

Required Sexual Orientation and Gender Identity Reporting by US Health Centers: First-Year Data

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Objectives. To assess the performance of US health centers during the first year of required sexual orientation and gender identity (SOGI) data reporting and to estimate the baseline proportion of lesbian, gay, bisexual, and transgender patients accessing health centers.

Methods. We conducted a secondary analysis of SOGI data from 2016. These data were reported by 1367 US health centers caring for 25 860 296 patients in the United States and territories.

Results. SOGI data were missing for 77.1% and 62.8% of patients, respectively. Among patients with data, 3.7% identified as lesbian, gay, bisexual, or something else; 0.4% identified as transgender male or female; 27.5% did not disclose their sexual orientation; and 9.3% did not disclose their gender identity.

Conclusions. Although health centers had a high percentage of missing SOGI data in the first year of reporting, among those with data, the percentages of lesbian, gay, bisexual, and transgender people were similar to national estimates, and disclosure was more than 70%. Future data collection efforts would benefit from increased training for health centers and improved messaging on the clinical benefits of SOGI data collection and reporting. (*Am J Public Health.* 2019;109:1111–1118. doi:10.2105/AJPH.2019.305130)

 See also Moragh-Bass, p. 1071.

Collecting sexual orientation and gender identity (SOGI) information from patients in health care settings and entering the data into electronic health records (EHRs) have been recommended by the Institute of Medicine,¹ the Joint Commission,² and other medical and policy experts as key steps to measuring and addressing multiple health disparities among lesbian, gay, bisexual, transgender, and queer (LGBTQ) populations.^{3–8} Routine SOGI data collection and reporting are considered critical not only for population health management but also for facilitating clinical decision support and promoting culturally affirming, patient-centered care.^{4–8} Adequate surveillance data on LGBTQ health disparities are needed to guide health care efforts at organizational and national levels.^{5,8,9} For clinicians, knowing the SOGI of patients helps to tailor prevention and improve rapport, as long as clinicians also receive training in effective communication,

SOGI core concepts, and LGBTQ health care best practices.^{4,5}

Despite the advantages of collecting SOGI data, few health care organizations have developed routine systems to do so.^{4,5} Some of the major barriers to prioritizing SOGI data collection have been clinician misperception that patients do not want to answer these questions,^{4,5} the inability of most EHRs to accommodate structured SOGI data,⁹ and the lack of best practices and supportive guidance on collecting SOGI data.⁵ Fortunately, these

challenges are diminishing. Studies have revealed that most patients, regardless of their SOGI, understand the health benefits of disclosure and feel comfortable doing so.¹⁰ Since January 1, 2018, all EHR systems certified under the federal Meaningful Use Stage 3 Incentive Program are required to have the capacity to record SOGI data.⁹ In addition, there are now several training resources and guidelines available that help equip organizations to collect these data and that educate clinicians in understanding sexual orientation and gender identity as distinct yet interconnected concepts.^{3,6,11}

Recognizing the value and urgency of SOGI data collection for population health management and equity, the US Bureau of Primary Health Care, Health Resources and Services Administration (HRSA) began requiring their Health Center Program grantees (HCs) to collect and report SOGI data in 2016.¹² HCs are community-based primary care organizations that provide comprehensive services to medically underserved populations.¹³ Because subgroups of LGBTQ people experience disproportionately higher stigma and poverty¹⁴ and lower insurance coverage,¹⁵ they can benefit from increased access to HCs across the United States. Collecting SOGI data in a manner similar to other sociodemographic data is therefore critical for monitoring the LGBTQ population's utilization of HC services.

Patients at HCs have a high prevalence of comorbidities, and HC staff are often overburdened.⁷ Given these challenges, as well as

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previously discussed barriers to SOGI data collection, we were interested in assessing the reporting performance of HCs in their first year of required SOGI data reporting. We therefore conducted a secondary analysis of 2016 SOGI data that assessed for patient disclosure and missing data and that estimated the proportion of HC patients who identified as LGBTQ. In addition, we looked for differences among HC characteristics potentially associated with reporting performance, patient disclosure, and percentage of LGBTQ patients (e.g., location type, size, and populations served). The overall goal was to inform future SOGI data collection and reporting efforts by HCs and other health systems.

METHODS

The data for this analysis were sourced from HRSA's 2016 Uniform Data System (UDS), a standardized report to which HCs submit annual aggregate (rather than patient-level) data on patient demographics, clinical indicators, and service utilization. The 2016 UDS consisted of data from 1367 HCs providing care to 25 860 296 unique patients in all 50 states, the District of Columbia, and 8 US territories.¹³ The UDS defined "patients" as individuals with at least 1 reportable HC visit in 2016, including any medical, dental, behavioral health, vision, enabling service, or other professional service visit.¹⁶

Measures

Sexual orientation and gender identity data. HRSA announced the SOGI data mandate on March 22, 2016.¹² Approved SOGI questions reflected best practices originally developed by clinicians, data system managers, and researchers with specialization in LGBTQ health, and later were studied in health care settings and federal surveys.^{3,4,6,8,10,17–19} The question for sexual orientation was "Do you think of yourself as (check one): lesbian or gay; straight (not lesbian or gay); bisexual; something else; don't know; choose not to disclose." Gender identity was assessed as follows: "What is your current gender identity? (check one): male; female; transgender male/trans man/female-to-male (FTM); transgender female/trans woman/male-to-female (MTF); other;

choose not to disclose." All patients also reported their "sex assigned at birth" as either "male" or "female."¹⁶ HRSA mandated SOGI data from adult patients (18 years and older) but encouraged HCs to also collect data on minors. SOGI was either self-reported or reported by caregivers (e.g., parents).¹⁶ To support data-collection efforts, HCs were provided access to free training resources from the National LGBT Health Education Center (<https://www.lgbthealtheducation.org>), a National Cooperative Agreement funded by HRSA.¹¹

No data were available on the processes used by HCs to ask SOGI questions. HCs were permitted to translate SOGI categories into other languages, depending on local population needs, and to add diverse categories, such as "genderqueer" and "asexual." When reporting to the UDS, however, HCs were instructed to group additional sexual orientation categories under "something else," and additional gender identity categories under "other."¹⁶ HCs were also instructed to report missing sexual orientation data under "don't know" and missing gender identity data under "other." Missing data included (1) patients whose visits occurred before data collection began; (2) patients who skipped questions; (3) patients not asked SOGI questions, either because of staff error or because data collection had not been implemented; or (4) data entry issues (e.g., data were collected but not submitted).¹⁶

The HCs could tailor data collection methods to meet workflow and EHR system needs. Anecdotally, HCs reported collecting SOGI data through patient portals, print or electronic registration forms, intake interviews, or during a clinical social or sexual history. Many HCs had EHRs that lacked designated fields for SOGI data. Some HCs modified the EHR to accommodate structured SOGI data in registration or sexual history fields; others put SOGI data into unstructured history or demographic text fields; and others stored the data in paper medical charts or in a separate database.

Health center-level characteristics. Because UDS data are submitted by HCs in aggregate, we could only stratify data by HC-level characteristics. Of the characteristics reported in the UDS, we selected those deemed most relevant to SOGI data. Specifically, we compared HCs by location type (rural vs urban) and size (smaller vs larger), because HC

staff have voiced concerns that patients in rural and smaller clinics may not disclose SOGI because of perceptions of anti-LGBTQ stigma and challenges with maintaining confidentiality. We also analyzed data from HCs funded by HRSA to serve special populations (migratory and seasonal agricultural workers; people experiencing homelessness), hypothesizing that HCs serving more marginalized populations would encounter additional challenges in collecting SOGI data. Moreover, LGBTQ people experience disproportionate homelessness,²⁰ and migratory agricultural workers are understudied and at increased risk for HIV and sexually transmitted infections (LGBTQ health disparities),^{21,22} suggesting the importance of assessing LGBTQ identities at these HCs.

Location and size. The UDS categorizes HCs as rural if they serve counties that are not part of a Metropolitan Statistical Area. All other HCs are categorized as urban. We defined smaller HCs as those with fewer than 10 000 patients, which represent 43% of HCs. All other HCs were defined as larger.

Special populations. The UDS indicates which HCs receive HRSA grants to enhance services for medically underserved special populations, including Migrant Grant-funded HCs serving migratory and seasonal agricultural workers and their families and Health Care for the Homeless-funded HCs serving those who are experiencing homelessness or are at risk for homelessness.

Data Retrieval and Analysis

In October 2017, HRSA granted us permission to access and analyze 2016 UDS data. We created a relational database in Microsoft SQL Server (2017; Microsoft, Redmond, WA) to house the data. We conducted descriptive analyses with Microsoft SQL Server and Tableau 9.3 (Tableau, Seattle, WA). We used SPSS version 25 (IBM, Somers, NY) to conduct the Wilcoxon rank sum test to compare data by demographic characteristic group for HCs at the .05 significance level.

RESULTS

Adult patients (18 years and older) comprised approximately two thirds of the overall

HC population. More patients were assigned female than male sex at birth (57.8% vs 42.2%). About one third of the population reported Hispanic/Latino ethnicity, about 20% reported their race as Black/African American, and nearly a quarter of patients were best served in a language other than English (Table 1).

Among the 1367 HCs reporting to the UDS, 1028 (75.2%) reported sexual orientation data on at least 1 patient. Sexual orientation data were reported missing for 77.1% of all patients (Table 2). Of the 22.9% (5 919 236) of patients with sexual orientation data, 68.8% identified as straight; 3.7% identified as lesbian, gay, bisexual, or something else (LGBSE); and 27.5% chose not to

disclose. There were 1099 (80.4%) HCs that reported gender identity data on at least 1 patient. Gender identity data were reported missing for 62.8% of all patients. Of the 37.2% (9 611 402) of patients with gender identity data, 52.7% identified as female, 37.6% as male, 0.2% as transgender female, 0.2% as transgender male, and 9.3% chose not to disclose.

Rural HCs did not differ significantly from urban HCs in the median percentage of patients with reported SOGI data or of patients who chose not to disclose SOGI (Table 3). Fewer patients in rural than urban HCs identified as LGBSE (median = 0.12%; interquartile range [IQR] = 0.00–0.40 vs median = 0.18%; IQR = 0.00–0.70;

$P < .001$), or transgender (median = 0.00%; IQR = 0.00–0.03 vs median = 0.01%, IQR = 0.00–0.07; $P < .001$).

Smaller HCs had better reporting of gender identity data than did larger HCs (median = 39.5%; IQR = 0.11–100.0 vs median = 17.5%; IQR = 0.16–99.9; $P = .006$) and had slightly lower gender identity nondisclosure than larger HCs (median = 0.00%; IQR = 0.00–0.17 vs median = 0.00%, IQR = 0.00–0.20; $P = .02$; Table 3). These differences persisted when we compared HCs by size in urban areas, but not in rural areas (data not shown). The significant differences in bisexual and transgender identity by HC size did not remain when HCs were further stratified by rural and urban location (data not shown). The percentage of patients who reported their sexual orientation as something else, however, differed significantly by HC size in both rural (median = 0.00%; IQR = 0.00–0.03; $P = .003$) and urban areas (median = 0.00%; IQR = 0.00–0.03; $P = .03$).

Migrant Grant–funded HCs did not differ significantly on any of the SOGI measures compared with all other HCs (Table 4). Health Care for the Homeless–funded HCs had more patients identifying as LGBSE (median = 0.30%; IQR = 0.01–0.88 vs median = 0.11%; IQR = 0.00–0.47; $P < .001$) and as transgender (median = 0.02%; IQR = 0.00–0.10 vs median = 0.00%; IQR = 0.00–0.04; $P < .001$) and reported collecting more gender identity data compared with all other HCs (median = 36.67%; IQR = 0.89–100.0 vs median = 21.2%; IQR = 0.09–99.99; $P = .01$).

DISCUSSION

This study is the largest-scale examination of SOGI data reporting by health care organizations in the United States, to our knowledge. Although several federal population-based health surveys have added sexual orientation and, to a lesser extent, gender identity questions to identify and track LGBTQ health disparities,^{18,19} this was the first time that SOGI patient data were collected and reported by all HCs nationally. In sum, we found that HCs reported missing sexual orientation data on more than 75% of patients and missing gender identity data on nearly 65% of patients.

TABLE 1—Patient Sociodemographic Characteristics Reported by US Health Centers, 2016 Uniform Data System

	All Patients, % (n = 25 860 296)
Sex assigned at birth	
Female	57.8
Male	42.2
Age, y	
< 18	31.0
18–64	60.7
≥ 65	8.3
Race	
Asian	3.4
Native Hawaiian/other Pacific Islander	1.0
Black/African American	19.5
American Indian/Alaska Native	1.2
White	58.2
More than 1 race	2.8
Unreported/refused ^a	14.0
Ethnicity	
Hispanic/Latino	34.3
Non-Hispanic/Latino	62.4
Unreported/refused ^b	3.3
Patients best served in a language other than English	23.6
Income as percentage of US Department of Health and Human Services poverty guidelines	
≤ 100%	50.6
> 100%	21.7
Unknown ^c	27.7

^aPatients who did not report race, or patients of health centers that did not distinguish White Hispanic/Latino patients from Black Hispanic/Latino patients.

^bPatients who did not report race or Hispanic/Latino ethnicity.

^cPatients whose income information was not collected within a year of their last visit.

TABLE 2—Patient Sexual Orientation and Gender Identity Data Reported by US Health Centers, 2016 Uniform Data System

	No.	Percentage of Patients With Reported Data	Percentage of All Patients
Sexual orientation			
LGBSE			
Lesbian or gay	125 772	2.1	
Bisexual	50 941	0.9	
Something else	43 948	0.7	
Subtotal LGBSE	220 661	3.7	
Straight	4 073 054	68.8	
Chose not to disclose	1 625 521	27.5	
Total reported data	5 919 236		22.9
Total missing data ^a	19 941 060		77.1
Gender identity			
Transgender			
Transgender female	15 826	0.2	
Transgender male	20 975	0.2	
Subtotal transgender	36 801	0.4	
Female	5 064 052	52.7	
Male	3 617 287	37.6	
Chose not to disclose	893 262	9.3	
Total reported data	9 611 402		37.2
Total missing data ^b	16 248 894		62.8

Note. LGBSE = lesbian, gay, bisexual, or something else; transgender female = transgender female/trans woman/male-to-female (MTF); transgender male = transgender male/trans man/female-to-male (FTM).

^aIncludes patients who responded “don’t know.”

^bIncludes patients who responded “other.”

Although these percentages are high, they should not be interpreted as a failure of implementation. First, HCs did not learn about the data collection mandate until March 22, 2016, yet were required to report data starting from January 1, 2016¹²; therefore, nearly 3 months of data were missing because of the implementation timeline. Second, the mandate took place before the requirement that EHRs incorporate SOGI data fields; therefore, implementation of SOGI data collection into clinical workflows and EHRs would be expected to take several months for HCs without SOGI data fields already in place. Third, although SOGI data were only required for adults, HCs reported SOGI data for all ages. Because 31% of the total HC population was aged younger than 18 years,¹³ up to one third of the missing data could represent children and adolescents. Finally, missing data were artificially inflated because HCs were required to combine missing sexual orientation data with “don’t

know” responses and missing gender identity data with “other” responses.¹⁶ On the other hand, until August 2016, HCs were given instructions to categorize patients who had a clinical visit before the start date of SOGI collection as “choose not to disclose.” It is possible that some HCs followed these original instructions and undercounted missing data while overcounting nondisclosure.

The large amount of missing SOGI data limits our capacity to know if the proportion of LGBTQ patients found is representative of all HCs nationally. Nonetheless, our findings of 3.7% LGBSE and 0.4% transgender are similar to national population-based estimates of 2.5% to 4.1% LGBTQ.^{15,23} By contrast, only 68% of HC patients with reported data identified themselves as straight, which is much lower than the national estimate of about 97%.¹⁵ This discrepancy suggests that the majority of the 27.5% of patients who chose not to disclose their sexual orientation

would have identified as straight. Consistent with this interpretation is a study that found that heterosexual people were less likely than lesbian, gay, or bisexual people to agree that they would answer SOGI questions at their HC.¹⁷ Also of note, we found that the percentage of patients who identified as something else was similar to the percentage who identified as bisexual. This finding may reflect the growing number of young adults who use terms such as queer or pansexual (rather than lesbian, gay, or bisexual) to describe their sexual orientation.²⁴

In the overall HC patient population, gender identity disclosure was higher than sexual orientation disclosure, which is consistent with studies indicating that people are less likely to refuse to answer gender identity than sexual orientation.^{4,25} Patients were possibly better able to interpret the gender identity question,¹⁷ and parents were possibly more likely to answer gender identity than sexual orientation questions about their children. Patients and providers may also have prioritized the clinical implications of gender identity over sexual orientation.⁴ Not only do transgender people experience greater stigma and health care rejection than lesbian, gay, and bisexual people, but they may also have more distinct medical needs, such as gender-affirming hormone therapy.²⁶

Contrary to assumptions, rural and smaller HCs did not differ significantly from urban and larger HCs in sexual orientation reporting performance or patient disclosure. Migrant Grant-funded HCs also did not differ in reporting or disclosure compared with all other HCs. Moreover, smaller HCs had higher gender identity reporting than larger HCs, and HCs funded to serve people experiencing homelessness had higher gender identity reporting performance and disclosure compared with all other HCs. Overall, these findings may help alleviate lingering concerns that most patients will not reveal their SOGI in health care settings perceived as having more close-knit, vulnerable, or stigmatized populations. Higher gender identity reporting performance in smaller settings may also suggest that implementation and scale-up of data collection is easier in organizations with smaller patient panels and fewer clinical sites.

The finding that more patients identified as LGBTQ in Health Care for the Homeless-funded HCs than in other HCs aligns with

TABLE 3—Comparison of Rural With Urban Health Centers and Smaller With Larger Health Centers: Median Percentage of Sexual Orientation and Gender Identity Data Reported for US Health Center Patients in 2016 Uniform Data System

	Rural Health Centers vs Urban Health Centers			Smaller Health Centers vs Larger Health Centers		
	Rural Health Centers (n = 606), Median % (IQR)	Urban Health Centers (n = 761), Median % (IQR)	P	Smaller Health Centers (n = 593), Median % (IQR)	Larger Health Centers (n = 774), Median % (IQR)	P
Sexual orientation						
LGBSE						
Lesbian or gay	0.06 (0.00–0.19)	0.09 (0.00–0.36)	< .001	0.08 (0.00–0.31)	0.07 (0.00–0.26)	.33
Bisexual	0.02 (0.00–0.13)	0.04 (0.00–0.23)	< .001	0.02 (0.00–0.19)	0.04 (0.00–0.17)	.031
Something else	0.0 (0.00–0.03)	0.0 (0.00–0.03)	.22	0.00 (0.00–0.03)	0.00 (0.00–0.03)	< .001
Subtotal LGBSE	0.12 (0.00–0.40)	0.18 (0.00–0.70)	< .001	0.13 (0.00–0.60)	0.15 (0.00–0.50)	.47
Straight	6.55 (0.00–31.50)	4.40 (0.00–21.17)	.049	4.90 (0.00–30.92)	5.66 (0.00–21.35)	.68
Choose not to disclose	0.04 (0.00–3.00)	0.01 (0.00–1.45)	.12	0.02 (0.00–2.00)	0.02 (0.00–1.84)	.54
All patients with reported SO data	9.76 (0.00–53.87)	7.09 (0.03–31.51)	.08	7.76 (0.00–59.96)	7.97 (0.05–31.84)	.32
Gender identity						
Transgender						
Transgender female	0.00 (0.00–0.01)	0.00 (0.00–0.03)	< .001	0.00 (0.00–0.02)	0.00 (0.00–0.02)	< .001
Transgender male	0.00 (0.00–0.02)	0.00 (0.00–0.03)	< .001	0.00 (0.00–0.03)	0.01 (0.00–0.02)	< .001
Subtotal transgender	0.00 (0.00–0.03)	0.01 (0.00–0.07)	< .001	0.00 (0.00–0.05)	0.01 (0.00–0.05)	< .001
Female	14.29 (0.07–51.09)	9.10 (0.01–47.19)	.25	15.56 (0.00–50.74)	9.02 (0.05–45.60)	.32
Male	9.92 (0.04–38.89)	5.84 (0.00–36.67)	.06	13.38 (0.00–40.37)	5.72 (0.02–34.06)	.001
Choose not to disclose	0.00 (0.00–0.30)	0.00 (0.00–0.14)	.36	0.00 (0.00–0.17)	0.00 (0.00–0.20)	.021
All patients with reported GI data	30.47 (0.23–99.99)	19.73 (0.10–99.99)	.20	39.50 (0.11–100.00)	17.54 (0.16–99.97)	.006

Note. GI = gender identity; IQR = interquartile range; LGBSE = lesbian, gay, bisexual, or something else; SO = sexual orientation; transgender female = transgender female/trans woman/male-to-female (MTF); transgender male = transgender male/trans man/female-to-male (FTM). The number of rural patients was 8 478 596; the number of urban patients was 17 381 700; the number of patients from smaller health centers was 2 960 988; the number of patients from larger health centers was 22 899 308. The P value represents comparisons between group distributions (Wilcoxon rank sum).

research demonstrating a disproportionate burden of homelessness among LGBTQ people because of family rejection and workplace and housing discrimination.^{20,26} Urban HCs also had higher median percentages of patients identifying as LGBTQ, consistent with US Census findings that more same-sex couples reside in urban than non-urban areas.²⁷

Limitations

This study had several limitations. First, we do not know if HCs followed best practices in data collection and reporting; it is likely that processes varied considerably across HCs (e.g., translation of questions, different methods of data collection and entry, adding and collapsing of SOGI categories). Although many HCs in most states have received training on SOGI and other LGBTQ health

topics since 2012,²⁸ not all HCs had accessed SOGI training or trained all relevant staff in 2016. Variations in how data collectors are trained, differences in patients’ interpretation of identity terms, and structural issues in the EHR can all affect the accuracy of demographic identity data in the EHR.²⁹

SOGI question phrasing also created limitations in interpretation of the data. For example, patients who were better served in a language other than English may have misclassified their SOGI because of language barriers or because translations were not culturally congruent. A 2017 study found that more than half of older non-LGBTQ Spanish-speaking respondents marked their sexual orientation as “don’t know how to answer” or “something else” because they did not understand the meaning of “heterosexual.”³⁰ In addition, the full diversity of SOGI could not be captured in our analysis. Patients

questioning their sexual orientation who answered “don’t know” were missed, as were patients identifying their gender identity as gender fluid, genderqueer, something else, or of no gender who answered “other.”

Finally, the analysis likely missed transgender patients who identified their gender identity as “male” or “female” and not as “transgender.”^{6,19} The only way to identify these patients as transgender would have been to cross-check gender identity data with sex assigned at birth data^{6,19}; this was not possible because we did not have access to patient-level data.

Next Steps

Future UDS reporting of SOGI data would benefit from addressing the limitations of this first year’s efforts. To reduce classification errors, HRSA could add a separate

TABLE 4—Comparison of Migrant Grant–Funded Health Centers and Health Care for the Homeless–Funded Health Centers With All Other Health Centers: Median Percentage of Sexual Orientation and Gender Identity Data Reported for US Health Center Patients in the 2016 Uniform Data System

	Migrant Grant–Funded Health Centers vs All Other Health Centers			Health Care for the Homeless–Funded Health Centers vs All Other Health Centers		
	Migrant Grant–Funded Health Centers (n = 174), Median % (IQR)	All Other Health Centers (n = 1193), Median % (IQR)	P	Health Care for the Homeless–Funded Health Centers (n = 295), Median % (IQR)	All Other Health Centers (n = 1072), Median % (IQR)	P
Sexual orientation						
LGBSE						
Lesbian or gay	0.06 (0.00–0.18)	0.07 (0.00–0.29)	.43	0.15 (0.00–0.47)	0.06 (0.00–0.24)	< .001
Bisexual	0.03 (0.00–0.11)	0.03 (0.00–0.19)	.47	0.08 (0.00–0.33)	0.02 (0.00–0.14)	< .001
Something else	0.00 (0.00–0.02)	0.00 (0.00–0.03)	.66	0.01 (0.00–0.04)	0.00 (0.00–0.03)	< .001
Subtotal LGBSE	0.13 (0.01–0.36)	0.14 (0.00–0.59)	.35	0.30 (0.01–0.88)	0.11 (0.00–0.47)	< .001
Straight	6.62 (0.23–23.20)	5.07 (0.00–25.22)	.31	7.55 (0.07–26.68)	4.54 (0.00–24.18)	.029
Chose not to disclose	0.02 (0.00–1.75)	0.02 (0.00–1.92)	.51	0.07 (0.00–2.91)	0.01 (0.00–1.71)	.06
Total patients with reported SO data	7.56 (0.30–31.41)	8.05 (0.01–43.14)	.78	10.31 (0.28–38.70)	7.39 (0.00–42.63)	.08
Gender identity						
Transgender						
Transgender female	0.00 (0.00–0.02)	0.00 (0.00–0.02)	.27	0.01 (0.00–0.05)	0.00 (0.00–0.02)	< .001
Transgender male	0.00 (0.00–0.02)	0.00 (0.00–0.03)	.12	0.01 (0.00–0.05)	0.00 (0.00–0.02)	< .001
Subtotal transgender	0.01 (0.00–0.04)	0.01 (0.00–0.05)	.20	0.02 (0.00–0.10)	0.00 (0.00–0.04)	< .001
Female	10.53 (0.05–40.23)	11.22 (0.02–49.52)	.62	15.58 (0.35–46.89)	9.84 (0.00–48.53)	.17
Male	6.79 (0.02–34.75)	7.51 (0.01–37.42)	.62	12.96 (0.21–41.97)	6.32 (0.00–35.91)	.001
Chose not to disclose	0.00 (0.00–0.13)	0.00 (0.00–0.21)	.91	0.00 (0.00–0.24)	0.00 (0.00–0.18)	.050
Total patients with reported GI data	18.61 (0.13–99.99)	25.53 (0.16–99.99)	.41	36.67 (0.89–100.00)	21.19 (0.09–99.99)	.010

Note. GI = gender identity; IQR = Interquartile range; LGBSE = lesbian, gay, bisexual, or something else; SO = sexual orientation; transgender female = transgender female/trans woman/male-to-female (MTF); transgender male = transgender male/trans man/female-to-male (FTM). The number of patients at Migrant Grant–funded health centers was 5 778 882, while the number of patients at all other non–Migrant Grant–funded health centers was 20 081 414; the number of patients at Health Care for the Homeless–funded health centers was 7 352 267; the number of patients at non–Health Care for the Homeless–funded health centers was 18 508 029. The P value represents comparisons between group distributions (Wilcoxon rank sum). There were 37 health centers that received both Migrant Grant and Health Care for the Homeless funding. In addition, many health centers without special population funding served people who meet the criteria for special populations.

category for missing data. HCs could also use HRSA–approved linguistic translations of SOGI questions and be encouraged to ask people in both the LGBTQ and non–LGBTQ local communities to review translations for accuracy and cultural appropriateness. To reduce patient nondisclosure and nonresponse, HCs could build registration staff’s capacity to respond to patient questions by providing annual training and by stocking registration areas with patient educational brochures on SOGI.¹¹

Finally, to increase uptake and quality of collection processes, HCs may need to receive improved messaging on the clinical benefits of SOGI data and the importance of staff training. Broader dissemination of these messages along with training resources can be better incorporated into national and regional

HC–focused communications and meetings. Expanding training to all HCs, possibly through a national training mandate, would likely increase quality, validity, and quantity of data, particularly if trainings cover SOGI concepts and terminology, LGBTQ health disparities, relevance of SOGI to patient-centered care, culturally sensitive communication, and guidance in applying quality metrics to SOGI data.³¹ Important considerations for mandated training include choosing curricula that will impart the most essential knowledge and skills to a given audience, determining how to engage resistant trainees, and knowing how to assess competency.²⁸

SOGI training can be further enhanced through additional UDS data analyses. For example, comparing characteristics of HCs

that reported data with those that did not would provide insight into data collection facilitators and barriers. Comparing characteristics of HCs that accessed training to those that did not would help trainers fine-tune content and adjust outreach and teaching methods. In addition, an in-depth evaluation of data-collection processes at the HC level through a national survey and qualitative methods would contextualize UDS findings and guide future training efforts. Given that smaller HCs performed better than larger HCs, the larger HCs may benefit from initially piloting data collection in just 1 service department or location and then slowly disseminating an iteratively refined approach to other locations.

Future SOGI studies would benefit from access to patient-level data. Researchers could

then stratify SOGI by relevant patient characteristics. For example, comparing different age cohorts would show potential differences in nondisclosure by age; in addition, limiting analyses to adults would more accurately measure reporting performance. Patient-level data would also enable cross-checking of gender identity with sex assigned at birth to capture more transgender patients and to control for data errors and misclassification. Stratification by other sociodemographic characteristics (e.g., race, ethnicity, language, country of birth) could elucidate intersectional experiences within LGBTQ communities and identify other nuanced topics for additional training.

Public Health Implications

Despite barriers and limitations, the prospect for improved future SOGI data collection appears promising. Other SOGI research has shown decreases in nonresponse and refusal rates over time,¹⁰ and new certification requirements for EHRs to accommodate SOGI data should help accelerate implementation.⁹ This first analysis of SOGI data in HCs has served as an important starting point not only for UDS reporting in future years but also for national SOGI data collection in other settings. The potential for LGBTQ population health management capabilities is substantial. At the individual clinic level, health care organizations can use the data to monitor and address LGBTQ health disparities in their patient populations. On a national level, pooling data would allow for broad evaluation of LGBTQ health care access and disparities and would enable tracking of temporal and geographic trends. These efforts, in concert with public health prevention campaigns and LGBTQ health training, will help us move closer to the goal set by *Healthy People 2020* “to improve the health, safety, and well-being of LGBT individuals.”³² **AJPH**

CONTRIBUTORS

A. S. Keuroghlian supervised the design, implementation, and reporting of the study. C. Grasso, K. H. Mayer, and A. S. Keuroghlian conceptualized the study. D. King and S. L. Reisner contributed to the design of the analysis. D. Funk and D. King conducted the analyses. H. Goldhammer led the writing and editing of the article, with contributions from C. Grasso, S. L. Reisner,

K. H. Mayer, and A. S. Keuroghlian. All authors interpreted the data and contributed revisions. C. Grasso and H. Goldhammer are co-first authors.

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CONFLICTS OF INTEREST

The authors report no conflicts of interest.

HUMAN PARTICIPANT PROTECTION

Ethical approval was not required because no human participants were involved, and all data were de-identified.

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