

# Cancer & COVID in our Community



Experiences of the coronavirus pandemic from LGBTIQ+ people affected by cancer



August  
2020

# Live Through This

*“Supporting and advocating for LGBTIQ+ people affected by cancer.”*

We are a London based charity that is committed to raising awareness about LGBTIQ+ specific issues in cancer. We offer peer support, oversight and share expert opinion across the UK to improve policy, practice and inclusion. We are patient led with a trustee board of experts in the fields of oncology and LGBTIQ+ issues in healthcare.

This survey was developed to gather the responses of LGBTIQ+ persons' affected by cancer and how the SARS-CoV-2 pandemic has affected them. Data is vital to identify impact and in coordinating responses based on community need. By gathering these community experiences we hope to understand the areas of work that will be required as the situation develops.

Current healthcare systems do not reliably track sexual and gender minority status, so without an independent survey of this population, their experiences will be lost in the larger aggregate of public health data.

This survey report is public access to encourage visibility of our community needs and open conversation on how to address these issues. If you want to continue this discussion, please contact us directly at [contact@livethroughthis.co.uk](mailto:contact@livethroughthis.co.uk) or see our website for more information [www.livethroughthis.co.uk](http://www.livethroughthis.co.uk)

*Please note:*

Our charity uses LGBTIQ+ as standard. This refers to Lesbian, Gay, Bisexual, Transgender, Intersex and Queer people. The plus includes other identities not represented in the initialism such as Pansexual, Asexual, Non-binary, Agender and Genderfluid to name a few.

Throughout this report, variations of this initialism will be used. This is due to the scarcity of LGBTIQ+ specific research that is broad ranging and inclusive. To avoid erroneous assumptions relating to data and research findings this report will use LGBT, LGB and others in order to accurately respond to the findings being discussed.



Registered Charity: 1190756

# CONTENTS

<b>Executive Summary</b>	4
<b>Background</b>	
LGBT Health + Cancer	6
Cancer + COVID-19	7
Screening + Referrals	8
COVID -19 + LGBT	9
Support Services	10
<b>Findings</b>	
Respondent Demographics	12
Isolation + Loneliness	13
Physical Health	15
Smoking + Drinking + Drug Use	17
Mental Health	18
Work + Finances	20
<b>Limitations</b>	
<b>Recommendations</b>	
Anticipating Additional Lockdown(s)	22
Suggested Actions	23
<b>Appendix</b>	
Further Discussion: Race + Ethnicity	24
Further Discussion: Gender	26
Additional Quotes	28
<b>Glossary</b>	
<b>References</b>	38

## EXECUTIVE SUMMARY

The coronavirus pandemic has had a profound impact on many lives across the globe. Healthcare services have reacted and reorganised. Ethnic minority communities have been disproportionately affected. Socioeconomic disparities have contributed to poorer outcomes. Age, race and pre-existing health conditions have been identified as high risk factors for COVID-19 complications.

Cancer has been one of the most affected healthcare services during the pandemic. Cancer Research UK reports issues in screening, referrals and treatment, all resulting in a backlog of patients experiencing disruption or delay to their life saving treatment. Macmillan's service users are experiencing high levels of stress, anxiety, fatigue, pain and poorer sleep.

Reports from The LGBT Foundation and Consortium have shown that LGBT people are a highly affected yet underrepresented minority during the pandemic. Poor monitoring standards in health and social services have resulted in an incomplete account of impact for those in the queer community.

Insufficient monitoring not only affects how we understand the experiences of the LGBTIQ+ community as a whole during public health crises, but also inhibits us from exploring the intersectional effects of sexuality or gender identity on other factors, such as having cancer.

In the interest of addressing this gap we launched our online survey. Data was collected across a two month period from May to July and yielded over 70 responses from various countries.

Our findings show that our community is experiencing high levels of concern around loneliness, work, mental health and physical health. The pandemic, along with the government shielding measures, has greatly impacted LGBTIQ+ cancer patients and these effects are related to previously identified barriers to equitable care or treatment. These effects are also considered in relation to previous research on pandemics and the effects of prolonged isolation. Demand from patients for clear communication with healthcare staff about their disease management and risk of COVID-19 complications was also a key finding and is discussed in relation to patient support.

Limitations to respondent reach and issues related to additional lockdowns are explored. Recommendations are made about potential actions for supporting this at risk community. Further discussion about gender, race and ethnicity is attached as an appendix along with additional respondent quotes not included in the main body of this report.

55% are worried about not seeing their friends or family  
43% are concerned about social isolation

43% are worried about their own health  
39% are worried about the health of their friends and/or family

22% are concerned about accessing healthcare  
19% are concerned about medication

30% are concerned about their mental health  
58% report negative impact on mental health

23% are worried about job loss or affected employment  
18% are concerned about their finances

"Being single with no supportive family and shielding alone has been incredibly stressful. A friend and fellow cancer patient died during this period and not being able to mourn their death with others/ our community has been really hard."

"Was meant to have further investigation through scans that have been cancelled. It has caused me a lot of anxiety due to not having these scans and worried that they won't know if the cancer has spread."

"Many appointments have been switched to over the phone, which is not ideal as it is sometimes difficult to communicate physical symptoms in a way that will allow diagnosis and treatment. Several of my side effects of chemotherapy were dismissed or left untreated because I wasn't able to adequately explain the effects to my doctor over the phone."

"My mother is homophobic and transphobic and covid has made me have to push back supports til it calms down. I want to be me."

"How will I be able to work if classed as vulnerable?"

## LGBT Health + Cancer

LGBTIQ+ people have poorer patient experiences and outcomes in multiple areas including mental health, sexual health, substance misuse, healthcare avoidance and cancer due to a variety of clinical, social and behavioural factors.<sup>1</sup>

Data on LGBTIQ+ cancer risk and incidence is hindered by the absence of effective and robust sexuality and transgender status monitoring in healthcare. This lack of data also inhibits us from exploring the intersectional experiences of those who may be in multiple at risk categories (e.g. race, age, gender etc.) for certain diseases.<sup>2</sup>

Published findings show there is an increased risk of breast cancer in lesbian women.<sup>3</sup> Men who have sex with men (MSM) have an increased risk of anal cancer due to HPV transmission, with HIV being an additional risk factor.<sup>4</sup> Potential for higher rates of other cancers are considered in relation to high risk behaviours in the community such as an increased rate of smoking and the risk it poses for developing lung cancer.<sup>5</sup>

Women who sleep with women (WSW) are often incorrectly told they do not require cervical screening and in some instances are actively refused the service.<sup>6,7</sup> Trans men and non-binary people assigned female at birth (AFAB) are also at risk of this problem.<sup>8</sup> Other barriers to cervical screening faced by gender minorities AFAB include transphobia, provider discomfort and gender dysphoria.<sup>9,10</sup> Gender minority patients AFAB are also less likely to attend cervical screening appointments compared to cisgender patients.<sup>10</sup> Previous negative experiences and fear of discrimination can lead to screening avoidance and also reduce the rate of sexual orientation disclosure with health care providers.<sup>11,12</sup> All of these factors pose a serious risk for later stage diagnoses.<sup>1,13,14,15</sup>

If an AFAB gender minority patient is no longer registered at their GP as female, they will not be automatically invited to anatomically relevant screenings.<sup>16,17</sup> This places the patient in a position of weighing up the safety of disclosure against potential risks to health.<sup>18</sup> Public Health England have released a leaflet for trans people about which screenings they need to attend and reports that this has improved community awareness.<sup>17</sup> However, a recent literature review found that a lack of awareness in both the service user and the provider continues to be a barrier to screening access in trans people who are AFAB.<sup>10</sup> The overt gendering or “pinking” of breast and gynae cancers can also become a barrier for LGBT people seeking information, screening or support.<sup>19,20</sup>

Negative experiences are another key barrier to healthcare engagement and are widely reported to affect preventive care, check-ups and presentation with minor incidents or emergencies.<sup>18,21,22</sup> One in seven LGBT people have avoided treatment for fear of discrimination,<sup>21</sup> which raises to 37% for trans people.<sup>18</sup> Of those who did seek help, 38% had a negative experience related to their trans status.<sup>23</sup> Patients have also reported witnessing homophobic language in clinical settings that made them feel unwelcome.<sup>24,25</sup> Interactions with healthcare providers can often involve inappropriate curiosity,<sup>21,23</sup> awkward handling of disclosure, heteronormative assumptions and an exclusion from standard psychosocial cancer support.<sup>25,26</sup>

Sexual and gender minority patients are directly affected by a healthcare providers’ skills, knowledge, assumptions and subsequent treatment.<sup>27</sup> 62% of trans patients report having experienced a lack of understanding of their needs.<sup>21</sup> The healthcare provider’s lack of

knowledge may be due to the lack of curriculum about the LGBT community.<sup>15,19,28</sup> This results in patients being obliged to educate their healthcare provider<sup>6,26,29,30</sup> despite LGBT+ people reporting a lack of knowledge around their own specific cancer risks<sup>31</sup> and the majority of their knowledge being acquired from unreliable sources such as the internet or social media.<sup>25,26</sup>

## Cancer + COVID-19

Early findings published in March proposed that people with cancer who were immunosuppressed as a result of receiving treatment were prone to worse outcomes associated with COVID-19.<sup>32</sup> However, the validity of these assertions has been called into question owing to a small heterogeneous sample and multiple confounding variables such as smoking and previous surgeries that may have impacted levels of immunosuppression.<sup>33</sup>

A review of data from Wuhan suggests that cancer patients presented poorer outcomes when they had undergone anti-tumour treatment within 14 days of a COVID-19 diagnosis.<sup>34</sup> Recommendations from this report suggest that cancer patients receiving similar treatments should be rigorously tested for COVID-19 and consider dose reduction to avoid immunosuppression.

Data from New York suggests that old age is a driving factor in cancer patients being more frequently intubated than non-cancer patients, however there were no significant differences relating to mortality.<sup>35</sup> Although this data is drawn from a larger sample than that of the Wuhan study, the issue of cancer heterogeneity remains and limits analysis.

More recent findings from the UK Coronavirus Cancer Monitoring Project (UKCCMP) have shown that mortality from COVID-19 in cancer patients is driven by age, gender and certain comorbidities, such as cardiovascular disease and hypertension.<sup>36</sup> Findings also show no evidence that patients taking cytotoxic chemotherapy or other anticancer treatments have an increased risk of mortality compared to those not on active treatment when facing COVID-19.

Recommendations from the UKCCMP include shielding cancer patients from the virus through self isolation, reducing hospital visits and protecting cancer work-streams from cross-contamination with COVID work-streams in hospitals.<sup>36</sup> The study notes that patients regularly ask if they are at greater risk of dying from COVID-19. The authors responded with “not necessarily no”. In cancer it appears that “COVID-19 mortality is principally driven by advancing age and the presence of other non-cancer comorbidities.”<sup>36</sup>

The picture for haematological malignancies appears to be slightly more complicated, leading some research projects to consider them separately from solid tumours.<sup>37</sup> There is concern of a higher mortality risk related to the immunosuppressive effects of their treatments and how recently the patient was diagnosed,<sup>37,38</sup> the most critical window being five years from diagnosis.<sup>37</sup> This effect is most apparent when compared to the general population, but research findings comparing haematological malignancies with solid malignancies can be conflicting.<sup>38</sup> Larger cohort studies are needed to draw clearer conclusions. An increased risk of COVID-19 related mortality in these patients raises concerns around exposure, particularly regarding hospital appointments, strict adherence to shielding measures and whether quarantine extensions should be considered to mediate their risk.<sup>38</sup>

Pressure has been placed on healthcare to create COVID-free spaces so that there is enough capacity to safely continue critical cancer care,<sup>39</sup> however this is only a realistic goal for cancer centres independent from general hospitals.<sup>40</sup> Cancer Core Europe describes that to facilitate these COVID-free spaces, many face-to-face appointments have been moved to phone appointments and non-urgent visits delayed. In addition, visitors and partners have not been allowed to accompany patients for infusions or radiotherapy.<sup>40</sup>

Similar precautions have been taken by cancelling non-emergency surgeries and considering alternatives where possible such as radiotherapy.<sup>40, 41</sup> These decisions are encouraged to be taken on a patient by patient basis weighing the risk of their cancer against the risk of COVID-19 infection and complications.<sup>39, 40</sup>

Looking ahead, Cancer Core Europe predicts two key complications from the current strain on cancer services as described below:<sup>40</sup>

- Patients whose cancer outcomes have been negatively impacted by the COVID-19 reorganisation demanding answers
- The growing queue of patients who continue to require cancer treatment who have been delayed due to the prioritisation of care and services

Three key priorities of NHS cancer services at this time and moving forward are to provide:<sup>42</sup>

- Sufficient capacity
- Equitable access to services based on clinical priority
- Patient confidence in the safety of treatments and services.

## Screening + Referrals

There has been a significant drop in cancer referrals since the onset of the pandemic. Although this is slowly beginning to return to normal,<sup>42</sup> every week that had below average service provision creates a backlog which places additional pressure on available services<sup>41</sup> and increases risk to patient mortality.<sup>43, 44</sup>

As of June 2020, Cancer Research UK estimates that over two million people in the UK are awaiting screening, tests or treatment since lockdown began.<sup>41</sup> This figure is due to the cumulative impact of paused screening. Every week 7,000 people are not referred for further tests and 380 cancers are not diagnosed through screening programmes.

*“Delays to diagnosis and treatment could mean that some cancers will become inoperable. Patients shouldn’t need to wait for this to be over before getting the treatment they need.”*

*Professor Charles Swanton, Cancer Research UK*

Urgent referrals dropped to 25% of usual levels at the start of the pandemic. This means 290,000 fewer people were referred for further tests compared to the usual rate. This is largely attributed to fewer people presenting to their GP with symptoms that may be indicative of cancer.<sup>41</sup>

Data from May 2020 showed that only 47.9% of people began their first definitive treatment for cancer within 62 days of referral from an NHS cancer screening service (all cancers). A sharp drop from 81.2% in April 2020.<sup>45</sup>

As services begin to resume, there may be the additional challenge of fostering confidence in the public that it is safe to attend screening and undergo diagnostic tests or attend appointments.<sup>42</sup> This has the potential to be a compound factor in LGBT populations owing to the preexisting levels of healthcare avoidance.<sup>21</sup>

Macmillan reports that 1 in 3 (35%) people with cancer in London are feeling stressed, anxious or depressed as a result of lockdown. 1 in 6 people report seeing their mental health deteriorate whilst 8% of respondents said that they had experienced panic attacks as a result of the pandemic and lockdown. Physical health markers such as sleep, fatigue and pain are also all reported to have worsened.<sup>46</sup> With the increased incidence of mental health diagnoses in LGBT populations,<sup>21, 23</sup> it is plausible to consider that these issues may be experienced more often by LGBTIQ+ cancer patients.

## COVID-19 + LGBT

LGBTFoundation reports a sharp increase in helpline calls related to discrimination since the onset of the pandemic. Late March to early April saw 4.5 times as many calls about biphobia, double the amount of calls about transphobia and a 52% increase related to homophobia. 8% of respondents to their survey reported feeling unsafe with where they were currently staying, but this figure rises to 15% for disabled people and 17% for trans and non-binary people.<sup>47</sup>

Domestic violence related support also saw an increase in demand with a 38% rise in calls but more than 8 times as many domestic abuse webpage views. Violence outside the home and fear of hate crime is also raised by the survey.<sup>47</sup>

Mental health support appears to be a common concern in our community during the pandemic. 42% of LGBT people reported wanting mental health support, which raised to 66% for Black and minority ethnic (BAME) LGBT people, 48% of disabled LGBT people, 57% of trans people and 60% of non-binary people. Medical appointments have also been affected for 34% of LGBT people, with the disabled and the elderly most affected.<sup>47</sup>

The amount of LGBT people living alone during the pandemic is particularly concerning, especially in older people (40%), putting them at increased risk of social isolation. It is known that LGBT people are less likely to have family or friends involved in their care<sup>27, 48, 49</sup> and we know that COVID-19 severity is related to the age of the patient.<sup>50</sup> This presents a potentially dangerous compound effect.

Employment rates are lower for trans and non-binary people,<sup>23</sup> with BAME trans people being most affected. 60% of trans people report they earn less than £20,000 per year.<sup>47</sup> Since being faced with the pandemic, 12% of LGBT people revealed they needed financial support but had not been able to secure any and this figure rises to 21% for trans people.<sup>47</sup>

American data shows that LGBTQ people are more likely to become unemployed or have their work hours cut as a result of the pandemic, creating greater financial instability.<sup>51</sup> These issues are felt harder by Black and minority ethnic members of the LGBTQ community.<sup>52, 53</sup>

It is important to remember that being LGBTIQ+ places you at a greater chance of intersectional oppression and this point is salient in a global health crisis that disproportionately affects people of colour.<sup>52</sup> In the United States black people and LGBTQ people are more frequently in jobs that are likely to be affected by the pandemic.<sup>53</sup> As a result, transgender people in the United States are reporting high levels of job loss and financial risk and these impacts are experienced at higher levels for trans people of colour.<sup>52</sup>

Poor monitoring and data collection continues to obstruct a clear picture of the economic and health effects of the pandemic on the LGBTIQ+ community.<sup>53</sup> Until we are able to provide better sexuality and gender monitoring, as per the LGBT Action Plan,<sup>54</sup> our ability to understand the impact of the virus on our community will be unclear.

## Support Services

Consortium supports LGBT+ groups and organisations in the UK and reports that the LGBT third sector is experiencing severe disruption due to the pandemic.<sup>55, 56</sup> A quarter of their members are experiencing an immediate loss of income or funding and 61% of organisations are cancelling fundraising and community events. As a result, both services and beneficiary reach are compromised. Donations and volunteer retention has also shown immediate reduction.<sup>56</sup>

Numerous support and service based organisations reported an increase in demand yet others have seen or predicted a decrease.<sup>55</sup> This variance may be attributed to issues with taking work online and the ability to create safe digital spaces from which to provide services during lockdown. Moving services online poses multiple challenges. Consortium reports that safeguarding, service user resistance and practical implications of achieving work and support have been felt by multiple service providers.<sup>55</sup> Similarly, digitisation of face-to-face support can be difficult to achieve in certain groups due to issues with novel technology and digital poverty, particularly for older service users.<sup>57</sup>

A respondent to the LGBT Foundation survey writes:

"On-line services are OK when you have the opportunity to see friends, but not for everybody. I have five friends in their 70s or 80s who are LGBT who live by themselves and don't have smart phones or computers. Two of them also don't have a TV. We have to rely on landlines"<sup>47</sup>

Being able to maintain LGBTIQ+ services during public health crises is paramount. 64% of LGBT people told the LGBT Foundation that they would rather receive LGBT specific support during this time. This desire is greater in BAME (71%), disabled (69%), trans (76%) and non-binary people (74%).<sup>47</sup>

LGBT cancer patients emphasise the importance of support groups<sup>27, 58</sup> especially those that reflect their identity or show some community awareness.<sup>48, 59</sup> Patients also report being more satisfied with support when it is delivered by someone who is aware of their sexual orientation.<sup>60, 61</sup>

Consortium reports that LGBT+ service providers' primary concerns moving forward are the wellbeing and safety of their beneficiaries, wellbeing of staff and volunteers, income and service stability.<sup>56</sup>

These issues are wide reaching. In America, front line support for LGBT cancer patients has been affected and the majority of services have been forced to move online, particularly those for communities of colour.<sup>2</sup> Although the LGBT sector has moved towards co-operative work to support operations and have provided small self-generated relief grants for those most at need, there is a distinct lack of funding or security for services and in turn a lack of stable support for their beneficiaries.<sup>2</sup>

It is clear that LGBTIQ+ people face healthcare barriers and negative outcomes specific to our community and that these issues place us at risk of clinical and social impacts related to COVID-19.

Cancer patients are also being heavily impacted during this time with reductions to services, changes to treatments and psychological distress.

It is our intention to take an intersectional approach in exploring the experiences of LGBTIQ+ people affected by cancer during this global pandemic and identify any compound difficulties they may be facing.

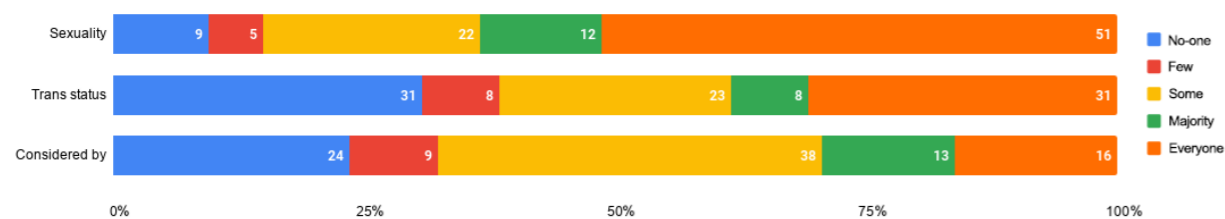
## Respondent Demographics

This survey reports on 74 respondents who identified themselves as:

<b>Race or ethnicity</b> 94.6% White 2.7% Mixed race or ethnicity 2.7% Asian	<b>Gender</b> 50% Male 41.9% Female 8.1% Non-binary	<b>Disability</b> 32.4% Disabled 67.6% Not disabled
<b>Country of Residence</b> 50% UK 35.1% Australia 9.5% America 4.1% Canada 1.4% Germany	<b>Age</b> 5.4% 18-25 4.1% 25-30 10.8% 30-40 16.2% 40-50 24.3% 50-60 37.8% 60+	<b>Marital Status</b> 33.8% Married/ Civil Partner 31.1% Single (never married) 12.2% Long term partner(s) 12.2% Domestic partnership 5.4% Widowed 4.1% Divorced 1.4% Separated
<b>Sexual Orientation</b> 64.9% Gay or Lesbian 12.2% Bisexual 9.5% Queer 8,1% Heterosexual 4.1% Pansexual 1.4% Asexual	<b>Intersex</b> 95.9% Not intersex 2.7% Don't know 1.4% Intersex	<b>Trans Status</b> 87.5% Cisgender 12.5% Transgender

## Disclosure in Healthcare

Our survey shows that 51% of LGBTIQ+ respondents are out about their sexuality to everyone in their healthcare teams but 9% are not out to anyone in these settings. In trans respondents, 31% are out to all of their healthcare staff but equally 31% are not out to anyone.



Only 16% of respondents felt that healthcare staff considered their sexuality and/or trans status at all times whilst 24% felt this was never the case. The majority (91%) of respondents reported no change in the levels of consideration for their identity during the pandemic.

## Isolation + Loneliness

55% are worried about not seeing their friends or family

43% are concerned about social isolation

41% are living alone

“Being single with no supportive family and shielding alone has been incredibly stressful. A friend and fellow cancer patient died during this period and not being able to mourn their death with others/ our community has been really hard.”

The standard rate of chronic loneliness in Great Britain is around 5% but 14.3% of the population have reported that loneliness attributed to lockdown was affecting their wellbeing.<sup>62</sup> LGBT Foundation reports that 27% of LGBT people are concerned about isolation at this time.<sup>47</sup> Our data shows that isolation is a greater concern in LGBTIQ+ persons with cancer compared to both the broader LGBT community and the general population. Data on loneliness and isolation in the general cancer population as a result of the pandemic is not yet publicly known, but a relationship is anticipated.<sup>63</sup>

Family and friends are key to both emotional and social support in cancer.<sup>61, 64</sup> However, LGBT cancer patients are more likely to report no family or friends are involved in their care<sup>27, 48, 49</sup> This is particularly important during a public health crisis that mandates a lockdown.

“As disabilities get worse, I will need to go into a home of some sort as have no one I can depend on to care about me, pandemic or not.”

In contrast, one respondent shared how their polyamorous family had allowed there to be more support for them during the pandemic:

“Actually, given my bisexual and polyamorous family we are dealing well with lockdown. We are 3 in the partnership and have found throughout that there is more strength and support because of that.”

41% of respondents live alone and at the time of data collection three quarters of this group were socially distancing and one quarter were isolating. 63% of all respondents felt completely safe where they were staying but 4% of our respondents reported feeling unsafe. The risk that people may be staying with LGBT-phobic family or households at this time is still a key concern.<sup>47</sup> This potential for a harmful environment in addition to the stress of being affected by cancer during the pandemic may have a serious effect on mental health. One non-binary respondent shared:

“My mother is homophobic and transphobic and covid has made me have to push back supports til it calms down. I want to be me.”

Previous research into the effects of quarantine shows that people experience feelings of separation, isolation, boredom and uncertainty and in some cases this can progress to a suicide risk.<sup>65</sup> Longer periods of quarantine were more associated with PTSD symptoms and depression.<sup>66</sup> In the case of cancer patients during the current coronavirus pandemic, this is an important issue due to the length of shielding requested by the UK government which ran from March 29th to July 31st, inclusive.<sup>67</sup>

*“It has probably made me more reclusive than I have become over the last few years.”*

It's important to note that a large proportion of survey respondents reside in Australia. The Australian government did not mandate shielding or isolation measures for vulnerable people beyond that of the general public. Instead, Australia's government issued guidance on staying safe<sup>68, 69</sup> and asked people who may be at risk to create a COVID Action Plan with their local doctor.<sup>70</sup>

53% of respondents had face-to-face contact daily and age did not affect this. 7% of people responded that they never had face-to-face contact. Contact via the phone was high with 35% using calls every day and 39% doing so a few times a week. Respondents over 60 were more likely to talk to somebody daily than other age groups. Messaging was popular with all age groups showing that 55% used messages daily and 34% used them a few times a week.

Recent developments in communication technology and conferencing software have provided many different options for people to stay connected during the pandemic.<sup>65</sup>

*“Zoom calls & conferences are nice to be involved with.”*

Although they still have limitations. One respondent mentioned they were experiencing “Video conferencing fatigue” and that they missed “face to face intervention”. Others shared:

*“I've always enjoyed face to face meet ups just for an hour to talk about things, now with lack of staff for Young's patients within the hospital in Exeter I find I don't know who to go to and how to have these moments and it's hard.”*

*“I miss being face to face with my friends.”*

## Physical Health

*43% are worried about their own health*

*39% are worried about the health of their friends and family*

*“I am despairing over the stupidity out there, no masks, little social distancing, this thing is going to kill millions more. It's all very distressing.”*

Our findings show that LGBTIQ+ patients with cancer during the pandemic are highly concerned with their own health and also that of their friends and family. This finding is supported by data from other cancer patients who had high levels of concern for themselves, family and progression of their disease due to treatment interruptions or delays as a result of the pandemic.<sup>71, 72</sup>

*“Was meant to have further investigation through scans that have been cancelled. It has caused me a lot of anxiety due to not having these scans and worried that they won't know if the cancer has spread.”*

22% of our respondents are concerned about being able to access healthcare at this time. 19% are concerned about their medication and 16% are concerned about their ability to contact their cancer team. 8% said they are somewhat unsure and 7% are completely unsure about who to contact regarding their cancer. The majority of respondents do know who to contact with 49% being very confident about this.

*“Can't get hold of hospital so upset.”*

30% of respondents felt that the potential impact of COVID-19 to their health had not been explained to them at all. 39%-46% felt they were somewhat aware but only 11% were completely satisfied with the level of explanation they had received.

Government advice was largely seen to be inline with the medical advice received by patients, however, 14% felt that there was very little correlation between the two sets of information or guidance. This was consistent across all countries.

Of those who have carer arrangements, 74% of these said there were no changes to their support, with 11% reporting moderate to severe changes.

64% reported no delay in presenting to their GP. 21%-34% reported some delay in contacting their GP and 2% have avoided the service completely.

Respondents have mixed views about their appointments being moved to phone or video calls. Although necessary<sup>41</sup> these changes inhibit the positive effect of rapport with the cancer patient and make it harder to discuss or manage their concerns.<sup>72</sup> In patients who are able to attend appointments a smaller form of isolation is felt due to the inability to bring a friend or family member who would usually provide emotional support and aid in information retention and comprehension.<sup>72</sup>



“Many appointments have been switched to over the phone, which is not ideal as it is sometimes difficult to communicate physical symptoms in a way that will allow diagnosis and treatment. Several of my side effects of chemotherapy were dismissed or left untreated because I wasn't able to adequately explain the effects to my doctor over the phone.”

The lack of physical meetings and rapport may become a barrier to disclosure or personalised care for some patients, as evidenced by one respondent who shared:

“No one is that interested in intersex people like me, so I rarely mention it, big can of worms.”

Trans respondents also shared the impacts to their gender treatments as a result of the pandemic which have caused them distress.

“I was referred for top surgery at the start of the pandemic, and that has been put on hold which is a bit distressing.”

“T jabs are a nightmare to organise due to clinic restrictions.”

These experiences are reflected in preliminary findings from the TRANSCARECOVID-19 study in Germany, Austria and Switzerland. The study reports that 15.4% of participants have had a surgery cancelled due to the pandemic, 44.4% fear the pandemic will affect access to hormones, 14% would avoid COVID-19 testing for fear of discrimination and 4.3% have already done so.<sup>73</sup>

## Smoking + Drinking + Drug Use

*95% do not smoke*

*93% do not use recreational drugs*

*19% are drinking alcohol more often*

Our survey shows very low rates of smoking and recreational drug use in LGBTIQ+ people with cancer. One third of respondents do not drink alcohol. Of those who do drink, a third said that the pandemic has had no effect on their rate of drinking however 19% reported an increase in drinking related to the pandemic. 77% of respondents overall reported no concern about their smoking, drinking or drug use and only 2% of respondents showed high levels of concern about their intake.

It is encouraging to see low rates of smoking, drinking and recreational drug use in our data as these behaviours are known to be higher in LGB people when compared to their heterosexual peers.<sup>74, 75, 76, 77</sup>

In the UK, the rate of smoking in LGB people is 22.2% compared to 15.5% of heterosexuals.<sup>77</sup> Around two thirds of cancer survivors who are smokers continue to smoke after their diagnosis,<sup>78</sup> although the cessation rate is more favourable for head and neck cancer patients (50%).<sup>79</sup> With these two factors in mind, 95% of respondents being non-smokers is exceptionally low.

This may be in part mediated by age<sup>77</sup> or positive health behaviours when facing cancer<sup>80</sup> but future surveys should explore this further by asking if people are ex-smokers and the date and cause of cessation. Transgender smokers are also advised to quit at least three months before starting hormones.<sup>81</sup> Any information gathered on how or why smoking rates are so low for LGBTIQ+ cancer patients may help inform positive health strategies to reduce smoking in both the broader cancer and LGBTIQ+ communities.

Stress related to the COVID-19 pandemic has been linked to higher rates of alcohol use in the general population, particularly for those between 21-40 years.<sup>82</sup> In the LGBT community the LGBT Foundation found that 18% are concerned about alcohol abuse or relapse at this time.<sup>47</sup> Although 19% of our respondents reported an increase in drinking, only 3% of these said this was “much more often” and only 2% reported a high level of concern about this.

## Mental Health

30% are concerned about their mental health

58% report a negative impact on mental health

The coronavirus pandemic is resulting in higher anxiety and depression and lower mental wellbeing<sup>82,83</sup> that is increasing mental health helpline use in the general<sup>84</sup> and LGBT populations.<sup>47</sup> Factors most highly associated with anxiety during lockdown include loneliness, sex, disability and work being affected by the pandemic,<sup>85</sup> all of which are relevant to the respondents of our survey.

Although 58% of our respondents showed a reduction in mental health and wellbeing in relation to the coronavirus only 16% reported the lowest possible rating. Responses showed that trans and non-binary people averaged a lower mental health score than their cisgender peers.

Periods of quarantine can create immediate and long-term mental health impacts. Particular stressors include quarantine duration, infection fears, boredom, inadequate supplies, inadequate information, financial loss and stigma.<sup>86</sup> All of these stressors have been identified in our survey and have the potential to create a “perfect storm” for mental health issues.<sup>87</sup> For those with pre-existing health conditions, including cancer, this effect is shown to be more pronounced.<sup>88,89</sup>

Extended quarantine can increase the likelihood of long-term psychological impact manifesting as post traumatic stress, confusion, anger and a continuation in avoiding social spaces or direct contact with others who show any sign of coughing or sneezing.<sup>86</sup> It should be noted that social distancing is in itself a small act of isolation<sup>72,87</sup> and consideration for the complete amount of time a person has experienced shielding followed by strict social distancing is important.

For patients with a history of mental illness, these symptoms associated with the pandemic are likely to be more pronounced<sup>90</sup> and result in longer term effects.<sup>65,86</sup> A long-term plan for mental health recovery needs to be developed to support these patients as well as the general population.<sup>87</sup> As many as 70% of cancer patients in China reported needing mental health support in relation to the pandemic.<sup>71</sup> Likewise, when our respondents were asked about what support they would need in the future, psychological and emotional support were frequently mentioned:

“More specific cancer support. How to deal with not hearing from your cancer team for long periods of time. Knowing when to report new symptoms, etc.”

“Mental health support for increased anxiety about health during the pandemic.”

“Thinking about cancer orientated longtime psychotherapeutic support for a while, but there are no suitable offers.”

When asked if respondents would use LGBT specific support if it was available, 40% of responses were favourable and a further 38% said that they “might use” such a service.

Any support that is developed should be as intersectional, inclusive and person centred as possible. Our survey also revealed that many LGBTIQ+ people with cancer were also sources of support for others during this time, which was placing additional strain on their mental health.

“My separated parents each lean on me for support not each other because I am queer/single and don't have my own family and that has been one of the hardest things to deal with is their increased needs. Further being a single 50 year old queer has fewer positive role models for living a fulfilling life, and limited social supports for people not eligible for aged care or youth support.”

Interestingly, there were also a small cohort of respondents who discussed how autism had affected their experiences of the pandemic and lockdown. Autism and being transgender or non-binary are known to overlap<sup>91</sup> and are related to anxiety and depression.<sup>92</sup> Any future developments of support should consider how to be inclusive of this group. Autistic respondents were aware of the lack of support currently available to them and anticipated this continuing to be an issue in adjusting to the end of lockdown. When asked an open question about the support they might need as we come out of the pandemic, they responded:

“Yes - in regards to my autism.”

“Theres no support for adults on the ASD spectrum”

“Support around re-entering the social world and the anxiety that will come with moving out of shielding and the continued fear of catching COVID. I fear this will be very tricky with my ASD”

Approaching this issue from a different angle, one respondent described autism as advantageous in dealing with the lockdown period:

“Actually I've enjoyed lockdown. My son is diagnosed on the autism spectrum and I think I might be similar. Not having to go out and socialise has been very relaxing for me.”

## Work + Finances

23% are worried about job loss or affected employment

18% are concerned about their finances

*“How will I be able to work if classed as vulnerable?”*

In line with those concerned about job loss, a quarter of our respondents reported drastic changes to their employment and 2.7% are at risk of homelessness.

Work can be a potentially hostile environment for LGBT people<sup>23, 93</sup> with trans people less likely to find secure paid work.<sup>93, 52</sup> In addition, patients fighting cancer are often subject to costs related to their health or other forms of negative financial impact related to their disease or ability to work. This is known as financial toxicity. The issue of work is important when considering the effect of prolonged shielding measures on cancer patients at this time.

*“It has affected my uni teaching. They’ve announced that its opening in September but I am unsure on whether I will be allowed to go back that early on.”*

Financial insecurity may create new barriers to healthcare such as not being able to afford mental health support<sup>87</sup> or the inability to afford adequate PPE to be able to safely and securely leave the home. Likewise, poor finances may result in digital poverty that may exclude a person from being able to access support services that have taken their work online in response to the pandemic.<sup>2, 55</sup>

Economic disadvantage is strongly associated with risk factors for disease severity including obesity, asthma, diabetes, hypertension and cardio-metabolic complications,<sup>94</sup> all of which are known risk factors for COVID-19 mortality.

There has been a sharp rise in people claiming out of work benefits due to the pandemic,<sup>95</sup> therefore we must be mindful of the barriers to employment already faced by LGBTIQ+ people who are seriously and/or chronically ill with cancer as the post-COVID-19 job market becomes more competitive.

*“As an american here in the UK on a working visa with no work, I am using retirement funds that I had not planned to use. These funds will now not last as long. I will run out of money much sooner.”*

## Limitations

### Race + Ethnicity

While race is a social construct of physical differences, ethnicity is a complex characteristic comprising of genetics, social constructs, culture and behaviours.<sup>96</sup>

This survey fails to capture the experiences of LGBTIQ+ people of colour with cancer. The intersectional experience of their ethnicity, being LGBTIQ+ and being affected by cancer cannot be overlooked. Our failure to recruit BAME respondents may be in part due to our methods of using our pre-existing network of stakeholder relationships with cancer charities and oncological healthcare colleagues to advertise the survey. Another limitation was the inability to advertise the survey in physical spaces such as cancer centres due to their closing or reduced services during the pandemic and other restrictions on visitors in hospital grounds. Although we did contact BAME LGBT groups, we were not successful in recruiting respondents. These limitations were also noted by an LGBT COVID research project in mental health which advertised through similar methods in America.<sup>87</sup> Research suggests that Black cancer patients tend to derive support from their religion and church communities,<sup>97, 98, 99</sup> therefore this may be a potential recruitment route for future surveys.

*See appendix for further discussion.*

### Effective monitoring

A lack of representative data is a serious concern when evaluating the impact of the pandemic. Inconsistent monitoring of at-risk groups makes it difficult to assess their physical and mental health, accessing to therapy and well-being outcomes.<sup>100</sup>

Data that is collected is often an incomplete representation for the whole LGBTIQ+ community, particularly for the trans community.<sup>101</sup> Although this may be due to methodological or funding limitations, it is important that these experiences are captured as they are often those most negatively affected by social and health disparities. Data about the older transgender population is particularly vital as they are more likely to be vulnerable and more frequently isolated.<sup>51</sup> Oncology also needs to improve its ability to collect the experiences of BAME responders<sup>102, 103</sup> and extend this reach to BAME responders who identify as LGBTIQ+.

American data shows us that LGBT people are often in service industry, frontline and key worker roles.<sup>51</sup> This has important implications during the coronavirus pandemic and similar data needs to be collected for the LGBTIQ+ community in the UK. Stonewall provides guidance on the importance and execution of effective monitoring to both the collectors of the data and the respondents.<sup>104, 105</sup>

## Recommendations

### *Anticipating Additional Lockdown(s)*

It is important to reflect on the lessons learned from the first lockdown so we can identify strategies to support LGBTIQ+ cancer patients through any additional periods of shielding.

Currently, there is an unclear picture around the length of time antibodies remain detectable in the body.<sup>106</sup> The issue of antibody strength and longevity primarily applies to exposure as a form of immunity as any vaccine would be developed from patients with a strong antibody response to the virus.<sup>107</sup> Yet, without a vaccine there are serious long-term implications for those who have been categorised as high risk during the pandemic. Asymptomatic cases also present a high risk of a “silent spread” where potentially 40-45% of these cases are able to transmit the virus to another person.<sup>108</sup> Mass testing must be carried out to help control this problem, but this is limited by the accuracy of tests, sample collection and capacity.<sup>108</sup>

Therefore, social distancing measures are pivotal in controlling the spread of the virus. The National Police Chiefs’ Council (NPCC) reports a low rate social-distance violation, 3 fines per 10,000 people in England and 6 per 10,000 in Wales, but this only accounts for instances that resulted in penalty action.<sup>109</sup> Many cases have not been issued with a fine as seen in the overcrowding of England’s south coast beaches and the situation in Humberside where 900 reports to police were made a day.<sup>110</sup> Police attribute high rates of community reporting to the “wooly rules” set by the government,<sup>110</sup> and public surveys seem to support this with only 14% of the population fully understanding current lockdown guidance.<sup>111</sup> Although appeals to altruism are considered beneficial in encouraging people to follow social distancing guidance, they need to be accompanied by clear rationale and protocols.<sup>86</sup>

Strict compliance with social distancing guidelines has seen a reduction in the UK since the onset of the pandemic. “Complete compliance” appears to be related to age as those under 30 are the least compliant (20-30%) and those over 60 are the most compliant (50-55%). “Complete compliance” is also lower in high income households, in England, in urban areas and in adults living with children.<sup>111</sup> As this pandemic continues and government guidance regularly changes to navigate “hotspots” of infection, it is important to monitor noncompliance and appreciate the psychological impact this has on those most at risk. Evidence of the public ignoring health guidance through social gatherings and “anti-mask activism” will be psychologically distressing to LGBTIQ+ people affected by cancer and will likely affect confidence in the safety of exiting shielding and lockdown.

High levels of anxiety related to social spaces and interactions are seen after extended periods of quarantine or shielding.<sup>86</sup> If these anxious avoidant behaviours continue they not only create additional mental stress but also have a potential to extend the minor effects of isolation.<sup>72</sup> Mental health support is required to help manage these effects<sup>87</sup> and consideration should be given for the cumulative strain of shielding followed by social distancing and any potential return to lockdown or shielding. This is especially important for those LGBTIQ+ cancer respondents who are reporting unsafe home environments, financial and employment impacts, mental health strain and other reductions in quality of life markers.

Support that is community aware should be developed for LGBTIQ+ cancer patients with contingent strategies for any potential further lockdowns. Embracing modern technologies to provide these services may be key in combating feelings of isolation.<sup>65</sup> Providing sufficient medical resources with up to date and accurate information can also be beneficial forms of preparation for and during lockdown.<sup>88</sup> Failure to prepare will leave LGBTIQ+ cancer patients open to the same risk of psychological harm as the first lockdown with the potential for poorer outcomes as previous symptoms remain unaddressed and the pandemic continues to develop.

### *Suggested Actions*

In order to best support LGBTIQ+ people with cancer moving forwards, we recommend the following actions to any existing or emerging services:

- Improved monitoring of service users or patients that is LGBTIQ+ inclusive
- Existing cancer services should expect and be prepared for LGBTIQ+ patients to access their services
- The use of an intersectional model to best support those most at risk or with community specific considerations
- Any LGBTIQ+ orientated work should be community led or co-designed
- Development of long term psychotherapeutic support options to help cancer patients through and out of the pandemic
- Consideration for people with pre-existing mental health diagnoses through immediate and clear signposting of where they can access appropriate mental health support
- Development of COVID-free social spaces or events in order to aid transition out of shielding for those who are struggling to reintegrate into society
- Employment rights charities and organisations should be prepared to support LGBTIQ+ people with cancer returning to work and requesting reasonable adjustments or seeking permission to continue working from home
- Guidance on how to prepare for additional lockdowns or shielding, including advice on accessing or storing medication, food and where to find reliable, up-to-date information
- Identify clear communication channels for patients to contact their cancer teams
- Confidence and relationship building in virtual appointments that allow patients to share symptoms or personal issues and feel heard
- Any tumour specific guidance that deviates from government advice should be explained clearly to help patients understand any discrepancy
- Maximise use of social media engagement to encourage connection and shared activities between cancer patients who are isolated by shielding or social distancing

## Further Discussion

### *Race + Ethnicity*

We know that racial differences in outcomes exist in almost all cancers<sup>103, 112</sup> and that Black people self-report poorer experiences in oncological care.<sup>102</sup> The cancer patients experience survey (CPES) highlights particular areas of concern including delays in diagnosis and referrals, information provision, interactions with healthcare professionals and access to help and support.<sup>102, 103</sup> We must consider how Black and other minority ethnic cancer patients may be impacted by COVID-19 to attempt to protect these factors from further decline.

International and UK data shows that BAME groups are at increased risk of infection and death from COVID-19. In the UK, NHS data shows the highest risk for Black Caribbeans followed by Bangladeshi, Pakistani and Indian communities,<sup>113</sup> even when adjusted for by location.<sup>114</sup>

Early reports showed that Black males in England and Wales were up to 4.2 times more likely to die from COVID-19 than White males, however this disparity has reduced with more recent data to a rate of 2.9 times as likely.<sup>94, 113</sup> Bangladeshi communities are twice as likely to die from COVID-19.<sup>50, 94, 113</sup> White people have the lowest mortality risk across all ethnicities. This has been partly attributed to pre-existing health conditions such as hypertension and diabetes common in Black and South Asian communities.<sup>94, 115</sup> The importance of culturally appropriate positive health messages and preventive behaviour strategies is already understood to be paramount as we move forward through the pandemic and beyond.<sup>94, 116</sup> These approaches must consider the minority stress on these at risk communities and the fundamental differences in resources that prohibit them from pursuing good health, preventive medicine and disease management.

When controlling for age as a driving factor and focussing solely on data from 20 to 64 years old, we still see concerning rates of mortality by ethnicity. The mortality risk in this age bracket when compared to White people is 80% higher in Bangladeshi communities, 50% higher in "Black Other" and Pakistani and 30% higher in Black Caribbean.<sup>50</sup> The reliability of this racial disparity shows there may be additional socioeconomic or housing factors affecting these communities, their health and potential exposure to the virus compared to their White peers.<sup>50</sup>

Minority ethnic groups are more likely to live in London and other highly populated urban areas.<sup>113</sup> We know this is also true for LGBT people, with London being home to the largest proportion of LGBT residents.<sup>117</sup> Therefore, we must remember that LGBTIQ+ people of colour will be living in these conditions and may also be subject to compound effects related to housing and socioeconomic variables.

Around 2% of White British households experience overcrowding, compared to 30% of Bangladeshi households. Even when controlled for socioeconomic status, age, most regions, being a renter or homeowner and income bands, White British households were less likely to be overcrowded than those from all other ethnic groups combined.<sup>118</sup> This may pose an immediate challenge for those with cancer needing to isolate or shield during the pandemic and may cause additional stress for LGBTIQ+ cancer patients in unsupportive households.

Increased levels of racial abuse, hate crime and hate speech has been reported during the coronavirus pandemic.<sup>119</sup> This aligns with evidence of spikes of increased hate crime during and after other key events including the EU referendum and the terrorist attacks in 2017.<sup>100</sup> This has worrying implications for the increasing number of LGBT-phobic hate crimes seen before the pandemic<sup>120</sup> and the potential for them to increase in the current climate as evidenced by LGBT Foundation survey respondents.<sup>47</sup> It is important to be robustly intersectional in our monitoring of hate crimes against queer people of colour.

Distrust and fear are another barrier to healthcare leading to untreated issues and poorly managed chronic conditions.<sup>121</sup> These negative outcomes will have a further impact on COVID-19 mortality risk for BAME populations. Healthcare avoidance in LGBT populations is a frequent finding<sup>21</sup> so we must be vigilant for any compound effects of healthcare avoidance from LGBTIQ+ people of colour, especially as delays to presentation of cancer can seriously affect outcomes or mortality.<sup>41</sup>

A greater need for support for front line workers of colour is also a pressing topic, particularly in the NHS.<sup>100</sup> In the UK, we see 20.8% of the NHS workforce are from BAME backgrounds, 10% of which are Asian and 6.1% are Black. This is above the average amount of working age BAME people in the country (14.4%).<sup>122</sup> For those communities who are most at risk but also on the frontline, this may lead to additional stress and trauma.<sup>123, 124</sup> Workplace discrimination based on race has been identified within the NHS and there are concerns that these may preclude further maltreatment or lack of safe practice for BAME staff.<sup>123</sup>

In America this concern extends to BAME frontline staff who are also LGBT.<sup>2, 51</sup> Unfortunately, the UK Government does not publish sexual orientation demographics for the NHS workforce making it difficult to appreciate who is at this particularly high-risk intersection of COVID-19 impact in the UK. However, a staff survey of 569,440 NHS staff (48% response rate of 1.1 million survey invites<sup>125</sup>) showed that 3.3% of the workforce reported being gay lesbian or bisexual and 6.6% preferred not to say.<sup>101</sup> This rate is higher than the UK population average for LGB people (2.3%) and a marked increase over the prefer not say response rate (2.5%).<sup>117</sup> 45.5% of these LGBT NHS survey respondents said that they had experienced discrimination related to their sexuality<sup>101</sup> so attention should be given to the potential for COVID-19 to exacerbate these issues as per those with race<sup>123</sup> and the potential for compound discrimination against the LGBT BAME workforce.

Racial inequality in the NHS workplace combined with the stress of the pandemic may have the potential to result in under reporting of unsafe or unsatisfactory work conditions for fears of job security or discrimination.<sup>123</sup> Levels of financial instability at this time may become barriers to accessing social and mental health support that is community specific.<sup>2, 52, 53</sup> It may also impact the ability to afford personal protective equipment (PPE) which is now required in some public settings, although some Black men face the additional fear of wearing a mask due to negative public perception of Black men covering their faces.<sup>126</sup>

It is important that all of these issues are explored and understood to protect those who sit at the intersections of these disadvantages during the pandemic. We know that older Black men are 2-3 times more likely to develop prostate cancer than White men<sup>127, 128, 129</sup> and also be at risk of hypertension or being obese.<sup>127</sup> We also know that barriers to screening and other inequalities in healthcare can lead to greater risk or mortality<sup>129, 130, 131, 132, 133</sup> and there are campaigns to address this.<sup>134</sup>

Although prostate cancer is not more prevalent in men who sleep with men,<sup>135</sup> we do know that it has additional impacts post treatment sexually,<sup>135, 136</sup> mentally<sup>137, 138</sup> and in support.<sup>135</sup> As the pandemic places strain on the cancer system, it is imperative we do not lose sight of those affected at multiple levels and find a way to support them with an intersectional approach to their care.

## Gender

“Although sex and gender are often used interchangeably, they have separate meanings. Sex refers to the underlying biological profile of a person. It influences a range of bodily responses that are important in tackling infection or disease. Gender refers to the roles, behaviours, activities and attributes that any given society considers appropriate for men, women, and people with non-binary identities. Gender determines what is expected, valued or allowed in the behaviour of men and women.”<sup>139</sup>

Men have been identified as being at particular risk for COVID-19.<sup>113</sup> A similar gender weighting of severe infection has been seen in other zoonotic coronaviruses such as SARS and MERS.<sup>139</sup> This factor has been consistent in each race group.<sup>50</sup> It is important to understand the cause of this difference so that any guidance produced can be clear and accessible for trans and non-binary people.

Should the effect be due to genetics and chromosomal differences<sup>116</sup> whereby cisgender women receive greater immunity due to their XX chromosomes,<sup>140</sup> then we should consider how this would be expressed in any gendered public health messages or national reporting of sex or gender differences in COVID-19 risk or mortality. It is important that any discussion of sex differences are evidenced, clear and inclusive of trans and non-binary people or those with differences in sex development (DSD).

Socially based determinants of the COVID-19 gender difference have been attributed to observed behavioural differences between men and women. Poor hand washing and hygiene in men may be a factor,<sup>116</sup> but a more evidenced approach is the disparity in smoking between genders and how this could affect COVID-19 outcomes.<sup>141</sup> Although our data showed that LGBTIQ+ people with an experience of cancer had low smoking rates, best practice and preventive strategies should be sought for those in our community at particularly high risk of smoking and developing cancer.

Smoking is more common in men than women in the UK (15.9% men, 12.5% women<sup>77</sup>) and globally (34% men, 6% women<sup>142</sup>). Higher rates of smoking are also seen:

- in gay and lesbian smokers (22.2%) compared to heterosexual smokers (15.5%)<sup>77</sup>
- in trans smokers (35.5%) compared to cisgender smokers (20.7%)<sup>143</sup>
- in trans men compared to trans women<sup>144</sup>
- in socioeconomic variables such as housing: social (29.8%) and private (22.2%) renters compared to homeowners (7.9%)<sup>77</sup>
- by ethnicity with the highest rate in mixed ethnicity groups, but large differences also in Asian (13.9% in men and 2.9% in women), Chinese (12.6% in men and 4.0% in women) and Black (12.9% in men and 6.9% in women) communities.<sup>77</sup>

The potential risk of masculine socialisation for smoking must be considered alongside these other listed factors. Any cessation strategies should be transgender community appropriate<sup>143, 144, 145</sup> and backed by the government to assess efficacy and outcomes.<sup>146</sup>

Due to higher rates of smoking in men, passive smoking in male coded social spaces may also pose a health risk. Secondary smoke may increase risk for COVID-19 severity,<sup>141</sup> cancer<sup>147, 148</sup> and heart disease,<sup>149, 150</sup> a known high risk factor for COVID-19. This may also apply to the overcrowding seen in minority and low socioeconomic status households<sup>118</sup>. Likewise, this may also pose a risk in LGBTIQ+ social spaces due to the community's higher rate of smoking.

Data also shows that men are less likely to wear masks or other PPE to protect themselves and others from COVID-19 and are more likely to falsely believe that they are at a lesser risk of contracting the virus than women.<sup>151</sup> Reasons given for mask avoidance include the beliefs that they are “shameful, not cool, a sign of weakness, and a stigma”.<sup>151</sup> Young men have also been shown to ignore lockdown rules at a greater rate with 50% of 19-24 breaking social distancing guidance compared to 25% of young women.<sup>152</sup> Men under 45 made up 75% of the fixed penalty notices issued by police relating to the coronavirus for breaching public health regulations of which 57% were issued to 18-34 year olds.

These effects of gender may apply to both cisgender men and transmasculine people therefore it is important that trans and non-binary representation is included in any health messages or preventive health guidance aimed at men related to the coronavirus. Guidance should also be clear about the foundation and science behind its content and its use of sex and gender. This is so that trans people can accurately understand their relation to the message and mediate their risk with appropriate preventive behaviour. This is relevant to those with cancer and those without.

## Additional Quotes

### Isolation + Loneliness

"The lockdown has closed down great places to meet, and killed the income of many in the arts."

"Not me but the sauna has been closed."

"Feeling lonely sometimes."

"I am missing my partner."

"Having a smaller support system and a lack of familial support has been difficult to manage in coronavirus and I'm reliant on friends who are just trying to cope with it all too."

"Going thru a recent breakup and suffering with depression thats worsened since pandemic, difficult not to stay isolated which likely is making my depression worse."

"I've been fairly asexual since having hormone therapy, and since my partner passed, there's no use for me to try to be 'intimate' or 'try for a more intimate relationship' (albeit, via social distancing - obviously), as being mainly asexual means that there is less of a chance to have an intimate (albeit, socially distanced) relationship; thus, I'm more lonely at that level; there's no used to wishing, as most people don't understand asexuality). I'm still attracted to men (mainly bears), but as any form of sex is no longer an option, that adds to the loneliness, as well as a sense of "why bother any more"."

"Only missing my family and craving contact and normality."

"Terminally lonely. No cure for that. I don't relate to ppl much. Keep to myself. I'm pretty down & no support from so-called partner who is a male."

"Isolation, in that I have not had the ability to have other guys over at my home due to 6 foot spacing."

"Being with partner who lives interstate, international and interstate travel cancellations for bucketlist"

"Support for widows and widowers who've lost their soul-mate."

## Physical health

"Mammogram was cancelled, so I'm a little worried in case there is something wrong."

"Small anxiety - it would be good to have clarity and confirmation that I am still clear."

"Some anxiety that PSA may continue to increase."

"Harder to secure healthy fresh food at the start of the lockdown, was concerned about having enough medication when we had to isolate for 14 days due to symptoms"

"As a vulnerable (on the UK list) i was hoping to get food delivery help, but the question "do you have food for 2 days" was always yes so i did not get help."

"Tele consultation much easier to get to than in-person - but a little less satisfying."

"Not being able to have my bloodwork taken due to phone appointments means I don't really know how my disease is progressing. My specialist told me that he thought my cancer type did not put me at higher risk with COVID, but my treatment might. Then the government letters told me I was in the highest risk category. I've ended up shielding to be safe, but not sure if I'm suffering through isolation for no reason."

"Feel uncomfortable about lack of personal visits to health professionals - telephone consultation not a good substitute."

"Uncertainty - via phonecall the oncologist told me it was not necessary for me to shield, but official letters say otherwise. Concerning and upsetting to have to explain this regularly, and the move to phone appointment with oncologist meant that I haven't been able to be examined for a physical symptom."

"Consultations took place over the phone. CT scan delayed."

"Having to use public transportation to get from home to treatment is my worst issue."

"Radiotherapy was cancelled in favour of more invasive surgery (bilateral mastectomy) to avoid risk of repeated hospital visits. This change has been very emotional and difficult to accept. Many appointments have been switched to over the phone, which is not ideal as it is sometimes difficult to communicate physical symptoms in a way that will allow diagnosis and treatment. Several of my side effects of chemotherapy were dismissed or left untreated because I wasn't able to adequately explain the effects to my doctor over the phone."

"Left in limbo mostly, little is followed up"

"My hip replacement operation was cancelled."

"Anxiety about extent to which a formerly compromised immune system due to chemo might increase risk of C-19."

"Lack of treatment.. Lack of communication.. Lack of care."

"Surgery appointment with local doctors, no information on how you can contact them, so for me I've been sending pictures then waiting for results."

## Mental Health

“Depression, mental-limbo, reduced mobility.”

“There is limited support available to LGBT+ people during this time, which has only worsened during the pandemic. I can only imagine how challenging this time must be for trans people in our community.”

“A lot, i have difficulty with change in plans and just change in general and specifically with cancer treatment etc.”

““Lots, fear of things, ability to cope, lack of connection, uncertainty and misinformation about cancer treatment, lots of other things.”

“Regular/constant low grade anxiety and uncertainty.”

“The hardest challenge for me was the impact of supporting others, my parents, and work colleagues while being completely isolated, living alone with no partner, family or even flatmates. Being exhausted from providing support to others and having no emotional energy left to reach out for my own social support needs with friends. As someone who works for a major LGBTI support service, I can't use that service because I work there. Who helps the helper with LGBTI peer support?”

“Having to support my wife who is struggling with covid restrictions while still trying to heal my mind.”

## Work + Finances

“I was due to go back to work after surgery but covid has delayed this.”

“I have lost my job.”

“As I manage support services and have responsibility for some income generation, I am more busy with less staff”

“Caring responsibilities and the need to WFH around them has extended my working hours.”

“I had been applying for university jobs with a UK Tier 1 Exceptional Talent job and now there are no jobs so I am using retirement funds to live.”

“I am working temp as reception, unable to find work in professional role.”

“I've been less productive in my opinion.”

“Job has not been in touch or offered support.”

“Restricted my ability to work as a patient advocate and other charity/community work.”

“It has affected my uni teaching. They've announced that its opening in September but I am unsure on whether I will be allowed to go back that early on.”

“No jobs to apply for.”



## Support Needs

### Work + Finances

"Would benefit from more support at work (I work in healthcare)."

"Legal support or job advocacy."

### Physical Health

"More awareness of trans people's rights in health teams."

"Public health policies created to protect everyone."

"Clear details on who to contact, and expectations of how and when they will get back to me."

"Better information liaising between healthcare and community and more peer support options."

"More Information to be passed down the line."

"Face to face appointments to replace those that have been moved to phone appointments - so that I can be physically examined by oncologist."

"Ability to exercise and remain as fit as I was, weight gain."

"More talk , updates , and actually be told what the plans are and who I can contact"

## Mental Health

"Not now but could do if next appointment is not positive."

"Safe talking space."

"Somewhere to be me."

"Much more counselling like weekly or more and more contact with queer community and peers and more support from current health care team."

"Mental health support for increased anxiety about health during the pandemic."

"Emotional Depression for both prostate cancer and testing positive for the coronavirus"

"Mental health and re-socialising."

"Yes more extensive support, can't cope on my own."

"Psychological support including for my partner who has had kidney failure during COVID 19."

"Support for compassion fatigue."

"Support around re-entering the social world and the anxiety that will come with moving out of shielding and the continued fear of catching COVID. I fear this will be very tricky with my ASD."

"Group therapy."

"Mental health and re-socialising."

**Ace**

An umbrella term to include variations in an absence of sexual or romantic interest, including the experiences of asexual, aromantic, demi-sexual, demiromantics and grey-As.

**Agender**

A lived experience that does not relate to gender.

**Assigned Female at Birth (AFAB)**

Any person who's sex assignment at birth resulted in a declaration of "female".

**Assigned Male at Birth (AMAB)**

Any person who's sex assignment at birth resulted in a declaration of "male".

**Asexual**

An absence of sexual attractions, feelings or desires.

**Autistic Spectrum Disorder (ASD)**

A term used to describe a number of symptoms and behaviours which affect the way in which a person understands and reacts to the world around them. It is an umbrella term which includes autism, Asperger syndrome and pervasive developmental disorders.

**BAME**

Initialisation referring to Black, Asian and Minority Ethnic communities. Also used as an acronym.

**Biphobia**

Prejudice, discrimination, fear or dislike towards someone that is bisexual based on their identity

**Cancer Patient Experience Survey (CPES)**

A national survey commissioned and managed by NHS England and overseen by a national Cancer Patient Experience Advisory Group.

**Cisgender**

A person whose gender identity matches the sex they were assigned at birth.

**COVID-19**

The disease caused by this new strain of coronavirus. 'CO' stands for corona, 'VI' for virus, and 'D' for disease. Formerly, this disease was referred to as '2019 novel coronavirus' or '2019-nCoV.'

**Differences in Sex Development (DSD)**

A group of rare conditions involving genes, hormones and reproductive organs that result in a sex development that is different to most other people's. Often used as the clinical term for intersex.

**Digital poverty**

The lack of sufficient information or communication technologies.

**Ethnicity**

A complex characteristic comprising of genetics, social constructs, culture and behaviours.

**Financial toxicity**

The problems a cancer patient has related to the cost of treatment. Can also refer to additional impacts of cancer on financial stability such as the ability to work.

**Gay / Homosexual**

A general label for same sex attraction. Most commonly used with men who are exclusively or preferentially attracted to other men in an emotional, sexual and/or physical manner.

**Genderfluid**

A person who does not have a fixed sense of gender.

**Heterosexual**

A person who is romantically or sexually attracted to someone of a different gender.

**Homophobia**

Prejudice, discrimination, fear or dislike towards someone that is homosexual based on their identity

**Gender**

The roles, behaviours, activities and attributes that any given society considers appropriate for men, women, and people with non-binary identities.

**Gender Dysphoria**

The discomfort felt between one's gender and sex assigned at birth.

**HCP**

Healthcare provider

**Intersectionality**

Theory introduced by Prof. Kimberlé Crenshaw to describe how multiple facets of a person's identity can combine to make unique forms of oppression and discrimination.

**Intersex**

Intersex is a general term used for a variety of instances in which a person is born with reproductive or sexual characteristics that do not fit the typical definitions of female or male.

**Lesbian**

A woman who is exclusively or preferentially attracted to other women in an emotional, sexual and/or physical manner.

**LGB**

Initialisation of Lesbian, Gay and Bisexual.

**LGBTIQ+**

Initialisation of Lesbian, Gay, Bisexual, Transgender, Intersex, Queer and others.

**LGBT**

Initialisation of Lesbian, Gay, Bisexual and Trans

**LGBT-phobia**

Prejudice, discrimination, fear or dislike towards someone that is LGBT based on their identity

**LGBT Action Plan**

A document of over 75 commitments from the UK Government published in 2018 that sets out to improve the lives of LGBT people.

**Men who have Sex with Men (MSM)**

A term for any man who has sex with men to include homosexual, bisexual, pansexual and those who do not identify as being LGBTIQ+

**MERS**

Middle East Respiratory Syndrome. A viral respiratory illness that was first reported in Saudi Arabia in 2012.

**Non-Binary**

A term for people who do not identify with the discrete categories of male and female.

**Pansexual**

A person whose attraction to others is not constrained by sex or gender.

**PPE**

Personal protective equipment. It can include items such as safety helmets, gloves, eye protection, high-visibility clothing, safety footwear and safety harnesses. It also includes respiratory protective equipment (RPE).

**PSA**

Prostate-specific antigen. A protein made by the prostate gland and found in the blood. PSA blood levels may be higher than normal in men who have prostate cancer.

**Queer**

An umbrella term for people in the LGBTIQ+ spectrum. It also refers to a mode of critical theory and political discourse and is a reclamation of a previous slur.

**Race**

A social construct that groups people based on physical features or differences.

**SARS**

A severe respiratory illness that is caused by a coronavirus. It is an infectious disease with symptoms including fever and cough and in some cases progressing to pneumonia and respiratory failure.

**SARS-CoV-2**

Severe acute respiratory syndrome coronavirus 2 is the strain of coronavirus that causes COVID-19.

**Sex**

The underlying biological profile of a person. It influences a range of bodily responses that are important in tackling infection or disease.

**Sexual Orientation**

A person's sexual feelings towards certain genders. Activity does not equate orientation as some people will have same-gender sexual activity for various reasons and not classify themselves as LGB+.

**Sexuality**

A term referring to someone's sexual attractions, behaviours, kinks and desires. Sexuality is a term broader than sexual orientation to encompass a sense of what a person enjoys and whom with.

**Trans Man**

A man who was assigned female at birth.

**Trans Woman**

A woman who was assigned male at birth.

**Transfeminine**

A person who was assigned male at birth but whose gender identity is more female than male.

**Transmasculine**

A person who was assigned female at birth but whose gender identity is more male than female.

**Transgender**

An umbrella term for a person who's gender identity differs from the one they were assigned at birth.

**Transphobia**

Prejudice, discrimination, fear or dislike towards someone that is transgender based on their identity

**UKCCMP**

UK Cancer Coronavirus Monitoring Project

**Women who have sex with Women (WSW)**

A term for any woman who has sex with women to include homosexual, bisexual, pansexual and those who do not identify as being LGBTIQ+

**Zoonotic**

A type of disease that passes from an animal or insect to a human.

## References

- Dean, L., Meyer, I.H., Robinson, K., Sell, R.L., Sember, R., Silenzio, V.M.B., Bowen, D.J., Bradford, J., Rothblum, E., White, J., Dunn, P., Lawrence, A., Wolfe, D. & Xavier, J. (2000). Lesbian, Gay, Bisexual, and Transgender Health: Findings and Concerns. *Journal of the Gay and Lesbian Medical Association*, 4(3), 102-151.
- The National LGBT Cancer Network (2020). Impact of COVID-19 on LGBTQ+ Communities of Color. <https://www.youtube.com/watch?v=U10Gvaky-dPUJ> accessed 25/06/20.
- Clavelle, K., King, D., Bazzi, A., Fein-Zachary, V. & Potter, J. (2015). Breast Cancer Risk in Sexual Minority Women during Routine Screening at an Urban LGBT Health Center. *Women's health issues : official publication of the Jacobs Institute of Women's Health*, 25, 10.1016/j.whi.2015.03.014.
- Goldstone, S., Palefsky, J.M., Giuliano, A.R., Moreira, E.D., Aranda, C., Jessen, H., Hillman, R.J., Ferris, D.G., Coutlee, F., Liaw, K.L., Marshall, J.B., Zhang, X., Vuocolo, S., Barr, E., Haupt, R.M., Guris, D & Garner, E.I. (2011) Prevalence of and risk factors for human papillomavirus (HPV) infection among HIV-seronegative men who have sex with men. *Journal of Infectious Diseases*, 203(1), 66-74.
- Tamargo, C. L., Quinn, G. P., Sanchez, J. A., & Schabath, M. B. (2017). Cancer and the LGBTQ Population: Quantitative and Qualitative Results from an Oncology Providers' Survey on Knowledge, Attitudes, and Practice Behaviors. *Journal of clinical medicine*, 6(10), 93. <https://doi.org/10.3390/jcm6100093>
- Light, B. and Ormandy, P. (2011). Lesbian, Gay and Bisexual Women in the North West: A Multi-Method Study of Cervical Screening Attitudes, Experiences and Uptake. University of Salford Report.
- Hunt, R., & Fish, J. (2008). Prescription for Change: Lesbian and bisexual women's health check. London: Stonewall.
- Agénor, M., Peitzmeier, S.M., Bernstein, I.M., McDowell, M., Alizaga, N.M., Reisner, S.L., Pardee, D.J., Potter, J. (2016). Perceptions of cervical cancer risk and screening among transmasculine individuals: patient and provider perspectives. *Cult. Health Sex.* 18, 1192–1206. <https://doi.org/10.1080/13691058.2016.1177203>.
- Agénor, M., White Hughto, J. M., Peitzmeier, S. M., Potter, J., Deutsch, M. B., Pardee, D. J., & Reisner, S. L. (2018). Gender identity disparities in Pap test use in a sample of binary and non-binary transmasculine adults. *Journal of General Internal Medicine*, 33(7), 1015–1017. doi:10.1007/s11606-018-4400-3
- Connolly, D., Hughes, X., & Berner, A. (2020). Barriers and facilitators to cervical cancer screening among transgender men and non-binary people with a cervix: A systematic narrative review. *Preventive Medicine*, 106071. doi:10.1016/j.ypmed.2020.106071
- Tracy, J., Lydecker, A. & Ireland, L. (2010). Barriers to Cervical Cancer Screening Among Lesbians. *Journal of women's health*, 19, 229-37.
- Brooks, H., Llewellyn, C. D., Nadarzynski, T., Pellosso, F. C., De Souza Guilherme, F., Pollard, A., & Jones, C. J. (2018). Sexual orientation disclosure in health care: a systematic review. *The British journal of general practice : the journal of the Royal College of General Practitioners*, 68(668), e187–e196. <https://doi.org/10.3399/bjgp18X694841>
- Ceres, M., Quinn, G.P., Loscalzo, M. & Rise, D. (2018). Cancer Screening Considerations and Cancer Screening Uptake for Lesbian, Gay, Bisexual and Transgender Persons. *Seminars in Oncology Nursing*, 34(1), 37-51.
- Institute of Medicine. The health of Lesbian, Gay, Bisexual and Transgender People: Building a foundation for better understanding. Washington DC: National Academy of Sciences; 2011.
- Fish, J. & Williamson, I. (2018). Exploring lesbian, gay and bisexual patients' accounts of their experiences of cancer care in the UK. *European Journal of Cancer Care*, 27(1).
- Public Health England (2019). Addressing inequalities in LGBT cancer screening coverage. <https://phescreening.blog.gov.uk/2019/03/15/addressing-inequalities-in-lgbt-cancer-screening-coverage/> accessed 15/07/20.
- Public Health England (2018). New PHE Screening leaflet for trans and non-binary people has improved awareness <https://phescreening.blog.gov.uk/2018/01/24/new-phe-screening-leaflet-for-trans-and-non-binary-people-has-improved-awareness/> accessed 15/07/20.
- Stonewall. (2018). LGBT in Britain: Trans Report. [https://www.stonewall.org.uk/system/files/lgbt\\_in\\_britain\\_-\\_trans\\_report\\_final.pdf](https://www.stonewall.org.uk/system/files/lgbt_in_britain_-_trans_report_final.pdf) accessed 15/07/20.
- Macmillan Cancer Support & Brighton and Hove LGBT Switchboard. (2018). LGBTQ people affected by cancer report. <https://www.switchboard.org.uk/wp-content/uploads/2018/05/LGBTQ-People-affected-by-Cancer-Report-2018.pdf> accessed 15/07/20.
- Margolies, L. & Scout, N.F.N. (2013). LGBT Patient-centred outcomes: Cancer survivors teach us how to improve care for all. <https://cancer-net-work.org/wp-content/uploads/2017/02/lgbt-patient-centered-outcomes.pdf> accessed 10/07/20.
- Stonewall. (2018). LGBT in Britain: Health Report. <https://www.stonewall.org.uk/lgbt-britain-health> accessed 10/07/20.
- Meads, C., Hunt, R., Martin, A. & Varney, J. (2019). A Systematic Review of Sexual Minority Women's Experiences of Health Care in the UK. *International Journal of Environmental Research and Public Health*, 16(17), 3032.
- Government Equalities Office. (2018). National LGBT Survey. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/722314/GEO-LGBT-Survey-Report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/722314/GEO-LGBT-Survey-Report.pdf) accessed 14/7/20.
- House of Commons: Women and Equalities Committee (2019). Health and Social Care and LGBT Communities. <https://publications.parliament.uk/pa/cm201920/cmselect/cmwomeq/94/94.pdf> accessed 2/11/2019.
- Fish, J., Williamson, I., Brown, J., Padley, W., Bell, K. & Long, J. (2018). Promoting good outcomes in Lesbian, Gay, Bisexual cancer care: a qualitative study of patients' experiences in clinical oncology. Leicester, De Montfort University.
- Southwark LGBT Network. (2019). Southwark LGBTQ+ Community Consultation 2018-2019. [https://southwarklgbtnetworkhome.files.wordpress.com/2019/06/southwark-lgbtq-community-consultation-2018-19\\_final.pdf](https://southwarklgbtnetworkhome.files.wordpress.com/2019/06/southwark-lgbtq-community-consultation-2018-19_final.pdf) accessed 25/06/20.
- Kamen, C. (2018). Lesbian, Gay, Bisexual and Transgender (LGBT) Survivorship. *Seminars in Oncology Nursing*, 34(1), 52-59.
- Taylor, E.T., Bryson, M.K., Boschman, L., Hart, L.T., Gahagan, J., Rail, G. & Ristock, J. (2019). The cancer's margins project: Access to Knowledge and its mobilization by LGBQ/T cancer patients. *Media and Communication*, 7(1), 102-113.
- Grant, J.M., Mottet, L.A., Tanis, J., Harrison, J., Herman, J.L., & Keisling, M. (2011). Injustice at every turn: A report of the National Transgender Discrimination Survey. [https://www.thetaskforce.org/wp-content/uploads/2019/07/ntds\\_full.pdf](https://www.thetaskforce.org/wp-content/uploads/2019/07/ntds_full.pdf) accessed 2/12/19.
- James, S.E., Herman, J.L., Rankin, S., Keisling, M., Mottet, L. & Ana, M. (2016). The report of the 2015 U.S. Transgender Survey. Washington DC: National Center for Transgender Equality.
- Macmillan Cancer Support. No-one overlooked: Experiences of LGBT people affected by cancer. <https://www.macmillan.org.uk/documents/aboutus/research/inclusionprojects/experiencesoflgbtpeople.pdf> accessed 10/12/19.
- Wang, H. & Zhang, L. (2020). Risk of COVID-19 for patients with cancer. *The Lancet: Oncology*, 21(4), E181.
- Xia, Y., Jin, R., Zhao, J., Li, W. & Shen, Huahao. S. (2020). Risk of COVID-19 for patients with cancer. [https://www.thelancet.com/pdfs/journals/lanonc/PIIS1470-2045\(20\)30150-9.pdf](https://www.thelancet.com/pdfs/journals/lanonc/PIIS1470-2045(20)30150-9.pdf) accessed on 10/07/20.
- Zhang, L., Zhu, F., Xie, L., Wang, C., Wang, J., Chen, R., Jia, P., Guan, H.Q., Peng, L., Chen, Y., Peng, P., Zhang, P., Chu, Q., Shen, Q., Wang, Y., Xu, S.Y., Zhao, J.P. & Zhou, M. (2020). Clinical characteristics of COVID-19-infected cancer patients: a retrospective case study in three hospitals with Wuhan, China. *Annals of Oncology*, 31(7), 894-901.
- Miyashita, H., Mikami, T., Chopra, N., Yamada, T., Chernyavsky, S., Rizk, D., & Cruz, C. (2020). Do patients with cancer have a poorer prognosis of COVID-19? An experience in New York City. *Annals of oncology : official journal of the European Society for Medical Oncology*, S0923-7534(20)39303-0. Advance online publication.
- Lee, L.Y.W., Cazier, J.B., Starkey, T., Turnbull, C.D., UK Coronavirus Monitoring Project Team, Kerr, R. & Middleton, G. (2020). COVID-19 mortality in patients with cancer on chemotherapy or other anticancer treatments: a prospective cohort study. *The Lancet*, 395(10241), 20-26.
- The OpenSAFELY Collaborative. (2020). OpenSAFELY: factors associated with COVID-19-related hospital death in the linked electronic health records of 17 million adult NHS patients.
- El-Sharkawi, D. & Iyengar, S. (2020). Haematological cancers and the risk of severe COVID-19: Exploration and critical evaluation of the evidence to date. *British Journal of Haematology*, 190(3), 336-345. 10.1111/bjh.16956
- Palmer, C., Johnson, P. & Powis, S. (2020). Advice on maintaining cancer treatment during the COVID-19 response. <https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/03/C0119-Maintaining-cancer-services--letter-to-trusts.pdf> accessed 26/06/20.
- Van de Haar, J., Hoes, L.R., Coles, C.E., Seamon, K., Fröhling, S., Jäger, D., Valenza, F., de Braud, F., De Petris, L., Bergh, J., Erberg, I., Besse, B., Barlesi, F., Garralda, E., Piris-Giménez, Baumann, M., Apolone, G., Soria, J.C., Tabernero, J. & Calsdas, C. (2020). Caring for patients with cancer in the COVID-19 era. *Nature Medicine*, 26, 665-671.

- Cancer Research UK (2020). Over 2 million people waiting for cancer screening, tests and treatments. <https://scienceblog.cancerresearchuk.org/2020/06/01/impact-of-coronavirus-on-cancer-services-revealed-over-2-million-people-waiting-for-screening-tests-and-treatments/> accessed 26/06/20.
- Palmer, C. & Johnson, P. (2020). Second phase of NHS response to COVID-19 for cancer services. <https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/06/C0511-second-phase-of-nhs-response-to-covid-19-for-cancer-services-letter.pdf> accessed 26/06/20.
- Sud A, Torr B, Jones ME, et al. (2020). Effect of delays in the 2-week-wait cancer referral pathway during the COVID-19 pandemic on cancer survival in the UK: a modelling study. *Lancet Oncol*. [https://doi.org/10.1016/S1470-2045\(20\)30392-2](https://doi.org/10.1016/S1470-2045(20)30392-2)
- Maringe, C., Spicer, J., Morris, M., Purushotham, A., Nolte, E. & Sullivan, R. (2020). The impact of the COVID-19 pandemic on cancer deaths due to delays in diagnosis in England, UK: a national, population-based, modelling study. *Lancet Oncol*. [https://doi.org/10.1016/S1470-2045\(20\)30388-0](https://doi.org/10.1016/S1470-2045(20)30388-0)
- NHS England (2020). Provider-based Cancer Waiting Times for May 2020 (Provisional). <https://www.england.nhs.uk/statistics/statistical-work-areas/cancer-waiting-times/monthly-prov-cwt/2020-21-monthly-provider-cancer-waiting-times-statistics/provider-based-cancer-waiting-times-for-may-2020-provisional/> accessed 10/07/20.
- Macmillan Cancer Support & YouGov (2020). Lost in Lockdown - Press Memo.
- LGBT Foundation. (2020). Hidden Figures: The impact of the COVID-19 pandemic on LGBT communities in the UK (Third Edition).
- Jowett, A. & Peel, E. (2009). Chronic illness in non-heterosexual contexts: An online survey of experiences. *Feminism & Psychology*, 19(4), 454-474.
- Hulbert-Williams, N.J., Plumpton, C.O., Flowers, P., McHugh, R., Neal, R.D. & Semley, J. (2017). The cancer care experiences of gay, lesbian and bisexual patients: A secondary analysis of data from the UK Cancer Patient Experience Survey. *European Journal of Cancer Care*, 26, e12670.
- Public Health England (2020). Disparities in the risk and outcomes of COVID-19. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/892085/disparities\\_review.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/892085/disparities_review.pdf) accessed 22/06/20.
- Human Rights Campaign Foundation (2020). The lives and livelihoods of many in the LGBTQ community are at risk amidst COVID-19 crisis. <https://assets2.hrc.org/files/assets/resources/COVID19-IssueBrief-032020-FINAL.pdf> accessed 23/06/20.
- Human Rights Campaign Foundation & PSB (2020). The economic impact of COVID-19 intensifies for transgender and LGBTQ communities of color. <https://assets2.hrc.org/files/assets/resources/COVID19-EconImpact-Trans-PCC-061520.pdf> accessed 23/06/20.
- Human Rights Campaign Foundation & PSB (2020). The impact of COVID-19 on LGBTQ communities of color. [https://assets2.hrc.org/files/assets/resources/COVID\\_19\\_EconImpact-CommunitiesColor052020d.pdf](https://assets2.hrc.org/files/assets/resources/COVID_19_EconImpact-CommunitiesColor052020d.pdf) accessed 20/06/20.
- Government Equalities Office. (2018). LGBT Action Plan: Improving the lives of lesbian, gay, bisexual and transgender people. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/721367/GEO-LGBT-Action-Plan.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/721367/GEO-LGBT-Action-Plan.pdf) accessed 14/7/20.
- Consortium of Lesbian, Gay, Bisexual and Transgender Voluntary and Community Organisations (2020). The impact of COVID-19 on LGBT service delivery. <https://www.consortiumlgbt/wp-content/uploads/2019/07/LGBT-Sector-Covid-19-Impact-on-LGBT-Service-Delivery.pdf> accessed 26/06/20.
- Consortium of Lesbian, Gay, Bisexual and Transgender Voluntary and Community Organisations (2020). An insight into the impact of COVID-19 on the LGBT+ sector in the UK. <https://www.consortiumlgbt/wp-content/uploads/2019/07/The-Impact-of-CV19-on-LGBT-Organisations.pdf> accessed 26/06/2020.
- Hill, R., Betts, L. R., & Gardner, S. E. (2015). Older adults' experiences and perceptions of digital technology: (Dis)empowerment, wellbeing, and inclusion. *Computers in Human Behavior*, 48, 415–423. doi:10.1016/j.chb.2015.01.062
- Hill, G. & Holborn, C. (2015). Sexual minority experiences of cancer care: a systematic review. *Journal of Cancer Policy*, 6, 11-22.
- Griggs, J., Maingi, S., Blinder, V., Denduluri, N., Khorana, A.A., Norton, L., Francisco, M., Wollins, D.S. & Rowland, J.H. (2017). American Society of Clinical Oncology Position Statement: Strategies for reducing Cancer Health Disparities among Sexual and Gender Minority Populations. *Journal of Clinical Oncology*, 35(19), 2203-2208.
- Maragh-Bass, A.C., Torain, M., Adler, R., Schnieder, E., Ranjit, A., Kodadek, L.M., Shields, R., German, D., Snyder, C., Peterson, S., Schuur, J., Lau, B. & Haider, A. (2017). Risks, Benefits and Importance of Collecting Sexual Orientation and Gender Identity Data in Healthcare Settings: A Multi-Method Analysis of Patient and Provider Perspectives. *LGBT Health*, 4(2), 141-152.
- Grossman, A.H, D'Augelli, A.R. & Hershberger, S.L. (2000). Social support networks of lesbian, gay and bisexual adults 60 years of age and older. *Journals of Gerontology*, 55(3), 171-179.
- Office for National Statistics. (2020). Coronavirus and loneliness, Great Britain: 3 April to 3 May 2020. <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/bulletins/coronavirusandlonelinessgreatbritain/3aprilto3may2020> accessed 23/07/20.
- Garutti, M., Cortiula, F. & Puglisi, F. (2020). Seven Shades of Black Thoughts: COVID-19 and Its Psychological Consequences on Cancer Patients. *Front Oncol.*, 10, 1357.
- Boehmer, U. (2018). LGBT Populations' Barriers to Cancer Care. *Seminars in Oncology Nursing*, 34(1), 21-29.
- Chatterjee, K., & Chauhan, V. S. (2020). Epidemics, quarantine and mental health. *Medical journal, Armed Forces India*, 76(2), 125–127. Advance online publication. <https://doi.org/10.1016/j.mjafi.2020.03.017>
- Hawryluck, L., Gold, W. L., Robinson, S., Pogorski, S., Galea, S., & Styra, R. (2004). SARS control and psychological effects of quarantine, Toronto, Canada. *Emerging infectious diseases*, 10(7), 1206–1212. <https://doi.org/10.3201/eid1007.030703>
- Public Health England. (2020). Guidance on shielding and protecting people who are clinically extremely vulnerable from COVID-19. <https://www.gov.uk/government/publications/guidance-on-shielding-and-protecting-extremely-vulnerable-persons-from-covid-19/guidance-on-shielding-and-protecting-extremely-vulnerable-persons-from-covid-19> accessed 22/07/20.
- Australian Government Department of Health. (2020). Isolation for coronavirus (COVID-19). <https://www.health.gov.au/news/health-alerts/novel-coronavirus-2019-ncov-health-alert/how-to-protect-yourself-and-others-from-coronavirus-covid-19/isolation-for-coronavirus-covid-19> accessed 4/08/20.
- Australian Government Department of Health. (2020). Advice for people at risk of coronavirus (COVID-19). <https://www.health.gov.au/news/health-alerts/novel-coronavirus-2019-ncov-health-alert/advice-for-people-at-risk-of-coronavirus-covid-19#advice-for-specific-communities-and-groups> accessed 4/08/20.
- Australian Government Department of Health. (2020). COVID-19 ACTION PLAN. <https://www.health.gov.au/sites/default/files/documents/2020/07/coronavirus-covid-19-action-plan.pdf> accessed 4/08/20.
- Qian, Y., Wu, K., Xu, H., Bao, D., Ran, F., Wei, W., Cheng, T., Huang, D., Lin, X., Bruera, E., Hu, D. & Wu, Y. (2020). A Survey on Physical and Mental Distress among Cancer Patients during the COVID-19 Epidemic in Wuhan, China. *Journal of Palliative Medicine*, 23(7), 888-889.
- Cook, K.A. & Kahn, J.M. (2020). Distancing Without Isolating - Connection in the Era of COVID-19. *JAMA Oncol*. doi:10.1001/jamaoncol.2020.2725
- Koehler, A., Motmans, J., Gueldenring, A. & Nieder, T.O. (2020). The impact of COVID-19 on transgender health in German speaking countries: Preliminary results of the TRANSCARECOVID-19 study. [https://transcarecovid-19.com/wp-content/uploads/2020/05/TransCareCovid-19\\_Germany\\_Fact\\_Sheet\\_ENGL\\_V1.0\\_FINAL.pdf](https://transcarecovid-19.com/wp-content/uploads/2020/05/TransCareCovid-19_Germany_Fact_Sheet_ENGL_V1.0_FINAL.pdf) accessed 4/08/20.
- Lee, J.G.L., Griffin, G.K., Melvin, C.L. (2009). Tobacco use among sexual minorities in the USA, 1987 to May 2007: a systematic review. *Tobacco Control*, 18, 275-282.
- Hughes, T. L., Wilsnack, S. C., & Kantor, L. W. (2016). The Influence of Gender and Sexual Orientation on Alcohol Use and Alcohol-Related Problems: Toward a Global Perspective. *Alcohol research : current reviews*, 38(1), 121–132.
- Greenwood, G.L. & Gruskin, E.P. (2007). LGBT Tobacco and Alcohol Disparities. *The Health of Sexual Minorities* pp 566-583.
- Office for National Statistics. (2020). Adult smoking habits in the UK: 2019. <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifexpectancies/bulletins/adultsmokinghabitsinbritain/2019> accessed 18/07/20.
- Tseng, T.S., Lin, H.Y., Moody-Thomas, S., Martin, M. & Chen, T. (2012). Who tended to continue smoking after cancer diagnosis: the national health and nutrition examination survey 1999-2008. *BMC Public Health*, 12, 784. doi:10.1186/1471-2458-12-784
- Gritz, E.R., Fingeret, M.C., Vidrine, D.J., Lazev, A.B., Mehta, N.V. & Reece, G.P. (2006). Successes and failures of the teachable moment: smoking cessation in cancer patients. *Cancer*, 106(1), 17-27. doi:10.1002/cncr.21598
- Jassem J. (2019). Tobacco smoking after diagnosis of cancer: clinical aspects. *Translational lung cancer research*, 8(Suppl 1), S50–S58. <https://doi.org/10.21037/tlcr.2019.04.01>
- Gender Identity Clinic. First appointment. <https://gic.nhs.uk/appointments/first-appointment/> accessed 3/08/20.
- Ahmed, Z., Ahmed, O., Aibao, Z., Hanbin, S., Siyu, L. & Ahmad, A. (2020). Epidemic of COVID-19 in China and associated Psychological Problems. *Asian Journal of Psychiatry*, 51, 102092. <https://doi.org/10.1016/j.ajp.2020.102092>

83. Torales, J., O'Higgins, M., Castaldelli-Maia, J.M. & Ventriglio, A. (2020). The outbreak of COVID-19 coronavirus and its impact on global mental health. *Int J Soc Psychiatry*, 66(4), 317-320. doi:10.1177/0020764020915212
84. Wang, S., Wen, X., Liu, B., Dong, Y. & Hu Cui M. (2020). Psychological influence of Coronavirus disease 2019 (COVID-19) pandemic on the general public, medical workers and patients with mental disorders and its countermeasures. *Psychosomatics*, <https://doi.org/10.1016/j.psym.2020.05.005>
85. Office for National Statistics. (2020). Coronavirus and anxiety, Great Britain: 3 April 2020 to 10 May 2020. <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/coronavirusandanxietygreatbritain/3april2020to10may2020>
86. Brooks, S.K., Webster, R.K., Smith, L.E., Woodland, L., Wessely, S., Greenberg, N. et al. (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *The Lancet*, 395(10227), 912-920. [https://doi.org/10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8)
87. Veldhuis, C.B. & McKeown, L. (2020). Mental health during the COVID-19 pandemic: Comparing LGBTQIA+ and cisgender heterosexual individuals. <https://youtu.be/ZC0iv2cMWaA> accessed 21/07/20.
88. Luo, M., Guo, L., Yu, M., Jiang, W. & Wang, H. (2020). The psychological and mental impact of coronavirus disease 2019 (COVID-19) on medical staff and general public – A systematic review and meta-analysis. *Psychiatry Research*, 291, 113190. <https://doi.org/10.1016/j.psychres.2020.113190>
89. Qian, Y., Wu, K., Xu, H., Bao, D., Ran, F., Wei, W., Cheng, T., Huang, D., Lin, X., Bruera, E., Hu, D. & Wu, Y. (2020). A Survey on Physical and Mental Distress among Cancer Patients during the COVID-19 Epidemic in Wuhan, China. *Journal of Palliative Medicine*, 23(7), 888-889.
90. Medscape. (2020). No 'Tidal Wave' of New Mental Illness; Pandemic Exacerbates Preexisting Conditions. <https://www.medscape.com/viewarticle/934334> accessed 23/07/20.
91. Stagg, S.D. & Vincent, J. (2020). Autistic traits in individuals self-defining as transgender or nonbinary. *European Psychiatry*, 61, 17-22.
92. Murphy, J., Prentice, F., Walsh, R., Catmur, C. & Bird, G. (2020). Autism and transgender identity: Implications for depression and anxiety. *Research in autism spectrum disorders*, 69, 101466.
93. Stonewall. (2018). LGBT in Britain - Work report [https://www.stonewall.org.uk/system/files/lgbt\\_in\\_britain\\_work\\_report.pdf](https://www.stonewall.org.uk/system/files/lgbt_in_britain_work_report.pdf) accessed 29/07/20.
94. Public Health England. (2020). Beyond the data: Understanding the impact of COVID-19 on BAME groups. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/892376/COVID\\_stakeholder\\_engagement\\_synthesis\\_beyond\\_the\\_data.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/892376/COVID_stakeholder_engagement_synthesis_beyond_the_data.pdf) accessed 16/07/20.
95. Office for National Statistics. (2020). Claimant Count : K02000001 UK : People : SA : Thousands. <https://www.ons.gov.uk/employmentandlabourmarket/peoplenotinwork/outofworkbenefits/timeseries/bcjd/unem> accessed 22/07/20.
96. Lee, C. (2008). "Race" and "ethnicity" in biomedical research: How do scientists construct and explain differences in health? *Soc Sci Med*, 68, 1183-90.
97. Reynolds, P., Hurley, S., Torres, M., Jackson, J., Boyd, P. & Chen, V.W. (2000). Use of Coping Strategies and Breast Cancer Survival: Results from the Black/White Cancer Survival Study. *American Journal of Epidemiology*, 152(10), 940-949. <https://doi.org/10.1093/aje/152.10.940>
98. Koffman, J., Morgan, M., Edmonds, P., Speck, P. and Higginson, I.J. (2012). "The greatest thing in the world is the family": the meaning of social support among Black Caribbean and White British patients living with advanced cancer. *Psycho-Oncology*, 21, 400-408. doi:10.1002/pon.1912
99. Koffman, J., Morgan, M., Edmonds, P., Speck, P. & Higginson, I.J. (2008). "I know he controls cancer": The meanings of religion among Black Caribbean and White British patients with advanced cancer. *Social Science & Medicine*, 67 (5), 780-789.
100. Welsh Government (2020). Black, Asian and Minority Ethnic (BAME) COVID-19 Socioeconomic Subgroup: report. <https://gov.wales/black-asian-and-minority-ethnic-bame-covid-19-socioeconomic-subgroup-report> accessed 22/06/20.
101. NHS England & NHS Improvement. (2020). Learning from experience: Exploring inequalities in the NHS Staff Survey.
102. Macmillan Cancer Support. (2019). No one overlooked: Experiences of BME people affected by cancer. <https://www.macmillan.org.uk/documents/aboutus/research/inclusionprojects/experiencesofbmepeople.pdf> accessed 20/07/20.
103. Fazil, Q. (2018). Race Equality Foundation: Cancer and black and minority ethnic communities. <https://raceequalityfoundation.org.uk/health-care/cancer-and-black-and-minority-ethnic-communities/> accessed 20/07/20.
104. Stonewall. (2016). Do ask, do tell: Capturing data on sexual orientation and gender identity globally. [https://www.stonewall.org.uk/sites/default/files/do\\_ask\\_do\\_tell\\_guide\\_2016.pdf](https://www.stonewall.org.uk/sites/default/files/do_ask_do_tell_guide_2016.pdf) accessed 20/07/20.
105. Stonewall. (2015). What's it got to do with you? <https://www.stonewall.org.uk/resources/whats-it-got-to-do-with-you> accessed 28/07/20.
106. Long, Q., Tang, X., Shi, Q. et al. (2020). Clinical and immunological assessment of asymptomatic SARS-CoV-2 infections. *Nat Med*. <https://doi.org/10.1038/s41591-020-0965-6>
107. Robbani, D.F., Gaebler, C., Muecksch, F. et al. (2020). Convergent antibody responses to SARS-CoV-2 in convalescent individuals. *Nature*. <https://doi.org/10.1038/s41586-020-2456-9>
108. Oran, D. P., & Topol, E. J. (2020). Prevalence of Asymptomatic SARS-CoV-2 Infection: A Narrative Review. *Annals of internal medicine*, M20-3012. Advance online publication. <https://doi.org/10.7326/M20-3012>
109. Currenti, R. & Flatley, J. (2020). POLICING THE PANDEMIC: Detailed analysis on police enforcement of the Public Health Regulations and an assessment on disproportionality across ethnic groups. National Police Chiefs' Council.
110. ITV News. (2020). Humberside Police received 900 complaints a day during lockdown about people breaking social distancing rules. <https://www.itv.com/news/calendar/2020-07-10/humberside-police-received-900-complaints-a-day-during-lockdown-about-people-breaking-social-distancing-rules> accessed 29/07/20.
111. Fancourt, D., Bu, F., Mak, H.W., Steptoe, A. (2020). Covid-19 Social Study: Results Release 17. [https://b6bdc03-332c-4ff9-8b9d-28f9c957493a.file.susr.com/ugd/3d9db5\\_8f72d734373243f68867ad8465fb9588.pdf](https://b6bdc03-332c-4ff9-8b9d-28f9c957493a.file.susr.com/ugd/3d9db5_8f72d734373243f68867ad8465fb9588.pdf) accessed 3/08/20.
112. Esnaola, N.F. & Ford, M.E. (2012). Racial Differences and Disparities in Cancer Care and Outcomes: Where's the Rub? *Surg Oncol Clin N Am*, 21(3), 417-viii. doi:10.1016/j.soc.2012.03.012
113. Office for National Statistics. (2020). Coronavirus (COVID-19) related deaths by ethnic group, England and Wales: 2 March 2020 to 15 May 2020. <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/articles/coronaviruscovid19relateddeathsbyethnic-groupenglandandwales/2march2020to15may2020#ethnic-group-differences-in-deaths-involving-covid-19-adjusted-for-socio-demographic-factors> accessed 27/07/20.
114. Aldridge, R.W., Lewer, D., Katikireddi, S.V. Mathur, R., Pathak, N., Burns, R., Fragaszy, E.B., Johnson, A.M., Devakumar, D., Abubakar, I. & Hayward, A., (2020). Black, Asian and Minority Ethnic groups in England are at increased risk of death from COVID-19: indirect standardisation of NHS mortality data. *Wellcome Open Res*, 5, 88.
115. Tillin, T., Hughes, A.D., Mayet, J., et al. (2013). The relationship between metabolic risk factors and incident cardiovascular disease in Europeans, South Asians and African Caribbeans. *J Am Coll Cardiol*, 61, 1777-86.
116. Gumber, A. & Gumber, L. (2020). Differential effects of COVID-19 by gender and ethnicity. *British Medical Journal*, 369.
117. Office for National Statistics. (2020). Sexual orientation, UK: 2018. <https://www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/sexuality/bulletins/sexualidentityuk/2018> accessed 16/07/20.
118. UK Government (2020). Overcrowded Households. <https://www.ethnicity-facts-figures.service.gov.uk/housing/housing-conditions/overcrowded-households/latest#main-facts-and-figures> accessed 22/06/20.
119. Sky News. (2020). Coronavirus: Hate crimes against Chinese people soar in UK during COVID-19 crisis. <https://news.sky.com/story/coronavirus-hate-crimes-against-chinese-people-soar-in-uk-during-covid-19-crisis-11979388> accessed 16/07/20.
120. BBC. (2020). Call for law change over increase in homophobic hate crimes in London. <https://www.bbc.co.uk/news/uk-england-london-51049336> accessed 31/07/20.
121. Burns, R. (2019). Medecins de Monde's 2019 Observatory Report Left Behind: The state of universal healthcare coverage. MIHADRI: [https://www.doctorsoftheworld.org.uk/wp-content/uploads/2018/11/DOTW\\_2019\\_lowress\\_alt.pdf](https://www.doctorsoftheworld.org.uk/wp-content/uploads/2018/11/DOTW_2019_lowress_alt.pdf) accessed 22/06/20.
122. UK Government. (2020). NHS workforce. <https://www.ethnicity-facts-figures.service.gov.uk/workforce-and-business/workforce-diversity/nhs-workforce/latest#by-ethnicity> accessed 16/07/20.
123. Royal College of Psychiatrists. (2020). Impact of COVID-19 on Black, Asian and Minority Ethnic (BAME) staff in mental healthcare settings | assessment and management of risk. [https://www.rcpsych.ac.uk/docs/default-source/about-us/covid-19/impact-of-covid19-on-bame-staff-in-mental-healthcare-settings-report-2020.pdf?sfvrsn=2a9083a\\_2](https://www.rcpsych.ac.uk/docs/default-source/about-us/covid-19/impact-of-covid19-on-bame-staff-in-mental-healthcare-settings-report-2020.pdf?sfvrsn=2a9083a_2) accessed 16/07/20.
124. British Medical Association. (2020). The mental health and wellbeing of the medical workforce – now and beyond COVID-19. <https://www.bma.org.uk/media/2475/bma-covid-19-and-nhs-staff-mental-health-wellbeing-report-may-2020.pdf> accessed 16/07/20.
125. NHS England (2020). NHS Staff Survey: National Results Briefing. [http://www.nhsstaffsurveyresults.com/wp-content/uploads/2020/01/P3255\\_ST19\\_National-briefing\\_FINAL\\_V2.pdf](http://www.nhsstaffsurveyresults.com/wp-content/uploads/2020/01/P3255_ST19_National-briefing_FINAL_V2.pdf) accessed 18/07/20.

126. New York Times. (2020). For Black Men, Fear That Masks Will Invite Racial Profiling. <https://www.nytimes.com/2020/04/14/us/coronavirus-masks-racism-african-americans.html> accessed on 10/07/20.
127. Dess, R.T., Hartman, H.E., Mahal, B.A., et al. (2019). Association of Black Race With Prostate Cancer-Specific and Other-Cause Mortality. *JAMA Oncol.*, 5(7), 975-983.
128. Prostate Cancer UK. (2016). Black men and prostate cancer. <https://prostatecanceruk.org/prostate-information/are-you-at-risk/black-men-and-prostate-cancer> accessed 20/07/20.
129. Jones, A. L., & Chinegwundoh, F. (2014). Update on prostate cancer in black men within the UK. *Ecancermedalscience*, 8, 455. <https://doi.org/10.3332/ecancer.2014.455>
130. Dean, L. T., Subramanian, S. V., Williams, D. R., Armstrong, K., Zubrinsky Charles, C., & Kawachi, I. (2015). Getting Black Men to Undergo Prostate Cancer Screening: The Role of Social Capital. *American journal of men's health*, 9(5), 385-396. <https://doi.org/10.1177/1557988314546491>
131. American Cancer Society. (2020). Cancer facts & figures for African Americans 2019-2021. <https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/cancer-facts-and-figures-for-african-americans/cancer-facts-and-figures-for-african-americans-2019-2021.pdf> accessed 5/08/20.
132. Roberts, A. (2010). Barriers preventing early detection of prostate cancer in Black African/Caribbean men living in Westminster. Westminster's Joint Strategic Needs Assessment.
133. Michigan Health Lab. (2019). Study Explores Why Prostate Cancer Mortality is Higher in Black Men. <https://labblog.uofmhealth.org/lab-report/study-explores-why-prostate-cancer-mortality-higher-black-men> accessed 20/07/20.
134. Orchid. (2019). Changing lives, engaging black African and black Caribbean men affected by prostate cancer. <https://orchid-cancer.org.uk/prostate-cancer/changing-lives-engaging-black-african-and-caribbean-men-affected-by-prostate-cancer/> accessed 20/07/20.
135. Prostate Cancer UK (2018). Prostate cancer tests and treatment: A guide for gay and bisexual men. [https://prostatecanceruk.org/media/2492023/guide\\_for\\_gay\\_and\\_bisexual\\_men-ifm.pdf](https://prostatecanceruk.org/media/2492023/guide_for_gay_and_bisexual_men-ifm.pdf) Accessed on 16th November, 2019.
136. Susman E. (2011). Gay Men Face Extra Burden Coping with Prostatectomy. *Oncology Times*, 33(11), 23.
137. Quinn, G.P., Schabath, M.B., Sanchez, J., Sutton, S.K. & Lee Green, B. (2015). The Importance of Disclosure: Lesbian, Gay, Bisexual, Transgender/ Transsexual, Queer/Questioning, Intersex (LGBTQI) Individuals and the Cancer Continuum. *Cancer*, 121(8): 1160-1163.
138. Gordon, J.R., Baik, S.H., Schwartz, K.T.G. & Wells, K.J. (2019). Comparing the mental health of sexual minority and heterosexual cancer survivors: A systematic review. *LGBT Health*, 6(6): 271-288.
139. UK Research and Innovation (2020). Sex, gender and COVID-19. <https://coronavirusexplained.ukri.org/en/article/cad0007/> accessed 18/07/20.
140. Klein SL, Flanagan KL. (2016). Sex differences in immune responses. *Nature reviews. Immunology*, 16(10), 626-638.
141. World Health Organisation. (2020). Smoking and COVID-19. <https://www.who.int/news-room/commentaries/detail/smoking-and-covid-19> accessed 19/07/20.
142. World Health Organisation. (2019). Breaking Barriers: Towards more gender-responsive and equitable health systems. [https://www.who.int/healthinfo/universal\\_health\\_coverage/report/gender\\_gmr\\_2019.pdf](https://www.who.int/healthinfo/universal_health_coverage/report/gender_gmr_2019.pdf) accessed 18/07/20.
143. Buchting, F. O., Emory, K. T., Scout, Kim, Y., Fagan, P., Vera, L. E., & Emery, S. (2017). Transgender Use of Cigarettes, Cigars, and E-Cigarettes in a National Study. *American journal of preventive medicine*, 53(1), e1-e7. <https://doi.org/10.1016/j.amepre.2016.11.022>
144. Tamí-Maury, I., Sharma, A., Chen, M., Blalock, J., Ortiz, J., Weaver, L., & Shete, S. (2020). Comparing smoking behavior between female-to-male and male-to-female transgender adults. *Tobacco prevention & cessation*, 6, 2. <https://doi.org/10.18332/tpc/114513>
145. Burkhalter, J. E., Warren, B., Shuk, E., Primavera, L., & Ostroff, J. S. (2009). Intention to quit smoking among lesbian, gay, bisexual, and transgender smokers. *Nicotine & tobacco research : official journal of the Society for Research on Nicotine and Tobacco*, 11(11), 1312-1320. <https://doi.org/10.1093/ntr/ntp140>
146. Lee, J. G., Matthews, A. K., McCullen, C. A., & Melvin, C. L. (2014). Promotion of tobacco use cessation for lesbian, gay, bisexual, and transgender people: a systematic review. *American journal of preventive medicine*, 47(6), 823-831. <https://doi.org/10.1016/j.amepre.2014.07.051>
147. Johnson, K.C. (2005). Accumulating evidence on passive and active smoking and breast cancer risk. *Epidemiology*, <https://doi.org/10.1002/ijc.21150>
148. Lee, P., Chamberlain, J. & Alderson, M. (1986). Relationship of passive smoking to risk of lung cancer and other smoking-associated diseases. *Br J Cancer* 54, 97-105. <https://doi.org/10.1038/bjc.1986.157>
149. Whincup, P.H., Gilg, J.A., Emberson, J.R., Jarvis, M.J., Feyerabend C., Bryant A. et al. (2004). Passive smoking and risk of coronary heart disease and stroke: prospective study with cotinine measurement. *BMJ*, 329, 200.
150. He, J., Vupputuri, S., Allen, K., Prerost, M.R., Hughes, J. & Whelton, P.K. (1999). Passive Smoking and the Risk of Coronary Heart Disease – A Meta-Analysis of Epidemiologic Studies. *N Engl J Med*, 340, 920-926.
151. Capraro, V., & Barcelo, H. (2020). The effect of messaging and gender on intentions to wear a face covering to slow down COVID-19 transmission. <https://doi.org/10.31234/osf.io/tg7vz>
152. Levita, L. (2020). Initial research findings on the impact of COVID-19 on the well-being of young people aged 13 to 24 in the UK. [https://drive.google.com/file/d/1A0c0wCPqv2gfFSQ\\_DVmw12vrqK01z0V/view](https://drive.google.com/file/d/1A0c0wCPqv2gfFSQ_DVmw12vrqK01z0V/view) accessed 28/07/20.

