Integrating Evidence-Based Practice in Athletic Training Though Online Learning

Brittany A. Vorndran
Seton Hall University, USA

Michelle Lee D'Abundo
Seton Hall University, USA

INTRODUCTION

Health care is always changing and as a result the associated health professions must adapt. As challenges persist such as rising health care costs, an aging population and the need to treat increasing numbers of people with chronic health conditions, the field of health care must continue to explore ways to deliver quality care while reducing costs. Like many other health care professions, athletic training has turned to evidence-based practice to assure that athletic trainers are trained to deliver the highest quality of care in the most efficient way to their patients. The transition to integrating evidence-based practice can be challenging and will require a massive diffusion of innovation throughout the field of athletic training.

Athletic trainers (ATs) are defined as "health care professionals who collaborate with physicians. The services provided by ATs comprise prevention, emergency care, clinical diagnosis, therapeutic intervention and rehabilitation of injuries and medical conditions. ATs work under the direction of physicians, as prescribed by state licensure statutes" (Profile of athletic trainers, 2014, para. 1). The profession of athletic training is constantly growing, and athletic trainers can be found in many different settings including high schools, colleges, working with the athletic teams, the military, and workplaces. Despite many employment opportunities, some people in the health care industry are unfamiliar with the responsibilities of the AT and it is apparent that athletic training as a profession is still lagging behind other allied health professions (Hankemeier & Van Lunen, 2013a).

BACKGROUND

In order to change the perceptions of ATs to the public, the National Athletic Trainers' Association (NATA) is introducing the use of evidence-based practice (EBP) in both the education of new ATs, and in the clinical setting with athletic trainers already working in the field (Hankemeier & Van Lunen, 2013; Hankemeier et al., 2013; McCarty Hankemeir, Walter, Newton, & Van Lunen, 2013; Welch, Van Lunen, & Hankemeier, 2014b). There are many benefits to increasing the use of evidence-based medicine (EBM). One reason that is frequently discussed is improving both the image and recognition of athletic trainers as health care professionals and not personal trainers, physical education teachers, or the people carrying water bottles on the sideline of games. Other benefits to using EBM include improving the care provided to the patients and justifying third party reimbursement (McCarty et al., 2013; Welch et al., 2014a).

Using EBP can be broken down into five steps as shown by Sackett et al. (1996). These steps include: defining clinically relevant questions, searching for the best evidence, critically appraising the evidence, applying the evidence, and evaluating how effective evidence-based medicine was when put to use. While these steps

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seem relatively simple when written out, most athletic training clinicians are not presently using EBP in their current treatment practice, but 98% of them were found to believe that it is important for the credibility of the profession (McCarty et al., 2013). Hankemeier et al. (2013b) showed that clinicians had a lower perceived importance score and a lower knowledge score when compared with post-professional educators. ATs who work in an athletic training education program have been more exposed to the notion of EBP and therefore are more knowledgeable regarding it and understand its importance more than individuals that only work in the clinical setting.

Since EBP is very new to the field of athletic training, practicing clinicians that are not recent graduates likely did not learn about EBP in the educational curriculum and would not be familiar with it unless the individual took initiative to learn the process independently. In a study completed by Hankemeier and Van Lunen (2013a) less than 20% of the surveyed clinicians had received any form of EBP training. Based on the information provided in this survey, very few clinicians have been trained to use EBP. These clinicians with no background in using the five steps would need some training in order to be able to effectively integrate EBP into daily clinical practice.

Disseminating knowledge about EBP to ATs is essential in this transition. Continuing education (CE) is an important method for educating athletic training clinicians on what EBP is and how to use. In order for CE to be truly effective, athletic trainers need to understand what modes are best for presenting this information to promote long term knowledge retention and knowledge translation. Popular ways that CE is presented is through online learning, in person lectures, discussions, hands on demonstrations, and mixed mode learning. Studying modes individually for these gains or comparing one type of CE with another will help to advance understanding on how EBP should be presented to maximize an increase in knowledge and use.

Distance education, e-learning, computer mediated, web-based, and online instruction are terms used to describe education delivered through computer-based technologies. Whatever term is chosen, such computer-based technologies are essential components of the preparation and continuing education of health professionals. One of the most frequently used modes of CE, particularly for learning EBP, is online learning. Web-based learning has become very popular due to its flexibility and ease. This type of learning can be done from anywhere and completed at the convenience of the individual taking the course (Militello, Gance-Cleveland, Aldrich, & Kamal, 2014).

Allied health care tends to use three models of online learning and instruction: blended learning, online learning, and continuing education (Stewart & Wright, 2004). Blended learning includes both face to face and online learning and instruction. Online learning is learning and instruction that is completely web-based. Continuing education for health professionals is offered in both blended and online formats. In fact, most health-related disciplines are using a combination of online and face-to-face learning in their programs.

From a theoretical standpoint, characteristics of an effective online learning experience have been outlined. Reeves and Reeves (2008) provided 10 dimensions to be considered when designing, implementing and evaluating an online class in health and social work. The model they described for health and social work education included 10 dimensions of interactive teaching and learning:

1. Pedagogical philosophy;
2. Learning theory;
3. Goal orientation;
4. Task orientation;
5. Source of motivation;
6. Teacher role;
7. Metacognitive support;
8. Collaborative learning support;
9. Cultural sensitivity; and
10. Structural flexibility.