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SELECTED OCCUPATIONAL HISTORY

Chiropractic Physician and Clinic Director, Asheville Spine and Injury Center, Asheville, North Carolina, 1992 –Present

Mission Hospital, Chaplain, Asheville, North Carolina, 2000 - 2016

Preceptor / Adjunct Clinical Faculty, Palmer College of Chiropractic, Port Orange, Florida, 2024

EDUCATION AND LICENSURE

Spinal Biomechanics and Trauma (Fellowship Candidate), State University of New York at Buffalo, Jacobs School of Medicine, Office of Continuing Education, and Cleveland University-Kansas City, College of Chiropractic, 2021-present

Doctor of Chiropractic, licensed in the State of North Carolina, License # 1880

Doctor of Chiropractic, licensed in the State of South Carolina, License # 1569

Doctor of Chiropractic, licensed in the State of West Virginia, License # 569

Doctor of Chiropractic, Life University, Marietta, Georgia, 1991

Internship, Life Clinics, Marietta, Georgia, 1989 - 1990

Internship, Dorothea Dix Hospital, Raleigh, North Carolina, 1985 - 1986

Internship, John Umstead Hospital, Butner, North Carolina, 1985

National Board of Chiropractic Examiners, Part I, 1990

National Board of Chiropractic Examiners, Part II, 1990

National Board of Chiropractic Examiners, Part III, 1990

B.A. in Averett University, Danville, Virginia, 1983

Master of Divinity in Southeastern Baptist Theological Seminary, Wake Forest, NC, 1986

Certification in Physiological Therapeutics in National Chiropractic College, Lombard, Illinois, 1990

Undergraduate Studies in Science, Brenau College, Gainesville, Georgia, 1987

Teaching and Academic Positions

Preceptor / Adjunct Clinical Faculty

1. Palmer College of Chiropractic – Supervised and mentored senior chiropractic interns in clinical practice.
2. Provided instruction on patient assessment, differential diagnosis, treatment planning, and case management.
3. Modeled professional standards in documentation, ethical practice, and interdisciplinary communication.
4. Evaluated intern performance, offering feedback and guidance to enhance clinical competence.

SELECTED POST-GRADUATE EDUCATION, AND CERTIFICATIONS

Soft Tissue Injury Classification and Mechanism Correlation in Personal Injury Practice - Advanced clinical instruction on the identification, differentiation, and documentation of ligamentous, discal, muscular, and osseous injuries in trauma-focused environments. Emphasizes injury pattern recognition, acceleration-deceleration biomechanics, rotational and shear stress mechanisms, compression versus distraction forces, and expected tissue-specific healing timelines. Covers acute versus delayed presentation patterns, instability indicators, fracture identification, annular disruption patterns, and structural compromise. Clinical reporting strategies are aligned with medico-legal scrutiny, focusing on causation analysis, objective reproducibility, and defensible narrative development consistent with high-liability case

environments. National Spine Management Group, Federation of Chiropractic Licensing Boards, PACE Program 2026

MRI Interpretation in Personal Injury: Acute vs. Chronic Disc Pathology and Degenerative Differentiation - In-depth analysis of intervertebral disc morphology, displacement patterns, and degenerative grading systems with emphasis on differentiating traumatic herniation from degenerative bulge. Detailed instruction on Modic endplate changes (Types 0-III), Pfirrmann disc grading (I-V), disc desiccation, loss of disc height, vacuum phenomenon, intradiscal fluid, signal intensity interpretation, and migration patterns including protrusion, extrusion, and sequestration. Integrates sagittal and axial plane analysis, zone classification, annular fissure recognition, and correlation of imaging findings with symptom patterns and EMG data. Emphasis on timing of imaging relative to causative event and structured reporting language to support causation analysis in medico-legal review. National Spine Management Group, Federation of Chiropractic Licensing Boards, PACE Program 2026

ACR Technical Standards and MRI Spine Protocol Optimization for Medico-Legal Defensibility - Comprehensive review of American College of Radiology (ACR) Practice Parameters and Technical Standards for cervical, thoracic, and lumbar MRI. Covers slice thickness requirements, interslice gap limitations, STIR sequence utilization, sagittal and axial planning through superior endplate, mid-disc, and inferior endplate levels, and sequence optimization for annular and endplate evaluation. Emphasis on reproducibility, artifact minimization, patient positioning standards, and imaging consistency necessary for medico-legal defensibility. Instruction highlights the role of proper technical acquisition in preventing misinterpretation, under-reporting, and credibility challenges in litigation environments. National Spine Management Group, Federation of Chiropractic Licensing Boards, PACE Program 2026

Personal Injury Case Management: From the Clinic to the Courtroom - A comprehensive 8-lecture clinical and medico-legal training program addressing the full continuum of personal injury case management from initial patient encounter through litigation and expert testimony. Instruction includes tissue-based injury identification, mechanism-of-injury correlation, reproducible examination procedures, imaging integration, structured documentation, impairment considerations, and courtroom communication strategy. Emphasis is placed on defensibility under cross-examination, documentation reviewed by non-clinicians, deposition preparation, and interdisciplinary coordination with attorneys, adjusters, and primary care physicians. Participants

develop systematic case frameworks that integrate clinical precision with legal awareness while maintaining evidence-based spine management principles. National Spine Management Group, Federation of Chiropractic Licensing Boards, PACE Program 2026

Alteration of Motion Segment Integrity (AOMSI) in Cervical and Lumbar Spine Trauma: Biomechanics, Measurement Standards, and Reliability Metrics - Advanced instruction in the biomechanical and radiographic evaluation of motion segment instability in both the cervical and lumbar spine utilizing AMA Guides (5th and 6th Editions) criteria. Comprehensive coverage includes translational and angular measurement thresholds for the cervical spine (>3.5 mm anterior-posterior translation; >11° segmental angular differential compared to the adjacent inferior segment) and lumbar spine motion integrity assessment through flexion-extension radiography, segmental translation analysis, and angular displacement evaluation. Emphasis is placed on proper imaging acquisition protocols, neutral-flexion-extension positioning, full patient effort validation, elimination of motion artifact, magnification correction, and standardized measurement methodology to ensure reproducibility. Instruction correlates abnormal motion findings with ligamentous injury patterns involving the anterior longitudinal ligament (ALL), posterior longitudinal ligament (PLL), interspinous and supraspinous ligaments, facet capsule disruption, and posterior tension band compromise. Participants analyze instability patterns in acute trauma versus degenerative spondylotic motion changes, differentiating structural incompetence from adaptive hypermobility. Impairment rating implications are reviewed with structured integration into medico-legal reporting, including causation analysis, permanency considerations, and courtroom defensibility strategy. The program further incorporates advanced discussion of inter-rater reliability (IRR) and quantitative agreement standards in motion measurement systems. Detailed review of Cohen's Kappa (κ) interpretation thresholds for categorical agreement and Intraclass Correlation Coefficient (ICC) benchmarks for continuous measurement reliability is applied directly to translational and angular motion analysis. The curriculum underscores structured, reproducible measurement systems, inter-reader comparison methodology, and objective documentation strategies that enhance defensibility under deposition and cross-examination while promoting interdisciplinary consistency in spine trauma evaluation. National Spine Management Group, Federation of Chiropractic Licensing Boards, PACE Program 2026

Inter-Rater Reliability in Quantitative Spine Assessment and Medico-Legal Measurement Integrity - Advanced discussion of inter-rater reliability metrics including Cohen's Kαppa (κ),

Intraclass Correlation Coefficient (ICC), and percent agreement standards as applied to segmental motion analysis, disc grading systems, translational and angular measurements, and AOMSI evaluation. Interpretation scales and clinical benchmarks are reviewed with emphasis on thresholds appropriate for clinical use, research integrity, and high-stakes medico-legal environments. Instruction focuses on minimizing provider-dependent variability, enhancing interdisciplinary consistency, and strengthening objective defensibility under deposition and cross-examination. National Spine Management Group, Federation of Chiropractic Licensing Boards, PACE Program 2026

Legal Frameworks in Personal Injury: No-Fault Systems, Tort Law, and Litigation Processes- Structured overview of personal injury legal frameworks including No-Fault versus Tort systems, serious injury thresholds, Personal Injury Protection (PIP) requirements, subrogation principles, pre-litigation negotiation processes, and formal litigation procedures. Detailed discussion of depositions, direct examination, contingency fee structures, defense counsel roles, and the strategic importance of early documentation. Emphasis on clinician awareness of how medical records are interpreted by non-clinicians, how inconsistencies weaken credibility, and how structured documentation shapes case boundaries and settlement outcomes. National Spine Management Group, Federation of Chiropractic Licensing Boards, PACE Program 2026

Regulatory Compliance, FDA Pathways, and Risk Management in Clinical Technology Utilization - Comprehensive review of FDA medical device regulatory pathways including 510(k) clearance and De Novo classification processes, predicate device requirements, risk classification levels, and submission timelines. Examines professional, civil, and criminal consequences of utilizing non-FDA-approved technologies, including malpractice exposure, insurance reimbursement denial, regulatory enforcement actions, and institutional disciplinary measures. Provides mitigation strategies including verification of clearance status, risk assessment protocols, IRB consultation when appropriate, and structured regulatory strategy planning for innovative or AI-based technologies within chiropractic and interdisciplinary spine practices. National Spine Management Group, Federation of Chiropractic Licensing Boards, PACE Program 2026

Concussion/Mild Traumatic Brain Injury and Traumatic Brain Injury, Diagnosing and Triaging,

developed proficiency in differentiating mTBI from more severe presentations through evidence-based neurological and cognitive assessments. Trained in identifying red flag symptoms requiring urgent imaging or specialist referral. Acquired expertise in correlating patient history, mechanism of injury, and exam findings for accurate classification. Focused on optimizing patient outcomes through early identification and appropriate interdisciplinary care coordination. Cleveland University, Kansas City, Chiropractic and Health Sciences, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2025

Documenting and Coding Evaluations and Re-Evaluations, The documentation requirements for CPT codes 99202 through 99205 are determined by either medical decision-making (MDM) or total time spent on the date of the encounter. Each higher-level code reflects increasing complexity of history, examination, and MDM, or greater total time. For time-based coding, 99202 requires 15–29 minutes, 99203 requires 30–44 minutes, 99204 requires 45–59 minutes, and 99205 requires 60–74 minutes of total provider time. MDM criteria include the number and complexity of problems addressed, the amount and/or complexity of data reviewed, and the risk of morbidity or mortality from patient management. Accurate documentation is essential to support code selection and to ensure compliance with CMS and payer requirements. Cleveland University, Kansas City, Chiropractic and Health Sciences, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2025

Research Trends in Spine Care: Ongoing study of emerging spinal research with emphasis on disc pathology, biomechanical engineering, anomalies, tumors, and infections. Actively engaged in reviewing clinical applications of cutting-edge findings to improve patient outcomes. Focus includes interpreting complex imaging and integrating advancements in diagnostics and treatment protocols. Collaboration with neurosurgeons, orthopedic specialists, oncologists, and infectious disease experts is integral to case management based on pathology. Emphasis is placed on interdisciplinary coordination to ensure comprehensive and evidence-based spine care. Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2025

Documenting complicated and uncomplicated spinal cases, focusing on anatomical and biomechanical pathology: Creating comprehensive evaluation, management, and medical-legal reports tailored to the complexity of each case. Integrating clinical findings with imaging and laboratory data to support evidence-based care. Demonstrated ability to manage cases independently or in collaboration with medical specialists when appropriate. Translating complex

diagnostic and functional findings into clear, actionable documentation for clinical and legal use. Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2025

Fellowship Candidate, Spinal Biomechanics and Trauma - *State University of New York at Buffalo, Jacobs School of Medicine, Office of Continuing Education, and Cleveland University-Kansas City, College of Chiropractic, 2021-present*

Diagnosis and Management of Lumbar Disc Herniation – case review of traumatically induced 10mm L5-S1 intervertebral disc extrusion was presented. The correlation of neurological examination including testing of myotomes, dermatomes, and deep tendon reflexes was presented. Detailed reviews of sagittal T1, sagittal T2, axial T1, axial T2 as well as STIR images were presented. Clinical referral for surgical consultation was outlined, and clinical rationale was presented. Review of the differences between anatomical and functional sources of pain were outlined with a focus on biomechanical parameters such as pelvic incidence. 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.

Chiropractic Diagnosis and Management of Vertebral Compression Fracture – review of the influence of osteoporosis on the development of vertebral compression fracture was reviewed and detailed in comparison to neoplasm. Utilization of MRI as the gold standard for evaluating the age of and pathophysiology was discussed and presented. Absorptiometry was outlined and presented in relation to monitoring bone density. Interprofessional communication of absolute versus relative contraindications to conservative care and spinal manipulation was outlined and reviewed. Review of the three columns of vertebral architecture was detailed. 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.

Chiropractic Diagnosis and Management of Cervical Ligament Laxity – detailed outline of injury thresholds of the anterior longitudinal, posterior longitudinal and ligamentum flavum was presented. Review of structural and physiological properties relating to stress/strain curve of the above ligaments. Outline of the toe region, linear region and failure region was demonstrated. Transversely isotropic material properties of spinal ligaments was included and correlated to chiropractic care and impairment rating using the AMA Guides to the Evaluation and

Management 5th and 6th editions. 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.

Chiropractic Diagnosis and Management of Lumbar Ligament Laxity – detailed outline of injury thresholds of the anterior longitudinal, posterior longitudinal and ligamentum flavum was presented in the lumbar spine. Review of structural and physiological properties relating to stress/strain curve of the above ligaments. Outline of the toe region, linear region and failure region were demonstrated. Transversely isotropic material properties of spinal ligaments were included and correlated to chiropractic care and impairment rating using the AMA Guides to the Evaluation and Management 5th and 6th editions. 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.

Diagnosis and Management of Lumbar Arachnoiditis – an outline of the causes of arachnoiditis in the human spine was presented. Specific focus was on a case of lumbar arachnoiditis involving the cauda equina evidenced on T1, T2 sagittal and axial MRI. Treatment options and lack of curative interventions were presented. Relevant anatomy of the lumbar spine including cauda equina, conus medullaris, filum terminale, dura mater, pia mater and arachnoid mater were reviewed in detail. Reviews of arachnoiditis and chiropractic adjustment were discussed as well as interprofessional coordination of care with interventional pain management and surgical consultation. 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.

Standards in Report Writing and Diagnosing, accurate documentation of patient-reported pain, including exacerbating factors and pain elicitation during evaluations. He meticulously records past medical, family, and social histories to support a comprehensive clinical assessment. His reporting aligns with appropriate Evaluation & Management (E&M) coding standards to reflect the complexity of each case. This thorough approach enhances diagnostic accuracy, continuity of care, and proper reimbursement. Academy of Chiropractic-Post Doctoral Division, Long Island, NY, 2025

Spinal Biomechanical Engineering Diagnosing, The utilization of X-ray in spinal biomechanical engineering for accurate diagnosis, prognosis, and treatment planning. This approach aids in identifying the primary lesion in the spine, ensuring targeted and effective care. Additionally, it facilitates the assignment of impairment ratings to spinal pathology based on objective imaging findings. Accurate X-ray analysis enhances clinical decision-making and patient outcomes in spinal healthcare. Academy of Chiropractic-Post Doctoral Division, Long Island, NY, 2025

Research Trends in Spine Care: Ongoing study of emerging spinal research with emphasis on disc pathology, biomechanical engineering, anomalies, tumors, and infections. Actively engaged in reviewing clinical applications of cutting-edge findings to improve patient outcomes. Focus includes interpreting complex imaging and integrating advancements in diagnostics and treatment protocols. Collaboration with neurosurgeons, orthopedic specialists, oncologists, and infectious disease experts is integral to case management based on pathology. Emphasis is placed on interdisciplinary coordination to ensure comprehensive and evidence-based spine care. Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2025

Documenting complicated and uncomplicated spinal cases, focusing on anatomical and biomechanical pathology: Creating comprehensive evaluation, management, and medical-legal reports tailored to the complexity of each case. Integrating clinical findings with imaging and laboratory data to support evidence-based care. Demonstrated ability to manage cases independently or in collaboration with medical specialists when appropriate. Translating complex diagnostic and functional findings into clear, actionable documentation for clinical and legal use. Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2025

Chiropractic Diagnosis and Management of the Post-Surgical Patient - outline and analysis of spinal biomechanical parameters in a whole spine model of care in the post-surgical analysis of the spine pain patient. A review of the details of measuring Pelvic Incidence and discussion of history of its analysis in relation to sagittal balance and vertebral body rotation was discussed. Outline of movement from a regional model of spine care to a full spine model was presented particularly in the context of pain management strategies post-surgery. Analysis of the components of the post-surgical patient including muscle movement patterns, segmental mobility, spinal curvature, and rotation in the coronal, sagittal and axial planes were presented. Interprofessional communication and co-management were emphasized. 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.

Chiropractic Diagnosis and Management of the Pre-Surgical Patient – outline and analysis of spinal biomechanical parameters in a whole spine model of care. Review of the details of measuring Pelvic Incidence and discussion of history of its analysis. Outline of movement from a regional model of spine care to a full spine model was presented. Analysis of the components of the pre-surgical patient including muscle movement patterns, segmental mobility, spinal curvature and rotation in the coronal, sagittal and axial planes 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 – 2021.

Biomechanical Analysis in Patient Crash Injuries – Detailed review of the difference between biomechanical and biomedical analysis of injuries was presented. Outline of necessity of the use of properly credentialed biomechanical and crash investigation professionals in the diagnosis, management, and reporting of crash injuries. Review of specific research related to forces during Activities of Daily Living and those sustained in a crash were presented. Details of a proper biomechanical analysis were discussed, and specific review of a biomedical report omitting the mathematical calculations needed to determine force and injury potential was presented. Additional review of methods needed to determine expertise of the bio mechanist or accident investigation was discussed. 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.

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. [Texas Chiropractic College or PACE Recognized by The Federation of Chiropractic Licensing Boards],ACCME Joint Provider ship 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 gradientand STIR sequences of imaging. Standardized and desired protocols in views and sequencing of MRI examination to create an accurate diagnosis in MRI. [Texas Chiropractic College or PACE Recognized by The Federation of Chiropractic Licensing Boards], ACCME Joint Provider ship 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

Aberrant Spinal Motion and Degenerative Disc Disease – research analysis of mechanic factors as etiology of intervertebral disc degeneration. Review of spinal tissue mechanics and their relation to mechanical stress was discussed and corelated to abnormal changes in the structure and composition of the intervertebral disc. Detailed discussion of ingrowth of pain transmitting nerve fibers into degenerative intervertebral discs and their relationship to acute and chronic pain was presented. Clinical correlation between congenital malformations of the spine, including scoliosis, kyphosis, spina bifida, spondylolysis and Klippel Feil syndrome), accidental back injury or ligament injury, occupational exposure and causing aberrant mechanical loading of lumbar spine, and intervertebral disc degeneration visible on T1, T2 and STIR MRI, sagittal and axial sequences was presented. National Spine Management Group, LLC, Federation of Chiropractic Licensing Boards, 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 tumorsand lesions. [Texas Chiropractic College or PACE Recognized by The Federation of Chiropractic Licensing Boards], ACCME Joint Provider ship 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. [Texas Chiropractic College or PACE Recognized by The Federation of Chiropractic Licensing Boards], ACCME Joint Provider ship with the State University of New York at Buffalo Jacobs School of Medicine andBiomedical 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 clinical indications of manual and adjustive therapies in the patient with spinal nerve rootand spinal cord insult as sequelae. [Texas Chiropractic College or PACE Recognized by The Federation of Chiropractic Licensing Boards], ACCME Joint Provider

ship with the State University of New York at BuffaloJacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2018

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, and infection. National Spine Management Group, Cleveland University Kansas City, Chiropractic and Health Sciences, Federation of Chiropractic Licensing Boards, Lehi, UT 2021

Clinical Grand Rounds – Chiropractic Management of Chronic Spine Pain – Discussion of chronic spine pain as a Public Health issue and Chiropractic's role in its diagnosis and management. Epidemiological statistics of chronic pain sufferers consulting Doctors of Chiropractic in the United States was presented. Outline of a spinal function and
A preventative model as opposed to a curative process was presented and reviewed. 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

Clinical Grand Rounds – Chiropractic Management of Lumbar Disc Herniation – review of the pathogenesis and morphological presentation of lumbar intervertebral disc herniation. Outline of patient history, physical examination including neurological and orthopedic evaluation as well as criteria for ordering and reading advanced imaging such as MRI and CT were presented. Plain film static and dynamic radiographic studies were reviewed. Patient centered; consensus-driven clinical diagnosis including interprofessional communication was presented. 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.

Clinical Grand Rounds – Importance of Interprofessional Healthcare Communication and *Teamwork –* *Discussion of the history of interprofessional healthcare and the acknowledgement by the World Health Organization was presented. Specific details on chiropractic academia and student perception of its importance was outlined. The growth and importance of both interprofessional education and communication was stressed and reviewed. Need for a clear professional identity to facilitate interprofessional education and communication was*

presented. 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.

Clinical Grand Rounds – Chiropractic Management of Lumbar Facet Syndrome - discussion of the clinical presentation of lumbar facet syndrome with specific attention paid to the pathogenesis and differential diagnosis of lumbar disc herniation, disc bulge and radiculopathy. Review of patient history, mechanism of injury, physical examination including neurological and orthopedic evaluation as well as criteria for ordering and reading advanced imaging such as MRI and CT were presented. Discussion involving ligamentous structures such as interspinous ligament, supraspinous ligament and facet capsules was presented. Plain film static and dynamic radiographic studies were reviewed as well as specific Sclerotogenous referrals patterns of facet mediated pain. Patient centered; consensus driven clinical diagnosis including interprofessional communication was presented; specific presentation relating to diagnostic medial branch blocks and pain management referral was emphasized. 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.

Clinical Grand Rounds – Cervical Spinal Alignment and Knee Replacement Revision Rates – Review of the most common cervical spinal sagittal alignment parameters and their relationship to interprofessional communication was presented. Discussion of rationale for knees replacement revision surgery including aseptic loosening, fracture and prosthetic joint infection was reviewed. Specific statistical review on revision surgery and effective treatment of end- stage knee osteoarthritis was presented. Details of evidence-based research outlining patients with cervical degenerative disorders having a higher rate of total knee replacement revisions than those without degenerative changes. Analysis of the benefit of radiographic studies looking at the mechanical relationship between the cervical spine and knee composition was outlined and reviewed. 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.

Pain Management and the Chiropractic Adjustment – Current peer reviewed indexed research demonstratingthe 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, 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 duringthe 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, Lehi, UT 2021

Health Maintenance Care and Chiropractic Case Management, Current peer reviewed indexed researchdemonstrating 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 professionand the public was emphasized. National Spine Management Group, Cleveland University Kansas City, Chiropractic and Health Sciences, Federation of Chiropractic Licensing Boards, Buffalo, NY, 2021

Evidence Based Clinical Reporting, an overview of current CPT and ICD-10 coding guidelines pertaining to theevaluation and management of spine pain patients was presented. Timed codes, relevant diagnosis relatedto injured tissue were 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, 2021

Cervical Spine Clinical Workflows, detailed review of workflows of a thorough patient history and identificationof 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 ofChiropractic Licensing Boards, Buffalo, NY, 2021

Lumbar Spine Clinical Workflows, detailed review of workflows of a thorough patient history and identificationof 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 dysfunctionwas 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, 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 SpineManagement Group, Cleveland University Kansas City, Chiropractic and Health Sciences, Federation of Chiropractic Licensing Boards, Buffalo, NY, 2021

Clinical Documentation for the Spine Surgeon, contemporary techniques to best communicate chiropractic care to the spine surgeon, were 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 forphone consultation was presented. National Spine Management Group, Cleveland University Kansas City, Chiropractic and Health Sciences, Federation of Chiropractic Licensing Boards, Buffalo, NY,

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 andscope 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, 2021

Clinical Documentation for Attorney, contemporary techniques to best communicate chiropractic care andpermanent 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, 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 sagittalbalance 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, 2021

Clinical Grand Rounds – Patient Triage – testing and physical examination workflows – evidence-based evaluation of the spine pain patient was outlined and presented. Thorough review of criteria for ordering plain film and advanced imaging was discussed and

demonstrated. Clinical rationale for ordering electrodiagnostic testing and patient referral criteria overview was demonstrated. EMR and documentation workflows were discussed, and efficiency protocols were outlined and applied to evidence based physical examination procedures with and without a medical scribe. Details of re-evaluations and clinical outcomes were reviewed and discussed. 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.

Objectifying the Biomechanical Spine Lesion, review of ligament laxity and alternation of motion segmentintegrity 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 waspresented. 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 andHealth Sciences, Federation of Chiropractic Licensing Boards, Buffalo, NY, 2021

Clinical Grand Rounds – Classification of Cervical Degenerative Disc Disease – review of a radiographic rating system for objective assessment of intervertebral disc degeneration in the cervical spine. The degree of degeneration was organized based on loss of disc height, formation of osteophytes and the presence of diffuse sclerosis of adjacent vertebral bodies. Specific details of assessment were outlined and presented. Comparison of plain film radiographs to cadaver specimens was demonstrated and discussed. Review of interobserver validity of the grading system between observers was presented. 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

Clinical Grand Rounds – Differentiating Degenerative vs Traumatic Cervical Spondylolisthesis – outline of spondylolisthesis clinical work up in the presence of spine pain including plain film dynamic radiographs, regional MRI study and assessment of alteration of motion segment integrity of specific spinal segments. Review of the correlation of present segmental degenerative changes such as loss of disc height, osteophyte formation, ligament ossification and facet joint hypertrophy and its association to pre-existing spondylosis was

presented. Detailed discussion of past and present medical history including past traumatic events was emphasized. 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.

Clinical Grand Rounds – Mechanical Response of Damaged Human Cervical Spine Ligaments – discussion of the biomechanical properties of cervical spinal ligaments under sub-failure loads. Ligaments discussed were the Anterior Longitudinal Ligament, Posterior Longitudinal ligament, and the Ligamentum Flavum. Deformations exceeding physiological limitations were presented and reviewed. Grade I and Grade II injuries were outlined and discussed. Presentation included observed ligamentous injury significantly compromising ligament ability to give tensile support within physiological spinal motion. Findings were clinically correlated to long term sequalae in Alteration of Motion Segment Integrity and the AMA Guides to the Evaluation of Permanent Impairment 5th and 6th Editions. 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.

Clinical Grand Rounds – Facet Joint Thresholds and Alteration of Motion Segment Integrity – discussion of the predominant mode of joint loading of the cervical facet joints during whiplash injury related to retraction tension on the facet joint capsule. Review of shear forces, translation of the inferior and superior facet joint as well as injury risk due to excessive stretching of spinal ligaments was presented. Overview and discussion of mechanical trauma to ligament tissue and subsequent microstructural damage not visibly detected was outlined. Threshold for microstructural changes during retraction, reduced ligament stiffness and unrecovered strain was discussed in detail. Individual response to facet joint capsule response supported in the medical literature was presented. 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

Documentation, MRI Necessity and Trends in Spinal Treatment Protocols, correlating history and a thoroughclinical evaluation in determining the necessity for x-ray and MRI evaluations in the trauma and non-trauma patients. Considering whole spine patho-biomechanics in formulating treatment plans and long-term supportive care. Documentation requirements in transitioning from telemedicine to in-office care. Academy ofChiropractic Post-

Doctoral Division, PACE Approved for the Federation of Chiropractic Licensing boards, Long Island, New York, 2020

Documentation & Clinical Excellence, utilizing documentation to accurately reflect the Evaluation and Management code billed. Inclusive of a complete current, past history, previous care, and a full review of systems. The management of post-traumatic cases in a collaborative environment in a literature-based standard. Academy of Chiropractic Post-Doctoral Division, PACE Approved for the Federation of ChiropracticLicensing Board, Long Island, New York, 2020

Solution Based Documentation & Clinical Excellence, A case study of managing a patient where the MRI was inaccurate based upon literature standards and the collaboratively working through a system in triagingan extruded disc patient from psychological support to appropriate surgical care. Academy of Chiropractic Post-Doctoral Division, PACE Approved for the Federation of Chiropractic Licensing Board, Long Island, NewYork, 2020

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, andsequellae to injury diagnosis. Academy of Chiropractic Post-Doctoral Division, PACE Approved for the Federation of Chiropractic Licensing Boards, Long Island, New York, 2020

Diagnosing and Case Management, the requirements for diagnosing imaging inclusive of static x-rays, biomechanical x-rays, and MRI. Documenting the clinical findings of disc bulge, herniation, protrusion, extrusion, and fragmentation. Coding, diagnosing, and documenting individual treatment encounters in theclinical setting. Academy of Chiropractic Post-Doctoral Division, PACE Approved for the Federation of Chiropractic Licensing Board, Long Island, New York, 2020

Improving Quality & Treatment Outcomes & Clinical Care and Risk Management, Review of best practices inclinical procedures to improve patient care, promote safety and reduce practice risks with proper patient documentation. Health Network Solutions, North Carolina Licensing Board of Chiropractic Examiners, North Carolina, 2020

Compliance & Cultural Competency Training for Contracted Health Care Professionals, Education and training regarding the laws and regulations that govern the health care industry to ensure compliance tothose laws. Health Network Solutions, North Carolina Licensing Board of Chiropractic Examiners, NorthCarolina, 2020

ICD-10 Code & Reimbursement Changes, Clinical update on proper codes for diseases, signs and symptoms, abnormal findings, complaints, social circumstances, and external causes of injury or diseases.Health Network Solutions, North Carolina Licensing Board of Chiropractic Examiners, North Carolina, 2020

Certification in Advanced Examination and Proficiency rating of spinal ligament injuries, Biocybernetics, Inc.,Clearwater, Florida, 2020

Forensic Documentation-Report Writing, *Report writing in a medical-legal case inclusive of causality, bodily injury, persistent functional loss, and restrictive sequela from trauma. Demonstratively documenting bodily injury utilizing models, graphs and patient image of x-ray and advanced imaging.* Cleveland University, Kansas City, PACE Recognized by the Federation of Chiropractic Licensing Boards, Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2019

Forensic Documentation- Demonstrative Documentation, *demonstratively reporting spinal biomechanical failure and spinal compensation. How in a medical-legal environment to ethically report pre-existing injuries vs causally related current injuries and what is permissible in a legal proceeding.* Cleveland University, Kansas City, PACE Recognized by the Federation of Chiropractic Licensing Boards, Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2019

Forensic Documentation- Reporting Direct Opinions, *Causality, bodily injury, and persistent functional losses documented and reported in a medical-legal environment as your direct opinion. Avoiding hearsay issues to ensure ethical relationships.* Cleveland University, Kansas City, PACE Recognized by the Federation of Chiropractic Licensing Boards, Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2019

Forensic Documentation- Initial, Final and Collaborative Reporting, *preparing demonstrative documentation in a medical-legal case ensuring that you are familiar with all other treating doctor's reports. Correlating your initial and evaluation and management (E&M) report and your*

follow-up E&M reports with the narrative upon maximum medical improvement documenting continuum of care. Cleveland University, Kansas City, PACE Recognized by the Federation of Chiropractic Licensing Boards, Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2019

Forensic Documentation- Qualifications and Preparation of Documentation, *how to prepare your documentation for courtroom testimony and ensuring your qualifications are documented properly on an admissible, professional curriculum vitae. How to include indexed peer-reviewed literature in medical-legal documentation, Cleveland* University, Kansas City, PACE Recognized by the Federation of Chiropractic Licensing Boards, Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2019

Forensic Documentation- Reporting Patient History and Credentials, *Reporting patient history in a medical-legal case based upon your initial intake forms and understanding the work, social, academic, household, and social activities of your patient. Understanding and explaining your doctoral and post-doctoral credentials in the courtroom.* Cleveland University, Kansas City, PACE Recognized by the Federation of Chiropractic Licensing Boards, Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2019

Forensic Documentation- Reporting Chiropractic Care and Injured Anatomy, *preparing demonstrative documentation in a medical-legal case to report the bodily injuries of your patients , inclusive of loss of function and permanent tissue pathology.* Cleveland University, Kansas City, PACE Recognized by the Federation of Chiropractic Licensing Boards, Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2019

Forensic Documentation- Reporting Temporary vs. Permanent Issues, *preparing documentation in a medical-legal case ensuring that you can communicate permanent vs. temporary functional losses and permanent vs. temporary tissue pathology. How to maintain and explain ethical relationships in medical-legal cases,* Cleveland University, Kansas City, PACE Recognized by the Federation of Chiropractic Licensing Boards, Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2019

Forensic Documentation- Reporting Bodily Injury, *how to report bodily injury and functional losses as supported by your credentials in a medical-legal case. Clinically correlating causality and permanent tissue pathology as sequela to trauma,* Cleveland University, Kansas City, PACE Recognized by the Federation of Chiropractic Licensing Boards, Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2019

Forensic Documentation- Record Review and Documentation Reporting, *how to report records of collaborative treating doctors and communicating your scope of practice in the management of your case. How to ethically report your role as a doctor in medical-legal cases,* Cleveland University, Kansas City, PACE Recognized by the Federation of Chiropractic Licensing Boards, Academy of Chiropractic, Post-Doctoral Division, Long Island, NY, 2019

Coding, Documentation and Compliant Coding, PACE Approved for the Federation of Chiropractic Licensing Boards, Academy of Chiropractic Post-Doctoral Division, Long Island, New York, 2019

Medical-Legal Ethical Relationships, Documentation and Legal Testimony, *Report writing for legal cases, the 4 corners of a narrative and documenting damages with understanding defense medical documentation and consistent reporting of bodily injuries.* Academy of Chiropractic, Post-Doctoral Division, Cleveland University-Kansas City, College of Chiropractic, Long Island, NY, 2018

Medical-Legal Ethical Relationships, Documentation and Legal Testimony, Part 2, *Understanding report writing and the types of medical reports required for court inclusive of diagnosis, prognosis, and treatment plans with requirements of reporting causality and permanency.* Academy of Chiropractic, Post-Doctoral Division, Cleveland University-Kansas City, College of Chiropractic, Long Island, NY, 2018

Medical-Legal Ethical Relationships, Documentation and Direct Testimony, *organizing your documentation and understanding all collaborative documentation and how it fits into your diagnosis, prognosis, and treatment plan*, *Understanding the nuances of the functional losses of your patients related to their bodily injuries*, Academy of Chiropractic, Post-Doctoral Division. Academy of Chiropractic, Post-Doctoral Division, Cleveland University-Kansas City, College of Chiropractic, Long Island, NY, 2018

Medical-Legal Ethical Relationships, Documentation and Direct Testimony Part 2, *Utilizing demonstrative documentation in direct examination and communicating the results of your care concurrently with the written documentation and reporting an accurate diagnosis for all images.* Academy of Chiropractic, Post-Doctoral Division, Cleveland University-Kansas City, College of Chiropractic, Long Island, NY, 2018

Medical-Legal Ethical Relationships, Documentation and Direct Testimony Part 3, The evaluation, interpretation, and reporting of collaborative medical specialists' results and

concluding an accurate diagnosis inclusive of all findings and reviewing all images to ensure an accurate diagnosis. Academy of Chiropractic, Post-Doctoral Division, Cleveland University-Kansas City, College of Chiropractic, Long Island, NY, 2018

Medical-Legal Ethical Relationships, Documentation and Direct Testimony Part 4, Determining and documenting disabilities and impairments inclusive of loss of enjoyment of life and duties under duress and the evaluation and validation of pain and suffering. Academy of Chiropractic, Post-Doctoral Division, Cleveland University-Kansas City, College of Chiropractic, Long Island, NY, 2018

Medical-Legal Ethical Relationships, Documentation and Cross Examination Testimony, reporting your documentation factually and staying within the 4 corners of your medical report and scope of practice inclusive of understanding how your credentials allow you to report your documentation. Academy of Chiropractic, Post-Doctoral Division, Cleveland University-Kansas City, College of Chiropractic, Long Island, NY, 2018

Medical-Legal Ethical Relationships, A Documentation Relationship Between the Doctor and Lawyer, the level of organization required in a medical-legal case that accurately reflects the bodily injuries of your patients and the time constraints in rendering an accurate report. Academy of Chiropractic, Post-Doctoral Division, Cleveland University-Kansas City, College of Chiropractic, Long Island, NY, 2018

Medical-Legal Ethical Relationships, Report Writing and Preparing for a Legal Case, Reviewing the facts of the case inclusive of your documentation, the defense medical *examiner, medical specialists, and the attorney to ensure accurate and consistent reporting.* Academy of Chiropractic, Post-Doctoral Division, Cleveland University-Kansas City, College of Chiropractic, Long Island, NY, 2018

Medical-Legal Ethical Relationships, Report Writing and Preparing for a Legal case, *Creating demonstrative evidence, visuals of your patient's bodily injuries inclusive of x-rays, MRI's, CAT Scans and electrodiagnostic findings, the spinal biomechanics of herniated disc with ipsilateral findings and contralateral symptomatology.* Academy of Chiropractic, Post-Doctoral Division, Cleveland University-Kansas City, College of Chiropractic, Long Island, NY, 2018

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 sequestrationof 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, New York, 2019

Evidenced Based Care in a Collaborative Setting; Primary Spine Care 5, 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 havingthe evidence as a basis for those recommendations, Academy of Chiropractic Post-Doctoral Division PACE Approved for the Federation of Chiropractic Licensing Boards, Cleveland University- Kansas City, College of Chiropractic, Long Island NY, 2018

Current Literature Standards of MRI Spine Interpretation; Primary Spine Care 5, MRI Spine Interpretation ofthe Spine. How to triage trauma and non-trauma with advanced imaging and document the necessity. Basics of MRI Spine Interpretation inclusive of all types of herniations, bulges, Academy of Chiropractic Post-Doctoral Division, PACE Approved for the Federation of Chiropractic Licensing Boards, Cleveland University-Kansas City, College of Chiropractic, Long Island NY 2018

Spine Brain Connection in Pain Pathways; Primary Spine Care 5 , MRI Spine The spine-brain connection inmanaging chronic pain patients. Understanding how chronic pain negatively affects 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'srole, Academy of Chiropractic Post-Doctoral Division, PACE Approved for the Federation of Chiropractic Licensing Boards, Cleveland University- Kansas City, College of Chiropractic, Long Island NY 2018

Bio-Neuro-Mechanical Mechanism of the Chiropractic Spinal Adjustment; Primary Spine Care 5, The biological, neurological, and mechanical mechanisms, and pathways from the thrust to the lateral horn and brain connection and how the brain processes chiropractic spinal adjustment based upon the literature.Care paths of chiropractic and physical therapy from an outcome basis, Academy of Chiropractic Post-Doctoral Division, PACE Approved for the Federation of Chiropractic Licensing Boards, Cleveland University-Kansas City, College of Chiropractic, Long Island, NY 2018

Triaging and reporting while maintaining ethical medical-legal relationships, Neurodiagnostic, Imaging Protocols and Pathology of the Trauma Patient, an in-depth understanding of the protocols in triaging andreporting 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 2018

Physical Examination & Documentation for the Trauma Patient, Neurodiagnostic, Imaging Protocols andPathology of the Trauma Patient, an in-depth understanding of the protocols in triaging and reporting theclinical 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 2018

Crash Dynamics and Its Relationship to Causality, 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 targetcar. This includes Gs 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, Academyof Chiropractic Post-Doctoral Division, Long Island, NY 2018

MRI, Bone Scan and X-Ray Protocols, Physiology and Indications for the Trauma Patient, MRI, Bone Scanand 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-DoctoralDivision, Long Island, NY 2018

Neurodiagnostic Testing: EMG/NCV, VEP, BAER, V-ENG and SSEP, Clinical Indications and Interpretation,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 2018

Documentation and Working within Your State Laws to Ensure Compliant Paperwork and Reimbursement, 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 2018

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 kinesiopathology, myopathology, neuropathology, and pathophysiology in botha functional and structural paradigm. Cleveland University – Kansas City, Academy of Chiropractic Post-Doctoral Division, Long Island, NY 2018

Spinal Biomechanical Engineering, Cartesian System, The Cartesian Coordinate System from 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. Certification inSpinal Biomechanical Engineering, Cleveland University – Kansas City, ACCME Joint Provider ship 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 theanterior and posterior motor units and normal function and relationship of the intrinsic musculature to thosemotor units. Nomenclature in reporting normal and pathobiomechanical findings of the spine. Cleveland University – Kansas City, ACCME Joint Provider ship with the State University of New York at Buffalo JacobsSchool 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

Provider ship 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 sequellae to pathobiomechanics from trauma. The utilization of digital motion x-ray in diagnosing normal versus abnormalfacet motion along with case studies to understand the clinical application. Cleveland University – Kansas City, ACCME Joint Provider ship with the State University of New York at Buffalo Jacobs School of Medicineand 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 algorithms in analyzing a spine. Cleveland University – Kansas City, ACCME Joint Provider ship with the StateUniversity 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 movements. Ligament instability/failure/pathology are identified all using numerical values and models. Review of case studies to analyze pathobiomechanicsusing a computerized /numerical algorithm. Cleveland University – Kansas City, ACCME Joint Provider ship 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 spineimages to diagnose pathobiomechanics. This includes anterior and posterior vertebral body elements inrotational 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 Provider ship 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 sequellae to trauma in relation to ligamentous failure and discand 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.Cleveland University – Kansas City, ACCME Joint Provider ship 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, 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 systeminclusive of the lateral horn, periaqueductal grey matter, thalamus, and cortices involvement. Cleveland University – Kansas City, ACCME Joint Provider ship with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NewYork, 2018

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-datingspinal disc pathology in accordance with Wolff's Law. Cleveland University – Kansas City, ACCME Joint Provider ship 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

Diagnostic dilemmas and connective tissue Morphology, 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 JointProvider ship 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

Ligament anatomy and injury research and spinal kinematics, Spinal Trauma Pathology, Ligament Anatomyand 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 Provider ship 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 pathologyand 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 Provider ship with the State University of New York at Buffalo Jacobs School of Medicineand Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, New York, 2018

Spinal trauma pathology, Research and documentation Review, The review of current literature standards inspinal trauma pathology and documentation review of biomechanical failure, ligamentous failure, and age- dating disc pathology. Cleveland University – Kansas City, ACCME Joint Provider ship with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy ofChiropractic Post-Doctoral Division, Buffalo, New York, 2018

Orthopedic Testing: Principles, Clinical Application and Triage, Integration of orthopedic testing in the clinicalsetting 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 Provider ship with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy ofChiropractic Post-Doctoral Division, Buffalo, NY, 2018

Cervical Spine Orthopedic Testing, Integration of cervical orthopedic testing in the clinical setting to develop adifferential diagnosis. Utilizing radiographic and advanced imaging inclusive of MRI and CAT scan findings toverify tissue pathology suspected by orthopedic testing conclusions and developing a treatment plan as sequelae. Cleveland University – Kansas City, ACCME Joint Provider ship 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 Part 2, integration of cervical orthopedic testing in the clinical setting to develop a differential diagnosis. Utilizing radiographic and advanced imaging inclusive of MRI and CAT scanfindings to verify tissue pathology suspected by orthopedic testing conclusions and developing a treatment plan as sequelae. Cleveland University – Kansas City, ACCME Joint Provider ship with the State University ofNew 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 adifferential diagnosis. Utilizing radiographic and advanced imaging inclusive of MRI and CAT scan findings toverify tissue pathology suspected by orthopedic testing conclusions and developing a treatment plan as sequelae. Cleveland University – Kansas City, ACCME Joint Provider ship with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-DoctoralDivision, Buffalo, NY, 2018

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 patientsand 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 Provider ship with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy ofChiropractic Post-Doctoral Division, Buffalo, NY, 2018

Impairment Rating, The understanding and utilization of the protocols and parameters of the AMA Guide tothe 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 detailedin relation to impairment ratings. [Texas Chiropractic College or PACE Recognized by The Federation of Chiropractic Licensing Boards'], ACCME Joint Provider ship with the State University of New York at BuffaloJacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, , 2018

Head Trauma, Brain Injury and Concussion, Brain and head physiology, brain mapping and pathology as a sequella to trauma. Traumatic brain injury, mild traumatic brain injury, axonal shearing, diffuse axonal injury, and concussion are detailed in etiology and clinically. Clinical presentation, advanced diagnostic imaging andelectrodiagnostics are detailed in analysis to create a differential diagnosis. Balance disorders that often occur as a result of trauma are also explored from clinical presentation to advanced imaging and differential diagnosis. [Texas Chiropractic College or PACE Recognized by The Federation of Chiropractic Licensing Boards], Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2018

Stroke Anatomy and Physiology: Brain Vascular Anatomy, The anatomy and physiology of the brain and howblood 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 Provider ship with the State University of NewYork at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-DoctoralDivision, Buffalo, NY, 2018

Stroke Anatomy and Physiology Part 2, Stroke Types and Blood Flow, Various types of stroke identifying ischemia, hypoperfusion, infarct and penumbra zones and emboli. Cardiac etiologies and clinical features as precursors 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 Provider ship with the State University of NewYork at Buffalo Jacobs School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-DoctoralDivision, 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 andfuture care in the chiropractic, primary care, or manual medicine clinical setting. Cleveland University – Kansas City, ACCME Joint Provider ship with the State University of New York at Buffalo Jacobs School ofMedicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, Buffalo, NY, 2018

Clinical Evaluation & Protocols for Identifying Stroke Risk, the neurological history and examination foridentifying 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, ACCMEJoint Provider ship 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

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 translatedto 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 CriticalDocumentation,** Factors that cause negative acceleration to zero and the subsequent forces created for thevehicle 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 inreconstructing 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, frontalimpact 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

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 theperformance 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 emphasison 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, 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 ofpassive 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

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, 2018

Documenting Trauma and Non-Trauma Cass and Triaging Disc Pathology, Triage, care, and collaboration forherniated, bulged, protruded, extruded, and fragmented spinal discs. Compliant documentation of evaluationand management of new and established patients

inclusive of chief complaint, history of present illness, review of systems, past-family-social histories with case management protocols and the required elements. Clinically coordinating treatment with subjective complaints, clinical findings, and diagnosis for each encounter. PACE Approved for the Federation of Chiropractic Licensing Boards, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2018

Utilization of Research in the Clinical setting, utilizing peer reviewed scientific literature in creating a diagnosis, prognosis, and treatment plan for the chronic and acute patient. How to implement and stay current on techniques and technology in healthcare. [Texas Chiropractic College or PACE Recognized byThe Federation of Chiropractic Licensing Boards], Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2018

Primary Spine Care 2: Spinal Trauma Pathology, Morphology of healthy and traumatized connective tissue and the permanency implication of adhesions, spinal disc morphology in the healthy and pathological patientas sequella to trauma in relationship to bulges, herniations, protrusions, extrusions, and sequestrations. Aberrant spinal biomechanics and negative sequella to trauma. Texas Chiropractic College, Academy ofChiropractic, Setauket NY, 2018

Primary Spine Care 2: Utilizing Research in Trauma, the ability of your electronic health records to conveytissue pathology while documenting case studies, field experiments, randomized trials, and systematic literature reviews, introducing evidence-based macros in documentation to support the literature andnecessity of care. Texas Chiropractic College, Academy of Chiropractic, Setauket NY, 2018

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 uponoutcome studies. Texas Chiropractic College, Academy of Chiropractic, Setauket NY, 2018

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 disparateregions of the body in both pain and systemic stimulation. Texas Chiropractic College, Academy of Chiropractic, Setauket NY, 2018

Improving Quality & Treatment Outcomes of Clinical Care and Risk Management, Review of current state and federal documentation requirements including outcome measures to ensure optimal patient care. HealthNetwork Solutions, North Carolina State Board of Chiropractic Examiners, 2018

Primary Spine Care 6: Connective Tissue Pathology, Spinal Biomechanics as Sequella to Trauma, , MRI Spine Interpretation Ordering Protocols & Triaging the Injure, the latest research on the 6 ways to age-datedisc herniations and bulges from trauma inclusive of disc pathology nomenclature. MRI ordering protocols, inclusive of Dixon format and fat-suppressed images. The neurology and pathology of connective tissue andthe sequella of trauma at the biomechanical level leading to bio-neuro-mechanical failure. Contemporary u201cevidenced-based building blocksu201d for triaging and in a collaborative environment. Cleveland University Kansas City, Chiropractic and Health Sciences, Academy of Chiropractic Post-Doctoral Division,Long Island NY, 2018

Primary Spine Care 6: Spinal Biomechanical Engineering Digitizing, integrating automated mensuration intocreating treatment plans and determining maximum medical improvement. A literature-based study of normalvs. abnormal motor until function. Determining ligamentous laxity, alteration of motion segment integrity and pathological stress units and whole person impairments based upon the literature and academic standards, Cleveland University Kansas City, Chiropractic and Health Sciences, Academy of Chiropractic Post-Doctoral Division, Long Island NY 2018

Primary Spine Care 6: Science of the Chiropractic Spinal Adjustment and Vertebral Subluxation, the literature-based definitions of both the mechanisms, the chiropractic adjustment and how it affects the centralnervous system in pain pathways and systemic issues that is the arbiter for normal vs. abnormal function. The physiological mechanisms of how chiropractic spinal adjustment affects the peripheral and centralnervous systems. Subluxation degeneration/Wolff's Law will be detailed from a literature perspective combined with the mechanism of subluxation (bio-neuro-mechanical lesion). A literature perspective on why long-term chiropractic care is clinically indicated as usual and customary to effectuate demonstrable biomechanical changes in the spine. An evidenced-based perspective of why physical therapy is a poorchoice for spine as a 1st referral option for any provider inclusive of the literature.

Cleveland University Kansas City, Chiropractic and Health Sciences, Academy of Chiropractic Post-Doctoral Division, Long IslandNY 2018

Primary Spine Care 6: Documentation, Collaboration, and Primary Spine Care, an academic basis for documentation that is usual and customary across professions in collaborative care. Maintaining ethical medical-legal relationships based upon Voir Dire and Duabert standards with ensuring a u201c4- cornersu201d inclusive report. Ensuring Primary Care Status based upon an academic standard. ClevelandUniversity Kansas City, Chiropractic and Health Sciences, Academy of Chiropractic Post-Doctoral Division, Long Island NY 2018

Credentialed in MRI Interpretation, ACCME Joint Sponsorship with the State University of New York atBuffalo, School of Medicine and Biomedical Sciences, Academy of Chiropractic Post-Doctoral Division, recognized by the PACE Program of the Federation of Chiropractic Licensing Boards, Buffalo, New York,2018

Certification in Trauma Team Member, Academy of Chiropractic, 2018

Understanding whiplash, Details concerning the biomechanics of low-speed rear impact collisions. This includes discussions on the S shaped curve of the spine, general magnitudes of force, factors associated with increased risk of injury and the types of injuries that result from these collisions. DcHours, 2010

BASIC MRI PART 1, This course describes the basic fundamental principles shared by all MRI scanners inproducing MRI images 2010

BASIC MRI PART 2, A discussion regarding the multiplanar images of MRI, the shades of gray and the differences between T1 and T2 weighted images. We will then explore the special MRI studies that have been created to help identify different pathologies. This will include discussions on Fat Suppression, ContrastEnhanced and Functional MRI studies. 2010

BASIC MRI PART 3, Discussion of Contraindications to MRI, how to read an MRI report, the MRI appearance of DDD, Ligamentum Flavum Hypertrophy, Disc Herniations, Annular Tears and Post-discSurgical cases. 2010

PASSIVE CARE MODALITY'S PART 1, Passive Care Modalities provide detailed instruction on symptom-based care. This will include a discussion regarding thermal therapies and electric stimulation and TENS unitintegration as an effective pain management tool. 2010

PASSIVE CARE MODALITY'S PART 2, In this course we will continue our discussion on Passive care Modalities. This course will provide information and instruction on Ultrasound, Trigger Point Therapy, andTraditional Traction. 2010

FUNCTION BASED CARE PART 1, Instructions are provided to physicians on the basic principles of function-based care. It will include a discussion on how to demonstrate medical necessity for function-based care, how to perform physical capacity tests, and how to prescribe specific exercises related to the patient's ability to perform those tests. 2010

FUNCTION BASED CARE PART 2, Function Based Care picks up with Neuromuscular Re-education. In this course we will discuss the theory of this treatment as well as how to demonstrate medicalnecessity for these exercises. This course will also discuss stretching exercises and postural correction exercises. 2010

BASIC CASE MANAGEMENT, this course will provide you with the basic principles of case management. Itwill include discussion on evaluation, diagnosis, setting goals and treatments. As part of this course, you will also be introduced to the use of outcome assessments. 2010

Chiropractic in the World of Sports Injuries, Diagnosis, and treatment of athletic injuries Review of protocolsand evaluation of field injuries with special consideration of head and brain injuries. Palmer College of Chiropractic Institute for Professional Advancement, 2000

Pathobiomechanics and Documentation, CPT Coding Guidelines for Initial and Established Patients withparticular attention paid to Patient History, Review of Systems, Social and Family History, Physical Examination, and Medical Decision making. Specific differences in coding levels and required elements for a99202-99203-99204-99205. Academy of Chiropractic Post-Doctoral Division, PACE Approved for the Federation of Chiropractic Licensing Boards, Cleveland University, Kansas City, Missouri, 2000

Pain Management, an overview of the fundamentals of pain medicine in addition to identifying

best practices and practical approaches to the treatment of common pain disorders. Focused, case-based lectures designed to advance patient outcomes by improving the assessment, diagnosis, treatment, and managementof patients with various acute and chronic pain disorders. Cleveland Chiropractic College and American Academy of Pain Management, 1998

V**alidating Chiropractic, 20 years of research in scientific literature** and how to apply it clinically to improvepatients' health, function, and quality of life. Life College - School of Chiropractic, 1993

AMA Guidelines to the Evaluation of Permanent Impairment of musculoskeletal injuries, this course is specifically designed to educate and prepare physicians in the use of the AMA Guidelines to the Evaluation of. Permanent Impairment. Perform musculoskeletal permanent impairment ratings according to the AMA Guides to the Evaluation of Permanent Impairment. Life College - School of Chiropractic, 1993

Whiplash and Spinal Trauma, Current review of medical, legal and insurance developments and informationnecessary to successfully evaluate, treat and manage patients with whiplash, spinal trauma, and personal injury claims. Life College - School of Chiropractic, 1993

SELECTED TEACHING/INSTRUCTING/LECTURING/CONSULTING

Adjunct Clinical Instructor / Preceptor
Palmer College of Chiropractic – Clinical Co-Curricular Programs
Asheville Spine & Injury Center, Asheville, NC — 2023–Present

- Provide clinical instruction and mentorship to senior chiropractic students completing their externship rotations.
- Supervise patient evaluations, treatment planning, and evidence-based care delivery in a private practice setting with a focus on spinal trauma and personal injury cases.
- Integrate diagnostic imaging (X-ray, MRI), advanced range of motion assessment, and functional testing into patient management.
- Facilitate interprofessional communication with medical providers and attorneys to ensure continuity of care and accurate medico-legal documentation.
- Emphasize professional ethics, documentation compliance, and real-world practice management skills.

Instructor, Advanced Musculoskeletal Evaluation and Diagnostic Technologies

Myotronics-Noromed, New York, NY — 1996-1997

- Delivered advanced training in musculoskeletal assessment using state-of-the-art diagnostic technologies.
- Provided hands-on instruction to healthcare professionals on clinical application of Myotronics-Noromed systems for evaluation and treatment planning.
- Focused on integrating objective data collection (surface EMG, computerized range of motion, diagnostic analysis) into evidence-based patient care.

SELECTED PUBLICATIONS

Stockstad, M. (2003). The World's Best Kept Health Secret Revealed. 297 - 277

SELECTED MEMBERSHIPS

National Spine Management Group, 2021 – Present

Academy of Chiropractic, 2018 - 2021

The American Academy or Medical-Legal Professionals,2018 – Present

Foundation for Wellness Professionals, 2014 – Present

North Carolina Chiropractic Association, (Vice President Western District 2014-2015),

American Chiropractic Association, 1990 - Present

Doctors for Health and Wellness Foundation, 2016 - 2018

American Academy of Pain Management, 1998 - 1999

American Association of Spine Physicians, 1998 - 1999

International Chiropractic Association, 1990 - 1992

SELECTED COMMUNITY SERVICE

Mission Hospital Chaplain, Asheville, North Carolina, 2000 - 2016