

Health and Health Care of Rural Sexual and Gender Minorities: A Systematic Review

Dani E. Rosenkrantz, Whitney W. Black, Roberto L. Abreu, Mollie E. Aleshire,
and Keisa Fallin-Bennett
University of Kentucky

Prior research describes significantly worse health outcomes experienced by lesbian, gay, bisexual, and transgender (LGBT) people relative to their heterosexual and cisgender counterparts. A prevalent research focus on urban LGBT populations has created a gap in understanding rural LGBT health care and outcomes from a holistic perspective. The present article provides a literature review focusing on the health and health care experiences of LGBT people living in rural areas and highlighting challenges and opportunities for growth in providing culturally competent rural health care. We conducted a systematic review that resulted in the inclusion of 58 articles focused on the health of rural LGBTQ people published between 1998 and February 2016. Findings clustered around 3 themes: (1) individual health outcomes and risk behaviors, (2) experiences of health care and interactions with the health care system, and (3) sociocultural factors at the intersection of rurality and health. Evidence-based recommendations for systemic change and interventions to promote health among rural LGBT people are provided.

Keywords: LGBT, rural, health, health care, health disparities

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Within recent years, a number of review articles have emerged documenting the issues of lesbian, gay, bisexual, and transgender (LGBT) persons within the context of the U.S. health care system (Addis, Davies, Greene, Macbride-Stewart, & Shepherd, 2009; Boehmer, Miao, Linkletter, & Clark, 2012). Such reviews highlight poorer health outcomes experienced by the

LGBT population relative to their heterosexual and cisgender counterparts. These reviews cite studies conducted largely with urban-dwelling LGBT populations, making applicability of the findings to a rural LGBT population uncertain. Differences in LGBT experience in rural versus urban populations have been documented in domains such as resilience, social support, and general well-being (Annes & Redlin, 2012; Comerford, Henson-Stroud, Sionainn, & Wheeler, 2004). However, there is a need to increase understanding of the health of rural LGBT individuals as a unique and understudied intersection.

Literature on small and distinct populations, such as rural minority populations, is heterogeneous in methodology. Though some population-based surveys now include LGBT identity and/or sexual behavioral questions, such as the National Health Interview Survey (Dahlhamer, Galinsky, Joestl, & Ward, 2013) and the National Adult Tobacco Survey (Centers for Disease Control and Prevention [CDC], 2012b), to date there are no identified published studies using national health data sets to distinguish

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Dani E. Rosenkrantz, Whitney W. Black, and Roberto L. Abreu, Department of Educational, School, and Counseling Psychology, College of Education, University of Kentucky; Mollie E. Aleshire, College of Nursing, University of Kentucky; Keisa Fallin-Bennett, Department of Family and Community Medicine, School of Medicine, University of Kentucky.

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Correspondence concerning this article should be addressed to Dani E. Rosenkrantz, Department of Educational, School, and Counseling Psychology, College of Education, University of Kentucky, 237 Dickey Hall, Lexington, KY 40506. E-mail: dani.rose@uky.edu

between rural and urban LGBT people. The lack of rural data from national surveys is likely due in part to the small absolute number of LGBT-identified respondents and the short window of time that such surveys have included sexual orientation and gender identity questions. Therefore, accumulated knowledge concerning rural LGBT health largely comes from small surveys and qualitative studies. The purpose of this review is to explore the literature specific to health and health care of rural LGBT people and to categorize and organize this literature in a way that identifies gaps in current knowledge to guide future research.

In our initial exploration of the literature to date, we discovered that contemporary research falls into categories of health status (i.e., disparities in health outcomes), risk factors (disparities in health risk behaviors), and the health care experience, all of which clearly interact in the broader health picture of individuals and populations. In conducting a systematic review, we sought to verify or dispute the following hypotheses:

1. Rural LGBT individuals would report disparities in health status and/or behavior.
2. Rural LGBT people would also report an increased burden of disparities relative to urban LGBT people.
3. Differences in rural and urban LGBT people's health care experiences contribute to health disparities.

Method

Literature Search

Prior to beginning the search, the authorship team operationalized the terms LGBT, rural, and health and determined the inclusion criteria for selection of studies. LGBT was defined as the broad spectrum of sexual and gender minorities (e.g., persons either not cisgender, not heterosexual-identified, or not having exclusively opposite-gender partners). Rural was operationalized broadly, including any study that differentiated urban or metropolitan areas from less populated areas (e.g., nonmetropolitan or rural). Health was defined as pertaining to health status (mental or physical), health behaviors or risk factors, or interaction with the health care sys-

tem, but not solely social determinants of health.

In the initial PubMed search, only 20 of the articles predated 1998, and review of titles suggested that the late 1990s was the first time that articles including rural LGBT people but not focused entirely on HIV and AIDS began to become more prominent. Preliminary searches included three articles from 1998 particularly relevant to our research question (Heckman, Somlai, Oito-salaj, & Davantes, 1998; Tiemann, Kennedy, & Haga, 1998; Waldo, Hesson-McInnis, & D'Augelli, 1998) and none from 1997; therefore 1998 was chosen as the initial year for inclusion with timeframe extending to the latest date we could renew the search.

The following inclusion criteria were established:

1. focus on LGBT people or attitudes or practices toward LGBT people;
2. focus on health or health care;
3. rural setting or rural population included;
4. publication dates from January 1998 to February 2016; and
5. peer-reviewed, empirical, or review article.

Studies were excluded based on the following criteria:

1. not clearly LGBT, (i.e., mixed population without differentiation of LGBT people in findings, HIV-related without categorization by sexual identity or behavior in findings);
2. not directly related to health outcomes or health care;
3. findings not relevant to rural setting or rural population;
4. international studies without substantial U.S. sample;
5. published before 1998; and
6. editorial, part of a book, or not empirical and peer-reviewed.

Grounded in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA; Moher, Liberati, Tetzlaff, Altman, & the PRISMA Group, 2009) guidelines, articles were identified via three primary methods. In the first method, two searches of PubMed, Academic Search Premier, CINAHL,

and PsycINFO were conducted. The searches used various combinations of search terms, initially with a focus on searching the database-indexing terms followed by a basic keyword search to capture articles that had not yet been indexed. Exploration of the database-indexing systems was used to determine the terms that would best capture the population of interest. As such, database-indexing term searches often included more historically used terms such as homosexual or transsexualism, whereas the basic keyword search emphasized more current terms such as *gay*, *transgender*, and *LGBTQ*. Overall, the entire search process included the following terms related to sexual and gender identity: *LGBT*, *GLBT*, *LGB*, *GLB*, *GLBTQ*, *gay*, *homosexual*, *homosexuality*, *male homosexuality*, *bisexuality*, *lesbianism*, *transgender*, *transsexualism*, *sexual orientation*, *sexual identity*, *GLB*, *sexual minority*, and *men who have sex with men (MSM)*. Rurality was located using the terms *rural*, *rural environments*, or *nonmetropolitan*. Search terms for health primarily used the word *health* itself, but also included terms such as *health care*, *health care services*, *health personnel attitudes*, *health care delivery*, or *health disparities*. The authorship team then engaged in the following search process when using the first method:

1. Searches were conducted using database-indexing terms and keywords and duplicates were removed.
2. Authors individually reviewed articles by abstract and convened to discuss and determine appropriateness for inclusion and exclusion.
3. The articles in the included group were then divided among the authors to be read in full. Two authors read each article, and then the entire group reconvened to discuss and finalize inclusion and exclusion.

In addition to the database search, a second method for literature identification included an ancestral approach (White, 1994), which entailed reviewing the reference lists of each included article to identify additional studies for possible inclusion. Finally, in the third method, articles were identified from search engine alerts of relevant studies and existing knowledge and resources of the authorship team.

Coding Process

From an initial pool of 857 articles, 58 articles were identified for further review following the PRISMA multistep review process (Moher et al., 2009) visually depicted in Figure 1. Each article was reviewed and coded for (a) population, (b) location, (c) definition of rural, (d) method, (e) main findings, (f) differences in urban and rural experience, (g) limitations, and (h) theme. The authors separately reviewed the articles and met several times throughout the process to compare and confirm findings. Supplemental Table 1 contains a detailed description of all the articles in this review.

Results

Analysis of the final sample of articles ($n = 58$) resulted in identification of three primary themes elucidating interactions between the health care system and rural LGBT health: (a) disparities in health outcomes and health risk behaviors; (b) health care experiences, predominantly focused on interpersonal relationships and communication between patients and health care providers; and (c) sociocultural factors at the intersection of rurality and health. In accordance with our second hypothesis, we compared disparities between the rural LGBT people, as found in our systematic search, with findings from a general search of the urban literature for the first two themes.

Theme I: Disparities in Health Outcomes and Health Risk Behaviors

Understanding the health behaviors and individual risk factors that impact rural LGBT people is integral to understanding rural LGBT health. Subthemes include (a) substance use, (b) sexual risk taking, (c) mental health, and (d) physical health.

Substance use. Thirteen reviewed articles assessed their LGBT study participants' substance use, all of which concluded that use of tobacco, alcohol, and drugs was a health issue for rural LGBT persons (Bennett, McElroy, Johnson, Munk, & Everett, 2015; Bennett, Ricks, & Howell, 2014; Coleman, Irwin, Wilson, & Miller, 2014; Farmer, Blosnich, Jabson, & Matthews, 2015; Fisher, Irwin, & Coleman, 2014; Horvath, Iantaffi, Swinburne-Romine, &

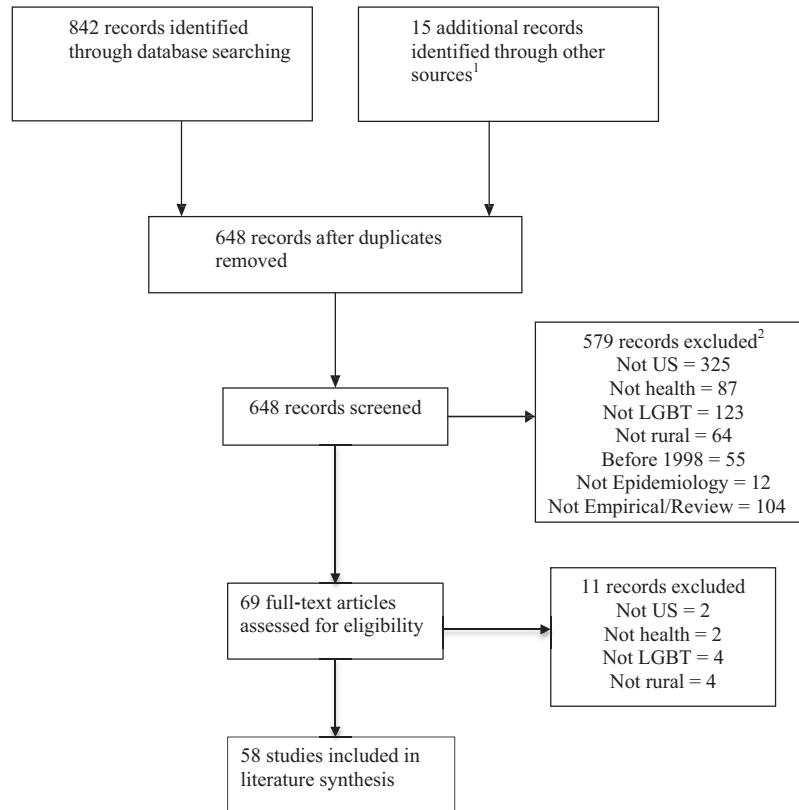


Figure 1. Systematic PRISMA (Moher et al., 2009) Article Identification Process, Inclusive of Literature from January 1998 to February 2016. ¹ Through reference tracking, search engine suggestions of relevant studies, and existing knowledge and resources. ² Some articles excluded for more than one category.

Bockting, 2014; Lee, Goldstein, Ranney, Crist, & McCullough, 2011; Pelster, Fisher, Irwin, Coleman, & McCarthy, 2015; Rhodes et al., 2012; Rostosky, Owens, Zimmerman, & Riggle, 2003; Stotzer, Ka'opua, & Diaz, 2014; Stratford, Ellerbrock, & Chamblee, 2007; Whitehead, Shaver, & Stephenson, 2016). Common findings in the studied rural LGBT populations included a high prevalence of current and former tobacco use (Bennett et al., 2015; Coleman et al., 2014; Fisher et al., 2014; Horvath et al., 2014; Pelster et al., 2015; Rhodes et al., 2012; Stotzer et al., 2014; Stratford et al., 2007; Whitehead et al., 2016), as well as high-risk drinking (Coleman et al., 2014; Fisher et al., 2014; Horvath et al., 2014; Pelster et al., 2015; Rhodes et al., 2012; Whitehead et al., 2016). Use of other substances by rural LGBT individuals was also reported (Horvath et al.,

2014; Rhodes et al., 2012; Stratford et al., 2007).

Sexual risk taking. Sexually risky behaviors were a category of individual health behaviors discussed in 17 of the reviewed articles (Bockting, Miner, & Rosser, 2007; Bowen, Williams, & Horvath, 2004; Gilbert & Rhodes, 2014; Horvath, Bowen, & Williams, 2006; Horvath et al., 2014; Hubach, Dodge, Cola, Battani, & Reece, 2014; Hubach et al., 2015; Kakietek, Sullivan, & Heffelfinger, 2011; Miller, Solomon, Bunn, Varni, & Hodge, 2015; Preston et al., 2004; Preston, D'Augelli, Kassab, & Starks, 2007; Rhodes et al., 2012; Rosenberger, Schick, Schnarrs, Novak, & Reece, 2014; Schnarrs et al., 2010; Stratford et al., 2007; Varni, Miller, & Solomon, 2012; Williams, Bowen, & Horvath, 2005). With the exception of Rosenberger and colleagues (2014) and Williams and colleagues

(2005), all authors reported on condom use as a measure to assess high-risk sexual behavior; high prevalence of inconsistent condom use was common among LGBT rural individuals. Multiple sex partners (Bockting et al., 2007; Horvath et al., 2014; Rhodes et al., 2012; Schnarrs et al., 2010; Stratford et al., 2007), receptive or insertive anal sex (Bowen et al., 2004; Hubach et al., 2015; Horvath et al., 2014; Kakietek et al., 2011; Preston et al., 2004, 2007; Schnarrs et al., 2010; Williams et al., 2005), using the Internet to find sexual partners (Bowen et al., 2004; Horvath et al., 2006; Hubach et al., 2014; Kakietek et al., 2011; Rosenberger et al., 2014; Schnarrs et al., 2010; Williams et al., 2005), and sexual activity while under the influence of alcohol and/or drugs (Bowen et al., 2004; Rhodes et al., 2012; Stratford et al., 2007) were other risky behaviors identified in the research of rural LGBT populations. Notably, five studies reported challenges for LGBT persons related to HIV testing (Bowen et al., 2004; Hubach et al., 2014; Rosenberger et al., 2014; Williams et al., 2005), and low levels of HIV knowledge was also a risk for some MSM (Rhodes et al., 2012).

Mental health. The significance of mental health in the LGBT population and various aspects of rural LGBT mental health were the most common subtheme, present in 23 reviewed articles (Barefoot, Rickard, Smalley, & Warren, 2015; Barefoot, Smalley, & Warren, 2015; Cain, 2001; Cohn & Hastings, 2010; Cohn & Leake, 2012; Farmer et al., 2015; Fisher et al., 2014; Galliher, Rostosky, & Hughes, 2004; Heckman et al., 1998; Horvath et al., 2014; Hubach et al., 2015; Irwin, Coleman, Fisher, & Marasco, 2014; Mathey, Carol, & Schillace, 2003; Miller et al., 2015; Moore, 2002; Preston et al., 2004, 2007; Rostosky et al., 2003; Swank, Frost, & Fahs, 2012; Ullrich, Lutgendorf, & Stapleton, 2002; Waldo et al., 1998; Walinsky & Whitcomb, 2010; Wienke & Hill, 2013). High prevalence of depression was a finding in six reviewed studies (Fisher et al., 2014; Galliher et al., 2004; Horvath et al., 2014; Irwin et al., 2014; Ullrich et al., 2002; Whitehead et al., 2016) and, when compared with their urban counterparts, higher rates of depression were found in rural LGBT adults (Fisher et al., 2014), rural transgender persons (Ullrich et al., 2002), and sexual minority females (Galliher et al., 2004). Of the 770 rural LGBT Nebraskan participants in Irwin and colleagues' (2014) study,

49.6% of LGB and 66% of transgender participants endorsed seriously considering suicide at some point. Rates of previous suicide attempts were found to be high in rural LGB young people (Waldo et al., 1998) and in rural transmen (Horvath et al., 2014).

Physical health. When compared with the wealth of studies including mental health findings, relatively few studies (i.e., 9) provided information regarding physical health factors related to rural LGBT health (Barefoot, Warren, & Smalley, 2015; Cain, 2001; Farmer et al., 2015; Fisher et al., 2014; Hubach et al., 2015; Mendoza, Harner, Haseley, & Leedy, 2015; Stotzer et al., 2014; Whitehead et al., 2016; Wienke & Hill, 2013). The majority of participants studied by Farmer and colleagues (2015); Wienke and Hill (2013), and Stotzer and colleagues (2014) reported overall good or very good health. However, Farmer and colleagues (2015) found that rural lesbians' and bisexuals' reported health status was worse than their heterosexual counterparts, and chronic diseases impacted many of et al.'s (2014) and Whitehead et al.'s (2016) LGBT study participants (42% and 35%, respectively). Obesity was also a noted health issue in three studies (Barefoot, Warren, & Smalley, 2015; Farmer et al., 2015; Mendoza et al., 2015). Information regarding the experiences of rural LGBT individuals living with HIV was limited despite the inclusion of HIV topics and HIV-positive participants in 16 of the reviewed articles (Bockting et al., 2007; Bowen et al., 2004; Cain, 2001; Gilbert & Rhodes, 2014; Horvath et al., 2014; Hubach et al., 2014, 2015; Kakietek et al., 2011; Miller et al., 2015; Rhodes et al., 2012; Rosenberger et al., 2014; Stratford et al., 2007; Ullrich et al., 2002; Varni et al., 2012; Waldo et al., 1998; Williams et al., 2005).

Comparison to the general/urban literature. Nineteen of the articles reviewed contained some direct comparison of rural and non-rural LGBT subjects. Of those, 13 had findings pertinent to health outcomes and risk factors. Five found no clear geographic differences in an outcome of interest (Bennett et al., 2015; Farmer et al., 2015; Fisher et al., 2014; Stotzer et al., 2014; Waldo et al., 1998), four had results that were mixed or uncertain in terms of rural and nonrural comparisons (Horvath et al., 2014; Kakietek et al., 2011; Mathey et al., 2003; Ullrich et al., 2002), and one demonstrated advan-

tages in happiness and well-being for rural as opposed to urban subjects (Wienke & Hill, 2013). The remaining three studies (Austin, 2013; Barefoot, Smalley, & Warren, 2015; Barefoot, Warren, & Smalley, 2015; Swank et al., 2012) found disadvantages for rural versus nonrural LGBT subjects. The majority of reviewed articles focused on mental health and reported findings including no mental health disparities, mixed results, and urban disparities or rural disparities. Physical health findings fell into both those studies reporting no differences (Farmer et al., 2015; Stotzer et al., 2014) and rural disparities (Barefoot, Warren, & Smalley, 2015). The former two studies found no differences in multiple measures of risk behaviors, physical, and mental health, while the latter found increased psychological distress and higher BMI in rural versus urban lesbian women. The general LGBT health literature is rich in documentation of disparities in mental health (e.g., Kosciw, Greytak, & Diaz, 2009) and has recently begun addressing health conditions and outcomes in studies with large sample sizes. Such documented disparities include HIV and AIDS (CDC, 2012a), cancer (Quinn et al., 2015), and obesity and eating disorders (Boehmer, Bowen, & Bauer, 2007; Case et al., 2004; Valanis, Bowen, Bassford, Whitlock, Charney, & Carter, 2000). It is difficult to draw any conclusions on the health behaviors and status of rural versus urban LGBT people.

Theme II: Experiences With Health Care

A number of articles identified challenges rural LGBT patients experience engaging with providers in the health care system. Subthemes included (a) patient-experienced stigma and discrimination; (b) cultural-competency challenges in health care; and (c) difficulty disclosing LGBT status to providers.

Patient-experienced stigma and discrimination. Stigma within the health care system was not only anticipated by patients due to formed impression of the health system, but also was experienced directly, as evidenced by 12 articles (Austin, 2013; Barefoot, Smalley, & Warren, 2015; Butler & Hope, 1999; Cain, 2001; King & Dabelko-Schoeny, 2009; Moore, 2002; Rhodes et al., 2010; Stotzer et al., 2014; Tiemann et al., 1998; Whitehead et al., 2016; Willging, Salvador, & Kano, 2006a, 2006b).

LGBT individuals commonly reported inappropriate and discriminatory actions, interactions, and treatments; these behaviors persisted even among providers who were perceived to be accepting of or friendly toward LGBT patients (Austin, 2013; Barefoot, Smalley, & Warren, 2015; Butler & Hope, 1999; Cain, 2001; Moore, 2002; Rhodes et al., 2010; Stotzer et al., 2014; Tiemann et al., 1998). In Moore's (2002) study, rural gay and lesbian participants reported being met with antipathy from providers, being questioned about their relationships, being joked about, being the target of heterosexist comments, and being turned away from care. These lived experiences of health care provider discrimination often led LGBT patients to delay or discontinue health care (Stotzer et al., 2014; Willging et al., 2006b). For rural transgender respondents and respondents identifying as having a nonbinary gender identity (e.g., not man or woman) in Whitehead and colleagues' (2016) study, experiences of stigma or discrimination were significantly associated with scores indicating poorer overall health.

Cultural competency of providers. Eight studies indicated rural LGBT people perceived inadequacies in provider cultural competency. These studies are distinct from those in the sociocultural section in that patient perception was measured rather than measuring provider's attitudes or knowledge (Barefoot, Smalley, & Warren, 2015; Cain, 2001; Heckman et al., 1998; Moore, 2002; Petroll & Mosack, 2011; Rhodes et al., 2010; Stotzer et al., 2014; Tiemann et al., 1998). Petroll and Mosack (2011) found that even when men in their MSM sample had disclosed their sexual history to their primary care providers, the preventive health services recommended were often not congruent with current evidence-based guidelines. Lesbians reported similar experiences of inappropriate treatment recommendations from health care providers despite the patients' attempts to disclose pertinent health information (Tiemann et al., 1998).

Disclosing LGBT identity to providers. Challenges related to disclosure of sexual orientation and/or gender identity were a significant barrier affecting health and health care for rural LGBT individuals as highlighted by nine reviewed studies. Sometimes or never disclosing sexual orientation to health care providers was common for rural LGBT populations (Aus-

tin, 2013; Butler & Hope, 1999; Coleman et al., 2014; King & Dabelko-Schoeny, 2009; Petroll & Mosack, 2011; Rhodes et al., 2010; Tiemann et al., 1998; Whitehead et al., 2016; Williams et al., 2005). Only 14% ($n = 271$) of gay and bisexual study participants from Wisconsin had been directly asked by their health care provider about their sexual orientation (Petroll & Mosack, 2011). Several studies suggested that LGBT disclosure was negatively impacted by rural status (Petroll & Mosack, 2011; Tiemann et al., 1998; Whitehead et al., 2016). Many patients did not feel able to disclose their sexual orientation and/or gender identity or to talk openly about these topics with their providers (Austin, 2013; Coleman et al., 2014; Petroll & Mosack, 2011; Rhodes et al., 2010; Tiemann et al., 1998; Williams et al., 2005). Importantly, one study indicated that disclosure was associated with improved report of health status for LGBT persons (Whitehead et al., 2016).

Comparison to the general/urban literature. Only three of the articles reviewed contained some direct comparison of rural and nonrural LGBT subjects in this category. Stotzer and colleagues (2014) found no clear geographic differences in stigma or discrimination experienced in health care. Austin (2013) found that rural lesbians were significantly less likely to disclose their sexual orientation to health care providers than suburban or urban lesbians. This study also found that 13% ($n = 934$) of study participants had experienced discrimination from health care providers, but in this case there was no urban-rural difference. Likewise, Petroll and Mosack (2011) found that rural residence was a predictor of nondisclosure to providers, with disclosure, though not geography, related to health care provider competency.

Within the general literature on LGBT health care, there is a focus on LGBT patients' coming-out decisions and perceptions of provider bias rather than addressing patient-provider communication directly (Bradford, Reisner, Honnold, & Xavier, 2013; Brotman, Ryan, Jalbert, & Rowe, 2002; Durso & Meyer, 2013; McIntyre, Szewchuk, & Munro, 2010). The articles in our review focused heavily on lack of trust and difficulties with disclosure, again consistent with findings in the general LGBT population (Austin, 2013; Butler & Hope, 1999; Coleman et al., 2014; King & Dabelko-

Schoeny, 2009; Petroll & Mosack, 2011; Rhodes et al., 2010; Tiemann et al., 1998; Whitehead et al., 2016; Williams et al., 2005).

Theme III: Sociocultural Factors at the Intersection of Rurality and Health

Most of the articles that formed our review discussed sociocultural context factors with an impact on either or both of the health and health care of rural LGBT populations. Subthemes included (a) limited provider education; (b) provider knowledge, attitudes, and sensitivity; (c) anticipated stigma; (d) barriers to access; and (e) the impact of the rural community.

Limited provider education. Limited education of health care providers regarding LGBT populations was cited as problematic in three articles (Eliason & Hughes, 2004; Sirota, 2013; Willging et al., 2006a). Eliason and Hughes (2004) compared rural and urban substance abuse counselors and found that formal LGBT training was lacking in both rural and urban groups. Most nurse educators in Sirota's (2013) study considered themselves to be deficient in knowledge related to LGBT populations and unprepared to educate others on LGBT topics. Willging and colleagues (2006a) found that lack of LGBT education of mental health providers had a significant impact on health care delivery to LGBT clients.

Provider knowledge, attitudes, and sensitivity. The knowledge, attitudes, and sensitivity of health care providers related to their rural LGBT clients emerged as another sociocultural subtheme in five articles (Einbinder, Fiechter, Sheridan, & Miller, 2012; Hancock, 2008; Sirota, 2013; Téllez, Ramos, Umland, Palley, & Skipper, 1999; Willging et al., 2006a). Téllez and colleagues (1999) found that over 22% of rural physicians ($n = 1,027$) sometimes felt uncomfortable treating lesbian or gay patients. In recent studies, educators in both social work (Einbinder et al., 2012) and nursing (Sirota, 2013) had negative attitudes toward homosexuality, and these negative attitudes were more prevalent in nurse educators who taught in rural environments (Sirota, 2013). In qualitative interviews, rural mental health providers described negative LGBT bias present at individual and institutional levels. These providers indicated that health care ac-

cess had been denied to LGBT clients, providers had discouraged LGBT clients from discussing sexuality and gender, and LGBT clients had been segregated from other clients (Willging et al., 2006a).

Anticipated stigma. The anticipation of stigma in the health care system was indicated in nine articles (Barefoot, Smalley, & Warren, 2015; Cain, 2001; Hubach et al., 2015; Moore, 2002; Rhodes et al., 2010; Tiemann et al., 1998; Ullrich et al., 2002; Varni et al., 2012; Williams et al., 2005). Stigma was noted to relate to LGBT identity as well as HIV status. For example, none of Williams and colleagues' (2005) rural, MSM study participants would ask for HIV testing from their personal physician or a local health department because of concern that their confidentiality would not be maintained and fear of speculation regarding their sexuality. HIV being a taboo topic and difficult to talk about was reported in two studies (Ullrich et al., 2002; Williams et al., 2005).

Barriers to access. Twelve of the articles included in this review indicated one or more barriers to health care access for members of rural LGBT populations (Barefoot, Smalley, & Warren, 2015; Butler & Hope, 1999; Fisher et al., 2014; Horvath et al., 2014; King & Dabelko-Schoeny, 2009; Moore, 2002; Rhodes et al., 2010; Stotzer et al., 2014; Tiemann et al., 1998; Vissman et al., 2011; Willging et al., 2006a, 2006b). The most frequently reported barriers to health care access for rural LGBT individuals clustered around health insurance coverage with both the lack of health insurance and discrimination in insurance policies being cited (Barefoot, Smalley, & Warren, 2015; Butler & Hope, 1999; Fisher et al., 2014; King & Dabelko-Schoeny, 2009; Moore, 2002; Rhodes et al., 2010; Stotzer et al., 2014). Financial barriers to health care access were found in three studies (Barefoot, Smalley, & Warren, 2015; Butler & Hope, 1999; Willging et al., 2006b), whereas transportation and geographical barriers also were noted to negatively impact rural LGBT access to health care (Butler & Hope, 1999; King & Dabelko-Schoeny, 2009; Willging et al., 2006b). Another hindrance to health care access for rural LGBT individuals was the lack of health care options, including few alternative medicine choices (Butler & Hope, 1999) and a paucity of LGBT-friendly health care providers and environments (Bare-

foot, Smalley, & Warren, 2015; Butler & Hope, 1999; King & Dabelko-Schoeny, 2009; Stotzer et al., 2014; Tiemann et al., 1998; Willging et al., 2006b). Further, providers in Willging and colleague's (2006a) study reported that treatment facilities lacked LGBT-supportive policies, thus compromising access to care and quality of care for LGBT clients.

Impact of rural community. Eighteen articles reported on the impact of rural community on LGBT health, health behavior, and health access (Barefoot, Smalley, & Warren, 2015; Bennett et al., 2014; Cohn & Hastings, 2010; Fisher et al., 2014; Gilbert & Rhodes, 2014; Irwin et al., 2014; King & Dabelko-Schoeny, 2009; Moore, 2002; Pelster et al., 2015; Preston et al., 2004, 2007; Rhodes et al., 2010; Stotzer et al., 2014; Swank et al., 2012; Tiemann et al., 1998; Willging et al., 2006a, 2006b; Williams et al., 2005). Within rural communities, a generalized social stigma and associated discrimination related to LGBT persons was often indicated (Barefoot, Smalley, & Warren, 2015; Bennett et al., 2014; Irwin et al., 2014; Pelster et al., 2015; Preston et al., 2004, 2007; Swank et al., 2012; Willging et al., 2006a, 2006b; Williams et al., 2005). Lack of social support, low levels of social engagement, and isolation in rural communities were pervasive factors impacting rural LGBT health (Bennett et al., 2014; Cohn & Hastings, 2010; Fisher et al., 2014; King & Dabelko-Schoeny, 2009; Moore, 2002; Pelster et al., 2015; Rhodes et al., 2010; Swank et al., 2012; Willging et al., 2006a, 2006b; Williams et al., 2005). Less common was a hostile rural social climate, where some participants described the potential for personal property damage or violence against LGBT persons (Cohn & Hastings, 2010; Moore, 2002; Swank et al., 2012; Tiemann et al., 1998; Williams et al., 2005). Heterosexism and heteronormativity were associated with the rural community in four reviewed studies (Cohn & Hastings, 2010; Willging et al., 2006a, 2006b; Williams et al., 2005). Many LGBT persons did not disclose or infrequently and selectively disclosed their sexual orientation and/or gender identity within their rural communities (Bennett et al., 2014; Fisher et al., 2014; King & Dabelko-Schoeny, 2009; Moore, 2002; Willging et al., 2006a, 2006b; Williams et al., 2005). Finally, a lack of legal and financial support for LGBT individuals in their rural communities was also a

finding related to the impact of the rural community on LGBT health (Moore, 2002).

Comparison to the general/urban literature. Seven of the articles reviewed contained some direct comparison of rural and non-rural LGBT subjects in this category. Of those, one found no clear geographic differences other than insurance status in general access to care and anticipated stigma (Stotzer et al., 2014), and one demonstrated advantages in the attitudes of rural social workers toward LGBT clients (Eimbinder et al., 2012). The remaining five studies found disadvantages for rural versus nonrural LGBT subjects, including additional barriers to health care access and more negative health care provider attitudes (Austin, 2013; Barefoot, Smalley, & Warren, 2015; Fisher et al., 2014; Sirota, 2013; Téllez et al., 1999).

Although few studies in our review addressed training of health professionals, there was high perception of less than adequate preparation and desire for more LGBT specific training. (Eliaison & Hughes, 2004; Sirota, 2013; Willging et al., 2006a). Persistent educational disparities related to LGBT health care are more thoroughly documented in multiple recent studies in the general literature (Lee, Kelz, Dubé, & Morris, 2014; Mansh et al., 2015; Obedin-Maliver et al., 2011; White et al., 2015) and would be expected to influence both urban and rural providers.

A sensation of anticipated stigma seems nearly universal in the general literature that addresses any aspect of contact with the health care system (e.g., Bennett et al., 2014; Brotman et al., 2002; Jann, Edmiston, & Ehrenfeld, 2015; McIntyre et al., 2010). The evidence of health care access and utilization disparities between LGBT and non-LGBT was clear in the general literature dating from the early 2000s (Diamant, Wold, Spritzer, & Gelberg, 2000; Heck, Sell, & Gorin, 2006; Wilson & Yoshikawa, 2007). Recent studies indicate that though sexual minority men tend to have increased engagement with the health care system compared with heterosexual men (Boehmer et al., 2012), sexual minority women continue to experience disparities in access (Tracy, Schluterman, & Greenburg, 2013). A very recent international review dominated by U.S. studies concluded that major challenges in health care access and experiences still exist for sexual minorities, especially women. The authors came to similar conclusions as we have in this review, finding that disparities

are influenced by sociocultural context, health care services, and professional health training (Albuquerque et al., 2016). These findings in the rural literature suggest that access barriers are similar, though most of the rural studies had no comparison to urban populations. Lack of provider choice and travel distance to acceptable care sites were emphasized in the rural literature in a way that is less common in most urban settings (Barefoot, Smalley, & Warren, 2015; Butler & Hope, 1999; King & Dabelko-Schoeny, 2009; Stotzer et al., 2014; Tiemann et al., 1998; Willging et al., 2006b).

Discussion

Our review of the literature reveals the scope and limitations of current scholarship surrounding the health of rural LGBT persons. The 58 articles reviewed were heterogeneous in sample size, topic, methodology and quality, with most being small surveys or qualitative studies with convenience samples. An overarching theme of sociocultural factors at the intersection of rurality and health dominated the reviewed articles. The literature synthesis confirms our first hypothesis that rural LGBT people experience disparities in health, and our third hypothesis that disparities in health care exist that could at least partially account for these differences. It remains unclear whether rural LGBT people experience similar disparities to the LGBT population at large, given that the majority of included studies with direct urban-rural comparisons had mixed or conflicting results. Those without direct comparisons within the study were too heterogeneous in method and quality to compare directly to the general literature. As in urban populations, rural LGBT people are particularly burdened by mental health challenges, sexual risk-taking, and substance abuse. Physical health outcomes were less commonly studied in the rural population.

Strengths and Limitations

The strengths of this review include the systematic process used to search and determine which articles should be included and synthesized in the review.

The current study included a focus on published literature at the possible expense of relevant unpublished work. Limitations exist

within research databases in terms of the search indices and keywords chosen, and it is possible that pertinent studies were missed that were not published in research databases and/or not labeled by the indexing system in the ways represented in the search. Efforts were made to minimize these limitations by employing the databases most pertinent to health and the sociocultural factors influencing health. A search was also conducted using keywords during the most recent period when index terms would not yet be available.

The heterogeneity of included studies limits the ability to draw any generalizable conclusions. Reviewed studies varied widely in the way they operationalized both LGBT status and rurality (with some giving no clear definition), and studied variables were diverse, ranging from provider training issues to patient smoking status with scant data on health outcomes. Most of the included studies employed surveys or qualitative methods in small convenience samples. The potential for selection bias and limited generalizability highlight the need for more representative ways to measure health and behaviors in rural minorities.

Knowledge Gaps and Recommendations for Future Research

Though there are now population-based, appropriately sampled surveys that include LGBT identity and/or sexual behavior questions (e.g., the National Health Interview Survey; [Dahlgamer et al., 2013](#); the National Adult Tobacco Survey; [CDC, 2012a](#)), the few available options are limited in their ability to distinguish urban and rural LGBT health. In fact, only three articles emerged in our review that compared rural and urban LGBT participants in representative samples. Of these, two studies ([Cohn & Leake, 2012](#); [Galliher et al., 2004](#)) used the National Longitudinal Study of Adolescent Health and one study ([Farmer et al., 2015](#)) analyzed data from states with LGBT status on the Behavioral Risk Factor Surveillance System Survey ([CDC, 2013](#)). Although challenges in recruiting adequate sample sizes are evident, more work is needed to overcome this barrier.

Another gap highlighted by this review is the lack of volume and rigor in studies of rural patient-provider interactions. For example, studies that directly assessed providers ne-

glected to measure other details of communication between patient and provider, such as whether and how a social and sexual history were taken (e.g., [Eliason & Hughes, 2004](#); [Petroff & Mosack, 2011](#)). In fact, none of these studies included such measures, although some qualitative studies reported findings related to communication (e.g., [Butler & Hope, 1999](#); [Rhodes et al., 2010](#); [Tiemann et al., 1998](#)). Additionally, despite the potential positive impact of nonverbally communicating a safe environment ([Tiemann et al., 1998](#)), no studies evaluated the impact of nonverbal communication, such as the use of inclusive terminology on paperwork, or the inclusion of LGBT affirming symbols in the office, all strategies recommended by national organizations to facilitate patient-provider communication ([The Joint Commission, 2011](#)).

There were also no longitudinal studies meeting inclusion criteria, nor any comparing multiple studies over time. Given the vast societal changes relative to LGBT rights and attitudes of the public in the time period represented by the review ([Equaldex, 2016](#)), research findings could fluctuate quickly with time. The influence of place in time and its continuous impact should be acknowledged and addressed in research, with emphasis on longitudinal or repeated studies.

Perhaps most importantly, this review reveals a lack of health outcomes data and very few interventions to address any of the known disparities for rural LGBT people. In addition to efforts at oversampling and weighting large-scale population-based samples to reveal health outcomes of rural LGBT people, funding and national research efforts should be aligned to support multiyear measures of health outcomes in convenience samples recruited over the Internet and/or coordinated across sites in multiple states. Similar efforts should be directed toward measuring health care access and experience more directly, and toward linking specific elements of the health environment to outcomes. Interventions targeting awareness, behavior, and ultimately health outcomes for rural LGBT people are sorely needed. [Moore's \(2002\)](#) intervention study and Bowen and colleagues' ([Bowen, Horvath, & Williams, 2007](#); [Bowen, Williams, Daniel, & Clayton, 2008](#)) reports on methodology serve as models for further research.

Conclusion

The literature synthesis confirms that rural LGBT people experience disparities in health outcomes and risk factors, as well as health care experiences. It is clear that that multiple geographic and social barriers exist between rural LGBT people and their health, and that stigma present in rural communities can manifest in limited cultural competency of providers and distrust of the health care system among LGBT people. Although disparities discovered in this review were similar to those found in the general or urban literature, enough rural differences were found to justify continued efforts to ensure representation of this population in health research. The review also revealed many research gaps and methodological challenges of assessing the impact of the rural context for the LGBT population. Viewing this literature from a systemic lens allows health care providers to be more intentional about seeing individual health as the outcome of an evolving but challenging system. Multiple years of (a) national, population-based data and coordinated convenience sample data; (b) longitudinal studies; (c) innovative methodologies to reach rural sexual and gender minorities; and (d) efforts to measure health outcomes and interventions are needed to address the diverse systems contributing to the health disparities of rural LGBT populations.

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