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REVIEW



Barriers and opportunities for the mental health of LGBT older adults and older people living with HIV: a systematic literature review

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ABSTRACT

Objective: LGBT older adults and older people living with HIV (PLWH) experience a disproportionate burden of behavioral health conditions compared to their heterosexual, cisgender, and HIV-negative peers. This study intends to systematically review the literature regarding accessing mental health care among LGBT older adults and older PLWH.

Methods: This study was conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Statement framework. Three databases were searched using Boolean search strings, and inclusion/exclusion criteria were developed and applied to the search outcomes to appropriately narrow results. Article quality and evidence of bias were evaluated using the National Heart, Lung, and Blood Institute (NHLBI) quality-assessment tool, and the Critical Appraisal Skills Program (CASP) assessment tool, two instruments used to help reviewers in assessing for internal validity of studies. Two independent researchers coded the articles for themes, and consensus was reached on theme grouping through an iterative process.

Results: Out of 2,031 articles initially screened, 28 met all inclusion criteria and advanced to final analysis. Several key themes emerged, including a lack of provider competency in caring for LGBT patients, lower rates of insurance coverage, greater mental health burden, social and structural determinants of health, policy solutions, and technology and health literacy.

Conclusion: There were several domains identified in the literature as barriers to accessing mental healthcare, as well as opportunities to better attend to the mental health needs of these populations. Provider training, implementing health technology solutions, and enacting public policy changes could improve mental health outcomes.

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HIV;
MSM;
mental health;
health disparities

Introduction

LGBT individuals and people living with HIV (PLWH) experience a disproportionate behavioral health burden. For example, many older LGBT individuals experience high rates of social isolation and loneliness (Dragon et al., 2017; Kim & Fredriksen-Goldsen, 2016; Nanni et al., 2015; Scheer & Pachankis, 2019). LGBT older adults also experience higher rates of anxiety, depression and substance use disorder, compared to their similarly aged heterosexual and cisgender counterparts (Yarns et al., 2016). An analysis of the Aging with Pride survey of 2,560 LGBT older adults in 11 US cities found that mental health quality of life was associated negatively with discrimination and positively with social support, social network size, and a positive sense of sexual identity (Fredriksen-Goldsen et al., 2015). Older PLWH similarly experience a disproportionate behavioral health burden (Halkitis et al., 2017), including higher rates of anxiety, trauma, depression, and substance use disorder (Chambers et al., 2015; Proeschold-Bell et al., 2015; Rueda et al., 2016; Schadé et al., 2013). Increasingly, health care organizations providing care to LGBT patients and PLWH are integrating behavioral health care with primary medical care, and adopting trauma-informed approaches to care to address some of the aforementioned disparities (Keuroghlian, n.d.; Marc et al., 2021).

This study originated from discussions in the HIV and Aging Policy Action Coalition (HAPAC), a network of LGBT older adults living with HIV, HIV activists, and HIV researchers convened by SAGE (Services and Advocacy for GLBT Elders). Many HAPAC members are long-term survivors living with HIV since before the advent of highly active anti-retroviral therapy in 1996. In preparing for a meeting with the Health Resources and Services Administration (HRSA) HIV/AIDS Bureau leaders and for a Congressional briefing on HIV and aging in fall 2020, some HAPAC members noted that many older LGBT people living with HIV had substantial challenges with accessing mental health care. In particular, some individuals reported that they were unable to access services for mental health unless they had severe substance use disorders. HAPAC members also expressed that milder to moderate mental health conditions like Major Depressive Disorder and Generalized Anxiety Disorders were harder to get treatment for, at least for many older PLWH and older LGBT people. We conducted this systematic review to better understand whether there is anything in the research literature about this phenomenon, and if so what the reasons are for the difficulty in accessing basic mental health care.

The purpose of this review was to examine the literature to identify what could explain why older people living with HIV

(PLWH) and LGBT older adults with mental health needs have such a hard time finding care. Because men who have sex with men (MSM) account for 69% of new HIV diagnoses and transgender women are disproportionately burdened by HIV, we conceive of these groups (PLWH, gay and bisexual men and other MSM, and transgender women) as having a large degree of overlap/intersection and as being affected by similar barriers to care (CDC, n.d.-a, n.d.-b). Attitudes toward PLWH are also often shaped by homophobia and anti-gay prejudice. This is due to the early association of HIV with homosexuality, as well as the disproportionate impact of HIV on gay people today (Collani et al., 2010). Therefore, we also searched for research on older LGBT people and mental health access (U.S. Statistics | HIV.gov, n.d.).

One initial hypothesis to explain this barrier is that Medicaid reimbursements for mental health care tend to be lower than private and Medicare insurance. This is relevant given the high proportion of PLWH who are on Medicaid. According to the Kaiser Family Foundation, 42% of PLWH in the US were on Medicaid as of 2019 (Medicaid and HIV | KFF, n.d.). Some mental health providers don't accept Medicaid, and some don't accept insurance at all, including private insurance (Medicaid and HIV | KFF, n.d.). This is a major barrier to accessing care. Cost sharing is another major structural barrier (Medicaid and HIV | KFF, n.d.).

Methods

Search strategy

This study is a systematic review of the literature, conducted using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Statement as our framework (Moher et al., 2016). The protocols for this literature review were registered and submitted to PROSPERO, an international database of prospectively registered systematic reviews in cross-disciplinary areas (PROSPERO, n.d.). Three databases were utilized to conduct the review: Pubmed, PsychInfo, and Web of Science.

Boolean searches were conducted across these databases utilizing a standardized keyword search. These keywords included clauses related to LGBT identity (e.g. LGBT, sexual minority, sexual orientation), items related to gender identity (e.g. gender minority, non-binary, transgender), items related to HIV status (e.g. HIV, AIDS), and items related to mental health (e.g. behavioral health, mental health). Clauses were also added to specify older adults (e.g. old, senior, elder) and exclude youth (e.g. young, youth, children). A full listing of the Boolean search strings is available in the Appendix.

Records that were initially identified through searching the databases were then reviewed to remove duplicates. After that, records were screened based on title and date to exclude those that did not meet inclusion criteria. Records were then screened via abstract, and finally were included in the qualitative synthesis.

Inclusion criteria

Studies were included in our review if they met the following inclusion criteria: 1) they were conducted in the United States; 2) were written in English; 3) were published from Jan 2015 through December 2020; 4) primarily evaluated adults ages 50+ or made comparisons between older adults and other age demographics; 5) participants either identified as LGBT or

engaged in same-sex behavior, or were a person living with HIV; 6) focused on behavioral health primarily or as a sub-category within a larger analysis. The rationale for the 2015-2020 inclusion window is twofold: 1) there has been a sharp increase in research on LGBT topics over the past 6 years, including research on LGBT older adults and older PLWH, and 2) the healthcare landscape in the US changed drastically with the implementation of key provisions of the Affordable Care Act from 2012-2014; because of this fluctuation in insurance access and marketplaces, 2015-2020 represented a more stable, current period to include articles from. The rationale for utilizing age 50+ is because the original Research on Older Adults with HIV (ROAH) study and other HIV and aging studies have identified that many PLWH experience earlier onset of certain conditions, such as cognitive decline, and thus may experience similar age-related consequences to a traditional 65+ 'elder' group (Karpiak et al., 2006). Additionally, researchers looking at Behavioral Risk Factor Surveillance System (BRFSS) data often examine 50+ or 50-75 age cutoffs, because solely evaluating respondents aged 65+ does not yield enough people to conduct a thorough analysis and compare older LGBT adults to older straight and cisgender counterparts.

The review also included articles which synthesized evidence from other peer-reviewed sources to generate policy recommendations or evidence-based guidelines for clinicians to follow when providing mental health care for LGBT older adults with or without HIV. Studies that did not explicitly address mental health or behavioral health, or those only focusing on adults ages 49 or younger, were excluded in this review.

Data abstraction and evidence evaluation

Study citations were tracked in a Microsoft Excel document as well as through Mendeley citation manager. Data abstracted included the study's purpose, key findings, and research methodology as applicable. Two independent researchers evaluated and determined key findings for each of the studies, in order to reduce bias as indicated by criteria 11 of the PRISMA systematic review checklist (Moher et al., 2016).

In order to ensure research articles included in this systematic review were of high quality and without bias (per PRISMA checklist item 11), two quality assessment tools were utilized to judge article quality and bias risk. Quality assessment was conducted primarily utilizing the National Heart, Lung, and Blood Institute (NHLBI) quality-assessment tool for observational cohort and cross sectional studies, as well as their tool for systematic reviews and meta-analyses (NHLBI, NIH, n.d.). For cross sectional and cohort studies, responses to each of the 14 items were scored as 'Yes', 'No', or 'Not Applicable' by two independent researchers. Items with 'no' responses indicated limitations of the studies. After scoring the 14 items, a summative rating of 'Good', 'Fair', or 'Poor', was assigned to each article, depending on how many limitations a study had. Articles receiving a rating of 'Poor' would be screened out of the review. For systematic review studies, the NHLBI tool included 8 items scored in the same way. Additionally, for qualitative data analysis, the Critical Appraisal Skills Program (CASP) checklist for qualitative studies was utilized (CASP CHECKLISTS – CASP, n.d.). This is an instrument designed as part of an educational curriculum for health professionals on critically appraising literature, and has been utilized in the literature previously particularly in the evaluation of qualitative studies (Satinsky et al., 2019).

Two independent reviewers evaluated each study utilizing either the NHLBI tools or CASP. After each reviewer gave a summative score, consensus was reached for points of discrepancy that arose in evaluation.

Data analysis and synthesis

Qualitative synthesis was conducted by two independent researchers reviewing key findings of the articles and identifying cross-article themes. Consensus was reached on the themes, which were then pooled into larger categories that encompassed over-arching motifs that emerged. Paraphrasing as well as direct article quotes were utilized to incorporate key findings into the results of this review.

Results

Search results

Upon initial search through the three databases, 2031 records were identified. After duplicates were removed, 1922 articles remained. Next, out of 1922 articles, 1568 articles were screened out utilizing title and date inclusion criteria. Finally, an additional 463 articles were screened by abstract, of which 435 were excluded for not meeting inclusion criteria. This left us with 28 articles remaining in the qualitative synthesis. See [Figure 1](#)

detailing the review process. Of these articles, 18 were focused on LGBT older adults broadly, and 10 were focused on PLWH in particular.

Evidence evaluation results

Out of the 28 articles meeting all inclusion criteria, nine were identified as being descriptive in nature or offered policy and legislative advocacy recommendations and thus were not screened utilizing either the NHLBI instrument or CASP. 18 articles were evaluated utilizing either the NHLBI cross sectional and cohort study evaluation tool, or the systematic review tool. One qualitative article was evaluated utilizing CASP.

Of the 18 articles evaluated with NHLBI tools, 16 received a summative evaluation of 'good' from both reviewers. Two articles received a score of 'fair' from both reviewers. No articles received 'poor' evidence evaluations. Discrepancies in reviewer overall scores were uncommon, with only 4 out of 18 of the articles having initially discrepant scores. For these articles, individual criteria out of the NHLBI tool that were rated differently between reviewers were discussed in-person to reach consensus, with citations of passages from the articles being used to justify or reject a given criteria score. The one article evaluated with CASP scored a 10/10 on the qualitative checklist from both reviewers, indicating high degrees of validity, depth of analysis, and research applicability.

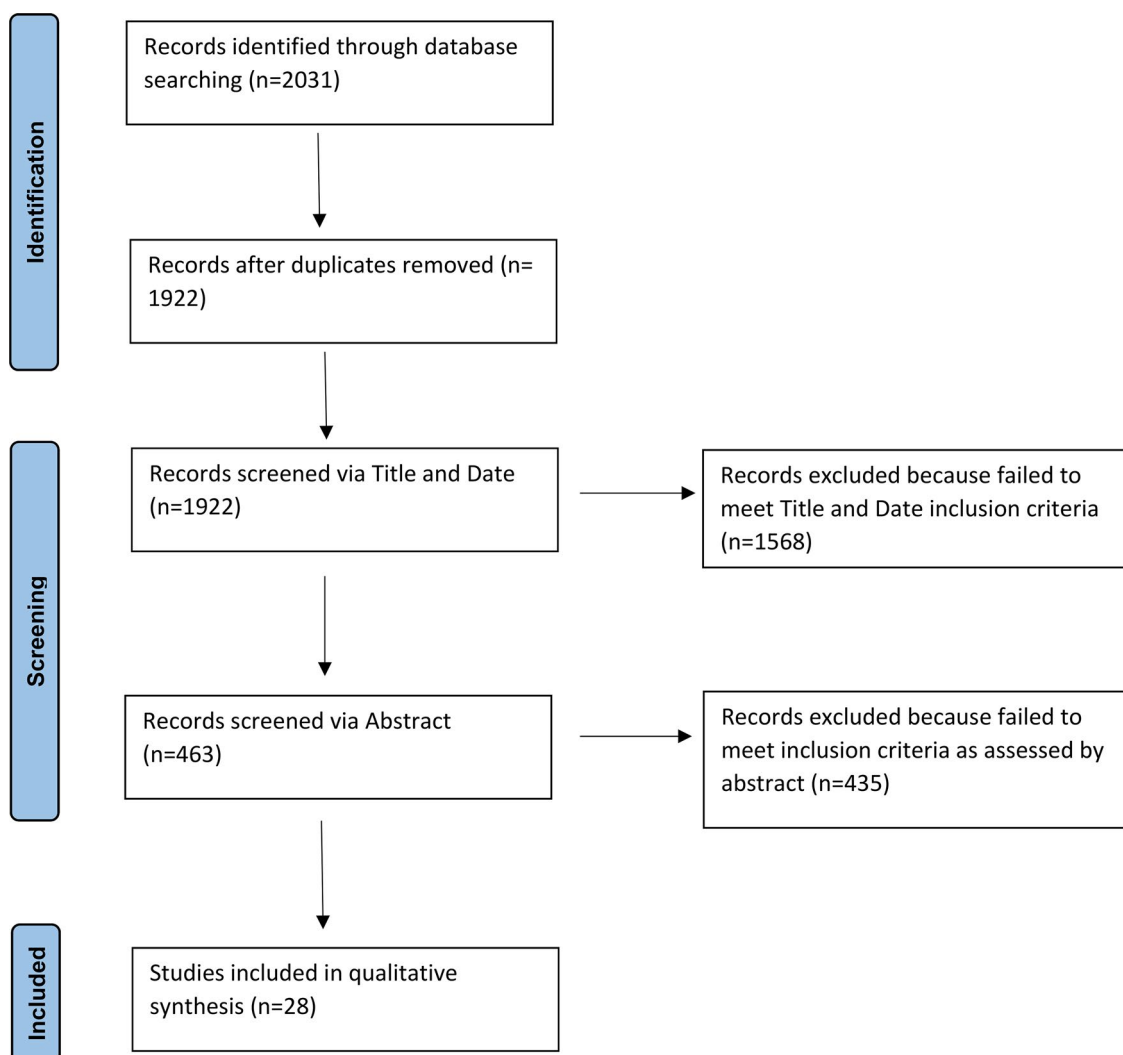


Figure 1. Identification of studies via database searches.

Table 1. Six key themes and thematic summaries that emerged from analysis of the included papers.

Theme identified	Theme summary
1. Provider competency	Provider competency and comfort in caring for older LGBT patients and HIV positive older adults affected patient willingness to seek and engage in care. Many practitioners of mental healthcare for older LGBT people and older people living with HIV (PLWH) have no formalized training on how to care for these vulnerable and marginalized groups. This lack of trust in providers affects patient outcomes: transgender individuals in particular often delay accessing care, or drop out of care, due to this barrier.
2. Insurance coverage issues	LGBT individuals and PLWH tend to have lower rates of insurance coverage and face more exclusions from their plans if they do have coverage. PLWH on Medicare tend to have better coverage than their Medicaid-insured counterparts. Additionally, individuals with private insurance had better outcomes than any of the individuals on Medicare or Medicaid. This is critically important because insurance access modifies the association between mental health conditions and decreased retention in HIV care. The Affordable Care Act dramatically expanded access to health insurance for PLWH, though its long-term future is still in question due to judicial and legislative attacks.
3. Individual health status	The incidence of mental health conditions is both higher among elderly PLWH, and also contributes to greater missed clinic visits and lower retention into care for PLWH. Thus, addressing mental health among this population is critically important to retaining older PLWH and LGBT older adults into care. Additionally, individual wellness is in part predicted by degree of individual resilience.
4. Social and structural determinants of health	The dispersion, displacement, and integration of LGBT older adults into general society versus historic urban enclaves has contributed to transportation challenges in accessing care, for example through LGBT community centers. Social isolation and lower socioeconomic status played a large role in predicting the mental health outcomes of LGBT and PLWH older adults. Housing is also a substantial predictor of engagement in care for PLWH.
5. Policy remedies and advocacy	The designation of LGBT and PLWH as populations of greatest social need under the Older Americans Act would provide targeted services and funding to this population. This has been done by state elder affairs departments, and could be done by the federal Administration on Aging. Additionally, a federal nondiscrimination law prohibiting sexual orientation and gender identity (SOGI) discrimination in health care and other public accommodations could reduce discrimination and increase access to care, enabling better mental health outcomes in these two intersecting populations.
6. Technology and health literacy	LGBT older adults are more likely to utilize health information technology compared to their heterosexual counterparts, presenting an avenue to reaching this population that may not be available for other communities. Additionally LGBT older adults and older PLWH may have challenges in appraising health-related information and navigating the complex HIV clinical environment. The use of patient navigators for this population may improve retention in care, health outcomes, and quality of life.

Key themes

See Table 1 for a brief summary of the following themes.

Theme 1: Provider competency

One major finding was the extent to which provider competency and comfort in managing LGBT older adult patients impacted patient willingness to seek and engage in care. Even in situations where older adults had access to a service on paper (i.e. their insurance covered a visit or there were specialists in their area that accepted their plan), there were still concerns among patients that the type of care would be inadequate (Boggs et al., 2017). Social and health services that were not LGBT friendly were identified by other studies as detrimental to LGBT aging (Caceres & Frank, 2016). Furthermore, even services 'labelled' as LGBT friendly were not necessarily perceived by LGBT older adults as being such, because some of these services were primarily designed by heterosexual providers who lacked appropriate competency training in issues of LGBT older adult mental health (Caceres & Frank, 2016; Hoy-Ellis et al., 2016).

Some root causes of this particular access to care issue may stem from the fact that providers of mental healthcare for LGBT older adults have very little formal training in LGBT health issues (Smith et al., 2019). Additionally many of these providers reported zero self-study hours, or did not respond to survey items of this nature (Smith et al., 2019). However, this may represent a promising area for improvement, as providers generally indicated a high degree of openness to learning more about and providing inclusive care to LGBT older adults in long-term care (Smith et al., 2019).

For transgender individuals, there is evidence that care is delayed at a rate significantly higher than the general population due to perceived provider discrimination (Stanton et al., 2017). This could be in part due to the fact that there is a shortage of clinicians able to provide gender affirming care in addition to high rates of clinician discrimination and lack of coverage of transgender health care needs (Solotke et al., 2020).

We found no articles examining the importance of cultural competency to provide mental health care to older PLWH and long-term survivors, another theme that has arisen in the HAPAC conversations. Generally, Theme 1 was identified more among articles which focused exclusively on LGBT older adults.

Theme 2: Insurance coverage issues

A recurring motif across multiple articles was the role that public and private insurance played on the ability of older LGBT adults and older PLWH to access mental health care, and the impact on utilization of services. Broadly, LGBT individuals tend to have lower rates of insurance coverage (especially lesbian women, bisexual women, and transgender people) and may face more exclusions from their insurance plans if they do have coverage (Zelle & Arms, 2015). This is still the case despite the fact that between 2013 and 2015, the percentage of LGB adults without health insurance decreased from 21.7% to 11.1%, which is a larger decrease than in the non-LGB adult population (QuickTake, n.d.).

However, when given more robust insurance access, HIV positive individuals were shown to utilize care more readily. For example HIV-positive dually eligible individuals (those eligible for both Medicare and Medicaid) had significantly higher anti-depressant use compared to those with Medicaid alone, despite similar levels of depressive symptomatology (Belenky et al., 2019). This likely has to do with higher Medicare provider reimbursement rates, compared to Medicaid's (Medicaid-to-Medicare Fee Index | KFF, n.d.). Anti-depressants are one of six protected classes under Medicare Part D, which means that Part D plans must cover 'all or substantially all drugs' within that class (Medicare's Six Protected Classes Explained, n.d.).

Furthermore, for transgender individuals seeking gender affirmation therapy, Medicare Advantage plans offered more unrestricted coverage compared to their stand-alone counterparts (original Medicare Part A and B) for both feminizing and masculinizing therapies (Solotke et al., 2020). The same study

found that annual costs for hormone therapy can vary widely and are largely dependent on the medication regimen, presenting a challenge considering that transgender individuals tend to be of a lower socioeconomic status. This has major behavioral health implications given that addressing gender dysphoria is important in and of itself but also to address the comorbid mental health disparities faced by the transgender community. While both original Medicare and private Medicare Advantage should cover transition-related care, often Medicare Advantage plans have specific guidelines and conditions for such coverage (Medicare | National Center for Transgender Equality, n.d.).

Rooks-Peck et al. conducted a systematic review and meta-analysis of research on mental health and retention in HIV care. They found that having a mental health diagnosis was a statistically significant barrier to being retained in care. Health insurance status modified this association. Most importantly, 'mental health services utilization was associated with an increased odds of being retained in care' (OR 1.84; 95% CI [1.45, 2.33] (Rooks-Peck et al., 2018).

We found no journal articles addressing a key issue that arose in conversations of SAGE's HIV and Aging Policy Action Coalition: the difficulty older PLWH have accessing mental health care due to payment barriers, specifically providers who do not take Medicaid, or who do not take private insurance. However as above, we did find research showing that greater insurance access, such as being dually eligible for Medicare and Medicaid, can increase mental health service utilization. Generally, this theme was identified more among articles that focused on PLWH and transgender individuals, versus LGBT older adults more broadly.

Theme 3: Individual health status

Individual health status played a substantial role in determining access to care, indicating that poor mental health and substance use can precipitate a self-reinforcing downward spiral of decreasing access to care. In general, rates of mental health conditions are higher among people vulnerable to acquiring HIV as well as PLWH, compared to the general population (Remien et al., 2019). Remien et al. note that '[m]ental health impairments increase risk for HIV acquisition and for negative health outcomes among PLWH at each step in the HIV care continuum'. (Moher et al., 2016)

There is clear evidence suggesting that mental health impairments increase risk for poorer quality of life among PLWH (Catalan et al., 2017; Remien et al., 2019). But the fact that mental health impairments directly impact access to care is particularly troubling. For example, greater depressive symptoms predicted a greater number of missed clinic visits in one study (Fazeli et al., 2020).

Indeed, one cross-sectional study found that 'LGBT older adults with depressive symptomatology reported lower engagement even when they perceived a health concern, compared with their peers without depressive symptomatology'. (Shiu et al., 2017) This is an important finding as it might suggest that the intersection of depression, being LGBT, and needing to discuss sexual health issues may in combination be a more significant barrier to access than one of these factors alone. These findings are corroborated with other studies suggesting that individuals with mental health diagnoses or symptoms have lower odds of being retained in HIV care (Rooks-Peck et al., 2018).

Fredriksen-Goldsen et al. note that several of the modifiable risk factors for Alzheimer's disease—depression, cardiovascular

disease (CVD), smoking, obesity, and limited social or cognitive engagement—are experienced at higher rates among LGBT older adults (Fredriksen-Goldsen et al., 2018). Several of these factors—depression, CVD, smoking, and limited social or cognitive engagement, are also experienced at higher rates among older PLWH (Fredriksen-Goldsen et al., 2018).

Some factors did impact wellness behaviors and generalized resilience. Having health insurance and access to care helped explain variance in wellness, suggesting that improving access to mental health care may be one strategy to secure wellness for older adults (Henry et al., 2020). Furthermore, older age was found to be associated with increased wellness behavior engagement (Henry et al., 2020). Indeed, another study found that older transgender people reported greater well-being than younger (aged 18-24) (Stanton et al., 2017). This could be a byproduct of LGBT older adults having greater crisis competence from dealing with decades of prejudice compared to their younger counterparts.

This theme regarding individual health status existed evenly across both PLWH and LGBT older adults in the literature during our analysis.

Theme 4: Social and structural determinants of health

Several structural and institutional barriers to care emerged from the literature. The dispersion and integration of LGBT adults into general society compared to in historic enclaves has contributed to transportation challenges particularly for older adults (Hoy-Ellis et al., 2016). Many LGBT community agencies exist within these historic LGBT enclaves. However, LGBT older adults, especially low-income individuals, have more difficulty accessing these resources as they are disproportionately displaced into more affordable, outlying neighborhoods with less accessible transportation (Hoy-Ellis et al., 2016). This presents a structural barrier to accessing resource centers which can play an important role in directing older adults to appropriate mental health resources.

Additionally, being of a lower socioeconomic status played a substantial role in determining quality of life among older people living with HIV (Catalan et al., 2017) and for older LGBT people (Javier & Oswald, 2019). Many older PLWH and LGBT individuals cannot purchase more comprehensive insurance plans, resulting in higher out-of-pocket costs that strain already low financial resources among LGBT older adults (Javier & Oswald, 2019). This is of particular relevance for transgender individuals seeking gender affirmation therapy, as hormone therapy regimens can vary widely in cost and may be particularly onerous given that transgender individuals have lower socioeconomic status on the whole than their cisgender counterparts (Solotke et al., 2020).

A prominent theme that came up as well was the role of social isolation in the development of poor mental health and as an impediment to accessing care. Since LGBT older adults are more likely to live alone and less likely to have familial supports, they tend to have less protective social ties against the development of poor mental health (Fredriksen-Goldsen et al., 2018; Zelle & Arms, 2015). Furthermore, LGBT adults acting as caregivers for other LGBT adults without formal legal ties may have limited legal power to be involved in issues of consent and decision-making, leading to decreased ability to advocate for where a loved one will reside during end-of-life care and their treatments (Fredriksen-Goldsen et al., 2018). Some remedies to

address social isolation include technological interventions in the home setting to boost communication and interconnect- edness across LGBT older adults; this is of particular importance for those individuals who are long-term survivors of HIV (Bhochhibhoya et al., 2021).

Housing also emerged in the literature as a substantial unmet need particularly for PLWH (Irvine et al., 2017). Engagement in care and viral load suppression improved for PLWH who were stably housed and were able to stop hard drug use. The use of care coordination and patient navigation were both found to be positively associated with increased housing and with viral suppression (Mizuno et al., 2020).

Experiencing discrimination and disadvantage over a life course can contribute to minority stress, which presents an individual barrier to accessing care as well (Javier & Oswald, 2019). Minority stress theory argues that 'stigma, prejudice, and discrimination create a hostile and stressful social environment that causes mental health problems.' (Meyer, 2003) The dual, intersectional experiences of being of a racial minority as well as an LGBT individual may also play a role in exacerbating some of the mental health disparities seen among this population (Dragon et al., 2017).

This theme regarding social and structural determinants of health existed evenly across both PLWH and LGBT older adults in the literature during our analysis.

Theme 5: Policy remedies and advocacy

Several articles discussed the role of legislative advocacy in overcoming some of the barriers to mental health access for our population of interest. Some outlined an approach leveraging the Older Americans Act (OAA)'s designation of people with mental disabilities as a priority population for services and supports (Adams & Tax, 2017). Because LGBT older adults face higher rates of disability and mental health challenges, including higher rates of suicide, they should qualify for inclusion within the OAA's population of greatest social need, which could open the door for targeted services and funding (Adams & Tax, 2017). Four states and the District of Columbia designate LGBT older adults as a population of 'greatest social need' under the OAA, and two of these states and DC also designate HIV+older adults.

Unfortunately, there is much turbulence regarding sexual orientation and gender identity (SOGI) nondiscrimination regulations depending on which party controls the federal government. From 2017 to 2021, the Trump Administration undermined SOGI nondiscrimination regulations governing health insurance, health care, and elder care and services, and promoted religious refusal policies that allow for discrimination in health care and social services based on religious and moral objections (Perone, 2020).

Furthermore, the insurance market currently has too much license in determining which aspects of care are considered 'medically necessary', presenting a large barrier for transgender older adults seeking to transition (Perone, 2020).

This theme regarding policy remedies and advocacy focused mostly on LGBT older adults, although as mentioned above some articles discussed states that designate both PLWH and LGBT older adults as populations of 'greatest social need'.

Theme 6: Technology and health literacy

Finally, health technology and health literacy represent important elements that could be leveraged to improve access to

mental health care for older LGBT and HIV positive adults. Interestingly, LGB older adults are more likely to utilize health information technology compared to their heterosexual counterparts (Lee et al., 2017). Specifically, Lee et al. found that sexual minority adults were twice as likely as heterosexual respondents on the National Health Interview Survey to look up health information online, fill or renew a prescription online, and communicate with a provider by email (Lee et al., 2017).

This presents an opportunity to deliver targeted information and address mental health disparities among older adults who may not have access to inclusive care through traditional means (Lee et al., 2017). For example, having a dearth of providers in one geographical area or a dearth of providers with adequate training in caring for older LGBT people or long-term survivors of HIV could be remedied by telehealth. Additionally, technological interventions tailored to older adults in their home settings, or communication technologies to help decrease social isolation among older adults, could also play a role in maintaining well-being (Bhochhibhoya et al., 2021).

Regarding health literacy, the evidence suggests that older PLWH may have challenges in appraising health-related information and navigating the complex care environment of the HIV clinic (Fazeli et al., 2020). A number of studies found a greater degree of missed clinic visits among PLWH in HIV care (Fazeli et al., 2020). One possible remedy to this issue is the use of patient navigators among PLWH. This is a patient-centered health care delivery model, where patient navigators help identify and resolve barriers to care (Mizuno et al., 2020). Approximately one third of PLWH did not use patient navigation despite needing the service objectively or subjectively, indicating a large untapped potential of this intervention (Mizuno et al., 2020). Given that evidence suggests patient navigation is positively associated with viral suppression, this intervention has significant promise (Mizuno et al., 2020). A lack of health insurance and not knowing how to access navigation services were the most prominent obstacles noted (Mizuno et al., 2020).

This theme regarding health literacy existed evenly across both PLWH and LGBT older adults in the literature during our analysis.

Discussion

The fact that we found no articles examining the importance of cultural competency to provide mental health care to older PLWH and long-term survivors is troubling. Older gay men living with HIV for more than a quarter century (i.e. long-term survivors) active in HAPAC note that there is a dearth of mental health providers in general, and an even greater dearth of providers with competency to treat the trauma experienced over the life course by many long-term survivors living with HIV. More research is needed in this area, as are trainings to improve the capacity of mental health providers, as evidenced by Theme 1 (Provider Competency). Given that unmet mental health care needs are a barrier to retention in HIV care as discussed in Theme 3 (Individual Health Status), and that mental health services utilization is a facilitator to retention in care, this should be a top priority of the Ryan White HIV/AIDS Program, the Substance Use and Mental Health Services Agency, and the Administration on Aging. These three agencies, and analogous state and local agencies, should work closely together to better serve older PLWH and older LGBT people and meet their unmet mental health needs.

It is also important that older LGBT people, many of whom are PLWH, are able to access LGBT-affirming mental health care. LGBT cultural competency is an important element of access to mental health care for older LGBT people, as discussed in Theme 1 (Proeschold-Bell et al., 2015; Keuroghlian, n.d.; Marc et al., 2021). Gender affirming care, including hormone treatment and gender affirmation surgery, have also been shown to significantly improve transgender patients' long-term health outcomes—including significantly improving quality of life, general health, social functioning, and mental health (Keo-Meier et al., 2015; Murad et al., 2010).

A number of resources are available to help behavioral health providers increase their competency to serve these two, intersecting populations. These include the National LGBTQIA + Health Education Center (<https://www.lgbtqiahealtheducation.org/>), the National Resource Center on LGBT Aging (<https://www.lgbtagingcenter.org/>), the AIDS Education and Training Centers' National Coordinating Resource Center (<https://aidsetc.org/>), the Black AIDS Institute (<https://blackaids.org/>), the National Resource Center on HIV and Aging (<https://aginghiv.org/>), and many other resources. Many of these training centers provide archived webinars, interactive learning modules, and Project ECHO learning collaboratives that offer continuing education credits.

Many transgender people report that they are happier and more productive following their transition to express their current gender identity (National Center for Transgender Equality, n.d.). Additionally, as discussed in Theme 2 (Insurance Coverage Issues) most health insurance plans cover only 'medically necessary care' which leaves wiggle room for insurance companies to deny transitioning care or create obstacles to accessing gender affirmation therapy (Perone, 2020). The fact that most instances of gender affirming surgery require case-by-case evaluation is one such barrier (Perone, 2020).

To expand and reflect on Theme 3's (Individual Health Status) notion of resilience as an individual wellness factor, older people living with HIV have higher rates of retention in care, treatment adherence, and viral suppression compared to younger age cohorts (Ghidei et al., 2013). This could be related to 'crisis competence' among older LGBT people, a process whereby older gay and lesbian people 'apply lessons learned from being a sexual minority to the aging process.' (Fredriksen-Goldsen et al., 2014; Friend, 1990) Many older PLWH, especially long-term survivors, had to become experts on HIV in the 1980s and early 90s via community organizations like ACT-UP, and this may be a factor in greater treatment adherence and patient engagement in their health.

The finding in Theme 4 (Social and Structural Determinants of Health) that many older LGBT people cannot afford to live in gentrified gay neighborhoods like the Castro in San Francisco or Chelsea in New York, and often have to leave these cities altogether, is important. Older LGBT people living in rural, suburban and even urban areas also describe limited public transportation options as a major barrier to accessing health care and other services (Cahill, 2020). Social isolation, sometimes related to mobility issues, exacerbates behavioral health burden. The COVID-19 pandemic caused many LGBT older adult support groups, often based in congregate meal programs, to move online. This actually increased access to community and reduced social isolation for many older adults with mobility issues (Cahill, 2020).

Finally, passage of the Equality Act, a federal SOGI non-discrimination law that would cover public accommodations,

would permanently protect LGBT older adults against discrimination in health care (Cicilline, 2021). This would build on some of the policy remedies we encountered in Theme 5 (Policy Remedies and Advocacy). Advocates at the state level can also protect older LGBT people and older PLWH by getting them designated as populations of greatest social need under the Older Americans Act, which allows for targeted funding and services (Krinsky & Cahill, 2017). They can also pass laws, such as New Jersey's 2021 'LGBTQI+ senior bill of rights' that protects against discrimination and harassment in nursing homes, assisted living, and long-term care, enumerates prohibited forms of discrimination and harassment, and mandates training of congregate living facility staff (S2545, n.d.).

Conclusion

Overall, it is clear that several systemic improvements must be made to improve access to mental healthcare for LGBT older adults and older people living with HIV. Provider education and training is necessary to ensure that all healthcare providers have basic competencies in addressing the needs of the LGBT community and PLWH, including older adults. More clearly defined benefits and transparency for Medicare Advantage plans regarding gender affirmation therapy and general medication access would greatly improve the experience of transgender older adults looking to access gender affirmation.

Much work remains to be done regarding improving individual mental health status, as poor mental health at baseline impacts the degree to which access is possible. Technological innovations to bring mental healthcare into the homes of LGBT older adults who may not have the social supports to transport themselves to visits is critical. The designation of LGBT older adults and older PLWH as a 'population of greatest social need' under the Older Americans Act would ensure that these populations get the funding necessary to address some of the mental health disparities seen. Several state elder affairs departments have taken this step, and the U.S. Administration on Aging could also make such designations. The Ryan White HIV/AIDS Program and the Administration on Aging should collaborate closely on policy and services, including training elder service providers so that they are competent to provide affirming care to older PLWH and older LGBT people. Finally, codifying nondiscrimination protections for LGBT older adults through U.S. Senate passage of the Equality Act, as opposed to reversible executive orders that may not legally extend to health care and other public accommodations due to limitations in federal sex discrimination law, would better ensure that LGBT older adults and older people with HIV (most of whom in the U.S. are LGBT) can age successfully with access to affirming, culturally responsive and clinically competent mental health care, as well as all the other elder services and care supports that they need.

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Appendix: Boolean search strings

Section A: Sexual orientation

1. ('LGBT' OR 'LGB' OR 'sexual minority' OR 'sexual orientation' OR 'HIV' OR 'AIDS' OR 'sexual and gender minority' OR 'gay' OR 'homosexual' OR 'lesbian' OR 'bisexual' OR 'long term survivor') AND ('mental health' OR 'behavioral health') AND ('old' OR 'senior' OR 'age' OR 'older' OR 'elder' OR 'aging' OR 'elderly') AND **'access'** NOT ('young' OR 'youth' OR 'children' OR 'adolescent')
2. ('LGBT' OR 'LGB' OR 'sexual minority' OR 'sexual orientation' OR 'HIV' OR 'AIDS' OR 'sexual and gender minority' OR 'gay' OR 'homosexual' OR 'lesbian' OR 'bisexual' OR 'long term survivor') AND ('mental health' OR 'behavioral health') AND ('old' OR 'senior' OR 'age' OR 'older' OR 'elder' OR 'aging' OR 'elderly') AND **'payment'** NOT ('young' OR 'youth' OR 'children' OR 'adolescent')
3. ('LGBT' OR 'LGB' OR 'sexual minority' OR 'sexual orientation' OR 'HIV' OR 'AIDS' OR 'sexual and gender minority' OR 'gay' OR 'homosexual' OR 'lesbian' OR 'bisexual' OR 'long term survivor') AND ('mental health' OR 'behavioral health') AND ('old' OR 'senior' OR 'age' OR 'older' OR 'elder' OR 'aging' OR 'elderly') AND **'insurance'** NOT ('young' OR 'youth' OR 'children' OR 'adolescent')
4. ('LGBT' OR 'LGB' OR 'sexual minority' OR 'sexual orientation' OR 'HIV' OR 'AIDS' OR 'sexual and gender minority' OR 'gay' OR 'homosexual' OR

'lesbian' OR 'bisexual' OR 'long term survivor') AND ('mental health' OR 'behavioral health') AND ('old' OR 'senior' OR 'age' OR 'older' OR 'elder' OR 'aging' OR 'elderly') AND **'barrier'** NOT ('young' OR 'youth' OR 'children' OR 'adolescent')

Section B: Gender identity

5. ('gender minority' OR 'non-binary' OR 'transgender' or 'trans' OR 'gender identity') AND ('mental health' OR 'behavioral health') AND ('old' OR 'senior' OR 'age' OR 'older' OR 'elder' OR 'aging' OR 'elderly') AND **'access'** NOT ('young' OR 'youth' OR 'children' OR 'adolescent')
6. ('gender minority' OR 'non-binary' OR 'transgender' or 'trans' OR 'gender identity') AND ('mental health' OR 'behavioral health') AND ('old' OR 'senior' OR 'age' OR 'older' OR 'elder' OR 'aging' OR 'elderly') AND **'payment'** NOT ('young' OR 'youth' OR 'children' OR 'adolescent')
7. ('gender minority' OR 'non-binary' OR 'transgender' or 'trans' OR 'gender identity') AND ('mental health' OR 'behavioral health') AND ('old' OR 'senior' OR 'age' OR 'older' OR 'elder' OR 'aging' OR 'elderly') AND **'insurance'** NOT ('young' OR 'youth' OR 'children' OR 'adolescent')
8. ('gender minority' OR 'non-binary' OR 'transgender' or 'trans' OR 'gender identity') AND ('mental health' OR 'behavioral health') AND ('old' OR 'senior' OR 'age' OR 'older' OR 'elder' OR 'aging' OR 'elderly') AND **'barrier'** NOT ('young' OR 'youth' OR 'children' OR 'adolescent')