

1 ***Barriers and facilitators to accessing sexual health services for older LGBTQIA+ adults:***  
2 ***A global scoping review and qualitative evidence synthesis***

3

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23

24 **ABSTRACT**

25 **Background**

26 The number of older adults identifying as lesbian, gay, bisexual, transgender and other sexual  
27 and gender diverse identities (LGBTQIA+) continues to grow as populations age and social  
28 environments become more accepting. This study uses a global evidence synthesis to  
29 understand perceived barriers and facilitators to sexual healthcare service access globally for  
30 older LGBTQIA+ adults.

31

32 **Methods**

33 We used a scoping review and qualitative evidence synthesis. Embase, PubMed and PsycInfo  
34 were searched with terms related to LGBTQIA+ populations, adults aged 45 years old, and  
35 sexual healthcare. We used the Cochrane Handbook and the review protocol was registered.  
36 Primary and secondary textual data were coded and grouped into themes using PRISMA-  
37 SCR and the Minority Stress Model. The certainty of review findings was assessed using the  
38 GRADE-CERQual approach.

39

40 **Results**

41 The scoping review identified 19 studies and 15 were included in the qualitative evidence  
42 synthesis. All studies were from high-income countries. Heterocentricity and male-centricity of  
43 sexual health care services contributed to feelings of exclusion for older LGBTQIA+ adults (13  
44 studies, moderate certainty of evidence). Both anticipated and enacted stigma from healthcare  
45 providers resulted in older LGBTQIA+ adults, especially those with chronic conditions,  
46 avoiding health services (seven studies each, low certainty). Older LGBTQIA+ adults have  
47 unique sexual health needs and may feel their age empowers them to access appropriate  
48 care (four studies, low certainty).

49

50 **Conclusion**

51 This review highlights the need for additional research and interventions to improve sexual  
52 health services for older LGBTQIA+ adults. Practical strategies to make sexual health less  
53 heterocentric (e.g., gender neutral signage) may increase uptake of essential sexual health  
54 services.

55

56

57 **INTRODUCTION**

58

59 The percentage of individuals identifying as lesbian, gay, bisexual, transgender, intersex,  
60 asexual, and other sexual and gender diverse identities (LGBTQIA+) has increased over the  
61 past 50 years across the globe [1, 2]. LGBTQIA+ people have unique sexual health needs and  
62 experiences, which are often influenced by lifetime discrimination, informal support networks,  
63 and sexual behaviors which fall outside of hegemonic heteronormativity. This highlights the  
64 importance of visibility and accommodation for older LGBTQIA+ adults in all health services,  
65 especially sexual health services.

66

67 Older adults, or adults aged 45 years old or older, are often neglected in sexual health  
68 services [3]. There is also a paucity in disaggregated data for LGBTQIA+ adults in this age  
69 range and many are excluded from studies. Menopause and related biological changes at  
70 mid-life provide a rationale for this age cutoff. Older adults are likely to face barriers in  
71 accessing sexual healthcare given that many sexual health services do not focus on this  
72 subpopulation [4-7]. Older adults are more likely than younger adults to be affected by chronic  
73 illness, disability, or co-morbidities which have consequences for sexuality and sexual function  
74 [4, 8-11]. The overall prevalence of HIV among people aged 50 and above doubled in the last  
75 decade [6, 12]. Older LGBTQIA+ adults are more likely to live with multiple diseases than  
76 older cis-gendered and heterosexual adults [13-15]. Additionally, sexual dysfunction is more  
77 likely among older adults [8, 16]. Sexual healthcare for older LGBTQIA+ adults may be  
78 accessed through general practitioners (GPs) and specialist healthcare providers in lieu of  
79 sexual health physicians. Therefore, it is pertinent that these such healthcare providers are  
80 aware of the sexual healthcare needs and priorities of older LGBTQIA+ adults in order to  
81 provide well-rounded care.

82

83 The historic pathologizing of advanced age in sexual health has led to increased hesitation  
84 seeking professional help compared to younger cis-gendered and/or heterosexual people [17,  
85 18]. Additional factors such as inclusion in minoritized ethnic and religious communities may  
86 lead to further barriers to access to care [19]. Sexual health research has historically focused  
87 on youth and fewer sexual health programs target older adults, yet older adults have diverse  
88 sexual identities and many continue vibrant sexual lives [20]. Given that older LGBTQIA+  
89 adults are likely to have familiar, longitudinal relationships with healthcare providers and to  
90 have experienced compounding microaggressions and heteronormativity in during interactions  
91 with these providers, they provide an especially important perspective when considering the  
92 inclusivity of sexual healthcare [21, 22].

93

94 Few research studies focus on older LGBTQIA populations [23-26]. There are limited  
95 quantitative data that have rich, nuanced details about their sexual lives [27]. A limited number  
96 of studies consider barriers and facilitators to sexual health care and even fewer discuss how  
97 morbidities and disabilities affect the sexual health of sexual and gender diverse older people.  
98 Qualitative analyses allow for direct and personal narratives about older LGBTQIA+ adults'  
99 experienced barriers and facilitators. A qualitative evidence synthesis can capture social  
100 determinants which may affect service uptake. Qualitative evidence syntheses have been  
101 used by the WHO and other organizations to inform guideline development [28].

102

103 The purpose of this scoping review was to determine barriers and facilitators in accessing  
104 sexual healthcare services for older LGBTQIA+ adults using a global scoping review and  
105 qualitative evidence synthesis.

106

107 **METHODS**

108

109 ***Search strategy and selection criteria***

110 We used a scoping review method for the following reasons: few research studies focused on  
111 this specific topic; there was substantial heterogeneity in key operational definitions;  
112 identifying research gaps in the literature may be well addressed through a scoping review  
113 [29]. We used a qualitative evidence synthesis method to lend a richer, more nuanced  
114 interpretation of qualitative results to understand the current situation and to better inform our  
115 recommendations [28].

116

117 This scoping review used a framework as developed by Arksey and O'Malley to guide the  
118 methodological approach and structure [30, 31]. This study used an adapted Minority Stress  
119 Model and the Patient-Centered Access to Care framework to map the results from the  
120 qualitative evidence synthesis [32, 33]. The Minority Stress Model has been previously used in  
121 studies related to LGBTQIA+ adults' sexual health [34]. The Patient-Centered Access to Care  
122 framework has previously been used in sexual health research focused on individuals with  
123 disabilities [35]. As such, these frameworks were selected because they provide an  
124 established and inclusive lens through which we can identify individual, provider and system-  
125 level barriers to sexual healthcare access for older LGBTQIA+ adults.

126

127 On June 10, 2021, PsycINFO, Medline and Embase databases were searched using the  
128 search terms with assistance from a public health librarian (Appendix 1). Synonyms,  
129 truncations, acronyms, subject headings, and Boolean operators (AND/OR) were used to  
130 combine the search terms. Relevant terms varied between databases given their individual  
131 search mechanisms. Additionally, relevant articles were searched manually from references.

132

133 All potential studies were exported into EndNote citation software, removing duplicates and  
134 were screened for inclusion by one author following PRISMA-SCR guidance. Studies were  
135 included if they discussed older adults' views on the sexual health care, the study population  
136 was older LGBTQIA+ adults as defined by individuals aged 45 and above or sub-analyses  
137 were completed for this age group, and they used qualitative methods or ~~was~~ a review of  
138 qualitative literature. Studies were excluded if they did not include a main or sub-analysis for  
139 older LGBTQIA+ adults, did not address sexual healthcare access or perceptions of  
140 experiences, or the primary analysis used quantitative data. There were no time or geographic  
141 restrictions. References from studies identified by the search strategy as well as the manual  
142 search were assessed and those meeting the inclusion criteria were included as a part of this  
143 review. Grey literature was also included.

144

#### 145 ***Data analysis***

146 For the thematic analysis, one researcher thoroughly read each of the included articles. An  
147 initial list of themes was discussed with two co-authors and finalized. Using the Minority Stress  
148 Model, deductive themes of heterocentricity, stigma, and disclosure were identified. Text was  
149 pulled from the included articles if it addressed one of these deductively set themes. Given the  
150 Minority Stress Model did not adequately explain all themes addressed in the selected  
151 studies, inductive coding methods were used. During multiple reads of the full included texts,  
152 one researcher pulled quotes and concepts related to barriers and facilitators of sexual  
153 healthcare access and, if similar, subsequently grouped together. Our inductive analysis  
154 captured themes of male-centricity, provider characteristics, increased security in older age  
155 and the unique needs of older LGBTQIA+ adults. Text fitting these inductively determined

156 themes was initially pulled from the included articles when similar ideas were found in various  
157 articles and later codified into coherent themes.

158

159 Confidence in the Evidence from Reviews of Qualitative Research approach (GRADE-  
160 CERQual) was used to assign grades of “Very low confidence,” “Low confidence,” “Moderate  
161 confidence,” and “High confidence” to thematic findings (Table 5) [36]. CERQual is  
162 recommended by Cochrane and has been used by the World Health Organization and other  
163 organizations to synthesize qualitative data for guideline development.

164

## 165 **RESULTS**

166

167 A total of 946 citations were identified. 54 duplicates and 863 unrelated citations were  
168 excluded. A total of 19 studies were selected, including four literature reviews, thirteen  
169 qualitative studies and two mixed method studies of which only the qualitative evidence was  
170 analyzed (Figure 1). A total of 15 studies were included in the qualitative evidence synthesis.  
171 Details (lead author, study design, methods, location, population, and age range) are in Table  
172 1. All included studies were conducted in high-income settings including the United States  
173 (eight studies), the United Kingdom (five studies), Canada (three studies), Australia (two  
174 studies), New Zealand (two studies), Ireland (one study), and Sweden (one study). Seventeen  
175 studies focused on cis-gendered individuals, two included transgender people and none  
176 looked specifically at trans people. Ten studies analyzed gay and/or bisexual men or men who  
177 have sex with men (MSM) and four studies looked solely at lesbian and/or bisexual.  
178 Publication year of the articles included ranged from 2006 to 2020. Included studies captured  
179 the experiences of older adults seeking prostate cancer treatment (six studies), breast cancer  
180 treatment (one study), HIV-related care (three studies), primary care (three studies), sexual



181 health clinics (two studies) as well as general healthcare experiences (six studies). None of  
182 the included studies captured the perspectives of sexual health specialists, with older  
183 LGBTQIA+ adults seeking sexual healthcare from GPs and other internal medicine specialists.  
184 Only two studies [37, 38] were guided by theoretical frameworks, using the Socio-Ecological  
185 Theory and the Health Behavior Model of Health Service Use, respectively. Additionally, we  
186 were interested in capturing the intersection between disability and sexual healthcare access  
187 for older LGBTQIA+ adults but no studies reported on disability. Access to sexual healthcare  
188 services for older people with disabilities is a complex issue and should be explored further.

189

## 190 **Themes**

191

192 Only the fifteen unique qualitative studies were compared to organize codes and derive  
193 relevant themes and the results were assessed for quality (Table 2). Our analysis identified  
194 five overarching barriers for sexual health care access for older LGBTQIA+ individuals. From  
195 the perspective of older LGBTQIA+ adults, anticipated stigma following disclosure of sexual  
196 orientations and/or gender identity, and diverse needs as a result of aging as part of the  
197 LGBTQIA+ community function as barriers. At the level of health systems and providers,  
198 heterocentricity and male-centricity of sexual health service environments and resources,  
199 enacted stigma in response to disclosure and insensitive healthcare providers decreased  
200 sexual healthcare access for older LGBTQIA+ adults.

201

202 Our analysis also identified three overarching facilitators for sexual health care access for  
203 older LGBTQIA+ individuals. Increased security in identity in older age as well as  
204 intersectional needs as a result of aging as part of the LGBTQIA+ community facilitate sexual

205 healthcare access for older LGBTQIA+ adults. Empathetic healthcare providers also  
206 contribute to increased access for this population.

207

208 The inductive and deductive themes identified in the selected articles reflect the perspectives  
209 and experiences of the older LGBTQIA+ adults accessing sexual healthcare, which then map  
210 to sociocultural stressors, health behaviours within the Minority Stress Model and represent  
211 opportunities for intervention as dictated by the Access to Care framework.

212

213 ***Heterocentricity of sexual health services and research (Moderate certainty of the***  
214 ***evidence)***

215

216 Results from thirteen studies [37, 39-50] suggested that heterocentricity of healthcare service  
217 environments, intake forms and resources were a barrier for older LGBTQIA+ adults to access  
218 sexual health services. Heterocentricity was defined as the assumption of, or default to,  
219 sexual relationships between a cis-gender heterosexual man and a cis-gender heterosexual  
220 woman by providers. Heterocentricity affected the way that LGBTQIA+ individuals accessed  
221 services and interacted with health care providers [51]. Providers with heterocentric attitudes  
222 made older LGBTQIA+ adults feel unwelcome and unsupported [49, 50].

223

224 ***Male-centricity sexual health services for non-male identifying individuals***

225

226 Results from the selected studies indicated that older LGBTQIA+ adults who were male-  
227 identifying were researched to a greater extent to those who identified with other genders,  
228 evidenced by the lack of studies focused on this population. The male-centric bias translated

229 into the exclusion of lesbian women from “sexual health scripts” [47]. The risk of sexually  
230 transmitted infections for older LGBTQIA+ women was reportedly fully dismissed by sexual  
231 healthcare providers due to a lack of adequate understanding of sexual behavior and risks  
232 [39].

233

234 ***Anticipated stigma following disclosure of gender identity and/or sexual orientation to***  
235 ***healthcare providers (Moderate certainty of the evidence)***

236

237 Ten studies [39, 40, 42, 44, 46, 47, 49, 52-54] pointed to older LGBTQIA+ adults’ anticipation  
238 of stigma following disclosure of their gender identity and/or sexual orientation to their  
239 healthcare providers as a barrier to accessing sexual healthcare. Anticipated stigma may have  
240 resulted from previous experiences with providers as well as the legal and political setting in  
241 which older LGBTQIA+ adults exist which may alienate, or exclude these individuals from  
242 protection [39, 44]. These experiences were characterized by overt homophobia, judgement of  
243 sexual behaviors, and provider embarrassment when discussing LGBTQIA+ sexual identities  
244 [35, 38, 50]. When older LGBTQIA+ adults were disincentivized to disclose their identity or  
245 sexual behaviors, to healthcare providers, the less likely it became that they would receive  
246 appropriate care or access care at all [39].

247

248 ***Enacted stigma from sexual healthcare providers (Moderate certainty of evidence)***

249

250 According to eleven studies [37, 39, 40, 42, 45-50, 52], enacted stigma towards older  
251 LGBTQIA+ adults by healthcare providers was a barrier to sexual healthcare access. Enacted  
252 stigma was reported in the form of homophobic comments by providers, providers not

253 knowing about sexual healthcare needs of LGBTQIA+ adults, and denial of care following  
254 disclosure of gender or sexual orientation, for example [37, 39, 40, 42, 46-49]. Older  
255 LGBTQIA+ adults were more likely to experience discrimination in healthcare settings than  
256 LGBTQIA+ youth or non-LGBTQIA+ individuals [39]. Experiences of enacted stigma may also  
257 contribute to later anticipated and internalized stigma when accessing healthcare. Findings  
258 from two studies noted that older LGBTQIA+ adults were likely to delay or discontinue care as  
259 a result of such behavior by providers [37, 52]. Two other studies reported that older  
260 LGBTQIA+ adults felt they needed to find other means of care and information outside of  
261 formal healthcare settings such as personal research or non-medical social support [45, 49].

262

263 ***Characteristics of sexual health providers for older LGBTQIA+ adults (Moderate***  
264 ***certainty of evidence)***

265

266 Results from ten studies [38, 40, 42, 44, 46, 48, 49, 53-55] noted the effects of healthcare  
267 providers' characteristics on sexual healthcare access for older LGBTQIA+ adults. Depending  
268 on whether older LGBTQIA+ adults perceived the characteristics of a provider as positive or  
269 negative affects the way that they view their care experience. Participants in four studies  
270 noted that they were more comfortable discussing their needs and concerns with a sexual  
271 healthcare provider that was also LGBTQIA+ [38, 40, 49, 53]. Providers who were seen as  
272 empathic, compassionate, and open were associated with increased service access and  
273 comfort discussing sexual health needs by older LGBTQIA+ adults, particularly older  
274 LGBTQIA+ women [38, 46, 48].

275

276 ***Increased security in identity in older age for LGBTQIA+ adults (Moderate certainty of***  
277 ***evidence)***

278

279 According to five studies [38, 47, 50, 55, 56], older age facilitated sexual healthcare access  
280 among older LGBTQIA+ adults. Older age was linked to resilience in the face of minoritized  
281 gender identity and/or sexual orientation [38]. Older age was also associated with a strong  
282 sense of self leading some older LGBTQIA+ adults to note that they felt more comfortable  
283 discussing their sexual health needs at their current age than they did as young people due to  
284 anticipated and enacted stigma [47].

285

286 ***Unique sexual health needs of older LGBTQIA+ adults (Moderate CERQual evidence)***

287

288 Six studies [39, 42, 45-47, 49] suggested that older LGBTQIA+ adults had unique sexual  
289 health needs that affected access to sexual health services. Unique sexual health needs  
290 referred to how various social categorizations, such as race, sexuality and gender, intersect to  
291 influence discrimination or disadvantage [57]. In particular, older gay and bisexual men in one  
292 study felt that their sexual health needs were divergent from that of older heterosexual men in  
293 relation to treatment options, consequences from side effects, and sexual relationship  
294 dynamics [46]. Conversely, older women who have sex with women noted increased  
295 hesitance initiating sexual health screening and providers were less likely to emphasize  
296 service access due to deprioritization [39, 47]. Older LGBTQIA+ adults of all genders noted  
297 that sexual activity was intertwined with intimacy and maintenance of support networks, which  
298 felt more pertinent to them at their current age than when they were younger [45, 47].

299

300 **DISCUSSION**

301

302 This scoping review and qualitative evidence synthesis identified multiple barriers and  
303 facilitators to sexual health care services for older LGBTQIA+ adults. Our data suggests that  
304 heterocentric health services may inadvertently exclude older LGBTQIA+ adults. Internalized  
305 homophobia among older LGBTQIA+ adults could exacerbate this process of exclusion,  
306 particularly when providers and systems reinforce their “otherness” through unequal access to  
307 appropriate information and resources. We found that health system level stressors, such as  
308 one-size-fits-all treatment plans and inadequate acknowledgement of diverse sexual  
309 relationships, are likely to cause sexual health risks to be misinterpreted, deprioritized, or  
310 simply ignored for older LGBTQIA+ individuals. The combined effects of system level  
311 stressors and older individuals’ health behaviors are likely to result in negative health  
312 outcomes for this already underserved population.

313

314 Our results suggest that heterocentricity was a barrier for older LGBTQIA+ adults to access  
315 sexual health services This is consistent with existing research demonstrating heterocentric  
316 biases in sexual health research and practice [18, 58]. Heterocentric sexual health services  
317 discourage older adults from disclosing their gender identity and/or sexual orientation.  
318 Meanwhile, male-centricity prioritizes the experiences of ~~male-identifying~~ cisgender male  
319 individuals, worsening gender disparities in health outcomes. Ensuring that healthcare  
320 providers have sufficient training to serve older LGBTQIA+ adults sexual healthcare needs is  
321 critical to facilitating high-quality services for all [38, 44]. However, we speculate that training  
322 alone may be insufficient to counter heterocentricity and male-centric services. Structural  
323 interventions to support diverse genders and sexualities are important [59, 60]. When older  
324 LGBTQIA+ adults feel confident that their needs will be met by a provider, they will be more  
325 likely to continue accessing their services [55].

326

327 The findings in this review provide practical strategies to enhance sexual health services for  
328 this subgroup as outlined by the Minority Stress Model and Access to Care framework [32,  
329 33]. The barriers suggested in this study serve as opportunities for interventions and  
330 improvements to current sexual healthcare practices while the facilitators represent aspects of  
331 successful care access (Figure 3). Our review findings suggested that older LGBTQIA+ adults  
332 have different sexual health priorities than younger, non-LGBTQIA+ adults. Providers were not  
333 found to adequately acknowledge and address older LGBTQIA+ adults' specific concerns, a  
334 complaint observed in other studies [61]. Ensuring that healthcare providers have adequate  
335 training and resources that meet LGBTQIA+ needs, particularly when embedded in routine  
336 non-sexual clinical services, may improve the acceptability of services. Providers can improve  
337 outcomes by clearly signposting support in physical spaces and through provision of  
338 LGBTQIA+-specific resources, improving approachability. Gender neutral language could  
339 decrease anxiety and distress for older LGBTQIA+ adults during initial encounters [56]. Using  
340 gender neutral language in informal health settings (e.g. support groups) may also make  
341 these spaces feel more appropriate for older LGBTQIA+ adults [45]. The included texts did not  
342 fully address the concept of affordability as laid out by the Access to Care framework.  
343 However, there is evidence that older LGBTQIA+ adults are less likely to have health  
344 insurance and more likely to experience financial challenges than older non-LGBTQIA+ adults  
345 [62, 63].

346

347 This review extends the literature by focusing on older LGBTQIA+ individuals, assessing the  
348 quality of the evidence and using a qualitative evidence synthesis. Despite the importance of  
349 disability among older people, none of the studies focused on disabilities or comorbidities as  
350 they relate to accessing sexual health services. Older non-LGBTQIA+ adults with disabilities  
351 are similarly underrepresented in sexual health research, particularly related to their

352 experiences and perspectives related to accessing care. There is evidence, however, that  
353 similarly to older LGBTQIA+ adults, their sexual health needs are also not adequately  
354 addressed by providers [64]. This is an important topic because conditions associated with  
355 older age have implications for sexual function and pleasure. Given that older LGBTQIA+  
356 adults regularly access other specialist healthcare services as part of managing chronic  
357 conditions and comorbidities, integrating sexual healthcare into these services could further  
358 support this population and address their currently underserved needs. This deserves further  
359 research.

360

361 While this study has identified important implications for practice, it also has several  
362 limitations. First, this study was not able to capture the full policy and sociocultural contexts of  
363 older LGBTQIA+ adults and only captured data from high-income countries. This gap is a  
364 reflection of the dearth of research focused on older LGBTQIA+ adults outside of high-income  
365 contexts. However, high-income countries are less likely to criminalize divergent gender  
366 identities and/or sexual orientations and are more likely to have well-established healthcare  
367 infrastructure. High income countries may also provide a more supportive and feasible context  
368 for intervention given the increasing visibility of older LGBTQIA+ adults and health system  
369 infrastructure. Second, most of the participants from the selected studies were white and  
370 middle class. This underlines the importance of further research in other racial and ethnic  
371 groups. Third, much research on older LGBTQIA+ individuals is focused on gay men and  
372 lesbian women, further marginalizing less visible members of the community such as intersex,  
373 bisexual, transgender and gender non-conforming older adults. However, the value of this  
374 research is not diminished in that the contexts and individuals considered have intrinsic value.

375



376 This review is a rare comprehensive qualitative evidence synthesis of barriers and facilitators  
377 to sexual healthcare access among diverse older LGBTQIA+ population. Our findings highlight  
378 how heterocentricity, stigma and providers who are not inclusive inhibit sexual healthcare  
379 uptake and continuation for older LGBTQIA+ adults while age- and identity-related factors  
380 support sexual healthcare service use. Our data on older LGBTQIA+ adults lay the foundation  
381 for iterative service improvements. The results of this review demonstrate the need for more  
382 expansive provider training and inclusive sexual healthcare delivery, particularly in specialist  
383 healthcare, as well as inclusion of older LGBTQIA+ adults in clinical trials to make clinics more  
384 inclusive.

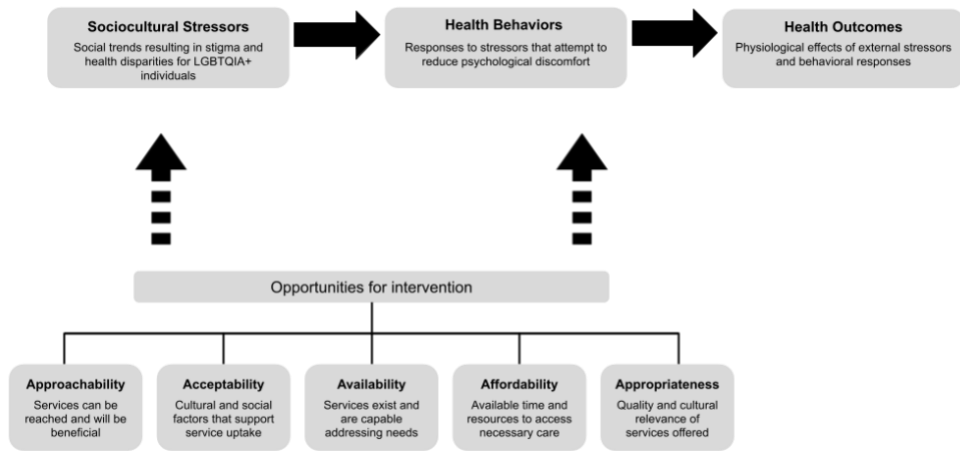
385

386 From a research perspective, our findings suggest the need to explore sexual healthcare  
387 experiences of older LGBTQIA+ women, intersex, bisexual, transgender, and gender non-  
388 conforming older adults. Additionally, research which explores the experiences of older  
389 LGBTQIA+ adults who are non-white, from low- and middle-income countries and diverse  
390 social classes will further add to our understanding and support service provision adaptations  
391 to best serve everyone. It is important that these investigations are led by people in these  
392 communities so as to not further privilege a heterocentric and male-centric perspective.

393

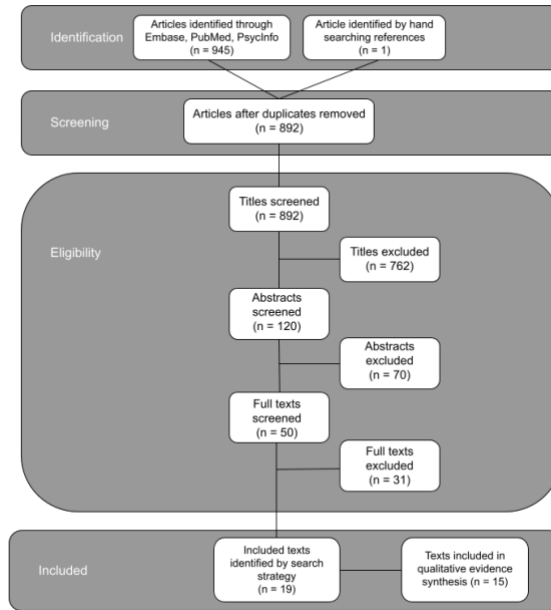
394 This scoping review and qualitative analysis highlights gaps in the literature, and points to  
395 individual and system level changes that could improve older LGBTQIA+ adults' sexual health  
396 services. For this population, barriers to sexual healthcare access are the result of  
397 sociocultural stressors and maladaptive health behaviors older LGBTQIA+ adults develop in  
398 response. Heterocentricity and stigma contribute to discriminatory information access and  
399 provider behavior as well as anxiety for this population. To address these barriers, our results  
400 suggest that providers and health systems need to improve the approachability, acceptability,

401 availability, affordability, and appropriateness of sexual health services. Older LGBTQIA+  
402 adults represent an underserved population by sexual healthcare services from the provider  
403 level to the health system level and as such represent a flaw in the system to be rectified to  
404 achieve equity in healthcare.



405

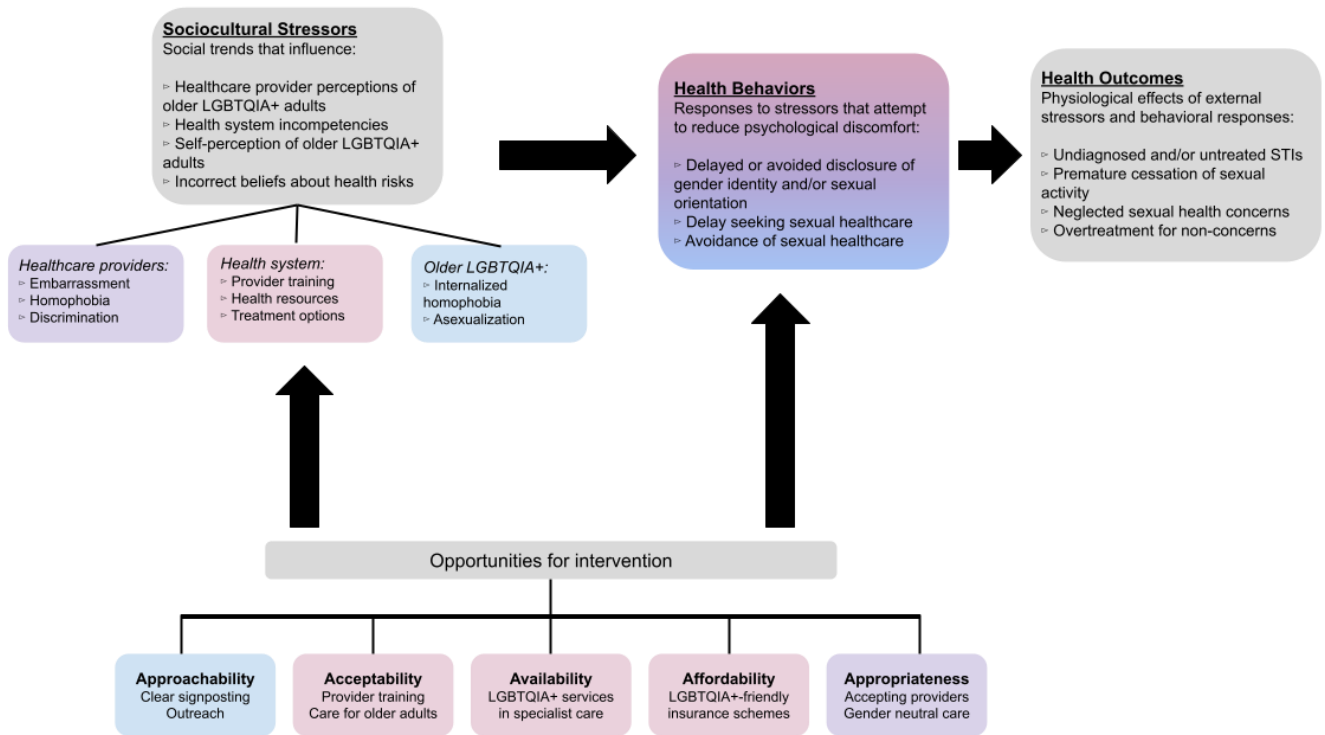
406 **Figure 1.** An adapted Minority Stress Model using the Patient-Centered Access to Care  
 407 framework identifying opportunities for intervention to increase uptake of sexual health  
 408 services among Older LGBTQIA+ adults  
 409



410

411

412 **Figure 2.** PRISMA flow chart



413

414 **Figure 3.** Using the Patient-Centered Access to Care framework to interrupt the pathway to  
 415 poor health for older LGBTQIA+ individuals as described by the Minority Stress Model

416

417

418 **Table 1.** Studies included in the scoping review and qualitative evidence synthesis of data  
 419 from older LGBTQIA+ adults on sexual health (n=19)

| Lead author and year | Study design      | Methods                              | Location                   | Population*                                                            | Age range* (in years)                        |
|----------------------|-------------------|--------------------------------------|----------------------------|------------------------------------------------------------------------|----------------------------------------------|
| [39] Addis 2009      | Literature review | Meta-narrative                       | <i>Not specified</i>       | Lesbian, gay, bisexual and transgender individuals                     | <i>“older” not defined</i>                   |
| [40] Alexis 2018     | Literature review | Meta-synthesis                       | <i>Not specified</i>       | Cis-gender gay, bisexual men who previously had prostate cancer        | 45+                                          |
| [52] Clover 2006     | Qualitative       | Semi-structured interviews           | London, UK                 | Cis-gender, white gay men                                              | 60 - 75                                      |
| [41] Danemalm 2019   | Qualitative       | Semi-structured interviews           | Sweden                     | Cis-gender gay men who had previously been treated for prostate cancer | 58 - 81                                      |
| [42] Doran 2018      | Qualitative       | Semi-structured interviews           | England, UK                | Cis-gender gay men with prostate cancer                                | 49 - 82                                      |
| [37] Dune 2020       | Literature review | Thematic systematic review           | <i>Not specified</i>       | Cis-gender lesbian, bisexual women                                     | 55+                                          |
| [43] Gessner 2019    | Qualitative       | Semi-structured interviews           | USA                        | Cis-gender lesbian, gay, queer individuals                             | 52 - 59                                      |
| [38] Green 2019      | Qualitative       | Semi-structured interviews           | Philadelphia, USA          | Cis-gender gay men living with HIV                                     | 50+                                          |
| [56] Kushner 2013    | Qualitative       | Semi-structured interviews           | New Zealand                | Cis-gender gay men                                                     | 65 - 81                                      |
| [44] LaVaccare 2018  | Qualitative       | Focus groups                         | Los Angeles, USA           | Cis-gender lesbian, bisexual women                                     | 65+                                          |
| [45] Lee 2015        | Qualitative       | Semi-structured interviews           | British Columbia, Canada   | Cis-gender MSM                                                         | 58 – 71                                      |
| [46] Lisy 2018       | Literature review | Systematic review and meta-synthesis | USA, Australia, UK, Canada | Cis-gender lesbian, gay, bisexual individuals who have/had cancer      | <i>Majority of studies included were 45+</i> |
| [53] Maloney 2017    | Qualitative       | Focus groups                         | USA                        | Cis-gender gay, bisexual men                                           | 40 – 52                                      |
| [54] Martos          | Qualitative       | Semi-structured                      | USA                        | Cis-gender                                                             | 52-59                                        |

|             |          |              |                                                   |                                 |                                                            |         |
|-------------|----------|--------------|---------------------------------------------------|---------------------------------|------------------------------------------------------------|---------|
| 2018        |          |              | interviews                                        |                                 | lesbian, gay, bisexual individuals                         |         |
| <b>[47]</b> | McIntyre | Qualitative  | Semi-structured interviews                        | Calgary, Canada                 | Cis-gender lesbian women who had previously had a Pap test | 43 – 54 |
| <b>[48]</b> | Politi   | Qualitative  | Structured interviews                             | Rhode Island, USA               | Cis-gender lesbian women who were currently unmarried      | 40 - 75 |
| <b>[55]</b> | Pollard  | Qualitative  | Focus groups                                      | Southeast England               | Cis-gender MSM                                             | 50+     |
| <b>[49]</b> | Rose     | Mixed method | Semi-structured interview and quantitative survey | Australia, New Zealand, USA, UK | Cis-gender gay, bisexual men and their partners            | 45 - 89 |
| <b>[50]</b> | Sharek   | Mixed method | Semi-structured interview and quantitative survey | The Republic of Ireland         | Lesbian, gay, bisexual and transgender individuals         | 55+     |

*\* Included in the analysis of this study*

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| Review finding                                                                                                                                                                                                                                                                                   | Contributing studies        | Confidence in the evidence | Explanation of confidence assessment                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Heterocentricity* and male-centricity</b> of sexual health clinical services (intake forms, environments, resources, surveys) privilege the perspectives of heterosexual people and men specifically. Older LGBTQIA+ individuals, especially women, report feelings of exclusion and erasure. | [41, 42, 43-45, 47-50]      | Moderate                   | All studies have minor to moderate methodological limitations. Moderate concerns about coherence and adequacy for all 13 studies. Major concerns about relevance due high-income settings of all studies.           |
| <b>Anticipated stigma following disclosure</b> often based on past experiences leads older LGBTQIA+ adults to refrain from addressing identity-related needs. Older LGBTQIA+ often have difficulty identifying providers that they feel will not stigmatize them following identity disclosure.  | [42, 44, 47, 49, 52-54]     | Low                        | All studies have minor to moderate methodological limitations. Moderate concerns about coherence and adequacy. Major concerns about relevance due high-income settings of all studies.                              |
| <b>Older LGBTQIA+ people reported enacted stigma from healthcare providers</b> in the form of discrimination, rejection, or poorer treatment. This experience of stigma sometimes leads older LGBTQIA+ individuals to avoid primary healthcare.                                                  | [42, 45, 47-50, 52]         | Low                        | All studies have minor to moderate methodological limitations. No or very minor concerns about coherence. Moderate concerns about adequacy. Major concerns about relevance due high-income settings of all studies. |
| <b>Provider characteristics</b> related to gender identity and sexual orientation, amount of experience with LGBTQIA+ patients, and openness may act as a barrier or facilitator                                                                                                                 | [38, 42, 44, 48, 49, 53-55] | Low                        | All studies have minor to moderate methodological limitations. No or very minor concerns about coherence for all 10 studies. Moderate concerns about adequacy. Major concerns about                                 |

depending on the specific context.

relevance due high-income settings of all studies.

**Increased security in identity in older age,** especially for older LGBTQIA+ women, leads individuals to advocate for their diverse healthcare needs more confidently, facilitating access to services.

[38, 47, 50, 55, 56]

Low

All studies have minor to moderate methodological limitations. No or very minor concerns about coherence for all 5 studies. Major concerns with adequacy given 2 studies with thin data, 3 studies with thick data. Major concerns about relevance due high-income settings of all studies.

**Intersectional needs of** older LGBTQIA+ adults related to age, gender identity and sexual orientation interact to drive sexual healthcare priority setting for individuals. As a result, older LGBTQIA+ individuals may make additional efforts to seek sexual healthcare or may be inclined to deprioritize particular services.

[42, 45, 47, 49]

Low

All studies have minor to moderate methodological limitations. No or very minor concerns about coherence. Major concerns about adequacy. Major concerns about relevance due high-income settings of all studies.

436 \* Heterocentricity is defined as the assumption of or default to acknowledging relationships, sexual or otherwise,  
437 between a cis-gender heterosexual man and a cis-gender heterosexual woman for this study  
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## 439 REFERENCES

440

- 441 1. Jones, J.M. *LGBT Identification Rises to 5.6% in Latest U.S. Estimate*. Politics 2021;  
442 Available from: [https://news.gallup.com/poll/329708/lgbt-identification-rises-latest-](https://news.gallup.com/poll/329708/lgbt-identification-rises-latest-estimate.aspx)  
443 [estimate.aspx](https://news.gallup.com/poll/329708/lgbt-identification-rises-latest-estimate.aspx).
- 444 2. Gevisser, M., *The Pink Line: Journeys Across the World's Queer Frontiers*. 2020:  
445 Macmillan.
- 446 3. Bancroft, J., *Chapter 7 - Sexuality and ageing*, in *Human Sexuality and Its Problems*  
447 *(Third Edition)*, J. Bancroft, Editor. 2009, Churchill Livingstone. p. 238-252.
- 448 4. Organization, W.H., *Ageing and health*. 2018: WHO.
- 449 5. Heidari, S., *Sexuality and older people: a neglected issue*. Reproductive Health  
450 Matters, 2016. **24**(48): p. 1-5.
- 451 6. Malta, S., et al., '*That might be a bit sexy for somebody your age*': *Older adult sexual*  
452 *health conversations in primary care*. Australasian Journal on Ageing, 2020. **39**(S1): p.  
453 40-48.
- 454 7. England, P.H., *People urged to practise safer sex after rise in STIs in England*. 2019,  
455 GOV.UK.
- 456 8. Rabathaly, P. and V. Chattu, *Emphasizing the importance of sexual healthcare among*  
457 *middle and old age groups: A high time to re-think?* Journal of Natural Science, Biology  
458 and Medicine, 2019. **10**(1): p. 91-96.
- 459 9. Bauer, M., E. Haesler, and D. Fetherstonhaugh, *Organisational enablers and barriers*  
460 *to the recognition of sexuality in aged care: A systematic review*. Journal of Nursing  
461 Management, 2019. **27**(4): p. 858-868.
- 462 10. Merghati-Khoei, E., et al., *Sexuality and elderly with chronic diseases: A review of the*  
463 *existing literature*. Journal of Research in Medical Sciences, 2016. **21**(1): p. 136-136.
- 464 11. Carrillo González, G.M., B. Sánchez Herrera, and L. Chaparro Díaz, *Chronic disease*  
465 *and sexuality*. Investigación y Educación en Enfermería, 2013. **31**: p. 295-304.
- 466 12. Mahy, M.A., Christine S; Stanecki, Karenb; Wynd, Shonaa, *Increasing trends in HIV*  
467 *prevalence among people aged 50 years and older: evidence from estimates and*  
468 *survey data*. AIDS, 2014. **28**.
- 469 13. Emler, C.A., et al., *The Relationship Between Sexual Minority Stigma and Sexual*  
470 *Health Risk Behaviors Among HIV-Positive Older Gay and Bisexual Men*. J Appl  
471 Gerontol, 2017. **36**(8): p. 931-952.
- 472 14. Westwood, S., et al., *Older LGBT+ health inequalities in the UK: setting a research*  
473 *agenda*. Journal of Epidemiology and Community Health, 2020. **74**(5): p. 408.
- 474 15. Okoro, C.A., et al., *Prevalence of Disabilities and Health Care Access by Disability*  
475 *Status and Type Among Adults - United States, 2016*. MMWR: Morbidity & Mortality  
476 Weekly Report, 2018. **67**(32): p. 882-887.
- 477 16. Peate, I., *The male menopause: possible causes, symptoms and treatment*. British  
478 Journal of Nursing, 2003. **12**(2): p. 80-84.
- 479 17. UNHR, *"Pathologization – Being lesbian, gay, bisexual and/or trans is not an illness"*  
480 *For International Day against Homophobia, Transphobia and Biphobia*. 2016, United  
481 Nations Human Rights Office of the High Commissioner: United Nations Human  
482 Rights.
- 483 18. Alencar Albuquerque, G., et al., *Access to health services by lesbian, gay, bisexual,*  
484 *and transgender persons: systematic literature review*. BMC International Health and  
485 Human Rights, 2016. **16**(1): p. 2.
- 486 19. Porter, K.E. and M. Brennan-Ing. *The Intersection of Transgender Identities, HIV, and*  
487 *Aging*. 2019.

- 488 20. Bauer, M., E. Haesler, and D. Fetherstonhaugh, *Let's talk about sex: older people's*  
489 *views on the recognition of sexuality and sexual health in the health-care setting.*  
490 Health expectations : an international journal of public participation in health care and  
491 health policy, 2016. **19**(6): p. 1237-1250.
- 492 21. Albuquerque, G.A., et al., *Sexual Diversity and Homophobia in Health Care Services:*  
493 *Perceptions of Homosexual and Bisexual Population in the Cross-Cultural Theory.*  
494 Open Journal of Nursing, 2016. **Vol.06No.06**: p. 13.
- 495 22. Project, S.M.A., *Understanding Issues Facing LGBTQ+ Older Adults.* 2017, SAGE:  
496 SAGE.
- 497 23. Sinković, M. and L. Towler, *Sexual Aging: A Systematic Review of Qualitative*  
498 *Research on the Sexuality and Sexual Health of Older Adults.* Qualitative Health  
499 Research, 2018. **29**(9): p. 1239-1254.
- 500 24. Aguilar, R.A., *Sexual Expression of Nursing Home Residents: Systematic Review of*  
501 *the Literature.* Journal of Nursing Scholarship, 2017. **49**(5): p. 470-477.
- 502 25. Nowakowski, A.C.H. and J.E. Sumerau, *Women's sexual health in later life: Gaps and*  
503 *opportunities in research and practice.* Women's Health, 2019. **15**: p.  
504 1745506519878092.
- 505 26. Kneale, D., et al., *Inequalities in older LGBT people's health and care needs in the*  
506 *United Kingdom: a systematic scoping review.* Ageing and Society, 2021. **41**(3): p. 493-  
507 515.
- 508 27. Choi, S.K.M., Ilan H., *LGBT Aging: A review of research findings, needs, and policy*  
509 *implications.* 2016, The Williams Institute at UCLA School of Law: UCLA.
- 510 28. Flemming, K., et al., *Qualitative evidence synthesis for complex interventions and*  
511 *guideline development: clarification of the purpose, designs and relevant methods.*  
512 BMJ Global Health, 2019. **4**(Suppl 1): p. e000882.
- 513 29. Pham, M.T., et al., *A scoping review of scoping reviews: advancing the approach and*  
514 *enhancing the consistency.* Research Synthesis Methods, 2014. **5**(4): p. 371-385.
- 515 30. Levac, D., H. Colquhoun, and K.K. O'Brien, *Scoping studies: advancing the*  
516 *methodology.* Implementation Science, 2010. **5**(1): p. 69.
- 517 31. Arksey, H. and L. O'Malley, *Scoping studies: towards a methodological framework.*  
518 International Journal of Social Research Methodology, 2005. **8**(1): p. 19-32.
- 519 32. Lick, D.J., L.E. Durso, and K.L. Johnson, *Minority Stress and Physical Health Among*  
520 *Sexual Minorities.* Perspectives on Psychological Science, 2013. **8**(5): p. 521-548.
- 521 33. Levesque, J.-F., M.F. Harris, and G. Russell, *Patient-centred access to health care:*  
522 *conceptualising access at the interface of health systems and populations.*  
523 International Journal for Equity in Health, 2013. **12**(1): p. 18.
- 524 34. Kuyper, L. and I. Vanwesenbeeck, *Examining Sexual Health Differences between*  
525 *Lesbian, Gay, Bisexual, and Heterosexual Adults: The Role of Sociodemographics,*  
526 *Sexual Behavior Characteristics, and Minority Stress.* The Journal of Sex Research,  
527 2011. **48**(2-3): p. 263-274.
- 528 35. Hameed, S., et al., *From words to actions: systematic review of interventions to*  
529 *promote sexual and reproductive health of persons with disabilities in low- and middle-*  
530 *income countries.* BMJ Global Health, 2020. **5**(10): p. e002903.
- 531 36. Lewin, S., et al., *Applying GRADE-CERQual to qualitative evidence synthesis findings:*  
532 *introduction to the series.* Implementation Science, 2018. **13**(1): p. 2.
- 533 37. Dune, T., et al., *Are Services Inclusive? A Review of the Experiences of Older GSD*  
534 *Women in Accessing Health, Social and Aged Care Services.* International Journal of  
535 Environmental Research and Public Health, 2020. **17**(11).
- 536 38. Green, D.C. and E.M. Wheeler, *A Qualitative Exploration of Facilitators for Health*  
537 *Service Use among Aging Gay Men Living with HIV.* Journal of the International  
538 Association of Providers of AIDS Care (JIAPAC), 2019. **18**: p. 2325958219880569.

- 539 39. Addis, S., et al., *The health, social care and housing needs of lesbian, gay, bisexual*  
540 *and transgender older people: a review of the literature*. Health Soc Care Community,  
541 2009. **17**(6): p. 647-58.
- 542 40. Alexis, O. and A.J. Worsley, *The Experiences of Gay and Bisexual Men Post-Prostate*  
543 *Cancer Treatment: A Meta-Synthesis of Qualitative Studies*. American Journal of Men's  
544 Health, 2018. **12**(6): p. 2076-2088.
- 545 41. Danemalm Jägervall, C., J. Brüggemann, and E. Johnson, *Gay men's experiences of*  
546 *sexual changes after prostate cancer treatment : a qualitative study in Sweden*.  
547 Scandinavian journal of urology, 2019. **53**(1): p. 40-44.
- 548 42. Doran, D., et al., *"It's not just about prostate cancer, it's about being a gay man": A*  
549 *qualitative study of gay men's experiences of healthcare provision in the UK*. European  
550 Journal of Cancer Care, 2018. **27**(6): p. e12923.
- 551 43. Gessner, M., et al., *Sexual Minority People's Perspectives of Sexual Health Care:*  
552 *Understanding Minority Stress in Sexual Health Settings*. Sex Res Social Policy, 2019.  
553 **17**(4): p. 607-618.
- 554 44. LaVaccare, S., et al., *Healthcare Experiences of Underrepresented Lesbian and*  
555 *Bisexual Women: A Focus Group Qualitative Study*. Health Equity, 2018. **2**(1): p. 131-  
556 138.
- 557 45. Lee, T.K., et al., *Impact of Prostate Cancer Treatment on the Sexual Quality of Life for*  
558 *Men-Who-Have-Sex-with-Men*. J Sex Med, 2015. **12**(12): p. 2378-86.
- 559 46. Lisy, K., et al., *Experiences and unmet needs of lesbian, gay, and bisexual people with*  
560 *cancer care: A systematic review and meta-synthesis*. Psycho-Oncology, 2018. **27**(6):  
561 p. 1480-1489.
- 562 47. McIntyre, L., A. Szewchuk, and J. Munro, *Inclusion and exclusion in mid-life lesbians'*  
563 *experiences of the Pap test*. Cult Health Sex, 2010. **12**(8): p. 885-98.
- 564 48. Politi, M.C., et al., *Patient-provider communication about sexual health among*  
565 *unmarried middle-aged and older women*. Journal of general internal medicine, 2009.  
566 **24**(4): p. 511-516.
- 567 49. Rose, D., J.M. Ussher, and J. Perz, *Let's talk about gay sex: gay and bisexual men's*  
568 *sexual communication with healthcare professionals after prostate cancer*. European  
569 Journal of Cancer Care, 2016. **26**(1): p. e12469.
- 570 50. Sharek, D.B., et al., *Older LGBT people's experiences and concerns with healthcare*  
571 *professionals and services in Ireland*. Int J Older People Nurs, 2015. **10**(3): p. 230-40.
- 572 51. Morrison, S. and S. Dinkel, *Heterosexism and health care: a concept analysis*. Nurs  
573 Forum, 2012. **47**(2): p. 123-30.
- 574 52. Clover, D., *Overcoming barriers for older gay men in the use of health services: A*  
575 *qualitative study of growing older, sexuality and health*. Health Education Journal,  
576 2006. **65**(1): p. 41-52.
- 577 53. Maloney, K.M., et al., *Culturally Competent Sexual Healthcare as a Prerequisite for*  
578 *Obtaining Preexposure Prophylaxis: Findings from a Qualitative Study*. LGBT health,  
579 2017. **4**(4): p. 310-314.
- 580 54. Martos, A.J., et al., *"Like finding a unicorn": Healthcare preferences among lesbian,*  
581 *gay, and bisexual people in the United States*. Social Science & Medicine, 2018. **208**:  
582 p. 126-133.
- 583 55. Pollard, A., et al., *Patients' perspectives on the development of HIV services to*  
584 *accommodate ageing with HIV: a qualitative study*. International Journal of STD &  
585 AIDS, 2017. **29**(5): p. 483-490.
- 586 56. Kushner, B., S. Neville, and J. Adams, *Perceptions of ageing as an older gay man: a*  
587 *qualitative study*. Journal of Clinical Nursing, 2013. **22**(23-24): p. 3388-3395.
- 588 57. Crenshaw, K., *Mapping the Margins: Intersectionality, Identity Politics, and Violence*  
589 *against Women of Color*. Stanford Law Review, 1991. **43**(6): p. 1241-1299.

- 590 58. Ussher, J.M., *Heterocentric Practices in Health Research and Health Care: Implications for Mental Health and Subjectivity of LGBTQ Individuals*. *Feminism & Psychology*, 2009. **19**(4): p. 561-567.
- 591
- 592
- 593 59. Dubin, S.N., et al., *Transgender health care: improving medical students' and residents' training and awareness*. *Advances in medical education and practice*, 2018. **9**: p. 377-391.
- 594
- 595
- 596 60. Goldhammer, H., et al., *National Findings from an LGBT Healthcare Organizational Needs Assessment*. *LGBT Health*, 2018. **5**(8): p. 461-468.
- 597
- 598 61. Brennan-Ing, M., et al., *Sexual Health Among Lesbian, Gay, Bisexual, and Heterosexual Older Adults: An Exploratory Analysis*. *Clinical Gerontologist*, 2021. **44**(3): p. 222-234.
- 599
- 600
- 601 62. Adler, L., *Distributive Justice for LGBTQ People*. 2020, Oxford University Press.
- 602 63. Chan, C.D. and N. Silverio, *Issues for LGBTQ Elderly*, in *Queer Psychology: Intersectional Perspectives*, K.L. Nadal and M.R. Scharrón-del Río, Editors. 2021, Springer International Publishing: Cham. p. 237-255.
- 603
- 604
- 605 64. Taylor, A. and M.A. Gosney, *Sexuality in older age: essential considerations for healthcare professionals*. *Age and Ageing*, 2011. **40**(5): p. 538-543.
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609 **SUPPLEMENTAL**

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611 **Appendix 1.** Full search strategies

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|                 |                                                                                                                                                                                             |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Embase</b>   | 1. Queer or lesbian or gay or MSM or WSW or transgender or transexual or intersex or bisexual or LG* or "sexual minority" or "men who have sex with men" or "women who have sex with women" |
|                 | 2. "Older adult*" or older or elder* or ag?ing or "mature adult*" or "middle age**"                                                                                                         |
|                 | 3. "sexual health" or "sexual healthcare" or "sexual health care"                                                                                                                           |
|                 | 4. 1 and 2 and 3                                                                                                                                                                            |
|                 | 5. limit 4 to (360 middle age <age 40 to 64 yrs> or "380 aged <age 65 yrs and older>" or "390 very old <age 85 yrs and older>")                                                             |
|                 | 6. limit 4 to aged <65+ years>                                                                                                                                                              |
| <b>PsycInfo</b> | 1. Queer or lesbian or gay or MSM or WSW or transgender or transexual or intersex or bisexual or LG* or "sexual minority" or "men who have sex with men" or "women who have sex with women" |
|                 | 2. "Older adult*" or older or elder* or ag?ing or "mature adult*" or "middle age**"                                                                                                         |
|                 | 3. "sexual health" or "sexual healthcare" or "sexual health care"                                                                                                                           |
|                 | 4. 1 and 2 and 3                                                                                                                                                                            |
|                 | 5. limit 4 to (360 middle age <age 40 to 64 yrs> or "380 aged <age 65 yrs and older>" or "390 very old <age 85 yrs and older>")                                                             |
| <b>Medline</b>  | 1. sex/ or sex.mp                                                                                                                                                                           |
|                 | 2. sexual health/ or sexual health.mp                                                                                                                                                       |
|                 | 3. sexual dysfunction.mp                                                                                                                                                                    |
|                 | 4. 1 or 2 or 3                                                                                                                                                                              |
|                 | 5. Healthcare or health care or delivery health care                                                                                                                                        |

|  |                                                                            |
|--|----------------------------------------------------------------------------|
|  | 6. Middle age* or middle age.mp or aged or ag?ing or elderly or elderly.mp |
|  | 7. Chronic disease.mp or chronic disease/                                  |
|  | 8. Comorbidity/ or comorbidity.mp                                          |
|  | 9. Hypertension/ or hypertension.mp or diabetes.mp or diabetes/            |
|  | 10. 7 or 8 or 9                                                            |
|  | 11. Qualitative.mp or focus group/ or focus group.mp                       |
|  | 12. 2 or 5                                                                 |
|  | 13. 4 and 5                                                                |
|  | 14. 6 and 13                                                               |
|  | 15. 10 and 14                                                              |
|  | 16. 11 and 15                                                              |

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**Appendix 2.** Summary of CASP scores from the systematic review checklist of literature review studies

| Lead author   | Year published | Focus ed? | Best sort of studies? | Relevant studies included? | Ri gor? | Results appropriately combined? | Overall results clear? | Generalizability? | Imp nt out s con ed? |
|---------------|----------------|-----------|-----------------------|----------------------------|---------|---------------------------------|------------------------|-------------------|----------------------|
| <b>Addis</b>  | 2009           | Yes       | Yes                   | Yes                        | Yes     | No                              | Yes                    | No                | Y                    |
| <b>Alexis</b> | 2018           | Yes       | Yes                   | Yes                        | Yes     | Yes                             | Yes                    | No                | Y                    |
| <b>Dune</b>   | 2020           | Yes       | Yes                   | Yes                        | No      | Yes                             | Yes                    | No                | Y                    |
| <b>Lisy</b>   | 2018           | Yes       | Yes                   | No                         | Yes     | Yes                             | Yes                    | No                | Y                    |

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**Appendix 3.** Summary of CASP scores from the systematic review checklist of qualitative studies

| Lead author | Year published | Focus ed? | Qualitative approach | Appropriate research design? | Appropriate recruitment | Appropriate data collection | Reflexivity? | Ethics clearly |
|-------------|----------------|-----------|----------------------|------------------------------|-------------------------|-----------------------------|--------------|----------------|
|-------------|----------------|-----------|----------------------|------------------------------|-------------------------|-----------------------------|--------------|----------------|

|                  |      |     | justified<br>? |     | strategy? | strategy? |     | sta<br>ed' |
|------------------|------|-----|----------------|-----|-----------|-----------|-----|------------|
| <b>Clover</b>    | 2006 | Yes | Yes            | Yes | Yes       | Yes       | No  | No         |
| <b>Danemalm</b>  | 2019 | Yes | Yes            | Yes | Yes       | Yes       | No  | No         |
| <b>Doran</b>     | 2018 | No  | Yes            | Yes | Yes       | Yes       | No  | No         |
| <b>Gessner</b>   | 2019 | No  | Yes            | No  | Yes       | Yes       | Yes | No         |
| <b>Green</b>     | 2019 | Yes | Yes            | Yes | Yes       | Yes       | No  | No         |
| <b>Kushner</b>   | 2013 | Yes | No             | Yes | No        | Yes       | No  | No         |
| <b>LaVaccare</b> | 2018 | Yes | Yes            | Yes | Yes       | Yes       | No  | No         |
| <b>Lee</b>       | 2015 | Yes | Yes            | Yes | No        | Yes       | No  | No         |
| <b>Maloney</b>   | 2017 | Yes | Yes            | Yes | Yes       | No        | No  | No         |
| <b>Martos</b>    | 2018 | Yes | No             | Yes | Yes       | Yes       | No  | No         |
| <b>McIntyre</b>  | 2010 | Yes | Yes            | Yes | No        | Yes       | No  | No         |
| <b>Politi</b>    | 2009 | Yes | No             | Yes | No        | Yes       | No  | No         |
| <b>Pollard</b>   | 2017 | Yes | Yes            | Yes | No        | No        | No  | No         |
| <b>Rose*</b>     | 2016 | Yes | Yes            | Yes | No        | Yes       | No  | No         |
| <b>Sharek*</b>   | 2015 | Yes | Yes            | Yes | Yes       | Yes       | No  | No         |

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