Written evidence from the National Survey of Sexual Attitudes & Lifestyles (Natsal) Team

1. The Health and Social Care Committee has launched an inquiry into sexual health and seeks evidence on sexual health, including recent trends, prevention, as well as the commissioning and delivery of sexual health services.

2. We would like to draw the Committee’s attention to findings from the National Surveys of Sexual Attitudes and Lifestyles (Natsal), which are of relevance to this inquiry and all of which are published and publicly available.

3. **What are the Natsal surveys?**: The Natsal surveys are large, decennial, nationally representative, random probability sample surveys and form a major source of evidence about sexual health in Britain. They are carried out by a team of researchers led from UCL, with LSHTM, University of Glasgow and other organisations, with the fieldwork element undertaken by NatCen Social Research. The first Natsal survey was conducted in 1990-91 and interviewed 18,876 men and women aged 16-59 years and the second survey was conducted in 1999-2001 and interviewed 11,161 men and women aged 16-44 years. In the most recent survey (2010-12) we interviewed 15,162 men and women aged 16-74 years. Funding for the fourth survey has recently been awarded by the Wellcome Trust (https://wellcome.ac.uk/what-we-do/directories/longitudinal-population-studies-grant-funded) and the development phase for this survey will commence in spring 2019, with data collection planned to begin late 2020, and the resulting data available from late 2022.

4. **How can the Natsal surveys contribute to the inquiry?**: Natsal was initiated in response to the emerging HIV epidemic and has evolved to become internationally-renowned in the population-based measurement of the social, behavioural and biological aspects of sexual health. Natsal’s unique contribution is its high-quality detailed data on sexual behaviour, attitudes, sexual health outcomes, and service use, which are representative of the British general population. Unlike surveillance data, which is restricted to service users, Natsal is a population-based probability survey capturing data on those who do not attend services (in addition to those who do attend), which is essential to inform the design and delivery of sexual health services and STI control programmes.

5. **Sexual health - what we know from Natsal**: Natsal’s consistent methodology and repeated cross-sectional data enables rigorous assessment of trends, which capture generational changes and broad societal shifts through the measurement of both period and birth cohort effects. Natsal has captured dramatic changes in sexual attitudes and lifestyles in Britain, such as earlier sexual debut, increasing partner numbers and same-sex experience. Natsal has provided the evidence-base for major sexual health interventions and monitoring their impact (including for models on cost-effectiveness). These include the National Chlamydia Screening Programme; enhanced HIV testing; HPV vaccination; the Teenage Pregnancy Strategy; and sex and relationship education. Natsal-1-2-3 have shown increases in sexual health service use among those at greatest need. Updated evidence from Natsal-4 will evaluate consequences of changes to sexual health service provision on outcomes and inequalities; commission future services; and examine the impact of ongoing and new initiatives.

6. **Evidence for the Inquiry**: The key findings from the most recent survey addressing the key components of sexual health were published as a series of 6 papers in the Lancet in 2013. Since then, a number of papers have been published from Natsal-3 on a range of topics related to sexual health and service use. A full list of Natsal outputs is available
from the Natsal website (www.natsal.ac.uk/natsal-3/publications.aspx). Here we bring to the attention of the Inquiry the key relevant publications, listed by theme. For each paper, we include a brief summary of key messages with implications for policy and practice, and provide the open-access reference (including DOI) at the end of this document.

**Sexual behaviour:**

- Changes in sexual attitudes and lifestyles in Britain through the life course and over time.\(^1\)
  Sexual lifestyles in Britain have changed substantially over the past 60 years, with changes in behaviour seeming greater in women than men. While the majority (~80%) of the population (16-74y) are sexually-active, most have just one partner predominantly of the opposite-sex although women are increasingly reporting same-sex experience. Sexual frequency has declined while heterosexual repertoires are widening. The continuation of sexual activity into later life - albeit reduced in range and frequency - emphasises that attention to sexual health and wellbeing is needed throughout the life course.

- Sexual identity, attraction and behaviour in Britain: the implications of using different dimensions of sexual orientation to estimate the size of sexual minority populations and inform public health interventions.\(^2\)
  Sexual orientation encompasses three dimensions: sexual identity, attraction and behaviour. Approximately 2.5% of people aged 16-74y in Britain identify as lesbian, gay or bisexual, equating to ~547,000 men and 546,000 women. In contrast, 5.5% of men and 6.1% of women reported ever experience of same-sex sex, corresponding to >1.2M men and almost 1.4M women in Britain. A larger proportion still (6.5% of men and 11.5% of women) reported any same-sex attraction. This demonstrates the substantial diversity at an individual-level between the three dimensions of sexual orientation, with implications for estimating population-based denominators, delivering appropriate services, and targeting and monitoring public health interventions.

- The health and well-being of men who have sex with men (MSM) in Britain.\(^3\)
  MSM are disproportionately affected by a broad range of harmful health behaviours and poor health outcomes. In addition to being more likely to report long-standing illness/disability/infirmity, treatment for depression, and substance use, MSM were also more likely to report harmful sexual health behaviours, e.g. condomless sex with multiple partners, as well as poor sexual health outcomes, e.g. STI diagnoses, poorer sexual function, and non-volitional sex. Although often observed for a minority of MSM, many health inequalities occurred in combination, such that policies and practices aimed at improving the health and well-being of MSM require a holistic approach.

- Examining ethnic inequalities in sexual behaviours and lifestyles: evidence from a British national probability sample survey.\(^4\)
  Ethnic inequalities exist in sexual health, e.g. STI diagnoses were more commonly reported by black Caribbean men and women of mixed ethnicity; emergency contraception use was higher among black Caribbean women. These partly reflects behavioural differences, e.g. sexual partner numbers and their timing (concurrent or not), both of which were greater/more likely among black populations. Additionally taking account of ethnic differences in broader determinants at both the individual-level (e.g. recreational drug use, highest among those of ‘white other’ and mixed ethnicity) and area-level (e.g. those of black Caribbean, black African, and Pakistani ethnicity experienced greater deprivation), still did not fully explain
the ethnic inequalities in sexual health. Holistic interventions are needed that address modifiable risk factors and target ethnic groups at greatest risk of poor sexual health.

- Finding sexual partners online: prevalence and associations with sexual behaviour, STI diagnoses, and other sexual health outcomes in the British population. Finding sexual partners online was reported by around 1 in 6 men and 1 in 10 women (aged 16–74 years) with one or more new sexual partner(s) in the past year. It was associated with reporting sexual risk behaviour in men and women, while associations with sexual health service use outcomes were observed for men only. The data suggest a mismatch between the need for and uptake of sexual health services in those using the internet to find sexual partners, who might be at higher risk of STIs.

- Is ‘sexual competence’ at first heterosexual intercourse associated with subsequent sexual health status? The timing of first sexual intercourse is often defined in terms of chronological age, with particular focus on early first sex. However, taking account an individual’s readiness and the appropriateness of the timing of sexual debut - ‘sexual competence’ - is also important. Among sexually-experienced 17- to 24-year-olds, 51.7% of women and 43.6% of men were classified as not sexually competent at first sex. This was independently associated with testing positive for HPV at interview, low sexual function (past year), and among women only: reporting STI diagnosis (ever), unplanned pregnancy (past year), and experiencing non-volitional sex. These data suggest that there is much room for improvement in optimising young people’s first sexual intercourse and reducing the likelihood of subsequent adverse sexual health outcomes.

- Patterns and trends in sources of information about sex among young people in Britain. Sex education lessons at school are increasingly the main source of information about sexual matters (from 28.2% citing this source in 1990 to 40.3% in 2012. But most people (circa 70%) say they did not know enough when they first felt ready for sexual experience. The topics people felt they needed to know more about are: psychosexual matters, STIs and contraception (women only). Our data call for comprehensive education that covers both psychosexual aspects of sex as well as risk reduction.

- Associations between source of information about sex and sexual health outcomes in Britain. The data in this paper suggest that schools are best placed to provide comprehensive sex education. Those who cite school as their source of information about sex report older age at first sex; lower likelihood of unsafe sex/STI diagnosis; and in women, lower likelihood of lack of sexual competence at first sex; experience of non-volitional sex, abortion and distress about sex (all after controlling for educational level and family structure).

- The prevalence of, and factors associated with, paying for sex among men resident in Britain. Men who pay for sex are a key group in terms of STI transmission. Almost 16% of all reported STI diagnoses in the past 5 years were reported by men who pay for sex. Among men, 11% report ever paying for sex, and among these men, just under one in five of their lifetime partners were paid partners. After adjusting for partner numbers, paying for sex remained strongly associated with STI diagnosis and with reporting new partners outside the
UK in the past 5 years. Men who pay for sex should be considered a core-group for sexual health interventions and services.

- Trends and patterns in heterosexual practices among young people in Britain. There has been a dramatic shift in young people’s sexual repertoires over the last thirty years. The proportion of young people (aged 16 to 24) reporting a past-year repertoire of vaginal, oral and anal sex increased from one in ten in 1990 to one in four men and one in four women in 2010. This is very important trend given the higher risk of STIs associated with anal sex.

**Sexually transmitted infections (STIs) & HIV:**

- Prevalence, risk factors, and uptake of interventions for sexually transmitted infections in Britain. In 16-44 year old women and men, high-risk HPV was the most prevalent infection, followed by chlamydia; HIV and gonorrhoea were uncommon. Although STI risk increased with increasing partner numbers, most of the chlamydia and HPV infections were in individuals who did not have many recent partners. For chlamydia and HPV, broad population-wide interventions are needed. By contrast, gonorrhoea and HIV were restricted to a small proportion of the population who had high risk factors, including other STIs, supporting targeted interventions. Using data from all three Natsal studies, we showed increases in reported chlamydia diagnoses and HIV testing, and in attendance at sexual health clinics, especially in individuals at highest risk.

- Confirmatory assays are essential when testing for *Neisseria gonorrhoeae* in low prevalence settings. For gonorrhoea, the prevalence fell from 0.4% to <0.1% following confirmatory testing and the positive predictive value (PPV) for initial testing was found to be 19%. For chlamydia, the prevalence for a reactive test was not different to the prevalence for a confirmed test (prevalence 1.3%; PPV=95%). Failure to undertake confirmatory testing in low-prevalence settings may lead to inappropriate diagnoses, unnecessary treatment, and overestimation of population prevalence.

- Human papillomavirus (HPV) in young women in Britain: Population-based evidence of the effectiveness of the bivalent immunisation programme and burden of quadrivalent and 9-valent vaccine types. This paper presents prevalence estimates for a range of HPV types circulating in the British population in 2010–2012, and shows that there remains a significant amount of vaccine-preventable HPV. Even amongst 16–20 years who were eligible for the immunisation programme, 5%, 11% and 21% of women were infected with at least one of the bivalent, quadrivalent or 9-valent vaccine types, respectively. The Natsal data do nevertheless provide an early indication of population-based effectiveness of the bivalent vaccine in women in the age groups eligible for vaccination, with a ~50% reduction seen in the prevalence of HPV-16/18 in 18–20 year olds.

- High-risk human papillomavirus infection and cervical cancer prevention in Britain. Socioeconomic markers and smoking were associated with HR-HPV positivity, non-attendance for cervical screening, and non-completion of catch-up HPV vaccination. The cervical screening program needs to engage those missing HPV catch-up vaccination to avoid a potential widening of cervical cancer disparities in these cohorts. As some screening non-
attenders are at low risk for HR-HPV, tailored approaches may be appropriate to increase screening among higher-risk women.

- *Trichomonas vaginalis* infection is rare in the British general population: implications for clinical testing and public health screening.\(^{15}\)

The prevalence of *T. vaginalis* was 0.3% in sexually experienced women and 0% in sexually experienced men aged 16–44 years. Most cases were in women of Black or mixed ethnicity, or reported recent partners of Black or mixed ethnicity. Most had symptoms consistent with infection, and most had recently attended a sexual health clinic. *T. vaginalis* is rare and the data support policies that restrict asymptomatic screening in favour of testing within clinical settings and guided by symptoms and local demography.

- Epidemiology of *Mycoplasma genitalium* in British men and women aged 16-44 years.\(^{16}\)

This study strengthens evidence that MG is an STI: there were strong associations with risky sexual behaviours, with behavioural risk factors similar to those in other known STIs, and no infections were detected in those reporting no previous sexual experience. Given the uncertainty on the natural history and clinical implications of infection, especially in women, here we report that although asymptomatic infection was common, we found a strong association with post-coital bleeding in women. Thus in addition to MG being an STI, it can be an STD. MG was identified in over 1% of the population aged 16–44, and among men was most prevalent in 25–34-year-olds, who would not be included in STI prevention measures aimed at young people.

- Male circumcision and STI acquisition in Britain.\(^{17}\)

The prevalence of circumcision in sexually-experienced men aged 16-44 years was 17.4%. Male circumcision was strongly associated with lower detection of any HPV and HR-HPV in urine, even after adjusting for key demographic and behavioural variables, but not associated with self-reported previous STI diagnosis/es in this population. These findings improve the precision of models of STI the design of interventions to reduce STI acquisition.

Reproductive health – including unplanned pregnancy and contraception:

- The prevalence of unplanned pregnancy and associated factors in Britain.\(^{18}\)

One in six pregnancies in the last year to women aged 16–44y were considered unplanned, while 29·0% scored as ambivalent and 54·8% as planned. Pregnancies in women aged 16–19y were most commonly unplanned, yet of all unplanned pregnancies, most were in women aged 20–34y. Factors strongly associated with unplanned pregnancy include early sexual debut (and lacking sexual competence at this time), substance use and lower educational attainment. These data offer scope for primary prevention aimed at reducing the rate of unplanned conceptions, and secondary prevention aimed at modifying health behaviours and health disorders in unplanned pregnancy that might be harmful for mother and child.

- Changes in conceptions in women younger than 18 years and the circumstances of young mothers in England in 2000-2012.\(^{19}\)

Conception rates in women<18y declined steadily from their peak in 1996–98 and more rapidly from 2007. More deprived areas and those receiving greater Teenage Pregnancy Strategy-related investment had higher rates of conception in 1994–98 and had greater declines to 2009–13. Regression analyses assessing the association between Teenage Pregnancy Strategy funding and decline in conception rates in women<18y showed an estimated reduction in the conception rate of 11·4 conceptions per 1000 women aged 15–17y
for every £100 Teenage Pregnancy Strategy spend per head and a reduction of 8.2
conceptions after adjusting for socioeconomic deprivation and region. This paper proposes
that a sustained, multifaceted policy intervention involving health and education agencies,
alongside other social and educational changes, probably contributed to a substantial and
accelerating decline in conceptions in women<18y in England since the late 1990s.

• Trends in the use of emergency contraception (EC) in Britain.\textsuperscript{207}
  This paper reports a significant increase in the use of EC in Britain from 2.3\% in 2000 to
  3.6\% in 2010. Increases were particularly great among single women, those with higher
  educational attainment, and those without behavioural risk factors. Increases were also more
  marked among women usually accessing contraception from retail sources (vs. healthcare
  sources). Contraceptive advice and provision need to be targeted at those at highest risk of
  unplanned pregnancy.

• Prevalence of infertility and help seeking among 15,000 women and men.\textsuperscript{21}
  One in eight women and one in ten men in Britain aged 16–74 years had experienced
  infertility, defined by unsuccessfully attempting pregnancy for at least a year. Prevalence was
  higher among those reporting later cohabitation, higher socio-economic status and, for those
  who had a child, becoming parents at older ages. Little more than half of these people sought
  medical or professional help, and tended to better educated and in higher status occupations.
  The paper concludes that the prevalence of infertility is higher among those delaying
  parenthood, and that inequalities in help-seeking should be considered by clinical practice
  and public health.

\textit{Sexual function:}

• Sexual function in Britain.\textsuperscript{22}
  Poor sexual function is associated with STI diagnosis and non-volitional sex, as well as
  sexual behaviours such as same-sex partners, paying for sex (men only), higher number of
  lifetime partners. Problems with sexual response are common (42\% of men and 51\% of
  women). It is important therefore to take an holistic approach which recognises, in particular,
  the strong links between risk taking, depression and lack of sexual function/wellbeing.

• Sexual function in British 16 to 21 year olds.\textsuperscript{23}
  It is often assumed that problems with sexual function only affect older people. In fact, sexual
  function problems are also common in young people: 9.1\% of men and 13.4\% of women
  reported a distressing sexual problem lasting 3 months or more in the last year. There is
  significant unmet need: almost two-thirds of young people reporting these problems did not
  seek help about their sex life, and among those who did, this was rarely from professional
  sources. Among those who had not had sex in the last year, just>10\% of young men and
  women said they had avoided sex because of sexual difficulties.

• Factors associated with reporting lacking interest in sex and their interaction with
  gender.\textsuperscript{24}
  15\% of men and 34\% of women lack interest in sex, and this is associated with poor general
  health, as well as depression. Relational factors (emotional closeness, sharing same interest in
  sex) and ease of talking about sex are key influences on desire.

• Painful sex (dyspareunia) in women.\textsuperscript{25}
Painful sex is a common but neglected female health problem. Of all sexual function problems, it is most likely to be experienced as distressing. It is reported by 7.5% of women and is associated with a range of other sexual response problems (notably vaginal dryness) and relational problems as well as adverse experiences such as non-volitional sex. There are strong links with poor general health and depression.

- **Medicated sex in Britain.** Medication to enhance sexual performance is surprisingly common, particularly among men (13% of men and 2% of women report using it in the last year). In men, after adjusting for age, same-sex partnership and reporting erectile difficulties, taking medication to enhance performance was associated with STI diagnosis. Although there has been some research on this phenomenon in relation to the gay clubbing scene (studies on chemsex), it is poorly understood and barely researched in the wider population. Given the link with STI diagnosis, and increasing ease of access of non-prescription drugs online, this is a concern.

**Non-volitional sex:**

- **Lifetime prevalence, associated factors, and circumstances of non-volitional sex among women and men in Britain.** Almost 10% of women in Britain have experienced non-volitional sex (sex against their will). Reporting this experience is associated with STI diagnosis, first intercourse before 16 years, same sex experience, more lifetime partners and low sexual function. This clustering of risk, and in particular, clear links between sexual violence and STIs, provides strong rationale for addressing adverse sexual health experiences in an holistic way, such as integrated services for victims of sexual assault.

**Service use:**

- **Sexual health clinic attendance and non-attendance in Britain.** Approximately 1 in 20 sexually-active 16–74 year olds in Britain reported sexual health clinic (SHC) attendance in the previous year. However, >85% of this population who reported ‘unsafe sex’ in the past year had not attended a SHC during that time. Among those reporting unsafe sex, SHC attendance was higher in those reporting more sexual partners and concurrency (both in the past year) and many non-attenders reported that they had tested for chlamydia (in the past year). The paper concludes that diverse sexual health services with strong referral mechanisms are needed to offer appropriate care to those at risk.

- **STI risk perception in the British population and how it relates to sexual behaviour and STI healthcare-use.** Very few sexually-active people in Britain consider themselves at risk of STIs: 5% men and 3% women self-rated as ‘greatly/quite a lot at risk’. Although those reporting STI risk behaviours were more likely to perceive themselves at risk, the majority of those who had had unsafe sex and/or had a prevalent STI, perceived themselves as ‘not at all’ or ‘not very much’ at risk. Over half of men and around one-third of women who had unsafe sex and/or had a prevalent STI, perceived themselves as ‘greatly/quite a lot at risk’ had neither attended a sexual health clinic nor tested for STIs. These data suggest that many people at risk of STIs in Britain underestimate their risk, and many who correctly perceived themselves to be at risk had not recently accessed STI healthcare. Health promotion needs to address this mismatch and ensure that people access healthcare appropriate to their needs.
• HIV testing, risk perception, and behaviour. Among the sexually-experienced British population, an estimated 3.5% of men and 5.4% of women are estimated to have tested for HIV in the past year. Greater HIV risk perception was associated with sexual risk behaviours and with HIV testing. However, the majority of those rating themselves as ‘greatly’ or ‘quite a lot’ at risk of HIV (3.4% of men, 2.5% of women) had not tested in the past year. This was also found among the groups most affected by HIV: MSM and black Africans. Many people who test for HIV in Britain are at low risk, reflecting current policy that aims to normalise testing. Strategies are needed that improve testing uptake, particularly in those at greatest risk, to further reduce undiagnosed HIV infection at late diagnoses.

• Patterns of chlamydia testing in different settings, and implications for wider STI diagnosis and care. The majority of chlamydia testing in Britain now occurs in general practice and other non-specialist settings. Those who do test in general practice are less likely to report traditionally ascribed risk behaviours, yet there is a sizeable minority who do report engaging in higher-risk behaviours. Despite national recommendations that those diagnosed with chlamydia should be tested for other STIs including HIV, most individuals treated for chlamydia outside of specialist settings (i.e. sexual health clinics) did not report an HIV test. There is a need to provide pathways to comprehensive STI care to the sizeable minority at higher risk.

• Is chlamydia screening and testing in Britain reaching young adults at risk of infection? This paper compared factors associated with chlamydia prevalence, testing and diagnosis among 16-24 year-old women and men in Britain. It found that chlamydia testing was generally greater among those reporting risk factors for chlamydia (eg, greater numbers of sexual partners). However, substantial proportions of young adults reporting risk factors for chlamydia who are not regularly accessing screening, as well as those living in deprived areas, may reduce the prevalence of undiagnosed infection and decrease transmission.

• Where do women and men in Britain obtain contraception? Some 87.0% of women and 73.8% of men in Britain accessed at least one source of contraceptive supplies in the previous year. General practice continues to be the most commonly used source by women in Britain for contraceptive supplies, while for men, retail. Integrated sexual and reproductive health clinics and wider contraceptive provision in community settings, such as in schools and colleges, have helped reach those who have not accessed more traditional services in the past. A strong case can be made for the provision of high-quality services in different settings and with different styles of service delivery to ensure that women and men have access to contraception that meets their needs.

Sexual health & its association with other health behaviours and outcomes:

• Associations between health and sexual lifestyles in Britain. Health and sexual lifestyles are associated in most sexually active age groups. However, many people in poor health and at older ages report an active or satisfying sex life, or both. Health conditions had an important effect on sex lives, and this effect persisted into older age. Of individuals reporting a health condition that affected their sex life, only a quarter of men and a fifth of women had sought clinical help or advice. The findings should help clinicians, their patients, and policy makers to consider the continuation of sexual activity and
enjoyment in the face of ill health. Practitioners should consider giving appropriate advice about sexual lifestyles to promote the overall wellbeing of patients with chronic conditions.

- **Are depression and poor sexual health neglected co-morbidities?** Individuals treated for depression, or with depressive symptoms, were more likely to report a range of sexual health difficulties. For example, those treated for depression were more likely to report behaviours linked to STI acquisition, and depression was strongly associated with low sexual function. Around two-thirds of those treated for depression reported problems with their sex lives, but only around 15% had sought professional help (in most cases this was their GP). Women treated for depression, but not men, were more likely to report accessing sexual health clinics, suggesting that depressed men might be inadequately served by sexual health services. The sexual health of people with depression needs consideration in primary care, and mental health assessment might benefit people attending sexual health services.

- **Illicit drug use and its association with key sexual risk behaviours and outcomes.** Among sexually-active 16-44 year-olds in Britain, use of illicit drugs other than, or in addition to, cannabis in the past year was reported by 11.5% of men and 5.5% of women. Use of these types of drugs was more common among those <35 years, those who reported poor general and/or sexual health behaviours but also to report engaging with sexual health services. As such, these should be considered appropriate settings to implement holistic interventions to maximise health gain.

- **Sexual behaviours and sexual health outcomes among young adults with limiting disabilities.** Overall, sexual behaviours were similar between those with limiting disability (1 in 10 of those aged 17-34y) and those without, with a few exceptions. Women and men with limiting disability were less likely to report having sexual partners, and women with limiting disability were more likely to report same-sex partner(s). However, differences in sexual health outcomes were apparent among women (only), in terms of experiencing non-volitional sex, STI diagnoses, and having sought help/advice for their sex life. This study concludes that it is important to ensure that people with disabilities are included in sexual health promotion and service planning. Targeted policy and programme interventions are needed to address negative sexual health outcomes experienced by people with disabilities.

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**References:**