**Minnesota Athletic Trainers’ Association Annual Meeting and Symposium**

**MATA Student Free Communications**

**MATA Student Research Abstract Proposal Guidelines**

*\*\*Borrowed with permission from the GLATA Research Assistance Committee\*\**

**DEADLINE FOR ABSTRACT SUBMISSION: See MATA website for this year’s deadline.**

**Abstracts will be submitted via the MATA website.**

**Instructions for Submission of Abstracts and Process for Review of all Submissions:**

Please read all instructions before preparing the abstract. Individuals may submit more than one abstract, but no individual may be the primary (presenting) author on more than one paper. The first author must be a student member within the MATA. Each student submission must have a certified member sponsor who is a member of the MATA. All abstracts will undergo blind review.

The top three poster submissions will present their research in a moderated session during the MATA Annual Meeting & Symposium. The remaining accepted submissions will be presented in poster format during or in conjunction with the Annual Meeting and Symposium.

**Instructions for Preparing Original Research Abstracts for Free Communications*:***

**1.** Provide all information requested on the online Abstract Author Information Form on the MATA website.

**2.** Top, bottom, right, and left margins of the body of the abstract (in a Microsoft Word file) should be set at 1.5" using the standard 8.5" x 11" format. Use Arial, Calibri, or Helvetica font no smaller than 12pt. Provide the title of the paper or project starting at the left margin. Clinical case report/series titles should not contain information that may reveal the identity of the individual. An example of a proper title for a clinical case report is "Chronic Shoulder Pain in a Collegiate Wrestler”.

**3.** On the next line, indent 3 spaces and provide the names of all authors, with the author who will make the presentation listed first. Enter the last name, then initials (without periods), followed by a comma, and continue the same format for all secondary authors (if any), ending with a colon.

**4.** On the same line following the colon, indicate the name of the institution (including the city and state) where the research was conducted.

***5.*** Double space and begin entering the body of the abstract flush left in a single paragraph with no indentions. **The text of the body must be structured** (i.e., with the bolded headings as indicated below). Do not justify the right margin. Do not include tables, figures, or references. Abbreviations should be defined for the reader before use, except for the approved abbreviations (see below). The body of abstracts for original research must not exceed 475 words and clinical case reports must not exceed 600 words.

***6.*** Abstracts fall into one of the following 7 categories; the author is responsible for determining the most applicable category for structuring their abstract. Abstracts should be prepared with the appropriate running headers within a single paragraph.

**1. Basic Research (e.g. experimental, epidemiological)**

* **Basic Sciences (e.g. muscle tissue biopsy, EMG, etc)**
* **Epidemiology (e.g. cohort, case-control, intervention, clinical trial)**
* **Biomechanics (e.g. motion analysis, jump landing characteristics)**

**Context:** No more than two to three sentences summarizing the rationale for the study. End this section by stating the specific objective(s) or question(s) addressed in the abstract, including hypotheses if applicable.

**Methods:** The following should be included (where applicable): Study design (Clinical trial, cohort, cross-section, controlled laboratory study, etc), setting, patient population (include appropriate data for age, height, mass, time from surgery, etc); Intervention, outcome measures (including specific units of measure where appropriate), data processing, statistical analyses

**Results:** The main results of the study should be given. Comparative reports must include descriptive data (e.g., proportions, means, rates, odds ratios or correlations), accompanying measures of dispersion (e.g., ranges, standard deviations or confidence intervals) and inferential statistical data. Where appropriate, results should be accompanied by the exact level of statistical significance.

**Conclusions:** Summarize or emphasize the new and important findings of the study. The conclusion must be consistent with the study objectives and results as reported and should be no more than three to four sentences.

**Clinical Applications:** Include practical applications of information to improve patient care.

**Word Count:** 475 word limit

**2. Survey Research**

**Context:** No more than two to three sentences summarizing the rationale for the study. End this section by stating the specific objective(s) or question(s) addressed in the abstract, including hypotheses if applicable.

**Methods:** The following should be included (where applicable): Study design (Clinical trial, cohort, cross-section, controlled laboratory study, etc), setting, patient population (include appropriate data for age, height, mass, time from surgery, etc); Intervention, outcome measures (including specific units of measure where appropriate), data processing, statistical analyses

**Results:** The main results of the study should be given. Comparative reports must include descriptive data (e.g., proportions, means, rates, odds ratios or correlations), accompanying measures of dispersion (e.g., ranges, standard deviations or confidence intervals) and inferential statistical data. Where appropriate, results should be accompanied by the exact level of statistical significance.

**Conclusions:** Summarize or emphasize the new and important findings of the study. The conclusion must be consistent with the study objectives and results as reported and should be no more than three to four sentences.

**Clinical Applications:** Include practical applications of information to improve patient care.

**Word Count:** 475 word limit

**3. Critically Appraised Topics**

**Clinical Scenario:** A sentence or two providing a clinical scenario or general introduction for the need to evaluate the evidence pertaining to a clinical question.

**Focused Clinical Question:** Provide an explicit statement of the question with reference to participants, interventions, comparisons, and outcomes (PICO).

**Search Strategy:** Clearly describe the search strategy of peer-reviewed evidence including criteria for inclusion/exclusion, search strategy (databases used, hand search, etc.), search terms (combination of terms), and number of possible pieces of evidence.

**Evidence Quality Assessment:** Describe the method(s) used to appraise the evidence including the number of evaluators and how consensus may have been achieved (if applicable). Recommended methods include PEDro based on the CONSORT statement (www.pedro.org.au/), QUADAS scale based on the STARD statement (www.quadas.org), and STROBE (www.strobestatement.org/?id=available-checklists).

**Results and Summary of Search:** Provide a synthesis of the findings and a summary of the key findings. Also review the strengths and weaknesses of the evidence used to answer the clinical question.

**Clinical Bottom Line:** Clearly indicate the answer to the clinical question and include the strength of the recommendation.

**Implications**: Indicate how the findings should be used in clinical practice and the implications for use of the findings.

**Word Count:** 475 word limit

*CAT Guidelines derived from IJATT*

*http://journals.humankinetics.com/new-manuscript-format-guidelines-forijatt*

**4. Meta-Analysis Research & Systematic Reviews**

**Context:** Write a sentence or two summarizing the rationale for the study, providing a reason for the study question.

**Methods:** Describe the methods of the study performed (you do not need to include any additional sub-headings). This section should identify method of selecting papers included in the study (including search databases, timeframe, key words, limits, where appropriate) and how those studies were evaluated for quality of design. Describe which variables were extracted and how those data were obtained.

**Results:** Briefly explain the findings of the review that support the primary objective(s) of the study. Point estimates and measures of dispersion should be included with associated statistical results where appropriate.

**Conclusions**: Summarize or emphasize the new and important findings of the study and relate implications of the findings for future research and/or for clinical practice and offer an indication as to the strength of the evidence provided.

**Word Count:** 475 word limit

***5. Qualitative Research***

**Context:** This section should be no longer than two sentences summarizing the rationale for the study. Finish by stating the precise objective(s) or question(s) addressed in the abstract, including hypotheses if applicable

**Methods:** Describe the methods of the study performed (you do not need to include any additional sub-headings). This section should clearly identify the study design (case study, phenomenology, grounded theory, etc) and describe the environment in which the study was conducted to allow reviewers to understand transferability of the findings. Describe the target population and selection procedures and important aspects to describe the final subject pool. Sampling methods (theoretical sampling, criterion sampling) should be described and justify the number of participants (data saturation, etc). Describe methods of data collection, management and analysis. Where appropriate describe agreement and verification for data collection and analyses as well as any verification strategies.

**Results:** A short descriptive account of the case or the interpretation of the

findings should be provided.Identify and explain the themes that emerged from the study as well as any descriptive information that provides an explanation of the findings.

**Conclusions:** Summarize the new and important findings of the study and relate implications of the findings for future research and/or for clinical practice. The statement of your findings must be consistent with the results as reported.

**Word Count:** 475 word limit

**6. Clinical Case Studies (Adopted from NATA REF)**

**NOTE: All clinical case report abstracts submitted to Free Communications must have permission of the patient before submission.**

**CASE Study abstract guidelines update**

As of August 2017 the CASE (Contributing to the Available Sources of Evidence) study guidelines have been revised to be more inclusive of both evidence-based and practice-based evidence. Drawing from recent publications,1-4 there are now four types of CASE study abstracts. Levels 1-3 are submitted in one format, and Level 4 is submitted in a different format.

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| --- | --- | --- |
| **Table. Comparison of types of CASE report/study based on terminology and research design** Traditional Terminology | New Terminology\* | Abstract Format  (see guidelines on following pages) |
| Case Study | Level 1 Validation CASE Study | Level 1-3 Clinical CASE Study Abstract Guidelines |
| Case Study | Level 2 Exploration CASE Study/Series | Level 1-3 Clinical CASE Study Abstract Guidelines |
| Case Study | Level 3 Exploration CASE Study/Series | Level 1-3 Clinical CASE Study Abstract Guidelines |
| Case Report | Level 4 Rare Events CASE Study | Level 4 Clinical CASE Study Abstract Guidelines |

**Authors are encouraged to review the following references to determine the level of case study they are submitting:**

1. McKeon JMM, King MA, McKeon PO. Clinical Contributions to the Available Sources of Evidence (CASE) Reports: Executive Summary. *J Athl Train*. 2016;51(7):581.

2. McKeon JMM, McKeon PO. Evidence-based practice or practice-based evidence: what's in a name? *Int J Athl Ther Train*. 2016;21(1):1-3.

3. McKeon JMM, McKeon PO. New year, a new set of guidelines for making clinical contributions to the available sources of evidence. *Int J Athl Ther Train*. 2016;21(1):1-3.

4. McKeon JMM, McKeon PO. Building a case for case studies. *Int J Athl Ther Train*. 2015;20(5):1-5.

**Level 1-3 Clinical CASE Study Abstract Guidelines**

**Background:** Provide an overview of the condition of interest using available evidence, where appropriate. Indicate the level of the clinical CASE Study. For a Level 1 validation CASE study, the authors should provide a clear description of the previously reported comparison study and highlight the most important findings. For Level 2 & 3 exploration case studies/series, introduce the alternate, unique, or irregular presentation of the case examined compared to the available evidence.

**Patient:** Present the clinical case(s), including primary patient characteristics (age, sex, sport if appropriate, sport or activity, and years of experience) and diagnosis. For a case series, describe the underlying target population with measures of means and variance and important aspects of the subject pool. Pertinent aspects of the medical history should be included. Describe their complaints, MOI, initial clinical examination, diagnostic imaging, lab tests, and their commonality (examples: characteristic, injury, postural/gait abnormality, pathology, MOI). Describe the process that led to the diagnosis of the condition.

**Intervention or Treatment:** Describe the management of the case, interventions used, the timeline for progression to final resolution in the case, and the specific time points when treatment was provided.Relevant and unique details should be included. For level 2 or 3 case studies/series, compare and contrast the interventions used with the typical presentation of the condition as described in the literature.

**Outcomes or other Comparisons:** Describe the primary outcomes or results of the case. For Level 1 CASE studies, compare and contrast the outcome from the current case to the outcome of the previously reported comparison study. Compare/contrast the outcomes used in the Level 2 or Level 3 Exploration CASE Studies / CASE Series with the typical presentation of the condition as previously described. For Case Series, report whether all patients responded similarly to each other. For this, it is important to ensure that similar outcome measures were used.

**Conclusions:** Interpret the findings of the study. For Level 1 CASE studies, discuss the current case in the context with the previously reported comparison study, including the similarities and differences in the patient and outcomes. Discuss challenges associated with implementing the intervention from the comparison study "in real life" and provide recommendations for continued use of the assessment or intervention. For Level 2 & 3 case studies/series, discuss the challenges associated with the case due to the atypical presentation, and provide recommendations for clinical practice.

**Clinical Bottom Line:** Provide an overall statement of the most important clinical points that can be gleaned from the current CASE study.

**Word count:** Limited to 600 words, not including headings.

**Level 4 Clinical CASE Study Abstract Guidelines**

**Background:** Include the individual's age, sex, sport or activity, pertinent aspects of their medical history, a brief history of their complaint, and physical findings from the athletic trainer's examination.

**Differential Diagnosis:** Include all possible diagnoses suspected based on the history, mechanism of injury, and the initial clinical examination prior to physician evaluation and subsequent diagnostic imaging and laboratory tests.

**Treatment:** Include the physician's evaluation and state the results of diagnostic imaging and laboratory results if performed. The final diagnosis of the injury or condition and subsequent treatment and clinical course followed should be detailed. Relevant and unique details should be included, as well as the final outcome of the case.

**Uniqueness:** Briefly describe the uniqueness of this case, such as its mechanism, incidence rate, evaluate findings, rehabilitation, or predisposing factors.

**Conclusions:** Include a concise summary of the case as reported and highlight the case's importance to the athletic training profession and provide the reader with a clinical learning opportunity.

**Word Count:** Limited to 600 words, not including headings.

Acceptable Abbreviations

ACL Anterior Cruciate Ligament ADL Activities of Daily Living

AED Automated External Defibrillator

AIDS Acquired Immune Deficiency Syndrome

AMA American Medical Association AROM Active Range of Motion ATP Athletic Training Program

BESS Balance Error Scoring System

BMI Body Mass Index BOC Board of Certification

BP Blood Pressure

bpm Beats per Minute CAATE Commission on Accreditation of Athletic Training Education

CAI Chronic Ankle Instability

CDC Centers for Disease Control and Prevention

CE Continuing Education

CNS Central Nervous System

COPD Chronic Obstructive Pulmonary Disease

CPM Continuous Passive Motion

CPR Cardiopulmonary Resuscitation CT Computed Tomography

DIP Distal Interphalangeal

DSM IV Diagnostic and Statistical Manual of Mental Disorders - 4th Ed. DVT Deep Vein Thrombosis

EAP Emergency Action Plan

EBP Evidence-Based Practice

ECG/EKG Electrocardiogram EMG Electromyography

EMS Emergency Medical Services

EPA United States Environmental Protection Agency

FDA US Federal Drug Administration

FMS Functional Movement Screen

HIPAA Health Insurance Portability and Accountability Act

HIV Human Immunodeficiency Virus

HMO Health Maintenance Organization

HR Heart Rate LCL Lateral Collateral Ligament LESS Landing Error Scoring System

MCL Medial Collateral Ligament

MCP Metacarpophalangeal

MMT Manual Muscle Test MRI Magnetic Resonance Imaging

MRSA Methicillin Resistant Staph Aureus

MTP Metatarsophalangeal

NATA National Athletic Trainers' Association

NCAA National Collegiate Athletic Association

NOCSAE National Operating Committee on Standards for Athletic Equipment

NSAID Non-Steroidal Anti-Inflammatory Drug NWB Non-Weight Bearing

OSHA Occupational Safety and Health Administration

OTC Over The Counter PCL Posterior Cruciate Ligament PFP Patellofemoral Pain

PIP Proximal Interphalangeal

PNF Proprioceptive neuromuscular Facilitation

PPE Personal Protective Equipment

PPO Preferred Provider Organization

pps Pulse Per Second

PRN As Needed

PROM Passive Range of Motion

QD Per Day

QID Four Times a Day ROM Range of Motion RROM Resistive Range of Motion

RTP Return to Play SEBT Star Excursion Scoring System

SLAP Superior Labral Tear from Anterior to Posterior

SOAP Subjective, Objective, Assessment, Plan

STD Sexually Transmitted Disease

TBI Traumatic Brain Injury

TENS Transcutaneous Electrical Nerve Stimulation

TID Three Times a Day

WBGT Wet-Bulb Globe Temperature

WNL Within Normal Limits