



Anxiety, Depression, and Access to Mental Health Care by Sexual Orientation and Rurality

Carrie Henning-Smith, PhD, MPH, MSW

Courtney Sarkin, MBE

Mariana Tuttle, MPH

Gilbert Gonzales, PhD, MHA

Key Findings

- Rural lesbian, gay, and bisexual (LGB) adults reported the highest rates of depression and anxiety disorder diagnosis, as well as the highest levels of depressed feelings, compared with urban LGB adults and rural and urban heterosexual adults.
- Urban LGB adults reported the most barriers to accessing health care.
- Both rural and urban LGB adults were more likely to have delayed mental health care in the past 12 months because of cost, compared with their heterosexual counterparts.

Purpose

Disparities in mental health and access to care are well-documented by both sexual orientation and rural/urban location. However, less is known about the intersection of sexual orientation and rurality in mental health and access to or utilization of health care. This policy brief addresses the research gap among rural sexual minorities by illuminating differences in mental health for two of the most common mental health disorders (depression and anxiety), as well as differences in access to health care.

Background and Policy Context

In recent years, notable progress has been made toward advancing the civil rights of lesbian, gay, and bisexual (LGB) individuals living in the US.¹⁻³ Still, health disparities by sexual orientation remain, with LGB individuals facing an array of challenges that their heterosexual counterparts do not experience.^{4,5} One particularly egregious set of challenges involves mental health, both in terms of access to mental health care and mental health outcomes. Members of the LGB community experience worse mental health outcomes and face greater challenges accessing care than their heterosexual counterparts.⁶⁻⁹ For example, LGB individuals are more than twice as likely to experience a mental health condition compared with their heterosexual counterparts.¹⁰ More specifically, research suggests that LGB adults are at higher risk than heterosexual adults for experiencing depression and anxiety disorders.¹⁰

Rural residents also experience disparities in mental health outcomes and access to mental health services.^{11,12} According to the National Survey on Drug Use and Health (NSDUH), just over 1 in 5 rural adults reported having a mental illness in 2020.¹⁰ Some research suggests that the prevalence of mental health conditions for rural and urban adults is similar,^{13,14} but the accessibility and uptake of health care services and supports, such as specialized mental health care provid-

ers, varies dramatically by rurality.^{12,13} As a result, rural residents report substantial disparities in mental health outcomes.¹³ Adults experiencing mental illness in rural settings also face unique challenges in accessing mental health care, including lack of anonymity when seeking care, shortage of mental health professionals available to them, transportation to treatment, and issues with affordability.^{12,15,16}

Unfortunately, very little research has examined the mental health of rural LGB populations—mostly due to the lack of credible data on sexual orientation and rurality. Of the available research, qualitative evidence and convenience samples of sexual and gender minorities (often combined for easier recruitment strategies) suggests elevated levels of psychological distress and substance use among rural LGB adults with barriers to mental health care.^{17–19} Much more research is critically needed to examine the intersection of sexual orientation and rurality in mental health care access and mental health outcomes. The purpose of this policy brief is to illustrate the differences in two of the most common mental health disorders, and in access to mental health care, by sexual orientation and rurality.

Approach

Data for this study came from the 2019–2020 National Health Interview Survey (NHIS), accessed through the IPUMS Health Surveys.²⁰ The NHIS is a nationally-representative survey of the civilian, noninstitutionalized population in the US, which has been fielded annually since 1957. It was among the first nationally representative surveys to include a publicly-available measure of sexual orientation, which was added to the adult component of the survey in 2013. The 2019–2020 NHIS included a longitudinal component, in which some respondents were invited to participate both years. For this brief, we only used baseline responses for all respondents who had answered questions on mental health, access to care, and sexual orientation (N=50,995).

Outcome variables included whether respondents had ever received a diagnosis of depression or anxiety disorder. For anxiety disorder, the survey asked respondents, “Have you ever been told by a doctor or other health professional that you had any type of anxiety disorder?” For depression, respondents were asked, “Have you ever been told by a doctor or other health professional that

you had any type of depression?” We created a categorical variable indicating whether they had received a diagnosis of neither, only depression or only anxiety disorder, or both depression and anxiety disorder. We also assessed the level of depression, which was asked using this question, “Thinking about the last time you felt depressed, how depressed did you feel? Would you say a little, a lot, or somewhere in between?” The level of depression question was asked of sample adults who reported feeling some depression (regardless of a formal diagnosis) and/or who took medication for depression.

Finally, we looked at three measures of access to care: has a usual source of care (including multiple usual sources of care); needed, but couldn’t afford medications (of any type) in the past 12 months; and delayed mental health care because of cost in the past 12 months. While two of these three measures are not specific to mental health care, they are indicative of broader access issues. Further, mental health concerns are often addressed first in a primary care setting,²¹ so measuring differences in access to care generally is important for understanding access to care for mental health conditions.

Rural location was defined using the 2013 NCHS Urban-Rural Classification Scheme.²² All non-metropolitan counties were categorized as rural and all metropolitan counties were categorized as urban. Sexual orientation was defined using the question, “Do you think of yourself as gay/lesbian; straight, that is, not gay/lesbian; bisexual; something else; or you do not know the answer?” We defined lesbian, gay, bisexual (LGB) as including all respondents who answered gay/lesbian, bisexual, or something else and heterosexual as all respondents who answered “straight.”

For all mental health and access to care measures, we used chi-squared tests to determine statistically significant differences within rural (LGB vs. heterosexual) and within urban (LGB vs. heterosexual) respondents. We used survey weights for all estimates and ran all analyses in Stata v. 16.

Results

The highest levels of depression and anxiety disorder diagnoses were found among rural LGB adults, with 38.6% reporting a dual diagnosis of depression and anxiety disorder (vs. 11.4% of heterosexual rural adults, $P < 0.001$, 29.5% of urban LGB adults, and 8.7% of ur-

ban heterosexual adults; see Figure 1). Urban heterosexual adults had the highest rates of neither depression nor anxiety disorder diagnosis (81.0%) compared to other heterosexual and LGB adults.

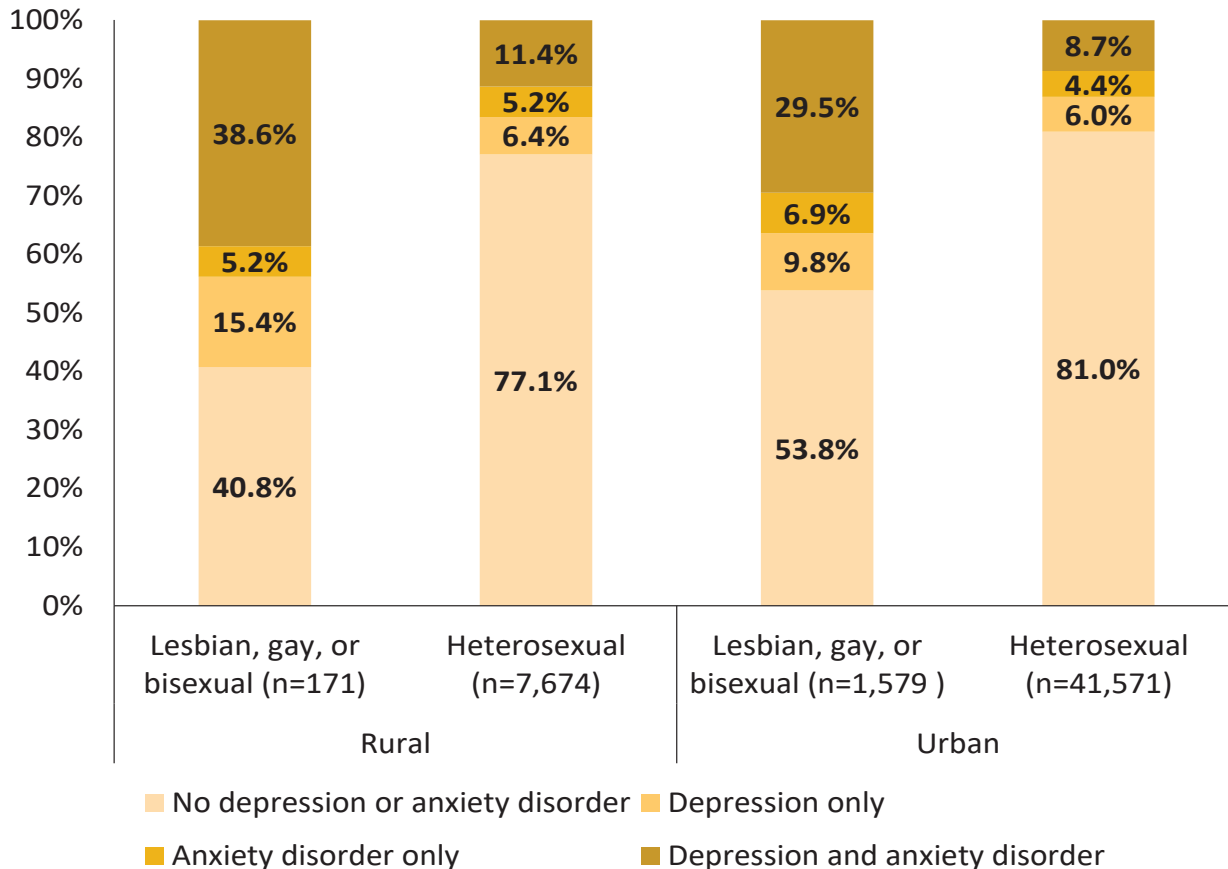
Among both rural and urban adults who had felt depressed or took medication for depression, the severity of depression was higher among LGB adults (see Figure 2). Rural LGB adults had the highest levels of depressed feelings, with 30.3% reporting that the last time they felt depressed it was, “a lot.” Rural and urban heterosexual adults had similar rates of reporting that the last time they felt depressed it was, “a little” (51.1% and 51.0% respectively).

Table 1 shows differences in access to care measures by sexual orientation among rural and urban adults by mental health diagnosis. Among rural respondents, LGB respondents were less likely to report having a usual source of care and more likely to report not being able

to afford medications across most diagnosis categories; however, those differences were not statistically significant, likely because of small sample sizes (e.g., 171 rural LGB adults). Rural LGB adults without a depression or anxiety disorder diagnosis were more likely than rural heterosexual adults without a depression or anxiety disorder diagnosis to say that they had delayed mental health care in the past 12 months because of cost (9.9% vs. 1.1%, $P < 0.001$), as were rural LGB adults with both a depression and anxiety disorder diagnosis, compared to rural heterosexual adults with both a depression and anxiety disorder diagnosis (25.5% vs. 13.9%, $P < 0.05$).

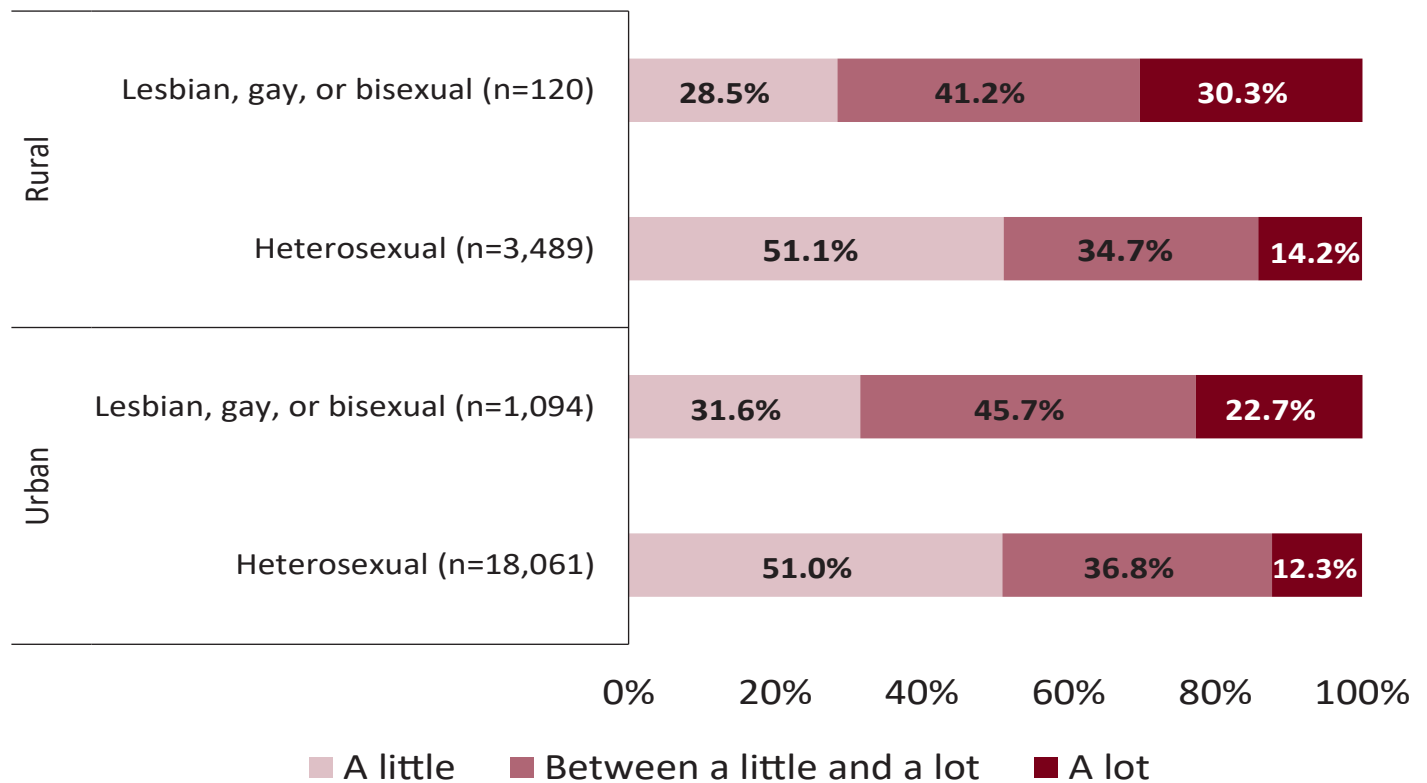
We found statistically significant differences among urban adults by sexual orientation, with urban LGB adults being less likely to have a usual source of care among those with no depression/anxiety disorder diagnosis and among those with a diagnosis of both depression and anxiety disorder. Urban LGB adults with no

Figure 1. Prevalence of Depression and Anxiety Disorder by Rurality and Sexual Orientation



Note: Differences by sexual orientation among rural and urban adults significant at $P < 0.001$. Data are from the National Health Interview Survey, 2019-2020. N=50,995

Figure 2. Level of Depressed Feelings by Rurality and Sexual Orientation



Note: Differences by sexual orientation among rural and urban adults significant at $P < 0.001$. Data are from the National Health Interview Survey, 2019-2020. $N = 22,764$

depression/anxiety disorder diagnosis were more likely than their heterosexual counterparts to have needed but couldn't afford medication in the past 12 months. Lastly, urban LGB adults across all mental health diagnosis categories were more likely than urban heterosexual adults to have delayed mental health care because of cost in the past 12 months.

Discussion and Implications

In this brief, we identified disparities in mental health and access to care (including mental health care) at the intersection of sexual orientation and rurality. Specifically, we found the highest rates of depression and anxiety disorder overall for rural LGB adults, as well as higher levels of depressed feelings. In contrast, urban, heterosexual adults reported the lowest overall levels of depression and anxiety disorders. Elevated rates of depression and anxiety among rural LGB adults points to the intersecting risks factors related to homophobia and structural urbanism – that is, systemic and inter-

personal discrimination against sexual minorities coupled with under-resourcing of rural areas.^{6,23}

Urban LGB adults reported the most barriers to accessing mental health care despite nearly half of urban LGB adults reporting a lifetime diagnosis of depression, anxiety, or both. Further, although not statistically significant, rural LGB adults reported more barriers to care than their heterosexual counterparts. In particular, more than one-third of rural LGB adults reporting any lifetime diagnosis of depression, anxiety, or both have forgone medications and delayed mental health care in the past year because of cost, compared with less than one-fifth of rural heterosexual adults. The lack of significant findings may be related to small samples sizes, especially of rural LGB adults, and should prompt additional research and data collection to better illuminate these inequities.

Efforts to improve rural health, including mental health and access to mental health care, should focus on sexual orientation diversity. Meanwhile, policies

Table 1. Access to Care by Rurality, Sexual Orientation, and Mental Health Diagnosis

	Rural			Urban		
	LGB	Heterosexual	P-value	LGB	Heterosexual	P-value
	N=171	N=7,674		N=1,579	N=41,571	
Has usual source of care						
No depression or anxiety disorder	90.4%	90.2%	0.980	83.5%	89.0%	<0.001
Depression only or anxiety disorder only	90.5%	94.6%	0.443	89.8%	92.7%	0.268
Depression and anxiety disorder	90.4%	94.6%	0.241	82.8%	93.8%	<0.001
Needed but couldn't afford medication, past 12 months						
No depression or anxiety disorder	7.8%	4.5%	0.247	8.0%	4.5%	<0.01
Depression only or anxiety disorder only	9.0%	9.5%	0.935	10.7%	11.3%	0.801
Depression and anxiety disorder	28.4%	21.5%	0.263	19.5%	15.9%	0.936
Delayed mental health care because of cost, past 12 months						
No depression or anxiety disorder	9.9%	1.1%	<0.001	8.6%	2.1%	<0.001
Depression only or anxiety disorder only	10.8%	5.6%	0.220	22.5%	8.9%	<0.001
Depression and anxiety disorder	25.5%	13.9%	<0.05	33.6%	17.0%	<0.001

Note: P-value represents differences by sexual orientation within rural and urban adults. LGB=lesbian, gay, or bisexual.

to address health disparities that disproportionately affect LGB individuals should take rurality into account. LGB adults living in rural settings may require particular attention in policy efforts to address health inequities by sexual orientation. Policies that could help address mental health and health care disparities by rurality and sexual orientation include addressing mental health professional workforce shortages, especially in rural areas,²⁴ increasing reimbursement rates (especially through Medicare and Medicaid) for mental health services; and increasing telehealth services availability, including bolstering broadband availability and affordability.²⁵

Policies and programs must also address provider education on sexual orientation, including the entire health care team, from the front desk to the entire clinical staff. For instance, rural health care facilities, providers, and staff should receive training or be offered continuing medical education on LGB health vocabulary and topics to improve their comfortability with treating LGB adults. Current provider education curriculum includes very little, if any, content on sexual orientation,²⁶ let alone on the unique context for rural LGB individuals. Offering continuing education and training to health

care providers and staff in rural settings about sexual orientation is important to ensuring that rural sexual minorities receive high-quality care. More broadly, passage of the Equality Act at the federal level would prohibit discrimination by sexual orientation and gender identity in health care, among other sectors.²⁷ Additionally, community-wide efforts to increase awareness and acceptance of LGB residents in rural areas are important to countering homophobia and interpersonal discrimination. Community-wide events and signs of visibility (e.g., rainbow flags) are a first step toward creating more inclusive environments for LGB people. But, education and programming must also be paired with policy action, including the passage and enforcement of anti-discrimination legislation, especially in states with larger rural populations.

This brief's findings come with some caveats. First, some of our estimates lacked statistical significance, likely due to small samples of rural LGB adults in the NHIS. Therefore, it remains important to ensure the collection of data on sexual orientation to document the intersections of rurality and sexual orientation in mental health care access and outcomes. We also do not have

large enough sample size to examine differences by race and ethnicity, another layer of intersecting identity impacting health equity because of racism. The NHIS also does not collect data on gender identity, so transgender and gender diverse populations cannot be identified in this analysis. Mental health needs at the intersection of gender and race are likely more pronounced.²⁸ Finally, the measures of access to care in this brief are not all specific to mental health care; however, since many mental health conditions first present in primary care, understanding health care access broadly remains relevant for addressing inequities in access to mental health care specifically.

Health and health care disparities by rurality and sexual orientation are well-documented, but less is known about how they intersect. This brief shows disparities in mental health and access to mental health care for rural LGB adults. Our findings that rural LGB adults experience the highest rates of depression and anxiety, coupled with inequitable access to health care, should serve as an urgent call for policy to bolster mental health and health care access at the intersection of rurality and sexual orientation.

References

1. Supreme Court of the United States. *Bostock v. Clayton County, Georgia*.(2020).
2. Supreme Court of the United States. *Obergefell et Al. v. Hodges, Director, Ohio Department of Health, et al.*(2015).
3. U.S. Equal Employment Opportunity Commission. Examples of Court Decisions Supporting Coverage of LGBT-Related Discrimination Under Title VII. <https://www.eeoc.gov/wysk/examples-court-decisions-supporting-coverage-lgbt-related-discrimination-under-title-vii>. Accessed February 24, 2022.
4. Cahill S, Miller AS, Keuroghlian AS. Sexual and Gender Minority Health Equity in the Biden Administration. *JAMA Heal Forum*. 2022;3(2):e214868-e214868. doi:10.1001/JAMAHEALTHFORUM.2021.4868
5. Gruber S, Halpin J. *The State of the LGBTQ Community in 2020: A National Public Opinion Study*; 2020. <https://www.american-progress.org/article/state-lgbtq-community-2020/>. Accessed February 24, 2022.
6. Gonzales G, Przedworski J, Henning-Smith C. Comparison of Health and Health Risk Factors Between Lesbian, Gay, and Bisexual Adults and Heterosexual Adults in the United States. *JAMA Intern Med*. 2016;176(9):1344. doi:10.1001/jamainternmed.2016.3432
7. Gonzales G, Henning-Smith C. Health Disparities by Sexual Orientation: Results and Implications from the Behavioral Risk Factor Surveillance System. *J Community Health*. May 2017. doi:10.1007/s10900-017-0366-z
8. Gonzales G, Green J. Medication Use Among Sexual-Minority Populations for Self-Reported Feelings of Depression and Anxiety. <https://doi.org/10.1176/appi.ps.201900219>. 2019;71(4):343-354. doi:10.1176/APPI.PS.201900219
9. Das RK, Gonzales G. Self-reported Behaviors Regarding Medications to Save Money Among Sexual Minority Adults in the US, 2015-2018. *JAMA*. 2021;326(24):2526-2529. doi:10.1001/JAMA.2021.20335
10. U.S. Department of Health & Human Services Substance Abuse and Mental Health Services Administration (SAMHSA). 2020 NS-DUH Detailed Tables. <https://www.samhsa.gov/data/report/2020-nsduh-detailed-tables>. Accessed February 24, 2022.
11. Rural Health Information Hub. Map of Health Professional Shortage Areas: Mental Health, by County, 2019. 2020. <https://www.ruralhealthinfo.org/charts/7>. Accessed August 7, 2020.
12. Henning-Smith C, Johnson M. Mental Health in Rural Communities Toolkit . Rural Health Information Hub. <https://www.ruralhealthinfo.org/toolkits/mental-health> Published December 2019. Accessed August 7, 2020.
13. Morales DA, Barksdale CL, Beckel-Mitchener AC. A call to action to address rural mental health disparities. *J Clin Transl Sci*. 2020;4(5):463. doi:10.1017/CTS.2020.42
14. McCall-Hosenfeld JS, Mukherjee S, Lehman EB. The prevalence and correlates of lifetime psychiatric disorders and trauma exposures in urban and rural settings: Results from the national comorbidity survey replication (NCS-R). *PLoS One*. 2014;9(11). doi:10.1371/JOURNAL.PONE.0112416
15. Kepley HO, Streeter RA. Closing Behavioral Health Workforce Gaps: A HRSA Program Expanding Direct Mental Health Service Access in Underserved Areas. *Am J Prev Med*. 2018;54(6 Suppl 3):S190-S191. doi:10.1016/J.AMEPRE.2018.03.006
16. Andrilla CHA, Patterson DG, Garberson LA, Coulthard C, Larson EH. Geographic Variation in the Supply of Selected Behavioral Health Providers. *Am J Prev Med*. 2018;54(6 Suppl 3):S199-S207. doi:10.1016/J.AMEPRE.2018.01.004
17. Willging CE, Salvador M, Kano M. Unequal treatment: Mental health care for sexual and gender minority groups in a rural state. *Psychiatr Serv*. 2006;57(6):867-870. doi:10.1176/PS.2006.57.6.867
18. Rosenkrantz DE, Black WW, Abreu RL, Aleshire ME, Fallin-Bennett K. Health and health care of rural sexual and gender minorities: A systematic review. *Stigma Heal*. 2016. doi:10.1037/sah0000055
19. Fisher CM, Irwin JA, Coleman JD. LGBT Health in the Midlands: A Rural/Urban Comparison of Basic Health Indicators. *J Homosex*. 2014;61(8):1062-1090. doi:10.1080/00918369.2014.872487
20. Blewett LA, Drew JAR, Griffin R, King ML, Williams K. IPUMS Health Surveys: National Health Interview Survey: Version 6.3. 2018. <http://doi.org/10.18128/D070.V6.3>.
21. Brown M, Moore CA, MacGregor J, Lucey JR. Primary Care and Mental Health: Overview of Integrated Care Models. *J Nurse Pract*. 2021;17(1):10-14. doi:10.1016/J.NURPRA.2020.07.005
22. National Center for Health Statistics. NCHS Urban-Rural Classification Scheme for Counties. http://www.cdc.gov/nchs/data_access/urban_rural.htm. Published 2014.
23. Probst J, Eberth JM, Crouch E. Structural urbanism contrib-

utes to poorer health outcomes for rural america. *Health Aff.* 2019;38(12):1976-1984. doi:10.1377/HLTHAFF.2019.00914/ASSET/IMAGES/LARGE/FIGUREEX2.JPEG

24. Health Resources & Services Administration (HRSA) Bureau of Health Workforce. Health Professional Shortage Areas (HPSAs) . <https://bhwh.hrsa.gov/shortage-designation/hpsas>. Accessed August 7, 2020.

25. Kozhimannil KB, Henning-Smith C. Improving Health among Rural Residents in the US. *JAMA - J Am Med Assoc.* 2021;325(11):1033-1034. doi:10.1001/jama.2020.26372

26. Minturn MS, Martinez EI, Le T, et al. Early Intervention for LGBTQ Health: A 10-Hour Curriculum for Preclinical Health Professions Students. *MedEdPORTAL J Teach Learn Resour.* 2021;17:11072. doi:10.15766/MEP_2374-8265.11072

27. H.R.5 - 117th Congress (2021-2022): Equality Act | Congress.gov | Library of Congress. <https://www.congress.gov/bill/117th-congress/house-bill/5>. Accessed April 8, 2022.

28. Robertson L, Akre ER, Gonzales G. *Mental Health Disparities at the Intersections of Gender Identity, Race, and Ethnicity.* <https://home.liebertpub.com/lgbt>. 2021;8(8):526-535. doi:10.1089/LGBT.2020.0429

Suggested Citation

Henning-Smith C, Sarkin C, Tuttle M, and Gonzales G. Anxiety, Depression, and Access to Mental Health Care by Sexual Orientation and Rurality. *UMN Rural Health Research Center Policy Brief.* June 2022. <https://rhrc.umn.edu/publication/anxiety-depression-and-access-to-mental-health-care-by-sexual-orientation-and-rurality/>



Rural Health Research & Policy Centers

Funded by the Federal Office of Rural Health Policy
www.ruralhealthresearch.org

Support for this study was provided by the Federal Office of Rural Health Policy, Health Resources and Services Administration, Cooperative Agreement U1CRH03717-13-00. The information, conclusions, and opinions expressed are those of the authors, and no endorsement by FORHP, HRSA, or HHS is intended or should be inferred.

For more information, contact Carrie Henning-Smith (henn0329@umn.edu)

University of Minnesota Rural Health Research Center
Division of Health Policy and Management, School of Public Health
2221 University Avenue SE, #350 Minneapolis, MN, 55414