Public Health England

Protecting and improving the nation's health

Improving the health and wellbeing of lesbian and bisexual women and other women who have sex with women

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-leading science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health and Social Care, and are a distinct delivery organisation with operational autonomy to advise and support government, local authorities and the NHS in a professionally independent manner.

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Executive summary

There is evidence that lesbian, bisexual and other women who have sex with women (LBWSW) experience significant health inequalities, and specific barriers to services and support.

LBWSW face complex and interconnected experiences of social disadvantage and barriers to being and flourishing as ‘who they are’ linked to their sex, gender and sexual orientation and these negative experiences are often compounded by age, social class, ethnicity, disability and/or faith.

This report is based on a systematic best evidence review commissioned by Public Health England (PHE), which is being published separately in a series of peer review journals, and supplemented by a series of rapid evidence summaries undertaken by PHE staff to capture additional research since the review was completed. The process was informed by an external stakeholder group and the draft report was reviewed by a diverse group of academics and LBWSW community stakeholders.

The international and UK evidence suggests that LBWSW experience inequalities across a range of areas but especially in relation to mental health, reproductive health issues, domestic violence and health risk behaviours such as smoking and alcohol misuse.

There was also evidence from a bespoke analysis of the the England GP Patient Survey of higher rates of musculoskeletal health issues, asthma and respiratory conditions and some types of cancer among LB women compared to heterosexual women. This data is being published as part of the best evidence review summaries separately in peer review journals.

In the context of the wider determinants of health there is also evidence of inequalities across a range of areas, some of which may reflect the impact of discrimination and marginalisation, such as income and employment, domestic violence and sexual assault and homelessness and housing, among others.

In some specific areas there is good international evidence of significant health inequalities affecting LBWSW, however the UK and current grey literature do not support the same statistically significant findings, possibly as the number of UK specific studies is so limited and the sample size is often very small and has a sample bias.

It is important to note there is a significant absence of research into women who have sex with women but do not identify as bisexual or lesbian and therefore it has not been possible to identify any specific needs that are unique to this group.

There is consistent evidence from the UK and internationally that there has been a paucity of attention, concern and research on lesbian and bisexual women's health inequalities.

Although this report highlights deficits in the knowledge base about inequalities affecting LBWSW populations, it is important to reflect that there is also a strong asset base within these communities, with varying levels of social and community networks and organisations supporting LBWSW to live flourishing lives.

The unique needs of LBWSW are rarely recognised or treated separately to general approaches aimed at lesbian, gay, bisexual and trans communities or considered explicitly in generic women's focused work, and the absence of needs-based, appropriate approaches may further compound the inequality experienced. The evidence does demonstrate that LBWSW face additional barriers in accessing services and therefore consideration of their specific needs is important.

Opportunities for local and national action to address LBWSW inequalities will require developing solutions at national and local level with partnerships across the breadth of the public health system and consistent co-production including engagement with LBWSW communities and organisations. This report highlights opportunities for local and national action, and the potential contribution of PHE.

Introduction

Lesbian, bisexual and other women who have sex with women (LBWSW) constitute an estimated 1.92% of the female population in the United Kingdom (UK)[1]. It should be noted that this figure is likely to underestimate the full number of LBWSW as it was derived from general social surveys, but it helps to provide an indication of the currently known size of this population.

Throughout the report we have used the term lesbian, bisexual and other women who have sex with women (LBWSW). We have included the epidemiological term 'other women who have sex with women' to highlight some of the complexities of identity, whilst also recognising there are distinct and important differences as well as similarities between both lesbians and bisexual women. Some research also uses the term 'sexual minority women' to describe the diverse range of non-heterosexual sexual identities used, but the majority of research focuses on self-identified lesbian or bisexual women.

It is important to note that the types of relationships LBWSW experience vary considerably and sexual identity may change over a lifetime and there is very little research that explores the lifetime evolution of sexual identity for women.

The LBWSW population continues to experience inequalities in health and wellbeing and in other areas, such as the experience or fear of stigma and discrimination, despite significant improvements in social attitudes and laws that protect and uphold the rights of lesbian, gay, bisexual and transgender (LGBT) people. The intersection between gender inequalities and sexual orientation inequalities contributes to increased invisibility and barriers to access in both women's rights & spaces and LGBT contexts.

This diverse population includes women from different ethnicities, faith groups and women with disabilities – with potential of these groups to experience marginalisation and isolation. There is evidence that ethnic minority and disabled lesbian and bisexual women also experience more inequalities than white or non-disabled heterosexual women but this is primarily international or from grey literature sources.

LBWSW have not experienced the single catastrophic disease scenario that was HIV for gay and bisexual men and their needs within women's health issues have often been marginalised or invisible. This has perpetuated a lack of evidence and visibility within research and policy which creates a continual loop of exclusion. This report aims to break that loop and draw out, based on what limited evidence there is, the opportunities to improve the health of lesbian, bisexual and other women who have sex with women in England.

Methodology

This document draws on a number of sources summarising the evidence on health and wellbeing outcomes for LBWSW.

Firstly, a 'best evidence' systematic review was conducted by Dr Catherine Meads (Anglia Ruskin University) and colleagues from across Public Health England in 2016/17. The best evidence review presented all available relevant research in the health and wellbeing of UK sexual minority women (LBWSW). This included a wide range of health topics, including prevalence, health behaviours, access to healthcare, material determinants of health and psychosocial factors compared to similar exposure in heterosexual women. 72 primary studies and 33 systematic reviews (including systematic reviews of international research) were identified for inclusion in the best evidence review. The evidence review was supplemented by a bespoke analysis of the GP Patient Survey in England (2009/10), although this is now historical data it presents one of the largest methodologically robust population surveys in England that collected sexual orientation data and therefore provided an important counterpoint for the predominantly international published evidence base. These review findings are being published separately in a series of peer reviewed publications and the methodology is summarised in the annex.

Secondly, this document uses findings from a series of rapid evidence reviews conducted by PHE to update the 2012 LGBT companion document to the Public Health Outcome Frameworks, focusing on evidence published on lifestyle risk behaviours and wider determinants of health. The rapid review methodology is described in more detail in the annex to the report

Thirdly the draft report was peer reviewed by both PHE national topic expert teams and an external expert advisory group, including academics, and representatives from Metro, LGBT Foundation, and BiCon, who provided additional advice and input to its content.

This report summarises aggregated information from across these different evidence sources. Sections are set out in three sections, to reflect the range of LBWSW experienced health inequalities, firstly health inequalities, health behaviours and lastly the wider determinants of health. These sections consider inequalities across the 'life course', recognising that short, medium and long term accumulation of health burdens impact across the life course and therefore that action for change is possible at every life stage.

Health inequalities

Health inequalities exist across the life course for LBWSW. Some burdens come directly from adult lifestyle behaviours but many come from the wider determinants in our lives such as housing, employment and the impact from the families, communities and society in which we live. In national surveys, lesbian and bisexual women self-report significantly higher levels of fair or poor health than heterosexual women[2].

Throughout the evidence identified relating to LBWSW's health, as well as that for other gay, bisexual and trans communities, there is consistent discourse[3] highlighting the negative impact of discrimination and invisibility in social narratives. This is a key driver for health inequalities. These operate directly through impacts on mental health and the creation of barriers in accessing health care and indirectly through marginalisation and social isolation.

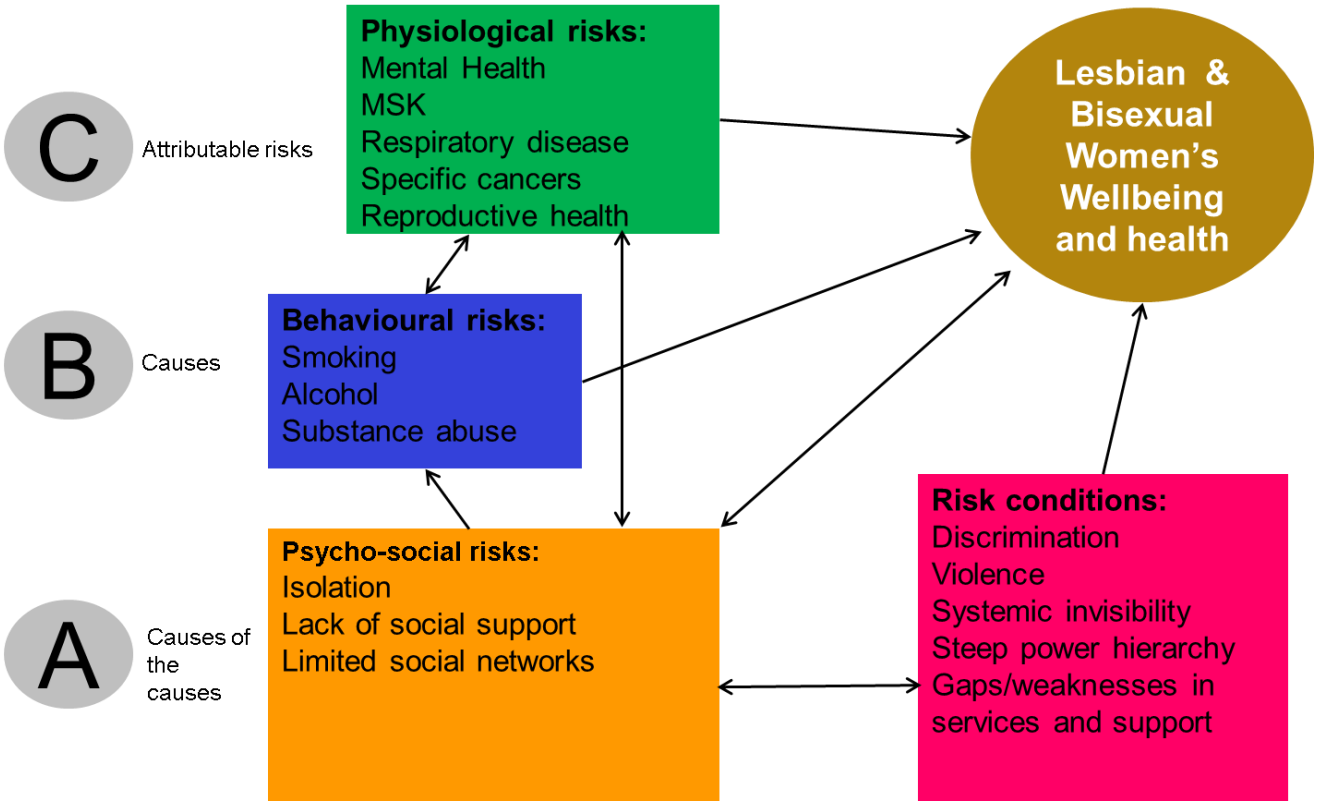
The lack of data collection within the National Health Service (NHS) means that evidence on LBWSW's physical health is limited. In 2017 the NHS launched an NHS Information Standard on Sexual Orientation Monitoring that will start to standardise the collection of demographic data alongside ethnicity, disability and gender. Over time routine collection of sexual orientation data will allow for a much better national understanding of the health inequalities affecting LBWSW. However the experience from ethnicity monitoring suggests it will take 5 to 10 years before there is good enough quality data to be able to robustly assess the true picture.

The best evidence review highlighted the following inequalities in mental and physical health conditions from both peer review publications and the analysis of the GP survey:

- depression, stress and anxiety
- cancer outcomes
- long-term neurological problems
- teenage conception
- asthma
- musculoskeletal issues

An individual's health and wellbeing is a result of the interplay between their personal interaction with their wider environment, the communities they live in and the political and legislative landscape, as well as individual factors such as genetics which work together to enable, or disable, healthier life choices. This complexity of interactions and the layering of inequalities, influence and opportunities for action, highlights the need to take a whole system approach to tackling health inequalities affecting LBWSW.

Diagram 1: Summary of the inequalities affecting lesbian and bisexual women's health and wellbeing



Inequalities in physical health outcomes

Inequalities in physical health outcomes are reflected at an individual level through the impact of disease, disability and death, and at a population level by increased use of health and social care services, and by population morbidity and mortality.

General health

There is consistent evidence from both peer review publications and grey literature that in general lesbian and bisexual women report worse general health than their heterosexual counterparts[2]. This inequality is present across the life course[4] and there is some evidence that it is even greater for bisexual women than for lesbian women[5].

The English GPPS study found that self-reported 'fair or poor' health status was 24.9% (95%CI 23.6 to 26.2) and 31.6% (95%CI 30.0 to 33.3) in lesbian and bisexual women respectively compared to 20.5% (95%CI 20.4 to 20.6) in heterosexual women.

International research[6,7] suggests higher proportions of lesbian and bisexual women have chronic health conditions and disabilities than their heterosexual counterparts. But there is conflicting international evidence[8,9] on higher rates of mortality among LBWSW.

Sexual and reproductive health

The evidence review highlighted an evidence base from both systematic reviews[10] and population surveys[14] of higher rates of some specific types of sexually transmitted infections, primarily bacterial vaginosis in women who have sex with women. However unlike for men who have sex with men, there is no routine publication of the prevalence of different sexually transmitted infections (STIs) in UK sexual minority women. Evidence from grey literature[11] suggests that LBWSW are less likely to have undertaken STI testing than heterosexual women, suggesting a potentially unmet need.

A systematic review[12] on the likelihood of lesbians and bisexual women becoming pregnant through heterosexual sex or through artificial insemination found that although overall there was a lower rate of pregnancy in lesbians and bisexual women in general population surveys[13,14] (around half of LBWSW are parents), but there was a statistically significant higher rate of pregnancy in adolescent lesbians and bisexual women. This was particularly found in bisexual adolescents where the rate was twice that found in the heterosexual adolescent cohorts.

Research into LBWSW's use of reproductive health services is limited, but multiple small scale studies in the UK highlight consistent barriers, especially around heteronormative assumptions in access across sexual health[15], maternity[16,17] and infertility treatment services[18]. This mirrors the international research[19,20,21] on LBWSW's uptake of sexual and reproductive health services, and suggests opportunities to improve access for this population[22].

This evidence highlights the need to consider sexual and reproductive health needs of LBWSW, particularly in local and national initiatives to address access to sexual health services, and conception, among others.

Cancer

Compared to heterosexual women, UK evidence shows that there may be a higher prevalence of certain types of cancer among lesbian and bisexual women; these include mesothelioma, oro-pharyngeal cancer, stomach cancer and endometrial cancer[23], this mirroring findings from the USA[24]. Across all cancers in the UK, prevalence of cancer in the last five years in lesbian and bisexual women when compared to heterosexual women[a] found no difference overall, which also reflects results from international research[25,26].

There is consistent evidence from three UK studies that LBWSW have lower participation in gendered cancer screening (ie breast[27] or cervical[28,29]), which mirrors international research[30].The research suggests this is linked to heteronormative assumptions about risk and eligibility among professionals and patients.

In terms of cancer outcomes there is one international study suggesting that lesbian and bisexual women have high rates of cancer mortality[8] but no UK studies.

There are consistent narratives from qualitative research into cancer care in the UK[31,32] which highlight a lack of recognition of the needs of LBWSW in healthcare professional education and clinical practice.

This suggests that there are opportunities for specific action to address LBWSW women's needs in cancer screening, cancer data collection, cancer care pathways and management approaches in England.

Cardiovascular disease (CVD)

The evidence base in relation to cardiovascular disease in LBWSW is varied, across a broad spectrum of research covering cardiometabolic risk[33,34], hypertension, heart disease[35], and cardiovascular events (eg stroke, heart attack). Very few demonstrate statistically significant differences, and systematic reviews[36] have been unable to provide a definitive answer about any relationship between sexual minority status and CVD.

However in light of the clustered increased prevalence of lifestyle risk factors in LBWSW, ie smoking, alcohol, weight issues, there is a clear need for more research into the prevalence, outcomes and impacts on cardiovascular health for LBWSW.

[a] Additional analysis done by Saunders et al for the evidence review. The adjusted prevalence adjusted percentage of survey responders expected to report each long term condition in their survey response, should they have the same age, gender, ethnicity and socio-economic composition

Diabetes

There was no statistically significant evidence of differences in prevalence of diabetes among LBWSW[36], but there was some UK evidence, from the GPPS, that bisexual women are more likely than heterosexual women to visit their GP in relation to Type 2 Diabetes[39]. Although the clustering of lifestyle risk factors for type 2 diabetes is less clear than for CVD, this is an area where further research is needed to understand the patterns of this disease in LBWSW.

Musculoskeletal conditions (MSK)

There is evidence from the analysis of the English GPPS of an increased prevalence of arthritis/long-term joint problems and long term back problems for both lesbian and bisexual women compared to heterosexual women. This mirrors the limited international evidence base[37,38] which found statistically significant differences for arthritis conditions.

The analysis of the GPPS suggests that although lesbian and bisexual women are experiencing more MSK conditions they are not necessarily accessing more support and services in primary care[39].

Table 1: English GPPS Analysis for MSK Conditions among Women

Sexual orientation	Lesbian	Bisexual	Heterosexual
Self-reported prevalence of arthritis or long-term joint problems	21.3% (95%CI 19.5 to 23.1)	23.6% (95%CI 21.3 to 26.0)	19.4% (95%CI 19.3 to 19.5)
Self-reported prevalence of long term back problems	14.4% (95%CI 12.9 to 15.9)	14.8% (95%CI 13.0 to 16.7)	11.3% (95%CI 11.2 to 11.4)

Further research is needed to explore the prevalence, and treatment pathways, for LBWSW in England, and particularly to explore the reasons behind the reported higher rates for bisexual women compared to heterosexual women.

Respiratory health

There is good evidence that lesbian and bisexual women have higher rates of asthma than heterosexual women[36] and this correlates with the findings from the English GPPS (14.6% (95%CI 13.3 to 16.0) and 14.3% (95%CI 12.7 to 15.9) in lesbian and bisexual women respectively compared to 11.4% (95%CI 11.3 to 11.5) in heterosexual women).

Currently, there is no research to explain why this increased prevalence might be the case, but in multiple studies it is found as a statistically significant finding for LBWSW. Further research is needed to explore why this difference in prevalence may exist and the implications for individuals and healthcare services.

Neurological health

There is a lack of evidence on neurological health of LBWSW. However, the bespoke analysis of the GPPS found a statistically significant increased self-reported prevalence of long-term neurological problems in lesbians. This was 2.9% (95%CI 2.2 to 3.5) and 3.6% (95%CI 2.7 to

4.6) in lesbian and bisexual women respectively compared to 1.9% (95%CI 1.8 to 1.9) in heterosexual women.

Further work is needed to explore the different types of neurological problems that affect LBWSW to better understand the opportunities to address these inequalities.

Access to health and social care services

Research into LBWSW experiences of healthcare frequently reports negative experiences which mirror the findings from the analysis of the English GPPS that lesbian and bisexual women have lower levels of trust, report more dissatisfaction with consultations and report poorer communication experiences with healthcare professionals than their heterosexual counterparts. This is also reflected in qualitative research[4] in the UK, and may be manifesting in the lower GP consultation rates among lesbian and bisexual women compared to heterosexual women[39].

Table 2: English GPPS analysis of no trust or confidence in the doctor[2] and odds ratio of GP utilisation[39] in women's sample

Sexual orientation	Lesbian	Bisexual	Heterosexual
Self-reported 'no trust or confidence in the doctor'	5.3% (95%CI 4.7 to 5.9)	5.3% (95%CI 4.6 to 6.0)	3.9% (95%CI 3.8 to 3.9)
Adjusted Odds ratio to visit GP in previous 3 months	0.81 (95%CI 0.76 to 0.86)	0.89 (95%CI 0.82 to 0.96)	1.0

When seeking health information-seeking, evidence from a systematic review[40] suggests that sexual minority young people (girls and boys) are more likely to turn to healthcare professionals for advice compared to heterosexual young people who were more likely to turn to their parents. This highlights the need for healthcare professionals to effectively recognise and meet these needs, and be able to provide culturally competent care for LBWSW. When disclosing sexual orientation to healthcare professionals, a systematic review[41] found a number of factors affected whether lesbians felt safe to do so. These included relevancy, health status, overall 'outness' and relationship status. Socio-demographic factors such as age, ethnicity and education did not have clear links with disclosure.

An analysis of primary care guidelines[42] found that the policy and practice guidelines landscape is supportive of LBWSW inclusion but the experiential evidence would suggest this has not translated into the actual clinical experience for LBWSW patients.

Inequalities in mental health prevalence

There is a consistent body of UK and international evidence that demonstrates the significantly higher rates of mental health inequalities affecting LBWSW. Since King et al's[43] systematic review of mental disorder, suicide and self-harm there have been several more reviews and systematic reviews published[44,45,46,47,48] but none of them report results separately for women. Therefore, the 2008 numerical estimates of higher mental health problems in sexual minority women compared to heterosexuals remain the best available review.

Population surveys[2,14,49,50,51] demonstrate consistently higher levels of mental health issues among lesbian and bisexual women compared to heterosexual women, and some evidence of worse mental health among bisexual women compared to lesbian women.

To date there has been limited investigation of lesbian and bisexual women's experiences of mental health services[52,53,54]. However, across the existing studies there are consistently negative experiences, and perceptions of significant barriers related to sexual orientation. In most studies bisexual women have been found to experience poorer mental health than lesbian women. This difference is an area where more research is needed to better understand the differentiation in bisexual and lesbian women's experiences and risk factors for common mental health issues, as well as their therapy outcome disparities[68].

Exploration of psychiatrists' attitudes to LGB patients[55] highlights a significant proportion have actively engaged in treatment with an individual with the aim to 'change or reduce their same sex attraction' despite widespread discrediting and longstanding condemnation of conversion or reparative approaches to treatment by national and international psychological and psychiatric professional bodies[56]. This finding comes 45 years after the removal of homosexuality from the American DSM, and yet highlights there is still further work needed. In the UK, Stonewall are working with the NHS and counselling and psychotherapy bodies on a Memorandum of Understanding that condemns conversion therapy and highlights its dangers.

Consistent with other explorations of LGBT health service experiences[57], there is a common perception that staff are not adequately trained to support LBWSW's needs with respect and dignity. There continues to be descriptions of direct and indirect discrimination[58,59] despite significant progress in equality legislation.

There is a consistent evidence base which demonstrates significant mental health inequalities affecting LBWSW and evidence of a lack of awareness and support from mental health services, suggesting a clear opportunity for action.

Common mental health disorders

Both UK and international research has demonstrated higher prevalence of stress, anxiety and depression among lesbian and bisexual women.

Table 3 presents the findings from two large scale studies, one meta-analysis and one from analysis of the GP patient survey, highlight the inequalities for LBWSW compared to heterosexual women and within the group the increased inequalities for bisexual women.

Table 3: Mental health inequalities from two UK papers analysing population studies

Sexual orientation / Indicator	Lesbian women	Bisexual women	Heterosexual women
Odds ratios of poor mental health (anxious or depressed as measured by GHQ-12 or EQ5D)[51] from meta-analysis of 12 UK population studies	1.38 (95%CI 1.07 to 1.78)	2.23 (95%CI 1.83 to 2.73)	1.0 (baseline comparison for odds ratio)
Weighted percentages reporting a longstanding psychological or emotional condition from English GPPS[2]	12.3% (95%CI 11.4 to 13.2)	18.8% (95%CI 17.1 to 20.5)	6.0% (95%CI 5.9 to 6.0)

Severe and enduring mental health disorders

The best evidence review did not identify specific research into the prevalence of severe and enduring mental health disorders, aside from self-harm and eating disorders, where there is evidence of increased prevalence for LBWSW.

To date the analysis of the sexual orientation cohorts in the National Mental Health and Wellbeing Survey/Adult Psychiatric Morbidity Survey have presented data for lesbian and bisexual women combined with that of gay and bisexual men[50] which makes it hard to interpret the significance of any findings for LBWSW.

Further work is needed to explore differences between LBWSW's prevalence of severe and enduring mental health disorders and that of heterosexual women, and their experiences of services. Mental health services should be actively considering the needs of LBWSW among their client group.

Suicide

Although there is little empirical data available on completed suicide by sexual orientation in the UK, there is consistent evidence from international studies[60] and population surveys of increased suicide ideation, and self-harm behaviour among sexual minority groups. However, there is very limited exploration of gender differences within this group.

King et al's[61] systematic review reported a lifetime prevalence of suicidal ideation relative risk for LBWSW of 1.75 to 2.10 and the 12 month prevalence of suicide attempts for women 1.94 to 2.46.

A systematic review of bisexuality and suicide[62] found that suicide attempts were higher among bisexual people; it is worth highlighting that much of the evidence base is from US adolescent studies and little is known about lifetime LBWSW suicide risk. The review included one American study that demonstrated that bisexual women were more likely to report prior suicide events than lesbian women, and that both groups report higher levels of suicide attempts and suicidal ideation than heterosexual women. This pattern is also reflected in UK Prescription for Change Survey findings[124].

There is a clear need for more and better data, as well as local and national suicide prevention initiatives to consider the needs of bisexual and lesbian women and engage actively in supporting prevention with these groups.

Health behaviours

The connection between many behavioural risk factors and health outcomes is clear but complex, as an individuals' health behaviours are a result of the interaction between the individual's personal, social and cultural situation, and their biological and genetic risk factors. There is some evidence of a correlation between experiences of discrimination, stress and health risk behaviours such as smoking and substance misuse. Lesbian and bisexual women may well face compound effects through their gender and sexual orientation.

In general, most research into sexual orientation and health behaviours has bundled together lesbian women, gay men and bisexual women and men in the analysis. There is a growing body of research where lesbian and bisexual women's combined experiences are analysed separately, although it remains relatively rare for lesbian and bisexual women to be analysed as independent groups.

Smoking

There is both UK[63] and international research that demonstrates higher levels of smoking among lesbian women compared to bisexual and heterosexual women. These findings are mirrored in UK population surveys and longitudinal cohort studies[64].

Table 4: Data on current smoking status of women by self-identified sexual orientation from the Integrated Household Survey (2013)

Sexual orientation	Lesbian women	Bisexual women	Heterosexual women
Current smoking status	30.7% (95%CI 23.3-38.2)	21.9% (95%CI 12.9 to 30.9)	17.3% (95%CI 16.6 to 17.9)

Conversely, there is some published evidence[65] that smoking rates among bisexual women are higher than for lesbian women but the sample sizes in most studies mean these differences are not statistically significant.

Overall, international research demonstrates that smoking is more common among lesbian and bisexual young people, and across the life course, than their heterosexual counterparts [66,67,68,69,70 ,71,72,73]. Research suggests that higher smoking rates and stress can be linked to discrimination and marginalisation[74,75,76,77,78,79,80,81] as well as with wider determinants of health[82].

Public Health England has published local authority data on smoking rates by sexual orientation since 2013. This suggests that, although the overall rate of smoking in adults has fallen over the last three years, there has been an increase in rates of smoking among bisexuals. Although there has been some fall in the rate in lesbian women it remains significantly higher than that in the general population and heterosexual women.

Alcohol

UK evidence[64] suggests that lesbian and bisexual women are more likely to have hazardous drinking patterns than heterosexual women, and that this behaviour is often established in adolescence[83]. International evidence is more varied, with more evidence of hazardous drinking in US studies[84,85,86] than in European studies, which may reflect cultural differences in lesbian and bisexual women's social context. Nonetheless, there is consistent evidence demonstrating that alcohol misuse is a more significant issue for lesbian and bisexual women[87] than heterosexual women. The social narrative around women's drinking is complex and has evolved across different generations, there is evidence[88,89,90,91,92,93] that highlights that there are different social norms regarding alcohol use for lesbians and bisexual women than for heterosexual women.

Evidence for the reasons of hazardous drinking for LBWSW are varied, but include experiences of stress[94,95,96,97] , biphobia[98], discrimination [99,100], and the community context of sexual minorities[101,102,103] but this is more evident for sexual minority men than women.

There is limited research[104] into effective interventions for hazardous drinking among LBWSW and into the impacts of hazardous and harmful drinking among lesbian and bisexual women, however there is some research[105] from the USA which highlights a connection to risky sexual behaviours and the co-occurrence of mental health conditions[106].

This evidence highlights the need for alcohol strategies and interventions to explicitly consider the needs of LBWSW. It also refers to the importance of sexual health services working in this area to also be mindful of this population.

Drugs

Historically the focus of substance misuse have been primarily directed towards gay and bisexual men linked to risky sexual behaviour (Chemsex). There has been limited attention or analysis of drug use amongst LBWSW.

Surveys of LGB people in the UK[107] suggest that recreational drug use is higher among lesbians than in bisexual women and across the evidence base there are consistent findings that both groups use drugs more than heterosexual women[108]. This is consistent with international research[109]. Further evidence suggests that patterns of drug use are different for lesbian and bisexual women, especially in relation to those injecting drugs, and their age of injecting initiation[110], and there is some research specifically into prescription medication abuse in this group[111,112].

There is very little exploration in the research of specific interventional approaches to reduce drug misuse among lesbian or bisexual women[113]. However there is a consistent narrative that culturally competent service provision[114] and community interventions that shift the social narrative towards inclusion, such as school gay/straight alliances[115], may have an impact.

Physical inactivity

Physical inactivity contributes to the risk of over 20 different diseases as well as being a significant risk factor for preventable mortality. Sexual orientation data was routinely collected in the Active People Survey which provides data for local authorities between the Health Survey for England national data collection (Table 5). The survey data suggests that lesbian and bisexual women are more active than heterosexual women and more lesbian and bisexual women are achieving the chief medical officer's recommendation of at least 150 minutes of moderate physical activity in a week.

Table 5: Active People Survey Results for Female Participants[b]

Indicator	2012-13	2013-14	2014-15		2012-13	2013-14	2014-15
	Inactive (<30mins of moderate physical activity a week)				Active (>150mins of moderate physical activity a week)		
Heterosexual	31.6%	31.2%	32.1%		50.5%	51.3%	51.0%
Lesbian	22.2%	16.0%	21.0%		61.7%	67.1%	60.1%
Bisexual	21.1%	24.3%	21.3%		68.4%	62.3%	70.3%
Other	45.9%	50.2%	53.1%		42.3%	34.1%	34.3%

The rapid evidence review found limited published research in this area and diverse findings from population surveys in the US[116,117,118] and Korea[119]. Where gender and sexual orientation were both considered in the analysis lesbian and bisexual women in general experienced fewer inequalities in physical activity than gay and bisexual men compared to their heterosexual counterparts.

Excess weight and underweight issues

UK-based research suggests that lesbian and bisexual women have similar levels of excess weight and underweight issues as heterosexual women. However, the international evidence base is more varied.

Sexual orientation data is routinely collected in the Active People Survey (2012-2015) which provides data for local authorities. The survey included self-reported weight. (Table 6). Data on underweight and morbidly obese women by sexual orientation was not reported due to small numbers. This data suggests that lesbian women have slightly higher levels of excess weight and that bisexual women have higher levels of healthy weight than heterosexual women.

[b] Data source: Sport England Active People Interactive

Table 6: Active People Survey Results for Female Participants[c]

Indicator	2012-13	2013-14	2014-15		2012-13	2013-14	2014-15
	Healthy weight [BMI range 18.5 - 24.9 kg/m≤]				Overweight & Obese [BMI range 25 - 39.9 kg/m≤]		
Heterosexual	53.0%	54.5%	54.0%		42.2%	40.3%	41.1%
Lesbian	46.80%	51.80%	48.80%		47.10%	42.50%	44.80%
Bisexual	60.30%	55.30%	62.20%		17.00%*	24.10%*	*

Across the international research the majority of studies found that sexual minority women have a higher body weight or body mass index compared to heterosexual women and this was consistent across the life course[117,120,121].

There are consistent research findings highlighting higher rates of eating disorders among lesbian and bisexual women, especially in studies of young people[122]. These resonate with the findings in the UK Prescription for Change survey[123,124] which found that 19.2% of lesbian women and 30.5% of bisexual women reported an eating disorder, of which the majority was bulimia (51.1% in lesbians and 55.6% in bisexual women) followed by anorexia (34.1% and 31.3% respectively).

Weight is an area where there has been some qualitative research into both perceptions and experiences of lesbian and bisexual women[125,126,127,128] and into service providers[129]. These highlight the need for culturally competent[130] approaches to interventions and the need to better understand the specific context of weight issues for LBWSW.

Diet and nutrition

Diet and nutrition are fundamental building blocks of health and wellbeing, and the Eatwell Guide defines the government recommendations on achieving a healthy, balanced diet. The Active People Survey suggests that lesbian and bisexual women have similar intake of fruit and vegetables as heterosexual women and there is no specific evidence to suggest otherwise.

The rapid evidence review found extremely limited specific research exploring lesbian or bisexual women's nutrition and diet, although a position statement by the American Society for Nutrition Education and Behavior highlighted the need for more exploration of diet by sexual orientation[131]. Further research is required to understand diet and nutritional behaviour for LBWSW and how this might correlate to weight issues.

[c] Data source: Sport England Active People Interactive *represents where data has not been reported due to small numbers (no data was reported in any year on obese bisexual women and in 14/15 data was suppressed for overweight bisexual women.

Wider determinants

The wider determinants of health underpin individual and population health. Fundamentally, having an education, housing and employment are essential to achieving good health.

Health and work

There is a clear connection between health and work at national, local, community and individual level. Being in 'safe and good work' can support and improve individual health and wellbeing, whilst being unemployed can have negative impacts on health. Ill health can be a significant barrier to achieving an individual's employment potential. The evidence base of the negative impacts of discrimination in the workplace is reflected in a range of population surveys in both the UK and internationally[132].

There is limited peer-reviewed published research into either LGBT or LBWSW-specific experiences of employment or unemployment, but what there is suggests LBWSW can experience significant hostility in the workplace[133,134] and that this has negative impacts on their health and wellbeing[135,136] and family life[137].

There are two European studies[138,139] that have specifically highlighted bisexual women having worse experiences in the workplace than lesbians or gay or bisexual men, but further larger scale research is needed to explore this. There is also one longitudinal study that suggests that same sex attracted young women have lower levels of occupational attainment than their heterosexual counterparts[140], but further work is need to validate and explore these findings. There is some published evidence on how to mitigate discrimination in the workplace. These papers[141,142,143,144,145,146,147] highlight the key role of employers in creating inclusive and supportive workplaces through policies and leadership as impactful. Similarly, there is limited research about the economic resilience or capacity of LBWSW. What research exists provides conflicting international evidence into whether LBWSW experience economic inequalities, and there is no published evidence or analysis on this in a UK context.

Education

An individual's educational attainment is an important wider determinant of health. It underpins employment potential and economic capacity, as well as health literacy, and impacts on social connection and access/uptake of health services.

There is very little published research into the education attainment of LGBT individuals, or LBWSW specifically, and the majority of research focuses on LGBT (without disaggregation) young people's experiences of discrimination in schools and higher educational settings, and perspectives of educational staff. Research in the UK has consistently aligned with international evidence that LGBT students experience

significant discrimination, bullying and harassment in educational settings. There is little exploration of whether this is different, or not, for LBWSW.

Further work is needed to explore whether there are unique educational attainment issues or different experiences of educational setting based discrimination, bullying or harassment for LBWSW.

Housing and homelessness

There is no routine publication of national data on housing or homelessness by sexual orientation and gender in the UK, despite a growing evidence base of issues and inequalities, particularly at the two ends of the life course ie youth homelessness and older adult housing care.

Very little research into homelessness or housing issues has explored gender and sexual orientation but where gender has been considered very little significant difference has been found for lesbian and bisexual women compared to gay and bisexual men.

Crime and violence

Experiences of violence, crime, abuse or coercion can be damaging to both mental and physical health at both an individual and community level. The majority of available research focuses on individual experiences of crime and violence which are well known to suffer from under-reporting.

It is also important to recognise the impacts of high profile homophobic/biphobic/transphobic attacks, such as the Pulse nightclub attack, which go beyond those directly involved[148].This is an area where further work is needed, especially for LBWSW, as the majority of high-profile hate crime has been target at gay and bisexual men's venues or trans individuals.

Misogynist hate crime against women is not recorded in the UK. There is consistent evidence from population surveys[149] and incident reporting that hate crime related to sexual orientation and gender identity remain significant issues in England.

There is consistent international evidence demonstrating increased rates of intimate partner violence[150,151,152,153 , 154]sexual coercion[155] and abuse affecting bisexual women compared to both lesbian and heterosexual women. There is also some international evidence[156] of bias in interpretation of violence in the context of same sex relationships. Furthermore, there is international evidence[157,158] that service providers lack training and confidence to support the needs of LBWSW affected by violence, abuse and coercion, this is reinforced by UK[159] and international evidence[160] of barriers to seeking health for LBWSW affected by abuse and violence.

Limitations

This evidence consolidation is limited by the availability of the published evidence specifically reporting on LBWSW. The majority of published research is based on cross-sectional surveys with the inherent limitations associated with this type of study design. Much of the published research have small sample sizes, and unlikely to effectively disaggregate data consistently by sexual orientation.

The best evidence review and rapid evidence reviews did not explicitly draw systematically on grey literature, such as Prescription for Change (2008) remains the largest targeted population survey of lesbian and bisexual women specifically in England, and excluded some forms of publications such as conference abstracts which may have further enriched the understanding.

The best evidence review focused primarily on systematic reviews and although it did explore the papers considered by these reviews this may have excluded individual papers excluded by these reviews.

There was very limited exploration of intersectionality of ethnicity[156,161] or disability and lesbian or bisexual identity and this was mostly only in non-UK settings. However, this limited evidence base does highlight more significant inequalities affecting these groups compared to white or non-disabled LBWSW counterparts.

The majority of published research on LBWSW is based on populations outside the UK and there is little exploration of the transferability of these findings to a UK context where the legislative and cultural context of being LBWSW may be different.

Opportunities for action

There are a range of opportunities which could help accelerate activity at national and local levels to close the inequality gaps for LBWSW and improve their health and wellbeing. These include the following:

There is a significant gap in the evidence base for lesbian and bisexual women, and virtually no exploration of women who have sex with women. There is a clear opportunity for **researchers, and research funders, to be more precise in the analysis gender and sexual orientation and where possible to avoid combining LGB samples** in reporting as this undervalues the needs of LBWSW. It has been a decade since Prescription for Change which was the largest survey of lesbian and bisexual women in the UK and this could be repeated with a stronger emphasis on peer review publication of the findings to add to the UK evidence base.

In line with aspirations of Health Education England (HEE), the General Medical Council (GMC), the Royal College of Nursing (RCN) and the NHS Charter for an inclusive and diverse health service in England, there is an opportunity to ensure that all healthcare professionals have a good understanding of LBWSW's health issues through a **coherent and structured embedded approach to sex, gender and sexual orientation across undergraduate and post-graduate healthcare professional education**.

The roll out of the NHS Sexual Orientation Monitoring Information Standard presents an excellent opportunity for a step change in the approach to provision of health services for LBWSW. There is already evidence from a study of mental health treatment outcomes in South London that utilising routinely-collected sexual orientation data can reveal health service disparities for lesbian and bisexual women. There is potential for NHS England and Local Authorities to work in partnership to **maximise the collateral benefits of the National Sexual Orientation Information Standard implementation** over the next few years to review provision, training and community engagement with LBWSW to ensure their needs are met at a local level.

The evidence shows some specific health conditions which have increased prevalence among lesbian and bisexual adolescents and adult women and this provides an opportunity for **specific consideration of their needs in the care pathway planning and integrated care models** being developed by the NHS England.

The significant burden of violence, especially sexual violence, demonstrates the opportunity for action through the prism of the Violence Against Women and Girls agenda as a specific thread at national and local level, especially around ensuring that **domestic violence and abuse support and early intervention services are accessible for lesbian and bisexual women** and ready and able to meet their unique needs.

There is consistent evidence of inequalities affecting LBWSW young women, including increased risk of teenage conception and worse mental health. This highlights the opportunity for local and national frameworks to support children and young people's health to **explicitly consider the needs of LBWSW young people, especially within the context of gender-specific service provision and intervention**.

Although there is an increasing research evidence base exploring LBWSW's health it remains dominated by American research. There is an opportunity for more UK based research and **better exploration of the context of LBWSW inequalities, especially around smoking, alcohol and drugs, and the interaction with wider determinants of health and community assets.**

PHE contribution

Public Health England has worked with partners across a range of topic areas and programmes to take action to reduce health inequalities affecting lesbian, gay, bisexual and trans communities in England.

This has included:

- published Sexual Orientation Prevalence report
- published, where data is available, public health outcome framework indicators by sexual orientation (eg smoking prevalence)
- published the RCN LGB and Trans youth suicide prevention toolkits
- co-produced RCGP e-learning modules on LGB health inequalities
- specific focus on LGBT smoking in implementation collateral for national social marketing campaign
- specific inclusion of lesbian and bisexual women's issues in development of reproductive health consensus statement
- specific work with the LGBT Foundation to promote uptake of cervical cancer screening among lesbian and bisexual women
- supporting NHS England work to develop and implement the National Sexual Orientation Information Standard
- work with the National LGBT Partnership to:
    - develop a whole system approach to tackling LGBT health inequalities in two pilot local authorities
    - develop e-learning materials on health inequalities affecting LGBT communities
    - develop trans healthy living resources

Glossary

Ally: A person who fights for and supports others in their fight for equality, despite not necessarily being affected themselves eg a straight and/or cisgender person who believes in and fights for equality for LGBT people.

Bisexuality: Refers to a person of any gender who experiences romantic and/or sexual attraction to people of more than one gender.

Biphobia: Discrimination against and/or fear or dislike of bisexual people (including those perceived to be bisexual) or bisexuality. Includes the perpetuation of negative myths and stereotypes through jokes and/or through personal thoughts about bisexual people.

Cis/cisgender: A person whose gender aligns with the sex they were assigned at birth. eg a person who was assigned female at birth and who identifies as a woman.

Gay: Refers to a man who experiences romantic and/or sexual attraction to other men. Often ‘gay’ is used by women who are attracted to women too.

Gender: Often expressed in terms of masculinity and femininity, gender is largely culturally determined, based on the sex assigned at birth.

Heterosexual: A person who is attracted to people of a different gender to their own eg a man who is attracted to women

Heteronormative: The assumption that everyone is heterosexual, and that heterosexuality is superior. An emphasis on heterosexual being ‘the norm’ and a valued position in society. The media often reinforces heteronormativity through images used or the way characters are portrayed.

Homophobia: Discrimination against and/or fear or dislike of lesbian and gay people (including those perceived to be gay or lesbian) and homosexuality. This includes the perpetuation of negative myths and stereotypes through jokes and/or through personal thoughts about lesbian and gay people.

Homosexuality: a clinical term, not really used by young people to describe themselves

Lesbian: A woman who experiences romantic and/or sexual attraction to other women.

Out: LGBT people living openly and telling people about their sexual orientation and/or gender identity. This is a process; it is not something that just happens on one occasion. Some people will be out in some places and to some people but not others.

Queer: sometimes used as an offensive term to describe LGBT people. It can also be used to reject LGB categories of identity and is often associated with sexual and gender identity fluidity.

Sex: People are assigned a sex at birth, based on sex characteristics (genitalia). A person may be assigned ‘male’, ‘female’ or ‘intersex’. This does not necessarily reflect how a person will identify or feel about themselves.

Sexual orientation: refers to being romantically or sexually attracted to people of a specific gender. Sexual orientation and gender identity are separate, distinct parts of our overall identity. Although a young person may not yet be aware of their sexual orientation, they usually have a strong sense of their gender identity.

Trans: An umbrella term to describe people gender is not the same as, or does not sit comfortably with, the sex they were assigned at birth. Trans people may describe themselves using one or more of a wide variety of terms – including (but not limited to) transgender, transsexual, gender-queer, genderfluid, non-binary, gender variant, cross-dresser, genderless, agender, transman, transwoman, trans masculine, trans feminine and neutrois.

Women who have sex with Women: This is an epidemiological term used to describe women who have sex with women based on their reported sexual behaviour only and does not define or describe their sexual orientation. ie a women may have sex with another women but not self-identify as lesbian or bisexual.

Annex: Rapid review search summary

Database search

NHS Athens access to the Ovid Search Database
(Social Policy & Practice, PsychInfo, Ovid Medline, Global Health Archive, HMIC, Ovid Emcare, Embase)
The rapid review focused on publications in the last 5 years (2012-2017)
Search Limits: Human Research, English publications

Search terms

The searches were conducted using a common string of 'Lesbian OR Bisexual Women OR Sexual Orientation OR LGB*' AND the relevant topic term. Eg (Lesbian OR Bisexual women OR Sexual orientation OR LGB*) AND (smoking OR tobacco).

Exclusions criteria: Publication type (book chapters, conference abstracts)

Papers were retrieved by PHE Libraries service and reviewed by a single reviewer between November 2017 and January 2018.

	Drugs	Smoking	Alcohol	Weight Issues	Work Issues	Housing/ Homelessness	Physical activity	Violence, Crime or Abuse	Diet & Nutrition
Search terms	drug* OR substance misuse	smoking OR tobacco	Alcohol OR drinking	obes* OR weight OR overweight	work* OR unemploy* OR employment OR occupation* OR job	hous* OR home*	physical activity OR exercise OR sport	violence OR abuse OR crime OR coercion	diet OR nutrition OR fat OR salt OR vitamin OR vegetable* OR carbohydrate
Papers									
Identified	36	62	86	22	255	67	18	128	9
Excluded	14	9	43	11	150	39	7	62	4
Full text not found	5	13	15	1	74	13	0	29	2
Full text reviewed	17	40	28	10	31	15	11	37	3

Annex: Best evidence review methodology summary

Methods

A protocol was developed and registered in the Prospero database (CRD42016050299). The inclusion criteria were any published or semi-published quantitative or qualitative primary research or systematic reviews from 2010 onwards in sexual minority women (lesbians, bisexual women, women who have sex with women (WSW) and women who have sex with men and women (WSMW) or other non-defined non-heterosexual women), particularly from the UK. They could experience a wide range of health topics, including prevalence, health behaviours, access to healthcare, material determinants of health and psychosocial factors compared to similar exposure in heterosexual women. Also included were any interventions in women where results were given separately by sexual orientation. Any relevant health and social care outcomes were included. Reporting was in order of priority of UK research then reviews or systematic reviews. If there were neither of these in any specific topic, then research relevant to the UK was reported instead. Countries relevant to the UK included Australia, Canada, New Zealand, USA and Western European countries. For the intervention review, studies would need to be comparative, for example randomised controlled trials, case control studies or comparative case series.

Database searches were conducted in April 2015 in the Cochrane Library databases, Medline, Embase, CINAHL, PsycINFO, Social Policy and Practice. Update searches were conducted in Medline, Embase, CINAHL, PsycINFO, Web of Science, CAB abstracts and Cochrane Library databases in December 2016. Search terms included lesbian, bisexual, sexual minority and included MESH terms and text words. In addition to database searches, a number of other avenues were explored to find relevant research such as checking reference lists and indexes of LGBT-specific academic journals.

All citations were summarised in Microsoft Excel and pdfs and hard copies of references were obtained where required. Two reviewers (CM and AM) checked study eligibility. One independently extracted data from studies into the report and numerical results were checked by another reviewer (MS), with disagreements resolved through discussion. Quality of included studies was assessed using study designs, recruitment methods, size of sample and whether they were published or not. As most included quantitative studies were analyses of cross-sectional surveys, no established quality checklists were thought to be appropriate. For quantitative research, characteristics and results of all the included studies were described and analysis was through narrative synthesis and tabulation if appropriate. For qualitative research, main themes were analysed, according to general principles of qualitative systematic reviewing.

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