure 7.5 Frequency of Patient Referrals (2009) ........................................... 84
  Figure 7.6 Components of Chiropractic Practice .......................................... 86

Chapter 8

Patient Conditions .................................................................................... 89
  Figure 8.1 Percent of Patients With Chief Complaint (2003) ....................... 90
  Figure 8.2 Etiology of Patient Conditions (2003) ........................................ 90
  Figure 8.3 Conditions for Which Chiropractors Made the Diagnosis in the Majority of Cases ................................................................. 107
  Figure 8.4 Conditions Which Chiropractors Treat Solely in the Majority of Cases ................................................................. 108
  Figure 8.5 Conditions Which Chiropractors Co-manage in the Majority of Cases ................................................................. 109
Chapter 9

Professional Functions and Treatment Procedures..................................................... 111

Figure 9.1  Rating Scales Used in Assessing the Frequency, Risk, and Importance of Chiropractic Functions ................................................................. 112

Appendix A

Association of Chiropractic Colleges (ACC)............................................................. 127

Figure A.1  The ACC Chiropractic Paradigm ............................................................... 127
Figure A.2  ACC Chiropractic Scope and Practice...................................................... 130

Glossary

Glossary Figure 1  Range of Motion ............................................................................ 186