

Network News

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THE ATHLETIC TRAINING PRACTICE-BASED
RESEARCH NETWORK
(AT-PBRN)

Clinical Practice Site Highlight: Springfield College (Part II)

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Describe how the CORE-AT EMR is being utilized both educationally and clinically.

The EMR is connected to didactic coursework beginning with the first semester of the sophomore year. Students complete a case study using the demographic, evaluation, and treatment forms. In their junior year, students complete three comprehensive case study assignments utilizing all aspects of the EMR. Finally, senior year students utilize the EMR with patients in our college-based outpatient sports rehabilitation clinic.

Describe the successes and barriers students have faced in utilizing the patient-rated outcome measures.

There has been a slow learning curve for our senior students who are actively utilizing the EMR with patients for the first time. They understand the concept and the importance of patient-rated outcome measures, but they have had limited experience in implementing them. However, once the students became more experienced with the process, they were able to incorporate the results of the outcome measures in both short and long-term goal-setting with patients.

A senior level student who documented using the EMR last semester made the following statement regarding her experiences:

"I found that CORE-AT EMR was very helpful during my rehabilitation clinical rotation. I enjoyed that the EMR would remind me of things that I may have forgotten. The EMR allowed me to record everything that I needed to document. I also appreciated that I was able to retrieve any patient record from a computer in any location with internet, which was convenient because I did not have to be in the athletic training room to review documentation or to develop the next set of exercises in the rehabilitation progression".

Another student described experience with the EMR:

"Once I understood how to use the program, I did not have any problem documenting in the EMR. I found that the patient-rated outcome measures have become integrated in my clinical education. I tend to refer back to these outcome measures when treating a patient or when developing a rehabilitation program. I think these tools can be helpful in guiding my rehabilitation and treatment plans of athletes in the future because I have a better understanding of how these outcome tools will help me better treat the patient."

Describe the successes and barriers students have faced when learning to bill and code for procedures associated with documentation.

Prior to this year, coding and billing was addressed within the administration course, which is taken the second semester of our students' senior year. We now introduce it in the Fall of their junior year as lab assignments utilizing the CORE-AT EMR. Our seniors are now using the coding function of the EMR on a daily basis during their clinic-outreach rotation. We have not explored the total cost of billing of patients yet. However, we will be collecting data to evaluate what we, as a health care facility, would have been able to bill for the different interventions provided during patient encounters.

“We recommend identifying a person as the ‘facility administrator’ for the CORE-AT program. This individual then becomes the ‘go-to’ person for all EMR questions and issues.”

Have you found that students have been receptive to and successful in documenting using EMR?

In the Fall semester, there was a steep learning curve as both students, faculty, and clinicians were learning to use the EMR for the first time. By the end of the semester, both students and clinicians were very proficient in utilizing all aspects of the EMR. I observed that by incorporating the EMR into the students’ clinical experiences, it raised awareness of the importance and value of documentation and utilizing outcome measures. Prior to using the CORE-AT EMR, we used a different EMR to document our patients’ progress; the previous EMR was challenging to use and was not web-based. Now, students are able to bring their computers to the athletic training room and log into the EMR to complete their documentation without having to wait for computer access. The students also appreciate being able to complete documentation later in the day and from any location with internet access. Our juniors were able to utilize the EMR at many of our affiliate sites for a lab assignment that required them to document clinical experiences with patients. As a learning tool, our students like the detailed information that the CORE-AT EMR requires them to obtain within the injury evaluation. This feature prevents them from forgetting pertinent patient information. Some of our students are frustrated about the documentation they are required to complete, but 85 – 90% of students are satisfied with the EMR.

What has been the transition like for other faculty and clinical staff incorporating the EMR as a teaching tool?

Because it was so new to everyone, the transition was initially difficult. However, once we learned how to use the EMR, we began thinking of ways it could best suit our needs. We now have faculty members who are familiar with the EMR, which has allowed the training of additional faculty members to become much easier. We recommend identifying a person as the ‘facility administrator’ for the CORE-AT program. This individual then becomes the ‘go-to’ person for all EMR questions and issues.

Please identify the Athletic Training Educational Competencies (ATEC) which are being met by utilizing CORE-AT.

The following competencies are either being satisfied or supported through the utilization of the CORE-AT EMR. The instruction and evaluation of these competencies are completed over time beginning in the sophomore year through didactic coursework, laboratory assignments, and clinical field work assignments.

EBP-11. Explain the theoretical foundation of clinical outcomes assessment (eg, disablement, health-related quality of life) and describe common methods of outcomes assessment in athletic training clinical practice (generic, disease-specific, region-specific, and dimension-specific outcomes instruments).

EBP-12. Describe the types of outcomes measures for clinical practice (patient-based and clinician-based) as well as types of evidence that are gathered through outcomes assessment (patient-oriented evidence versus disease-oriented evidence).

EBP-13. Understand the methods of assessing patient status and progress (eg, global rating of change, minimal clinically important difference, minimal detectable difference) with clinical outcomes assessments.

EBP-14. Apply and interpret clinical outcomes to assess patient status, progress, and change using psychometrically sound outcome instruments.

CE-7. Identify the patient's participation restrictions (disabilities) and activity limitations (functional limitations) to determine the impact of the condition on the patient's life.

CE-8. Explain the role and importance of functional outcome measures in clinical practice and patient health-related quality of life.

CE-9. Identify functional and patient-centered quality of life outcome measures appropriate for use in athletic training practice.

TI-7. Identify patient- and clinician-oriented outcomes measures commonly used to recommend activity level, make return-to-play decisions, and maximize patient outcomes and progress in the treatment plan.

HA-11. Use contemporary documentation strategies to effectively communicate with patients, physicians, insurers, colleagues, administrators, and parents or family members.

HA-12. Use a comprehensive patient-file management system for appropriate chart documentation, risk management, outcomes, and billing.

HA-27. Describe the concepts and procedures for revenue generation and reimbursement.

CIP-9. Utilize documentation strategies to effectively communicate with patients, physicians, insurers, colleagues, administrators, and parents or family members while using appropriate terminology and complying with statutes that regulate privacy of medical records. This includes using a comprehensive patient-file management system (including diagnostic and procedural codes) for appropriate chart documentation, risk management, outcomes, and billing.

Call for Proposals!

Do you have something interesting to share with the other members of the Athletic Training Practice-Based Research Network? Would you like to write a short article for the next newsletter? Potential topics could include:

- ◆ Research updates for your clinical practice site or institution
- ◆ Clinical case studies or case series reports
- ◆ Academic or research achievements of students or faculty
- ◆ Other information relevant to members of the AT-PBRN

With ideas, please contact Mariel Yakuboff, Research Coordinator at A.T. Still University, at myakuboff@atsu.edu or 480.219.6178.



CORE-AT EMR Updates



The AT-PBRN is excited to announce a suite of new features in the CORE-AT EMR, available to users in the early Spring.

Based on feedback from our clinicians, we have been working to develop several reporting modules for the EMR. To date, aside from the daily login totals, clinicians have not had the ability to see aggregated data within the system. These new reporting modules will allow EMR users a global picture of the services they are providing, the types of injuries they are treating, average time lost by patients due to injury, and the economic value of their services.

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Injury Status Report

The injury status report provides clinicians the ability to create sport-specific reports for all injured athletes. These “coaches” reports will list all patients who are currently being treated for an injury, sorting them by participation status. Data is pulled from the most recent participation status fields in the Daily Treatment, Injury Demographic, and Evaluation forms. Reports can be printed directly from the EMR, and each sport will print on separate pages, allowing easy distribution to coaches. This feature was the number one requested report from EMR clinicians.

Injury Summary Report

The injury summary report provides clinicians with detailed information on the types of injuries treated at the clinical practice site. Data for the Injury Summary report is taken from the diagnosis fields in completed Injury Demographic forms. Reports can be run for any specified date range, and a variety of sorting options are available, including male/female, body part, sport, and diagnosis. This allows clinicians to examine the characteristics of their clinical practice, identify injury trends, and potential prevention strategies.

Total Services / Economic Analysis Report

Currently the daily login module provides limited information on total services provided within a given date range, however, it does not take into consideration specific activities recorded within the daily treatment forms, or the incorporated CPT coding. The Total Services report aggregates all of the services provided by the clinician, as well as a tally of the number of units. This report pulls data from the daily treatment form, and organizes services by CPT code. Further sorting criteria including male/female, sport, and body part can be used to drill down for more specific analysis. Also included within the Total Services report is an economic analysis based on a Physician Fee Schedule. Each unique CPT is assigned a specific monetary value, and then multiplied by the number of units of service provided within a given date range. This feature provides clinicians with a snapshot of the value of the services they are providing to their patients.

Time Loss Report

Returning to competition quickly is often the primary goal of our patients. With the Time Loss Report, users will be able to determine the average amount of time from injury to return to participation in their patients. Data for the report is acquired from the various forms within the EMR, and is based on the most recent participation status field. The report will be sortable by male/female, sport, and

diagnosis, allowing the ability to drill down for specific time loss information. Time loss reporting enables the clinician to see trends in recovery for specific injuries, comparison between sports and sex for recovery times, and the ability to evaluate the impact of changes in rehabilitation strategies and techniques on recovery time.

All of the EMR reports include an easy to use interface with radio button / check box selections. With just a few clicks, users will be able to produce detailed information about their clinical practice, and improve communication with coaches and administrators. All current EMR users will receive more detailed information regarding these new features as they are introduced live into the system.

Funding for the reporting modules was provided through the Arizona School of Health Sciences Interdisciplinary Research Lab.

Barton Anderson, MS, ATC
EMR Manager, AT-PBRN

Choosing a Patient-Rated Outcome Measure (PROM) for Your Patient:

The Shoulder Pain and Disability Index (SPADI) vs. The Functional Arm Scale for Throwers (FAST)

Bridget Spooner, Alison Snyder Valier, Mariel Yakuboff

Students in the post-professional athletic training program at A.T. Still University assessed the utility of patient-rated outcome measures (PROMs) through the use of case scenarios. The intent of this project was to introduce students to the process of evaluating and selecting patient-rated outcomes instruments for specific, individual patients. In general, there are a number of considerations when selecting PROMs which include: applicability of the instrument to the patient, ability to measure the same thing consistently and with little error, capability of measuring change over time, and friendliness of the measure to both patients and clinicians. To complete the assignment, students created a clinical case scenario and selected two outcomes measures from which to compare, with the ultimate goal of selecting the one instrument that best fit their patient.

The Case: A collegiate baseball pitcher had secondary shoulder impingement syndrome (pathophysiology). The patient presented with decreased ROM and strength, muscular atrophy, and pain (impairments). Initial treatment involved rest, ice, and compression. The patient had difficulty performing several basic activities such as washing his hair, lifting objects above shoulder level, and writing (functional limitations). Additionally, he was unable to lift his arm overhead to put away groceries, unable to serve as a starting pitcher on his baseball team, and socialized less with friends (pain, discomfort) (disabilities). The patient was also concerned with the negative impact his injury had on his leadership role on the team because he was interacting with teammates less frequently (disability). Pressure from the coaching staff about returning to play, and fear of losing his athletic scholarship also concerned him (societal limitations).

The Challenge: Selecting an instrument that would capture the major complaints (disablement domains of pathophysiology, impairment, functional limitations, disability, and societal limitations) of the patient and can be serially administered to the patient throughout his treatment plan (e.g., first day of treatment, day 7, day 14, and return-to-play).

The Critique: The two PROMs were selected for consideration and included the Shoulder Pain and Disability Index (SPADI) and the Functional Arm Scale for Throwers (FAST).

SPADI - The SPADI is a self-report, generic questionnaire that assesses an individual's pain (impairment) and functional activities (functional limitations) using a 10cm visual analogue scale and is not specific to athletes. The SPADI is a valid tool, meaning it measures what it intends to measure, as well as responsive, meaning it is capable of measuring change over time. Of importance to a clinician is the minimal clinically important difference (MCID) score, a measure of responsiveness, associated with an instrument. The MCID is the smallest amount of change that a patient would consider worthwhile and meaningful. For the SPADI, the MCID has been reported to range from 8-13.2 SPADI points in people with shoulder pain, tendinosis, and shoulder impingement. The SPADI score ranges from 0 - 100 with higher scores illustrating more pain and functional loss experienced by the patient and lower scores suggesting less pain and functional loss. The questionnaire is feasible, easy to administer, and is available online. However, scoring the SPADI takes time because it must be scored using a ruler for each question.

FAST - The FAST is a shoulder-specific patient-rated outcomes measure created for overhead throwing athletes. The FAST has a general scale that includes 22 questions which are answered on a 5-point likert scale. Additionally, there is a module with 9 questions specific to pitchers. Development of the FAST was based on the NCMRR disablement model, so the instrument contains questions within each of the disablement domains (pathophysiology, impairment, functional limitations, disability, societal limitations). One beneficial feature of the FAST, compared to many other shoulder instruments, is that its questions are sport activity related which likely increases the meaningfulness of the measure to the injured athletes who complete it. FAST scores range from 0-100, with lower scores indicative of better health-related quality of life. Because the measurement properties of the FAST have not been published, some caution is needed when using the measure. The FAST is easy to administer and complete as well as easy to score and interpret. However, more research is needed to identify the responsiveness of the instrument in athletic populations.

The Selection: Although all of the measurement properties have not been reported for the FAST, we decided that the FAST questionnaire better fit our clinical case than the SPADI. There were two limitations to the SPADI that made its use with this patient less desirable. First, the SPADI only assesses impairments and functional limitations and doesn't include questions related to the impact of the condition on disability or societal limitations. While responses to questions regarding pain and functional limitations are helpful, capturing patient disability would be important to an athletic trainer in treating the whole person and in helping address health-related issues that are likely more important to the patient. Secondly, the SPADI uses a VAS scale which can be time-consuming for clinicians to score. In contrast, the FAST is more desirable for this patient than the SPADI. First, the FAST includes questions from all disablement domains, allowing for a complete assessment of the whole person. Secondly, the questions are constructed to appeal to high-functioning, throwing athletes and so it is likely that this instrument would be viewed favorably by athletes with shoulder conditions, such as in this scenario.

Articles Referenced:

Bay RC et al., Item Reduction And Factor Distribution Of The Functional Arm Scale For Throwers (FAST). *J Athl Train* 2011;46(3 Suppl): S32

Roy JS, MacDermid JC, Woodhouse LJ. Measuring shoulder function: a systematic review of four questionnaires. *Arthritis Rheum* 2009;61:623-32.

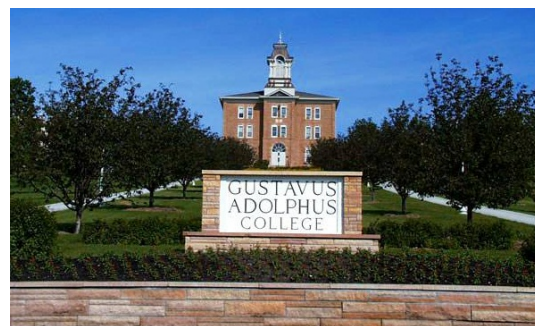
“While responses to questions regarding pain and functional limitations are helpful, capturing patient disability would be important to an athletic trainer in treating the whole person and in helping address health-related issues that are likely more important to the patient.”

Clinical Practice Site Highlight: Gustavus Adolphus College

Integrating the CORE-AT EMR system into clinical and classroom education within an undergraduate athletic training curriculum

Profile: Gustavus Adolphus College, Saint Peter, Minnesota

AT Education Program Director: Kyle Momsen, MA, ATC



Please describe your institution and athletic training program.

We are a residential liberal arts college located in Minnesota. Our numbers vary, but we can accept up to 12 students per year, and we are currently at full capacity. We have two full-time faculty and four full-time athletic training staff members on-campus. Additionally, we collaborate with two athletic trainers at local high schools. Students are accepted into the program before the Spring of their sophomore year and begin clinical rotations immediately. Sophomore students have five week rotations with our clinical staff on campus. During their junior year, students continue a five-week rotation pattern and gain additional clinical experience at the two high schools. Senior students are assigned the role of 'lead athletic training student' with an ACI for a season and, subsequently, complete rotations with a ATs, PTs, PAs, and MDs at an orthopedic and fracture clinic. Furthermore, these students have general medical rotations with a podiatrist, physician, nurse practitioner, or physician assistant. The athletic training staff currently teach several courses within the Health and Exercise Science Department.

What role does the CORE-AT EMR hold in terms of your students' education? What benefits do you expect your students to gain by using the EMR and participating within the AT-PBRN?

We have incorporated the CORE-AT EMR in both the clinic and classroom. Our clinical staff now use the EMR as their primary form of documentation in the athletic training room so that students have learning opportunities during their clinical rotations. Students are taught to document primarily using the EMR, but frequently continue to use paper-based forms while completing evaluations to assist documentation accuracy. We also use the EMR in class to practice evaluation and documentation. We believe this practice will allow for a consistent documentation method for students and will make the learning process easier. The EMR has stimulated mixed reactions amongst students; some students find it helpful to complete a comprehensive evaluation in the EMR, while others feel constrained by the idea of "filling in boxes". Our primary goal is to focus on EBP through utilizing the patient-rated outcome measures. Our hope is that it will also be helpful in EBP as we discuss the outcomes assessments and other options the EMR provides for gathering data and making clinical decisions. Integrating the EMR as a teaching tool will be a multi-step approach as the EBP concepts are taught, utilized in clinical experiences, and built upon in more coursework and clinical experiences. This Spring will mark our first formal project using the EMR since we joined the PBRN at the beginning of the Fall semester.

Please describe the setting in which you plan on using the CORE-AT EMR as an educational tool.

The athletic training room at Gustavus Adolphus facilitates the treatment of nearly 600 participants across 25 sports teams. Students use the EMR throughout their education and across all of our evaluation and rehabilitation courses. We have transitioned away from paper-based documents and scan reports from outside of our EMR so they can be stored electronically. Once we are more comfortable documenting through the CORE-AT EMR, we would like to explore having ATs at the local high schools also begin using the EMR.

Have you ever attempted to directly incorporate the use of an EMR into your students' education?

We have not attempted to use an EMR before last Fall. This venture was sparked by the clinical staff moving to an EMR and our desire to improve our EBP curriculum. The transition has gone fairly smoothly. The biggest challenge we recognized was that there are a few people who just generally don't like change and struggled to adjust to a new strategy of documentation. Since the initial implementation of the EMR, these individuals now see the value of this EMR and have adjusted well. We have noticed that CORE-AT staff is great at working on adjustments to the system when we need them.

What knowledge and/or skills do you hope your students will gain by using the CORE-AT EMR and participating in the PBRN?

Overall, we hope students will gain a familiarity with documenting on an EMR and an appreciation for electronic records. Additionally, based on the most recent Athletic Training Educational Competencies, we would like students to understand how and when to implement patient-rated outcome measures. We also hope that students will gain skills in coding and that they will utilize the EMR data to monitor injury rates, outcomes, and treatment plans for the purpose of encouraging practice-based research and to gain knowledge in their clinical practice patterns. The concept of the PBRN has been introduced into our curriculum and will continue to play a larger role each year. We have not formally assessed our treatments here on campus, but we hope to do so in the near future.

*Gustavus Adolphus College
Athletic Training students
practice spine-boarding. (below)*



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