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Assessing Cultural Competence Among Oncology Surgeons

Ardith Z. Doorenbos, PhD, RN, Arden M. Morris, MD, Emily A. Haozous, PhD, RN,
Heather Harris, RD, and David R. Flum, MD, MPH

University of Washington, Seattle, WA;
University of Michigan, Ann Arbor, MI; and
University of New Mexico, Albuquerque,
NM

Corresponding author: Ardith Z. Doorenbos,
PhD, RN, FAAN, School of Nursing,
University of Washington, Box 357266,
Seattle, WA 98195;
e-mail: doorenbos@uw.edu.

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QUESTION ASKED: Are there attributes of surgical providers that are associated with culturally congruent care?

SUMMARY ANSWER: Surgical providers reported treating diverse patient populations; 71% encountered patients from six or more racial/ethnic groups. More than half (58%) reported completing cultural diversity training, with employer-sponsored training the most common type reported (48%; 71 of 147). Cultural Competence Assessment scores ranged from 5.99 to 13.75 of a possible 14 (mean = 10.3; standard deviation $\pm$ 1.3), and receipt of diversity training was associated with higher scores than nonreceipt (10.56 v 9.82, respectively; $P < .001$).

METHODS: Surgical providers from six hospitals in the Puget Sound region of Washington State were invited to participate. Participants completed a 50-item survey that assessed demographic data and incorporated the Cultural Competence Assessment and the Marlowe-Crowne Social Desirability Scale. Survey response rate was 51.1% (n = 253).

BIAS, CONFOUNDING FACTORS(S), DRAWBACKS: Our study has several limitations. Although our survey response rate of 51% was better than that of most physician surveys reported in the literature, we acknowledge that our data cannot represent the experience of all surgeons in the United States who care for racial/ethnic minority patients, as our survey was limited to surgeons practicing in the Puget Sound region. Our survey items on the racial/ethnic and special population diversity encountered by providers were limited to experiences in the past 12 months. We might have obtained a more accurate description of providers' experience by using a more detailed quantitative measure, but we elected not to use this approach in order to limit respondent burden and thereby improve response rates. This study only surveyed surgical providers, which represents only a snapshot of the cancer care continuum. Future research should include medical oncology providers and others oncology providers to provide a more complete picture of cultural competency across the cancer care continuum.

REAL-LIFE IMPLICATIONS: Culturally competent care is an essential but often overlooked component of high-quality health care. In our study sample, most surgical providers who treated racially and ethnically diverse patients perceived that they had a high level of cultural awareness, and their perceived and measured cultural awareness were highly correlated in our analyses. As US demographics become increasingly diverse, these data provide encouraging evidence that surgical providers are generally culturally sensitive and culturally aware, and perhaps more important, that they place a high value on cultural awareness. Our results also demonstrate that exposure to cultural diversity training was the

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single most important contributor to culturally congruent care, indicating a substantial need to continue existing diversity training interventions. Future work should compare training offered by various hospital systems. [JOP](#)

Table 1. Characteristics of Study Participants by Cultural Diversity Training

Characteristic	Diversity Training (n = 147)	No Diversity Training (n = 106)	P
Mean age, years ($\pm$ SD)	50.05 ($\pm$ 11.44)	50.05 ($\pm$ 9.97)	.9996
Race, No. (%)			
White	118 (81.9)	78 (74.3)	.145
Other	26 (18.1)	27 (25.7)	
Sex, No. (%)			
Male	104 (72.2)	72 (68.6)	.532
Female	40 (27.8)	33 (31.4)	
Racial/ethnic diversity of patients served, No. (%)			
6 or more racial/ethnic groups	108 (73.5)	71 (67.0)	.263
less than 6 racial/ethnic groups	39 (26.5)	35 (33.0)	
Special populations diversity of patients served, No. (%)			
6 or more special population groups*	105 (71.4)	75 (70.8)	.907
< 6 special population groups	42 (28.6)	31 (29.2)	
Marlowe-Crowne Social Desirability Score, mean (SD)†	7.52 (3.12)	7.53 (3.17)	.965
Cultural Competence Assessment Score, mean (SD)‡	10.56 (1.21)	9.82 (1.29)	< .001

Abbreviation: SD, standard deviation.

*Special population groups include patients who were mentally or emotionally ill; physically challenged or disabled; homeless or housing insecure; substance abusers or alcoholics; gay, lesbian, bisexual, or transgender; and from different religious or spiritual backgrounds.

†Scores range from 0 to 13, with higher scores indicating greater needs for social approval.

‡Scores range from 2 to 14, with higher scores indicating more cultural competence.

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University of Washington, Seattle, WA;
University of Michigan, Ann Arbor, MI;
and University of New Mexico,
Albuquerque, NM

Abstract

Purpose

Racial and ethnic minority groups in the United States have the highest mortality rates for the most common cancers. Various factors, including a perceived lack of culturally congruent care and culturally competent providers, might lead minority patients to decline or delay care. As part of a large multimethod study to understand barriers to care among American Indian and Alaskan native patients with cancer, we examined surgical provider attributes associated with culturally congruent care.

Patients and Methods

Surgical providers from six hospitals in the Puget Sound region of Washington State were invited to participate. Participants completed a 50-item survey that assessed demographic data and incorporated the Cultural Competence Assessment (CCA) and the Marlowe-Crowne Social Desirability Scale.

Results

Survey response rate was 51.1% (N = 253). Participants reported treating diverse patient populations; 71% encountered patients from six or more racial and ethnic groups. More than one half of participants (58%) reported completing cultural diversity training, with employer-sponsored training being the most common type reported (48%; 71 of 147). CCA scores ranged from 5.99 to 13.75 of a possible 14 (mean, 10.3; standard deviation, ± 1.3), and receipt of diversity training was associated with higher scores than nonreceipt of diversity training (10.56 v 9.82, respectively; $P < .001$). After controlling for Marlowe-Crowne Social Desirability Scale score and hospital system, participation in diversity training was the variable most significantly associated with CCA score ($P < .001$).

Conclusion

Culturally competent care is an essential but often overlooked component of high-quality health care. Future work should compare training offered by various hospital systems.

INTRODUCTION

It is well established that racial and ethnic minority groups in the United States experience the highest rates of mortality for the most common cancers. Among minority patients, higher mortality rates after a cancer diagnosis have been associated with higher risk of postsurgical mortality, more advanced disease at

diagnosis, and a greater likelihood of delayed or nonguideline concordant care.¹

From a policy standpoint, poor-quality care and delayed care are considered health system problems and are often attributed to limited resources and services or to other structural issues. However, a systematic review of treatment decision making among racial and ethnic minority

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patients with cancer indicates that patients also decline or delay care because of inadequate social support, dissatisfaction with patient-provider communication, and perceived lack of culturally congruent care and cultural competence among providers.²

Culturally congruent care happens when the needs, preferences, and expectations of patients, families, and communities are aligned with clinician knowledge, attitudes, and skills.³ Provider characteristics associated with cultural congruence include cultural diversity on the basis of exposure to cross-cultural interactions; cultural awareness, a cognitive construct referring to knowledge of cultural differences; cultural sensitivity, an attitudinal construct referring to openness to learning about other cultures; and cultural competence, a behavioral construct referring to actions that respond to cultural diversity, awareness, and sensitivity.³ Cultural congruence is an essential but often overlooked attribute of high-quality care.⁴ Limited data indicate a positive association between cultural congruence and effective patient-provider communication,^{5,6} appropriate health care use,⁷ and desirable health outcomes.⁸⁻¹⁰ Given the complexity of cancer care, cultural congruence among patients, providers, and communities could have a beneficial effect on patient-centered outcomes among minority patients.¹¹ However, little is known about how providers develop cultural awareness and sensitivity, or whether interventions designed to improve cultural awareness and sensitivity result in culturally competent behaviors.¹²⁻¹⁴ Even less is known about the personal values of providers and their perceptions of their own cultural awareness.

In Washington State, according to Medicaid and Medicare data, approximately 2,000 cancer cases were diagnosed among American Indian and Alaskan natives from 2005 to 2014. On the basis of unpublished hospital data, we estimate that 20% of patients with a diagnosis of lung cancer undergo resection because advanced stage precludes surgery in most. In addition, 90% of patients with colorectal, 75% of patients with prostate, and 85% of patients with breast cancer undergo surgical treatment. More than one half were residents of the Tri-County area (King, Pierce, and Snohomish counties) near Puget Sound.

As part of a large multimethod study to understand systemic and interpersonal barriers to surgical care among American Indian and Alaskan native patients with cancer, this study examined provider attributes associated with culturally congruent care in the Puget Sound region.

PATIENTS AND METHODS

Participants

Surgical providers from six hospitals representing two hospital systems in the Puget Sound region of Washington State were recruited for the study. Participating sites served a mix of urban and rural areas and represented both university and community settings. Inclusion criteria were age ≥ 18 years and practice in one of the following surgical specialties: general surgery, urology, obstetrics and gynecology, neurosurgery, oncology, ophthalmology, or orthopedic surgery. Recruitment was limited to these specialties to ensure consistency across sites and inclusion of surgeons who perform invasive procedures. Approval for using human participants for the study was obtained from the institutional review boards of the University of Washington and participating hospitals before study activities began.

Procedures

Surgical providers were identified through department listings. Study recruitment and enrollment were conducted between April and August 2012 by using the following procedures: Study packets were placed in provider hospital mailboxes (hospital system 1) or mailed to provider hospital or clinic addresses by the US Postal Service (hospital system 2). The study packet included a statement explaining the purpose of the study along with possible risks and benefits; a paper copy of the survey; a self-addressed stamped envelope; and a \$5 Starbucks gift card to compensate participants for their time. Completion of the survey served as consent to participate, as indicated by the informational statement. Two weeks after study packets were sent, providers received an e-mail reminder containing the URL for the secure Web site to which the survey was posted. To accommodate individual preferences, providers had the option of completing the survey online or printing a paper copy, completing it, and mailing it back. Both modalities have been used to administer the Cultural Competence Assessment (CCA). Ten providers (2%) for whom the hospitals did not provide an e-mail address were sent a reminder through the US Postal Service; a subsequent reminder followed approximately 2 weeks later.

Instruments

The 50-item survey incorporated the CCA^{15,16} and the Marlowe-Crowne Social Desirability Scale (MCS).¹⁷ Both are validated instruments that include items on demographics,

cultural awareness and sensitivity, culturally competent behaviors, diversity experience (CCA), and a measure of the respondent's desire for societal approval (MCS). The racial and ethnic descriptors of the survey followed those used by the US Census.

The CCA has two domains: cultural awareness and sensitivity and culturally competent behaviors. Because it was designed for a multidisciplinary setting,¹⁶ demographic items were rephrased to be meaningful for surgical providers. Responses were assessed on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree" for the attitudes and beliefs section, and from "always" to "never" for the frequency of behaviors. Respondents were given the option of selecting "no opinion" or "not sure," but items completed in this manner were not included in the tabulation of the final score.

A common interpretive problem in many self-report assessments involves the degree to which responses are influenced by social desirability. Studies indicate that this problem can be reduced when a social desirability scale is included in such instruments. In this study, the MCS produced scores ranging from 0 to 13. Higher values represent larger numbers of socially desirable responses endorsed. Originally developed as a measure of response styles affected by social desirability, this scale also been found to predict defensiveness and vulnerable self-esteem.¹⁷

Analysis

Descriptive statistics, including selected bivariable associations, were computed for all study variables. For the linear regression, variables that have been reported in the literature as being associated with cultural competence were entered into the model. On the basis of the distribution of results, providers' race ("White/Caucasian" *v* "Other") as well as the racial, ethnic, and other diversities of patient populations (six or more different population groups *v* fewer than six) were collapsed to form binary variables. In addition to experience with racial and ethnic minorities, diversity was also measured in terms of experience with such special populations as patients who were mentally or emotionally ill; physically challenged or disabled; homeless or housing-insecure; substance abusers or alcoholics; gay, lesbian, bisexual, or transgender; or of different religious or spiritual backgrounds. Several categorical variables were also collapsed into fewer categories to use in the main effects model. Providers' self-assessments of cultural competence were grouped as "very incompetent" and "somewhat incompetent," "neither

competent nor incompetent" and "somewhat competent," and "very competent." Hospitals were grouped as system 1 or system 2, and age was grouped as 30 to 39 years, 40 to 49 years, 50 to 59 years, and ≥ 60 years.

The final main effects linear regression model consisted of demographic variables, self-assessment of cultural competence, presence or absence of diversity training, hospital system, and MCS score, as well as the degree of providers' interactions with diverse racial, ethnic, and other special population groups.

All statistical analyses were performed by using STATA 12.1 (STATA, College Station, TX). A priori statistical significance for independent variables and the primary outcome of cultural competence was set at $P < .05$, on the basis of a two-sided test for bivariable and multivariable associations.

RESULTS

A total of 495 study packets were distributed across both hospital systems (208 for system 1; 287 for system 2), and 253 physicians participated for a response rate of 51.1% (system 1: 65.7% [$n = 140$]; system 2: 39.4% [$n = 113$]). This total was deemed satisfactory for sampling practicing physicians. Most respondents completed the survey on paper (74% [$n = 187$]). Their mean age was 50 years (standard deviation [SD] ± 10.8 years; range, 32 to 77 years), 196 (77.5%) self-identified as White/Caucasian only, 44 (17.4%) self-identified as another race, nine (3.6%) marked mixed race, 176 (69.6%) were men, and four (1.6%) did not self-report sex (Table 1).

Participants treated diverse patient populations, with 179 (71%) reporting that they encountered patients from six or more different racial or ethnic groups and from six or more special population groups. Completing some form of cultural diversity training was reported by 147 participants (58%), with variation by hospital system: for system 1, 85 of 140 participants (70.7%), and for system 2, 62 of 113 participants (54.9%). Most providers (92.7%) reported feeling either "somewhat" or "very" competent working with people from cultures other than their own.

We found no correlations between age and completion of cultural diversity training or between age and CCA scores. The most common form of diversity training was an employer-sponsored program (48% [71 of 147]). Mean CCA scores were 10.3 (SD, ± 1.3 ; range, 5.99 to 13.75 of 14 total). Diversity training was significantly associated with overall scores, as evidenced by the difference between the mean scores of providers who had and had not completed such training: 10.56

Table 1. Characteristics of Study Participants by Cultural Diversity Training

Characteristic	Diversity Training (n = 147)	No Diversity Training (n = 106)	P
Age, years ($\pm$ SD)	50.05 (11.44)	50.05 (9.97)	.999
Race/ethnicity, No. (%)			
White	118 (81.9)	78 (74.3)	.145
Other	26 (18.1)	27 (25.7)	
Sex, No. (%)			
Male	104 (72.2)	72 (68.6)	.532
Female	40 (27.8)	33 (31.4)	
Racial/ethnic diversity of patients served, No. (%)			
Six or more racial/ethnic groups	108 (73.5)	71 (67.0)	.263
Fewer than six racial/ethnic groups	39 (26.5)	35 (33.0)	
Special populations diversity of patients served, No. (%)			
Six or more special population groups*	105 (71.4)	75 (70.8)	.907
Fewer than six special population groups	42 (28.6)	31 (29.2)	
MCS score ($\pm$ SD) [†]	3.12 (7.52)	3.17 (7.53)	.965
CCA score ($\pm$ SD) [‡]	1.21 (10.56)	1.29 (9.82)	< .001

Abbreviations: CCA, Cultural Competence Assessment; MCS, Marlowe-Crowne Social Desirability Scale; SD, standard deviation.

*Special population groups include patients who were mentally or emotionally ill; physically challenged or disabled; homeless or housing-insecure; substance abusers or alcoholics; gay, lesbian, bisexual, or transgender; or from different religious or spiritual backgrounds.

[†]MCS scores range from 0 to 13, with higher scores indicating greater needs for social approval.

[‡]CCA scores range from 2 to 14, with higher scores indicating more cultural competence.

(SD $\pm$ 1.2) versus 9.82 (SD $\pm$ 1.3), respectively ($P < .001$; Table 1).

In general, providers had a high level of cultural awareness and sensitivity (mean, 5.9; SD $\pm$ 0.5). Their consensus view was consistent with the statement, “I believe that everyone should be treated with respect no matter what their cultural heritage.” Eighty-eight percent of providers (219 of 250) indicated they “strongly agreed” with this statement, 11% (28 of 250) indicated that they “agreed,” and the remaining 1% (three of 250) were neutral. The most commonly endorsed misconceptions among providers were that “People with a common cultural background think and act alike,” and that “Race is the most important factor in determining a person’s culture.”

However, high levels of cultural awareness and sensitivity did not necessarily translate into culturally competent behaviors (mean, 4.3; SD $\pm$ 1.02; Table 2). The most commonly endorsed behavior was “I avoid using generalizations to stereotype groups of people,” with most respondents (74.6% [188 of 252]) indicating they “always” or “very often” adhered to this standard. A smaller majority (66.3% [162 of 244]) always or very often “welcome(d) feedback from

patients about how (they) related to people from different cultures,” whereas only five (2%) reported that they never did so. Culturally competent behaviors that were lacking included “hav(ing) resource books and other materials available to help (the respondent) learn about people from different cultures,” “document(ing) cultural assessments when (the respondent) provide(s) direct patient care,” and “document(ing) adaptations (the respondent) make(s) when provid(ing) direct patient care.” About one-third of respondents (32% [76 of 237]) reported “never” having resource books or other materials available, and only 3.8% reported “always” having them available. Fifty percent (122 of 245) “never” documented cultural assessments or did so only a “few times,” whereas 56.6% of respondents (138 of 244) documented cultural adaptations at least “sometimes.”

After controlling for MCS score and hospital system, participation in diversity training was the variable most significantly associated with CCA score ($P < .001$). The hospital system in which respondents practiced was also significantly associated with CCA score, consistent with the finding that 48% of respondents (n = 147) with diversity training received employer-based training. Female respondents also had higher

Table 2. Cultural Competency Items Showing Significant Differences by Cultural Diversity Training

Variable	Diversity Training			No Diversity Training			P
	No.	Mean	SD	No.	Mean	SD	
People with a common cultural background think and act alike.	145	4.9	1.4	105	4.3	1.5	.003
Spirituality and religious beliefs are important aspects of many cultural groups.	145	6.3	0.7	105	6.1	0.9	.042
I include cultural assessment when I do individual or organizational evaluations.	134	4.2	1.5	100	3.3	1.6	< .001
I seek information on cultural needs when I identify new people in my work	139	3.8	1.7	104	3	1.5	< .001
I have resource books and other materials available to help me learn about people from different cultures.	136	3	1.8	101	2.2	1.4	< .001
I use a variety of sources to learn about the cultural heritage of other people.	143	4	1.6	104	3	1.4	< .001
I ask people to tell me about their own explanations of health and illness.	145	4.8	1.6	105	3.9	1.7	< .001
I ask people to tell me about their expectations for health services.	145	5.1	1.5	106	4.3	1.6	< .001
I avoid using generalizations to stereotype groups of people.	146	5.9	1.1	106	5.6	1.1	.038
I remove obstacles for people of different cultures when I identify barriers to services.	140	5	1.3	102	4.6	1.4	.021
I remove obstacles for people of different cultures when people identify barriers to me.	139	5.3	1.2	102	4.9	1.4	.026
I find ways to adapt my services to individual and group cultural preferences.	145	5.2	1.4	102	4.6	1.5	.001
I document cultural assessments when I provide direct patient care.	142	3.1	1.6	103	2.5	1.5	.001

Abbreviation: SD, standard deviation.

CCA scores than males, although this association was not statistically significant. Finally, respondents' self-assessment of cultural competence was significantly correlated with their CCA scores.

DISCUSSION

In our study sample, most surgical providers who treated racially and ethnically diverse patients perceived that they had a high level of cultural awareness, and their perceived and measured cultural awareness were highly correlated in our analyses. As US demographics become increasingly diverse, these data provide encouraging evidence that surgical providers are generally culturally sensitive and culturally aware, and perhaps more important, that they place a high value on cultural awareness.

Participating providers' sex, self-assessed cultural competence, history of cultural diversity training, and hospital system were all associated with their practice of culturally congruent care. A large majority of respondents received diversity training through their employers, and such training accounted for most of the variation noted in CCA scores.

Future research on cultural sensitivity in provision of health care should therefore include a comparison of the trainings offered by different hospital systems.

Although we expected that receipt of cultural diversity training would be less frequent among older providers, our analyses revealed no such association. Nonetheless, we noted an age-related difference in the sources of training. Older respondents reported more informal sources, such as attending public school or serving in the military, whereas younger respondents reported more formal training during medical school. We also did not find any age-related differences in culturally competent behaviors. Although this null result might stem from an inadequate sample size, we hypothesize instead that among older respondents, experiential learning on the basis of years in practice and exposure to multiple cultural groups compensated for their lack of access to the more formalized training reported by younger respondents.

We also found that cultural awareness and sensitivity, which are the cognitive and attitudinal manifestations of cultural congruence, respectively, did not always translate into culturally competent behavior. One potential explanation for

our finding of no association between provider knowledge and behavior is the lack of optimal cultural competency training.¹⁸ In our study, knowledge in the form of cultural awareness was positively associated with receipt of cultural diversity training, as was behavior in the form of cultural competence. Therefore, future research interventions could use as a basis a more comprehensive transtheoretical model that integrates behavioral theory with such constructs as stages of change, processes of change, decisional balance, and self-efficacy.¹⁹ Future interventions to improve cultural competence could then incorporate diversity training as well as opportunities for behavior change.

Our study has several limitations. Although our survey response rate of 51% was better than most physician surveys reported in the literature,^{20,21} we acknowledge that our data cannot represent the experience of all surgeons in the United States who care for minority patients, because our survey was limited to surgeons practicing in the Puget Sound region. In addition, concerns about social desirability or perceived social norms might have motivated many respondents to misrepresent their true feelings and experiences. We tried to mitigate this possibility by using the Marlowe-Crowne Social Desirability Scale, a validated measure, to correct for social desirability bias, but some bias might still be present. Our survey items on the racial and ethnic and special population diversity encountered by providers were limited to experiences in the past 12 months. We might have obtained a more accurate description of provider experience by using a more detailed quantitative measure, but we elected not to use this approach to limit respondent burden and thereby improve response rates. This study surveyed only surgical providers, which represents only a snapshot of the cancer care continuum. Future research should include medical oncology providers and others oncology providers to provide a more complete picture of cultural competency across the cancer care continuum.

Despite these limitations, we believe that our study contributes substantive new findings on surgical providers and culturally congruent care. The surgeons in our sample displayed and valued cultural awareness and sensitivity, and our results also demonstrate that exposure to cultural diversity training was the single most important contributor to culturally congruent care. Both findings indicate a substantial need to continue existing diversity training interventions. Nevertheless, because we found that cultural awareness and sensitivity did not necessarily result in culturally competent

behavior, we highlight the pressing need for improved, theory-based interventions to achieve the goal of genuinely culturally competent care. **JOP**

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Authors' Disclosures of Potential Conflicts of Interest

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Author Contributions

Conception and design: Ardith Z. Doorenbos, Arden M. Morris, Emily A. Haozous, David R. Flum

Collection and assembly of data: Ardith Z. Doorenbos, Heather Harris, David R. Flum

Data analysis and interpretation: Ardith Z. Doorenbos, Emily A. Haozous, David R. Flum

Manuscript writing: All authors

Final approval of manuscript: All authors

Corresponding author: Ardith Z. Doorenbos, PhD, RN, School of Nursing, University of Washington, Box 357266, Seattle, WA 98195; e-mail: doorenbos@uw.edu.

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AUTHORS' DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST**Assessing Cultural Competence Among Oncology Surgeons**

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Ardith Z. Doorenbos

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Arden M. Morris

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Emily A. Haozous

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Heather Harris

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David R. Flum

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Appendix

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