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Hospice interdisciplinary team providers' attitudes toward sexual and gender minority patients and caregivers

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Abstract

Objective.—Hospice interdisciplinary team (IDT) providers' attitudes toward sexual and gender minority (SGM) patients and family caregivers impacts quality of care and end-of-life outcomes. This study assessed hospice IDT provider attitudes toward SGM patients and caregivers and identified demographic predictors.

Methods.—Hospice IDT providers (N=122) completed an adapted 11-item scale measuring attitudes toward SGM hospice patients and caregivers. Descriptive statistics, confirmatory factor analysis, and regression models were conducted.

Results.—The hospice-adapted Attitudes Toward LGBT Patients Scale (ATLPS) demonstrated acceptable Cronbach's alpha (0.707). Total scores ranged from 32–55 (M=47.04, SD=5.64) showing that attitudes were generally positive. Being religious (B=−3.169, p=0.008) was associated with more negative attitudes, while higher education (B=1.951, p=0.002) and time employed in hospice agency (B=0.600, p=0.028) were associated with more positive attitudes.

Conclusion.—This is among the first studies to assess SGM-specific hospice IDT attitudes. Participants had relatively positive attitudes, influenced by religious beliefs, clinical experience, and education. CFA results suggest the need for better instruments to measure this complex construct.

Practice Implications.—Education incorporating evidence of disparities, life-course perspectives, and end-of-life experiences of diverse cohorts of SGM patients and families may build on hospice IDT members' experience and training by influencing attitudes, reducing bias and improving competency.

Keywords

LGBT; sexual and gender minority; hospice; end of life; hospice providers

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Conflicts of Interest

The authors have no actual or potential conflicts of interest to disclose.

1. Introduction

1.1 Sexual and Gender Minority Cancer Patients and Caregivers

Sexual and gender minorities (SGMs) are individuals and groups defined by sexual orientations and gender identities that differ from majoritarian heterosexual, cis- and binary gender (e.g., female or male) categories. This includes people who identify as lesbian, gay, bisexual (LGB), pansexual, asexual, queer (Q), questioning, transgender (T), genderqueer, non-binary, and two-spirit (LGBTQ+). In October 2016, the National Institutes of Health designated SGMs as a health disparities population, with greater risk of experiencing inequalities related to a number of intersecting social determinants of health, and therefore subject to disproportionate risk of and burden from a range of chronic and life-limiting conditions, including cancer [1].

Estimates of the numbers of SGM individuals in the U.S. vary as sexual orientation and gender identity (SOGI) data beyond binary female/male categories is still not systematically tracked in population-level surveys despite projections that over 11 million (4.5 %) U.S. adults identify as LGBT [2]. Between 1.2% to 5.6% of the US population are estimated to be LGB [3, 4], while approximately 1.4 million people or 0.6% of the US population identify as transgender, with the caveat that data related to gender identity are even less often tracked by national surveys and health care agencies than those related to sexual orientation [3].

National cancer registries have not routinely collected SOGI data [5–8], so producing reliable estimates of cancer prevalence among SGM groups is difficult. Related research indicates, however, that many SGM individuals experience unique risk factors that contribute to a disproportionate risk for cancer, higher incidence of cancer, later diagnosis and disproportionate risk for subsequent cancer-related burden [6]. Contributing factors reported in the cancer and health disparities literature span personal and structural factors, including lifestyle factors, poorer physical and mental health, higher rates of chronic illness and comorbidities, fewer social supports [9–11], minority stress, [12] social stigma [13–14], avoidance of health services due to fear of discrimination, lack of self-disclosure, and poorer communication with providers that erodes trust and prevents LGBT patients from expressing their unique needs [6, 13–15].

Health care systems have also not systematically tracked how many SGM individuals serve as informal or family caregivers for those with cancer [5, 7, 8]. Among respondents to a 2015 U.S. national survey, 9% of caregivers of adults identified as SGMs, and a higher percentage of SGM respondents said that they provide caregiving (20%) compared with their non-SGM counterparts (16.5%) [16].

1.2 Challenges Faced by SGM Patients and Caregivers at End of Life

Hospice family caregivers of cancer patients face many challenges, and a growing body of work underscores that SGM cancer patients and their caregivers have unique end-of-life care challenges and needs [17]. Those challenges may be compounded by systems which render them demographically invisible, past experiences with bias and discrimination in health care, lack of provider knowledge, and anxiety about disclosing their SGM status. This holds true not only when the relationship is more apparent, such as when family caregivers and patients

are spouses or partners, but also when the SGM status may not be as obvious, such as when the family caregiver is a child or sibling [18, 19].

The many transitions associated with end-of-life care, including transitioning to hospice, can represent new risks and increased anxiety for SGM patients and caregivers as they weigh disclosing their orientation, identity or close relationships to a new set of providers. Relationships and interactions among biological and chosen family members and close others can be complex and sources of stress; same-sex spouses or partners who are primary caregivers may go unacknowledged by providers. Hospice services are often provided in the home, which can mean providers are entering a sanctuary space. The handful of studies describing SGM patient and caregiver experiences report some individuals altering their presentation and/or the home environment to hide indicators of their identities to protect the patient, themselves or other family members from judgement or mistreatment [20, 21]. Many hospice organizations do not provide SGM-specific education so the lack of knowledge and cultural competency of hospice interdisciplinary (IDT) team providers may limit their awareness of historical, social, and legal concerns affecting patients and caregivers; lack of knowledge and competency can also hamper communication [22].

1.3 Concerns and Previous Research Related to Provider Knowledge and Attitudes

SGM patients and caregivers report experiencing bias and discrimination during health care encounters across the continuum of care, in primary care offices, clinics, hospitals, and long-term care settings [14, 15, 18, 22–24]; these experiences engender stress, anxiety, and feelings of devaluation [12, 18, 25, 26]. Fifty-six percent of LGB and 70% of transgender people have reported discrimination during encounters with health providers [15]. Moreover, health and aging service providers may fail to consider they may be serving members of the SGM community [27, 28].

Previous studies have assessed attitudes of medical students [29–33] nurses [34, 35], health science students [36], primary care providers [37], and oncology providers [38–40] toward SGM patients, and examined how attitudes relate to providers' knowledge, practice behaviors, communication, and previous social or professional experiences with SGM individuals. Female gender, higher education level, non-Christian religious orientation, lower levels of religiosity, identifying as SGM oneself, having SGM family and friends, and greater knowledge of SGM health issues and experiences have all been associated with more positive attitudes [39].

While attitudes of medical and oncology providers have been examined in previous work, the attitudes of hospice care providers and potential impact on caring for SGM individuals is under-examined. A growing body of work is addressing the SGM population in cancer prevention and treatment [5–8]. Several U.S. organizations offer SGM-focused palliative, hospice, and end-of-life competency standards and training; currently, these initiatives are largely centered in urban communities, are optional for hospice organizations, and no national standards exist [41]. U.S. hospice organizations do not routinely collect SOGI data, making it difficult to quantify and track outcomes for SGM patients and families and generate evidence to drive education and training initiatives [27, 42]. We therefore lack evidence of numbers of SGM patients and families served, their demographic and clinical

diversity, systematic effects of competency training, and factors associated with hospice IDT providers' attitudes toward SGM patients and families. Moreover, although the discourse of hospice emphasizes a person- and family-centered ethos, providers may see end-of-life as having universal and essential aspects experienced similarly by all patients (e.g. "death is the great equalizer") [43, 44]. This can lead to providers' belief that they treat all patients the same or that SGM families have the same needs as other families [43] without closer examination of actual communication and practice. Because U.S. hospice care is largely delivered in patients' homes, with family caregivers providing 24/7 care, this knowledge is essential to support inclusive and effective communication among patients, caregivers and IDT members, achieving optimal outcomes.

1.4 Study Objective

The purpose of this study was to assess the attitudes of hospice IDT providers toward SGM hospice patients and caregivers. This study is part of a parent study funded by a National Institute of Health on hospice family caregivers of cancer patients (NR016249).

2. Methods

2.1. Participants and setting

All study activities were approved by the University of Utah's Institutional Review Board. A total of 26 hospice sites were approached to participate and four hospices agreed. Hospice IDT providers were purposely recruited from U.S. organizations in Utah, Massachusetts, Ohio, and Florida. Eligibility criteria for IDT providers included being a nurse, social worker, chaplain, clinician, physician, or aide, English-speaking, and at least 18 years of age. Multiple approaches were used to recruit IDT providers including attending team meetings and one-on-one conversations to present study information and answer questions. Participation was voluntary, with four providers completing consents but not surveys. Due to budgetary constraints, IDT participants were not compensated, however research staff periodically provided refreshments at IDT meetings in acknowledgement.

2.2 Measures

2.2.1. Demographic and Hospice-related items—Hospice IDT providers completed demographic questions (including SOGI), items related to their professional role and training including current position, time in current position and hospice, and whether participants held national certification in hospice (nurses) or had previous training specific to hospice and palliative care beyond their organization's basic orientation and training.

2.2.2. Attitudes Toward LGBT Patients Scale Adapted for Hospice—Participants completed a modified version of the Attitudes Toward LGBT Patients Scale (ATLPS) [33, 36], with wording adapted to be specific to hospice patients and family caregivers. The ATLPS is an 11-item questionnaire assessing provider opinions of LGBT patients, professional responsibilities, and level of comfort in providing care to LGBT individuals. Likert items range from 1 (strongly disagree) to 5 (strongly agree) and possible scores range from 11 to 55. First designed for use by residents and physicians providing care for patients with AIDS, Wilson et al. (2014) used the ATLPS to measure

health profession students' attitudes. Their principal component analysis identified three components accounting for 64% of variance, items 1–6 (eigenvalue 4.0; Cronbach's alpha = 0.81), items 10 and 11 (eigenvalue 1.75; Cronbach's alpha 0.92), and items 7–9 (eigenvalue 1.28; Cronbach's alpha 0.56); overall Cronbach's alpha of 0.84 for the scale [37]. Most prior studies of attitudes toward SGM patients have used items borrowed or adapted from previous similar studies; however, Wilson et al. (2014) argued for use of the entire scale to preserve scale integrity and complexity of the underlying construct [36]. We therefore adapted the ATLPS because it fit our original intent to measure and crosswalk attitude data with other forms of data collected in the parent study.

2.4 Statistical Analyses

We used SPSS version 24 [45] to perform analyses including descriptive statistics, Cronbach's alpha for the ATLPS scale and items, and linear regression modeling. We also used Mplus version 7.31 [42] to conduct confirmatory factor analysis (CFA) on ATLPS items.

2.4.1. Confirmatory Factor Analysis—We examined the ATPLS scale CFA using maximum likelihood estimation, which is flexible to missing data [42]. Benchmarks for model fit were RMSA of 0.01 = excellent, 0.05 = good, and 0.08 = mediocre fit [46] and CFI >0.95 [47]. CFA results demonstrated that both the single-factor as well as three-factor model had poor fit. Specifically, the single factor model had RMSEA=0.206 [0.183–0.230] $p < 0.001$ and CFI of 0.852. A three-factor model utilizing the previously proposed domains [33, 36] had an RMSEA=0.124 [0.099–0.150] $p < 0.001$ and CFI of 0.839.

2.4.2. ATLPS Reliability and Cronbach's Alpha—For our sample, because of errors in the survey form where item 10 was omitted for some participants and others skipped this item (total $n = 47$), list-wise deletion Cronbach's alpha has different sample size dependent on the domain. As described by Wilson et al 2014, there are three domains. Domain 1 (items 1–6) had a Cronbach's alpha of 0.694 ($n=119$); Domain 2 (items 7–9) had a Cronbach's alpha of 0.462 ($n=122$), and Domain 3 (items 10 and 11) had a Cronbach's alpha of 0.983 ($n=73$) [36]. Overall, Cronbach's Alpha based on the scale was 0.707 ($n=73$) which falls into the acceptable range [48]. Though Cronbach's was lower than other studies, consistent with Wilson et al.(2014) we opted to utilize entire scale sum scores for our models [33, 36].

2.4.3. Linear Regression Modeling of Predictors of Attitudes Toward LGBT Patients—Multivariable linear regression modeling examined if a priori factors were significant predictors of ATPLS total score. Predictors of interest included continuous variable age and categorical variables for gender identity (female=0, male=1; note that 1 respondent who identified as transgender also identified as female), post high-school education (0=less than bachelors, 1=bachelors, 2=graduate), religious affiliation (0=non-religious, 1=religious), time in current hospice position (categorical with 6 levels from < 6 months to >10 years), and additional hospice training education or certification (0=no additional training, 1=additional training). Predictor variables of race, ethnicity, sexual orientation and transgender or non-binary identities were considered but not included because of small cell counts. Because we utilized a sum score, missing data (see section

2.4.2) was handled by scaling a participant's sum based on the total number of items answered. Participants were required to complete at least 70% of items (8 out of 11 items). Alpha was set to 0.05. We report coefficients, statistical significance, and overall model fit.

3. Results

3.1 Demographics

Table 1 summarizes participant demographics. Our hospice provider sample was largely white (90%), female (79%), not SGM (87%), religiously affiliated (76.5%), had at least some graduate education (55%) and average age was 46 years. A 2012–2013 demographic survey of American Academy of Hospice and Palliative Medicine members found that hospice providers were 72.4% female and the majority (45.5%) were between 41–50 years of age (race, ethnicity, religion, SGM status, and education level were not assessed) [49].

Most in our sample (62%) had been employed with their current agency at least one year and had not received additional hospice training beyond that provided by their agencies (52.5%). Given the small number of participants within specific hospice roles (i.e. chaplain, nurse), we do not present this information to protect confidentiality.

3.2 Attitude Scores

The ATPLS was given to 137 IDT providers but only $n = 122$ contributed complete data to our calculations and are described here. The mean for the total ATPLS score was 47.04, and the median was 48 (SD = 5.65, range 32–55). Table 2 presents the adapted ATPLS items including item means, standard deviations, and response frequencies. Items 1, 3, 4, and 6 were highly skewed toward “strongly agree”. Responses to reverse score items (2, 5, 7, 8, 9) were less skewed and more distributed across the response set. Items 9 (LGBT patients and/or caregivers should disclose their sexual orientation to their hospice care team) and 11 (Same-sex behavior is a natural expression of sexuality in humans) received the most neutral responses (54.9% and 31.9%).

3.3 Linear Regression Results

Table 3 displays results of the linear regression analysis. A significant regression equation was found ($F(6, 107) = 4.125, p=0.001$), with an adjusted R^2 of 0.142. Significant effects on ATPLS score included decreases with religious affiliation ($B = -3.169, p=0.008$), increases with education level ($B = 1.951, p=0.002$) and increases with additional time employed with their organization ($B = 0.600, p=.028$).

4. Discussion, Conclusion, and Practice Implications

4.1 Discussion

To our knowledge, this is the first study to examine hospice IDT providers' attitudes of hospice SGM patients and caregivers. Although the numbers of SGM patients receiving hospice services are not systematically tracked, population-level data on cancer rates among SGM individuals [5,6] suggest that many SGM cancer patients and their caregivers will require palliative and end-of-life care at some point; however, most U.S. institutions and

agencies providing palliative and hospice care do not collect SOGI data [27, 42]. At the same time, Wilson et al. (2014) has argued, assessments of provider attitudes toward SGM individuals only captures attitudes toward people who providers perceive as being SGM [37]. This underscores the importance of including SOGI items on hospice intake forms, assessments, and histories. Inclusion of these items not only allows SGM patients and family members to self-identify, it also signals awareness and acknowledges diversity of history and experience. Furthermore, it is now recognized as a standard of best practice in the provision of a range of health care services [6, 7, 22].

Overall, participants in our study reported relatively positive attitudes towards SGM hospice patients and caregivers. Although different measures have been used in previous research, our finding suggests IDT providers may have more positive attitudes on average than members of other health care disciplines (medicine, nursing, allied health, dentistry) [37]. This may be due to increasing cultural acceptance of LGBT individuals, as our study is more recent; however, there may also be characteristics unique to hospice that are associated with more positive attitudes. For example, hospice providers may spend more time with patients and families in their own context [27], which could increase familiarity and patient- and family-specific knowledge, and thus improve attitudes. Prior research on attitudes has indicated that both increased familiarity with specific SGM individuals and increased knowledge and understanding of the context of SGM health experiences are associated with more positive attitudes [50].

Our analyses of provider variables associated with attitudes align with previous studies. For example, our finding that being religious is associated with more negative attitudes among providers towards LGBT individuals has been shown elsewhere [37, 39]. While previous studies did not examine education level explicitly, perhaps assuming that their samples of professional students and providers would lack variability on this dimension, hospice IDT teams are often comprised of professionals with education ranging from high school to graduate degrees. Moreover, broader literature on attitudes indicates that higher education predicts more positive attitudes [51–53]. Indeed, in our sample, higher education levels are associated with more positive scores. We analyzed how long providers had been engaged in providing care within their current organizations as a proxy for hospice experience and found this was also associated with more positive scores. Among IDT providers, time in hospice may be a proxy for exposure to a wider and deeper range of experience with different types of families, and presumably SGM individuals. If so, this finding may echo previous findings that more knowledge of and increased interactions with SGM individuals is associated with more positive attitudes [30–32].

Although we drew participants from agencies in three geographically and demographically disparate regions and states in the U.S. (for example, 1.4% of Utah's population is African American compared with 8.9% for Massachusetts and 16.9% for Florida; 42.9% of Massachusetts population aged 25 or more have a baccalaureate degree or higher compared with 33.3% for Utah and 29.2% for Florida), our sample lacked racial, ethnic and gender diversity. Our sample was largely white, female, non-SGM, middle-aged, highly educated, and declared some religious affiliation. This aligns with the gender and age information presented in the 2013 American Academy of Hospice and Palliative Medicine survey [49],

the only large-scale published survey of hospice provider demographics we found. While we do not know whether a more diverse sample of hospice IDT members would report more positive or negative attitudes, prior research indicates that younger age, female gender, SGM identity, and higher education are associated with more positive attitudes toward LGBT patients while religious affiliation (in general) and male gender is associated with more negative attitudes [39]. We also know that in other health care settings, lack of provider diversity is associated with poorer communication and patient outcomes, particularly among marginalized groups [54]. Lack of systematic tracking of SOGI data for hospice patients and demographic data (including SOGI) for hospice providers raises considerable challenges for examining relationships between provider characteristics and patient outcomes at system levels.

Our findings also affirm that attitudes toward SGM individuals and groups is a multidimensional construct [37]. Although the ATLPS provides an important preliminary view of attitudes, our findings show a need for a more psychometrically sound measure of provider attitudes towards SGM patients and caregivers. Attention towards developing an instrument better able to capture more nuanced and complex attitudes towards SGMs is also needed. Specifically, one item on the ATLPS that fails to capture the complex historical, social, legal, and cultural factors that can impact attitudes is item 9 (LGBT patients and/or family caregivers should disclose their sexual orientation to their hospice care team) which is reverse-coded and therefore seen as a negative statement in the current scale. Disclosure is now often perceived by the patients, caregivers and providers to be a positive communication development, demonstrating trust [43, 44]. Providers' positive opinions about disclosure represent a recognition that while there are similarities in how SGM and non-SGM patients and caregivers experience end of life, there are also important historical, social, legal, and cultural factors related to the question of disclosure that impact end-of-life outcomes. For example, when hospice providers have a better understanding of how relationships among family of origin and chosen family may affect dynamics and social support, the complex role that non-affirming religions may play in relation to spiritual and existential concerns, older adults' experiences with policies and practices that have legally and systematically disenfranchised their person- and couplehood, they will be better equipped to provide person- and family-centered care [22, 27]. This point is also supported by recent recommendations for competency and best practice [22, 42] and underscores the complexities of assessment as well as how attitudes and interpretations may change over time and with increased knowledge.

Self-report assessments such as the ATLPS approximate explicit bias because responses require conscious awareness and insight into one's views, and motivation to report them accurately. Links between attitude as a component of explicit bias and provider communication behaviors have been well-established [55, 56]. Yet implicit bias, driven by associations that providers are not consciously aware of, likely also plays a large role in hospice provider communication. This includes bias involving negative assumptions about SGM patients and families, and bias toward heteronormative assumptions; both interfere with critical goals of hospice care such as establishing safety, trust, and support. Hospice care delivered within patients' homes is particularly susceptible to nuances in

communication as bringing outsiders into the intimacy of the home setting can heighten feelings of vulnerability.

4.1.1 Limitations—As discussed, our sample lacked racial, ethnic, and gender diversity, and participants were largely religious, heterosexual, and cisgender. While this presents a limit to generalizability, we do not have enough information from published data to assess the degree to which our sample does or does not represent the U.S. population of hospice IDT providers. Some of the ATLPS missing data was not random but due to a clerical error, which resulted in analyses being conducted on a smaller sample. We conducted CFA to assess the validity of the scale and to better understand the underlying constructs. However, the poor fit of the three-factor and single-factor solution called into question the suitability of this scale for assessing attitudes in hospice providers. Overall, despite having been used previously in other health care contexts, a different instrument may be better suited to measuring SGM-related attitudes of hospice providers.

4.2 Conclusion

Attitudes toward SGM individuals and groups is a nuanced and complex construct. In the home hospice setting, patients and their family caregivers are accepting providers into their lives in ways that heighten the potential impact of provider attitudes on communication. Moreover, within the existential and profound context of end-of-life care, the effects of both negative and positive attitudes is amplified. Further work is needed to assess the impact of communication on caregiver and cancer patient outcomes; this includes determining whether hospice IDT providers' attitudes toward SGM individuals affects communication with all patients and caregivers.

4.3 Practice Implications

The mission of hospice interdisciplinary is to provide high quality, patient- and family-centered care. This specialized, individualized care is seen as essential to meeting both patient and family needs. Education incorporating evidence of disparities, life-course perspectives, and end-of-life experiences of diverse cohorts of SGM patients and families should be integrated into ongoing hospice trainings and build on hospice's core mandate of providing dignified and sensitive person- and family-centered care. Ideally, this education will combine evidence of disparities and risks for poor outcomes for end-of-life care with the narrative experiences and active involvement of diverse SGM patients, caregivers, families, and IDT providers. It will offer providers opportunities to test assumptions that they "treat everyone the same", and assess how this translates into specific communication behaviors, while also exploring how these beliefs and behaviors may align (or not) with principles of patient- and family-centered care. Finally, this education should connect provider attitudes and associated demographic and experiential characteristics with SGM patient and family outcomes like symptom management, caregiver burden, and satisfaction with care.

Our findings provide an important first step in helping SGM individuals be seen in end-of-life contexts and for providers to examine their own attitudes towards these communities. Further research is needed to examine hospice providers' attitudes toward caring for SGM

patients and caregivers, including how providers' knowledge and experiences informs communication that shapes end-of-life outcomes, and developing education strategies that are effective in improving both provider attitudes and patient and family outcomes.

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Table 1.

Demographics of Hospice Providers

Provider characteristics (n=122)	N (%)
Age (years): M(SD)	46.0(12.3)
Min-Max	24–73
Race^a	
White	109(89.3)
Gender	
Female	96(78.7)
SGM Status^b	
Non-SGM	106(86.9)
SGM	8(6.6)
Don't know/prefer not to answer/missing	8(6.6)
Religious Affiliation	
Has a religious affiliation	93(76.2)
Education^b	
Less than bachelor's degree	30(24.6)
Bachelor's degree	25(20.5)
Graduate Degree	66(54.1)
Additional Hospice Education	
Less than bachelor's degree	58(47.5)
Years with Current Hospice^b	
<6 months	25(20.5)
<1 year	21(17.2)
1–2 years	20(16.4)
3–4 years	18(14.8)
5–10 years	13(10.7)
>10 years	23(18.9)
Missing	2 (1.6)

^aRace had 2 missing responses, non-white race includes the racial categories: Asian, Black or African American, or Other

SGM status had 5 missing responses; Education had 1 missing response; Years in Current Hospice Position had 2 missing responses

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Table 2.

Attitudes Toward LGBT Hospice Patients and Caregivers Scale items (N=122)

ATPLS #	Question	Mean	SD	Strongly Disagree	n (%)			
					Disagree	Neutral	Agree	Strongly Agree
1	Lesbian, Gay, Bisexual, and Transgender (LGBT) hospice family caregivers and patients deserve the same level of quality care as heterosexual patients	4.74	0.91	6(4.9)	0(0.0)	2(1.6)	4(3.3)	110(90.2)
2	LGBT family caregivers and patients should only seek services from hospices with gay and lesbian specific specialization. ^a	4.48	0.91	84(68.9)	20(16.4)	14(11.5)	1(0.8)	3(2.5)
3	Private hospices have a responsibility to serve (or provide care for) LGBT patients and families.	4.58	0.96	6(4.9)	0(0.0)	5(4.1)	17(13.9)	94(77.0)
4	I would be comfortable if I became known among my professional peers as a hospice professional who cares for LGBT patients and families.	4.45	1.08	7(5.7)	2(1.6)	8(6.6)	17(13.9)	88(72.1)
5	I am concerned that if heterosexual patients or their families learned that I was caring for LGBT patients and families, they will no longer seek my care. ^{a,b}	4.41	0.89	73(60.3)	31(25.6)	12(9.9)	3(2.5)	2(1.7)
6	I would be comfortable telling my intimate partner that I cared for LGBT patients. ^a	4.66	0.82	3(2.5)	1(0.8)	6(5.0)	14(11.7)	96(80.0)
7	It would be more challenging to gather a history from an LGBT patient or family caregiver than from a heterosexual patient or caregiver. ^a	4.32	0.87	69(56.6)	26(21.3)	24(19.7)	3(2.5)	0(0.0)
8	It is more challenging to discuss sexual behavior with LGBT patients than with heterosexual patients. ^a	4.04	1.03	55(45.1)	28(23.0)	29(23.8)	9(7.4)	1(0.8)
9	LGBT patients and/or family caregivers should disclose their sexual orientation to their hospice care team. ^a	3.43	1.00	25(20.5)	19(15.6)	67(54.9)	6(4.9)	5(4.1)
10	Same-sex sexual attraction is a natural expression of sexuality in humans. ^b	4.15	0.98	1(1.3)	1(1.3)	22(29.3)	13(17.3)	38(50.7)
11	Same-sex sexual behavior is a natural expression of sexuality in humans.	3.80	1.22	7(6.0)	7(6.0)	37(31.9)	16(13.8)	49(42.2)
Total Score	Items 1–11	Mean 47.04	SD 5.64	Median 48	Min 32	Max 55		

^aIndicates item with reverse coding.

^bItem 5 had 1 missing response; item 6 had 2 missing responses, item 10 had 47 missing responses, item 11 had 6 missing responses

Table 3:
Results from Multivariable Regression for Predictors of Hospice Providers' ATPLS Scores

	Unstandardized B	Std. Error	Standardized Beta	t	Sig.	95.0% B Confidence Interval LB	UB
(Constant)	44.482	2.256		19.716	0	40.01	48.955
age	-0.007	0.041	-0.016	-0.165	0.87	-0.089	0.075
male	-2.007	1.259	-0.154	-1.594	0.114	-4.504	0.489
Religious^a	-3.169	1.182	-0.253	-2.682	0.008	-5.511	-0.826
Education^a	1.951	0.618	0.309	3.156	0.002	0.726	3.177
Years in current hospice^a	0.6	0.27	0.202	2.222	0.028	0.065	1.135
Additional hospice education	0.154	1.046	0.015	0.148	0.883	-1.919	2.228

^aBolded are significant at p<0.05