# Assessment of Certified Athletic Trainers' Levels of Cultural Competence in the Delivery of Health Care

Jeremy Marra, MS, ATC, CSCS\*; Tracey Covassin, PhD, ATC\*; René R. Shingles, PhD, ATC†; Renee Branch Canady, PhD, MPA‡; Tom Mackowiak, PhD, ATC\*

\*Michigan State University, East Lansing; †Central Michigan University, Mount Pleasant; ‡Ingham County Health Department, Lansing, MI. Mr Marra is now at Sports Performance Medical Division, United States Olympic Committee, Lake Placid, NY.

**Context:** The concept of culture and its relationship to athletic training beliefs and practices is virtually unexplored. The changing demographics of the United States and the injuries and illnesses of people from diverse backgrounds have challenged health care professionals to provide culturally competent care.

**Objective:** To assess the cultural competence levels of certified athletic trainers (ATs) in their delivery of health care services and to examine the relationship between cultural competence and sex, race/ethnicity, years of athletic training experience, and National Athletic Trainers' Association (NATA) district.

Design: Cross-sectional survey.

Setting: Certified member database of the NATA.

**Patients or Other Participants:** Of the 13568 ATs contacted, 3102 (age =  $35.3 \pm 9.41$  years, experience =  $11.2 \pm 9.87$  years) responded.

**Data Collection and Analysis:** Participants completed the Cultural Competence Assessment (CCA) and its 2 subscales, Cultural Awareness and Sensitivity (CAS) and Cultural Competence Behavior (CCB), which have Cronbach alphas ranging

from 0.89 to 0.92. A separate univariate analysis of variance was conducted on each of the independent variables (sex, race/ ethnicity, years of experience, district) to determine cultural competence.

**Results:** The ATs' self-reported scores were higher than their CCA scores. Results revealed that sex ( $F_{1,2929} = 18.63$ , P = .001) and race/ethnicity ( $F_{1,2925} = 6.76$ , P = .01) were indicators of cultural competence levels. However, we found no differences for years of experience ( $F_{1,2932} = 2.34$ , P = .11) or NATA district ( $F_{1,2895} = 1.09$ , P = .36) and cultural competence levels.

**Conclusions:** Our findings provide a baseline for level of cultural competence among ATs. Educators and employers can use these results to help develop diversity training education for ATs and athletic training students. The ATs can use their knowledge to provide culturally competent care to athletes and patients and promote a more holistic approach to sports medicine.

Key Words: delivery of health care, diversity, culturally competent care

### Key Points

- Although certified athletic trainers (ATs) self-reported a high level of cultural competence, their Cultural Competence Assessments revealed they operated at a lower level of cultural competence, and their cultural behaviors did not mirror their cultural awareness or sensitivity.
- Female ATs were more culturally competent than male ATs.
- Multiracial/other and black/African American groups had the highest cultural competence scores; the white/Caucasian group, midrange scores; and the American Indian/Alaskan native group, the lowest scores.
- Cultural competence level was not different between newly certified and experienced ATs or among National Athletic Trainers' Association districts.

The concept of culture and its relationship to athletic training beliefs and practices is virtually unexplored. The changing demographics of the United States and the injuries and illnesses of people from diverse backgrounds have challenged health care professionals to provide culturally competent care. The US Census Bureau has projected the percentage of minorities to increase from 30.6% in 2000 to 34.9% in 2010, eventually leveling out over the next 40 years.<sup>1</sup> Based on the National Collegiate Athletic Association's Race and Ethnicity Self-Study, the number of male and female minority athletes in Division I increased from 31.5% in 1999–2000 to almost 34% in 2004–2005.<sup>2</sup> However, these numbers do not represent the

certified membership of the National Athletic Training Association (NATA), which comprises 86.6% white, 2% black, 3% Hispanic, 3% Asian, 1% other, 0.4% American Indian/Alaskan native, and 4% unspecified members.<sup>3</sup> Some certified athletic trainers (ATs) might not be aware of cultural differences between themselves and their athletes and patients, unknowingly creating a setting that is uncomfortable for diverse individuals. These clinicians must possess the ability to use resources to make accurate diagnoses for patients from a culture other than their own. The profession should include more targeted cultural competence training in education and professional development to consider cultural issues when delivering care.

Diversity means accepting people who are different from oneself or being more inclusive and accepting of students, athletes, or colleagues regardless of color, national origin, race, religion, sex, or sexual orientation.<sup>4</sup> To be *culturally* competent means to understand and integrate differences and incorporate them into daily care and to work effectively in cross-cultural situations, which is also known as *transcultural health*.<sup>5</sup> The demand for culturally competent health care arises from the need to provide medical services to all segments of the population, especially with language and cultural barriers of non-English-speaking immigrants and racial and economic barriers faced by people of color.<sup>6</sup> Due to past and current disparities and inequities, the profession of athletic training should develop a culturally competent system built on awareness of the integration of health beliefs and behaviors, disease and injury prevalence and incidence, and treatment outcomes for diverse patient populations to prevent these disparities among ATs' athletes and patients. However, before developing a culturally competent system, the level of cultural competence must be assessed to analyze the areas in which ATs are proficient.

There are 365 entry-level athletic training education programs (ATEPs) accredited by the Commission on Accreditation of Athletic Training Education (CAATE)7 and more than 30 000 ATs nationwide.8 As the profession of athletic training grows, our knowledge of culturally competent health care delivery must grow. Because cultural competence education and care is included in the 4th edition of the NATA's Athletic Training Educational Competencies,9 the assumption that CAATE-accredited ATEPs have included cultural competence education and diversity training within their curricula can be made. However, cultural competence content might be in the form of a stand-alone college course, discussion within a college course, or other form of training. The training might or might not be specific to athletic training because each ATEP decides the appropriate way to deliver the content.

We found only 3 articles on cultural diversity or culturally competent care in which the researchers focused on ATs. One of the first articles on athletic training diversity was an editorial by Perrin<sup>4</sup> in which he described the need for promoting diversity in athletic training. In 2003, Geisler<sup>10</sup> assessed the benefits of including multicultural education, awareness, and training in ATEPs. Grant-Ford<sup>11</sup> wrote an editorial on working toward cultural competence in athletic training, outlining key points essential to the progression toward culturally competent care.

Due to the increasing diversity among the athletes and patients of ATs, the evaluation of culturally competent service is imperative to the profession of athletic training. Therefore, the purpose of our study was to assess the level of cultural competence in health care delivery from ATs. We examined the relationship between cultural competence and sex, race/ethnicity, years of athletic training experience, and NATA district. We hypothesized that ATs would be culturally competent and that no differences would exist in the level of cultural competence between male and female ATs and among NATA districts. We also hypothesized that ATs of color would experience higher levels of cultural competence than white/Caucasian ATs. Finally, we hypothesized that the level of cultural competence would not be different between newly certified (0-5 years) and experienced (>5 years) ATs.

# METHODS

# Participants

Participants were male and female ATs who were members of the NATA. We contacted potential participants via e-mail with addresses purchased from the NATA using funding from the association's Ethnic Diversity Advisory Committee. Participation was voluntary, and only those ATs who completed and returned their surveys were included in the final analysis of data. As of September 3, 2007, we determined that 26 234 student, international, and professional ATs were eligible for participation in this study.<sup>3</sup> Due to membership rights through the NATA, members could elect not to receive surveys; therefore, the survey was distributed to 13 568 student, international, and regular ATs. Before data collection, the Biomedical Health Institutional Review Board approved the study.

# Survey

Cultural Competence Assessment Inventory. To assess cultural competence among ATs, we distributed the Cultural Competence Assessment (CCA)<sup>12</sup> to ATs throughout the nation. Over the past 5 years, the CCA has been used in numerous studies identifying the cultural competence of various health care professions.<sup>12,13</sup> The self-administered inventory consists of 30 questions on a 7point Likert scale (1 = strongly agree to 7 = stronglydisagree) that assesses 4 constructs of culturally competent care: cultural diversity, cultural awareness, cultural sensitivity, and cultural competence.13 Each construct is operationally defined. Cultural diversity is the difference between groups based on distinguishing factors, such as race, ethnicity, national origin, sexual orientation, sex, ideology, language, disability, and generation.<sup>12</sup> Cultural awareness is the presumption that there is some reality to be contemplated and a corresponding capacity for processing knowledge.12 This means that awareness requires not only the existence of a fact but a knowledge and recognition of that fact. Cultural sensitivity involves the recognition of personal attitudes, values, beliefs, and practices.14 It is the self-examination and in-depth exploration of one's own cultural background.<sup>15</sup> Cultural *competence* involves providing effective services to people of all cultures, races, ethnic backgrounds, and religions in a manner that respects the worth of individuals and preserves their dignity. It is a developmental process that evolves over an extended period in which both individuals and organizations are at various levels of awareness, knowledge, and skills on the cultural competence continuum.<sup>16</sup>

Cultural diversity experience is addressed by asking participants to identify types of culturally and ethnically diverse athletes and patients for whom they have cared in the past 12 months. The 2 subscales of the CCA, Cultural Awareness and Sensitivity (CAS) and Cultural Competence Behavior (CCB), assess this remaining construct by instructing participants to respond to statements made about diversity and health care. For example, a participant can select a response along the 7-point Likert spectrum (1

Table 1. Demographics of Certified Athletic Trainers by National Athletic Trainers' Association District, Race/Ethnicity, and Sexa

_	Racial/Ethnic Group						Sex				
District	Hispanic/ Latino American	White/ Caucasian	Black/African American	American Indian/Alaskan Native	Asian	Native Hawaiian/Pacific Islander	Arab American/ Middle Eastern	Multiracial/ Other	Men	Women	Total
1	0	146	1	0	4	0	0	2	66	87	153
2	3	357	9	1	3	0	2	13	190	198	388
3	4	304	12	3	5	0	2	9	163	176	339
4	7	631	10	2	10	0	1	14	311	364	675
5	3	262	1	2	0	0	0	7	141	134	275
6	7	149	3	1	3	1	2	6	88	85	173
7	5	172	3	3	2	2	0	8	104	90	194
8	17	147	3	0	11	0	3	17	94	103	197
9	12	313	15	0	2	1	0	3	190	155	345
10	2	128	0	2	5	1	0	5	70	73	143
International	0	7	0	0	11	0	0	1	8	11	19
Total	60	2616	57	14	56	5	10	85	1425	1476	2901

<sup>a</sup> Not all participants provided this information.

= strongly agree to 7 = strongly disagree) or can select *no* opinion, which is coded as 0, for the following statement: "Many aspects of culture influence health and health care."

The CCA was revised by the primary author for the athletic training population, and face validity was established by a panel of experts, including ATs, sociologists, and ATEP program directors. However, we did not statistically analyze the revised edition of the CCA. The inventory included demographic questions pertaining to the participant's sex, race/ethnicity, years of experience, NATA district, work setting, level of education, route to certification, and previous cultural care education. Participants could select more than 1 option for questions about cultural care education. The inventory also asked participants if they felt culturally competent, which was assessed on a 5-point Likert scale (1 = very competent to 5 = very incompetent).

Psychometric Properties of Cultural Competence Assessment. Researchers have demonstrated the CCA is valid and reliable. Two separate panels of national experts in multicultural health care representing nursing, social work, medicine, spiritual care, anthropology, sociology, psychology, gerontology, education, and law established content, construct, and face validity of the CCA.<sup>13</sup> Reliability was established with internal consistency reliability Cronbach  $\alpha$ , ranging from 0.89 to 0.92.<sup>12–14,17,18</sup> Test-retest reliability has also been established at  $r = 0.85.^{18}$ 

#### **Procedures**

The CCA was distributed to eligible participants electronically via the Web site http://www.surveymonkey.com through e-mail addresses purchased from the NATA. The e-mail contained an overview and explanation of the study, as well as a hyperlink to the survey. Participants could complete the CCA in approximately 15 minutes. They were allowed to withdraw at any time without penalty and were allowed to skip questions. A follow-up e-mail was sent after 2 weeks to remind participants to complete the inventory. All responses were returned to the survey Web site as anonymous data. By completing and returning the online survey, ATs consented to participate.

### Data Analysis

Demographic information and scores from the CCA were summarized using descriptive data. All data collected were ordinal data. A high score (7) on the CCA indicates a health care professional has a high level of cultural competence, whereas a low score (1) indicates the participant has a low level of cultural competence. Frequency distributions were performed on each response. The mean of the CCA's subscales (CAS and CCB) served as the total score for the CCA. A separate univariate analysis of variance was conducted on each of the independent variables (sex, race/ethnicity, years of experience, district) to determine cultural competence. The  $\alpha$  level was set at .05. Data were analyzed using SPSS (version 15.1; SPSS Inc, Chicago, IL).

## RESULTS

## **Demographic Information**

A total of 3102 participants completed the survey, for a response rate of 22.86% (Tables 1 and 2). Because they provided incomplete data, 159 ATs were excluded from the study. The average age of participants was  $35.3 \pm 9.41$  years. They represented various races/ethnicities, various years of experience (11.2  $\pm$  9.87 years), and all NATA districts (Table 1). Almost two-thirds of the participants (1816/2927 [62.0%]) had earned a master's degree, one-third (975/2927 [33.3%]) had earned a bache-

Table 2.	Demographics by Racial/Ethnic Group Treated by
Certified	Athletic Trainers

Athlete/Patient Population	Encountered by Athletic Trainer, %	Total Population Treated, %ª
White/Caucasian	98.5	62.25
Black/African American	91.8	19.43
Hispanic/Latino American	82.4	12.24
Asian	67.8	5.28
Arab American/Middle Eastern	34.6	2.51
Native Hawaiian/Pacific Islander	21.3	2.23
Other	4.5	2.52

<sup>a</sup> Due to variations in participant responses, the sum of the percentages does not equal 100%.

Table 3. Total Cultural Competence Assessment Scores and 95% Confidence Intervals of Certified Athletic Trainers by Sex<sup>a</sup>

		Cultural Co Assessmo	•	95% Confidence Interval		
Sex	n	Mean	SD	Lower	Upper	
Men Women	1441 1490	4.644 4.899	1.029 2.001	4.561 4.818	4.727 4.980	

<sup>a</sup> Not all participants provided this information.

lor's degree, and few (138/2927 [4.7%]) had earned a doctorate. In addition, almost two-thirds (1829/2918 [62.7%]) of the participants had graduated from a CAATE-accredited program compared with a little more than one-third (1089/2918 [37.3%]) who followed the former internship route to certification. The most common employment position held by participants was college/ university (1072/2928 [36.6%]), followed by secondary school only (681/2928 [23.3%]), clinic/secondary school (523/2928 [17.9%]), other (468/2928 [16%]), and clinic only (182/2928 [6.2%]).

More than half (1576/2927 [53.8%]) of the participants had previous diversity training. Participants gained their diversity training in an employer-sponsored program (988/ 1683 [58.7%]), college course (503/1683 [29.9%]), professional conference or seminar (404/1683 [24.0%]), separate college course for credit (330/1683 [19.6%]), continuing education offering (145/1683 [8.6%]), other diversity training types (121/1683 [7.2%]), and online education (116/1683 [6.9%]). Those who selected "other diversity training types" listed military diversity training, teaching experience, and living/traveling abroad as the most common methods. When asked if their diversity training was specific to athletic training, most (1712/1908 [89.7%]) participants stated the training was not specific.

#### **Cultural Competence Assessment**

Results revealed that ATs self-reported a mean of  $4.52 \pm 0.63$  out of 5.0 (90.4%) for overall CCA. After completing the CCA, participants scored an overall mean of  $4.80 \pm 1.51$  out of 7.0 (68.5%), including a mean of  $5.65 \pm 0.526$  on the CAS (80.7%) and  $3.95 \pm 1.51$  on the CCB (56.4%). Therefore, ATs self-reported a high level of cultural competence, but results indicated that ATs operated at a lower level of cultural competence. Results also indicated that ATs' cultural behaviors did not mirror their cultural awareness and sensitivity.

A univariate analysis of variance revealed a difference between sexes ( $F_{1,2929} = 18.63$ , P < .001) (Table 3).

Specifically, female ATs  $(4.90 \pm 2.0)$  were more culturally competent than male ATs  $(4.64 \pm 1.03)$ . We also found a difference among races/ethnicities ( $F_{1,2925} = 6.76$ , P = .01) (Table 4), with the highest cultural competence scores reported for multiracial/other and black/African American groups. The least culturally competent group was American Indian/Alaskan native; the white/Caucasian group scored midrange. We found no differences between years of experience of ATs ( $F_{1,2932} = 2.34$ , P = .11) (Table 5) or among the 10 national and international NATA districts ( $F_{1,2895} = 1.09$ , P = .36) (Table 6).

## DISCUSSION

No previous empirical research has been conducted to assess the interactions of ATs with racially and ethnically diverse athletes and patients. With the exception of a few editorials and limited research studies, the issue is rarely discussed within the profession of athletic training. Furthermore, baseline levels of cultural competence have not been reported among ATs. Our findings revealed ATs self-reported a high level of cultural competence, whereas the CCA results showed ATs were less competent within the delivery of health care services. This discrepancy might be related to ATs being more aware of cultural issues as measured on the CAS, but behaviors do not necessarily reflect the awareness and sensitivity as measured on the CCB. More than half (53.8%) of the participants had been involved in some form of diversity training; however, only 10.3% had diversity training specific to athletic training. Our finding that ATs with diversity training scored higher on the CCA than ATs without training suggests that diversity education helps increase cultural competence.<sup>17</sup>

Female ATs scored higher on cultural competence levels than male ATs. One explanation is that more women than men might have been exposed to diversity training. Another explanation can be found in a study by Barak et al.<sup>19</sup> These investigators assessed views on diversity and found that white/Caucasian men perceived the organizations for which they worked as more fair and inclusive than white/Caucasian women and racial/ethnic minority men and women.<sup>19</sup> White/Caucasian women and racial/ethnic minority men and women also saw more value in and felt more comfortable with issues of diversity than did white/ Caucasian men.<sup>19</sup> The adversity that women and minorities of both sexes had to overcome in the 20th century in seeking global equality might explain this finding.

Our results showed ATs of color were more culturally competent than white/Caucasian ATs. The most culturally competent group was black/African American, followed by

Table 4. Total Cultural Competence Assessment Scores and 95% Confidence Intervals of Certified Athletic Trainers by Race/Ethnicity

		Cultural Competence	95% Confidence Interval		
Race/Ethnicity	n	Mean	SD	Lower	Upper
White/Caucasian	2643	4.778	0.031	4.717	4.839
Multiracial/Other	86	4.505	0.173	4.166	4.843
Hispanic/Latino American	61	4.613	0.205	4.211	5.015
Black/African American	57	5.484	0.212	5.069	5.900
Asian	57	4.600	0.212	4.184	5.015
American Indian/Alaskan Native	14	4.083	0.428	3.244	4.922
Arab American/Middle Eastern	10	5.006	0.506	4.013	5.998
Native Hawaiian/Pacific Islander	5	5.368	0.716	3.964	6.772
Total	2933	4.80	0.31		

 Table 5. Total Cultural Competence Assessment Scores of

 Certified Athletic Trainers by Years of Experience

		Cultural Competence Assessment Score		
Experience, y	n	Mean	SD	
0–5	1172	4.74	1.826	
>5	1762	4.85	1.434	
Total	2934	4.80	1.63	

multiracial/other, Hispanic/Latino American, and white/ Caucasian groups. The ATs identifying with more than 1 race/ethnicity reported they were reared in a multiracial home, which might have provided more exposure to diverse opportunities and education compared with a single-race/ethnicity home. Ethnicity and race are closely associated in the United States; thus, one also can assume that minority groups that might have greater experiences with discrimination or prejudice, such as black/African American and Hispanic/Latino American groups, might have a better understanding of the relevance of cultural issues in athletic training care than their white/Caucasian counterparts. Arab American/Middle Eastern, native Hawaiian/Pacific Islander, Asian, and American Indian/ Alaskan native groups reported a lower level of cultural competence. This finding might be influenced by the levels of assimilation of Asians and Hawaiian/Pacific Islander groups into the white Anglo American culture.<sup>20</sup>

Lower competence scores might also be associated with the types of patients and athletes that certain ATs treat. An AT who treats clients primarily within his or her own ethnic or racial group might have a lower score. Some researchers<sup>21</sup> have suggested that patients prefer health care providers within their same racial or ethnic groups, which is a finding that might apply to ATs. Cooper-Patrick et al<sup>21</sup> noted that patients in race-concordant relationships with their physicians rated their visits as more participatory than did patients in race-discordant relationships. Therefore, a patient's culture influences perception of care provided, communication, compliance, and injury/illness assessment and management.<sup>22</sup>

Other health care professions, such as nursing, have used various evaluation tools to assess culturally competent care. Doorenbos et al<sup>18</sup> found nurses were culturally competent, scoring 85% on the CCA. Schim et al<sup>17</sup> did not assess

Table 6.	Total	Cultural	Competence	Assessment	Scores of
Certified	Athletic	Trainers	by National	Athletic Trainer	's' Associa-
tion Distr	ict				

National Athletic Trainers'		Cultural Co Assessme	•
Association District	n	Mean	SD
1	153	4.833	0.663
2	388	4.620	2.711
3	339	4.698	2.855
4	676	4.845	0.735
5	275	4.847	1.619
6	173	4.755	0.751
7	195	4.898	0.704
8	198	4.762	0.899
9	347	4.809	0.809
10	143	4.842	0.805
International	19	4.723	1.151
Total	2906	4.78	1.246

competence levels but found that previous cultural competence training and level of educational attainment were indicators of higher levels of cultural competence in nursing. Because providers with diversity training score higher on the CCA than those without training, diversity education is needed in the athletic training profession.<sup>17</sup>

We found no differences in cultural competence levels between newly certified ATs and experienced ATs. One could argue that new ATs might score higher on cultural competence levels because most participants in this group would have graduated within the last 5 years and, therefore, would have participated in a CAATE-accredited program that required cultural competence education. Conversely, some might argue that more experienced ATs would score higher than new ATs due to their experience levels and opportunities for exposure to diverse situations or continuing education workshops. Although Sargent et al<sup>23</sup> stated that cultural competence requires preparation through formal education, the performance of experienced ATs who completed internship routes to certification was comparable with that of less experienced ATs who graduated from an accredited program.

We found no differences in competence levels among the 10 NATA districts, including international ATs. Overall, respondents were distributed evenly by sex, race/ethnicity, years of experience, and education throughout the districts, so competence levels did not vary.

Our study had several inherent limitations. First, a comprehensive literature review identified no instruments specific to athletic training to measure cultural competence levels. Therefore, we modified an existing instrument that was developed to measure cultural competence among health care providers working in a variety of settings.<sup>18</sup> Due to the generic nature of the CCA's original version, some of the questions might not have been easily applicable to ATs. Another limitation was a relatively low response rate of 22.86%, although a large number of ATs responded to the survey (3102). In addition, due to NATA membership rights, only 13568 ATs of 26234 NATA certified-student, certified-international, and certified-regular members received the inventory. The remaining ATs elected not to receive the survey via e-mail. Investigation of the cultural competence levels of the remaining NATA members and non-NATA members would provide more detailed results.

Our research supported the hypothesis that ATs are culturally competent. However, actual cultural competence scores were lower than self-reported cultural competence scores. This baseline data can raise awareness among ATs that the profession is not as culturally competent as selfreported. This discrepancy will enable ATs to be cognizant of opportunities to obtain further education on diversity issues. In addition, cultural competence is considered a continuum: part of a developmental process and not a goal that is attained and concluded.<sup>24</sup> Because baseline data have been collected regarding cultural competence levels, future researchers can focus on the most appropriate method of initial and continuing education for ATs on cultural issues among their athletes and patients. Maurer-Starks<sup>25</sup> stated that ATEPs must identify how they will prepare young professionals to provide health care services to diverse populations, which includes individuals of different races, ethnicities, religious affiliations, socioeconomic statuses, and sexual orientations.

Suggestions about how to increase the knowledge of ATs on issues of diversity lead back to the foundational education of ATs and require educators to personally evaluate their respective knowledge bases, experiences, comfort levels, resources, and educational philosophies, improving self-awareness and challenging themselves to identify with personal history, race, ethnicity, and culture.<sup>10</sup> Only then can ATs and athletic training students alike gradually become more comfortable with cross-cultural communication and assessments of race and culture. Athletic training educators must increase awareness so students will be better prepared to work with the diverse populations they will encounter as health care professionals.

The information from our study provides a baseline for the level of cultural competence among ATs in their delivery of health care services. Educators can use these findings to develop educational tools that assist professionals in gaining knowledge about working with diverse individuals. Employers can develop profession-specific diversity training modules to enhance cultural awareness among staff. Athletes and patients can be made aware that ATs consider needs that might be culturally determined while providing care. Minimally, these data will raise awareness among ATs, reminding the profession that cultural aspects of care must be considered when treating patients. Optimal outcomes are achieved when health care practitioners possess more knowledge and respond with sensitivity to cultural issues.<sup>11</sup> Embracing the differences within and around various cultures and adapting treatment to accommodate every athlete's or patient's needs is a far more equitable goal than simply treating everyone the same. Certified ATs have the unique opportunity to work with a largely diverse population, so they must recognize their responsibility to take advantage of and grow from these experiences to continually provide the best standard of care. Only through applying culturally competent care can ATs provide an optimal healing environment that ultimately will lead to greater patient outcomes and a more holistic level of athletic medicine.

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#### REFERENCES

- US Census Bureau. U.S. interim projections by age, sex, race, and Hispanic origin. http://www.census.gov/ipc/www/usinterimproj/. Accessed April 10, 2007.
- National Collegiate Athletic Association. 1999–2000 to 2004–2005 NCAA Student-Athlete Race and Ethnicity Report. Indianapolis, IN: National Collegiate Athletic Association; 2006.
- National Athletic Trainers' Association. July 2007 NATA membership by class and district. http://www.nata.org/members1/documents/ membstats/2007\_07.htm. Accessed September 3, 2007.
- 4. Perrin DH. Promoting diversity in athletic training. J Athl Train. 2000;35(2):131.
- 5. Cross TL, Bazron BJ, Dennis KW, Isaacs MR. Towards a Culturally Competent System of Care: A Monograph on Effective Services for

*Minority Children Who Are Severely Emotionally Disturbed.* Vol 1. Washington, DC: Georgetown University, CASSP Technical Assistance Center; 1989.

- 6. Chin J. Culturally competent health care. *Public Health Rep.* 2000;115(1):25–33.
- Commission on Accreditation of Athletic Training Education. Accredited graduate and undergraduate programs. http://caate. cyzap.net/dzapps/dbzap.bin/apps/assess/webmembers/tool. Accessed March 10, 2008.
- National Athletic Trainers' Association. March 2008 NATA membership by class and district. http://www.nata.org/members1/ documents/membstats/2008\_03.htm. Accessed March 10, 2007.
- National Athletic Trainers' Association. *Athletic Training Educational Competencies*. 4th ed. Dallas, TX: National Athletic Trainers' Association; 2006.
- Geisler PR. Multiculturalism and athletic training education: implications for educational and professional progress. J Athl Train. 2003;38(2):141–151.
- 11. Grant-Ford M. Working toward cultural competence in athletic training. *Athl Ther Today*. 2003;8(3):60–66.
- Schim SM, Doorenbos AZ, Benkert R, Miller J. Culturally congruent care: putting the puzzle together. J Transcult Nurs. 2007;18(2): 103–110.
- Schim SM, Doorenbos AZ, Miller J, Benkert R. Development of a cultural competence assessment instrument. J Nurs Meas. 2003;11(1): 29–40.
- Schim SM, Doorenbos AZ, Borse NN. Cultural competence among hospice nurses. J Hosp Palliat Nurs. 2006;8(5):302–307.
- Campinha-Bacote J. The Process of Cultural Competence in the Delivery of Healthcare Services: A Culturally Competent Model of Care. 3rd ed. Cincinnati, OH: Transcultural C.A.R.E. Associates; 1998.
- University of Michigan Health System. Program for multicultural health: cultural competency background. http://www.med.umich.edu/ multicultural/ccp/background.htm. Accessed March 10, 2008.
- Schim SM, Doorenbos AZ, Borse NN. Cultural competence among Ontario and Michigan heathcare providers. J Nurs Scholarsh. 2005;37(4):354–360.
- Doorenbos AZ, Schim SM, Benkert R, Borse NN. Psychometric evaluation of the cultural competence assessment instrument among heathcare providers. *Nurs Res.* 2005;54(5):324–331.
- Barak ME, Cherin DA, Berkman S. Organizational and personal dimensions in diversity climate: ethnic and gender differences in employee perceptions. J Appl Behav Sci. 1998;34(1):82–104.
- Kim S, McLeod JH, Shantzis CA. Cultural competence for evaluators working with Asian-American communities: some practical considerations. In: Orlandi MA, Weston R, Epstein LG, eds. *Cultural Competence for Evaluators: A Guide for Alcohol and Other Drug Abuse Prevention Practitioners Working With Ethnic/Racial Communities*. Rockville, MD: US Dept of Health and Human Services; 1995:203–260. DHHS publication (SMA)95-3066.
- Cooper-Patrick L, Gallo JJ, Gonzales JJ, et al. Race, gender, and partnership in the patient-physician relationship. *JAMA*. 1999;282(6): 583–589.
- 22. Lipson JG, Dibble SL, Minarik PA. Culture & Nursing Care: A Pocket Guide. San Francisco, CA: UCSF Nursing Press; 1996.
- Sargent SE, Sedlak CA, Martsolf DS. Cultural competence among nursing students and faculty. *Nurs Educ Today*. 2005;25(3):214–221.
- Campinha-Bacote J. The Process of Cultural Competence in the Delivery of Healthcare Services: A Culturally Competent Model of Care. 4th ed. Cincinnati, OH: Transcultural C.A.R.E. Associates; 2003.
- 25. Maurer-Starks S. Are Athletic Training Students Culturally Competent? [dissertation]. New York, NY: Columbia University; 2005.

Address correspondence to Tracey Covassin, PhD, ATC, Michigan State University, 105 IM Sports Circle, East Lansing, MI 48824. Address e-mail to covassin@ath.msu.edu.