Mark J. Jensen DC, FPSC(C) DAAMLP
3708 Forestview Road Suite 203
Raleigh, NC 27612
Phone: (919) 828-5669
Fax: (919) 828-5676
drmarkjjensen@gmail.com

Selected Occupational History

Fellowship of Spinal Biomechanics and Trauma, Candidate

MRI Interpretation Review Qualified – Cleveland University, Kansas City, 2024-present

Academy of Chiropractic – Active Trauma Team Member, 2018-2021, 2024-present

ImPACT Certified Provider- Certified Neurocognitive Provider

Clinic Director, Corrective Chiropractic, Raleigh, NC, 2006-present

Chiropractor, Hammer Chiropractic Center, Rocky Mount, NC, 1997-2006

Education and Licensure

Doctor of Chiropractic, Licensed in the State of North Carolina, License #2427, 1997-present

Doctor of Chiropractic, Licensed in the State of Minnesota, License #3471, 1997-1998

National Board of Chiropractic Examiners, Part I, 1996

National Board of Chiropractic Examiners, Part II, 1996

National Board of Chiropractic Examiners, Part III, 1996

National Board of Chiropractic Examiners, Physiotherapy, 1996

Doctor of Chiropractic, Northwestern College of Chiropractic, Bloomington, MN, 1996

Bachelor of Science in Human Biology, Northwestern College of Chiropractic, Bloomington, MN, 1996

Pre-Chiropractic Studies, Normandale Community College, Bloomington, MN, 1992-1993

Pre-Chiropractic Studies, University of Minnesota, Minneapolis/St. Paul, MN, 1987-1989, 1991-1992

Selected Post-Graduate Education

ImPACT Certification Program – Diagnosis of Traumatic Brain Injury.
This course discusses how to use a clinical interview, Vestibular-Ocular Motor Screening (VOMS), and ImPACT profiles, and the Balance Error Scoring System (BESS) to determine clinical trajectories and treatment pathways for an individual patient post-injury. You will see a full walkthrough of the VOMS and BESS, both tools that can be used to assess concussion. 2025

Compliance and Cultural Training- HNS has developed a compliance program to establish a culture within the HNS network that promotes prevention, detection, and resolution of conduct that does not conform to federal and state law, federal, state, and private payor health care program requirements, and/or HNS' ethical and business policies. 2025

Primary Spine Care 17, **Current and Future Trends in Documentation**, *Evidence-Based demonstrative documentation for creating successful patient-centered collaborative care. Using "reputation building" through effective documentation to develop relationships with MD PCPs, MD Specialists, ERs, and Urgent Care Centers. Using demonstrative evidence will eradicate the Non-Specific Back Pain "Dogma," allowing chiropractic utilization to increase based on the evidence.* 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, Long Island, NY, 2025

Primary Spine Care 17, MRI Spine Ancillary Tumor Detection and Advanced Imaging Stroke Detection*, Spinal imaging techniques to assess spinal structures and detect abnormalities. The sequences also identify ancillary findings such as renal, ovarian, extradural, and intradural tumors. Careful evaluation of spinal MRIs can reveal critical pathologies beyond musculoskeletal issues. Analyzing the morphology of the abdominal aorta to determine potential stroke risks*. 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, Long Island, NY, 2025

Primary Spine Care 17, Analyzing Spinal Pathobiomechanics, I*dentifying and diagnosing spinal segmental lesions in the facet, joint capsules involving ligamentous mechanoreceptors, and spinal proprioceptors. The central segmental motor control mechanism with upper motor neuron involvement with disparate efferent effects and demonstrative diagnostic tools to differentially diagnose the primary lesion. The statistical outcome of treating biomechanical spinal lesions.* 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, Long Island, NY, 2025

Primary Spine Care 17, Spinal Biomechanical Pathology, I*dentifying and diagnosing spinal segmental lesions in the facet, joint capsule involving ligamentous mechanoreceptors, and spinal proprioceptors. The central segmental motor control mechanism with upper motor neuron involvement with disparate efferent effects and demonstrative diagnostic tools to differentially diagnose the primary lesion. The statistical outcome of treating biomechanical spinal lesions.* 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, Long Island, NY, 2025

Primary Spine Care 17, *Advanced Credential Reporting, creating a professional bio and CV, essential for establishing credibility in the medical-legal field. Incorporating outcome statistics from cases helps demonstrate your work's real-world impact, especially in the medical legal arena. Getting published in the National Institutes of Health (NIH) using research, peer review, and adherence to scientific standards and enhances your reputation by validating your work within the healthcare community and increasing your authority in the healthcare community field.* 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, Long Island, NY, 2025

Primary Spine Care 17, Age-Dating Herniated Disc via MRI and X-Ray, Utilizing *the evidence in the literature to age-dating spinal herniated discs and trauma. Including interpreting X-rays, MRIs in T1, T2, STIR and Fat Saturation sequences, and other imaging alongside understanding the evidence of joint pathology. Being able to collaborate with physicians or as a medical-legal expert. Accurate age-dating helps establish a prognosis for patient recovery. The process must be grounded in evidence-based rationale to ensure reliability. Mastering this skill enhances both clinical decision-making and legal credibility.* 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, Long Island, NY, 2025

Primary Spine Care 17, Clinical Grand Rounds in Primary Spine Care, Clinical Grand Rounds for a case involve assessing disc, ligament, and spinal pathology. The process includes establishing a diagnosis, determining the prognosis, and developing a treatment plan. Special attention is given to conditions such as cord edema, myelomalacia, myelopathy, and tethered cords. Utilizing follow-up examinations as a step in crucial in refining the diagnosis and treatment approach. Adjustments to the treatment plan are made as new clinical findings emerge. This ensures that patient care remains dynamic and responsive to evolving spinal conditions. 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, Long Island, NY, 2025

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.* 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, 2024

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*. 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, 2024

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.* 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, 2024

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*. 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, 2024

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 noninvasive means of evaluating brain function. In this module multiple case studies are discussed with ensuing triage protocols pending the results*. 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, 2024

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, 2024

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, 2024

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, 2024

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, 2024

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, 2024

Primary Spine Care 14: Case Management and Documentation - Spinal Biomechanics in Clinical Practice, *The utilization of X-Ray digitization to diagnose spinal biomechanical pathology and analyzing trends in healthcare when triaging mechanical spine pain. The role of credentials in interprofessional collaboration.* 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, Long Island, NY, 2024

Primary Spine Care 14: Case Management and Documentation - MRI Spine Sequence Acquisition and Interpretation, *The understanding and utilization of T1, T2, STIR, Proton Density, FSE, GRE imagine sequencing for conclusive diagnosing of fracture, tumor, infection, and disc pathology. Identifying herniation, protrusion, bulge, extrusion-migrated, and extrusion-fragments on MRI images.* 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, Long Island, NY, 2024

Primary Spine Care 14: Case Management and Documentation - Spinal Disc Microanatomy, *The understanding of the human spinal discal elements; annulus, nucleus pulposis, cartilaginous end plates inclusive of the neurology, visualization, differentiation from the neonate to adults. The understanding of the etiology of Modic changes on MRI and how spinal biomechanics are altered.* 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, Long Island, NY, 2024

Primary Spine Care 14: Case Management and Documentation - Interprofessional Collaboration on Mechanical Back Pain in Clinical Practice, *Triaging neurologically compromised cases in conjunction with positive MRI images, and collaboratively managing cases with neurosurgeons in clinical practice. Post-operative management of spinal cases through full recovery.* 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, Long Island, NY, 2024

Primary Spine Care 14: Case Management and Documentation - Spinal Biomechanical Engineering Analytic, *The analytics of spinal biomechanical engineering utilizing X-Ray digitizing for Alteration of Motion Segment Integrity and biomechanical pathology. Determining laxity of ligaments in connective tissue pathology and the long-term negative sequels of the 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, Long Island, NY, 2024

Primary Spine Care 14: Case Management and Documentation - Demonstrative Reporting of MRI Spinal Disc Pathology, *The diagnosis, and reporting of spinal disc bulges, herniations, protrusions, extrusions, and fragments. Reporting varices, Modic 1, 2, and 3, posterior longitudinal, interspinous, and intertransverse ligament. Reporting the ligamentum Flavum and epidural fat as a space-occupying lesion.* 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, Long Island, NY, 2024

2023 Demonstrative Documentation Requirements, *Analyzing the requirements in anatomical diagnostic imagery to communicate spinal pathology. Integrating technology, clinical findings, and advanced graphic tools to communicate a diagnostic conclusion.* 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, 2024

MRI Spine Advanced Clinical Case Grand Rounds, *Clinical case review of MRI including intra and extra-dural findings inclusive of the disc and vascular anatomical lesions. Differentially diagnosing central cord lesions, and spinal cord vascular lesions in both acute trauma and degenerative presentations.* 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, 2024

Non-Specific Spine Pain, Chiropractic and Outcomes, *Analyzing neuro-biomechanical pathological lesions defines primary spinal lesions and removes the dogma of non-specific back pain. Creating evidence-based demonstrative documentation in the creation of treatment plans.* 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, 2024

Spinal Tumor MRI Interpretation*, Diagnosing and documenting:* Ependymoma, Astrocytoma, Hemangioblastoma, Lipoma, Meningioma, Neurofibroma, Schwannoma, Myxopapillary Ependymoma. 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, 2024

Demonstrative Narrative and Evaluation and Management Report Writing, Clinical record-keeping, why write clinical notes, the importance of context, what to include in a clinical note, tips for better clinical documentation, basic legal considerations, open clinical notes, how to keep documentation efficient. 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, 2024

Age-Dating Ligament/Connective Tissue Physiology and Pathology, Utilizing pain patterns, the high signal in the annulus, high signal outside the annulus, Modic changes, disc height, vacuum disc, sclerosis, Phirrman rating, facet edema, and previous MRIs to determine the chronicity of pathology., *Master-Class in ligaments; anatomy, physiology, vascularization, neurological innervation, tissue repair, and how they all relate to clinical practice. Ligament pathology correlating to the mechanisms of patho-neuro-biomechanical lesions (vertebral subluxation complex). Also, how ligaments play a critical role in chiropractic spinal adjustment and in defining the chiropractic spinal adjustment mechanisms*. 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, 2024

Clinical Grand Rounds in Biomechanics, Digitizing, and Advanced Imaging: *Case reviews concluding and accurate diagnosis, prognosis, and treatment plan utilizing evidence-based instrumentation and algorithms*. *Using demonstrative reporting of case findings to collaborate with co-treating physicians.* 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, 2024

Medical-Legal Documentation: *A documentation discussion on meeting the requirements of the courts, carriers, and licensure boards in complete and accurate reporting. Ensuring the diagnosis, prognosis, and treatment plan are demonstratively documented.* 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, 2024

MRI Interpretation Review Qualified, Recognized by Cleveland University-Kansas City, Chiropractic and Health Sciences with courses recognized by the ACCGME in conjunction with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences. Qualification language approved by the American Chiropractic College of Radiology (ACCR) and the American Chiropractic Board of Radiology (ACBR), 2024

2022 Trends in Spinal Healthcare, *Analyzing evidenced-based spinal healthcare trends in both utilization and necessity and understanding the marketplace. The use of evidenced-based demonstrative documentation in reporting treatment pathways in triaging spinal pathobiomechanics.* Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2024

MRI Spine Clinical Case Grand Rounds, *Clinical case review of MRI's including sagittal, axial, T1, T2, STIR, and proton density sequences. Identified will be the vertebrate, spinal cord, discs, nerve roots, thecal sac, posterior longitudinal ligament, epidural veins, and fat saturation pulses. Pathology will include bulges, herniations, protrusions, extrusions, myelomalacia, cord edema, and Schmorl's nodes. Learn how to collaborate effectively with radiologists, neuroradiologists, and neurosurgeons on the clinical findings.* Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2024

Chiropractic vs. Physical Therapy vs. Medical Case Management and Outcomes, *Analyzing evidence-based outcomes in triaging non-anatomical lesions. The analysis of neuro-biomechanical pathological lesions defines primary spinal lesions and removes the dogma of non-specific back pain. Managing collaborative relationships with medical primary providers and specialists in clinical practice.* Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2024

MSK Extremity Radiological Interpretation*, Utilizing both MRI and x-ray in identifying via x-ray and advanced imaging extremity instabilities from ligamentous, osseous or neoplastic derangement.* Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2024

Demonstrative Narrative and Evaluation and Management Report Writing, *Effectively creating demonstrative medical-legal documentation and meeting the needs of the courts and making your "4-Corner" (narrative) report to build your reputation as an evidence-based provider.* ***The step-by-step minutiae of building a report****, accomplishing report writing timely and effectively by understanding the regulatory and administrative rules. Learn how to educate the lawyer on bodily injury through evidence-based demonstrative reporting.* Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2024

Ligament/Connective Tissue Physiology and Pathology, *Master-Class in ligaments; anatomy, physiology, vascularization, neurological innervation, tissue repair and how they all relate to clinical practice. Ligament pathology correlating to the mechanisms of patho-neuro-biomechanical lesions (vertebral subluxation complex). Also, how ligaments play a critical role in the chiropractic spinal adjustment and in defining the chiropractic spinal adjustment mechanisms.* Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2024

Stroke Evaluation and Risk Factors in the Chiropractic Practice, *Diagnosing, triaging, and documenting headaches, migraines, and vascular incidents (stroke) in the primary provider's office. Imaging protocols based upon history and clinical presentation will be presented, along with analyzing imaging findings in determining the etiology. There will be an extensive question and answer session following the instructional presentation.* Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2024

Age-Dating Herniated Discs and Trauma, *Age dating herniated discs and trauma is a critical skill for an expert in spine. It combines the clinical skills of interpreting X-ray, MRI, and other imaging modalities with a clinician's understanding of joint pathology. This level of expertise is critical when collaborating with other physicians or working in the medical-legal environment as an expert. Age dating pathology is also central to creating a prognosis on your patient's recovery and must be evidence-based in rationale*. Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2024

Clinical Grand Rounds in Spinal Biomechanics, *Case reviews utilizing E/M, MRI, and x-ray mensuration report to conclude an accurate diagnosis, prognosis, and treatment plan. Common*

diagnosis requiring interprofessional collaboration with a discussion of diagnostic dilemmas and proper communication methods. Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2024

Neurosurgical Grand Rounds, A clinical discussion of collaborating with neurosurgeons on spinal cord and spinal nerve root co-morbidities. Triaging cases with herniated, protruded, extruded, fragments discs and differentially diagnosing tethered cord, syringomyelia, traumatic Schmorl's Nodes, Myelomalacia, spinal cord edema, vacuum disc and other intra, and extra-dural lesions. Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2024

Trends in Spinal Healthcare, *Analyzing spinal healthcare trends in both utilization and necessity and understanding the marketplace and how a level of clinical excellence is reflected in a doctors' documentation and credentials. Treatment pathways in triaging spinal pathobiomechanics.* Academy of Chiropractic Post-Doctoral Division, Cleveland University – Kansas City, Long Island, NY, 2024

MRI Spine Interpretation, *An evidence-based understanding of time-related etiology of disc pathology considering the American Society of Neuroradiology's designation of protrusion, extrusion, and sequestration of spinal discs, Considering the signal intensity of discs in age-dating pathology and acquisition protocols for advanced spinal imaging.* Academy of Chiropractic Post-Doctoral Division, Cleveland University – Kansas City, Long Island, NY, 2024

Spinal Biomechanics; A Literature Perspective, *An evidenced-based model for spinal biomechanical engineering and pathobiomechanics considering the pathophysiological limits in translations, angular deviation, and rotational planes. Utilizing the Cartesian system in plotting vertebral points to demonstratively conclude an accurate diagnosis, prognosis, and biomechanical treatment plan with the consideration of long-term care in the non-specific mechanical spine pain patient when necessary.* Academy of Chiropractic Post-Doctoral Division, Cleveland University – Kansas City, Long Island, NY, 2024

Case Management of Mechanical Spine Pathology, *Clinical Grand Rounds of herniated, protruded, extruded, sequestered, and bulging discs. Differentially diagnosing vascular vs. mechanical spinal lesions and the necessity for urgent vascular, neurological intervention, Collaborating in a team environment utilizing a neuroradiologist, electrophysiologist, and neurosurgeon with the chiropractor as the primary spine care provider.* Academy of Chiropractic Post-Doctoral Division, Cleveland University – Kansas City, Long Island, NY, 2024

Case Management, Spinal MRI and Documentation Documenting Herniated Discs, Age-Dating Disc Pathology, and Connective Tissue Pathology as Sequella to Trauma, *Herniated Discs and Connective Tissue Pathology, differentially diagnosing herniated discs vs. normal and bulging*

discs and protruded, extruded, and fragmented discs. Normal vs. Pathological connective tissues and age-dating herniated discs. 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, 2024

Case Management, Spinal MRI and Documentation, Case Management of Traumatic Spinal Injuries, *Understanding flexion-extension cervical injuries and diagnosing connective tissue pathology. Determining impairments and the literature-based standard for permanent injuries.* 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, 2024

Case Management, Spinal MRI and Documentation, Managing Herniated and Bulging Discs, Serious Injury in Non-Herniated Cases from Trauma*, Spinal disc morphology, and innervation. Herniated, bulged, protruded, and sequestered disc characteristics and management. Literature-based documentation requirements for no-dis spinal injuries.* 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, 2024

Case Management, Spinal MRI and Documentation, Herniated Discs and Permanent Brain Malfunction & Biomechanical Failure**,** *A case-study of a post-traumatic herniated disc and related brain malfunction supported by contemporary literature, MRI acquisition, and necessity protocols.* 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, 2024

Case Management, Spinal MRI and Documentation, Demonstrative Documentation of Disc Herniation and MRI Physics**,** *Understanding the documentation requirements to demonstratively show spinal disc lesions in reporting pathology. Understanding the physics of a nucleus resonating in T1 and T2 weighted imagery.* 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, 2024

Case Management, Spinal MRI and Documentation, Post-Traumatic Herniated Discs, Related Migraines-Headaches & Strain/Sprain Permanences**,** *Relationship of headaches, and migraines to cervical spine disc herniation, clinical rationale for ordering MRI's and the relationship of ligamentous pathology to spinal trauma.* 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, 2024

Case Management, Spinal MRI and Documentation, Documentation of Low-Speed Crashes in Determining Etiology of Serious Bodily Injuries, *Documentation requirements during the evaluation, and management encounter to understand the etiology of spinal injuries. Having a*

complete understanding of the forces involved to conclude a differential diagnosis, while concurrent ruling malingerers, if applicable. 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, 2024

MRI Spine Clinical Grand Rounds, *Interpretation sequencing of STIR, T1, T2, Axial and Sagittal acquisitions. Landmarks, physics, and literature-based definitions of disc and osseous pathology, Visualizing, diagnosing, and documenting cervical and lumbar anatomy vs. pathology.* Academy of Chiropractic Post-Doctoral Division, Accreditation Council for Continued Medical Education in conjunction with The State University of New York at Buffalo, Jacobs School of Medicine and Biomedical Sciences, NY, 2024

MRI Spine Clinical Grand Rounds, *Visualizing, diagnosing, and documenting lumbar spine sequencing, disc herniations, neural canals, cauda equina, conus medullaris, nerve sleeves, canal stenosis grading, and vertebral width vs. height in determining segmental remodeling. Diagnosing thecal sac abutment, central canal root compression and ligamentum flava involvement.* Academy of Chiropractic Post-Doctoral Division, Accreditation Council for Continued Medical Education in conjunction with The State University of New York at Buffalo, Jacobs School of Medicine and Biomedical Sciences, NY, 2024

MRI Spine Clinical Grand Rounds, *Case study visualizing, diagnosing, and documenting cervical spine sequencing, disc herniations, neural canals, cauda equina, conus medullaris, and vertebral width vs. height in determining segmental remodeling. Identifying the Pons, Occipital junction, and spinal cord to identify Chiari 1 malformations.* Academy of Chiropractic Post-Doctoral Division, Accreditation Council for Continued Medical Education in conjunction with The State University of New York at Buffalo, Jacobs School of Medicine and Biomedical Sciences, NY, 2024

MRI Spine Clinical Grand Rounds, *Visualizing, diagnosing, and documenting lumbar spine sequencing, disc extrusion type herniations, neural canals, cauda equina, conus medullaris, spondylolisthesis, degenerative spondylolisthesis, disc degeneration, neural canal and central root compressions, central canal stenosis. Varices vs. herniations, and multiple level disc pathology with biomechanical failures.* Academy of Chiropractic Post-Doctoral Division, Accreditation Council for Continued Medical Education in conjunction with The State University of New York at Buffalo, Jacobs School of Medicine and Biomedical Sciences, NY, 2024

MRI Spine Clinical Grand Rounds, *Visualizing, diagnosing, and documenting cervical spine sequencing, disc extrusion type herniations, neural canals, disc degeneration, thecal sac compression, central canal stenosis, cord displacement, reversal of cervical curve, Chiari 1 malformation. Identifying spinal biomechanical failure in MRI sequencing, with visualizing ligamentous pathology as cause for failure. Differentially diagnosing recent vs. older trauma based upon edematous signal in T1, T2, and STIR images.* Academy of Chiropractic Post-

Doctoral Division, Accreditation Council for Continued Medical Education in conjunction with The State University of New York at Buffalo, Jacobs School of Medicine and Biomedical Sciences, NY, 2024

MRI Spine Clinical Grand Rounds, *Visualizing, diagnosing, and documenting cervical spine sequencing, multiple disc extrusion type herniations, vertebral remodeling, intradural tumor displacing the spinal cord visualized in T1, T2, and STIR sequences, neural canal stenosis, disc degeneration, thecal sac compression, central canal stenosis, cord displacement, reversal of cervical curve, Chiari 1 malformation, and identifying of inferior brain structures.* Academy of Chiropractic Post-Doctoral Division, Accreditation Council for Continued Medical Education in conjunction with The State University of New York at Buffalo, Jacobs School of Medicine and Biomedical Sciences, NY, 2024

MRI Spine Clinical Grand Rounds, *Visualizing, diagnosing, and documenting 1) improper sequence acquisitions invalidating interpretation 2) incomplete study invalidating interpretation 3) visualizing, diagnosing, and documenting lumbar spine sequencing, multiple disc extrusion type herniations, vertebral remodeling, multiple thecal sac compressions, neural canal stenosis, disc osteophyte/ridging complex, central canal stenosis, spondylolisthesis. Identifying the spleen, liver, kidneys, inferior vena cava, and psoas musculature on imaging.* Academy of Chiropractic Post-Doctoral Division, Accreditation Council for Continued Medical Education in conjunction with The State University of New York at Buffalo, Jacobs School of Medicine and Biomedical Sciences, NY, 2024

MRI Spine Clinical Grand Rounds, *Visualizing, diagnosing, and documenting cervical spine sequencing, cervical spondylosis, pathological spinal biomechanics, reversal of lordotic curve, and vertebral width vs. height in determining segmental remodeling, central herniation, thecal sac compression of the cord, identifying tongue, epiglottis, hyoid cartilage, pharynx, thyroid. Reviewing fat saturation sequences for osseous metastatic tumors and advanced degeneration.* Academy of Chiropractic Post-Doctoral Division, Accreditation Council for Continued Medical Education in conjunction with The State University of New York at Buffalo, Jacobs School of Medicine and Biomedical Sciences, NY, 2024

MRI Spine Clinical Grand Rounds, *Visualizing, diagnosing, and documenting lumbar spine sequencing, degenerative disc disease, nerve root sleeve abutment, far lateral herniations vs. bulges, normal vs. dissected inferior vena cava aneurism, epidural fat as a space occupying lesion, facet arthropathy and edema, hypertrophy of ligamentum flava, and pseudo disc at the S1-S2 level.* Academy of Chiropractic Post-Doctoral Division, Accreditation Council for Continued Medical Education in conjunction with The State University of New York at Buffalo, Jacobs School of Medicine and Biomedical Sciences, NY, 2024

MRI Spine Clinical Grand Rounds, *Visualizing, diagnosing, and documenting cervical spine sequencing utilizing T1 weighted images for pathology, inclusive of advanced degeneration and tumor detection. STIR in a fat saturated image for ligamentous pathology inclusive of the*

posterior longitudinal, ligamentous flava and interspinal ligaments. Normal clivus and odontoid for cerebellar tonsil location. Cerebral spinal fluid (CSF) flow and the utilization of the spinal cord's central canal for CSF transport. Academy of Chiropractic Post-Doctoral Division, Accreditation Council for Continued Medical Education in conjunction with The State University of New York at Buffalo, Jacobs School of Medicine and Biomedical Sciences, NY, 2024

Extremity MRI & Xray Interpretation of the Shoulder, *Identifying normal anatomy on both MRI and x-ray, inclusive of osseous, connective tissue, and neurological structures. Identifying fractures in adult and pediatric cases. Differentially diagnosing various arthritic etiologies of osseous derangement.* 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, 2024

Extremity MRI & Xray Interpretation of the Shoulder, *Identifying fractures in adult and pediatric cases. Differentially diagnosing various arthritic changes vs. benign and metastatic Tumors.* 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, 2024

Extremity MRI & Xray Interpretation of the Elbow, *Identifying normal anatomy on both MRI and x-ray, inclusive of osseous, connective tissue, and neurological structures, identifying fractures in the adult and pediatric cases. Differentially diagnosing various arthritic etiologies of osseous derangement. Differentially diagnosing various arthritic changes vs. benign and metastatic Tumors.* 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, 2024

Extremity MRI & Xray Interpretation of the Wrist, *Identifying normal anatomy on both MRI and x-ray, inclusive of osseous, connective tissue, and neurological structures, identifying fractures in the adult and pediatric cases. Differentially diagnosing various arthritic etiologies of osseous derangement. Differentially diagnosing various arthritic changes vs. benign and metastatic Tumors.* 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, 2024

Extremity MRI & Xray Interpretation of the Hand, *Identifying normal anatomy on both MRI and x-ray, inclusive of osseous, connective tissue, and neurological structures, identifying fractures in the adult and pediatric cases. Differentially diagnosing various arthritic etiologies of osseous derangement. Differentially diagnosing various arthritic changes vs. benign and metastatic Tumors.* 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, 2024

Extremity MRI & Xray Interpretation of the Hip, *Identifying normal anatomy on both MRI and x-ray, inclusive of osseous, connective tissue, and neurological structures. Identifying fractures in adult and pediatric cases. Differentially diagnosing various arthritic etiologies of osseous derangement.* 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, 2024

Extremity MRI & Xray Interpretation of the Hip, *Identifying fractures in the adult and pediatric cases. Differentially diagnosing various arthritic changes vs. benign and metastatic Tumors.* 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, 2024

Extremity MRI & Xray Interpretation of the Knee, *Identifying normal anatomy on both MRI and x-ray, inclusive of osseous, connective tissue, and neurological structures. Identifying fractures in adult and pediatric cases. Differentially diagnosing various arthritic etiologies of osseous derangement.* 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, 2024

Extremity MRI & Xray Interpretation of the Knee, *Identifying fractures in the adult and pediatric cases. Differentially diagnosing various arthritic changes vs. benign and metastatic Tumors.* 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, 2024

Extremity MRI & X-ray Interpretation of the Ankle, *Identifying normal anatomy on both MRI and X-ray, inclusive of osseous, connective tissue, and neurological structures, identifying fractures in the adult and pediatric cases. Differentially diagnosing various arthritic etiologies of osseous derangement. Differentially diagnosing various arthritic changes vs. benign and metastatic Tumors.*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, 2024

Extremity MRI & Xray Interpretation of the Foot, *Identifying normal anatomy on both MRI and x-ray, inclusive of osseous, connective tissue, and neurological structures, identifying fractures in the adult and pediatric cases. Differentially diagnosing various arthritic etiologies of osseous derangement. Differentially diagnosing various arthritic changes vs. benign and metastatic Tumors.* 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, 2024

Primary Spine Care 15: Advanced MRI and X-Ray Documentation in Clinical Practice, *Interpreting and utilizing X-ray and MRI findings in creating demonstrative documentation. Advanced identification of spinal disc lesions, herniations, bulges, protrusion, extrusion, and fragmentations through computer graphics. Identification and demonstrative documentation of vertebral motor unit pathology and reporting demonstratively using computer graphics.* Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2023

Primary Spine Care 15; Advanced MRI Interpretation in Clinical Practice, *Utilization of thin slice acquisitions with T2 Fat suppressed, STIR, proton density, T1 and T2 sequencing for advanced identification of spinal disc lesions, herniations, bulges, protrusion, extrusion, and fragmentations. Better visualization of intradural and extradural lesions, neoplasms, and infections.* Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2023

Primary Spine Care 15; Ethics in Clinical Practice, *Ethical, collaborative relationships with medical PCPs and specialists using advanced documentation and accurate reporting of imaging and advanced imaging. Creating a collegial relationship when conflicts arise in concluding accurate diagnosis to allow consensus and the evidence to determine final diagnosis.* Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2023

Primary Spine Care 15; Spinal CAT Scan Interpretation, *Understanding the utilization of CAT Scan slicing and the reformatting when using bone and soft tissue windows. Correlating MRI to CAT Scan when either creates an unclear conclusion to render a complete image of the morphology of the indeterminate pathology. Understanding the physics of CAT Scan and the radiation levels with different types of CAT Scan technology.* Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2023

Primary Spine Care 15; Connective Tissue/Strain Sprain Pathology, *Understanding the morphology and physiology of connective tissue at the cellular and extra-cellular levels in building a foundation to understanding the function and interaction of ligaments, tendons, muscles, and bones, Identifying connective tissue pathology and the repair process with a foundation of r permanent aberrant sequella.* Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2023

Primary Spine Care 15; Advanced Spinal Biomechanical Engineering, *Understanding the concepts of normal vs. pathological movement of vertebral motor units in accurately concluding diagnosis on biomechanical pathology when considering excessive motion. An evidence-based approach to determining translation, angular deviation and rotations beyond pathobiomechanical limitations in the spine.* Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2023

Primary Spine Care 15; Trends in Spinal Care, *An evidence-based approach to concluding accurate diagnosis, prognosis, and treatment plan, Eradicating the non-specific back pain dogma utilizing X-ray digitizing based on literature standards, Creating treatment plans with*

identifying the primary spinal lesions using evidence-based tools. Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2023

Primary Spine Care 15; Documentation in Clinical Practice, *Understanding and including all historical elements; current history, past history, family history, and social history when documenting a 99201, 99202, 99203, 99204, and 99205. The application of time as the prime element as per Medicode in coding examinations and re-examination with face to face, review of records and the time necessary to document in an electronic health record.* Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2023

Compliance & Cultural Competency Training for Contracted Health Care Professionals: Compliance training for the prevention, detection, and resolution of conduct that does not conform to federal and state law, federal, state, and private payor health care program requirements, Health Network Solutions 2023

Course Title: Occipital Lift, cervical, and lumbar spine adjusting: which included occipital, cervical, and lumbar spine biomechanical movement pattern and how to detect and safely adjust the underlying pathology. Sherman Chiropractic College: Atlanta, GA, 2023

Compliance & Cultural Competency Training for Contracted Health Care Professionals: Compliance training for the prevention, detection, and resolution of conduct that does not conform to federal and state law, federal, state, and private payor health care program requirements, Health Network Solutions 2022

Comprehensive Analysis of Today's Health Topics; Brain health, pain management, cellular health, ATP issues, neurological conditions. Daniel Murphy DC, DABCO and Trevor Berry DC, DACNB 2022

Fall Convention for North Carolina Chiropractic Association, 2021

Compliance & Cultural Competency Training for Contracted Health Care Professionals: Compliance training for the prevention, detection, and resolution of conduct that does not conform to federal and state law, federal, state, and private payor health care program requirements, Health Network Solutions 2021

Compliance & Cultural Competency Training for Contracted Health Care Professionals: Compliance training for the prevention, detection, and resolution of conduct that does not conform to federal and state law, federal, state, and private payor health care program requirements, Health Network Solutions 2020

Corrective Exercises Postural Exercises; How to analyse dysfunctional movement patterns using the overhead squat assessment. Corrective Exercises used to for each dysfunctional patterns in the ankle, knee, hips, upper back, shoulders, and neck. 2020

Spinal Decompression: Understanding the protocols and how to utilize for spinal decompression for the cervical and lumbar spine. 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.* Cleveland University – Kansas City, Academy of Chiropractic Post-Doctorial Division, Long Island, NY, 2018

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, 2018

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, 2018

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, 2018

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, 2018

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, 2018

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, 2018

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, 2018

MRI Spinal Pathology, *MRI interpretation of bone, intradural, extradural, cord and neural sleeve lesions. Tuberculosis, drop lesions, metastasis, ependymoma, schwanoma 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, 2018

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, 2018.

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, 2018

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 sequellae, 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, 2018

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, 2018

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, 2018

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, 2018

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, 2018

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 spondylolisthesis, 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, 2018

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, 2018

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, 2018

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.* 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, 2018

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.* 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, 2018

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.* 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, 2018

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.* 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, 2018

Orthopedic Testing: Clinical Grand Rounds, 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. 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. 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, 2018

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, 2018

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.* 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, 2018

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.* 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, 2018

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.* 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, 2018

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 sequalae 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.* 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, 2018

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.* 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, 2018

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.* 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, 2018

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.* 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, 2018

Spinal Biomechanical Engineering: Full Spine Digital Analysis, *Digitalizing and analyzing the full spine images to diagnose pathobiomechanics as sequalae to trauma in relation to ligamentous failure and disc and vertebral pathology as sequalae. 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.* 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, 2018

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, 2018

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, 2018

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, 2018

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, 2018

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, 2018

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, 2018

Documentation and Compliance, A review of proper documentation and requirements to get the best patient results, *documentation to effectively support the necessity for clinically indicated care. The role of timely evaluations and re-evaluations in coordinating care inclusive of history, physical and evaluation report and concludes with the correlation of the SOAP note.* Kevin Sharpe, 2017

Shoulder Treatment and Diagnosis, An extensive look at the anatomy, etiology, diagnosis, and treatment of shoulder joint problems. How to coordinate care with orthopedic and the medical field for shoulder injuries. Raleigh, NC, 2017

Temporomandibular Joint Dysfunction, An extensive look at the anatomy, etiology, diagnosis and treatment of temporomandibular joint problems. How to coordinate care with dentists, orthodontists and the medical field in general. March 4-5, 2016 Chicago, Illinois.

Documentation and Evidence in a Medical-Legal Practice, *The role of scientific research conclusions with contemporary documentation to effectively support the necessity for clinically indicated care. The role of timely evaluations and re-evaluations in coordinating care inclusive of history, physical and evaluation report and concludes with the correlation of the SOAP note and HCFA that correlates the conclusion of the evolutionary findings. Coordinating research and clinical findings with primary care providers and medical specialists in the rehabilitation process inclusive of insurance requirements and contemporary MRI research nomenclature.* Academy of Chiropractic Post-Doctoral Division, Recognized by the PACE Program of the Federation of Chiropractic Licensing Boards, Boca Raton, FL, 2015

Impairment Rating Certification, 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. *Academy of Chiropractic Post Doctoral Division, Long Island, NY, 2012 Chiropractic Documentation, Billing and Coding, Review of documentation, proper billing and coding.* Texas Chiropractic College, Pasadena, TX, 2013

Ethics, Boundaries, and North Carolina Jurisprudence, *Review of ethics, boundaries and North Carolina jurisprudence.* Texas Chiropractic College, Pasadena, TX, 2013

Documentation and Triage in Trauma**,** ICD-9 and CPT requirements in coding for the traumatically injured including integrating electronic health records including informed consent, evaluation and management, testing orders. The utilization of research in medical reports for both the trauma and non-trauma patients. Clinical coordination of care and reporting to healthcare and legal providers, Federation of Chiropractic Licensure Boards, Academy of Chiropractic**,** American Academy of Medical-Legal Professionals, Hollywood, Florida, 2012

Medical-Legal Research and the Documentation of Causal Relationship, Prognosis and Treatment of the Traumatically Injured, Review of current research published in peer reviewed medically indexed journals focusing on traumatic injuries and how current literature affects the diagnostic conclusion and how to formulate treatment plans. Federation of Chiropractic Licensure Boards, Academy of Chiropractic, American Academy of Medical-Legal Professionals, Hollywood, Florida, 2012

Biomechanics of Spinal Trauma and its Relationship to Pre-Existing Injuries and Degenerative Changes. Whiplash Associated Disorders and the biomechanics of side impact

vs. rear impact with emphasis on traumatic forces and body position, the mechanism of whiplash injury phases with their relationships to physiologic tolerance to trauma, specific diagnosis of disc pathology and annular tear, disc herniation, fracture, ligamentous injury and instability. Details of spinal nerve root stretching injury and dimensions of the spinal canal during whiplash was outlined particular to significant spinal injury resulting from low level accelerations including pediatric spinal trauma and physiological normals. Spinal surgical intervention techniques including ordering diagnostic studies using MRI, CT and digital motion x-ray. Federation of Chiropractic Licensure Boards, Academy of Chiropractic, American Academy of Medical-Legal Professionals, Hollywood, Florida, 2012

MRI Spine Interpretation of Disc Bulge and Herniation, Spinal MRI findings related to degenerative changes vs. traumatic changes of the intervertebral disc by using definitions provided by the American Society of Neuroradiology. Anatomy of the intervertebral disc, spinal cord, nerve roots and spinal ligaments correlated to T1, T2, STIR sagittal, stacking and axial images. Anatomical MRI differentiation of normal, degenerative and traumatic changes, Federation of Chiropractic Licensure Boards, Academy of Chiropractic, American Academy of Medical-Legal Professionals, Hollywood, Florida, 2012

Electrodiagnostics Interpretation, EMG/NCV, Somato-sensory evoked potentials, brain stem auditory evoked potential and visual evoked potential utilization, physiology and interpretation, electrodiagnostic testing as a clinical component in part of the neurological work-up of the traumatically injured patient in both the peripheral and central nervous system. Inductions and contraindications to electrodiagnostic procedures. The utilization of electrodiagnostics in concluding radiculopathy, myelopathy and plexopathy and determining recent trauma or chronic pathology, Federation of Chiropractic Licensure Boards, Academy of Chiropractic**,** American Academy of Medical-Legal Professionals, Hollywood, Florida, 2012

Admissibility Standards of the Medical Expert in Trauma, Documentation requirements of the courts in a medical-legal case including causality, bodily injury and persistent functional losses, ethically reporting of functional loss as it pertains to the integrity of the joint and activities of daily living and implications of chronicity, reporting of normal findings, maximum medical improvement and the release of the patient in the medical-legal arena, Federation of Chiropractic Licensure Boards, Academy of Chiropractic**,** American Academy of Medical-Legal Professionals, Hollywood, Florida , 2012

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*. CMCS Post Doctoral Division, New York Chiropractic Council, New York State Department of Education Board for Chiropractic, Long Island, NY, 2009

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. CMCS Post Doctoral Division, New York Chiropractic Council, New York State Education Department Board for Chiropractic, Long Island, NY, 2009

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.* CMCS Post Doctoral Division, New York Chiropractic Council, New York State Education Department Board for Chiropractic, Long Island, NY, 2009

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.* CMCS Post Doctoral Division, New York Chiropractic Council, New York State Education Department Board for Chiropractic, Long Island, NY, 2009

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-Electronystagmosgraphy (V-ENG) interpretation, protocols and clinical indications for the trauma patient.* CMCS Post Doctoral Division, New York Chiropractic Council, New York State Education Department, Board for Chiropractic, Long Island, NY, 2009

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.* CMCS Post Doctoral Division, New York Chiropractic Council, New York State Education Department, Board for Chiropractic, Long Island, NY, 2009

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 kinesiopathology, myopathology, and neuropathology, pathophysiology in both a functional and structural paradigm.* CMCS Post Doctoral Division, New York Chiropractic Council, New York State Education Department, Board for Chiropractic, Long Island, NY, 2009

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.* CMCS Post Doctoral Division, New York Chiropractic Council, New York State Department of Education, Board for Chiropractic, Long Island, New York, 2010

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 sequellae.* CMCS Post Doctoral Division, New York Chiropractic Council, New York State Department of Education, Board for Chiropractic, Magdy Shady MD, Neurosurgeon, State University of New York at Stony Brook, Long Island, New York, 2009

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.* CMCS Post Doctoral Division, New York Chiropractic Council, New York State Department of Education, Board for Chiropractic, Robert Peyster MD, Neuroradiologist, State University of New York at Stony Brook, Long Island, New York, 2009

MRI Spinal Pathology, MRI *interpretation of bone, intradural, extradural, cord, and neural sleeve lesions. Tuberculosis, drop lesions, metastasis, epedymoma, schwannoma, and numerous other spinal related tumors and lesions.* CMCS Post Doctoral Division, New York Chiropractic Council, New York State Department of Education, Board for Chiropractic, Robert Peyster MD, Neuroradiologist, State University of New York at Stony Brook, Long Island, New York, 2009

MRI Disc Pathology & 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.* CMCS Post Doctoral Division, New York Chiropractic Council, New York State Department of Education, Board for Chiropractic, Robert Peyster MD, Neuroradiologist, State University of New York at Stony Brook, Long Island, New York, 2009

MRI Anatomy & History, 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.* CMCS Post Doctoral Division, New York Chiropractic Council, New York State Department of Education, Board for Chiropractic, Robert Peyster MD, Neuroradiologist, State University of New York at Stony Brook, Long Island, New York, 2009

MRI Physics and History, 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.* CMCS Post Doctoral Division, New York Chiropractic Council, New York State Department of Education, Board of Chiropractic, Terry Button, PhD, Medical Physicist, State University of New York at Stony Brook, Long Island, New York, 2009

Low Impact Auto Accidents, *Review of low impact auto accidents biomechanics and research studies on injuries from such accidents.* North Carolina Board of Chiropractic Education, Charlotte, NC, 2009

Chiropractic Documentation, Billing and Coding, *Review of documentation, proper billing and coding.* Chiropractic Network of the Carolinas, Greensboro, NC, 2009

Ethics, Boundaries, and North Carolina Jurisprudence, *Review of ethics, boundaries and North Carolina jurisprudence.* Texas Chiropractic College, Pasadena, TX, 2009

Pediatric and Fetal Development, *Review of the development of the fetus and infant as well related problems and chiropractic treatments.* North Carolina Chiropractic Association, Raleigh, NC, 2008

Chiropractic Treatment of Golf Injuries, *Review of normal golf swing, common swing errors, related injuries and chiropractic treatments of these injuries.* Texas Chiropractic College, Pasadena, TX, 2008

Chiropractic Treatment of Auto Accident Injuries*, A breakdown of the injuries sustained in auto accident from an anatomical, orthopedic, neurological, chiropractic, treatment and expected outcome stand point.* Texas Chiropractic College, Pasadena, TX, 2007

Foot and Ankle Symposium, *Chiropractic evaluation and treatment of foot and ankle injuries.* North Carolina Chiropractic Association, Raleigh, NC, 2007

Validating Chiropractic, *Up to date research regarding chiropractic treatment and outcomes for various conditions.* North Carolina Chiropractic Association, Raleigh, NC, 2006

Exercise and Strength Rehabilitation, *Review of normal muscle anatomy, types of training and benefits gained from various types of training.* North Carolina Chiropractic Association, Pasadena, TX, 2006

MRI Evaluation, *An in-depth look at MRI of the spine and diagnostic value to the chiropractor.* North Carolina Chiropractic Association, Charlotte, NC, 2005

Rehabilitation of the Spine, *Review of different types of in office and home exercise protocols for spinal and extremity injuries.* North Carolina Chiropractic Association, Raleigh NC, 2005

Selected Honors & Awards

Dean's List, Normandale Community College, 1993

Selected Memberships

International Chiropractic Association, 2018-Present

North Carolina Chiropractic Association, Member, 2009-2015

World Chiropractic Association, Member, 2006-2009

Selected Community Service

Raleigh Rugby Football Club Youth Coach, Raleigh 2220-Current

Raleigh Rugby Football Club, Board Member, Raleigh NC, 2014- 2019

Educational Coordinator BNI, Raleigh 2015

Vice President of BNI, Wake Forest, NC, 2014

Chamber of Commerce, Member, Raleigh, NC, 2008-2009

Tar River Kiwanis, Member, Rocky Mount, NC, 1997-2002

Red Cross, Volunteer CPR Instructor, Rocky Mount, NC, 1997-2000

Rocky Mount Jaycees, Member, Rocky Mount, NC, 1997-1999