CMLA

Commission for Motion Laboratory Accreditation, Inc

Application Review Criteria

Part 1: Administration and Personnel

Question 1: Summary Statement.

☐ Statement of Laboratory's scope, purpose and mission is provided. Stated purpose indicates that the Laboratory is involved in clinical work.

Question 2: **Lab Personnel/Titles/Credentials/Licensure**.

☐ Completed Table of Laboratory personnel included in application.

☐ Appendix A is included – current CPR or BLS certificates of all staff with direct patient contact provided.

☐ Appendix B is included – current licensure verifications of all medical /clinical staff provided.

☐ Laboratory demonstrates that clinical assessments and evaluation are being conducted by or under the supervision of a clinician with credentials/licensure which includes assessment/evaluation within the scope of practice for the population being served.

☐ Laboratory demonstrates that any invasive procedures performed (including but not limited to fine wire placement) are being conducted by or under supervision of a clinician whose licensure/credentials include such procedures within the scope of their clinical practice.

☐ The Laboratory demonstrates that data interpretation team includes at least one licensed clinician with demonstrated knowledge and expertise for treatment of conditions present in the population being served.

☐ The Laboratory demonstrates that personnel involved in clinical recommendations have appropriate licensure.

Question 3: **Components of Clinical Evaluation**

☐ The application indicates that the Laboratory captures & reports 3-D kinematics

☐ The application indicates that the Laboratory captures & reports 3 orthogonal components of force (kinetics)

☐ The application indicates that the Laboratory measures & reports electromyographic muscle activity (EMG)

☐ The application indicates that the Laboratory captures all components (kinematics, kinetics, & EMG) simultaneously.

- ☐ Documentation of volume of clinical cases provided.
- ☐ Documentation of diagnosis categories & percentages of clinical cases provided.
- ☐ Documentation of referral process for clinical cases provided.
- ☐ Evidence provided that clinical motion studies are performed following physician referral.
- ☐ Appendix C is included – Laboratory Referral Form.

Question 4: Consumer Feedback

- ☐ Documentation of a mechanism for patient/family satisfaction
- ☐ Documentation of a mechanism for referral source satisfaction
- ☐ Appendix D included - Surveys

Question 5: Procedure Manuals, Quality Assurance, and Competency

- ☐ Documentation of procedure manual, procedure protocols or operational definitions for physical examination or assessment as performed in the Motion Laboratory. Appendix E is included
- ☐ Documentation of a procedure manual or procedure protocol for marker/target placement. Appendix F is included.
- ☐ Documentation of a procedure manual or procedure protocol for EMG surface electrode placement as performed in the Motion Laboratory. Appendix G is included.
- ☐ Documentation of a procedure manual or procedure protocol for EMG fine wire placement as performed in the Motion Laboratory. Appendix H is included.
- ☐ Documentation of a procedure manual or procedure protocol for data collection. Appendix I included.
- ☐ Documentation of a procedure manual or procedure protocol for data reduction which includes an established verification system for target tracking and event identification. Appendix J is included.
- ☐ Documentation of a process for data interpretation.
- ☐ Documentation of a process for clinical recommendations.

☐ Documentation of Quality Assurance Programs in at least two of the following areas within the past 3 years

- ☐ a. physical exam
- ☐ b. marker/target placement
- ☐ c. surface EMG placement
- ☐ d. fine wire EMG placement
- ☐ e. data collection
- ☐ f. data reduction

☐ Documentation of methods to maintain consistency within personnel for each of the following areas:

- ☐ a. physical exam
- ☐ b. marker/target placement
- ☐ c. surface EMG placement
- ☐ d. fine wire EMG placement
- ☐ e. data collection
- ☐ f. data reduction
- ☐ g. data interpretation
- ☐ h. clinical recommendations

☐ Documentation of methods to maintain consistency between personnel for each of the following areas:

- ☐ a. physical exam
- ☐ b. marker/target placement
- ☐ c. surface EMG placement
- ☐ d. fine wire EMG placement
- ☐ e. data collection
- ☐ f. data reduction
- ☐ g. data interpretation
- ☐ h. clinical recommendations

☐ Documentation of methods to achieve initial competency of personnel for each of the following areas is provided:

- ☐ a. physical exam
- ☐ b. marker/target placement
- ☐ c. surface EMG placement
- ☐ d. fine wire EMG placement
- ☐ e. data collection
- ☐ f. data reduction
- ☐ g. data interpretation
- ☐ h. clinical recommendations

☐ Documentation of methods to maintain competency of personnel for each of the following areas is provided:

- ☐ a. physical exam
- ☐ b. marker/target placement
- ☐ c. surface EMG placement
- ☐ d. fine wire EMG placement
- ☐ e. data collection
- ☐ f. data reduction
- ☐ g. data interpretation
- ☐ h. clinical recommendations

Question 6: Safety Policies and Personnel Competencies

☐ Documentation of Written Policies for adherence to:

- ☐ Local Building Safety Codes. Appendix K is included.
- ☐ Hazards Communication Program, including Material Safety Data Sheets available for potentially hazardous materials in work area. Appendix L included.
- ☐ Emergency Medical Provision & First Aid Procedures. Appendix M included.
- ☐ Age-Specific Patient Care Services Program for all personnel with direct patient contact (technical and clinical). Appendix N included.
- ☐ Hospital and Departmental Infection Control Policies. Appendix O included.

☐ Evidence of maintained competency for all personnel by annual training in the following areas. Appendix P included:

- ☐ Local Building Safety Codes
- ☐ Environmental Safety Procedures
- ☐ Emergency Medical Provision & First Aid Procedures (demonstration of current CPR or BLS certification will suffice – see Appendix A)
- ☐ Age-Specific Patient Care Services
- ☐ Infection Control Procedures

Question 7: Other Accrediting Agencies

☐ Documentation of current accreditation (including date of expiration) from agencies indicated. Appendix Q included.

Part 2: Equipment

Question 1: Physical Layout

☐ Dimensions and description of current physical space or layout is provided. Appendix R is included.

Question 2: Hardware

☐ Documentation of descriptions for all equipment in current use for routine data collection as described in Part 1 Question 3a.

☐ Capability to capture & report 3-D kinematics

☐ Capability to capture & report 3 orthogonal components of force (kinetics)

☐ Capability to measure & report electromyographic muscle activity (EMG)

☐ Evidence of system components for synchronization between kinematic, kinetic, and EMG measurement systems

Question 3: Calibration Procedures, Accuracy & Precision: Motion Capture System

☐ Documentation of calibration procedures for the motion capture system.

☐ Evidence that calibration occurs in accordance with manufacturer's recommendations for the motion capture system being used.

☐ Documentation of methods to ensure accuracy (validity) of the motion capture system.

☐ Documentation of methods to ensure precision (repeatability) of the motion capture system

☐ Appendix S is included.

☐ Physical layout in Question 1 is consistent with the calibration volume described in Question 3.

Question 4: Calibration Procedures, Accuracy & Precision: Other Systems

☐ Documentation that calibration procedures are in place for all additional measurement equipment used for clinical analysis.

- ☐ 1. Force platform system
- ☐ 2. EMG system
- ☐ 3. All additional measurement systems as described in Part1 Question 3a.

☐ Evidence that calibration occurs in accordance with manufacturer's recommendations for each additional measurement system

- ☐ 1. Force platform system
- ☐ 2. EMG system
- ☐ 3. All additional measurement systems as described in Part1 Question 3a.

☐ Documentation of methods to ensure accuracy (validity) for each additional measurement system

- ☐ 1. Force platform system
- ☐ 2. EMG system
- ☐ 3. All additional measurement systems as described in Part1 Question 3a.

☐ Documentation of methods to ensure precision (repeatability) for each additional measurement system

- ☐ 1. Force platform system
- ☐ 2. EMG system
- ☐ 3. All additional measurement systems as described in Part 1 Question 3a.

☐ Appendix T is included.

Question 5: Biomechanical Model/Marker Set.

☐ Evidence that marker set can characterize 3D kinematics of the lower limbs.

☐ Evidence that the biomechanical model can utilize coordinate trajectories and ground reaction forces to calculate 3D kinetics of the lower limbs.

☐ Description provided demonstrates that authors understand the strengths and weaknesses of the biomechanical model they are using

☐ Description provided demonstrates that authors understand the potential sources of error in their calculations.

Part 3: Data Processing/Data Management/ Reporting

Question 1: Software/Data Processing/Data Reduction.

☐ Description of kinematic & kinetic data reduction software provided

☐ Description of EMG data reduction software provided.

☐ Description of how processing errors are identified and corrected is provided.

☐ Description of how gait events are identified is provided.

☐ Description provided demonstrates that authors understand the strengths and weaknesses of the data reduction software they are using for reduction of kinematic and kinetic data.

☐ Description provided demonstrates that authors understand the strengths and weaknesses of the data reduction software they are using for reduction of EMG data.

Question 2. Control Dataset.

☐ Description of control kinematic and kinetic dataset complete.

- ☐ Facility & Date(s) of data collection provided.
- ☐ Description of marker set provided.
- ☐ Type and Model of motion capture system provided
- ☐ Type and Model of force plate system provided

☐ Description of control EMG dataset complete (including facility & date of data collection)

☐ Suggested table provided and complete with data as requested.

☐ Description of data averaging, number of gait cycles per patient, and assignment of standard deviation provided.

☐ If control data taken from the literature or manufacturer, description of methodology for verification of consistency and validity of data with current clinical system is provided.

☐ Documentation of control kinematic and kinetic data provided. Appendix U included.

☐ Documentation of control EMG data provided. Appendix V included.

☐ Documentation of control temporal-distance parameters provided. Appendix W is included if necessary.

Question 3. Submission of Data Set and Descriptive Clinical Report.

☐ Data set includes a physical examination relevant to the condition being evaluated

- ☐ Passive Range of Motion Examination
- ☐ Lower Extremity Alignment (Transverse/Coronal Plane)
- ☐ Muscle Testing of Relevant Muscle Groups
- ☐ Assessment of Selective Motor Control

☐ Comprehensive kinematic data set provided

- ☐ Conditions of Testing Identified
  (e.g. barefoot, orthotic, prosthetic, shoes, assistive device, etc.)
- ☐ Clear Identification of Right/Left sides
- ☐ Clear Identification of Gait Cycle
- ☐ Clear Identification of Y-axis label
- ☐ Anatomic/Planar Orientation of Plots
- ☐ Normative Data Included on Plots and Clearly Identified
- ☐ Temporal-Distance parameters included
- ☐ Type of Depicted data clearly identified
  (representative trial, multiple trials, mean of multiple trials, etc.)

☐ Comprehensive kinetic data set provided

- ☐ Conditions of Testing Identified
  (e.g. barefoot, orthotic, prosthetic, shoes, assistive device, etc.)
- ☐ Clear Identification of Right/Left sides
- ☐ Clear Identification of Gait Cycle
- ☐ Clear Identification of Y-axis label
- ☐ Anatomic/Planar Orientation of Plots
- ☐ Normative Data Included on Plots and Clearly Identified

☐ Comprehensive EMG data set provided

- ☐ Clear Identification of Right/Left sides
- ☐ Clear Identification of Gait Cycle
- ☐ Normative Data Included on Plots and Clearly Identified
- ☐ Clear Identification of Type of processing, if appropriate
- ☐ Muscles or Muscle Abbreviations clearly identified

☐ Comprehensive Clinical History data set provided

- ☐ Identification of chief complaint or reason for study
- ☐ Documentation of pertinent past medical history
- ☐ Documentation of pertinent past surgical history
- ☐ Documentation of current orthotic, prosthetic, assistive device use

☐ Comprehensive Clinical/Interpretive Report provided
- ☐ Anatomic and/or Problem List Organization of Report
- ☐ Identification of Clinically Important Deviations/Abnormalities
- ☐ Identification of Possible Specific Treatment Options Based on Deviations/Abnormalities
- ☐ Names, profession, signatures of interpreters included. At least one of interpreters has a medical practice license.

☐ The Laboratory demonstrates that treatment recommendations (including appropriate referrals) are made consistent with the clinician's licensure guidelines.

Question 4. Data Management/Confidentiality

☐ Documentation of data management for raw data provided
- ☐ Location
- ☐ Back-Up
- ☐ Security
- ☐ Confidentiality
- ☐ Duration

☐ Documentation of data management for processed data provided
- ☐ Location
- ☐ Back-Up
- ☐ Security
- ☐ Confidentiality
- ☐ Duration

☐ Documentation of data management for video data provided
- ☐ Location
- ☐ Back-Up
- ☐ Security
- ☐ Confidentiality
- ☐ Duration

☐ Documentation of data management for clinical history/questionnaires provided
- ☐ Location
- ☐ Back-Up
- ☐ Security
- ☐ Confidentiality
- ☐ Duration

☐ Documentation of data management for physical examination provided
- ☐ Location
- ☐ Back-Up
- ☐ Security
- ☐ Confidentiality
- ☐ Duration

☐ Documentation of data management for clinical files provided
- ☐ Location
- ☐ Back-Up
- ☐ Security
- ☐ Confidentiality
- ☐ Duration

☐ Documentation of Written Policies regarding back-up procedures, security measures, and patient confidentiality in the following area. Appendix Y included and complete.

- ☐ Information Systems.
- ☐ Protected Health Information
- ☐ Medical Records or Health Information Systems

☐ Evidence of maintained competency for all personnel by annual training in the following areas. Appendix Z included:

- ☐ Information Systems.
- ☐ Protected Health Information
- ☐ Medical Records or Health Information Systems