

BRADLEY KEYS DC, PSP

Curriculum Vitae

Tradewinds Chiropractic
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SELECTED OCCUPATIONAL HISTORY

Owner, Tradewinds Chiropractic, St. Thomas, VI, 2018 – Present
Medical Director, Rugby Tournament, St. Thomas, VI, 2017
Clinic Director, Thrive Chiropractic, St. Thomas, VI, 2015 – 2017
Clinic Manager, Advance Medical Center, Meridian, Idaho, 2014 – 2015

EDUCATION AND LICENSURE

Doctor of Chiropractic, licensed in the US Virgin Islands, License # 85C, 2018 – Present
National Board of Chiropractic Examiners Certified Part 1, 2, 3, 4 and PT
Internship, Mountain West Chiropractic, Henderson, Nevada, 2013 – 2014
Doctor of Chiropractic, Palmer College of Chiropractic, Davenport, IA, 2013
Bachelor of Science in Health and Human Performance, University of Louisville, Louisville, KY, 2008

SELECTED MEMBERSHIPS

Virgin Islands Board of Chiropractic Examiners, Member, 2022 – Present
International Chiropractors Association, Representative Assembly for the US Virgin Islands, 2022-Present
Virgin Island Chiropractic Society, Secretary, 2021 – Present
North American Spine Society, Member, 2021 – Present
Academy of Chiropractic, Active Trauma Team Member, 2020 – Present
National Spine Management Group, Member, 2020 – Present
American College of Physical Medicine, Member, 2020 – Present
International Chiropractors Association, Member, 2019 – Present
US Virgin Islands Winter Olympic Committee, Treasure, 2017 – Present
Virgin Islands Exiles Men's Rugby Club, President, 2017 – Present
Vice President, Palmer College of Chiropractic Rugby Team, 2013
Member, Student Athlete Advising Committee (SAAC), University of Louisville, 2006-2007

SELECTED HONORS AND AWARDS

Performer, Sparks Dancing with the VI Stars, St. Thomas, USVI, 2016
Clinical Excellence Award Nominee, Palmer College of Chiropractic, 2012
Deans List, Palmer College of Chiropractic, 2010-2012
Scholarship Varsity Athlete, Palmer College of Chiropractic Rugby Team, 2010- 2013
Professional Athlete, United States National Rugby Team "the Eagles", 2009- 2010
All-Star Athlete, United States All Stars Men's Rugby 7's Team, 2008
Red and Black Scholar Athlete Award, University of Louisville, 2004-2007
Team Captain, Men's Sprints, University of Louisville Track Team, 2006- 2008
Scholarship Varsity Athlete, University of Louisville, 2004- 2008
Athlete, 110 Meter Hurdle State Record Holder, WVSSAC 2003-present

SELECTED POST-GRADUATE QUALIFICATIONS, CERTIFICATIONS AND EDUCATION

Primary Spine Practitioner (PSP) Certified, this certification includes graduate level training for chiropractors and physical therapist to be the first contact provider for patients with spine related disorders. This certifies you are qualified in coordinating a variety of clinical presentation related to spine disorders, identify indications for medication, injection or surgical intervention, to coordinate referral for these interventions and to guide patients through the referral process. In addition, this certification acknowledges your expertise in providing clear, evidence-based spine care management strategies for patients with spine related disorders, utilizing the most appropriate treatment procedures, protocols and care delivery personnel, University of Pittsburgh School of Health and Rehabilitation Sciences, Pittsburgh, Pennsylvania, 2022

Hospital Based Spine Care Qualified, Credentialed in hospital protocols, emergency room protocols, acute and chronic patient triage inclusive of MRI spine interpretation, spinal biomechanical engineering, head trauma, concussion, mild traumatic and traumatic brain injuries. Co-credentialed through the ACCME (Accreditation Council for Continuing Medical Education), Cleveland University–Kansas City and the Academy of Chiropractic, Long Island, New York, 2021

Primary Spine Care Qualified, this qualification includes graduate chiropractic education in healthy and traumatically altered spinal morphology inclusive of osseous, connective tissue and neurological structure, function, and pathology. This certifies you are qualified in assessing predictive models in spinal biomechanics and devising engineering paradigms for treatment plans to maximize spinal homeostasis in an evidenced based conclusion. In addition, this qualification acknowledges your expertise in triaging the injured and coordinating collaborative care from the trauma through conclusion of rehabilitation, Academy of Chiropractic Post-Doctoral Division, Cleveland University-Kansas City, College of Chiropractic, Long Island NY, 2020

MRI Spine Credentialing, this qualification includes graduate level training for medical doctors and chiropractors in MRI history, physics, spinal anatomy and protocol, disc pathology and spinal stenosis, spinal pathology, MRI methodology of analysis, clinical applications, and clinical necessity. This qualification went over interpretation of lumbar herniations, cervical herniations, degeneration and bulges, degenerative spine and disc disease with overlapping traumatic insult to both spine and disc. Cleveland University–Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2020

Trauma Team Qualified, this qualification includes graduate chiropractic education of over 100 hours of post graduate courses in triaging trauma patients, MRI spine credentialing, spinal biomechanical engineering, spinal trauma pathology, spinal disc and ligament neurology and pathology, accident reconstruction, impairment rating, orthopedic testing, electrodiagnostic; EMG/NCV, concussion: TBI-mTBI-PTSD, and stroke anatomy and evaluation Academy of Chiropractic Post-Doctoral Division, Cleveland University-Kansas City, College of Chiropractic, Kansas City, 2020

Evaluation & Management Qualified, this qualification includes graduate chiropractic education of nearly 40 hours of post graduate courses in evaluation and management, medical-legal documentation, orthopedic testing, stroke anatomy and evaluation, diagnosis, and documentation. Academy of Chiropractic Post-Doctoral Division, Cleveland University-Kansas City, College of Chiropractic, Kansas City, 2020

Certificate of Attendance in Spine Management Conference 12 CEs – Winter 2021, National Spine Management Group, Cleveland University Kansas City, Chiropractic and Health Sciences, Federation of Chiropractic Licensing Boards, Buffalo, NY, Lehi, UT 2021

Certification in Diagnosing and Case Management. Academy of Chiropractic Post-Doctoral Division, PACE Recognized by The Federation of Chiropractic Licensing Boards Licensing Boards, Long Island, NY, 2020

Certification in Traumatic Brain Injury and Concussion, Cleveland University, Kansas City, Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2020

Certification in Innervation and blood supply of the Intervertebral Disc, ACCME Joint Sponsorship with the State University of New York at Buffalo, Jacobs School of Medicine, 2020.

Certification in Triage Trauma patient, Cleveland University – Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2020

Certification in Accident Reconstruction, Cleveland University – Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2020

Certification in Spinal Trauma Pathology, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, New York, 2020

Certification in Impairment Rating, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, New York, 2020

Certification in Primary Spine Care 9, Academy of Chiropractic Post-Doctoral Division, PACE Recognized by The Federation of Chiropractic Licensing Boards, 2020

Certification in Evaluation and Management, Academy of Chiropractic Post-Doctoral Division, PACE Recognized by The Federation of Chiropractic Licensing Boards, 2020

Certification in Primary Spine Care 2, Academy of Chiropractic Post-Doctoral Division, PACE Recognized by The Federation of Chiropractic Licensing Boards, 2019

Certification in Primary Spine Care 3, Academy of Chiropractic Post-Doctoral Division, PACE Recognized by The Federation of Chiropractic Licensing Boards, 2019

Certification in Spinal Biomechanical Engineering, PACE Recognized by The Federation of Chiropractic Licensing Boards, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2019

Certification in Spine Disc and Ligaments; Neurology and Pathology, Academy of Chiropractic Post-Doctoral Division, PACE Recognized by The Federation of Chiropractic Licensing Boards, 2019

Certification in Mild Traumatic Brain Injury/ Traumatic Brain Injury/ Concussion, Academy of Chiropractic Post-Doctoral Division, PACE Recognized by The Federation of Chiropractic Licensing Boards, 2019

Certification in Patient Intake, History and Examination, Academy of Chiropractic Post-Doctoral Division, PACE Recognized by The Federation of Chiropractic Licensing Boards, 2019

Certification in Documentation-Carrier Mandates & How They Guide ER's and Lawyer Referrals, Academy of Chiropractic Post-Doctoral Division, PACE Recognized by The Federation of Chiropractic Licensing Boards, 2019

Certification in Orthopedic Testing, PACE Recognized by The Federation of Chiropractic Licensing Boards, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post Doctoral Division, Buffalo, NY, 2019

Certification in Most Common Therapeutic Application of CBD, Oregon Board of Naturopathic Medicine (OBNM) for Naturopathic Doctors and ND Pharmacists, ECS Therapeutics, 2019

Certification in Medical-Legal-Insurance Documentation, Colossus of the courtroom, PACE Recognized by The Federation of Chiropractic Licensing Boards, 2019

Certification in Primary Spine Care 8, DC vs PT vs MD vs Drugs as 1st Option for Spine, Cleveland University Kansas City, Chiropractic and Health Sciences, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2019

Certification in Primary Spine Care 5, Biomechanics, Neurology of the Chiropractic Spinal Adjustment & Documentation in Collaborative Relationships. Academy of Chiropractic Post-Doctoral Division, Cleveland University- Kansas City, Long Island, NY, 2019

Certification in Stoke anatomy Evaluation for Chiropractors and Manual Medicine Specialists, Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2019

Certificate of participation in clinical grand rounds 11.10.22 – Chiropractic Management – MRI Lumbar Spine – axial anatomy – detailed review of anatomical structures on the axial slices of lumbar spine MRI were presented. National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards – PACE, State University of New York at Buffalo Jacobs School of Medicine, and Biomedical Sciences –2022.

Certificate of participation in clinical grand rounds 11.03.22 – Chiropractic Management and Patient Triage – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards – PACE, State University of New York at Buffalo Jacobs School of Medicine, and Biomedical Sciences – 2022.

Certificate of participation in clinical grand rounds 10.27.22 – Indications and Absolute/Relative Contraindications to Chiropractic Care – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards – PACE, State University of New York at Buffalo Jacobs School of Medicine, and Biomedical Sciences – 2022.

Certificate of participation in clinical grand rounds 10.20.22– x-ray dosage, sagittal balance and surgery success rates – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards – PACE, State University of New York at Buffalo Jacobs School of Medicine, and Biomedical Sciences – 2022.

Certificate of participation in clinical grand rounds 09.15.22 – Degenerative versus Acute Intervertebral Disc – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards – PACE, State University of New York at Buffalo Jacobs School of Medicine, and Biomedical Sciences – 2022.

Certificate of participation in clinical grand rounds 07.21.22 – Chiropractic Management of Upper Extremity Neurologic Deficits and Pre-existing Intervertebral Disc Pathology – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards – PACE, State University of New York at Buffalo Jacobs School of Medicine, and Biomedical Sciences – 2022

Certificate of participation in clinical grand rounds 07.14.22 – Chiropractic Management of a L5-S1 Lumbar Disc Extrusion – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards – PACE, State University of New York at Buffalo Jacobs School of Medicine, and Biomedical Sciences – 2022

Certificate of participation in clinical grand rounds 07.07.22 – Role of Diagnostic Injections in Spinal Disorders - National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards – PACE, State University of New York at Buffalo Jacobs School of Medicine, and Biomedical Sciences – 2022

Certificate of participation in clinical grand rounds 06.16.22– Chiropractic Spine Management and Pain Categorization – Spine Management Group, LLC, Federation of Chiropractic Licensing Boards – PACE, State University of New York at Buffalo Jacobs School of Medicine, and Biomedical Sciences – 2022

Certificate of participation in clinical grand rounds 06.02.22– Atlanto-axial Pannus with and without rheumatoid arthritis –Spine management Group, LLC, Federation of Chiropractic Licensing Boards – PACE, State University of New York at Buffalo Jacobs School of Medicine, and Biomedical Sciences – 2022.

Certificate of participation in clinical grand rounds 04.21.22 – Chiropractic Management of Head and Neck Trauma – Spine Management Group, LLC, Federation of Chiropractic Licensing Boards – PACE, State University of New York at Buffalo Jacobs School of Medicine, and Biomedical Sciences – 2022.

Certificate of participation in clinical grand rounds 04.14.22 – Chiropractic and the MS Patient Spine Management Group, LLC, Federation of Chiropractic Licensing Boards – PACE, State University of New York at Buffalo Jacobs School of Medicine, and Biomedical Sciences – 2022.

Certificate of participation in clinical grand rounds 03.31.22 – Diagnosis and Management of Persistent Spine Pain – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards – PACE, State University of New York at Buffalo Jacobs School of Medicine, and Biomedical Sciences – 2022.

Certificate of participation in clinical grand rounds 03.24.22 – Spinal Biomechanical Engineering and Sagittal Balance of the Spine – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards – PACE, State University of New York at Buffalo Jacobs School of Medicine, and Biomedical Sciences – 2022.

Certificate of participation in clinical grand rounds 02.13.22 –Diagnosis and Management of Vertebral Osteomyelitis –National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards - PACE. State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2022.

Certificate of participation in clinical grand rounds 02.03.22 – Diagnosis and Management of Lumbar Arachnoiditis – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards - PACE. State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2022.

Certificate of participation in clinical grand rounds 01.27.22 – Diagnosis and Management of Lumbar Disc Herniation – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards - PACE. State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2022.

Certificate of participation in clinical grand rounds 01.13.22 – Diagnosis and Management of Post-Surgical Cervical Facet Syndrome – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards - PACE. State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 12.23.21 – Chiropractic Diagnosis and Management of Non-Specific Spine Pain – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards - PACE. State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 12.16.21 – Chiropractic Diagnosis and Management of Whiplash Disorder – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards - PACE. State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 12.09.21 – Chiropractic Diagnosis and Management of Vertebral Compression Fracture – National Spine Management Group, LLC, Federation of chiropractic Licensing Boards - PACE. State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 12.02.21 – Chiropractic Diagnosis and Management of the Post-Surgical Patient – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards - PACE. State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 11.18.21 – Diagnosis and Management of the Pre-Surgical Patient – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards - PACE. State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 11.11.21 – Chiropractic Diagnosis and Management of Lumbar Ligament Laxity – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards - PACE. State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 11.01.21– Chiropractic Diagnosis and Management of Cervical Ligament Laxity – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards - PACE. State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 10.28.21 Management of Cervical Myelopathy – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards - PACE. State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 9.23.21– Chiropractic Management of Lumbar Disc Herniation – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards, State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 9.16.21 – Chiropractic Management of Cervical Radiculopathy – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards, State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 9.09.21 – Chiropractic Management of Cervical Disc Herniation – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards, State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 8.19.21 – Importance of Interprofessional Healthcare Communication and Teamwork –National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards, State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 8.12.21 – Cervical Spinal Alignment and Knee Replacement Revision Rates – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards, State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 7.28.21 - Chiropractic Management of Chronic Spine Pain – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards, State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 06.17.21 - Types of Annular Fissures on Advanced and Plain Film Imaging – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards, State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021

Certificate of participation in clinical grand rounds 06.10.21 - Patient Triage – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards, State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 06.03.21 - Diagnosis of Lumbar Facet Syndrome – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards, State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 05.27.21 - Prevalence of Spinal Degeneration – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards, State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences– 2021.

Certificate of participation in clinical grand rounds 05.20.21 - Inter-professional Communication with the Personal Injury Attorney – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards, State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 05.13.21 - Chiropractic Professional Liability Litigation – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards, State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021

Certificate of participation in clinical grand rounds 05.06.21 - Biomechanical Analysis in Patient Crash Injuries – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards, State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 04.22.21 - Facet Joint Thresholds and Alteration of Motion Segment Integrity – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards, State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 04.08.21 - Classification of Degenerative Cervical Degenerative Disc Disease – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards, State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 04.01.21 - Differentiating Degenerative vs Traumatic Cervical Spondylolisthesis – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards, State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds 03.25.21 - Biomechanical Compensation and Intervertebral Disc Extrusion – National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards, State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences – 2021.

Certificate of participation in clinical grand rounds - Traumatic Cervical Disc Herniation and Associated Sternum Fracture – Academy of Chiropractic, Post-Doctoral Division, Buffalo, NY 2019

Certificate of participation in clinical grand rounds - Thoracic Intervertebral Disc Herniation with Subsequent Four Level Spinal Fusion T6-T10 – Academy of Chiropractic, Post-Doctoral Division, Buffalo, NY 2019.

Certificate of participation in clinical grand rounds - Compensatory Lower Back Pain Due to T2 Biomechanical Pathology – Academy of Chiropractic, Post-Doctoral Division, Buffalo, NY 2019

Certificate of participation in clinical grand rounds - Traumatic Cervical Disc Herniation and Associated Sternum Fracture – Academy of Chiropractic, Post-Doctoral Division, Buffalo, NY 2019

Certificate of participation in clinical grand rounds - Differentiating Pre-existing vs Causally Related Spinal Injury using MRI – Academy of Chiropractic, Post-Doctoral Division, Buffalo, NY, 2019

Certificate of participation in clinical grand rounds - Morphological versus Etiological Description of Intervertebral Disc Pathology in the Human Spine – Academy of Chiropractic, Post-Doctoral Division, Buffalo, NY, 2019

Certificate of participation in clinical grand rounds - Traumatic Disc Bulge and Associated Grade 2 Ligament Injury – Academy of Chiropractic, Post-Doctoral Division, Buffalo, NY, 2019

Certificate of participation in clinical grand rounds - Clinical Diagnosis and Interprofessional Management of Thoracic and Lumbar Post-Traumatic Compression Fractures – Academy of Chiropractic, Post-Doctoral Division, Buffalo, NY, 2019

ADDITIONAL POST-GRADUATE TRAINING

Interprofessional Hospital Based Spine Care, *Trends in hospital and emergent care in the healthcare delivery system inclusive of policies, hospital staffing and current care paths for mechanical spine issues.* Cleveland University – Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2021

Spine Management Clinical Workflows – *in-depth review and discussion of the Doctor of Chiropractic as a Spine Management Physician with specific focus on the diagnosis and management of spine pain of mechanical origin. Details were outlined in relation to triage of anatomical causes of spine pain such as fracture, tumor, infection.* National Spine Management Group, Cleveland University Kansas City, Chiropractic and Health Sciences, Federation of Chiropractic Licensing Boards, Buffalo, NY, Lehi, UT 2021.

Pain Management and the Chiropractic Adjustment – *Current peer reviewed indexed research demonstrating the chiropractic adjustment's effect on the central nervous system and pain threshold was outlined and reviewed. Anatomical review and contemporary supportive research were discussed. Details of central nervous system response to the chiropractic adjustment was reviewed and demonstrated.* National Spine Management Group, Cleveland University Kansas City, Chiropractic and Health Sciences, Federation of Chiropractic Licensing Boards, Buffalo, NY, Lehi, UT 2021.

Corrective Spinal Care and Chiropractic Case Management - *Current peer reviewed indexed research demonstrating the chiropractic adjustment's effect on the biomechanical structure of the human spine during the corrective/rehabilitative phase of care. Basic outline of biomechanical parameters in symptomatic and asymptomatic patients was reviewed with particular focus on pathobiomechanics in chiropractic practice.* National Spine Management Group, Cleveland University Kansas City, Chiropractic and Health Sciences, Federation of Chiropractic Licensing Boards, Buffalo, NY, Lehi, UT 2021.

Health Maintenance Care and Chiropractic Case Management - *Current peer reviewed indexed research demonstrating the chiropractic adjustment's effect on the maintenance of the human spine. Details of indexed research reviewing Chiropractic's role in the reduction of narcotic utilization and decreased absenteeism from work due to disability. Communicating Health Maintenance Care to the medical profession and the public was emphasized.* National Spine Management Group, Cleveland University Kansas City, Chiropractic and Health Sciences, Federation of Chiropractic Licensing Boards, Buffalo, NY, Lehi, UT 2021.

Evidence Based Clinical Reporting – *overview of current CPT and ICD-10 coding guidelines pertaining to the evaluation and management of spine pain patients was presented. Timed codes, relevant diagnosis related to*

injured tissue was presented. Specific discussion of proper format of the Assessment portion of clinical documentation was presented. Review of the difference between daily progress notes and Evaluation and Management [E/M] reporting was provided. National Spine Management Group, Cleveland University Kansas City, Chiropractic and Health Sciences, Federation of Chiropractic Licensing Boards, Buffalo, NY, Lehi, UT 2021.

Cervical Spine Clinical Workflows – detailed review of workflows of a thorough patient history and identification of clinical red flags related to relative and absolute contraindications to chiropractic care was presented. Outline of neurological examination including pathological reflexes present during spinal cord compression, cervical stenosis and cervical myelomalacia was discussed. Normal vs abnormal measurement of range of motion objectifying spinal dysfunction was presented. Specific orthopedic testing related to specific muscle, nerve or intervertebral disc injury was discussed. Review of interprofessional triage and imaging decision tree was outlined with specific focus on the pain management physician and spinal surgeon. National Spine Management Group, Cleveland University Kansas City, Chiropractic and Health Sciences, Federation of Chiropractic Licensing Boards, Buffalo, NY, Lehi, UT 2021.

Lumbar Spine Clinical Workflows - detailed review of workflows of a thorough patient history and identification of clinical red flags related to relative and absolute contraindications to chiropractic care was presented. Outline of neurological examination including pathological reflexes present during cervical and lumbar stenosis was discussed. Normal vs abnormal measurement of range of motion objectifying spinal dysfunction was presented. Specific orthopedic testing related to muscle, nerve or intervertebral disc injury was discussed. Review of interprofessional triage and imaging decision tree was outlined with specific focus on the pain management physician and spinal surgeon. National Spine Management Group, Cleveland University Kansas City, Chiropractic and Health Sciences, Federation of Chiropractic Licensing Boards, Buffalo, NY, Lehi, UT 2021.

Interprofessional Clinical Documentation for the Primary Care Physician – contemporary techniques to best communicate chiropractic care to the Primary Care Physician was discussed and presented. Analysis of the depth and scope of communication was emphasized with direct focus on the proper documentation management system including demographic sheet, imaging reports, most recent evaluation and management reports. Discussion of appropriate timing for phone consultation was presented. National Spine Management Group, Cleveland University Kansas City, Chiropractic and Health Sciences, Federation of Chiropractic Licensing Boards, Buffalo, NY, Lehi, UT 2021.

Clinical Documentation for the Spine Surgeon - contemporary techniques to best communicate chiropractic care to the spine surgeon was discussed and presented. Analysis of the depth and scope of communication was emphasized with direct focus on the proper documentation management system including demographic sheet, imaging reports, most recent evaluation and management reports. Discussion of appropriate timing for phone consultation was presented. National Spine Management Group, Cleveland University Kansas City, Chiropractic and Health Sciences, Federation of Chiropractic Licensing Boards, Buffalo, NY, Lehi, UT 2021.

Clinical Documentation for the Pain Management Physician - contemporary techniques to best communicate chiropractic care to the pain management physician was discussed and presented. Analysis of the depth and scope of communication was emphasized with direct focus on the proper documentation management system including demographic sheet, imaging reports, most recent evaluation and management reports. Discussion of appropriate timing for phone consultation was presented. National Spine Management Group, Cleveland University Kansas City, Chiropractic and Health Sciences, Federation of Chiropractic Licensing Boards, Buffalo, NY, Lehi, UT 2021.

Clinical Documentation for Attorney - contemporary techniques to best communicate chiropractic care and permanent injury to the personal injury attorney was discussed and presented. Analysis of the depth and scope of communication was emphasized with direct focus on the proper documentation management system including diagnosis, response to treatment, causality and persistent functional loss was outlined. Discussion of appropriate timing for phone consultation was presented. National Spine Management Group, Cleveland University Kansas City, Chiropractic and Health Sciences, Federation of Chiropractic Licensing Boards, Buffalo, NY, Lehi, UT 2021.

Spinal Biomechanical Engineering – detailed presentation of the progression of laboratory-based biomechanics into the clinical realm was outlined. Evidence based review of Pelvic Incidence and other sagittal balance parameters was presented. Regional sagittal balance and communication with the spine surgeon in the spine management practice was reviewed. Specific discussions were related to spinal sagittal balance and the non-surgical spine pain patient and correlated to the Corrective Care Phase of Chiropractic Care. Outline of the

future of full spine biomechanical modeling was presented in relation to symptomatic and asymptomatic patients. National Spine Management Group, Cleveland University Kansas City, Chiropractic and Health Sciences, Federation of Chiropractic Licensing Boards, Buffalo, NY, Lehi, UT 2021.

Objectifying the Biomechanical Spine Lesion – review of ligament laxity and alternation of motion segment integrity was presented with specific correlation to the AMA Guides to the Evaluation of Permanent Impairment 5th and 6th Education. Correlation to bodily injury, causality and persistent functional losses in the personal injury patient and communication with the attorney was outlined. Attention was paid to the differences between vertebral body translation and angular motion deficits between adjacent motor units was presented. Specific details on measurement tools and analysis of the injured cervical and lumbar spines were discussed. National Spine Management Group, Cleveland University Kansas City, Chiropractic and Health Sciences, Federation of Chiropractic Licensing Boards, Buffalo, NY, Lehi, UT 2021.

Diagnosing and Case Management, *The requirements for diagnosing based upon in an initial evaluation and management encounter ranging from a 99202 – 99205 that includes comorbidities, non-musculoskeletal, and sequellae to injury diagnosis.* Academy of Chiropractic Post-Doctoral Division, Long Island, NY , 2020

Specialty Research Rotation - Innervation and Blood Supply of the Intervertebral Disc. *Discussion of the distribution of nociceptive nerve fibers in the cervical intervertebral discs. Correlation of chronic neck pain patients and the relationship to nociceptive nerve fibers and discogenic neck pain. The role of nociceptive nerve fibers in the pathogenesis of neck pain of cervical disc origin was discussed and outlined.* ACCME Joint Sponsorship with the State University of New York at Buffalo, Jacobs School of Medicine, 2020.

MRI Spinal Anatomy, Protocols and Disc Pathology, Normal anatomy of axial and sagittal views utilizing T1, T2, gradient and STIR sequences of imaging. *Degeneration and annular fissures of discs in both trauma and non-trauma patients and the biochemical properties of joints in age dating pathology. Disc bulges from degenerative and sequela to osseous issues, herniation pathology and protrusion, extrusion, migrated and sequestered variations. Clinical scenarios as sequela to disc and pre-existing pathologies.* Cleveland University, Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2020

Traumatic Brain Injury and Concussion Overview: *This section is an in-depth overview of traumatic brain injury in concussion. It discusses that all brain injuries are traumatic and dispels the myth of a “mild traumatic brain injury.” Also, this covers triage protocols and the potential sequela of patients with traumatic brain injuries.* Cleveland University, Kansas City, Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2020

Head Trauma and Traumatic Brain Injury Part 1: *This section discusses gross traumatic brain injuries from trauma and significant bleeding with both epidural and subdural hematomas. There are numerous case studies reviewed inclusive of neurosurgical intervention and postsurgical outcomes.* Cleveland University, Kansas City, Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2020

Head Trauma and Traumatic Brain Injury Part 2: *This section continues with multiple case studies of gross traumatic brain injuries from trauma requiring neurosurgical intervention and also discusses recovery sequela based upon the significance of brain trauma. This module also concludes with concussion protocols in traumatic brain injury short of demonstrable bleeding on advanced imaging.* Cleveland University, Kansas City, Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2020

Concussion And Electroencephalogram Testing: *This this section covers concussion etiology and cognitive sequela where gross bleeding has not been identified on advanced imaging. It discusses the significance of electroencephalogram testing in determining brain function and pathology (if present). This module also covers the understanding of waveforms in electroencephalogram testing in both normal and abnormal scenarios.* Cleveland University, Kansas City, Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2020

Concussion And Electroencephalogram Testing Pathological Results: *This module covers amplitude, conduction and conduction delays as sequela to traumatic brain injury to diagnose concussion and traumatic brain injury in the absence of gross bleeding and advanced imaging. This section covers electroencephalograms and event-related potentials which measures the brain response that is a direct result of specific sensory or motor events. It is a stereotype electrophysiological response to a stimulus and provides a non-invasive means of evaluating brain function. In this module multiple case studies are discussed with ensuing triage protocols pending the results.* Cleveland University, Kansas City, Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2020

Specialty Research Rotation - Innervation and Blood Supply of the Intervertebral Disc – *Pathological mechanisms of discogenic low back pain including sensory nerve in growth into inner layers of the intervertebral disc, upregulation of neurotrophic factors and cytokines, and instability. Outline of the inhibition of these mechanisms and the treatment of discogenic low back pain. Understanding the innervation and instabilities of diseased intervertebral discs and the role of inflammatory mediators was compared with healthy intervertebral disc anatomy.* ACCME Joint Sponsorship with the State University of New York at Buffalo, Jacobs School of Medicine, 2020.

Specialty Research Rotation - Innervation and Blood Supply of the Intervertebral Disc – *discussion of chronic low back pain and its socioeconomic burden was presented. MRI findings and the diagnosis of MRI was outlined. Assessment of the sensory innervation of the vertebral endplate and degenerative intervertebral discs was outlined. Specific features highlighting the difference between healthy and degenerative intervertebral discs such as cartilage degeneration and subchondral bone defects was discussed.* ACCME Joint Sponsorship with the State University of New York at Buffalo, Jacobs School of Medicine, 2020.

Specialty Research Rotation - Innervation and Blood Supply of the Intervertebral Disc – *Investigation of effects of inflammatory cytokines, IL-1 β , and TNF- α , on the expression of an angiogenic factor, vascular endothelial growth factor (VEGF), and neurotrophic factors, nerve growth factor (NGF) and brain-derived neurotrophic factor (BDNF), in human IVD degeneration was presented. Outline of Neurotrophins role in the survival, growth, differentiation, and function of neurons inside and outside of the intervertebral disc. Further discussion was outlined relating to the process of IL-1B being generated during IVD degeneration and may stimulate the upregulation of VEGF, NGF, and BDNF expression, resulting in angiogenesis and nerve in-growth during intervertebral disc degeneration.* ACCME Joint Sponsorship with the State University of New York at Buffalo, Jacobs School of Medicine, 2020.

Accident Reconstruction: Terms, Concepts and Definitions, *The forces in physics that prevail in accidents to cause bodily injury. Quantifying the force coefficients of vehicle mass and force vectors that can be translated to the occupant and subsequently cause serious injury.* Cleveland University – Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2020

Accident Reconstruction: Causality, Bodily Injury, Negative Acceleration Forces, Crumple Zones and Critical Documentation, *Factors that cause negative acceleration to zero and the subsequent forces created for the vehicle that get translated to the occupant. Understanding critical documentation of hospitals, ambulance reports, doctors, and the legal profession in reconstructing an accident.* Cleveland University – Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2020

Accident Reconstruction: Skid Marks, Time, Distance, Velocity, Speed Formulas and Road Surfaces, *The mathematical calculations necessary utilizing time, distance, speed, coefficients of friction and acceleration in reconstructing an accident. The application of the critical documentation acquired from an accident site.* Cleveland University – Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2020

Accident Reconstruction: Research, Causality and Bodily Injury, *Delta V issues correlated to injury and mortality, side impact crashes and severity of injuries, event data recorder reports correlated to injury, frontal impact kinematics, crash injury metrics with many variables and inquiries related to head restraints.* Cleveland University – Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2020

Neurodiagnostics, Imaging Protocols and Pathology of the Trauma Patient, *An in-depth understanding of the protocols in triaging and reporting the clinical findings of the trauma patient. Maintaining ethical relationships with the medical-legal community.* Cleveland University – Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2020

Diagnostics, Risk Factors, Clinical Presentation and Triaging the Trauma Patient, *An extensive understanding of the injured with clinically coordinating the history, physical findings and when to integrate neurodiagnostics. An understanding on how to utilize emergency room records in creating an accurate diagnosis and the significance of “risk factors” in spinal injury.* Cleveland University – Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2020

Crash Dynamics and Its Relationship to Causality, *An extensive understanding of the physics involved in the transference of energy from the bullet car to the target car. This includes G's of force, newtons, gravity, energy, skid marks, crumple zones, spring factors, event data recorder and the graphing of the movement of the vehicle before, during and after the crash. Determining the clinical correlation of forces and bodily injury.* Cleveland University – Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2020

MRI, Bone Scan and X-Ray Protocols, Physiology and Indications for the Trauma Patient, *MRI interpretation, physiology, history and clinical indications, bone scan interpretation, physiology and clinical indications, x-ray clinical indications for the trauma patient.* Cleveland University – Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2020

Neurodiagnostic Testing Protocols, Physiology and Indications for the Trauma Patient, *Electromyography (EMG), Nerve Conduction Velocity (NCV), Somato Sensory Evoked Potential (SSEP), Visual Evoked Potential (VEP), Brain Stem Auditory Evoked Potential (BAER) and Visual-Electronystagmography (V-ENG) interpretation, protocols and clinical indications for the trauma patient.* Cleveland University – Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2020

Documentation and Reporting for the Trauma Victim, *Understanding the necessity for accurate documentation and diagnosis utilizing the ICD-9 and the CPT to accurately describe the injury through diagnosis. Understanding and utilizing state regulations on reimbursement issues pertaining to healthcare.* Cleveland University – Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2020

Documenting Clinically Correlated Bodily Injury to Causality, *Understanding the necessity for accurate documentation, diagnosis and clinical correlation to the injury when reporting injuries in the medical-legal community. Documenting the kinesio pathology, myopathology, neuropathology, and pathophysiology in both a functional and structural paradigm.* Cleveland University – Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2020

Spinal Trauma Pathology, Triage and Connective Tissue Injuries and Wound Repair, *Triaging the injured and differentially diagnosing both the primary and secondary complaints. Connective tissue injuries and wound repair morphology focusing on the aberrant tissue replacement and permanency prognosis potential.* Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, New York, 2020

Spinal Trauma Pathology, Ligament Anatomy and Injury Research and Spinal Kinematics, *Spinal ligamentous anatomy and research focusing on wound repair, future negative sequelae of abnormal tissue replacement and the resultant aberrant kinematics and spinal biomechanics of the spine.* Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, New York, 2020

Spinal Trauma Pathology, Spinal Biomechanics, Central Nervous System and Spinal Disc Nomenclature, *The application of spinal biomechanical engineering models in trauma and the negative sequelae it has on the central nervous system inclusive of the lateral horn, periaqueductal grey matter, thalamus and cortices involvement.* Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, New York, 2020

Spinal Trauma Pathology, Biomechanics of Traumatic Disc Bulge and Age Dating Herniated Disc Pathology, *The biomechanics of traumatic disc bulges as sequelae from trauma and the comorbidity of ligamentous pathology. Age-dating spinal disc pathology in accordance with Wolff's Law.* Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, New York, 2020

Spinal Trauma Pathology, Clinical Grand Rounds, *The review of case histories of mechanical spine pathology and biomechanical failures inclusive of case histories, clinical findings and x-ray and advanced imaging studies. Assessing comorbidities in the triage and prognosis of the injured.* Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, New York, 2020

Spinal Trauma Pathology, Research Perspectives, *The review of current literature standards in spinal trauma pathology and documentation review of biomechanical failure, ligamentous failure and age-dating disc pathology.* Cleveland University – Kansas City, ACCME Joint Providership with the State University of New

York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, New York, 2020

Impairment Rating: *The understanding and utilization of the protocols and parameters of the AMA Guide to the Evaluation of Permanent Impairment 6th Edition. Spine, neurological sequelae, migraine, sexual dysfunction, sleep and arousal disorders, station and gait disorders and consciousness are detailed for impairment rating. Herniated discs, radiculopathy, fracture, dislocation and functional loss are also detailed in relation to impairment ratings.* Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2020

MRI History and Physics, *Magnetic fields, T1 and T2 relaxations, nuclear spins, phase encoding, spin echo, T1 and T2 contrast, magnetic properties of metals and the historical perspective of the creation of NMR and MRI.* Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2020

MRI Spinal Anatomy and Protocols, *Normal anatomy of axial and sagittal views utilizing T1, T2, 3D gradient and STIR sequences of imaging. Standardized and desired protocols in views and sequencing of MRI examination to create an accurate diagnosis in MRI.* Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2020

MRI Disc Pathology and Spinal Stenosis, *MRI interpretation of bulged, herniated, protruded, extruded, sequestered and fragmented disc pathologies in etiology and neurological sequelae in relationship to the spinal cord and spinal nerve roots.* Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2020

MRI Spinal Pathology, *MRI interpretation of bone, intradural, extradural, cord and neural sleeve lesions. Tuberculosis, drop lesions, metastasis, ependymoma, schwannoma and numerous other spinal related tumors and lesions.* Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2020

MRI Methodology of Analysis, *MRI interpretation sequencing of the cervical, thoracic and lumbar spine inclusive of T1, T2, STIR and 3D gradient studies to ensure the accurate diagnosis of the region visualized.* Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2020

MRI Clinical Application, *The clinical application of the results of space occupying lesions. Disc and tumor pathologies and the clinical indications of manual and adjustive therapies in the patient with spinal nerve root and spinal cord insult as sequelae.* Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2020

MRI Protocols Clinical Necessity, *MRI slices, views, T1, T2, STIR axial, stacking, FFE, FSE and sagittal images. Clinical indication for the utilization of MRI and pathologies of disc in both trauma and non-trauma sequelae, including bulge, herniation, protrusion, extrusion and sequestration.* Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2020

MRI Interpretation of Lumbar Degeneration/Bulges, *MRI slices, views, T1, T2, STIR axial, stacking, FFE, FSE and sagittal images in the interpretation of lumbar degeneration. With the co-morbidities and complications of stenosis, pseudo-protrusions, cantilevered vertebrate, Schmorl's nodes and herniations. Central canal and cauda equina compromise interpretation with management.* Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2020

MRI Interpretation of Lumbar Herniations, *MRI slices, views, T1, T2, STIR axial, stacking, FFE, FSE and sagittal images in the interpretation of lumbar herniations. With the co-morbidities and complications of stenosis, pseudo-protrusions, cantilevered vertebrate, Schmorl's nodes and herniations. Morphology of lumbar disc pathologies of central and lateral herniations, protrusions, extrusions, sequestration, focal and broad based herniations are*

defined and illustrated. Central canal and cauda equina compromise interpretation with management. Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2020

MRI Interpretation of Cervical Degeneration/Bulges, MRI slices, views, T1, T2, STIR axial, stacking, FFE, FSE and sagittal images in the interpretation of cervical degeneration. With the co-morbidities and complications of stenosis, pseudo-protrusions, cantilevered vertebrate, Schmorl's nodes and herniations. Spinal cord and canal compromise interpretation with management. Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2020

MRI Interpretation of Cervical Herniations, MRI slices, views, T1, T2, STIR Axial, FFE, FSE and sagittal images in the interpretation of lumbar herniations. With the co-morbidities and complications of stenosis, pseudo-protrusions, cantilevered vertebrate, Schmorl's nodes and herniations. morphology of lumbar disc pathologies of central and lateral herniations, protrusions, extrusions, sequestration, focal and broad based herniations are defined and illustrated. Spinal cord and canal compromise interpretation with management. Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2020

MRI Interpretation of Degenerative Spine and Disc Disease with Overlapping Traumatic Insult to Both Spine and Disc, MRI slices, views, T1, T2, STIR Axial, FFE, FSE and sagittal images in the interpretation of degenerative spondylolesthesis, spinal canal stenosis, Modic type 3 changes, central herniations, extrusions, compressions, nerve root compressions, advanced spurring and thecal sac involvement from an orthopedic, emergency room, chiropractic, neurological, neurosurgical, physical medicine perspective. Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2020

Chiropractic as the First Option for Spine, A Literature-Based Standard, Utilizing clinical findings in conjunction with advanced imaging and electrodiagnostic findings in managing collaborative relationships with medical specialists. Applying a literature standard to care to ensure conservative care as the first option. PACE Approved for the Federation of Chiropractic Licensing Boards, Cleveland University Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island NY 2020

Chiropractic as the First Option for Spine, A Literature-Based Standard, Managing spinal related cases based upon MRI findings of herniations, bulges, protrusion, extrusions (comminuted and fragmented) utilizing thin-sliced acquisition protocols. When to consider ordering T1, T2, Short Tau Inversion Radiant, proton density and Dixon sequencing for spinal related pathology, PACE Approved for the Federation of Chiropractic Licensing Boards, Cleveland University Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island NY 2020

Chiropractic as the First Option for Spine, A Literature-Based Standard, Creating literature-based documentation inclusive of history and a clinical examination that encompasses causality, diagnosis, prognosis and treatment plans. Ensuring the whole person impairment ratings are consistent with contemporary literature, PACE Approved for the Federation of Chiropractic Licensing Boards, Cleveland University Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island NY 2020

Chiropractic as the First Option for Spine, A Literature-Based Standard, Spinal biomechanical engineering models related to pathobiomechanics and literature-based standards in creating an accurate diagnosis, prognosis, and treatment plan. Determining impairment ratings based upon alteration of motion segment integrity utilizing motion-imaging, and creating demonstrable evidence for continued treatment plans, PACE Approved for the Federation of Chiropractic Licensing Boards, Cleveland University Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island NY 2020

Primary Spine Care 1: Credentials and Knowledge Base, The credentials and knowledge based from an academia perspective when cooperatively treating in a collaborative environment inclusive of understanding pathology and mechanical spine issues, Texas Chiropractic College Graduate Doctoral Program, PACE Recognized by The Federation of Chiropractic Licensing Boards, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2019

Primary Spine Care 1: Spinal Biomechanical Engineering and MRI Spine Interpretation, Integrating Spinal Biomechanical Engineering and MRI Spine Interpretation into a primary spine care model, inclusive of necessity and acquisition protocols. A comprehensive review the latest evidence in documenting mechanical

issues, Texas Chiropractic College Graduate Doctoral Program, PACE Recognized by The Federation of Chiropractic Licensing Boards, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2019

Primary Spine Care 1: Hospital Administration, Triage, Clinical Requirements and Collaborative Relationships with Medical Specialists, *Understanding hospital and medical specialist's care paths for mechanical spine pathology and integrating the doctor of chiropractic in the hospital and allopathic treatment protocols*, Texas Chiropractic College Graduate Doctoral Program, PACE Recognized by The Federation of Chiropractic Licensing Boards, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2019, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2019

Primary Spine Care 1: Contemporary Spine Research and Documentation, *Central nervous system connection and the thalamus, hypothalamus connection in both ascending and descending central pathways with neuro-endocrine implications that have the mechanisms to be a component of Schizophrenia, Dementia and Alzheimer's with a linear relationship to the chiropractic spinal adjustment and chronic pain*, Texas Chiropractic College Graduate Doctoral Program, PACE Recognized by The Federation of Chiropractic Licensing Boards, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2019, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2019

Primary Spine Care 2: Utilizing Research in Trauma, *The ability of your electronic health records to convey tissue pathology while documenting case studies, field experiments, randomized trials and systematic literature reviews, Introducing evidence based macros in documentation to support the literature and necessity of care*. PACE Approved for the Federation of Chiropractic Licensing Board, Academy of Chiropractic Post-Doctoral Division, Setauket, NY, 2019

Primary Spine Care 2: Chiropractic Evidence, Analyzing segmental pathology, adjusting vs. mobilization with cervicogenic headaches, Opioid alternatives and case management of mechanical spine pain based upon outcome studies. PACE Approved for the Federation of Chiropractic Licensing Board, Academy of Chiropractic Post-Doctoral Division, Setauket, NY, 2019

Primary Spine Care 2: Chiropractic Spinal Adjustment Central Nervous System Processing, *Literature reviews of mechanoreceptor, proprioceptor and nociceptor stimulation of later horn gray matter with periaqueductal stimulation affecting the thalamus and cortical regions with efferent distribution in disparate regions of the body in both pain and systemic stimulation*. PACE Approved for the Federation of Chiropractic Licensing Board, Academy of Chiropractic Post-Doctoral Division, Setauket, NY, 2019

Mild Traumatic Brain Injury/Traumatic Brain Injury/Concussion: *Differentially diagnosing mild traumatic brain injury vs. traumatic brain injury and the clinical and imaging protocols required to conclude an accurate diagnosis for head trauma*. PACE Approved for the Federation of Chiropractic Licensing Board, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2019

Neurology of Ligament Pathology - Module 1: Normal Morphology and Tissue Damage, *Connective tissue morphology, embryology and wound repair as sequelae to trauma. Full components of strain-sprain models and permanency implications with wound repair and osseous aberration with aberrant structural integrity*, Academy of Chiropractic Post-Doctoral Division, PACE Approved for the Federation of Chiropractic Licensing Board, Cleveland University-Kansas City College of Chiropractic, Long Island, NY, 2019

Neurology of Ligament Pathology - Module 2: Spinal Biomechanics and Disc Pathology, *Disc pathology as sequelae to trauma; herniation, extrusion, protrusion, sequestration and how the spinal unit as one system creates homeostasis to balance the pathology*, Academy of Chiropractic Post-Doctoral Division, PACE Approved for the Federation of Chiropractic Licensing Board, Cleveland University-Kansas City College of Chiropractic, Long Island, NY, 2019

Neurology of Ligament Pathology - Module 3: Neurological Innervation, *The peripheral and central innervation of the disc and spinal ligaments of the dorsal root ganglion, spinal thalamic tracts, periaqueductal gray areas innervating the Thalamus and multiple regions of the brain. The efferent neurological distribution to disparate areas of the spine to create homeostasis until tetanus ensues creating osseous changes under the effect of Wolff's Law*, Academy of Chiropractic Post-Doctoral Division, PACE Approved for the Federation of Chiropractic Licensing Board, Cleveland University-Kansas City College of Chiropractic, Long Island, NY, 2019

Spinal Biomechanical Engineering: Cervical Pathobiomechanics, Spinal biomechanical engineering of the cervical and upper thoracic spine. This includes the normal and pathobiomechanical movement of both the anterior and posterior motor units and normal function and relationship of the intrinsic musculature to those motor units. Nomenclature in reporting normal and pathobiomechanical findings of the spine. PACE Recognized by The Federation of Chiropractic Licensing Boards, ACCME Joint Providership with the State

University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2019

Spinal Biomechanical Engineering: Lumbar Pathobiomechanics, *Spinal biomechanical engineering of the lumbar spine. This includes the normal and pathobiomechanical movement of both the anterior and posterior motor units and normal function and relationship of the intrinsic musculature to those motor units. Nomenclature in reporting normal and pathobiomechanical findings of the spine.* PACE Recognized by The Federation of Chiropractic Licensing Boards, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, 2019

Spinal Biomechanics in Trauma: *To utilize whiplash associated disorders in various vectors of impact and whiplash mechanisms in determining pathobiomechanics. To clinically correlate annular tears, disc herniations, fractures, ligament pathology and spinal segmental instability as sequellae to pathobiomechanics from trauma. The utilization of digital motion x-ray in diagnosing normal versus abnormal facet motion along with case studies to understand the clinical application.* PACE Recognized by The Federation of Chiropractic Licensing Boards, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, 2019

Spinal Biomechanical Engineering & Organizational Analysis: *Integrating spinal biomechanics and pathobiomechanics through digitized analysis. The comparison of organized versus disorganized compensation with regional and global compensation. Correlation of the vestibular, ocular and proprioceptive neurological integration in the righting reflex as evidenced in imaging. Digital and numerical algorithm in analyzing a spine.* PACE Recognized by The Federation of Chiropractic Licensing Boards, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2019

Spinal Biomechanical Engineering: Cervical Digital Analysis, *Digitizing and analyzing the cervical spine in neutral, flexion and extension views to diagnose pathobiomechanics. This includes alteration of motion segment integrity (AMOSI) in both angular and translational movement. Ligament instability/failure/pathology are identified all using numerical values and models. Review of case studies to analyze pathobiomechanics using a computerized/numerical algorithm.* PACE Recognized by The Federation of Chiropractic Licensing Boards, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2019

Spinal Biomechanical Engineering: Lumbar Digital Analysis, *Digitalizing and analyzing the lumbar spine images to diagnose pathobiomechanics. This includes anterior and posterior vertebral body elements in rotational analysis with neutral, left and right lateral bending in conjunction with gate analysis. Ligament instability/failure/pathology is identified all using numerical values and models. Review of case studies for analysis of pathobiomechanics using a computerized/numerical algorithm along with corrective guidelines.* PACE Recognized by The Federation of Chiropractic Licensing Boards, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2019

Spinal Biomechanical Engineering: Cartesian System, *The Cartesian Coordinate System from the history to the application in the human body. Explanation of the x, y and z axes in both translation and rotations (thetas) and how they are applicable to human biomechanics.* PACE Recognized by The Federation of Chiropractic Licensing Boards, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2019

Documenting & Credentials in Collaborative Health Care, history, past history, risk factors and review of systems in developing a differential diagnosis: *The clinical correlation of clinical evaluation, advanced imaging and necessary electrodiagnosis in concluding and accurate diagnosis, prognosis and treatment plan and indications for collaborative care,* Academy of Chiropractic, PACE Approved for the Federation of Chiropractic Licensing Boards, Cleveland University, Kansas City Chiropractic and Health Sciences, 2019

Spinal Biomechanical Engineering: Full Spine Digital Analysis, *Digitalizing and analyzing the full spine images to diagnose pathobiomechanics as sequellae to trauma in relation to ligamentous failure and disc and vertebral pathology as sequellae. This includes anterior and posterior vertebral body elements in rotational analysis with neutral, left and right lateral bending in conjunction with gate analysis. Ligament instability/failure/pathology is identified all using numerical values and models. Review of case studies for analysis of pathobiomechanics using a computerized/numerical algorithm along with corrective guidelines.* PACE Recognized by The Federation of Chiropractic Licensing Boards, ACCME Joint Providership with the State University of New

York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2019

Primary Spine Care 3: Connective Tissue Spinal Disc Permanent Pathology, *Herniated, bulged, protruded and extruded discs, etiology and morphology. Age-dating disc pathology inclusive of Modic changes, piezoelectric effect, Wolff's Law and radicular clinical presentation*, Academy of Chiropractic Post-Doctoral Division, Texas Chiropractic College, Long Island NY 2019

Primary Spine Care 3: Connective Tissue Pathology and Research, *Utilization in spinal models considering the opioid abuse and various spinal models in contemporary health care. Care paths for mechanical spine pain and the evidence for conservative chiropractic care*, Academy of Chiropractic Post-Doctoral Division, Texas Chiropractic College, Long Island NY 2019

Primary Spine Care 3: Bio-Neuro-Mechanical Lesions and Spine Care, *Mechanoreceptor, proprioceptor, nociceptor innervation and control of the spinal system with central nervous system action and interaction. The integration of the pain processing network and the HPA Axis (hypothalamus, adrenal and pituitary) with the chiropractic spinal adjustment*, Academy of Chiropractic Post-Doctoral Division, Texas Chiropractic College, Long Island NY 2019

Primary Spine Care 3: Ethics, Documentation and Research, *Maintaining ethical Interprofessional relationships based upon an evidenced based practice inclusive of triage, diagnostics and reporting. Creating thorough documentation that reflects your complete findings encompassing descriptive ICD-10 codes and concludes the presence or absence of pathology*. Academy of Chiropractic Post-Doctoral Division, Texas Chiropractic College, Long Island NY 2019

Evaluation and Management, *An overview of the evaluation and management process inclusive of utilizing electronic medical records to conclude evidenced-based conclusions with the utilization of macros. The importance of adhering to an academic standard and considering co-morbidities*. Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2020

Evaluation and Management, *Concluding a chief complaint, history and what needs to be considered in a physical examination. This covers in dept the required elements for chief complain, history of present illness, review of systems, and past, family, and/or social history. This module also covers the following components of a physical examination: observation, palpation, percussion, and auscultation*. Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2020

Evaluation and Management, Coding and Spinal Examination: *Detailing 99202-99205 and 99212-99215 inclusive of required elements for compliant billing. It reviews the elements for an extensive review of systems, cervical and lumbar anatomy and basic testing. The course also covers the basics of vertebra-basilar circulation orthopedic assessment*. Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2020

Evaluation and Management, Neurological Evaluation: *Reviewing complete motor and sensory evaluation inclusive of reflex arcs with an explanation of Wexler Scales in both the upper and lower extremities. The course breaks down testing for upper and lower motor neuron lesions along with upper and lower extremity motor and sensory testing examinations*. Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2020

Evaluation and Management, Documenting Visit Encounters: *Forensically detailing the S.O.A.P. note process for visit encounters and discussing the necessity for clinically correlating symptoms, clinical findings and diagnosis with the area(s) treated. It also details how to modify treatment plans, diagnosis, document collaborative care and introduce test findings between evaluations*. Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2020

Evaluation and Management, Case Management and Treatment Orders: *This module discusses how to document a clinically determined treatment plan inclusive of both manual and adjunctive therapies. It discusses how to document both short-term and long-term goals as well as referring out for collaborative care and/or diagnostic testing. It also includes how to prognose your patient and determine when MMI (Maximum Medical Improvement) has been attained*. Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2020

Patient Intake, History and Physical Examination: *Determining the etiology of the patient's complaints in a traumatic or non-traumatic scenario. Analyzing the patient's past history and review of systems along with the performance of a complete orthopedic, neurological and clinical examination to correlate both past, current and causality issues to formulate an accurate diagnosis, prognosis and treatment plan. There is an emphasis on triaging both the trauma and non-trauma patients*. Texas Chiropractic College or PACE Recognized by The

Federation of Chiropractic Licensing Boards, Academy of Chiropractic Post Doctoral Division, Long Island, NY, 2019

Orthopedic Testing: Principles, Clinical Application and Triage, *Integration of orthopedic testing in the clinical setting to develop a differential diagnosis. Utilizing radiographic and advanced imaging inclusive of MRI and CAT scan findings to verify tissue pathology suspected by orthopedic testing conclusions and developing a treatment plan as sequelae.* PACE Recognized by The Federation of Chiropractic Licensing Boards, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post Doctoral Division, Buffalo, NY, 2019

Orthopedic Testing: Clinical Grand Rounds, *Integration of orthopedic testing in the clinical setting utilizing both simple and complex patient scenarios. It includes potential stroke, or vertebrobasilar insufficient patients and understanding the nuances in a clinical evaluation with orthopedic testing as a critical part of the evaluation and screening process. How to integrate orthopedic testing in the clinical setting utilizing both simple and complex patient scenarios. It includes potential stroke, or vertebrobasilar insufficient patients and understanding the nuances in a clinical evaluation with orthopedic testing as a critical part of the evaluation and screening process.* Texas Chiropractic College or PACE Recognized by The Federation of Chiropractic Licensing Boards, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post Doctoral Division, Buffalo, NY, 2019

Orthopedic Testing: Cervical Spine, *Integration of cervical orthopedic testing in the clinical setting to develop a differential diagnosis. Utilizing radiographic and advanced imaging inclusive of MRI and CAT scan findings to verify tissue pathology suspected by orthopedic testing conclusions and developing a treatment plan as sequelae.* PACE Recognized by The Federation of Chiropractic Licensing Boards, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post Doctoral Division, Buffalo, NY, 2019

Orthopedic Testing: Cervical Spine, *Integration of cervical orthopedic testing in the clinical setting to develop a differential diagnosis. Utilizing radiographic and advanced imaging inclusive of MRI and CAT scan findings to verify tissue pathology suspected by orthopedic testing conclusions and developing a treatment plan as sequelae.* PACE Recognized by The Federation of Chiropractic Licensing Boards, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post Doctoral Division, Buffalo, NY, 2019

Orthopedic Testing: Lumbar Spine, *Integration of lumbar orthopedic testing in the clinical setting to develop a differential diagnosis. Utilizing radiographic and advanced imaging inclusive of MRI and CAT scan findings to verify tissue pathology suspected by orthopedic testing conclusions and developing a treatment plan as sequelae.* PACE Recognized by The Federation of Chiropractic Licensing Boards, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post Doctoral Division, Buffalo, NY, 2019

Most Common Therapeutic Application of CBD: *A review of literature and case studies relating to application and dosage of CBD and the most common uses of CBD in a clinical setting.* Certification in Most Common Therapeutic Application of CBD, Oregon Board of Naturopathic Medicine (OBNM) for Naturopathic Doctors and ND Pharmacists, ECS Therapeutics, 2019

Electrodiagnostics: Electromyogram/Nerve Conduction Velocity (EMG/NCV), Diagnosis & Interpretation: *Anatomy and Physiology of Electrodiagnostics: An in-depth review of basic neuro-anatomy and physiology dermatomes and myotomes to both the upper and lower extremities and the neurophysiology of axons and dendrites along with the myelin and function of saltatory for conduction. The sodium and potassium pump's function in action potentials.* Cleveland University, Kansas City, Academy of Chiropractic, Post-Doctoral Division, Long Island NY, 2019

Electrodiagnostics: Electromyogram/Nerve Conduction Velocity (EMG/NCV), Diagnosis & Interpretation: *Nerve Conduction Velocity (NCV) Part 1: Nerve conduction velocity testing, the equipment required and the specifics of motor and sensory testing. This section covers the motor and sensory NCV procedures and interpretation including latency, amplitude (CMAP) physiology and interpretation including the understanding of the various nuances of the wave forms.* Cleveland University, Kansas City, Academy of Chiropractic, Post-Doctoral Division, Long Island NY, 2019

Electrodiagnostics: Electromyogram/Nerve Conduction Velocity (EMG/NCV), Diagnosis & Interpretation: Nerve Conduction Velocity (NCV) Part 2: *Compound motor action potentials (CMAP) and sensory nerve action potentials (SNAP) testing and interpretation including the analysis and diagnosis of the wave forms. It also covers compressive neuropathies of the median, ulnar and posterior tibial nerves; known as carpal tunnel, cubital tunnel and tarsal tunnel syndromes. This section offers interpretation algorithms to help understand the neurodiagnostic conclusions.* Cleveland University, Kansas City, Academy of Chiropractic, Post-Doctoral Division, Long Island NY, 2019

Electrodiagnostics: Electromyogram/Nerve Conduction Velocity (EMG/NCV), Diagnosis & Interpretation: Needle Electromyogram (EMG) Studies: *The EMG process, inclusive of how the test is performed and the steps required in planning and electromyographic study. This covers the spontaneous activity of a motor unit action potential, positive sharp waves and fibrillations. The insertional activity (both normal and abnormal), recruitment activity in a broad polyphasic presentation and satellite potentials. This covers the diagnosing of patterns of motor unit abnormalities including neuropathic demyelinated neuropathies along with acute myopathic neuropathies. This section also covers the ruling out of false positive and false negative results.* Cleveland University, Kansas City, Academy of Chiropractic, Post-Doctoral Division, Long Island NY, 2019

Electrodiagnostics: Electromyogram/Nerve Conduction Velocity (EMG/NCV), Diagnosis & Interpretation: Overview of EMG and NCV Procedures, Results, Diagnoses and Documentation. *The clinical incorporation of electrodiagnostic studies as part of a care plan where neuropathology is suspected. It also covers how to use electrodiagnostics in a collaborative environment between the chiropractor as the primary spine care provider and the surgeon, when clinically indicated. This section covers sample cases and health conclude and accurate treatment plans based upon electro-neurodiagnostic findings when clinically indicated.* Cleveland University, Kansas City, Academy of Chiropractic, Post-Doctoral Division, Long Island NY, 2019

Medical-Legal-Insurance Documentation: *Accurate and compliant documentation of history and clinical findings inclusive of functional losses, loss of activities of daily living, duties under duress and permanent loss of enjoyment of life. Prognosing static vs. stable care, gaps in care both in the onset and in the middle of passive care with a focus on detailed diagnosing. The integration of chiropractic academia, the court system and the insurance reimbursor's requirements for complete documentation.* Cleveland University – Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2019

Primary Spine Care 5: Evidenced Based Care in a Collaborative Setting; *A literature-based model for collaborating with hospitals, medical primary care providers and specialists. Reviewing the documentation requirements to communicate the diagnosis, prognosis and treatment plans with medical entities and having the evidence as a basis for those recommendations.* Academy of Chiropractic Post-Doctoral Division, Cleveland University- Kansas City, Long Island, NY, 2019

Primary Spine Care 5: Current Literature Standards of MRI Spine Interpretation; *MRI Spine Interpretation of the spine. How to triage a trauma and non-trauma with advanced imaging and document the necessity. We will also cover the basics of MRI Spine Interpretation inclusive of all types of herniations, bulges,* Academy of Chiropractic Post-Doctoral Division. Academy of Chiropractic Post-Doctoral Division, Cleveland University- Kansas City, Long Island, NY, 2019

Primary Spine Care 5: Spine Brain Connection in Pain Pathways; *MRI Spine The spine-brain connection in managing chronic pain patients. Understanding how chronic pain negatively effects brain morphology and potential pathology as sequella. The role of chiropractic in preventing the loss of gray matter and the most recent evidence as outlined in indexed peer reviewed literature over the last 10 years verifying chiropractic's role.* Academy of Chiropractic Post-Doctoral Division, Cleveland University- Kansas City, Long Island, NY, 2019

Primary Spine Care 5: Bio-Neuro-Mechanical Mechanism of the Chiropractic Spinal Adjustment; *The biological, neurological and mechanical mechanisms and pathways from the thrust to the dorsal horn and brain connection and how the brain processes the chiropractic spinal adjustment based upon the literature. Care paths of chiropractic and physical therapy from an outcome basis,* Academy of Chiropractic Post-Doctoral Division. Academy of Chiropractic Post-Doctoral Division, Cleveland University- Kansas City, Long Island, NY, 2019

Stroke Anatomy and Physiology: Brain Vascular Anatomy, *The anatomy and physiology of the brain and how blood perfusion effects brain function. A detailed analysis of the blood supply to the brain and the physiology of ischemia.* Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York

at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2019

Stroke Anatomy and Physiology: Stroke Types and Blood Flow, *Various types of stroke identifying ischemia, hypoperfusion, infarct and penumbra zones and emboli. Cardiac etiologies and clinical features as precursor to stroke with associated paradoxical emboli and thrombotic etiologies. Historical and co-morbidities that have etiology instroke inclusive of diabetes, coagulopathy, acquired and hereditary deficiencies.* Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2019

Stroke Principles of Treatment an Overview for the Primary Care Provider: *Stroke type and treatments performed by vascular specialists. The goals of treatment with the physiology of the infarct and penumbra zones and the role of immediate triage in the primary care setting. Detailing the complications of stroke and future care in the chiropractic, primary care or manual medicine clinical setting.* Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2019

Clinical Evaluation and Protocols for Identifying Stroke Risk: The neurological history and examination for identifying stroke risks with a focus on supra and infratentorial regions, upper and lower motor lesions, cranial nerve signs, spinal cord pathology, motor and sensory pathology and gait abnormalities. Examining genetic and family histories along with dissection risk factors. Stroke orthopedic testing and clinical guidelines pertaining to triage for the primary care provider. Cleveland University – Kansas City, ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2019

Primary Spine Care 8: Trends in Spinal Treatment: *Migration of spinal care for mechanical spine issues from hospitals and medical specialists to trauma qualified chiropractors based upon published outcomes. Utilizing imaging studies in spinal biomechanics, pain models and clinical outcomes to determine a conclusive diagnosis, prognosis and treatment plan for triaging in a collaborative environment.* Cleveland University Kansas City, Chiropractic and Health Sciences, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2019

Primary Spine Care 8: Neurology of Spinal Biomechanics, *Understanding the normal of spinal biomechanics and the neurotransmitters required for homeostasis. The interconnected role of Pacinian Corpuscles, Ruffini Corpuscles, Golgi Organ Receptors, Nociceptors, Proprioceptors and Mechancoreceptors in maintaining sagittal and axial alignment in the presence of mechanical pathology.* Cleveland University Kansas City, Chiropractic and Health Sciences, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2019

Primary Spine Care 8: MRI Age-Dating of Herniated Discs, *The literature, academic and clinical standards to age-date herniated discs. The clinical correlation the pain patters with advanced imaging findings of bone edema, spurs based upon the Piezoelectric effect for remodeling, high signal on T2 weighted images, Vacuum Discs and disc heights in determining the time frames of the etiology of the spinal disc pathology.* Cleveland University Kansas City, Chiropractic and Health Sciences, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2019

Primary Spine Care 8: Computerized Mensuration of Spinal Biomechanical Pathology, *Understanding the algorithmic interpretation of spinal biomechanical pathology in a 3-D model and creating treatment plans, impairment ratings and teaching models based upon the vertebral motor unit angles. Determining sagittal and axial alignments in creating a normative baseline for treatment goals and outcomes.* Academy of Chiropractic Post-Doctoral Division, Long Island NY, 2019

Primary Spine Care 8: Neurosurgical-Chiropractic Collaboration on Spinal Pathology, *Utilizing x-ray, MRI and other modalities of advanced imaging in conjunction with spinal biomechanical failure and clinical evaluation to collaboratively create treatment protocols for patients in both the operative and non-operative cases. Determining the boundaries of scope of care for both the chiropractor and neurosurgeon based upon a definitive diagnosis of the mechanical vs. an anatomical lesion.* Academy of Chiropractic Post-Doctoral Division, Long Island NY, 2019

Primary Spine Care 8: Documentation and Ethics in Medical-Legal Relationships, *Creating ethical relationships based upon accurate documentation reflective of the casually related condition of the injured. Ensuring accepted credentials of the doctor based upon Voir Dire standards reflected in an admissible curriculum vitae. How to present demonstrative documentation in the courts reflective of the patient's pathology.* Academy of Chiropractic Post-Doctoral Division, Long Island NY, 2019

Primary Spine Care 8: Coding, Documentation and Compliant Coding, *Ensuring the correct codes are utilized in an evaluation and management encounter. The correct elements are utilized to support the level of E&M coded along with a self-audit program to ensure ethical billing occurs. Guidelines for history of present illness, primary complaint, review of systems, family, social and past histories are discussed and how to document the same.* Academy of Chiropractic Post-Doctoral Division, Long Island NY, 2019