

**Locating Human Papillomavirus (HPV)
vaccination in the sexual health of Gay,
Bisexual, and other Men who have Sex
with Men (GBMSM) in Scotland:
A Constructivist Grounded Theory study**



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*To my late mother, who never saw the person I
became*

*And to my father, who did so much to make me
the person I am*

Abstract

Background: Human Papillomavirus (HPV) is the leading causal mechanism for a variety of anogenital cancers including cervical, anal, penile, and head and neck worldwide in men. There are evident health inequalities in the risk of HPV infection as a determinant of the risk of these cancers with Gay, Bisexual, and other Men who have Sex with Men (GBMSM) more likely to be at risk of HPV-related infections than heterosexual men. Understanding factors associated with HPV vaccination among GBMSM is vital to implementing an effective and efficient vaccination programme. This thesis aimed to explore perceptions and experiences associated with HPV vaccination in GBMSM living in Scotland.

Methodology: This thesis used qualitative methods exclusively. A systematic review of HPV-GBMSM vaccination (prior to licensing in Scotland) used a qualitative evidence synthesis approach to explore previous qualitative literature. Primary research adopted a Constructivist Grounded Theory (Charmaz, 2014) approach to explore collaboratively with 17 eligible GBMSM, how they understood HPV and factors associated with initiation and completion of the vaccination schedule.

Main findings: The findings indicated that GBMSM perceived themselves independent to HPV as a threat to their health and were not pro-actively motivated to seek out and receive the HPV vaccine. In implementing the HPV-GBMSM vaccination programme in sexual health services, participants acknowledged the lack of reach to vaccinate GBMSM equitably given factors associated with the navigation of socio-cultural barriers which shape sexual health service use.

Conclusion: There are relevant psychosocial factors associated with HPV-GBMSM vaccination in Scotland. It is important to identify the barriers to HPV vaccination and alleviate experienced and perceived barriers as the vaccination programme continues. Further work is required in order to explore the development of targeted interventions to support those eligible and at risk of HPV-related infections, particularly those underserved by sexual health services.

Declaration of Authorship

I hereby declare that:

a) This work has not been submitted for any other degree or professional

qualification

b) That this thesis is the result of my own independent work and is not part

of a collaboration

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1 Chapter 1: Background

What will this chapter discuss?

This chapter will outline:

- What the Human Papillomavirus (HPV) is
- The clinical consequences of HPV infection
- Epidemiology of HPV globally, among men and then further amongst gay, bisexual, and other men who have sex with men (GBMSM)
- HPV prevention approaches globally and within the UK
- HPV vaccination targeting GBMSM in UK countries

1.1 Pathophysiology of the Human Papillomavirus (HPV)

1.1.1 Structure and Classifications of Human Papillomavirus

The Human Papillomavirus (HPV) is a small non-enveloped, double stranded DNA virus (consisting of six early genes – E1, E2, E4, E5, E6, and E7 and two late genes – L1 and L2) that infects squamous epithelia including the skin and mucosa of the upper respiratory and anogenital tracts (Ristriani et al., 2000). Based on the identity of the L1 major capsid gene sequence capable of infecting humans, HPVs are classified into five genera: Alpha [α]-, Beta [β]-, Gamma [γ]-, Mu [μ]-, and Nu [ν]-HPVs (Sichero et al., 2019). The largest group identified within these genera is the alpha HPV group, which this thesis will focus on. Isolates of HPV are classified as “types” in most used nomenclature, with other countries such as Public Health England and the International Committee on Taxonomy of Viruses (ICTV) proposing the use of “strains” (the terms “types” and “strains” will be used interchangeably throughout this thesis).

The types are assigned numbers in order of their discovery. HPVs are ubiquitous and enter the cutaneous epithelium via the basal layer as a result of microtraumas and the viral life cycle is linked to the differentiation of the stratified squamous epithelium infecting a wide variety of mammalian species (Aghaeipour et al., 2021; McBride & Warburton, 2017). Over 200 types of HPV have been identified (Egawa et al., 2015).

Across the 5 HPV genera, HPV types have been further subcategorised into ‘high risk’ and ‘low risk groups’ (see table 1.1) according to the degree of oncogenic capacity by the International Agency for Research on Cancer (Choi & Park, 2016; Muñoz et al., 2003).

Table 1.1 Classification of HPV Types and Associated diseases

Human Papillomavirus	Genotypes	Associated Disease(s)
High risk types of HPV	16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 68, 72, 82.	Cervical, anal, vaginal vulvar, penile, and oropharyngeal cancer and associated precursor lesions
Low risk types of HPV	6, 11, 40, 42, 43, 44, 54, 61, 70, 72, 81.	Genital warts, recurrent respiratory papillomatosis

Table adapted from de Sanjoé et al. 2018.

1.1.2 Carcinogenic HPV

The ‘high risk’ HPV subtypes are identified as such due to being directly associated with or known causative agents of a variety of different human cancers. Once HPV infects human cells exclusively keratinocyte of the skin or mucous membrane, stability in the natural maintenance of the host cell proteins is disrupted. Prolonged infection has significant impact on natural replication of the host cell. Once the cell’s genome is contaminated with HPV DNA dysfunctional cellular proliferation is promoted. Therefore, anomalous cells continue to replicate, causing intraepithelial neoplasia (IN) which is related to the site of infection and the thickness of the histological severity of the HPV-induced lesions. Therefore, the term “oncogenic” virus is used due to the ability of these ‘high risk’ HPV genotypes to promote oncogenesis of healthy epithelial cells (McBride & Warburton, 2017).

Over the past decade, HPV-16 and HPV-18 have been consistently shown to promote oncogenesis and leading to a variety of human cancers (Söderlund-Strand & Dillner, 2013). Among men these are anal intraepithelial neoplasia (AIN) leading to anal

cancer, penile intraepithelial neoplasia (PIN) leading to penile cancer, and oral intraepithelial neoplasia (OIN) leading to oral, head and neck cancers. Among women IN is related to cervical intraepithelial neoplasia (CIV) and vulvar intraepithelial neoplasia (VIA). HPV-16 has been identified in approximately 70% of all CIV cases worldwide (Burd, 2003) and a further 99% of cervical cancers being caused by persistent infection of other carcinogenic HPV types (Kombe Kombe et al., 2021).

1.1.3 Non-oncogenic HPV

Not all HPV strains express oncogenic potential (Egawa & Doorbar, 2017). Indeed, 'low risk' strains are classified as such as many are asymptomatic or result in benign tumour growth in the form of papilloma's also known as warts. HPV types 6 and 11 are attributable to approximately 90% of all genital warts (Giuliano et al., 2008). Expression of infection for genital warts appear from three weeks to eight months from primary infection as exophytic, confluent cauliflower-like tumour (Stamm et al., 2017). Genital warts are highly infectious; approximately 65% of individuals with an infected partner develop genital warts within 3 weeks and 8 months (Lacey et al., 2006). In the absence of treatment, approximately 30% of infection clear. The rate of spontaneous regression is not known. Genital wart treatment focuses on removal of the warts, but the infection may not necessarily be eliminated and persist sub-clinically and be a source of recurrence and ongoing viral transmission.

While not life threatening, several studies have shown genital wart infection can have tremendous psychosocial impact such as stigma associated with a visible STI as well as patients with positive infections feeling anger, disgust, shame, embarrassment, depression, anxiety, worry, and a feeling of being less desirable which all can have an impact on sexual relationships (Mortensen & Larsen, 2010; Piñeros et al., 2013). Given that HPVs are epithelial specialists, it is important to note how the virus interferes with the regulatory pathways that are not easily lost from the body, even as genetic errors accumulate. This is reflected in the difficulty in eradicating HPV infections including verrucas, common warts and genital warts, which arise from the common characteristics of the infected basal cells and the fact that a lesion can be

repaired even if a small number of infected basal cells remain (Kranjec & Doorbar, 2016).

1.1.4 Acquisition and transmission of HPV

Understanding how HPV is transmitted is pivotal for planning effective prevention. Given the ability of the virus to infect several sites HPV infections are common. HPV is predominantly sexually transmitted, although penetrative intercourse is not essential for transmission. This has led to HPV commonly being socialised as a sexually transmitted infection and/or disease while transmission routes including saliva and perinatal fluid are also routes of transmission (Sabeena et al., 2017; Wang et al., 2019). Indeed, HPV is highly transmissible via genital-to-genital transmission and – while less likely – hands to genitals or genitals to hands as well as HPV on surfaces in medical settings and public environments have been reported (Casalegno et al., 2012).

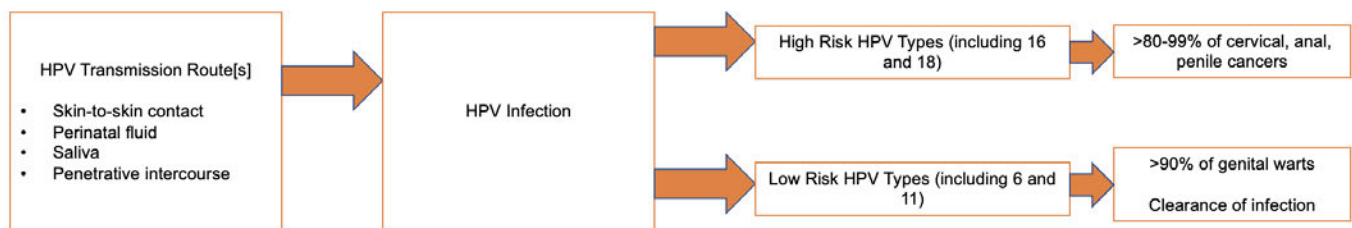


Figure 1.1 Overview of relationship between HPV and cancer presentation

Consistent evidence has shown that the prevalence of genital HPV infection is highly dependent on both lifetime and recent number of sexual partners (see figure 1.1) Even persons with one lifetime sex partner are at risk for infection. In 2006, Manhart and authors found HPV prevalence was 14.3% among women aged 18-25 years with one lifetime partner, rising to 22.3% for those with two lifetime partners, and 31.5% for those with three or more (Manhart et al., 2006). These results further establish the high prevalence of HPV infections. In the United States, incidence rates of HPV infection range from 1 to 5.5 million infections per year (Burd, 2003). Beginning of sexual activity in adolescence has also been documented as a risk factor for HPV infection (de Sanjosé et al., 2018). The highest incidence of HPV infection has been

demonstrated to be around sexual debut and in young adults up to 30 years. Risk of infection has been shown to decline with age.

1.1.5 Transient and persistent HPV infection

It must be noted that the majority of HPV infections are transient and cause no clinical problems (Gheit, 2019). Transient in this instance refers to the process of the body's immune system clearing the HPV, with data suggesting around 70% of new infections may clear within one year and approximately 90% will clear within two years (Moscicki et al., 2012; Winer et al., 2011). HPV infection cannot be treated; however most HPV infections will be asymptomatic and the human body will clear 90% of infections within a 18-24-month period of exposure (Gheit, 2019). The remaining 10% may reflect established persistent infections which are linked to malignant tissue transformation, dependent on risk factors and HPV genotype (McBride & Warburton, 2017). Persistent high-risk HPV infection is the main risk factor in cervical as well as anal cancer; both attributable to HPV16 (Lin et al., 2018; Machalek et al., 2012). This is due to persistent high-risk HPV infection of mucosal epithelium which can progress to intraepithelial neoplasia which, if left untreated, can further develop into high-grade abnormalities such as cervical/anal pre-cancerous and cancerous lesions. There is no universal consensus regarding the definition of what constitutes persistent HPV infection. However, a proxy for persistent infection has been demonstrated when a high-risk HPV infection does not clear within 6 months.

Current estimates of the attributable fraction of HPV in less common cancers vary greatly. For example, between 5% and 80% of oropharyngeal cancers are attributable to HPV, with substantial geographical variability among regions with high HPV attributable fractions including northern Europe and USA which reflects the relative burden of tobacco-/alcohol-attributable oropharyngeal cancers as well as prevalent sexual practices (de Martel et al., 2017; Ndiaye et al., 2014). Similarly, while oral HPV infection is less common than genital infection, time to clearance appears to be similar.

1.1.6 Clinical manifestations and sequelae of HPV infection

HPV is a necessary cause of cervical cancer. HPV is also a necessary cause in several related cancers in other sites (head and neck, oropharyngeal, penile, and anal). It is vital, therefore, to discuss the relative contribution of different viral types to HPV-related cancers, across sites, and their prevalence. In 2018, 700,000 new HPV related cancer cases were estimated to have occurred, with 90% (n = 630,000) among women and 10% (n = 71,000) among men. HPV types 16/18 (the two high-risk types) are associated with 69.4% of the total cases of cervical cancer (Serrano et al., 2015); see figure 1.2).

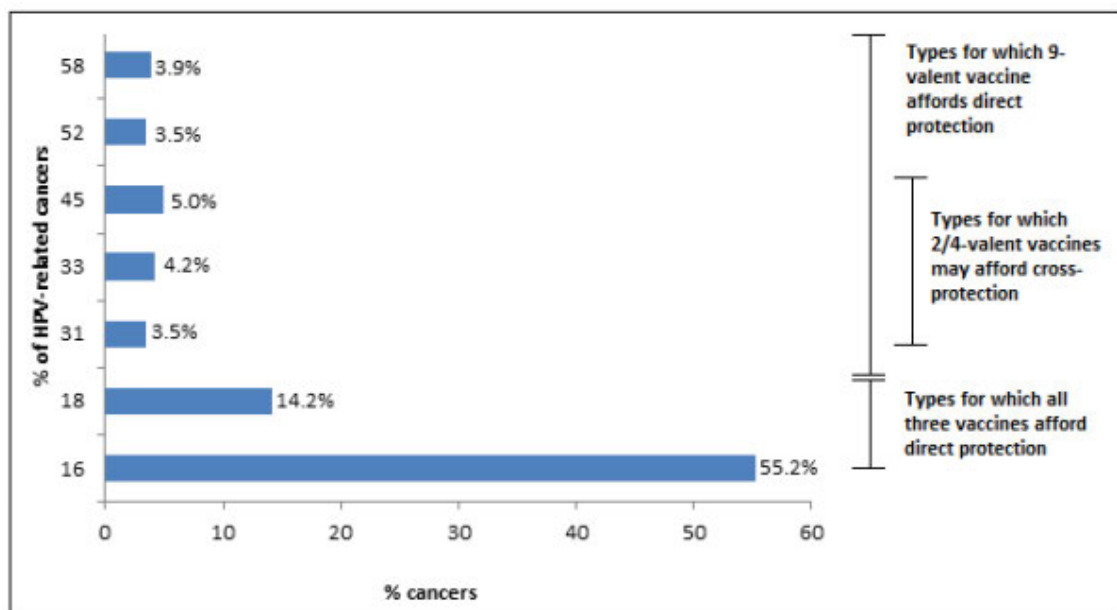


Figure 1.2 Contribution of different types of cervical cancer (from Serrano et al. 2015)

As most HPV infections are transient, asymptomatic, or subclinical (among immunocompetent) individuals, most HPV infections have no clinical consequences. Most clinically significant manifestations associated with HPV infection are anogenital warts, cervical cellular abnormalities, and anal and penile cancer among (immunocompromised) and Gay, Bisexual, and to other Men who have Sex with Men (GBMSM).

Across sites in which HPV-related cancer occur, among men, oropharynx, anal, and penile cancers had the highest incidences attributable to HPV (24,000; 21,000; and 18,000 cases, respectively). These non-cervical HPV-related cancers are more

frequently associated with HPV 16/18 than cervical cancer – such as that of 80% among men versus 69.4% of cervical cancer among women (see table 1.2).

Table 1.2 Incidence of HPV at cervical and all other sites

Anatomical cancer site	Cancers attributable to HPV	Estimated number of cancers attributable to % ([by row])		
		HPV 16/18 [A]	Top ten most common HPV strains [B]	Difference [B-A]
Cervix uteri	530,000 (100%)	370,000 (71%)	470,000 (90%)	100,000 (19%)
All other sites	110,000 (100%)	84,800 (80%)	95,300 (90%)	10,500 (10%)
Total	640,000 (100%)	454,800 (71%)	565,300 (90%)	110,500 (17%)

1.2 HPV-associated sequelae in men

Anal intraepithelial neoplasia (AIN) has been recognised as a precursor to anal cancer although the natural history of these lesions is unclear unlike the epithelial lesions which are precursors to cervical cancer. HPV 16 is the most common type detected in association with the development of AIN. GBMSM – and those living with HIV (LWHIV) – are persons reported to be at higher risk for anal precancer and cancer when compared to heterosexual samples. Indeed, in a review of global data of genital HPV prevalence infection in males Smith et al (2011) concluded HPV prevalence was high across all regions but varied considerably (1% to 84% among low-risk men and from 2% to 93% among high-risk men). Those deemed to be higher risk in this review referred to those who reported sexually transmitted infection (STI) clinic attendee's HIV-positive men, and male partners of women with HPV infection. HIV-positive GBMSM showed the highest prevalence (Smith et al., 2011). A clinical trial examining the baseline prevalence of penile, scrotal and perineal/perianal HPV infection in heterosexual men also reported variable incidences of cancer at these sites (18.7% at the penis, 13.1% at the scrotum, 7.9% at the perineal/perianal region and 21.0% at any site, (Vardas et al., 2011).

1.2.1 Anogenital warts

Anogenital warts commonly occur in areas of coital friction. For men, this includes external areas on the penis, urethral meatus, scrotum, perineum, and perianal area; in addition, men can have internal warts involving the urethral meatus or intra-anal mucosa. Among women, external warts can appear on the vagina, cervix, and anal mucosa. All anogenital warts are caused by low-grade HPV (types 6 and 11). Time for anogenital warts to develop varies, with some studies reporting a few months to years. The prevalence of anogenital warts is hard to measure as these are seldom routinely reported. Anogenital warts are associated with psychosocial reactions, including increased anxiety and depression, and can have a substantial negative impact on personal relationships.

1.2.2 Anal cancer

HPV is the causative agent in the anus and shares similarities with the cervical squamous cell carcinoma (SCC) reported in the cervix in women (Clarke & Wentzensen, 2018). High-risk HPV infection is responsible for about 90% of anal SCC and persistent intraepithelial lesions precede both anal and cervical cancer (Hoots et al., 2009).

The incidence rates of anal cancer have been reported to be increasing in a number of high and low/middle income countries including the US and Denmark (Islami et al., 2017). In Scotland, Brewster and Bhatti (2006), reported an increase in age-standardised rates of anal SCC among males (0.14 to 0.17 per 100,00 in late 1970s to around 0.37 in late 1990s but with a peak of 0.44 in 1993-1997 in women (Brewster & Bhatti, 2006). Comparable figures of anal cancer incidence in England between 1986 and 2003 were also reported to have increased among males from 0.7 to 1.1 per 100,000 cases (Office for National Statistics, 2017). Results in line with this were further reported by Robinson and authors (2009) who found anal cancer incidence in southeast England increased in both men and women (between 1960-2004) threefold in women and 1.5 fold in men (Robinson et al., 2009). Indeed, anal cancer statistics reported by Cancer Research UK demonstrate a 56% rise in anal cancer incidence rates since the 1990s with rates projected to rise by a further 43% by 2035 (Cancer Research UK, 2017). Recent supporting evidence in the UK where over the last

decade (between 2006-2008 and 2016-2018) anal cancer incidence rates for females and males combined increased by 37%. Amongst females this increased by 53% and in males' rates increased by 13% (Cancer Research UK, 2019). Overall, while anal cancer is more common in women than men, incidence in men under the age of 50 years is becoming increasingly more prevalent.

A considerable risk factor relevant to the elevated incidence of anal cancer among men is receptive anal intercourse associated with GBMSM (Stanley et al., 2012). The prevalence and incidence of anogenital human papillomavirus infection and HPV-related anal intraepithelial neoplasia (AIN), the precursor to anal cancer, has been reported to be higher in gay, bisexual, and other men who have sex with men (GBMSM) and highest among HIV positive GBMSM (Alemany et al., 2015; Melbye et al., 1994). In a review of global data of genital HPV prevalence infection in males (Smith et al, 2011) concluded HPV prevalence was high across all regions but varied considerably (1% to 84% among low-risk men and from 2% to 93% among high risk men). Those deemed to be higher risk in this review referred to those who reported sexually transmitted infection (STI) clinic attendee's HIV-positive men, and male partners of women with HPV infection. HIV-positive GBMSM showed the highest prevalence (Smith et al., 2011). Further evidence is found in a clinical trial examining the baseline prevalence of penile, scrotal and perineal/perianal HPV infection in heterosexual men also reported variable incidences of cancer at these sites (18.7% at the penis, 13.1% at the scrotum, 7.9% at the perineal/perianal region and 21.0% at any site, (Vardas et al., 2011).

Indeed, progression rate to anal SCC is reported to be 1 in 309 person years (PY) after a diagnosis of anal intraepithelial lesions in GBMSM compared to that of 1 in 80 PY in the development of cervix SCC. This comparison is noteworthy as Poynten and authors (2016) suggest these site-differences may be a result of biological factors such as site-specific viral defences and behaviour factors such as repeated sexual exposure to high-risk HPV into older age among GBMSM (Poynten et al., 2016). While rare (approximately 1 case per 100,00 person-years) in the general male population, anal cancer incidence among HIV-negative GBMSM is approximately 20 cases per 100,000 and 30 cases per 100,000 person-years. Due to an increased anal HPV exposure and HIV-related immunosuppression this can increase to 100 cases per

100,000 person-years in HIV-positive GBMSM (Clifford et al., 2021). However, it must be acknowledged that data was based on multiple cross-sectional studies and longitudinal data is scarce.

1.2.1 Penile cancer

Penile cancer is a rare and debilitating disease with an annual burden of approximately 22,000 estimated cases (de Martel et al., 2017). The incidence of penile cancer does vary across the globe. Lower estimates have been reported in the Western world where penile cancer remains rare accounting for <1% of all male malignancies (Veeratterapillay et al., 2015) but these rates are increasing (Islami et al., 2017). This differs between some low/middle income countries in some parts of Africa, South America and Asia where penile cancer can account for up to 10% of cancers among men (Bleeker et al., 2009). Two pathways have been identified to occur in penile cancer carcinogenesis: one related to penile conditions such as inflammation, phimosis, or a history of lichen sclerosis and the other pathway related to HPV infection (Albero et al., 2012). Indeed, squamous cell cancer of the penis represents about 90 to 95% of penile cancers. Salvioni et al (2009) found penile cancer incidence peaks in the fifth to sixth decades of life however an earlier study by Burgers et al (1992) found a fifth of patients were under 40 years and 7% under 30 years (Burgers et al., 1992; Salvioni et al., 2009). Approximately 33% of penile cancers are attributed to high-risk HPV infections, primarily with HPV type 16 (Alemany et al., 2015; Steinau et al., 2013).

Like risk of anal cancer, incidence, and risk of penile infection with a high-risk HPV type have also reported to be higher amongst GBMSM. A study in the Netherlands reported that 45% of HIV-negative GBMSM and 65% of HIV-positive GBMSM had an anal infection by a high-risk HPV type (van Aar et al., 2013). It has been reported that circumcision acts a protective factor, potentially by reducing HPV transmission or penile pathologic conditions associated with penile carcinogenesis (Albero et al., 2012). However, while there is robust evidence demonstrating vaccination against HPV prevents high grade lesions over a period of more than 6 years for precancerous lesions of the cervix, the evidence base is weaker regarding precancerous penile lesions in males (Harder et al., 2018). Given the above discussion, GBMSM and more

specifically HIV-positive GBMSM are at a markedly increased risk of penile malignancy than HIV-negative and heterosexual men.

1.3 Burden of HPV infection and related behaviours amongst men in the United Kingdom

A consistent risk factor in the development of HPV-related anal cancer among men and women is receptive anal sex. The availability of population-based comparison data is important as it enables the monitoring of prevalence of HPV risk behaviours. In the UK, the National Surveys of Sexual Attitudes and Lifestyle (NATSAL) can capture the population burden of STIs and link this to detailed behavioural information. One study (NATSAL-2) conducted between 1999 and 2001 interviewed 3123 UK citizens aged 18 – 44 years and asked participants to provide urine samples to detect HPV (Prah et al., 2014). Findings demonstrated that 17% of men were positive for any HPV type (16/18/31/33/35/39/45/51/52/56/58/59). 3% of participants were found to be infected with HPV16 and HPV18 and 2.2% infected with low-risk HPV strains 6 and 11.

In NATAL-3, conducted between 2010 and 2012, 16.3% of all (16 – 44 year-old) men were infected with any HPV type. In the same sample, 8.4% were infected with any high-risk HPV strain. High risk HPV infection (of any type) was highest amongst participants aged 25–35 years with 9.2%. Lowest were those aged between 16-24 years with 7.0% of this age group. HPV strains 16 was highest (2.1%) amongst 25–34 year-olds and lowest (1.5%) amongst 16–24 year-olds. However, HPV 18 was highest amongst 16–4 year-olds (0.6%) and lowest (0.3%) amongst 35-44 year-olds.

1.4 Prevention of HPV infection and related disease

The World Health Organisation (WHO) defines a vaccine as “any preparation intended to produce immunity to a disease by stimulating the production of antibodies” (WHO, 2022). Vaccination has been recognised as one of the most effective and cost-effective public health interventions.

As the above sections outline, HPV-related cancers caused by infections from HPV is a major public health problem impacting both high and low- and middle-income countries (de Sanjosé et al., 2018). Vaccines against HPV have been available since 2006 and recommended by the World Health Organisation since 2009. Their safety and efficacy have been proven and are continuously evaluated (Garland et al., 2016; Lu et al., 2011). The speed at which these have been progressively introduced in many national immunisation programmes has varied. In March 31st (2017) only 37% (n = 71) of countries across the globe had introduced the HPV vaccination as part of their vaccination schedule for girls. Of those recorded at the time, 11 had introduced the vaccination for boys (WHO, 2017). As of the end of 2020, 107 (55%) of the 194 WHO member states introduced HPV vaccination nationwide. By 2019 almost one third of programs (33 out of 107) were “gender neutral” in the sense that both girls and boys receive the vaccine.

1.4.1 Licensed HPV vaccines and their impact

Three prophylactic HPV vaccines are licensed for use against high- and low-risk genotypes. The quadrivalent vaccine (4vHPV) was introduced in the UK in 2006 and contains protein antigens for HPV 6/11/16/18 (Merck and Co, Inc., Whitehouse Stations, NJ, USA). The bivalent (2vHPV) was introduced in 2007 and contains protein antigens for HPV 16/18 (GlaxoSmithKline Biologicals, Rixenart, Belgium). The second generation non-avalent vaccine (9vHPV) was introduced later and targets antigens for HPV types 6/11/16/18/31/33/45/52/58. As the quadrivalent and bivalent vaccines were introduced to prevent cervical cancer in females, there are fewer studies of the vaccine’s preventive effective in males (Daley et al., 2016). The three vaccines (see table 1.3) offer comparable immunogenicity and effectiveness for cervical cancer prevention due to the similarities in HPV types they cover with robust safety profiles (Garland et al., 2007; Joura et al., 2007).

Table 1.3 HPV Vaccines and their manufacturers

	HPV vaccine		
	Bivalent HPV vaccine (2vHPV)	Quadrivalent HPV vaccine (4vHPV)	Nonvalent HPV vaccine (9vHPV)
Manufacturer	GlaxoSmithKline	Merck & Co, Inc	Merck & Co, Inc
Trade name	Cervarix	Gardasil	Gardasil9
HPV VLPs included	16, 18	6, 11, 16, 18	6, 11, 16, 18, 31, 33, 45, 52, 58
Injection Schedule (2 doses) *	0, 6-12 months	0, 6-12 months	0, 6-12 months
Injection Schedule (3 doses) **	0, 1, 6 months	0, 2, 6 months	0, 2, 6 months
Adapted from the Centres for Disease Control, USA (https://www.cdc.gov/hpv/hcp/schedulesrecommendations.html)			

Research exploring the provision of the HPV vaccine for males must be underscored by the notion that young girls/females represent the target population for HPV vaccination programmes. The focus on this target, as well as the attempt to eradicate cervical cancer, is the notion that vaccinating enough females would yield a higher and faster population impact (herd effect, indirect protection of unvaccinated women and direct protection of boys and men). Since the HPV vaccine has been licensed and provided for well over a decade now there is evidence that female-only vaccination programmes have resulted in a reduction in the number of males with genital warts (Drolet et al., 2015). Indeed, it is estimated that over 14 million European girls had received the full HPV vaccine dosage schedule and 17 million had received at least one dose; with these numbers approximately 76,000 cases of cervical cancer could have been prevented (Bruni et al., 2016). Therefore, evidence continues to demonstrate the potential for long-term coverage being likely to reduce HPV prevalence and HPV-related diseases in men if successful in vaccinating females. (Giuliano et al., 2011).

Vaccination of secondary target populations, such as older adolescent females or young women and males has growing evidence documenting the rationale to vaccinate these groups. The decision to extend vaccination to male populations has been established as research understands the increase in HPV pathology in males as well as the efficacy of the 4vHPV vaccine against anogenital warts and anal precancerous lesions (Bosch et al., 2016). The rationale of herd immunity through a female-only vaccination programme is not effective for GBMSM and, as a result, there has been extensive lobbying in the United Kingdom for the HPV vaccination programme to extend to GBMSM and to boys.

1.4.2 HPV vaccination of GBMSM in the United Kingdom

In July 2017, the UK's Joint Committee on Vaccination and Immunisation (JCVI) published an interim statement regarding extending HPV vaccination to adolescent boys and GBMSM. The latter was being reviewed as evidence on the association of HPV vaccine types with non-cervical cancers was being strengthened as well as evidence documenting the high burden of HPV-related diseases among GBMSM which would receive little indirect benefit from the female-only vaccination programme (Glick et al., 2014; Zou et al., 2014). The JCVI stated there would be an "improvement to the health of the UK population from gender-neutral vaccination". The modelling undertaken by the University of Warwick provided sufficient evidence to conclude that vaccinating boys and a gender-neutral programme would provide better control of the anal cancer causing types of HPV. Furthermore, additional future savings in the cervical cancer screening programme and gender-neutral vaccination would provide optimal protection for GBMSM in the long term.

The JCVI recommended a targeted GBMSM vaccination programme up to age 45 years who are already attending genitourinary medicine (GUM) and/or HIV clinics (also known as sexual health services).

1.4.3 HPV-GBMSM Vaccination: in England

This HPV-GBMSM Vaccination Programme was implemented in England since 2018 following a successful pilot that ran from June 2016 to March 2018. The programme in England (and other nations) runs in addition to the school-based vaccination

programme initially introduced in 2008 for females-only and later (2019) to boys. During the pilot phase in England clinics (with sufficient data recording) demonstrated 50% of eligible GBMSM initiated HPV vaccination and less than 5% refused vaccination (Checchi et al., 2019). This provided a rationale to proceed to a phased national rollout of the GBMSM-HPV vaccination programme for GBMSM attending Sexual Health services from April 2018. A total of 227 Sexual Health Services across England participated in the programme with 93% (210/227) reporting vaccination activity. In 2019, overall, first dose initiation was 33.7% (n = 36,016/106,835). Decreased initiation was seen with increasing age, with highest initiation seen for GBMSM aged <25 years at 38.1% (n = 12,583/33,031). Refusal of vaccination in all Sexual Health Services was 17% (n = 1,813/106/83) in 2019. Refusal of vaccination amongst HIV-positive GBMSM was 1.8% (n = 3,304/179,282) and did not considerably differ by age. Completion rates among GBMSM who received a first dose (n = 41,336/73,147) was 27.2% (19,875/73,147).

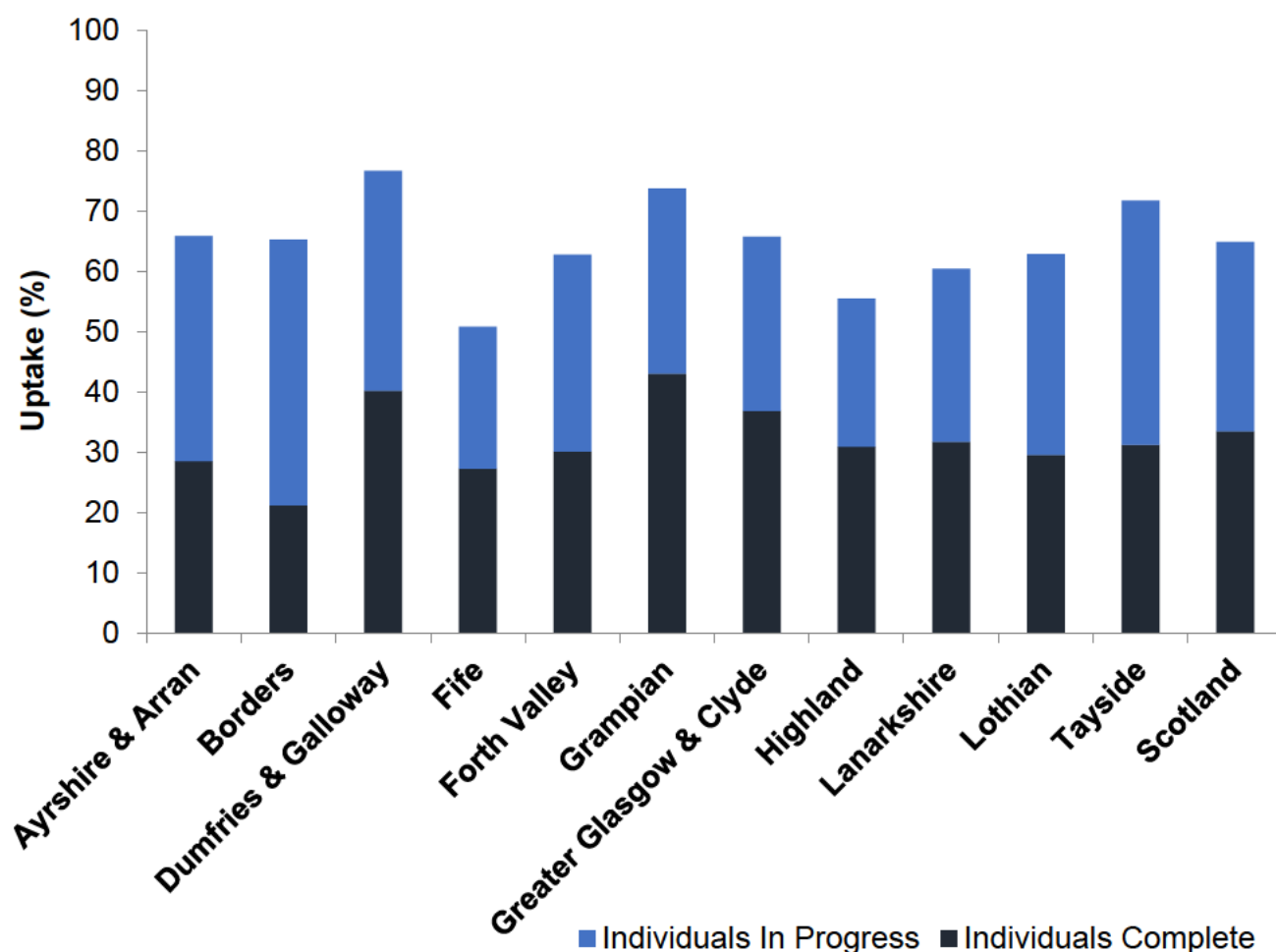
Follow-up times did impact doses received with second dose completion being higher among GBMSM who had received the first dose between 1 to 12 months of follow up. Figures do evidence missed opportunities to deliver second and third doses to GBMSM attending within the window for the HPV vaccine schedule. Of the 31,811 GBMSM who received the first dose but not a second, 23% (n = 7320) had attended a clinic within 2 to 12 months after receiving their first dose. Similarly, 15.2% (n = 2,936) GBMSM who received a second dose but not a third had subsequently attended a clinic 3 to 12 months after their second dose. In short, approximately 3 to 11% of GBMSM who reattended the same clinic but did not receive a subsequent dose represented a missed opportunity for vaccination between 2017-2019. Regarding clinic attendance, 27-31% of GBMSM did not reattend the same clinic within 12 months of their first dose.

1.4.4 HPV-GBMSM vaccination: in Scotland

Having outlined the HPV-GBMSM vaccination programme implementation above, the discussion will now turn to Scotland's provision of the vaccine for GBMSM. From the 1st of July 2017 GBMSM aged up to, and including 45 years of age, who attended sexual health/HIV clinics in Scotland. This programme also began in addition to the

school-based vaccination programme targeting school aged girls beginning in 2008 and extended to include adolescent boys in academic year 2019/2020. During the first 3 years of the programme almost 17,000 GBMSM attended a clinic were eligible for the HPV vaccine. Of those eligible, 65% (n = 10,944) received at least one dose of the HPV vaccine. 5,638 individuals were reported to have completed the full vaccination course. Variation in HPV uptake and completion was observed between NHS Board area (see figure 1.3).

MSM HPV Uptake, 1 July 2017 - 30 June 2020



Based on the most recent NHS Board of treatment.

Figure 1.3 Data from Public Health Scotland on HPV Vaccination Statistic for GBMSM (01 July 2017 to 30 June 2020)

Across the 3 years (July 2017 – June 2020) completion rates, unsurprisingly, had a clear upward completion rate (2017-2018: 35.6%, 2018-2019: 51.8%, 2019-2020: 84.3%). Completion rates decreased with age with younger (20-29 years, n = 2,773)

accounting for almost half (49.2%) of all completed vaccination doses. Data to end of June 2020 from the national HPV vaccination programme in Scotland show an uptake of 65% in sexual health clinics, considerably higher than that reported in England. Second dose completion was reported to be 52% in line with figures reported in England. Data on those eligible but not refusing the vaccine has not been updated since 2019 where across the period of 2017-2018 3,367 eligible GBMSM who attended a sexual health service did not begin the vaccination programme.

1.5 The health (inequalities) of GBMSM in the UK

There can be no certainty that providing the HPV vaccine for GBMSM through (specialised) sexual health services will ensure enough GBMSM will be reached – or reached early enough – to assure immunity within this group. This is played, in part, because of the health inequalities experienced by GBMSM. Health inequalities are differences in health experiences and outcomes which arise through the everyday circumstances of people's lives and the appropriateness of the systems in place to support them (Fish et al., 2021). Therefore, as “the conditions in which people are born, grow, live, work and age” (WHO, 2008), those living as LGBTQ+ people's contexts cannot be disaggregated from their health, the increased health risks in relation to HPV, and experiences of accessing healthcare.

1.5.1 Health and wellbeing of GBMSM in the United Kingdom

A corpus of data exists which demonstrates GBMSM as – to a greater or lesser extent when problematising the participation in the umbrella term of – Lesbian, Gay, Bisexual, and Transgender and Queer (LGBTQ+) individuals who experience significant health inequalities relating to health outcomes, health service provision and health risk factors compared to that of cis-heterosexual populations (Government Equalities Office, 2018). Indeed, LGBTQ+ experiences of health and well-being requires context-specific and identity-centred interventions in order to deliver congruent and competent services (Hunt et al., 2019).

1.5.2 Barriers to accessing healthcare services among LGBTQ+ populations

Those who identified as LGBTQ+ and were experiencing advanced illness in the UK were found to report several issues when accessing healthcare. This included the presence of heteronormative assumptions as well as homophobic or transphobic behaviours in healthcare services (Bristowe et al., 2018). This is in line with data which supports the notion that disclosure of sexual orientation and/or gender identity is complex and many LGBTQ+ individuals are fearful of seeking medical help because of invasive questioning. Indeed, in a sample of 5,375 LGBTQ+ people across England (53%), Wales (24%) and Scotland (23%) one in eight (13%) reported experiencing some form of unequal treatment from healthcare staff because of their sexual orientation. Some (10%) have also reported being outed without their consent by healthcare staff in front of other staff or patients. The study goes on to report almost one in four (23%) having witnessed discriminatory or negative remarks against LGBTQ+ people by healthcare staff (LGBT in Britain, Stonewall Report, 2018). These results, when taken together, continue to display while there have been recent changes in inclusivity of LGBTQ+ through greater inclusive policies and legislative changes, experiences of discrimination and exclusion in healthcare continue to persist for LGBTQ+ people. The consequences, therefore, continue to highlight that the health inequalities LGBTQ+ people experience throughout their life course are often further exacerbated by the barriers people face when accessing services to treat or support them.

1.5.3 Sexual Partners

Indeed, the targeted HPV-GBMSM vaccination programme will have limited efficacy in preventing HPV-related disease as it is most effective prior to sexual debut (or exposure to HPV through sexual contact). Sexual behaviour in the United Kingdom has been observed to have a decline in the age of sexual debut and an increase in the number of partners both of which have been identified as risk factors for HPV acquisition (Mercer et al., 2013). Data from the British National Surveys of Sexual Attitudes and Lifestyles (NATSAL) identified 2.6% (unweighted total of n = 190) of GBMSM in the UK. GBMSM reported larger number of sexual partners (of either gender) when compared to men having sex exclusively with women (MSEW). Indeed, the majority (62.7%) of MSEW reported one partner only while only 15.6% of GBMSM

reported one partner. It was reported that 34.8% of GBMSM had at least 10 partners while only 6.3% MSEW did (Mercer et al., 2016).

1.5.4 Sexual Health Service Use

Further data from Natsal-3 demonstrates that while a large and increasing proportion of the population are accessing sexual health services and testing for STIs, many at risk of STIs – and therefore receiving the HPV vaccine – may not. Natsal-3 (2010-2012) data found those whose urine was positive for chlamydia did not report having a chlamydia test in the past year and more than three-quarters had not attended a sexual health clinic in this time (Tanton et al., 2018). GBMSM perceived themselves at greater STI/HIV risk than MSEW, while fewer GBMSM considered themselves ‘greatly’ at risk of either STIs or HIV. A minority of GBMSM (33.0%) reported sexual health clinic attendance, testing for HIV (17.0%) and STI diagnosis/es (4.9%) each in the past year. GBMSM were reported to more likely seek professional help/advice for their sex life in the past year from sexual health/GUM/STI clinics when compared to MSEW (Mercer et al., 2016).

1.5.5 Conclusion

These increased health needs and health inequalities are significant to this thesis for two reasons: GBMSM clearly have a greater need for the HPV vaccine than men in the general population, so they are likely to require more encounters with the services in which the vaccine is provided in; and services and their providers need to be aware of the difference in health needs in GBMSM to ensure that health concerns, behavioural changes and relevant interventions are provided and followed-up in order to eliminate and reduce inequality in health outcomes due to ineffective health promotion and/or inadequate care.

As outlined above, the conditions of inequality which shape the health, and experiences of health, are important when contextualising the GBMSM participants of this study (Priya, 2019). By analysing the information from available literature on inequalities as discussed, the socio-political settings which shape GBMSM health gives a heightened cultural competency when entering the field and provides a

substantive understanding for which the primary research in this thesis can reflect on throughout the duration of the research.

1.6 Rationale

Underpinning this study is the rising prevalence – and awareness of – HPV-related disease among GBMSM. This study considers broad social and cultural factors that impact the lives of GBMSM and their attenuation to HPV infection and HPV vaccination. While the research considers individual perspectives in the navigation of health and HPV, the findings go beyond individualistic approaches. An analysis of construction of knowledge and the role of the socio-political environment GBMSM are entrenched within includes attitudes, perceptions and experiences of HPV was carried out. This study explored the role of the sexual health service in the provision of the HPV vaccine in Scotland. The outcome of this study provided a theoretical explanation for the psychosocial processes of HPV vaccination among GBMSM in Scotland. This contributed to sociocultural knowledge of the target recipients while also challenging studies based on positivism that are widespread in constructing risk and GBMSM outcomes.

To the author's knowledge this will be the first qualitatively inclined research project exploring HPV vaccination among GBMSM in Scotland. While there have been quantitative and mixed methodological studies exploring HPV vaccination among GBMS in England, notwithstanding, there is still a need for a bottom-up approach to examining factors which influence HPV vaccination from GBMSM in Scotland. As discussed, novel biomedical approaches to HIV prevention have had world changing impact on the discourses surrounding GBMSM health. Therefore, by unpacking the constructions of health among the target HPV vaccination recipients, the negotiation and social complexity of HPV vaccination can be unpacked.

1.6.1 Discipline of thesis

To situate this thesis, the discipline is defined prior to any critical appraisal of the literature and detailed methodology. This thesis is premised on the ever-changing historical and contemporary placement of sexual minority people relating to moral placement of values, standards, and expectations within a heteronormative society in

relation to the health of sexual minority men. These large “mutual simultaneous forces” (Lincoln & Guba, 1985, p. 151) are important to outline when discussing the experiences of HPV and GBMSM and the experiences of awareness, uptake, and completion of the vaccine dosage. This is because:

“Everything influences everything else, in the here and now. Many elements are implicated in any given action, and each element interacts with all of the others in ways that change them all while simultaneously resulting in something that we, as outside observers, label as outcomes or effects” (Lincoln & Guba, 1985, p. 151)

These socio-cultural-political positions have ultimately shaped and steered the conundrum of difference in the provision of health services targeting sexual minorities by bifurcating sexual and gender identities and behaviours (such as male, trans male, gay male). The research findings of this thesis are not designed to offer tangible data that result in any quantifiable relevance. Nor does this thesis present a dichotomising predicament of what is a right way or a wrong way in the governmental intervention in the health of sexual minority men in national health institutions. This work is couched within an understanding of processes (HPV vaccination) which may or may not produce regularities such as complete acceptance and provision of the HPV vaccine. Thereby the qualitative nature of qualitative (health) research intrinsically acknowledges and holds central the context – even the society – in which the research is being done as Becker (1966) in discussing Mead’s view of society states:

“The reality of social life is a conversation of significant symbols, in the course of which people make tentative moves and then adjust and reorient their activity in the light of the responses (real and imagined) others make to those moves. Social process, then, is not an imagined interplay of invisible forces or a vector made up of the interaction of multiple social factors, but an observable process of symbolically mediated interaction” (Becker, 1966, p. 69)

This thesis is both explanatory and exploratory. Therefore, the author anchors this within a qualitative health research (QHR) approach (Morse, 2016), as the primary discipline, that fits congruently with the proposed methodology and methods explored

later in chapters three and four. Put simply here, as this thesis explores the provision of the HPV vaccine to better address health inequalities, this is in alignment with a qualitative health research approach as it focuses on the:

“[the] experience and understanding of different participants’ perspectives, and generated from their different academic, social, cultural and political backgrounds... public health knowledge [therefore] is shaped by the cultural, historical, political and social norms that operate within that context and time”

The nature of qualitative research is exploration of trajectories with the perspectives of those involved; to understand those experiences and journeys. To understand the process of care – the journeys of patients go through in health systems – to understand the behaviours engaged in; to understand the people they encounter and how they interact; to think about how from these processes and understandings how new knowledge, new evidence, new policy, new method.

1.6.2 Purpose of the thesis

This thesis, in retaining congruency with Constructivist Grounded Theory (CGT) principles, explored factors relevant to the HPV vaccination of GBMSM in Scotland. The attitudes, perceptions, and experiences of GBMSM relating to HPV infection and HPV vaccination were explored to understand factors that influence HPV vaccine provision and vaccine acceptance. By comprehensively understanding these measures it can be recommended what may increase HPV vaccine provision and uptake to ultimately improve the health of GBMSM. Data was collected by conducting semi-structured interviews with GBMSM in Scotland eligible to receive the HPV vaccine since the programme began (July 2017). CGT, an advanced qualitative methodology, was used to collect and analyse data to construct a theoretical model about HPV vaccination (Charmaz, 2014).

1.6.3 Anticipated contribution to knowledge

Several contributions to knowledge were anticipated from this thesis. Primarily, this study contributed to knowledge by offering explanations of HPV vaccination based on the lived experiences of GBMSM as targeted recipients of the vaccination programme.

This offers insight into the challenges and issues concerning HPV vaccine provision and adds to the popular discourses surrounding HPV vaccination implementation approaches within the UK and globally. In utilising a qualitative approach, rich data pays proportionate credence to the complex experiences of GBMSM in the UK.

1.6.4 Aims and research questions

The arguments presented in this chapter have initiated and continued discussions in LGBTQ+ health and specifically HPV infection and vaccination. Therefore, aims have been recognised and structured research questions have been formulated to fill the gap in knowledge regarding GBMSM-HPV vaccination within Scotland. The aim of the research is as follows:

This doctoral thesis aims to develop an understanding of factors that influence participation and non-participation among GBMSM living in Scotland, in the targeted HPV vaccination programme.

Thesis Objectives:

1. To assess from the existing, qualitative literature, the barriers and facilitators of HPV vaccination among GBMSM (*Systematic Review Chapter*)
2. To develop a theoretical model of the psychosocial processes relevant to HPV vaccination among GBMSM in Scotland (*Findings*)
3. To contribute to theory development in LGBTQ+ health and psychology research by the development of theoretical interpretations of GBMSM-HPV vaccination informed by GBMSM (*Discussion*)

To achieve these aims the following research questions are explored:

Primary Research question:

“What factors contribute to – and influence – the receipt of the Human Papillomavirus (HPV) vaccine among Gay, Bisexual, and other Men who have Sex with Men in Scotland?”

1.6.5 Organisation of thesis

This thesis is presented in seven chapters. In the first chapter I have provided a brief background to the study by discussing both the population intended to receive the HPV vaccine and the HPV vaccine programme itself within a United Kingdom context. The research was undertaken to develop an understanding of the key phenomena explored in this thesis.

This thesis is intentionally structured to provide the reader with an accessible insight into the literature that exists in the field:

Chapter Two provides a Qualitative Evidence Synthesis of the qualitative literature pertaining to the perceptions and experiences that underpins GBMSM-HPV vaccination. Here the published literature is systematically retrieved and synthesised. The chapter concludes by situating the state of the evidence of GBMSM-HPV vaccination.

In **Chapter three**, the methodological approach underpinning the research is outlined. Reflections are made on the wider nature of social research and links to how this research is being conducted are made. This informs a discussion of – and provides a rationale for – the Constructivist Grounded Theory approach adopted situated in the history of this research approach and the qualitative paradigm.

Chapter four focuses on describing the methods taken for this thesis; the design of the study and recruitment strategy is outlined, and ethical considerations detailed. The analytical method practiced in Grounded Theory is also outlined, exemplified, and discussed. A reflexive discussion is also offered on researcher positionality and how my position as a cis gay man influenced the research design, analysis, and presentation of findings.

The findings and discussion are offered in **chapters five and six**.

2 Chapter 2: A systematic review and thematic synthesis exploring how gay, bisexual, and other men who have sex with men experience HPV and HPV vaccination.

What will this chapter discuss?

This chapter will outline:

- Outline key psychosocial phenomena related to HPV vaccination
- Define and rationalise the systematic review process
- Describe the methods, results, and analyses of the systematic review
- Finalise with an outlining of the gap in the literature
- HPV vaccination targeting GBMSM in UK countries

2.1 Chapter Overview

This chapter describes the methods and results of a thematic synthesis undertaken to understand the attitudes, perceptions, and experiences of GBMSM in relation to HPV and HPV vaccination reported in previously published primary qualitative articles. This chapter will begin with a discussion for why a qualitative evidence synthesis (QES) systematic review approach was chosen followed with an outline of the aims, methods, quality appraisal tools and results of the review. The thematic synthesis is then described which found multiple sites of tension relating to the attitudes and experiences of HPV and HPV vaccination among GBMSM including two major analytical themes – 1) The limited perceived relevancy of HPV among GBMSM; and 2) The role and influence of sociocultural context and care experiences on HPV-GBMSM vaccination. This chapter will conclude with a summary of the key findings and identified gaps in the existing literature to set the scene for the proceeding primary study.

2.2 HPV vaccine acceptability in men and women

While effective, safe, and recommended by WHO, HPV vaccination coverage remains low across high and low- and middle-income countries and eligible populations. Numerous factors have been identified such as lack of healthcare provider

recommendations, concerns about safety, concerns about side effects, and general lack of awareness and knowledge about HPV vaccination (Brandt et al., 2016). This is built on by Dubé et al. (2013) who also reported factors impeding HPV vaccination including past vaccine experiences, perceived importance of vaccination, risk perception and trust, subjective norm, and religiosity (Dubé et al., 2013). In the European Union (EU), a systematic review explored factors related to uptake of vaccination. Loke and authors (2017) identified worldwide HPV vaccination uptake and associated factors. Analysing twenty-eight studies, HPV vaccination uptake (>1 dose) varied significantly with results ranging from 2.4%, in Hong Kong to 94.4% in Scotland (Loke et al., 2017). Brewer et al. (2007) concluded from analysis of 28 studies found those who were already vaccinated against HPV were more likely to express willingness to receive the HPV vaccine. There was a weak relationship between HPV knowledge and acceptability indicating similar results of later systematic reviews on acceptability outlined above (Brewer et al., 2007). Similarly, social norms and values relating to sexual debut and behaviour have been found to inform the views and actions of healthcare professionals, parents, and young women in relation to HPV vaccine (Ferrer et al., 2014).

There is therefore an urgent need for a substantive understanding of the barriers and facilitators which impact HPV vaccination coverage to reduce the burden of HPV-associated infections and cancers.

2.3 Rationale for a systematic review and qualitative evidence synthesis

Chapter 1 highlighted that despite improvements in the provision of the HPV vaccine across the globe, the prevalence and incidence rates of HPV infection among GBMSM are higher than their heterosexual male counterparts coupled with a considerable and consistent amount of evidence suggesting low awareness and knowledge of HPV (Nadarzynski et al., 2019). In response to this, several countries began extending HPV vaccination to sexual minority men including the United Kingdom. These novel introductions represent the addition of another intervention in the health of GBMSM and necessitate an inquiry of perspectives and experiences of this in varying settings. Nadarzynski's existing systematic review on MSM and HPV vaccination confirm a prevailing lack of knowledge, competence and understanding about HPV and HPV

vaccination. It is argued here that there is a need to extend the focus and depth of this review as quantitative research does not offer the nuanced, rich, in-depth approach to data which qualitative research affords (Bearman & Dawson, 2013). Similarly, while highlighting trends, this research is unable to provide a more nuanced picture of barriers and facilitators of HPV vaccine provision post-licensing.

Therefore, this thesis involved the undertaking of a systematic review and a thematic synthesis of HPV-GBMSM experiences and perceptions of the published literature. Before outlining the details of this (see below), it is pertinent to outline the appropriate terminology used in this chapter. The systematic approach is considered “the gold standard to collect and summarise the best available evidence regarding a specific question” (Rada et al., 2020, p. 2). This is reflected in the growing number of disciplines in which the systematic review approach has been utilised and has become a staple in informing health and healthcare a key domain within evidence-based practice. Here, evidence-based practice can be considered as “the conscientious, explicit, and judicious use of theory-derived, research-based information in making decisions about service provision to individuals or groups and in consideration of individual needs and preferences” (Ingersoll, 2000, p. 152). This is in line with Munn et al. (2018) whom consider the systematic review process as one which involves “searching, appraising, and synthesising findings of primary studies, and has rapidly become a cornerstone of the evidence-based practice and policy movement” (Munn et al., 2018, p. 1).

To this end, qualitative research is uniquely situated to capture the complexity of the lived experiences of GBMSM in relation to the vaccination programme as a manifestation of evidence-based practice and therefore allows the appropriate attenuation which quantitative research is lacking. By holding central the premise that qualitative research explores the perceptions and experiences of participants as they navigate the world around them, qualitative research can make these navigations in connection to the individual’s health and use of healthcare services.

A systematic review and qualitative evidence synthesis (QES) was selected as the research design for this study as this allows an extensive and structured exploration and analysis of the qualitative data in the literature. The systematic review approach

therefore engenders rigour to the subsequent analysis as the systematic review approach reduces bias in the production of a detailed record of the qualitative literature exploring what is known about GBMSM experiences of HPV vaccination in which should be the starting point in any thesis as it can inform data collection and analysis (Bazeley, 2020).

This is aligned with Flemming et al. (2019) who suggest that qualitative synthesis can be used to explore:

- Health-related behaviours or experiences of illness
- Why and how a policy or intervention works
- Appropriateness or acceptability of interventions
- Barriers and facilitators to implementation of interventions
- Gaps in primary qualitative research evidence, for example gaps about knowledge of the acceptability of intervention (Flemming et al., 2019).

QES is a term which encompasses a broad array of different systematic reviews of primary qualitative research used to generate new knowledge based on rigorous analysis of existing (Thorne et al., 2004). Primary qualitative research refers to a peer-reviewed, published in an academic journal, study which uses a qualitative method of data collection and analysis. By utilising a qualitative approach, primary studies are likely to provide conceptually richer and thicker evidence than that of their quantitative counterparts. By synthesising qualitative studies this review will establish a greater understanding of the deep layers of meaning, acceptance and understanding relating to HPV and HPV vaccination among GBMSM allowing a heightened conceptualisation of the experiences, views, beliefs and priorities for healthcare relating to the HPV-GBMSM vaccination programme explored in Scotland (Booth, 2016; Flemming et al., 2019).

The context for this review is using existing research to inform the provision of the HPV vaccine for GBMSM in Scotland by bringing together studies that attempt to understand HPV vaccination from the perspectives of the targeted demographic of GBMSM affected. To do this, the accounts of the experiences and views of those

closely concerned and combining this with extrinsic – clinical and epidemiological research (as outlined in chapter 1) will be done. The focus of this review, it is argued, is broad enough to fully capture the potential range and experiences regarding HPV vaccination while being specific enough – rationalised by the sexual minority sample – to be useful to healthcare providers and policy makers and researchers. It is important to understand GBMSM's experience and perceptions of HPV and HPV vaccination so that potential barriers can be ameliorated, and facilitators bolstered by healthcare professionals within Scotland.

2.3.1 The review questions

The focus of study for this systematic review is the lived experience and perceptions of HPV and HPV vaccination among GBMSM.

This, therefore, is in line with the aims of QES as it seeks to enhance understanding of the particular values and attitudes toward, and experiences of, HPV and HPV vaccination by those who are intended to receive the vaccine (Karimi-Shahanjarini et al., 2019). Having identified the focus of the study, a well-constructed review question must unpack the scope into its component concepts. The review question is pivotal as it determines the methodology and the relevant considerations. While reviews focusing on intervention studies are guided by the Population, Intervention, Comparative Intervention and Outcome (PICO) method to formulate review questions, qualitatively focused reviews into the lived experience adopt the Population, Exposure, Outcome and Type (PEOT, see table 2.1) method to structure the review question (Bettany-Saltikov & McSherry, 2016). This allows the research question to act as a 'compass' allowing data with unintended relevance and resonance to be examined (Eakin & Mykhalovskiy, 2003).

Table 2.1 PEOT definition of study inclusion

Population	Gay, Bisexual, and other Men who have Sex with Men (GBMSM)
Exposure	To Human Papillomavirus (HPV) and HPV vaccination
Outcome	GBMSM perceptions and views of their experiences
Type	Phenomenology, Grounded theory, Descriptive thematic analysis

“What are gay, bisexual, and other men who have sex with men (GBMSM)’s experiences and perceptions of Human Papillomavirus (HPV) and HPV vaccination as demonstrated through existing primary qualitative research?”

2.4 Aims and objectives

As outlined in Chapter 1, the aim of this chapter is to:

Assess from the existing, qualitative, literature the barriers, and facilitators of HPV vaccination among GBMSM

With the specific objectives to:

- Describe GBMSM perceptions and experiences surrounding HPV vaccine acceptability
- Explore the barriers and facilitators to participating in HPV vaccination

2.5 Approach to synthesising data

2.5.1 Choice of synthesis method

A thematic synthesis approach, as outlined by Thomas and Harden (2012) was used to analyse and synthesis the data for this QES. The term Qualitative Evidence Synthesis (QES) is broad to accommodate a range of types of qualitative data such as case studies, policy analyses, process evaluations, and primary qualitative

research. Because of this, there are relatedly many different types of QES, each supported by divergent or very similar schools of thought (Noyes, et al 2013). Therefore, the decision on which QES to implement is complex.

Many frameworks have been proposed to assist in the construction and decision-making processes. These include the TREAD (Time/Timeframe, Resources, Expertise, Audience & Purpose, Data) framework (Booth, 2011) as well as the more contemporary RETREAT (Research Question, Epistemology, Time/Timeframe, Resources, Expertise, Audience & Purpose, Types of Data) frameworks. These guidance documents provide frameworks for selecting review methodologies, being critical of the appropriateness of undertaking a chosen approach (a Thematic Synthesis). These resources encourage authors to select the appropriate review methodology by outlining areas of reflection and consideration. In the internalisation of these frameworks, other approaches were considered, in particular a meta-ethnography.

A meta-ethnography is a well-developed method for synthesising qualitative data which focuses on translating studies into each other to afford comparison and critique across the data (Britten et al., 2002). Many aspects of a meta-ethnographic approach are suitable for this review. For example, meta-ethnography uses a method labelled reciprocal translation – this method has been identified as an unnamed element in most methods of qualitative synthesis, including the generation of analytical themes in Thematic Synthesis. During the process of choosing a QES approach, the review team considered the anticipated volume of studies to review (based off initial scoping work) and the intended audience of review: namely, academics, clinical professionals and lay audiences. The data to be included in the synthesis were generally more descriptive rather than interpretative or rich in theory, with the focus often on reporting barriers and facilitators of targeted vaccination. This may be in part due to the applied nature of the research questions that the studies were intended to address. The characteristics confirmed that a thematic synthesis approach method of review was chosen over a meta-ethnography approach. Moreover, it was also intended that this review perform an integrative approach rather than an interpretive approach given the primary research may have established themes within them. These themes, primarily descriptive related to notions of barriers and facilitators, would benefit from the

aggregation and development of high level, analytical themes, afforded in the thematic synthesis approach rather than developing new theories or concepts in the primary data as is the purpose of other methods such as meta-ethnography.

2.6 Review methods

This QES used thematic synthesis as outlined by Thomas and Harden (2008).

2.6.1 Review search strategy

A thorough search of available literature is a distinguishing feature of systematic reviews, with the need for the search strategy to be comprehensive and reproducible. As such, the aim is to optimise the ability of the search to identify relevant articles and, where possible, to exclude inappropriate articles in relation to the research question. The protocol was registered on PROSPERO (CRD42018090393).

Having established the key words from the PEOT and the methods of combining them (i.e., Boolean logic), the researcher undertook the systematic search strategy and applied it to the following databases:

1. Applied Social Index and Abstract (ASSIA),
2. SCOPUS,
3. PsycINFO
4. Cumulative Index to Nursing & Allied Health Literature (CINAHL),
5. PubMed/Medline
6. Embase

An initial search was conducted in February 2018 with an updated search conducted in March 2019. Due to time constraints, grey literature, conference abstracts, and thesis dissertations were excluded from this review. These databases represented the disciplines of medicine, nursing, and social sciences. An expert librarian was consulted in the implementation of the search strategy. To ensure a systematic and robust searching process, the following steps were conducted:

- Medical Subject Headings (MeSH) terms (or like thereof) for each database which categorised the content of the PEOT were identified and searched. The indexing on each database varies, for example qualitative research on Medline is indexed “qualitative research” while on CINAHL the subject heading “qualitative studies” is used.
- Free-text terms that might identify qualitative research was also used across each database. Commonly used qualitative research methodology terms informed by previous systematic reviews exploring HPV and HPV vaccination were used in information retrieval.
- Broad-based were also used in free text. These include terms such as “qualitative”, “findings”, and “interview” and synonyms thereof.

Terms used across all three search approaches were purposively chosen to maximise the precision and recall of the search strategy aimed at retrieving qualitative studies. Search strategies included terms associated with quantitative rather than qualitative research, such as “questionnaire” and “attitude” as it was necessary to include these terms as qualitative research may have been indexed as such despite qualitative researchers not choosing to use such terms to describe their work.

Given the expected paucity of literature to address the review question, no date restrictions were applied. Next, identified articles from each database were transferred to EndNote X9 (and later to X10) a data management tool for bibliographies. Duplicated records were removed and the title and abstract of each article screened by two researchers (LC and SM). References of included articles were also hand-searched.

2.6.2 Review inclusion/exclusion criteria

Only articles that reported qualitative primary data were included. The sample of included studies focused on GBMSM with regard sexual identity (non-heterosexual) as well as sexual practices. Studies that explored HPV-related perceptions among men which were not identified by authors as GBMSM, or sexual minorities were excluded (see table 2.2). No comparisons with heterosexual populations were made as it was outside the scope of this review. Studies which focused on perceptions of

HPV-related cancers (such as anal cancer and anal cancer screening) but not HPV vaccination were also excluded. These criteria were established to ensure data included in the review were sufficient and appropriate to draw valuable conclusions relating to the HPV vaccination of GBMSM.

Table 2.2 Inclusion and exclusion criteria for selecting studies

Inclusion criteria	Exclusion criteria
<p>Population</p> <ul style="list-style-type: none"> Articles must identify the population as sexual minority (GBMSM) or as practising non-heterosexual intercourse. <p>Exposure</p> <ul style="list-style-type: none"> Human Papillomavirus, Human Papillomavirus vaccination. <p>Outcome</p> <ul style="list-style-type: none"> Explicit reference to and or perceptions and experiences of HPV and HPV vaccination. <p>Type</p> <ul style="list-style-type: none"> Empirical qualitative studies and mixed-methods studies (inclusive of qualitative findings that can be extracted). <p>Language</p> <ul style="list-style-type: none"> English language studies 	<p>Population</p> <ul style="list-style-type: none"> Articles which do not identify the sexual identities or practise of self-identifying male samples. <p>Exposure</p> <ul style="list-style-type: none"> HPV-related cancers without reference to vaccination <p>Outcome</p> <ul style="list-style-type: none"> Quantitative attitudinal scales <p>Type</p> <ul style="list-style-type: none"> Quantitative studies, non-empirical studies (i.e. editorials), non-peer reviewed literature (i.e. theses). <p>Language</p> <ul style="list-style-type: none"> Non-English language studies

2.6.3 Review study selection

Papers were selected for review if they met the following criteria:

- Participants were identified as GBMSM (including sexual orientations and gender identities which assumes such a label). Because of the limited research on this topic, studies that identified participants as sexual or gender minority were also included.
- Qualitative studies (phenomenology, ethnography, grounded theory, generic qualitative or mixed methods) which reports the experiences, needs, and/or

preferences regarding HPV vaccination; interactions with health-care professionals or health-care systems regarding HPV vaccination.

- English language.

2.6.4 Review data management

Search results were uploaded to EndNote X9 (and later X10), de-duplicated, and imported into the data managing software nVivo10 (then later to nVivo 12) to conduct relevant screening, data extraction, and quality assessment. Following the removal of duplicates, the title and abstract of all remaining papers were screened independently by two reviewers (LC and SM). Conflicts were resolved by discussion. 9 papers were selected for full review. Following full-text review by LC, SM (and later JP), 1 article was removed.

2.6.5 Review data extraction process

Once screening was completed independently by two reviewers (LC and SM) the final number of included studies was determined, to obtain “meaningful information from each study” (Booth et al., 2016, p. 145), a data extraction template describing included studies was performed using a standardised tool garnering information on: population and sampling methods, theoretical perspective, data collection, data analysis and study findings (Noyes et al., 2018). This allowed the ‘contextual’ details (e.g., population studied and their characteristics) to be recorded. These details were pivotal in order to be able to interpret the findings from the data (Ellis, 2019).

The second approach of data extraction for the included studies was the extraction of their ‘results’ or ‘findings’ from the individual primary qualitative studies. These ‘results’ or ‘findings’ included quotes from the participants, author interpretations, and themes. The narrative format or tables used to reflect these were extracted. These were inputted into NVivo 9 (and later NVivo 12) allowing the management of the large narratives of text to be organised and analysed.

2.6.6 Quality assessment

Intrinsic to the credibility of the review is the quality of included studies and the dependability of their reported findings. What quality and reliability are in the context

of quality assessment in a qualitative evidence synthesis, however, is widely – and vociferously – contested (Hannes & Lockwood, 2012). Notwithstanding divergent positions on whether an assessment of methodological limitation should be undertaken, a pragmatic and utilitarian stance toward the contribution of qualitative research was taken, proffering that if findings from individual qualitative primary studies are to contribute to understanding of a particular phenomenon, then the resulting synthesis must hold true to how the findings of primary studies are reported by the original researchers. To this day, the debate around the feasibility and usefulness of assessing the quality of qualitative studies in evidence synthesis continues with little consensus reached. Despite the differing applications of quality assessment in the myriad of approaches to synthesising qualitative evidence – such as the exclusion of some evidence due to lack of quality in a meta-ethnographic approach compared to the lack of exclusion on such grounds in critical interpretation syntheses – it is generally agreed that some form of quality assessment is required to identify flaws within primary studies that might distort a review’s findings.

It is essential, given the ongoing debate regarding quality assessment, to ensure that the process of quality assessment chosen is rigorous and credible. To achieve this, the selection of an appraisal tool which fits the aims and assumptions of the review is required. To this review, quality assessment was undertaken to mediate messages (Grant and Booth, 2009). Undertaking an assessment of the included studies will allow a determination of whether the data contained within studies is conceptually rich or not or descriptively thick or thin (Noyes et al., 2019).

The decision to appraise the quality of included studies in this review also serves the purpose of ensuring the extent to which studies are methodologically sound is reported transparently. Moreover, this step in the review process allowed the researcher to reflect on the features of the included primary studies that may represent methodological rigor and, in turn, how the included findings synthesised may inform health policy decision making (Carroll and Booth, 2015).

To facilitate quality assessment of included studies in the current review and qualitative synthesis, the use of the Critical Appraisal Skills Programme (CASP) checklist for qualitative research (CASP, 2014) was deemed appropriate. The decision

to use the CASP tool was chosen because it is one of the most commonly used checklist/criteria-based tools for quality appraisal in health and social-care related qualitative evidence syntheses (Dalton et al., 2017) and is considered suitable for novice qualitative researchers (Hannes & Macaitis, 2012). Therefore, as the first author had no prior experience of formally appraising the qualitative research and the CASP tool was devised for use with health-related research it was deemed appropriate for the context of the review.

The CASP toolkit contains 10 checklist questions answered with a yes, no, or can't tell to assess the strengths and limitations of a qualitative research methodology. Screening questions compartmentalise the aims of the study and appropriateness of qualitative methodology to aims with eight questions pertaining to the design, recruitment strategy, data collection, reflexivity-related issues, ethical issues, rigor of data analysis, and the reporting and value of findings. Although no formal scoring system is included in the CASP toolkit, the following was used; item not met = 0 (no), item partially met = 1 (unsure), and item fully met = 2 (yes). The use of this system supported a critical reflection of the included studies (appendix 4).

An overview of the assessed quality of included studies is included (see results section below). While two reviewers (LC and JP) applied the CASP toolkit to included studies, given that sufficient quality was not a determining factor any discrepancies in the application of the toolkit was discussed and reviewed until consensus was reached. Using the CASP rating scores, the quality of articles were classified as high, moderate, or low.

2.6.7 Data synthesis

Within qualitative evidence synthesis, it is argued, there are two types of reviewing: one of descriptive (also known as narrative) which involves the characterisation of studies and the other which is called interpretative synthesis (Mays et al., 2005) which involves the production of new knowledge by synthesising data from qualitative studies relevant to the review.

Thematic Synthesis (Thomas & Harden, 2008) sits within the interpretative school of QES. Much like primary qualitative research, thematic synthesis is characterised in 3 stages (see table 2.3). It is noticeable here that this approach combines the reciprocal translation indicative of meta-ethnography without compromising the principles developed in systematic reviews. While thematic synthesis and grounded theory utilise line-by-line coding, thematic synthesis does not involve the constant comparison method central to grounded theory (Heyvaert, 2017). Where thematic synthesis does differ from the methods is that new constructs and explanations are generated directly from the corpus of evidence.

This approach was deemed suitable as the aim of the review is to provide complementary information about the barriers and facilitators to HPV vaccine implementation, acceptability, and other features of vaccine provision among GBMSM (Petticrew et al., 2013). Moreover, thematic synthesis has the flexibility to incorporate both 'thin' and/or 'thick' data in the development of analytical themes (Thomas & Harden, 2008). Thus, this method of analysis allows the identification of key concepts across included studies, even though the concepts may not be described using the same language, explanations or associated theories to be pooled and analysed to go beyond the content of the primary qualitative studies in silo (Thomas & Harden, 2008).

First, included studies were uploaded as full-text PDF files into NVivo project (QSR International, Australia). Each study was read repeatedly to ensure all text relating to HPV vaccination among GBMSM were identified and integrated. As outlined by Thomas and Harden (2008), data included for thematic analysis pertained to the results or findings sections of primary studies as well as evidence tables, quotes, and participant demographics. If text included in the abstract and discussion related to new concepts, this was also collected for coding. Coding is described as an analytical strategy for data reduction. Line-by-line coding is conducted to conceptualise the data and inductively identify concepts (Tong et al., 2016). This involves the inductive identification of words or phrases that reflect or capture the meaning of each sentence (Harden & Thomas, 2008; Tong et al., 2012). Codes/descriptive themes were devised and assigned to the text within the published article's 'findings' or 'results' section(s). Codes were reviewed and their parameters shaped/reshaped by the first author. These were compared and organised into overarching themes and re-read

considering the aims of the review (Thomas and Harden, 2008). This meant codes were investigated for recurrent relationship or in order to categorise the large data set into themes for later retrieval and/or theory building (Albert et al., 2010). A theme is a pattern found in the data that may act on a continuum or as a medium to interpret aspects of phenomena (Albert et al., 2010).

The results or finding sections of included sections was then thematically analysed line-by-line by the first author (LC) and later reviewed by the review team in detail. This process captured both “first-order” (participants’ interpretations of their experiences) and “second-order” (authors’ interpretations of participants’ experience) concepts (Britten et al., 2002). An inductive approach was used for coding, without pre-formulated assumptions of how codes should be defined and structured to maintain the trustworthiness of the findings from the review. By investigating the similarities and differences of codes between studies, concepts were translated across studies to identify specific barriers and facilitators to HPV vaccination, which were grouped and organised under a set of descriptive themes. The descriptive themes identified what issues were relevant to GBMSM’s lived experiences regarding HPV vaccination. To generate analytical themes, the studies and descriptive themes were reviewed as a whole in relation to the research question and the barriers and facilitators inferred by the descriptive themes (Barnett-Page & Thomas, 2009; Harden & Thomas, 2008).

Table 2.3 Process of Thematic Analysis

Stage 1	Line-by-line coding of text in the results and discussion sections according to meaning and content
Stage 2	Identifying 'descriptive themes' by looking for similarities and differences between codes and beginning to group them together into a hierarchy
Stage 3	Generating 'analytical themes' which involves going beyond the content of the studies to generate new interpretative constructs or explanations.

2.7 Review results

2.7.1 Studies included

The search terms utilised can be seen in the appendix (Appendix 1). The search strategy yielded high specificity and relevant studies to be included (Appendix 2).

Table 2.4 Included studies following update in March 2019

Database	Search result	Eligible studies	Rerun of search 13-19/1/19
PsycINFO	3	1*	3 (same)
Medline	5	3	8
Embase	18	4	22
Cinahl	7	2	8
Assia	3	2	4
Web of Science	3	0	6
Total N	N = 39	N = 12	N = 51

2.7.2 Study characteristics

The total eight included studies (see table 2.4) published reporting on seven studies (Galea et al., 2017 and Nurena et al., 2013 included the same data). Four of the studies included were carried out in the USA (Fontenot et al., 2017; Gutierrez et al.,

2013, Koskan et al., 2018; Wheldon et al., 2017) with remaining being employed in Canada (Grace et al., 2018), Peru (Galea et al., 2017), and two in the United Kingdom (Kesten et al., 2019 and Nadarzynski et al., 2017).

In total, 232 (range 18 to 41 participants) GBMSM participated across the primary qualitative studies. The range of the publication year for included studies was 2013 – 2019. Participants' ages ranged from 16 years to 68 years. Due to differing calculations of participants' ages, no grand mean of participant age can be calculated. All studies reported GBMSM (n = 1 study included a "two-spirit" participant).

The studies were homogenous in their focus, with the majority focusing on attitudes, perceptions and experiences of HPV and HPV vaccination and the barriers to this as documented in data extracted from the studies (Appendix 3).

2.7.2.1 Study methodology

All the studies included in the synthesis clearly stated the aims of the study and established that the qualitative method of analysis was appropriate (8/8).

2.7.2.2 Study design

Three articles (Galea et al., 2017; T. Nadarzynski et al., 2017; Nurena et al., 2013) reported employing a pluralistic approach to qualitative data collection. Three studies (Grace et al., 2018; (Koskan & Fernández-Pineda, 2018; Wheldon et al., 2017) employed semi-structured interviews as an exclusive data collection method. The remaining two studies (Fontenot et al., 2017; Gutierrez et al., 2013) focus groups were described as the exclusive data collection method. Two studies (Fontenot et al., 2017; Gutierrez et al., 2013) employed self-administered questionnaires in addition to qualitative methods of data collection. Two studies Gutierrez et al., 2013; Wheldon et al., 2017) made specific reference to a guiding theoretical framework (the Theory of Planned Behaviour, the Health Belief Model and the Integrative Model of Behavioural Prediction, respectively).

2.7.3 Quality assessment results

The quality of the studies based on the CASP criteria ranged from 16 (Koskan & Fernández-Pineda, 2018; T. Nadarzynski et al., 2017) to 6 (Onyeabor et al., 2015) out of a maximum possible of 20 (see Appendix 4 for details of the quality appraisal scores for the included studies). Onyeabor et al., 2015 – independent of their low CASP score – was removed from the study as there was no qualitative data to extract.

2.8 Performing the QES analyses

In order to generate new and analytical insights from the included, primary, research projects, the procedures of the Thematic Synthesis method outlined by Thomas and Harden (2008) were followed. All studies included were qualitative, meaning that there was significantly limited depth due to limited reporting styles, resulting in ‘thin’ descriptions outlined in the published papers. But, the included studies directly and indirectly addressed the study review question and so, despite the limitation with regard to depth published, this QES method continued to be an appropriate approach to the included studies.

The analysis began using free line-by-line coding of all text labelled ‘results’ or ‘findings’ within the included studies. The verbatim text, extracted from these sections, were included by one reviewer (LC) directly into nVivo using the PDF input function. The text included participant quotations, themes, sub-themes and the findings of the published studies. One reviewer (LC) coded each line of text and a second review (JP) consulted. The “free” codes were presented in a list of nodes/codes and extracted into Word. All inductive codes were placed within a bank of codes (see appendix 5). One reviewer (LC) looked for similarities and differences between the codes within the primary studies, collapsing and grouping the codes into new codes in order to capture and differentiate meaning in order to develop subsequent, seven, descriptive themes. The seven descriptive themes were recorded along with example participant quotations.

The seven descriptive themes were then continually analysed and re-examined for semantic and contextual meaning and consistency of interpretation by one reviewer (LC) in consultation with supervisors (JP, CGB). The descriptive themes remained

close to the original studies. The development of analytical themes was achieved through discussion and repeating the iterative cycle of critiquing and examining themes (Thomas and Harden, 2008). The analytical themes offered a new interpretation that went beyond the primary studies.

2.9 Findings of the Qualitative Evidence synthesis

The findings from the eight studies in the review have been synthesised into two analytical themes, which, in turn, represent a synthesis and interpretive analysis of seven descriptive themes. The coding process for this review began with studies that were both ‘thick’ and relevant to build an initial coding framework. Findings from other studies were then added into this initial coding framework and the framework itself was then further developed as new – and necessary – codes were identified.

The analytical themes were shaped to directly elucidate the objectives of the review in terms of exploring attitudes and experiences to HPV and HPV vaccination and barriers and facilitation of this. The following sections will present the analytical theme following a discussion of their constituent descriptive theme (see appendix 6).

2.9.1 Analytical theme 1: The limited perceived relevancy of HPV among GBMSM

In this theme, the lack of relevancy of HPV to the health of GBMSM is highlighted. In part, these related to the feminisation of HPV, connected to the perceived association of HPV and cervical cancer which provided an independence of the virus to the awareness of GBMSM. In discussing HPV, the virus and its causation in cancer was grounded in emotional responses such as shock and surprise. These also facilitated the participants' desire to know more about HPV, in turn, enabling them to alter their (low) perceived relevance of HPV.

2.9.1.1 Descriptive theme 1: lack of information on HPV and HPV vaccination

Across all studies, GBMSM reported having limited knowledge about HPV and its relation to their health. A recurrent observation related to GBMSM's thoughts about the low perceived relevance of HPV, and consequently, the relevance of HPV vaccination. Here, GBMSM reported that

“I've never thought about gay men being especially at risk for HPV” (Fontenot et al., 2017, p. 6214”

2.9.1.2 Descriptive theme 2: feminisation of HPV

On discussing constructions about perceived susceptibility to HPV, a recurrent assessment reported was the evaluation that HPV infection was a phenomenon that impacted cisgender woman or females only. This lack of understanding of HPV and its impact on GBMSM health contributed to a lack of active pursuit of the vaccine during access with sexual health services. In particular, the lack of attenuation to HPV and the vaccine being framed as a causal factor in lack of uptake:

“MSM are not prepared to receive the vaccine because they are not aware of the issue, and some will not do it of their own accord. In other words, they either don't know about it or they ignore it.” (Interviewee-5, MSM)” (Galea et al., 2017, p. 5).

While some studies did report an emergence of HPV being related to the health of men, the connection between HPV being related to cervical cancer was pervasive. One route of this attribution of HPV being a female-only issue is drawn from the information materials participants referred to in their awareness of HPV. Here, some participants discussed adverts and campaigns framing HPV (and the vaccine) as oriented to cervical cancer:

‘I know that it’s more dangerous for girls. It can cause genital warts and it can also increase their chances of cervical cancer?’ (Nadarzynski et al., 2017, p. 349)

The framing of HPV as exclusively causing cervical cancer was further apparent in the lack of knowledge of HPV’s role in anal and penile cancer. Where studies discussed knowledge of HPV-related sequelae, GBMSM often reported not having considered other HPV-related cancers. It is unsurprising, then, that Grace et al’s (2018) study whose data collection period was November 2016 – July 2017 reported an emerging knowledge of HPV’s association to anal cancer in men.

2.9.1.3 Descriptive theme 3: Informational needs

Given the lack of knowledge about HPV, and its relationship to a perceived lack of agency to seeking out the vaccine, participants reported the need for information as an important role in decision making, and better response to the vaccine:

“I had no idea that it caused all of those cancers. I think if that was made public knowledge [people would get vaccinated]”;

and

“knowing the facts is the most important part because once you know then you realize this shouldn’t be disregarded and there’s a vaccine you should probably get” (Fontenot et al., 2017, p. 6213).

Indeed, GBMSM in discussing informational needs provided clear scope for the type of information they wanted to receive. Some participants reported wanting to know

more information on how the vaccine affects older participants, those who are sexually active, and the mechanisms of transmission that spread HPV (Wheldon et al., 2017). Thus, providing guidance on the individualised impact of HPV and the impact of HPV for GBMSM as a collective group were discussed in order to help participants understand the role of HPV in the health of GBMSM.

While there were concerns about the receipt of the HPV vaccine, for example side effects, the belief that any negative side effects experiences would be offset by preventing HPV infection (Galea et al., 2017; Grace et al., 2018). Further to this, it was expressed that a better understanding of these would encourage uptake (Kesten et al., 2019).

2.9.1.4 Descriptive theme 4: cascading HPV information

The ways in which information regarding HPV could be presented to GBMSM was discussed by participants which included awareness campaigns and advertisements on the internet, radio, television, social media and LGBTQ+ focused organisations (Fontenot et al., 2017; Kesten et al., 2019). Technology was further expanded upon by participants as the ubiquity of technology and the perceived universality of technological literacy served to make booking appointments and accessing the vaccine (without directly engaging with a healthcare provider in the process) easier:

“[Regarding an app] I think that would be really helpful in keeping track of what you’ve had done, because right now I have no idea and I have to fill out this sheet with all my vaccinations and I have no idea how to get that information” (Fontenot et al., 2017, p. 6213).

2.9.2 Analytical theme 2: the role and influence of sociocultural context and care experiences on HPV-GBMSM vaccination

Across all studies, a tension emerged between the subjectivity of culturally sensitive healthcare and the medicalisation of the institutions that served as the context for HPV vaccination for eligible GBMSM. The GBMSM across these primary qualitative studies manifested culturally orientated health related values and how these values are

enacted in response to various healthcare systems. The diminishment of perceived and actualised stigma relative to the individual GBMSM and in relation to the healthcare provider and healthcare service was construed as a precursor to the opportunity to be given the HPV vaccine. Studies indicated that GBMSM in trying to navigate their relevant healthcare systems were faced with the stigmatisation of being a sexual minority and in response an appraisal system of the service and healthcare providers were measured against the potential anticipated or experienced discrimination. This analytical theme is comprised of the following sub (descriptive) themes: 1) Healthcare providers and practices as a determinant of HPV vaccination, 2) Healthcare provider recommendation as a determinant of HPV vaccination and, 3) The role of disclosure as a determinant of HPV vaccination. These will be discussed in turn.

2.9.2.1 Descriptive theme 1: Healthcare Providers and Practices as a determinant of HPV vaccination

All studies in the synthesis discussed the role of the healthcare provider and the centrality of these in the provision of the HPV vaccine. A tension was evident in participants' engagement with healthcare providers where healthcare providers were perceived as manifestations of the degree of culturally congruent services which the GBMSM participants could feel at ease to engage with. Indeed, in Fontenot et al's (2017) study, one participant outlined that:

“Increasing competency, honestly, of like healthcare provider who... don't work with queer populations or are not queer identified themselves” is necessary as it “the doctor's job to make sure that [you're] comfortable and speaking to them about whatever” (Fontenot et al., 2017, p. 6211).

Here the attenuation to the identity of the GBMSM participant is pivotal in their appraisal of providers and systems which may pose a risk of enacted discrimination in the clinical encounter. This appraisal of the healthcare provider as reflective of inclusive healthcare provision has also been seen as a determinant in the discussion of any issues related to the heightened risks GBMSM may present. This was enacted in Nadarzynski's study in which a participant would:

“[look for] Just body language. I guess a reluctance [from the healthcare provider] to make a conversation or just being almost cold in that they’re just getting information without taking into account that this could be some sort of sensitive issue. Especially if sexuality is involved” (Nadarzynski et al., 2017. P. 353)

Participants also appraised the ‘setting’ as an important component for preventative care citing institutions such as specialised sexual health services and family physicians. These settings presented a clear focus on the potential for further culturally congruent services as well as hazards. This was evident where some GBMSM ‘described feeling more comfortable seeking care at *“gay friendly” health centers*’ (Fontenot et al., 2017, p. 6211) where GBMSM may ‘feel more comfortable being offered the vaccine by someone they trust from a community LGBTQ+ or local sexual health centre’ (Kesten et al., 2019, p. 6).

2.9.2.2 Descriptive theme 2: healthcare provider recommendation as a determinant of HPV vaccination

A tension also emerged from the role of decision-making healthcare providers possessed in the acceptance of the HPV vaccine among GBMSM participants. Across all studies perceived knowledge of HPV vaccination was low (described elsewhere). But the acceptance of the HPV vaccine was intrinsically linked to the healthcare system and providers recommendation. A reliance on the healthcare provider telling the GBMSM patient about the HPV vaccine was construed as a necessity given low perceived risk and knowledge (Kesten et al., 2019; Nadarzynski et al., 2017). Koskan et al., (2018) demonstrate that some GBMSM’s receptivity of the HPV vaccine was predicated on the presentation of the vaccine and trust in the provider:

“If my doctor brings it to my attention that I need to get a vaccine for something, I will take it. I know it’s in my best interest.” (Koskan et al., 2018).

Indeed, GBMSM were willing to receive the HPV vaccination as the role of the healthcare provider was seen as an ‘active decision maker’ (Gutierrez et al., 2013, p.

34) in the management of their health where trust continues to be wrapped in the acceptance of the vaccine as the healthcare provider may be the *'only opinion that mattered'* (Wheldon et al., 2017, p. 57). Several authors found when presented with a discussion on asking for the HPV vaccine or being offered the HPV vaccine, GBMSM would more readily accept the HPV vaccine than have the ability to direct the clinical encounter and ask for the HPV vaccine:

"I think I'd be more likely to accept it if it were offered than I would actively request it. I think because if it was, if it was recommended to you it would be coming from a trusted source. (#1, Part-time employee, 30).

The saliency of the healthcare provider in the recommendation is also observed when the HPV vaccine is not offered to GBMSM. In Grace et al., (2018) study, authors commented that 'some participants reported that their physicians had never brought up either HPV or the HPV vaccine to them'. Relatedly, the (potential to have a) discussion with healthcare providers about HPV and the HPV vaccine is important and so too is how the vaccine is discussed. Some participants reported limited communication with healthcare providers as a barrier to making or remembering the decision to have the HPV vaccine (Grace et al., 2018).

2.9.2.3 Descriptive theme 3: the role of disclosure as a determinant of HPV vaccination

Across all studies, the tension of disclosing the GBMSM as a requirement of receiving the HPV vaccine was observed. Compounded by appraisals of the healthcare system (discussed above), the interplay of disclosing of their sexual orientation, identity, or behaviour(s) further complicated receiving the HPV vaccine. For example, within Wheldon et al's study:

"I would just feel weird talking to someone about that [HPV vaccine], I would not know their views on LGBT people. So I feel like there may be some bias in the information they could give me. Even though it's unprofessional" (19 years, Asian American Unvaccinated)

Therefore, their sensitive services were preferred as GBMSM would feel more aligned to the service. For example, in choosing a specialised service, Fontenot (2017) reports:

'[Related to why go to a gay friendly health center] they know about the issues in my community. They understand my body, my needs, and I don't feel like there's judgement'. (Fontenot et al., 2017, p. 6214)

In many studies, GBMSM stressed the importance of privacy and confidentiality when accessing relevant healthcare settings. There was high anxiety reported among participants about the consequences of partners, friends, and family finding out about their engagement with sexual health services (and consequently the HPV vaccine). Some GBMSM feared that their general practitioner (GP) would report their attendance to family members. Indeed, Kesten (2019) reports:

'Telling your family GP you're gay before you've told your family would be a big no I think because the GP might go back and tell your parents and then out you' (Kesten et al., 2019, p. 6)

The requirement of having to disclose in the context of GBMSM being eligible for the vaccine (in relation to gender neutral vaccination) is also discussed. A tension existed within this in relation to the vaccine being prophylactic which therefore complicated asking younger GBMSM to disclose their sexuality (Kesten et al., 2019, p. 6)

2.10 Discussion

2.10.1 Summary of qualitative evidence synthesis findings

This thematic synthesis of the views and experiences of GBMSM relating to HPV and HPV vaccination has identified findings that resonate with conclusions reported in previous quantitative reviews of GBMSM acceptability of HPV vaccination. These features will be discussed below. Key findings of this review are discussed in two domains: (i) factors affecting HPV vaccination relating to the population as GBMSM,

and, (ii) factors affecting HPV vaccination relating to the provision of the vaccine targeting GBMSM.

2.10.2 Factors affecting HPV vaccination relating to GBMSM

The first analytical theme considered GBMSM's understandings and perceptions of HPV and HPV vaccination. This analytical theme and its descriptive theme components demonstrated that GBMSM understanding of HPV and of HPV vaccination is shaped by a constellation of limited knowledge and perceived susceptibility which are then, in turn, reflective of the influence of social processes and relationships which act as a both a barrier and facilitator of HPV vaccination. The finding that GBMSM have limited understanding of HPV is supported in several studies in the literature surrounding vaccination attitudes in this sample. Some GBMSM who had already been vaccinated still demonstrated low knowledge of HPV.

A resonant theme that was constructed in the analysis of this review is the extent to which a gendered understanding of HPV plays a role in the perceptions and understanding of HPV and HPV vaccination for GBMSM. The notion that HPV infection and its association with cervical cancer was consistently reported as a dimension of the perceived low relevance of HPV for GBMSM. This notion has been aligned with previous research which has examined the feminisation of HPV related to the presentation of HPV vaccination programme which focused on females-only and therefore has resulted in an insufficient understanding and protection from HPV-related illness in men/GBMSM.

2.10.3 Factors affecting HPV vaccination relating to targeted programmes

The healthcare provider-patient interaction is central as it was noted GBMSM were unlikely to seek out and ask for the vaccine themselves. The tension, therefore, between being offered the vaccine and the GBMSM making the healthcare provider aware of their eligibility – through their GBMSM status – is therefore essential in the provision of the vaccine.

This finding of sexuality disclosure and the role of the healthcare setting is important when contributing to the discussion surrounding the social role healthcare providers

and their healthcare settings play in the provision of the vaccine and how its acceptance can be perceived. The appraisal of healthcare settings and provider's ability to meet the health needs is important when viewed through the prism of discrimination GBMSM may anticipate or have experienced. These underlying dynamics and their impact on health service engagement/uptake need to first be recognised and then addressed through meaningful engagement driving engagement from GBMSM.

The issue of health-seeking behaviours and trust within those health systems and their providers has been demonstrated to be an area of tension for GBMSM in the literature previously. Regarding HPV vaccination within this group, the second analytical theme demonstrated that trust and culture congruency are manifestations of trust of the provider and the health system providing the vaccine. These, in turn, drive vaccine acceptance and the perception of trust in the provider and their recommendation (or not) of the vaccine has been made clear in other research. It was repeatedly reported that healthcare providers play a crucial role in driving HPV vaccine acceptability

2.10.4 Practical/Policy implication

The findings of this review demonstrate the dynamic interplay between low perceived susceptibility of HPV and the impact this plays in the assessment of HPV's relevance to the health of GBMSM. Similarly, the tension manifested when exploring the relationship between GBMSM and the healthcare settings in which the HPV vaccine would be provided. These drivers must therefore be recognised and addressed to thoroughly gauge local understandings, concepts/misconceptions and nuances related to HPV and HPV vaccination. An HPV-GBMSM vaccination programme must thoroughly understand the socio-political dynamics within the context of GBMSM and its relationship to the context of the HPV vaccination implementation setting as this may create barriers for HPV vaccine uptake as well as perpetuate confusion and stigma.

2.10.5 Strengths and limitations of this review

It is important to contextualise the results of this review in its strengths and limitations.

Firstly, this review sought to specifically synthesise qualitative research on HPV and HPV vaccination among GBMSM rather than quantitative or experimental studies. This specific focus – upon qualitative evidence – has illuminated issues that are uniquely relevant to GBMSM and must be considered when providing the HPV vaccine for this population. For example, the understanding of HPV being construed as a female-only issue is indicative of the socio-cultural composition of the countries which originally provided the vaccine for women only. Thus, the reverberations of the female-only vaccination programme have had the unintended consequence of creating a cultural norm among GBMSM that HPV infection does not impact them ultimately constructing an ignorance of this in relation to their health. These proximal findings cannot be elucidated adequately in previous cross-sectional surveys attenuating to HPV vaccine acceptability.

The rigour of the current review utilising qualitative evidence was established through the systematic approach implemented during the literature search for the evidence. A strength, then, was tailoring each search strategy to the relevant database. This allowed the likelihood of identifying all relevant studies to answer the research question and served to reduce bias in the identification of studies. By integrating an appraisal tool for the evidence, the data was read and re-read by team members (LC, SM, and JP) ensuring the credibility of included studies. All studies were in English and with all studies set in high-income countries. Identification of country-specific issues may limit the applicability of results to the high-income settings.

2.10.6 Gap in the literature

The thematic synthesis allowed for the identification of gaps in the current literature. It is evidence that the socio-cultural-political lives of GBMSM appears to have a concentrated impact on the awareness of – and provision for – the HPV vaccine.

While the GBMSM in the review did discuss the experienced stigma and its impact on the provision of the HPV vaccine, the construction of health among GBMSM and the barrier this may present were not explicitly explored. This may be the result of some of the included studies discussing HPV vaccination before licensing and therefore experiences of the vaccine do not relate to actual experiences of receiving the vaccine.

This gap in knowledge has practical implications now that an HPV-GBMSM vaccination programme is being implemented in the United Kingdom; optimal uptake essential to the successful reduction of HPV-related incidences within this population.

Overall, the included studies did not sufficiently articulate the complexities in beliefs and awareness of HPV and HPV vaccination in Scottish GBMSM as the closest study included recruited participants in England and Northern Ireland (Nadarzynski et al., 2013; Kesten et al., 2019). Therefore, while the included studies attenuated to the lack of perceived relevancy of HPV among GBMSM and the socio-political context having an impact on the health of GBMSM no study truly navigated the differing UK-health systems and more specifically the health-related behaviours during the HPV-GBMSM vaccination programme as it is being implemented in Scotland.

2.11 Conclusion

As countries continue to expand the populations which can receive the HPV vaccine it is crucially important to understand the socio-cultural and psychosocial processes relevant to each extended population in the provision of the HPV vaccine. How GBMSM understand HPV and HPV vaccination is crucial to the short- and long-term successes of any targeted HPV vaccination programme. This review found that GBMSM understandings of HPV are shaped by a complex relationship between limited knowledge and information of HPV, a resonate construction of its association with cervical cancer and women, and the socio-political governmentality of health services in meeting their health needs. This review holds central the notion that HPV vaccination – and subsequent research – should not be implemented through a universal approach regarding education, sensitisation, and behavioural interventions promoting uptake.

3 Chapter 3: Methodology

What will this chapter discuss?

This chapter will outline:

- How the systematic review (chapter 2) supports the chosen research approach
- Epistemological and ontological positions of the thesis
- Research question, aims, and objectives
- Philosophical underpinnings of methodological approach

3.1 Introduction

This chapter firstly identifies the connection from the systematic review and QES to the chosen Constructivist Grounded Theory (CGT) methodology chosen for this project. The aim(s) and objective(s) of this thesis to position them at the centre of the research methodology chosen. Then a discussion of the philosophical and methodological approaches is outlined including the theoretical perspective for the project which explain the journey taken to arrive at the research design and to ensure the aim and objectives are achieved.

3.2 Why the Qualitative Evidence Synthesis (Chapter 2) supports a qualitative Constructivist Grounded Theory approach

3.2.1 Restatement of the thesis purpose

The study seeks to generate greater and a more comprehensive understanding of the experiences of the targeted human papillomavirus (HPV) vaccination programme implemented in Scotland from the recipient's perspectives. Previous chapters have outlined the inter- and intra-related issues regarding the targeted HPV vaccination of GBMSM as drawn from analysis of the literature and relevant operational contexts. Significant gaps were identified in the understanding of the HPV vaccination practices

of GBMSM living in Scotland and future needs, particularly in the context of the central belt of Scotland.

While studies investigating the provision of the HPV vaccine have guided our knowledge of this public health approach among women, school aged girls and their parents, questions pertaining to its social dimension became prudent to explore when the provision of the HPV vaccine extended to gay, bisexual, and other men who have sex with men (GBMSM) in Scotland in 2017. Understanding people's behaviours in the receipt of vaccines as prevention are crucial to the efforts of the vaccination programme. Therefore, the investigation of GBMSM's experience and perceptions must be understood in response to the national programme. Symbolic interactionism and the social construction of reality for the theoretical framework of this study was used in supporting a CGT approach.

It is important to bear in mind that national vaccination programmes as public health policy interventions have an intrinsic social dimension; therefore, considering the social conditions in the population in which they are implemented is necessary. Recognising the *sociocultural considerations for practice* is essential to increase acceptance of the vaccine by means of stronger education strategies targeted for the intended stakeholders.

3.2.2 Primary research questions and aims

This study investigates the attitudes toward and experiences of Human Papillomavirus (HPV) vaccination among GBMSM in Scotland: it does not merely investigate the individual-level hesitancy among GBMSM to be vaccinated against HPV but examines what may influence vaccination as an indicator of barriers and facilitators to the vaccine programme's implementation.

This study aims to examine the factors relating to the decision making among GBMSM as they are offered the HPV vaccine, and how these factors are related to the programmatic decisions in the implementation of the HPV-GBMSM vaccination programme.

The research question that was the impetus for this study was:

“What factors contribute to – and influence – the receipt of the Human Papillomavirus (HPV) vaccine among Gay, Bisexual, and other Men who have Sex with Men in Scotland?”

3.2.3 Research objectives

In answering the above research question, the following research objectives were formulated:

1. To obtain an in-depth understanding of the attitudes towards and experiences of HPV vaccination among GBMSM in Scotland based upon semi-structured interviews with GBMSM from across Scotland.
2. To gain a deeper understanding of how the sexual minority identity of being GBMSM may influence HPV vaccination
3. Construct a Constructivist Grounded Theory which attends to the influences discovered in relation to HPV-GBMSM vaccination
4. Position the findings of the research study within the field of HPV vaccination nationally and within the existing literature surrounding health technologies targeting GBMSM.

3.3 Selecting a methodological approach

The focus of this thesis relates to the experiences of recipients of a health intervention – that of receiving the HPV vaccine. If we are to promulgate this basic premise, then, it must be acknowledged that theory, ideology, and paradigms are at the heart of practice, planning, and research. The discussion below will consider the purpose of research in relation to paradigms and provides a rationale for the selection of a qualitative paradigm. The development of the research design is also discussed.

3.3.1 Philosophical and methodological approaches

Regardless of the methodological approach being adopted, it is important to consider the paradigm underpinning the research (see figure 3.1). In this instance ‘paradigm’ is one of several terms used synonymously to indicate the researcher’s philosophical foundation, including other terms such as worldview and philosophical assumptions.

Put another way by Mertens, a paradigm is a “worldview, complete with the assumptions associated with that view” (Mertens, 2003. P. 139). A research paradigm, therefore, is essential to the core elements that inform a piece of research as it can determine both the research question(s) and the data collection methods (Creswell, 2014). In line with this, the paradigm chosen is less important than the researcher’s ability to justify that choice and demonstrate its consistent application throughout the lifecycle of the research. It is imperative here to outline and ensure the theory that underpins the methodological approach is reflective of the ‘way of thinking’ to make transparent any assumptions, biases, and values brought to the research (Weaver and Olson, 2006).

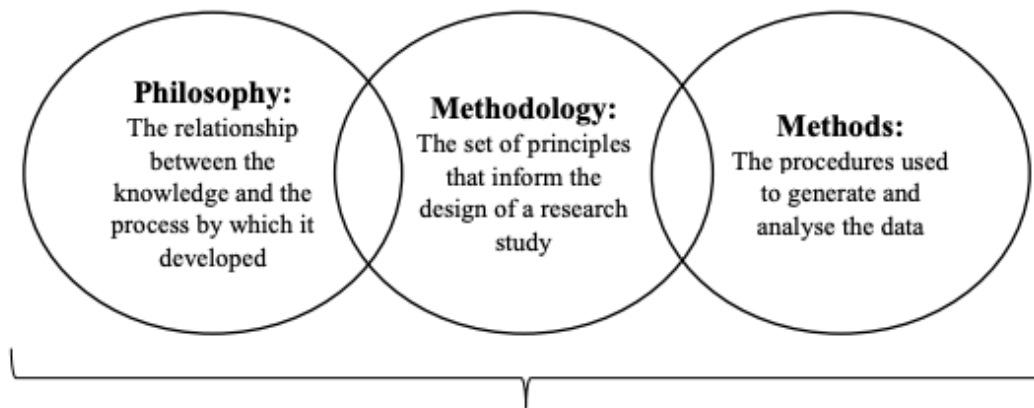


Figure 3.1 Framework for research design

A paradigm of inquiry essentially has three components: the nature of reality (ontology) and whether the researcher believes in a single or multiple reality as well as the nature of knowledge and how it can be gained (epistemology) and the chosen research strategy (the methodology). These, in turn, frame scientific inquiry (Guba and Lincoln, 2005). While these collectively shape the inquiry, the concepts of ontology, epistemology and methodology cannot be separated as they justify the research design (Pope and Mays, 1995; Weaver and Olson, 2006), the approach taken when designing the research (grounded theory, case study, ethnography and the like) and the type of approach chosen.

Therefore, the holistic nature encapsulating the research project must also reflect the researcher's positions in relation to this knowledge and the methodological strategies implemented in the pursuit of such knowledge (Dobson, 2009). Paradigmatic discussions have typically centred on two traditional philosophical paradigms pairing ontological and epistemological thought, namely; positivism and objectivism, and interpretivism and constructivism as extremes along a continuum. These will be discussed to identify the basic beliefs and framework which guided this research. Denzin and Lincoln (1998) argue these serve as the foundation for all research independent of the positions taken by the researchers (see figure 3.2).



Figure 3.2 Key philosophical paradigms in research methods

Discussions on paradigms have typically construed these to be either Positivist or Interpretivist (Crotty, 2009). However, more nuanced, contemporary, theorists like that of Creswell purport four widely adopted paradigms such as post-positivist, constructivist, transformative and pragmatist. Indeed, each paradigm holds a different view of the world, of the extent to which the researchers' relationship to the world and of what methods should be used to study (Oates, 2006).

While many paradigms in research exist, the most influential and pervasive within health service research are that of positivist (with an aligned objectivist ontological position) and of interpretivist (with an aligned constructionist position). A significant milestone in the methodological decisions of this thesis was the consideration of one's own views about the nature of reality which determines an appropriate paradigm which matches one's epistemological position. Mills and colleagues (2006, p. 26) argues the decision of one's philosophical positions are influenced '*by our history and cultural*

context, which, in turn, shape our view of the world, the forces of creation, and the meaning of truth’.

Given this, in the next sections, different research paradigms will be described, and their relative ontological and epistemological, and a framework of the approach provided. Figure 3.3 illustrates the philosophical and theoretical underpinning this research.

Epistemology		Ontology	
Social Constructivism		Relativist	
Theoretical Perspective			
Symbolic Interactionism			
Methodology			
Constructivist Grounded Theory			
Sampling Methods			
Purposive Sampling		Theoretical Sampling	
Data Collection Methods			
Semi-structured interviews		Qualitative Evidence Synthesis	
Data Analysis Methods			
Initial Coding	Focused Coding	Selective Coding	

Figure 3.3 Philosophical and theoretical underpinning of the research

3.3.2 Research paradigms: Positivism and objectivism

Epistemology is the study of how we know things and what this means (Gray, 2009). There is a continuum of epistemological positions ranging from positivism on one end and subjectivism on the others. These will be discussed.

Positivism (or objectivism) contends there is an absolute reality, which can be measured, studied, and understood independent of time or place and that this truth can be discovered (Green and Thorogood, 2005). This denotes an objectivist ontological position which is emblematic of the notion that “*social entities exist in reality external to and independent of social actors*” (Saunders et al., 2016, p. 124). Here, the one objective reality which exists is not influenced by human perception. Therefore, the scientific “*inquiry takes place as through a one-way mirror*” (Guba and Lincoln,

1994, p. 110). The epistemological position of positivism contends that reality is 'real', 'apprehend able and 'discoverable' (Weaver and Olson, 2006). This paradigm lends itself to that of quantitative research because a positivist position denotes that reality is discoverable, orderable, predictable, and controllable, and the findings are usually observable and quantifiable (Guba and Lincoln, 1994) and generalisable (Wahyuni, 2012). This extends to the methods in which one can achieve understanding reality reflected using rigorous scientific methods such as statistical and mathematical techniques (Avis, 2005).

As stated, positivists espouse the separation between the researcher and from the world they are studying which permits objectivity (Healy and Perry, 2000; Ritchie & Lewis, 2014). This, however argued by Denzin and Lincoln (1994), is limited as this separation is complicated as one cannot rationally identify the nature of facts, or the interactive nature of inquiry as one's positivist ontological position leads the belief that the world is external, that reality is singular and objective.

The aim of this research was to explore the lived experiences of gay, bisexual, and other men who have sex with men in their receipt of the Human Papillomavirus (HPV) vaccine as part of a targeted national vaccination programme. To achieve this a method which allows them to describe and discuss their experiences, views, and perspectives in an interpretive account was required. As such, an interpretive approach which allows one to understand human thought, speech, and action (Lincoln and Guba, 1985) is required, rather than a positivist approach which limits the exploration of the experiences, views, perspectives and social processes in the necessary depth (Healy and Perry, 2000). A positivist paradigm was rejected as it disregards the role of the researcher during interpretation of the findings.

3.3.3 Research paradigms: interpretivism and constructivism

Placed at odds with a positivist view of reality is that of interpretivism. Interpretivism espouses that subjects are dependent on one another and, as a result, social phenomena are influenced by social actions and actors. Sale and authors (2002, p. 45) argue interpretivism promotes that "*there are multiple realities or multiple truths based on one's construction of reality*". Therefore, what is considered 'truth', 'reality'

and 'fact' are subjective dimensions and socially constructed as our "*social reality is in our minds and is subjective and multiple...*" thereby making reality "*affected by the act of investigating it*" (Collis and Hussey, 2014, p. 44).

The belief that reality is socially constructed, interpreted, experienced, and produced through the interaction between '*social, political, cultural, economic, ethnic and gender factors*' (Guba and Lincoln, 1995, p. 110) is reflected in my experiences as a queer black man. My belief aligns with that of interpretivism as it allows multiple voices and identifies the importance of those voices within research (Charmaz, 2014). Most importantly within an interpretivist approach is the recognition of the role the research plays within the research: that is, that individual constructs can be understood through the interaction between and among the researcher and participants (Guba and Lincoln, 1994). Thus, with the aim of this research being to elicit the experiences, views, and perspectives of HPV vaccination among GBMSM, an interpretive position permits their words to be a mechanism to study their world (Charmaz, 2006).

Constructivism asserts social phenomena, and their meanings, are continually being accomplished by social actors. It implies that social phenomena and categories are "*not only produced through social interaction but that they are in a constant state of revision*" (Bryman, 2016, p. 16). Thus, no single universal truth exists, but multiple truths based in these experiences and contexts. The objective of interpretivism and research couched in this is to find out how phenomena are construed and to inductively develop a theory or pattern of meaning which are reflected in the implementation of qualitative methods. Lincoln and Guba (1985) as well as Morgan (2007) contend that research aligned with an interpretivist paradigm typifies the following characteristics:

- The social world cannot be understood from the standpoint of one individual
- Realities are multiple and socially constructed
- There is inevitable interaction between the researcher and their participants
- Context is vital for knowledge and knowing
- Knowledge is created by the findings, can be value laden and the values need to be made explicit

- Causes and effects are mutually interdependent
- Contextual factors need to be taken into consideration in any systematic pursuit of understanding

In this thesis, in order to explore how the phenomenon of the provision of the HPV vaccine for GBMSM in Scotland has been perceived and experienced by GBMSM and answering the research questions, the assumption that considers the truth to be 'what works' based on information (reflecting these) instead of searching for metaphysical truths has been considered as the most suitable one.

As discussed in the previous chapter(s), the national HPV-GBMSM vaccination programme cannot be studied mirroring similarly to other female-only (typically school-based) programmes because of the altering context and populations. Compared to the (perceived) longevity of female-only vaccination programmes in the UK, which have been implemented for over a decade, the infancy of the national HPV-GBMSM programme, supported by this notion of learned environments, the author's aim is to collect the required information related to the current targeted programme and the way this population – as intended recipients – navigate this phenomenon in Scotland.

3.3.4 Theoretical perspective: symbolic interactionism

Symbolic interactionism as a theoretic frame also informed the methodological construction of this thesis. This project serves to incorporate – through a qualitative design informed by one's interpretivist position – participatory processes which aims to evidence the understanding of HPV-GBMSM vaccination (Creswell, 2009). As this paradigm permits the co-construction of experiences and constructs relating to this health intervention, this project offers the possibility of informing (a/ny) change of policy through conveying what it is the participants say.

The combination of symbolic interaction and grounded theory has an affinity for the aims of this project. A theoretical perspective is defined as the "*theoretical stance informing the methodology*" (Crotty, 1998, p. 3). Symbolic interactionism serves as the theoretical perspective for this study, which is the predominant theoretical perspective correlated with grounded theory (Charmaz, 2014). Indeed, it can be argued that while

grounded theory offers the tools for analysis, symbolic interaction provides the inspiration for such an approach. Symbolic interactionism and grounded theory hold central the notion that people act as individuals and as a collective, and both symbolic interactionism and grounded theory focus on the studying of processes. Thus, grounded theory serves as a research process in which the interactionist perspective of understanding an issue or health behaviour is best served by garnering the perspectives of those affected by it (Chamberlain-Salaun, Mills, and Usher, 2013)

Symbolic interactionism is a sociological concept developed George Mead in 1934 and further explicated by Herbert Blumer in 1969. Symbolic interactionism serves as a way of describing social interaction and taking social interaction into account (Blumer, 1969). Symbolic interactionism is concerned with the relationship between individuals and society; the mechanisms in which we make meaning of events or reality and how we act in relation to beliefs (Chenitz and Swanson, 1986). Under this view, human beings are active participants and creators of the world in which they live (MacDonald 2001, p117). Indeed, symbolic interactionism assumes a continuous reciprocal process taking place between individuals, collectives and the environment. Data is given by individuals is therefore viewed as subjective and each perspective as being relative.

This is relevant to this study, where GBMSM are viewed as social actors and language, their meanings and actions attended to in order to explore the phenomenon of interest and to achieve the research aim. Central to symbolic interactionism is the concept of self. Mead (1934) conceived the way humans act within society as an exchange of symbols or gestures and emblematic through language (p 146). Explicated further in the 'classical' or 'Chicago School' of symbolic interactionism, Blumer (1969) emphasises the interpretative process in the construction of meaning. This is reflected in the fundamental premises of symbolic interactionism put forth by Blumer (1969):

1. People, individually and collectively, are prepared to act on the basis of the meanings of the objects that comprise their world;
2. The association of people is necessarily in the form of a process in which they are making indications to one another and interpreting each other's indications;

3. Social acts, whether individual or collective, are constructed through a process in which the actors note, interpret, and assess the situations confronting them; and
4. The complex interlinkages of acts that comprise organization, institutions, division of labor, and networks of interdependency are moving and not static affairs

Through these principles, it is evident that within an interactionist's approach there is no absolute truth as meaning is context dependent and *'coming to know entails searching for ways to understanding the meanings of a situation from the perspective of the individual and societal groups'* (Benzies and Allen, 2001. P544). Similarly, these principles of symbolic interactionism support the production of personal meaning in people's interactions with other individuals (Charmaz, 2005). These principles are appropriate to this study because the research participants act and react based on the meanings they have built for preventive health interventions in a sexual health context. Using Williams' (2008) account of symbolic interaction which comprised of two concepts: 'symbol' and 'interaction' in which 'symbol' refers to "any social object (e.g. a physical object, a gesture, or a word) that stands in place of or represents something else" and 'interaction' which "highlights the significance of interpersonal communication in transmitting the meaning of symbols" (p.1) the phenomenon of HPV vaccine provision and receipt (and the meanings participants attribute in this process) highlight relevant. Sexual health service use – and the health literacy of that individual – are shaped by their social interaction within their social context: for example, within their social contexts and with surrounding LGBTQ-health media and policies. Through symbolic interactionism, one can explore the 'culture' in which is understood to be the "ideas, objects and practices" that constitute health service engagement relative to HPV vaccination.

To understand HPV vaccination experiences, the researcher must attend to GBMSM who have been vaccinated and others who have not been vaccinated, to understand their views and to consider matters from these perspectives. Hence, the ability to negotiate, modify, or reject the meanings encountered within this phenomenon that symbolic interaction can permit the permeable nature of the culture in which participants convey to be explored grounded in their words (Warren & Williams, 2008). For instance, the perceptions and attitudes of HPV vaccinated GBMSM might be affected by their interpretation of what their sexual health means for them and any

challenges they have encountered. In this study, the researcher's interaction with GBMSM allowed understanding of the different meanings of their experiences with sexual health services to be explored as this cannot be independent of the provision (and or receipt) of the HPV vaccine in Scotland.

The affinity between grounded theory and the social theory of symbolic interactionism cannot be understated. Indeed, Bryant and Charmaz (2007) indicate "the fit between symbolic interactionism and grounded theory is extremely strong" (p. 27). Grounded theory is one of the most implemented and discussed and debated methodological perspectives in the qualitative arena. Contemporary discussions of grounded theory assert that it is a multi-faceted framework of approaches distinguished through 3 main iterations, that of: 1) 'classic' grounded theory, promoted by Glaser with other derivations being 2) Straussian Grounded Theory, 3) Charmaz's Constructivist Grounded Theory and 4) Clarke's Situational Analysis. It is worth noting the differences in these approaches by virtue of their altering epistemological and methodological positions and constructions as a frame of reference for the decision to use Constructivist Grounded Theory in this thesis. In this sense, Kenny and Fourie have clearly described the relation that exists between diversity and similitudes within GT approaches:

"Although this history of GT documents the schismatic nature of the three variations of GT, it is important to recognise that they nevertheless retain some familial resemblance... Straussian and Constructivist GT still claim a kinship with the original Classic GT... Straussian and Constructivist grounded theorists continue to embrace a number of the original innovative methodological techniques (including theoretical sampling, saturation, the constant comparison and memo writing) which originated in The Discovery of Grounded Theory (1967). As a consequence, although Classic, Straussian, and Constructivist GT, are undoubtedly distinct and diverging variations of GT, they nevertheless remain within the GT family albeit with some heated family arguments (Kenny, Fourie 2014:7)."

As symbolic interactionism forms an intrinsic position of the research the researcher is mindful of Charmaz (2008)'s argument that one must gain intimate familiarity with

the topic without “*imposing either preconceived problems or narrow interests*” on the study which may stifle the emergence and undermine the “*effective use of grounded theory*” (p. 162). The aim of gaining intimate familiarity will enable the researcher to gain knowledge of HPV vaccine decision-making practices among GBMSM. Blumer (1969) also provides recommendations on gaining intimate familiarity, which will be achieved by: perceiving situations from the position of the participants or collective, gaining “a body of relevant observations” manifested through narrative “accounts” from participants regarding how they see the world, ensuring preconceived ideas do not influence the research findings and challenging these preconceived ideas (p. 51-53)

3.4 Discussion of and rationale for a qualitative research approach

It is posed by Polit and Beck (2006) that research either generates new knowledge or tests existing theories to answer or solve problems. By collecting the experiences and views of GBMSM regarding how they experienced and perceive HPV vaccination, what their views were on the implementation, and what barriers and enablers there are of this vaccination in a Scottish context., this study aimed to produce a comprehensive understanding of HPV vaccination in its context. In turn, this new knowledge will provide data for Scotland to develop and improve the provision of the HPV vaccine and tackle important issues uncovered by responding to the perspectives explored. A discussion of qualitative research as a methodology is outlined first with other considered approaches following on from this.

3.4.1 Qualitative research

Whether the investigation for this thesis would be quantitative or qualitative was directly related to the questions and aims of the research (Creswell, 2003). Qualitative research investigates areas where there is likely to be complexity and diversity of human realities, such as experiences, cultures, behaviours, feelings, and individual perceptions (Creswell, 2003). This construction of social research provides answers to questions that are in a narrative form using language and explanation (Sarantakos, 2013). Chapters 1 and 2 explored the global background of HPV vaccination for GBMSM. However, it was found that there is still a lack of adequate exploration in the current research, especially in Scotland, where no comparative study was found to

have taken place. A qualitative approach was deemed necessary to allow participants to present their views, opinions and multiple understandings to help uncover rich data. Indeed, the parameters of GBMSM as service users of a national vaccination post-licensing of the vaccine programme is severely lacking evidence. Existing quantitative research approaches have not been sampled among Scottish GBMSM and studies exploring these experiences have not been implemented since the vaccine was licensed. As such, qualitative methods address such experiences because “*qualitative research provides a unique tool for studying what lies behind, or underpins, a decision, attitude, behaviour or other phenomena*” (Ritchie and Lewis, 2003, p. 28).

A qualitative approach allowed for the inclusion of both negative and positive experiences, which serve to answer the proposed research questions which recognise the importance of individual perspectives and experiences of GBMSM in this study. Moreover, this approach allowed the exploration of how individuals experience and give meaning to events and phenomena (Denzin and Lincoln, 2013).

Qualitative research facilitates in-depth understanding and seeks to uncover specific phenomena (Guba and Lincoln, 1994). Moreover, by providing the opportunity for narrative accounts, this research moved beyond the traditional quantitative approach and places central the voices that were previously silent to be heard and ‘describe what is going on’ in their own words (Creswell, 1994, p. 17). Such immersion in this phenomenon reflected the researcher’s attributes in supporting the agency and interests of sexual minority populations in health service research, which is emblematic with the focus on understanding the feelings and meanings related to HPV vaccination. To explore collective meaning and make interpretations of a narrative account (Flick, 2014) can be done through a plethora of methods such as interviews, observations, film, and written data (Holliday, 2016). These do not fit with a quantitative methodology that tests existing theories or attempts to verify existing hypotheses. Within this study, the feelings and experiences of HPV vaccination among GBMSM were explored and investigated. The design of the research is therefore qualitative in nature to explore the individual actions and interactions and the multiple perspectives of GBMSM.

3.4.2 Discussion of qualitative research approaches

To capture the subjective of 'how' and the 'meaning' of the experiences of the participants through their own words, a consideration of the methodologies which can capture this was conducted before deciding on constructivist grounded theory. Other methodologies considered such as ethnography, phenomenology, action research, and narrative approaches were discussed. All had elements and a space within the qualitative research school of thought which could have been a useful approach to achieve the study aims. While each of these approaches have merits, some were not deemed suitable for this research.

One such approach considered was that of Ethnography. Briefly, ethnography was conceived because of a need to understand the relationship between culture and behaviour. This approach is emblematic of the researcher being immersed in the culture being studied, carrying out observations, taking photos (for example) and interviewing with these data sources being triangulated by asking questions from different viewpoints as they relate to the phenomena being studied. The central tenet of ethnography exploring the tacit knowledge of the culture's participants, rather than specific phenomena, over a period was not suitable. On the one hand the aim of this study was being cognisant of the GBMSM-identity of participants as they are the targeted recipients of the vaccination programme through interviews of experiences of the interactions of the participants in how they navigate HPV vaccination.

However, the researcher would have introduced new biases (and being mindful of the ethics of) sitting in the clinical encounter observing the HPV-GBMSM vaccination programme as it was being implemented. It is unlikely that the participants themselves would have been able to be themselves in such a sensitive, and clinical, context if they were being watched by the researcher. Moreover, the timespan for a clinical encounter in a sexual health service may not have been sufficient for an 'immersive experience' reflected in ethnography to be achieved. Finally, the aim of this study was not to look at the relationship between a conceived 'culture' and behaviour, rather the viewpoint and experience of the participants themselves as they reflected on the delivery of HPV-GBMSM vaccination (Silverman, 2014).

Another qualitative approach considered for this research was a descriptive phenomenological approach. This approach focuses on describing the lived experience, which in some ways aligns with this project, to comprehend the phenomena of the participants' experiences. Indeed, phenomenology engenders a rich understanding of the phenomena through interviews which is akin to grounded theory. But, within phenomenology this project does not seek to explore the participant's '*whole life*' (Gray, 2009, p. 25) and, alternatively, construct a theory for application for understanding the broader implementation of vaccination programmes implemented targeting GBMSM and their experience of such. Moreover, the interpretive phenomenological approach (IPA) was not considered as it would not have met the aims of this study because this approach involves interpreting experiences of the participants and what it meant to them exclusively whereas this study sought to understand the experiences of participants as it relates to HPV-GBMSM vaccination and how this could inform (and inspire) how these programmes could be applied to GBMSM more broadly. Finally, the concept of 'bracketing' off the researcher's positionality and how this informs primary research needed to be acknowledged in-depth for this doctoral research which the phenomenological approach does not afford, unlike constructivist grounded theory.

The case study provides a detailed investigation of a specific phenomenon within a given context. However, this approach was rejected as insufficiently suited to the aims of this study, as case studies – while invaluable adding to an understanding and experiencing of a phenomenon – tend to be deductive beginning with a hypothesis which this inductive study did not have (Creswell, 2014). Had this study considered the effectiveness of clinical environments in providing the HPV vaccine in different settings then a case study approach would have been a considered approach. However, this study intended to discover the experiences of GBMSM for application through the creation of a theory which a case study approach did not align with.

3.4.3 Rationale for qualitative inquiry

The research questions and aims of the area of investigation in this study sought to explore behaviours amongst humans implying that this refers to sociological processes. While several approaches – outlined above – were considered, it was

pivotal that this research not just explore the individual; but the forces that influence and coalesce to shape the individual's thoughts and actions. The aim of this study was to explore perceptions and experiences of human papillomavirus (HPV) vaccination with the purpose of exploring factors that have influenced uptake and receipt of the vaccine. The psychosocial must be considered to investigate this. Factors such as the environment, interpersonal relationships, and culture must all be considered in pursuing the aims of this research. As such, a qualitative approach – and a constructivist grounded theory approach – is appropriate given the ambition to explain meanings, actions, beliefs and social structures (Charmaz, 2006). On the basis that understanding social phenomena one must recognise and acknowledge that multiple realities exist, an epistemological and ontology approach mirroring this notion must be chosen and is reflected in constructivist grounded theory. This is also congruent with the way the researcher sought to understand health research, seeking to understanding and work with others' perspectives. A Constructivist Grounded Theory approach ensured a principles approach which was fluid and dynamic in guiding the research process while also allowing for a reciprocal relationship between the participant and research in the cocreation of knowledge (Charmaz, 2014).

Given qualitative research and some approaches relevant to this have been described and a rationale for not choosing some outlined, constructivist grounded theory (CGT) was chosen as the methodological approach which is not described.

3.5 Grounded Theory and its origins

First and foremost, a significant contribution to qualitative research from the introduction of Grounded Theory by Glaser and Strauss (1967) was the incorporation of both method and methodology. Indeed, this contribution is acknowledged even among grounded theory critics: "*There can be little doubt that [Grounded Theory] has been a major – perhaps the major – contributor to the acceptance of the legitimacy of qualitative methods in applied social research*" (Thomas and James, 2006, p. 767). Taking a step back, it was the publication of 'The Discovery of Grounded Theory: Strategies for Qualitative Research' (Glaser and Strauss, 1967) which marked the start of Grounded Theory as a method of inductive qualitative inquiry. Intended to

“generate general categories and their properties for general and specific situations and problems” (Glaser and Strauss, 1967, p. 30), grounded theory dismissed the notion that researchers should focus on testing theories through quantitative empirical research as well as refuting the myth that researchers had discovered all good theories. Charmaz (2012) describes the dominant ideology of the time: *“beliefs in a unitary method of systematic observation, replicable experiments, operational definitions of concepts, logically deduced hypotheses and confirmed evidence – often taken as the scientific method – formed the assumptions upholding qualitative methods”* (p. 6). In the original proponents, Glaser and Strauss (1967) define grounded theory as the discovery of theory from data. As such, theory is conceptualised as constantly developed, and it is the deductions made from the emerging theory that inform the next (theoretical) sampling, in an iterative process. This ‘original’ grounded theory approach enmeshed both author’s epistemological positions: Glaser drawing from a quantitative/positivist approach in which codifying qualitative data would *“de-mystify the research process”* (Charmaz, 2014, p.9) and Strauss’ interpretivist emphasis on conceiving language as fundamental in understanding emergent processes and social and subjective meanings. Moreover, as put forth by Dunne (2011), this conception of grounded theory – situated in its positivist context – conveyed the utility of the processes of development through which qualitative data, gathered through interviews, document reviewed, observation, focus groups and the like, can be progressively analysed first through coded units which are then combined into conceptual categories, and then related together into theory. The result, then, is of a ‘substantive’ theory, which is closely linked to the data from which it is generated.

The Implementation of one’s ‘grounded theory’, however, is variable. The epistemological / ontological backgrounds of Glaser and Strauss has served as the platform for their separation and ultimate divergences in later directions of grounded theory with Strauss (Strauss and Corbin, 1998) emphasising a technical procedural approach to grounded theory and Glaser aligning to the original principles. Some characteristics – such as the generation of the categories themselves [since it necessitates a conceptualisation of data that is moving toward theorising] or the emphasis on the development of theory – are considered non-negotiable of grounded theory by some. Interpretations regarding the evolution of grounded theory vary as much as the variability in its approach. Some view it as the nature maturing of a m??

Charmaz (2006) argues that the deliberate movement from data, to coding, to development of theory is emblematic of grounded theory regardless of the point where that process of theory building is thought to begin. This notion distinguishes grounded theory from other processes within qualitative research which focus on developing themes and data reduction. Indeed, Corbin and Strauss (2008) argue *“if theory building is indeed the goal of a research project, then findings should be presented as a set of interrelated concepts, not just a listing of themes”* (p. 145). To fulfil this goal, increasing levels of conceptualisation and theory generates through a process of constant comparison to the data, both with new data and with the emergent conceptual categories that are developed within the analytical process is required.

Independent of divergences, grounded theory is called as such as it produces theory ‘grounded’ in data collected from participants on the basis of the complexities of their lived experiences in a social context (Fassinger, 2005). In Glaser and Strauss’ (1967) original grounded theory, theory is derived inductively, through an iterative process of data collection, coding, conceptualising, constant comparison and theorising (Fassinger, 2005). Corbin and Strauss (2008) describe grounded theory as denoting theoretical constructs derived from analysis. The fundamental methodological principle of grounded theory is, therefore, the theoretical interpretation of a phenomenon generated from data using core methodological principles (see Table 3.1). Thus, while divergences in grounded theory exist, the exploration of data to investigate “what is going on” (Charmaz, 2006, p24) during HPV vaccination decision making, or “when and how” does vaccine provision, as an action, take place, remains in this study. To understanding the multiplicity of interactions during HPV vaccination a Constructivist Grounded Theory approach was chosen as appropriate and will be considered in the following section.

Table 3.1 Core characteristics of grounded theory

Principle	Description
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Comparative Analysis	Emerging codes and concepts are continually compared with one another, with new data, with previously analysed data, and with the researcher's observations and analytical memos.
Coding and categorisation	Coding allows the data segments belonging to each code to be sorted together. Comparing these coded segments for similarities and differences allows them to be grouped into categories
Memo Writing	Detailed notes in the form of memos in which the researcher documents observations in the field, methodological ideas and arrangements, analytical thinking and decisions, and personal reflections. Begins at the time of conceptualisation of the study
Theoretical Sampling	Is guided by deductive reasoning, as the researcher seeks additional data to enlarge upon the insights that have been learned from the participants who have been interviewed thus far and to fill out those portions of the theory that need further development.
Theoretical Sensitivity	The ability of the researcher to recognise, understand and extract phenomena in abstract terms from the data to demonstrate relationships between studied phenomena.
Interplay of data collection and analysis	Early data analysis informs subsequent data collection, which then allows the researcher to define and follow leads in the data and to refine tentative categories.

3.5.1 Constructivist Grounded Theory (CGT)

The research approach (see figure 3.4) adopted for this project was CGT. As outlined, the ontological position of the researcher plays a significant role in choosing an approach which is congruent with the understanding that the social world. In this instance this is that the world and our experience of it consists of multiple individual realities influenced by cultural and structural contexts. Therefore, the choice of a

research strategy should be made on the basis of the research aim and objectives as well as the philosophy of interpretivism chosen for this project (Colin and Hussey, 2014).

CGT can be argued to be an interpretivist adaptation of grounded theory compared to Glaser and Strauss' (1967) methodology which is associated with positivism. The impetus of this project, therefore, was the individual's perspectives, how they engage with their experiences and construct a multiplicity of perspectives of these together with the researcher (Strauss and Corbin, 2008). Therefore, an objective external reality and a passive neutral observer is rejected (Charmaz, 2014). Epistemologically, an interpretivist perspective was apt in permitting the exploration of participants' views and how participants reconstruct their perspectives and understanding of HPV through meanings that they attached to their identity and experience during their interaction with sexual health services and the researcher (Charmaz, 1995).

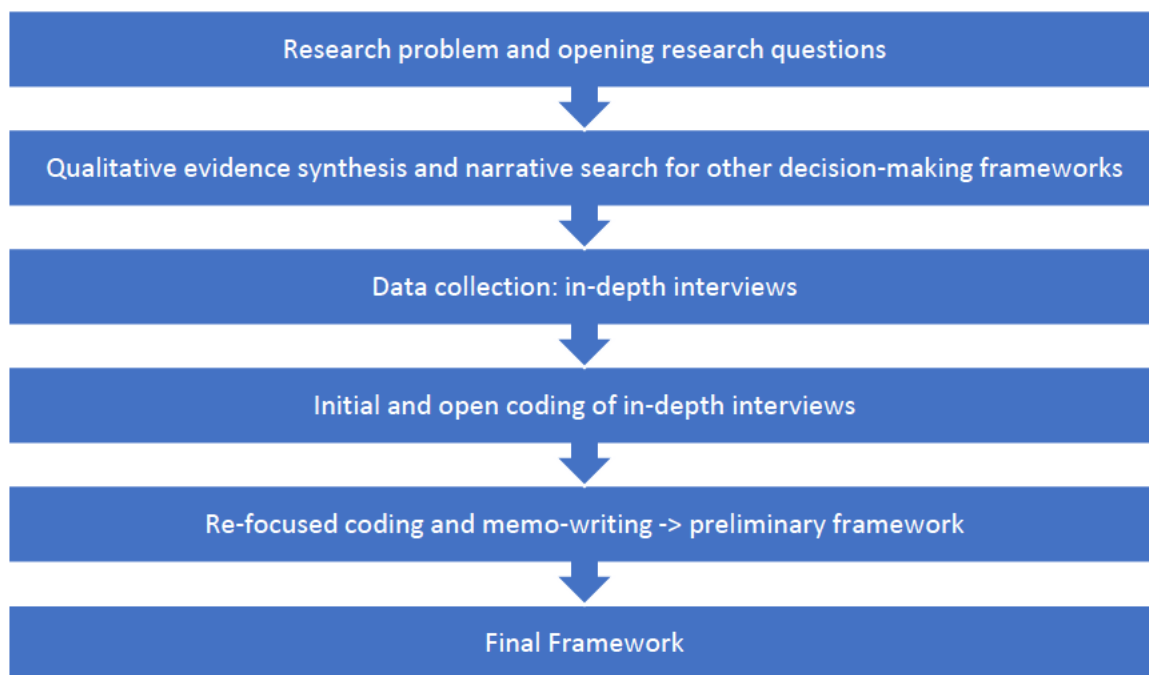


Figure 3.4 Constructivist Grounded Theory Approach in this study

Put forth by Kathy Charmaz – a former student of Glaser and Strauss – Constructivist Grounded Theory is a contemporary departure from classical Grounded Theory and is rooted in a constructivist philosophy (Kenny and Fourie, 2015). A Constructivist

Grounded Theory approach was used to explore the perceptions and experiences of HPV vaccination among GBMSM in Scotland (Figure 3.1). CGT forces a focused shift from classical grounded theory's positivist underpinning to those constructivism underpinnings (Charmaz, 2017). CGT 'builds on Glaser's useful methodological strategies ... but it does not duplicate the logic of inquiry in classic grounded theory statements (Charmaz, 2008, p. 137). In constructing Constructivist Grounded Theory Charmaz (2014) outlines why the term "constructivist" was used, stating:

"[I] chose the term 'constructivist' to acknowledge subjectivity and the researcher's involvement in the construction and interpretation of data and to signal the differences between my approach and conventional social constructivism of the 1980s and the early 1990s" (p. 14).

While an existence of an objective true world is not the position of constructivist grounded theorists, the focus is on the 'world made real in the minds and through the words and actions of its members' (Charmaz, 2000, p. 523). This is emblematic of the interpretivist epistemology assumed in CGT in which the researcher is not separated from the research project, and that knowledge is co-created (Charmaz, 2000). Achieving objectivity is not the ambition of CGT, nor is objectivity the standard for which this work's quality should be assessed against. Instead, standards for the quality of CGT work are mapped onto trustworthiness and authenticity of the data which are reflected to the epistemological commitments of the philosophical underpinnings.

The researcher and the relationship between the researcher and the participant and the role the researcher play in the writing of the CGT are held central in Charmaz's (2014) approach. Within CGT, theory development is explained as a process which is recognised as a non-linear, often cyclical, journey of constant comparison and memo writing until categories research saturation through the part of the process of the recruitment and sampling of participants. Moreover, CGT tries to capture processes and actions particularly using gerunds ('doing' words ending in 'ing'). This focus allows the experiences and perceptions of HPV vaccination to be translated into actions and processes that others may utilise in their considered of targeted GBMSM vaccination programmes or interventions.

As opposed to erasing the subjectivity of the researcher espoused in positivist approaches in the 1980/90s, CGT recognises the active involvement of the researcher in construction and interpretation of data, and these may occur during conditions which the researcher may not have control of or be aware of. Indeed, CGT recognises “*the mutual creation of knowledge by the viewer and the viewed...*” (Charmaz, 2000, p. 510) which “*recognises that the categories, concepts, and theoretical level of an analysis emerged from the researcher’s interactions within the field and questions about the data...*” (Charmaz, 200, p. 522) where reality is constructed in the process.

Charmaz describes CGT as a method of uncovering, unearthing, more broadly describing the experience and story of the participants. This is then constructed by the participants and co-constructed informed by the researcher’s positionality and interpretation of their stories (Charmaz, 2013). Experience, in this instance, cannot – and should not – be quantified. Experience is subjective and so the meaning attached to the idiosyncrasy of an experience is explored using coding and constant comparison of data with data. The researcher’s involvement in the participants’ stories cannot be separated from the final product.

In summary, CGT allowed the HPV vaccination experience to be understood in the wider constellation of the story’s participants’ presented when discussing it. Considering interview data, the participants’ social and environmental influences, the researcher’s role and influence and the focus on action and processes, a substantive depth of understanding can be ascertained and created. The methodology and rationale for its use in this project cannot be denied.

3.5.2 Coding, development of concepts and categories, and constant comparison
CGT (Charmaz, 2006) offers a systematic, yet flexible guidelines for gathering, analysing, and conceptualising data to construct theory. Charmaz (2006) encourages researchers to ‘immerse’ themselves in the data by listening back to each interview or reading and re-reading transcripts several times to elicit familiarity and gain insight into participants’ choice of words and tone. As a grounded theory approach, the analytical process involved cycles of data collection, coding, memo-writing and theory building through the emergence of categories in the data. Coding looks to “*fracture data*”

(Holton, 2006. P. 266) and attach labels to segments to define what data is about. Coding serves as the link between the collection of data and developing a theory to explain the data (Charmaz, 2006, p. 15) as opposed to describing it. CGT therefore moves beyond description reflected in many qualitative approaches to a conceptual and explanatory level. Coding is used to define codes ascribed to data and categories to explore and explain what is happening within the data (Howitt and Cramer, 2011) with a constant comparison approach drawing in each element of the analytical process between the data, its codes and categories, in a cycle of comparing and contrasting in a systematic way (see figure 3.5).

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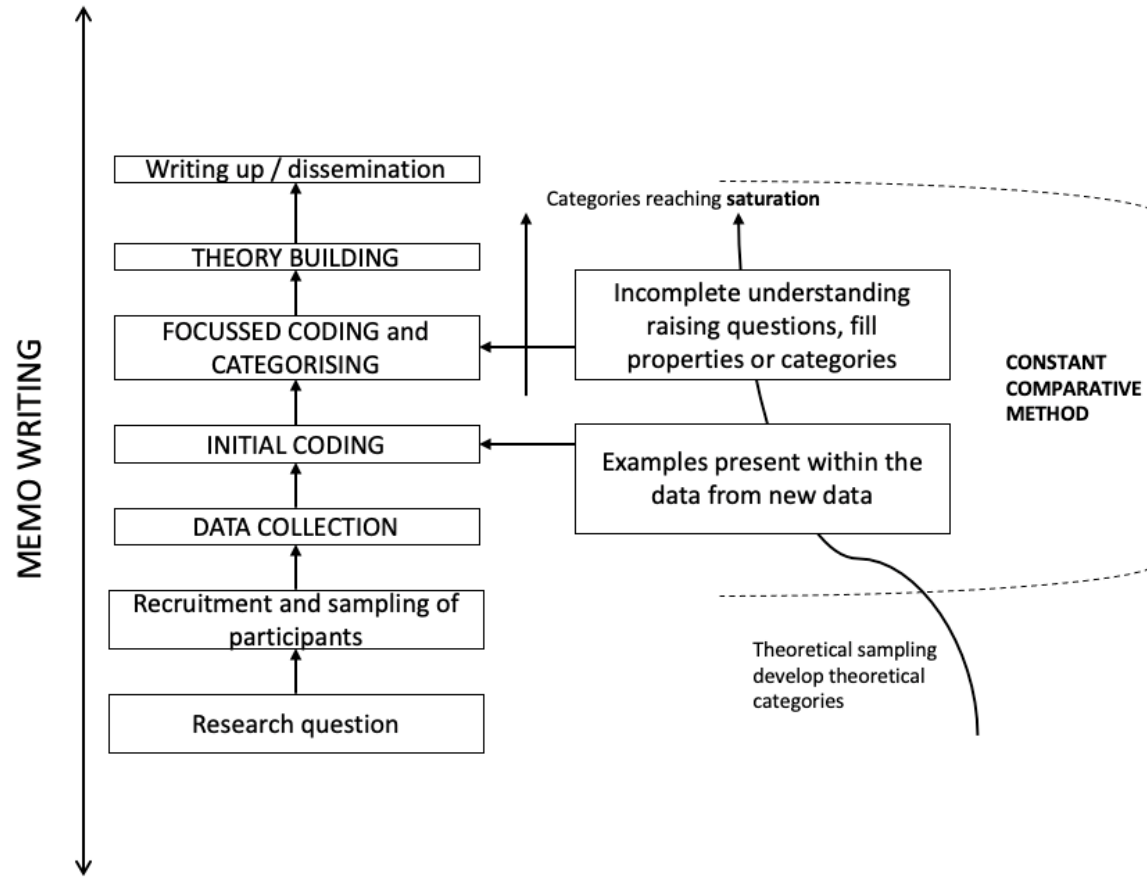


Figure 3.5 Charmaz (2006) visual representation of a constructionist grounded theory

Coding begins with what Charmaz (2006) outlines as “initial coding” which is a pivotal link between collecting data and developing an emergent theory. This manifests as labelling data with short phrases taken from the data also known as in-vivo coding line-by-line or sentence by sentence depending on appropriateness (Fourie and Kenny, 2007). CGT holds central the use of ‘in vivo’ codes, in which codes remain rooted in the participants’ own language and ways of expression (Kenny and Fourie, 2015). Similarly, each line or sentence is examined for ‘action’ and ‘process’. This initial approach allows the researcher to become very familiar with the data and create codes which meaningfully reflect what is being construed by each participant in each transcript. To stay as close to the data, Charmaz (2006, p. 47) offers the following reflections:

- What is the data a study of?
- What does the data suggest?
- From whose point of view is it suggested?
- What theoretical category does this specific datum indicate?
- What process is at issue here?
- How can I define it?
- Under which conditions does this process develop?
- How does the research participant(s) think, feel, act while involved in this process?
- When, why, and how does the process change?
- What are the consequences of this process?

Fitting with this study, this initial stage of coding looked to identify what the barriers and motivations, the context, and factors which promote or impede the provision of the HPV vaccine. It then meant looking closer at how participants navigate these appraisals and how these influences their experiences, seeking implication of meaning in the data. Analysing data in this way adds – and gives appropriate credence to – the nuance of the participants’ experiences moves the understanding deeper. Holding these reflections in mind allows the researcher to bracket their own preconceptions of the data, whilst focusing on:

'...the world through their eyes and understanding the logic of their experience'
(Charmaz, 2014, p. 133)

It must be reiterated that the analytical approach in CGT is flexible and systematic; a fluid process of coding data which can take the form of a stepwise approach yet the depth in these stages is less prescribed. Initial coding, therefore, does not relate to a superficial account of the data. Yet, this stage can be deeply immersive so credence should be maintained. Initial coding does lead to more defined coding processes being implemented.

Focused coding takes forward a core set of codes (Charmaz and Belgrave, 2012) which are deemed the most salient or dominant in the data and then to explore these ideas in more depth through a creative analytical process which compares codes and instances amongst the data. The saliency of codes can be reflected through the frequency of initial codes to reduce the data and organised is fragmentation. As the codes were being articulated, curated (sub)consciously and formed by the researcher, they were continually checked back and forth with data and initial codes to see if the codes and the curation of the data represented what was being said. Charmaz (2014) argues at this stage, the researcher must be mindful of their preconceptions to avoid forcing the data. Memo-writing (described later) serves an important tool of reflexivity. Through the process of constant comparison, focused codes and initial codes can be compared and contrasted. In doing so, focused codes can be raised into tentative categories and the analytical links between them expressed. Charmaz (2014, p. 127) outlined key questions to look for process while coding:

- What process or processes is at issue here? How can I define it?
- How does this process develop?
- How do participants act while involved in this process?
- What does the participant profess to think and feel while involved in this process?
- When, why and how does this process change?
- What are the consequences of the process?

The final stage refers to “theoretical coding” which aims to code the data on a theoretical level, going beyond creating relationships between data to explore and analyse the relationships through conceptualising and creating categories (Charmaz, 2006). The use of data analysis software supports the process of bringing all the data and its codes together in one place. From using nVivo, ‘nodes’ which correspond to each code were grouped. All nodes are then examined and grouped into the focused categories as discussed.

Charmaz (2014) suggests a grounded theory diagram can also be used for the researcher to see “*the relative power, scope and direction of the categories in the analysis, as well as the connections among them*” (p. 218)

3.5.3 Theoretical sensitisation, sampling, and integration

3.5.3.1 *Theoretical sensitivity and sufficiency*

Grounded Theory can be considered an approach to craft a theory that reveals intrinsic patterns in social relationships and behaviours between people or among groups (Birks and Mills, 2015). This theory evolves through the interplay of data collection and analysis. The role of the researcher in Constructivist Grounded Theory cannot be understated. Therefore, one must acknowledge that the data can also include the theoretical sensitivity that arises from reviewing the literature, the literature informing the researcher’s understanding of how the data collected links together to shape the categories of the theory (Chun Tie, Birks, and Francis, 2019). Therefore, the researcher having insight into the research phenomenon under investigation, their reactivity to the complex nature of participants’ words and actions and their ability to reconstruct meaning directly shapes the analytical process and emerging, and substantive, theory (Mills et al., 2006). Thornberg and Dunne (2019) argue once the researcher begins data collection, the literature review conducted informing the project should become more of a way to develop theoretical sensitivity. The use of a literature review – what is considered should or should not be read to develop theoretical sensitivity – is debated within the grounded theory topography.

Glaser provides a detailed characterisation of theoretical sensitivity as consisting of “*two essential characteristics [of the researcher] ... the personal and temperamental*

bent to maintain analytic distance, tolerate confusion and regression while remaining open, trusting to preconscious processing and to conceptual emergence” (Glaser and Holton, 2004, p. 43). The theoretically sensitive researcher “*thinks in theoretical terms about what he knows*” and needs to exhibit “[*their*] personal and temperamental bent” as well as “[*the*] ability to have theoretical insight into [*their*] area of research, combined with an ability to make something of [*their*] insights”. It must be acknowledged, therefore, that adopting a constructivist grounded theory approach in this project was a journey for the researcher. The decision-making processes requiring one’s appraisal of selecting, combining, and employing methods is reflective of the doctoral research journey and concomitant learning through that journey. The systematic review outlined in the previous chapter also serves as evidence of the process in which the researcher considers evidence, the potential bias from authors, and factors which affect and relate to the phenomena under investigation. The role in which a literature review serves as an established role in the doctoral journey should not be discarded or warped to counter the decision of a grounded theory approach. Charmaz (2014) recognised that researchers might have rich experiences of the study area. This mitigates the notion that researchers avoid in-depth literature reviews as doing so may increase the likelihood data will be construed into preconceived categories related to existing theories in the field (Boychuk-Duchscher & Morgan, 2004).

Reflexivity is therefore key in the constructivist grounded theory approach to account for the researcher’s conscious, pre-conscious, and unconscious ideas rather than ignoring them. What informs the researcher’s – and participants’ – responses to and within the data must be scrutinised and questioned. The theory should be positioned in the field of the researcher while clarifying its contribution to knowledge.

3.5.3.2 *Theoretical sampling*

Intrinsic to Constructivist Grounded Theory is the inductive process. This approach utilises a non-probability sampling approach so that novel materials, such as interviews from subgroups, are included within the research until data saturation is met (Charmaz, 2014). Thus, theoretical saturation is the point in the research process whereby the researcher has included novel information and no new data is yielded. There is no set number of participants set within a Constructivist Grounded Theory

approach – reflected more broadly in qualitative research – and purposive sampling is used to collect appropriate data (Boddy, 2016).

From the initial purposive sample in which initial encounters are iteratively compared and coded (using constant comparison described earlier), a theoretical guide can emerge which orients the next stage of sampling and data collection to develop the emerging process and develop and contribute concepts (Conlon et al., 2020). This process adds another dimension distinguishing a grounded theory approach to other qualitative approaches whereby data is often collected and subsequently analysed. Further sampling of incidents, events, or activities explored through interviews may be – and were – required to refine conceptual categories. This approach was pivotal to building theoretical insights during the analytical process and is therefore used to refine the emerging theory (Breckendridge, 2009). Strauss and Corbin (1998) define this theoretical sampling approach as continuing until no new “properties, dimensions or relationships merge during analysis” (Strauss and Corbin, 1998, p. 143). Charmaz, however, argues data saturation does not mean stopping data collection when repeated ideas or similar stories emerge. Indeed, Charmaz argues data collection should continue to the point of theoretical completeness when no new properties of the conceptual pattern emerge.

This was reflected in the attempt to recruit the population of interest via varying geographies, social media channels, and services to increase sample diversity and to explore the emerging theory. There was considerable difficulty in locating and recruiting GBMSM whose sexual health use was not related to their intent on receiving Pre-Exposure Prophylaxis (PrEP) through NHS clinics. Therefore, it was hoped that theoretical saturation would be met with most categories relaying the experience of GBMSM reflecting this dimension of their health.

3.5.3.3 Theoretical integration

Through the constant comparative analysis, data collected through interviews use inductive methods to generate theory. This comparison between incidents, codes, and categories continues until the theory is fully integrated (Birks and Mills, 2015). This analytical approach can also be construed as phased – beginning with initial coding

for identification of major categories, proceeding to intermediate coding for saturation and connection of (sub)categories, and resulting in advanced coding for theoretical integration.

3.5.3.4 Memoing

Memo writing refers to the intermediate step between coding and writing the first draft of the emerging theory, including provisional analysis (Charmaz, 2008). Lempert (2007) describes memo writing as *“the methodological link, the distillation process, through which the researcher transforms data into theory”* (p. 245). There are no abstract formulae as to what a memo specifically must contain. Memo writing is an idiosyncratic process. Constructivist Grounded Theory advocates for the use of memo-writing from the beginning of the research process and throughout the lifecycle of the project. It is integral when important ideas emerge, and theoretical progress is made. As the researcher navigates the field and their fieldwork, memo-writing enables the researcher to pause and engage different categories (Charmaz, 2006), recording ideas as well as emerging propositions (Glaser and Strauss, 1967). Memos serve as an aide to document methodological questions as well as comparisons between fragments of the data collected through the journey (Charmaz and Thornberg, 2021). These can be *“fragmented phrases, weird diagrams (narrated in memos, of course), half sentences, or long treatises”* (Lempert, 2007). Memos can also serve as an analytical base to construct and deconstruct codes. This base constitutes a mechanism for reflexivity and serves as a way for the researcher to make conscious unstated assumptions of the research and of research participants (Chun Tie, Birks, and Francis, 2019).

It is here that, according to Lempert (2007), the researcher is most visible as *“knowledge about self and knowledge about subject are intertwined, partial, historical, local knowledges”* (p. 248). This integration of knowledge as an active process documented by memo-writing can also be used to record thinking about the codes and the meanings of them, to help assist in the comparison processes and to investigate the codes and similarities and differences among them (Sbaraini et al., 2011). Memos do not have to be in the form of the written word. Diagrams and drawings also serve to convey thought processes and capture ideas which can, in turn, guide the

researcher to abstract ideas in the reality and depth of data (Holloway and Galvin, 2016).

3.5.4 Ensuring quality within Constructivist Grounded Theory

Criticism of qualitative research pertaining to weaknesses, specifically in relation to bias, lack of generalisability and rigour have plagued the qualitative paradigm for decades. A highly contested area of this paradigm relates to the criteria against which studies within it should be assessed (Lincoln and Guba, 2003). This project is underpinned by the assumption that – as a piece of qualitative research – it must be judged against criteria that are congruent with the qualitative paradigm; a notion shared by many seminal methodologists (Whittemore et al., 2001). An important aspect to the rationale for choosing Constructivist Grounded Theory as an approach for the project was its flexibility and dynamicity. It is important, therefore, to emphasise that this flexibility does not imply any reduction in the quality of research. Therefore, as a piece of qualitative work within the field, this work is not situated outside of the contention which exists in the notion of using ‘qualitative’ criteria to assess evidence. As Glaser highlighted, “*the goal is not clever verification*” (Glaser, 1978, p. 93) in one’s grounded theory, therefore relevant canons of validity should not pertain to the verification of it. Instead, quality in a grounded theory study is reflected in the rigorous and systematic approach to the *process*, in which the validity of theoretical outputs is demonstrated through links to the original data (Glaser, 1992).

Indeed, the term ‘rigour’ is often not used in the evaluation of grounded theory research. Instead, and while the terminology is different between the authors of the major versions of grounded theory, criteria when describing the assessment of grounded theory evidence is that of ‘quality’ which, essentially across author’s interpretations, refers to the quality of the grounded theory presented being determined by the quality of the research endeavour done. In other words, the discussion of the ‘quality’, therefore, are focused on the process and not the outputs because different interpretations of the same data may be made validly. Indeed, a rejection of the concepts of reliability and validity have been argued by Lincoln and

Guba (2002) whom question their relevancy to qualitative research. More specifically, validity – with its measurement of systems – is lacking in resonance to qualitative research given its limited efficacy in the context of social systems imbued with subjectively assessed and socially constructed concepts. Translating, transforming, or converting assessments or interpretations of human behaviour and the social systems and structures they're situated in into inappropriate quantifiable scales distort the grounded theory research process. Similar inappropriate avenues of assessment of grounded theory studies also relates to external reliability. As external reliability relates to the extent to which the results may be replicated, this has little relevance to qualitative research in which is limited to the patterns in similar or related contexts rather than the certainties in replicated contexts.

It is clear, then, that the limitations pertaining to reliability and validity stem from divergent ontological positions between positivism and interpretivism (Lincoln and Guba, 1985) which have been discussed above. While these constructs may be less relevant to qualitative research, it does evidence the importance of the need to establish quality of the evidence in this paradigm. The ways in which grounded theory studies are evaluated have evolved and developed away from its positivist origins as more credence to the interpretivist paradigm has increased. Glaser and Strauss (1967) – while ignoring the social construction of data (Hall and Callery, 2001) – set out four quality indicators for 'classic' grounded theory: firstly, that the theory has 'fit' within the field, secondly that the theory is understandable and makes sense as a basic social process, that the theory is modifiable to be applicable to the everyday changing situations and – finally – that stakeholders can control or work the theory. It is inappropriate, then, to apply the quality criteria of a 'classic' grounded theory – and its root in positivism – and so an interpretative assessment is chosen in favour of this. In line with their epistemic reposition of the grounded theory method, Charmaz (2006) developed four quality criteria for constructivist grounded theory to adhere to: credibility, originality, resonance, and usefulness. These criteria will be implemented throughout the research journey.

Credibility will be established through collecting rich data from a range of research participants and by maintaining sufficient evidence, or an audit trail for others to evaluate the research process. Originality will be maintained through the discovery of

new knowledge and insights into HPV vaccination of GBMSM in Scotland, which has yet to be investigated thoroughly. The substantive theory developed from this may assist in developed new procedural considerations in the provision of the HPV vaccine and inform interventions to enhance HPV vaccine receipt among GBMSM. Resonance will be developed throughout the process by carefully adhering to the procedure related to constructivist grounded theory analysis. Usefulness of the knowledge gained from this project will be seen in filling the current gap in the literature pertaining to new adaptations of HPV vaccine programmes in the UK. Directions for future research will be provided.

3.5.5 Charmaz (2014)'s criteria for Grounded Theory research quality

3.5.5.1 *Credibility*

Credibility in this instance refers to whether results are plausible regarding the familiarity and presentation of the data borne out of the process of analysis and the evidence for the claims made. Charmaz offers six key considerations of a grounded theory study's credibility:

1. Does the research present intimate familiarity with the setting or topic?
2. Are the range, number and depth of the data gathered sufficient?
3. Were categories systematically compared?
4. Do the categories cover a range of empirical settings?
5. Does the data gathered link rationally to the data analysis and subsequent arguments which emerge?

Has sufficient evidence been provided in the study to enable a detached reader to concur with the findings of the study?

3.5.5.2 *Originality*

Measured regarding the degree to which the study presents "*a new conceptual rendering of the data*" (p182), originality is the identification of new insights which may subvert or challenge existing knowledge within the empirical landscape. Charmaz offer four considerations for questioning originality:

1. Do the categories present fresh insights?

2. Is there: “a new conceptual rendering of the data?” (p. 182)
3. What is: “the social and theoretical relevance of this work? (p. 182)
4. To what extent will the grounded theory “challenge, extend, or refine current ideas, concepts and practices?” (p. 182)

3.5.5.3 Resonance

Resonance refers to assessing the breadth and depth of the data, the degree to which the categories are “*saturated*” and represent the “*fullness of the studies experience*” (Charmaz, 2006, p. 182). Charmaz offers four considerations of the study’s resonance:

1. To what extent do the categories present: “the fullness of the studies experience?”
2. Have you: “revealed... taken for granted for meanings?”
3. To what extent have links been made between “larger collectives or institutions and individual lives, when the data so indicate?”
4. “Does your grounded theory make sense to your participants or people who share their circumstances? Does your analysis offer them deeper insights about their lives and worlds?”

3.5.5.4 Usefulness

The fourth criteria for Charmaz’s (2006) quality in grounded theory research focuses on whether the theoretical findings are useful people in their everyday lives. Usefulness in this instance considers the degree to which this study can have an impact on the experience of HPV vaccination in Scotland. Charmaz (2006) offers four questions regarding the study’s “usefulness”:

1. The extent to which the analyses may be applied in people’s “everyday worlds”
2. Does the study’s theoretical categories capture: “generic processes?” Have these generic processes been analysed for “tacit implications”?
3. Does the analysis identify the need for additional research in other “substantive areas”?
4. How do the findings build upon existing knowledge?

3.6 In the name of 'theory'

As has been mentioned, a grounded theory approach attends to theoretical sampling, along with simultaneous data collection and analysis to develop a grounded theory. As the aim of this PhD thesis is to create a model/conceptual framework pertaining to the HPV vaccination of GBMSM in Scotland, how 'theory' is defined in relation to grounded theory must be discussed in order to situate the final product of this research. Glaser and Strauss (1967) distinguished between substantive and formal theory, writing:

By substantive theory we mean that developed for a substantive, empirical area of sociological inquiry, such as patient care, race relations, professional education, delinquency, or research organizations. By formal theory, we mean that developed for a formal, conceptual, area of sociological inquiry, such as stigma, deviant behavior, formal organization, socialization, status congruency, authority and power, reward systems or social mobility". Both types of theory may be considered as "middle-range." That is, they fall between the "minor working hypotheses" of everyday life and the "all inclusive" grand theories (pp. 32-33).

Formal theories, therefore, are abstract and provide theoretical accounts of general issues which can be applied to a wider range of concerns (Strauss and Corbin, 1998) Substantive theories provide an explanation for a particular area and are used to explain and explore that area in specific settings. Coalescing and synergising concepts from the results of several substantive theories may lead to the development of a more general formal theory (Charmaz, 2006).

Charmaz (2006) recognises the blurred boundaries of 'theory' in grounded theory writing. According to Charmaz (2006), two definitions of theory are offered: firstly, interpretive theory and positivist theory. Charmaz's view of positivist theory is a "statement of relationships between abstract concepts that cover a wide range of empirical observations" (p.125) ... "*positivist theory seeks causes, favours deterministic explanations, and emphasises generality and universality*" (p.126). In contrast to where interpretative theory is considered, "interpretive theory calls for the imaginative understanding of the phenomenon. This type of theory assumes

emergent, multiple realities, indeterminacy; facts and values as linked; truth as provisional; and social life as processual” (p. 126). Thus, the two theories pose differing focuses: with interpretivist theories focusing on the understanding of phenomena under investigation and positivist theories focusing on explanation and prediction.

Charmaz (2006) provides several considerations during theory generation. Theory should emerge from linking the categories and investigating the connections between concepts, theory should explore the varied behaviours of social participation and ideas, theory should recognise the construction of individual and collective actions and the aim of the theory will be to conceptualise the process of [HPV vaccination among GBMSM], to articulate theoretical claims, to acknowledge subjectivity in theorising and recognise the role of negotiation, dialogue and understanding within the experience of GBMSM HPV vaccination to offer an imaginative interpretation of the process.

In this thesis, the understanding and experiences of GBMSM related to HPV vaccination is the situated knowledge to be collected through qualitative means. Theories generated using Constructivist Grounded Theory, such as this, provide plausible account as opposed to theories that can claim any objective status applied out with the bounds of the project (Charmaz, 2006). This research, then, aimed to construct a substantive grounded theory providing the researcher’s interpretation of the GBMSM-HPV experience. Using an inductive approach, the substantive theory was developed ‘grounded’ in the data (Charmaz, 2006). Focusing on descriptions of thoughts and interpretations of the participants in this study offered insights into the provision of the HPV vaccination experienced by GBMSM in Scotland.

3.7 Limitations of Constructivist Grounded Theory

It cannot be understated that no singular methodology is perfect. Grounded theory as an approach lacks standardisation when it comes to data analysis and co-creation of theory. A pervasive criticism of CGT is that it departs too much from ‘classic’ GT which renders it descriptive. Moreover, the absence of substantive verifiable findings also presents a limitation of CGT. That being said, however, the validity of qualitative data analysis as they relate to the researcher – and participants’ – positioning can be

argued to be equally substantive when the research questions are explored, and findings found to be particular to each party respectively. Therefore, in light of this limitation, the findings – and this research – must acknowledge that they do not speak for others involved in the same phenomenon not included in the study. Indeed Lewis (2015) acknowledges that grounded theory study should be part of a broader picture when understanding data and thus this research – hopefully – will be combined with others which can be translated into practice.

In summary, the criticisms of CGT are useful as a position which the researcher should be mindful of. As Silverman explains, the methodological approach must fit the exploration and thus, CGT is understood. In this instance, it is to answer:

“What factors contribute to – and influence – the receipt of the Human Papillomavirus (HPV) vaccine among Gay, Bisexual, and other Men who have Sex with Men in Scotland?”

3.8 The congruency between the primary research and Constructivist Grounded Theory Approach

Central to this project is the focus on the attitudes, perceptions, beliefs and experiences of GBMSM as intended target recipients of a public health intervention. This project, through its aims and objectives, seeks to explore and provide an understanding of the barriers and facilitators of HPV vaccine uptake in relation to its provision in Scottish sexual health services. It cannot be ignored that providing the HPV vaccine as a population health intervention has already been assessed to be effective in the context of a female-only vaccination programme (since 2008 in the UK). Providing the HPV vaccine for GBMSM in Scotland began in July 2017. This project was undertaken September 2017.

Thus, given the absence of sufficient and applicable theories in the existing body of literature relating to the implementation of this population health intervention in a new context, it is appropriate to turn to the intended recipients of the intervention in order to accommodate a comprehensive understanding of the different contextual features, resources, and infrastructure. Thus, in addressing the rationale and implementation

for the provision of the HPV vaccine for population, grounded theory is seen as being required in order to provide a better understanding of this innovation (Stern, 1980).

In summary, the reasons for adopting a qualitative approach and using constructivist grounded theory in particular are:

- a) The central role of the researcher in the analysis process and theory construction due to its constructivist epistemological assumptions. Unlike classical grounded theory which advocates for no prior knowledge or ignoring prior knowledge (Glaser and Strauss, 1967) in the approach to a research phenomenon, constructivist grounded theory permits the researcher to use prior knowledge. This prior knowledge cannot be ignored in the data analytical approach, what questions were asked and how the data is interpreted.
- b) Emergence is facilitated by the researcher who is not a “distant observer” (Charmaz, 2000, p. 178). As outlined in the reflexivity section (below), the researcher has prior knowledge of the psychosocial factors affecting health service utilisation and, more specifically, factors affecting HPV vaccination among GBMSM as outlined in the review conducted in the preceding chapter. Indeed, this is supported by Charmaz’ (2014) argument that it is impossible for modern researchers to conduct a grounded theory study without doing prior (scoping) review prior, due to stringent ethical and institutional reasons.
- c) Flexible approach to methods which allows for creativity and responsiveness to new and unanticipated data. Little is known about the vaccination experiences among GBMSM in Scotland, therefore it is important to engage flexibly with this research phenomena. Moreover, it well documented that complexity among vulnerable populations is driven by broad structural forces where multiple disparities exist (Reutter and Kushner, 2010). Denzin and Lincoln (2018) support this notion in their call for innovative ideas to evolve social justice methodologies toward understanding complex populations.

- d) Initial and focused coding which facilitates an understanding of the meaning behind the narratives and “clarifies and sharpens analysis but avoid[s] imposing a forced framework on it with them” (Charmaz, 2000, p. 6).
- e) The end product of constructivist grounded theory is not specified: “*the finished work is a construction – yours*” (Charmaz, 2006, p. x1) My approach explicitly assumes that any theoretical rendering offers an interpretative portrayal of the studies world not an extant picture of it.

3.9 Positioning the researcher and the context

It is imperative that the role of the researcher in the co-construction of a constructivist grounded theory is made clear and the relevance of reflexivity and the researcher’s voice in the process of theory being made transparent. The researcher’s presence in the research process is neither neutral nor undesirable in constructivist grounded theory (Charmaz, 2017). Ramalho (2015) asserts that not only is the researcher a key stakeholder in the grounded theory process but often the researcher themselves proffer valuable insights and narratives that encourage research participants to be more open in constructing a grounded theory.

Interview data serves as a reproduction of participants’ realities, thereby under constructivist grounded theory the relationship between the researcher and participant must be acknowledged. While the philosophical underpinnings of the research paradigm and of the research in relation to methodology have been discussed, consideration of the researcher’s position in the research extends beyond this. The implementation of the research project is equally shaped by the researcher and therefore identification of the position of the researcher is required and recognised as an important factor to ensure the rigour and credibility of the final product.

One must therefore be transparent in their position in relation to the research process during qualitative inquiry. Positionality “reflects the position that the researcher has chosen to adopt within a given research study” (Savin-Baden & Major, 2013, p. 71). Some of these positions are culturally ascribed or generally perceived as fixed and also have an influence on the research. These include, for example, gender, race,

skin-colour, nationality. These also serve to shape the researcher and their experiences; often creating and embedding unrecognised values, assumptions, and beliefs which may consciously or unconsciously influence what is done by the researcher (Lois & Barton, 2002). Reflexivity, similarly, is the “process of a continual internal dialogue and critical self-evaluation of a researcher’s positionality as well as active acknowledgement and explicit recognition that this position may affect the research process and outcome” (Berger, 2015, p. 220). Glaser (1992) argues researchers should approach the field from a place of unknowing. Charmaz (2014), however, argues it is impossible to conduct value-free research and to bring one’s biases, prejudices and preconceptions. Indeed, what Charmaz (2017, p. 35) calls “*methodological self-consciousness*”, one must reflect on how perspectives, privileges and priorities impact the research process. An attuned balance must be struck between the researcher becoming so removed they cannot give credence to the data and an over familiarity with the research so to influence research subjectivity, where the area of interest is obfuscated.

As this research was required to be approved by Edinburgh Napier University’s School of Health and Social Care Ethics Committee, it was necessary to prepare and submit a research proposal that outlined the topic and reviewed (some) literature. This meant the researcher was aware of some of the issues relevant to HPV vaccination and their relevance to sexual minority men in Scotland. Moreover, a systematic review of the qualitative evidence was undertaken during the first year of the doctoral journey which further synthesised the researcher. Charmaz (2014) advocates for the use of ‘bracketing’ as well as engaging in an on-going reflexive journey throughout the Lifecycle of the research project. Constructivist grounded theory is fluid and dynamic enough relating to institutional necessities and pre-existing knowledge of the literature and experiences.

Under the mantle of constructivism, the researcher must position themselves within a reflexive framework; thereby making transparent how their own reality is construed and how they position themselves within that reality. Thus, it is important to provide my thoughts around the critical debate on the nature and existence of truth and reality and the representation of knowledge. I do not believe there is a discoverable reality which, when navigated, can reveal a universal truth. Reality and its representation is

a process whereby knowledge is cultural, partial, complex and positioned within a social and historical context.

To effectively reflect on the fact that my findings are produced through the specifics of interactions between myself and my participants I must consider my social location as the researcher. I am mixed White-Black Caribbean, English, working-class, queer-identifying, cis-male working in higher education. These elements of my identity must be reflected upon and cannot be ignored throughout the presentation of this thesis and the worldview with which the analyses occupy.

3.10 Summary

Chapter 3 presented a methodological discussion of the research, outlining the relevant ontological and epistemological position of the research. An exploration of the influencing role of symbolic interactionism was also presented Charmaz's Constructivist Grounded Theory was outlined as well as its history and the justification for its use as the most appropriate approach to answer the research question(s). The next chapter will explain the specific methods and tools used in the implementation of the CGT study.

4 Chapter 4: Methods

What will this chapter discuss?

This chapter will outline:

- Outline the research being explored
- Define and discuss the recruitment process
- Document relevant ethical considerations
- Outline data collection approaches
- Provide a robust account of Constructivist Grounded Theory data analysis
- Refer to key representations of illness theory

4.1 Introduction

This chapter describes the methods implemented to achieve the primary qualitative project for this thesis. In this chapter, how the Constructivist Grounded Theory (CGT) methodology was used to collect and analyse (via semi-structured interview) data from 17 GBMSM specifically relating to their experiences relating to the targeted HPV-GBMSM vaccination programme. Ethical considerations including how ethical governance was processed and achieved, informed consent, confidentiality, and data management are explained. Finally, a critical evaluation of rigour is presented.

4.2 The research topic

The purpose of this CGT study was to explore how GBMSM experience HPV and HPV vaccination with a particular focus on their attitudes, experiences and perceptions of this phenomenon. Specifically, the study aimed to inductively derive a theory regarding HPV-GBMSM vaccination and the processes relevant to this. The study addressed the following research question:

“What factors contribute to – and influence – the receipt of the Human Papillomavirus (HPV) vaccine among Gay, Bisexual, and other Men who have Sex with Men in Scotland?”

In seeking to achieve answering the above research question, the following research objectives were formulated:

1. To obtain an in-depth understanding of the attitudes towards and experiences of HPV vaccination among GBMSM in Scotland based upon semi-structured interviews with GBMSM from across Scotland.
2. To explicate how socio-political positioning of GBMSM in Scotland influences HPV-GBMSM vaccine provision as a national programme.
3. Construct an idiographic Constructivist Grounded Theory which maps the influences of HPV-GBMSM vaccination
4. Position the findings of the research study within the field of HPV vaccination nationally and within the existing literature surrounding health technologies targeting GBMSM.

4.3 The sample

Participants within this CGT primary qualitative study investigation was selected for their eligibility of the HPV vaccination programme for men who have sex with men. The decision to emulate the eligibility for the vaccination programme was due to the need to focus qualitative research to enhance its usefulness to practice. Therefore, only GBMSM fitting the inclusion criteria for the national programme were recruited in this study (Patton, 2002; Suri, 2011). However, the broad scope for inclusion in this study also permits the existence of some differences among GBMSM due to the different sexual identities, practices, and service uptake across Scottish Health Boards. One such difference, therefore, is the location of sexual health services which provide the HPV vaccine as part of the national programme. It was expected that there might be some difference in experiences when comparing participant experiences in health boards in the ‘urban’ health board – Greater Glasgow and Clyde, Forth Valley, and Lothians – with those in rural Scotland – such as Grampian, Highlands and Islands. This must be acknowledged when considering the heterogeneity of

participants in relation to the findings of this study. However, the expected similarities of participants as a result of a shared sexual minority must also be acknowledged. Thus, a sampling strategy which ensured the appropriate people were recruited to the study was essential.

While Charmaz (2014) does not offer guidance on sample size, it is acknowledged that the sample size should be large enough to achieve saturation of the emerging categories during the theoretical sampling phase of the study. Therefore, in keeping with the iterative nature of a constructivist grounded theory approach, the sample in this investigation reflects a purposive and theoretical sampling. The researcher strove to include participants from a variety of experiences related to vaccination. This was congruent with the aim of achieving a rigorous grounded theory, in which the fullness of experiences of HPV receipt among GBMSM can be conveyed (Charmaz, 2006; Morse, 2010). Indeed, Charmaz (2006) posits that a credible application of constructivist grounded theory methodology should collect data from the range of individuals interacting with the phenomena of study. It was essential, therefore, to be flexible and open to exploring different experiences at the beginning of the study.

Therefore, this study had few inclusion criteria for participants (see table 4.1):

Table 4.1 Inclusion and exclusion criteria of primary research study participants

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> Self-identified men who are sexually attracted to men 	<ul style="list-style-type: none"> Men below the age of 18 years and above the age of 45 years
<ul style="list-style-type: none"> Men above the age of 18 years and below the age up to and including 45 years 	<ul style="list-style-type: none"> Self-identified women
<ul style="list-style-type: none"> Self-identifying transgender men 	<ul style="list-style-type: none"> Self-identified heterosexual men

For practical and ethical reasons, exclusion criteria were applied to exclude the experiences of those under 18 years of age due to their vulnerability reflected in the Safeguarding Vulnerable Adults Act (2006). This study did not include people without the mental capacity to consent for themselves. Due to financial constraints, individuals

who could not speak or understand the English language were excluded from the study. This was unlikely to have a pronounced impact on understanding contemporary HPV vaccination receipt, as the large majority of public in Scotland speak English as their primary language.

4.4 The recruitment processes

Recruitment for this study took place between March to November 2019 and December – March 2020 following relevant ethical approvals outlined below (Appendix 7).

4.4.1 Visual advertisement

An A3 poster and A6 (Appendix 8) leaflet were developed to advertise individual interviews, explaining that the discussions are for gay and bisexual men about their views on sexual health and vaccinating against sexually transmitted infections. The posters and leaflets were distributed among various community locations in Edinburgh and Glasgow such as gay bars, saunas, clubs and cafes where GBMSM were likely to visit.

4.4.2 Social media

The poster used for this study were posted on social media (e.g., Twitter). Specific accounts relating to LGBTQ+ health and Scottish LGBTQ+ health was targeted to disseminate the advertisement. Edinburgh Napier University, University of Edinburgh, University of Glasgow, and Glasgow Caledonian University LGBT student societies were contacted to distribute the e-mail contacting the e-poster. Any potential GBMSM visiting these pages, social media accounts, or privy to the student societies were able to anonymously view the investigator's contact details.

4.4.3 Collaboration with the third sector

Waverly Care – a national HIV and Hepatitis charity, and SX Scotland – a subset of Waverly Care focusing on the sexual health of GBMSM in Edinburgh and the Lothians, agreed to collaborate with the identification of potential participants and the dissemination of study documents (see appendix 9)

4.4.4 Reimbursement

Participants were offered a £20 gift voucher to thank them for their time. The poster emphasised that all discussions were anonymous and confidential. Potential participants were able to tear off a part of the poster with the study investigator's email address.

4.4.5 Study geography

Intrinsic to CGT – and more so qualitative research as a paradigm – is that the selection of participants is dependent on collecting evidence on the research topic. The target population, being gay, bisexual, and other men-who-have-sex-with-men (GBMSM), are a minority group living in Scotland and likely to be located in cosmopolitan cities in Scotland localised to the 'central belt' incorporating the capital city, Edinburgh, as well as Glasgow. Edinburgh, situated in the Lothians health board, was chosen due to its LGBTQ+ community being situated in Scotland's capital. However, the researcher knew that one particular setting was not going to yield the dynamicity and variability of HPV vaccine experiences. In collaboration with a LGBTQ+-focused charity, Waverley Care, the regional outreach of the project was supported granting a facilitated data collection attempt in the Highlands of Scotland.

4.4.5.1 Mobilising 'the community'

Recruitment was carried out through community groups and local organisations, such as LGBTQ+ venues and sports clubs. LEAP Sport Scotland – a charity dedicated to promoting LGBTI participation in sport, Waverley Care – a charity dedicated to HIV and Hepatitis C support were approached and were keen to help in recruitment. These community organisations had a diverse service user base with regard to sexual identities, age, and geographic location. Snowball sampling by word of mouth and through dissemination of study materials from key stakeholders within these community groups facilitated recruitment. It was noted early in the recruitment process that in order to acquire a reasonable sample size which gave credence to the variability of HPV vaccination in Scotland, snowball sampling was required. This manifested as personal face-to-face contact or word of mouth recruitment from participants who may otherwise may have been difficult to recruit using the initial strategy.

4.4.6 The sampling approaches

4.4.6.1 Purposive and theoretical sampling

A key principle within the grounded theory approach is the method of initial or purposive sampling. This purposive sample are those who have been identified as having the knowledge and or experience to provide initial data for the area of enquiry. Another definition of purposive sampling provided by Patton (2002) explains purposive sampling as “[the] intentional selection of information-rich cases whose study will illuminate the central questions of the research” (p. 230). As such, this sample reflects an initial set of data for the researcher to analyse which will yield initial codes and categories to be developed. The researcher will then implement theoretical sampling to explore areas where further information is needed to add data to existing categories or concepts. Proceeding interviews, then, focused on emerging themes and developed exploration of these to reveal concepts or constructs which could be used to support theory generation (Charmaz, 2014).

As stated, sampling began purposively with the eligibility criteria of the national programme. Indeed, Charmaz (2014) outlined that “*initial sampling in grounded theory gets you started; theoretical sampling guides where you go*” (p. 197). Therefore, as initial sampling began, and so did data analysis participants were sought out to enable a deeper insight into the processes that contributed to the emerging categories. This is known as theoretical sensitivity. Theoretical sensitivity developed during concurrent data collection and analysis. This is a core component of constructivist grounded theory, in that the researcher recognises what is important in the data, acknowledging the data’s meaning in abstract terms and understanding conceptual relationships between patterns in the data (Charmaz, 2014).

Theoretical sampling is crucial to elaborate and refine theoretical categories (Charmaz, 2014). While criteria for purposive sampling can be defined prior to data collection, criteria for theoretical sampling can only be known and formed concurrent with data collection and analysis. The aim here was to develop and define the construct(s) of the emerging theory and not to achieve representativeness (Charmaz, 2014). As the researcher’s awareness of key ideas emerging during data analysis

occurred, it became evident that the experiences of GBMSM relating to the receipt of the HPV vaccine were influenced by their pursuit of Pre-Exposure Prophylaxis (PrEP) and sexual health service use. In one of the first interviews one participant spoke of how their experience of sexual health services has been through pursuing PrEP. This early insight into the role the GBMSM-HPV vaccination programme plays within the sexual health of GBMSM was initially coded regarding motivations/activation and to probe more specifically about this in subsequent interviews. By exploring participants who were accessing (or not accessing) PrEP these participants were chosen to develop and refine categories adjacent to sexual health service use construed later in the conceptual model. This type of sampling ensured questions surrounding the interrogation of this category were resolved thereby improving the conceptual and theoretical sufficiency of the analysis.

As a result, theoretical sampling superseded purposive sampling as the data – and the emerging theory – guided new directions to follow (Cutcliffe, 2000). Theoretical sampling therefore is in response to the data as opposed to following a predetermined path. This is in line with Breckenrdidge and Jones (2009) who assert that theoretical sampling is a deliberate, non-random sampling that does not aim to represent a population, but rather to identify data-rich sources to inform insights into an area. This is essential to grounded theory as it is reliant on the information emerging from the data, supporting the grounded of the theory in the data and allowing the theory to emerge (Corbin and Strauss, 2008).

Abductive reasoning is the freedom of using imaginative inferences to proffer the most plausible theoretical explanation to a confounding finding and re-examining data to locate where it fits (Reichertz, 2010). This reasoning was made possible through theoretical sampling as Charmaz (2006) contends grounded theory allowed plausible inferences and conjectures to be examined within the data.

4.4.6.2 Snowball sampling

Snowballing involved asking participants to forward the study advert to other people. Snowballing helped to address the limitations of recruiting through social media sites as a deliberate attempt to advertise for potential participants who may not be active

through those channels (Braun and Clarke, 2016; 2019). However, participants were not asked which method of recruitment/advertising they were exposed to the study so unfortunately the impact of snowball sampling cannot be measured.

4.4.7 The research in time

Qualitative research, while informed by a lexicon appropriate to the paradigm, has no fixed set of procedures for conducting data collection. Often, due to the variability of qualitative research, this process is described as being flexible, context specific and dependent on the research questions and aims. It also cannot be ignored that the research conducted in this study is a snapshot analysis of the research within the field. The project does not seek to provide “the” answer to providing GBMSM with the HPV vaccine but provide “an” exploration of an answer across the data collected in its time.

4.5 Ethical considerations and governance

Corbin and Strauss (2015) outline that the researcher has an “ethical responsibility to self, to participants, and to the profession to produce the highest quality work [they] are capable of” (Corbin & Strauss, 2015, p. 14). Approval to conduct this study was given from Edinburgh Napier University’s School of Health and Social Care Ethics Committee (approval number: 18006). This approval included study materials such as the participant information sheet (Appendix 10) and consent form (Appendix 11) being reviewed and approved by the committee. It was necessary, therefore, to consider the format of the interview and the questions which would (or would not) be asked of the participants. One such anticipated issue was the topic itself, relating to sexual health, which is considered “sensitive”, with heightened awareness of this topic causing emotional distress. This was put into consideration throughout the research process. The ethical approval process was facilitative in constructing the parameters of what would or would not be considered within the project with the intent to avoiding any harm to participants or the researcher being minimised.

4.5.1 Informed consent

Consent was sought from all participants to allow them to make an informed decision regarding participation in the research. All participants were provided an information sheet and consent form in person or via e-mail explaining the study, stating the

purpose, potential risks and benefits, and reimbursement. Participants were then reminded of their right to withdraw from the process at any time, and of their ability to choose not to answer questions they didn't want to answer with no consequences of choosing not to answer. Participants were asked if they understood the aims and intent of the project prior to signing the consent form.

4.5.2 Autonomy

Autonomy refers to the participant's right to choose whether to participate in the research based on the information provided. While the discussions surrounding the interview schedule may yield new lines of enquiry outside of the semi-structured interview, the process for consenting participants where the study information was shared with participants resulted in the maintenance of informed consent throughout allowing participants to retain autonomy.

4.5.3 Confidentiality

The data was stored in a password protected USB memory stick and uploaded to an Edinburgh Napier University secure storage system accessed exclusively through a university laptop and desktop computer in accordance with the Data Protection Act (2018) and the General Data Protection Regulation (2018). Anonymity was preserved through the removal of names and places within the transcription and writing up of the thesis. It is useful to refer to different areas of Scotland, but cities were not cited. Pseudonyms were used in all cases.

4.5.4 Risk and benefits

The discussion of this study focusing the understanding and sense making of HPV and HPV vaccination meant participants were asked to provide an account of their experiences relating to these. It was thought that the discussion of these experiences was not likely to become emotionally distressing for participants particularly as the project was framed in order to understand the barriers and facilitators of HPV vaccination. Therefore, given the bottom-up approach of this study, participants were made aware of the discussion surrounding HPV. Where issues of a distressing nature were considered in the ethics application relevant LGBTQ+-focused services were provided to participants.

4.5.5 Considering data collection ethically

This research would not have been possible without the participants and ‘the unique contribution of researchers and participants to a project makes them both inseparable parts of the final creation’ (Karnieli-Miller et al., 2009, p. 279). Therefore, the ethical considerations must also be addressed in terms of constructing the research questions presented. Charmaz (2003) highlights CGT’s perspective on multiple realities interacting with one other ultimately yields data which reflects each participant’s individual subjective interpretations of the phenomenon. Therefore, in order to ensure cultural sensitivity and emotional safety of participants, *what* questions being asked and *how* these were asked is a crucial consideration (Agee, 2009). With an aim to understand the simultaneous experience of sexuality and gender, thought consideration of how these identities are discussed – with specific bracketing of gendered assumptions – serve as a sensitive and powerful leverage in robustly exploring HPV vaccination in a (new and) Scottish context.

4.6 Data Collection methods

The data collected for this project was collected through the use of semi-structured interviews collected between March 2019 to October 2019 and December 2020 to May 2021. Interviews (face-to-face or online, discussed below) were audio-recorded, with observations made in a reflective diary to support analyses. The decision to utilise interviews as a form of data collection reflected the central premise of co-construction of data reflected in Charmaz’s (2008) dictation of the researcher’s role within the project and explained below.

4.6.1 Semi-structured interviews

The aim of the interviewing process was to focus on participants’ interpretations and meanings relating to HPV and HPV vaccination. The most appropriate method, given this aim, was to use semi-structured interviews as this approach offers flexibility to tailor questions relating to experiences that arise during interviews. Interviews as a method of data collection are one of the most prevalent approaches congruent with qualitative research (DeJonckheere & Vaughn, 2019). Therefore, at a generic level, semi-structured interviews are characterised (Edwards & Holland, 2013) as:

- Involving a dialogue exchange between two parties (researcher and participants)
- The researcher has topics, themes or pertinent issues to discuss in a fluid and flexible structure
- Meanings and understandings are created through the interaction, involving the construction and reconstruction of knowledge

Indeed, the use of semi-structured interviews was appropriate to achieve the aims of the project as this method of data collection helped to “understand the world from the subjects’ point of view, to unfold meaning of their experiences and to uncover their lived world prior to scientific explanations” (Brinkmann & Kvale, 2015, p. 3). Given the lack of data relating to HPV vaccination among GBMSM in a Scottish context, this approach also allowed to investigate any uncertainty or tensions arising from participants’ narratives that could be useful to attenuate to the study’s aims which may have been unknown to the author.

Moreover, and congruent with CGT, this form of interviewing also allowed for the interpretation – and explanation – of those experiences in the ability to attenuate to the contexts in which the experiences arise (Edwards & Holland, 2013). Indeed, the focus on forming the constructed theory using the experiences of participants requires flexibility as no one-size-fits-all interview can be implemented when exploring complex phenomena

With this line of thinking and given the sensitive subject nature relating to sexual health, this approach further allowed a comfortable discussion through a one-to-one discussion with the researcher and participant. This further established a justification for this approach as opposed to focus groups as it is anticipated that GBMSM may be less forthcoming and comfortable discussing experiences related to HPV, for example genital wart infection, with others.

4.6.2 Semi-structured interview protocol

This section will outline the procedures for writing the interview guide used in this study, as well as key question changes during data collection (outlined later).

The interview questions and approach are pivotal to the collection of relevant data which resonates with the project's aims (Charmaz, 2014). As outlined above, semi-structured interviews are congruent with Constructivist Grounded Theory. The interview schedule (Appendix 12) was developed with the supervisory team, informed by the QES (Chapter 2) and in reflection to the design and aim of the study. The theoretical frameworks used in the previous qualitative studies synthesised were particularly useful when considering different aspects of HPV and HPV vaccine awareness and attitudes. Overall, the questions in the interview schedule were related to eliciting the processes in the participant's experiences, thoughts, feelings and (reflections on) actions (Charmaz & Belgrave, 2012). Although I was relatively new to the topic area, my MSc dissertation had given me some experience researching the health of GBMSM groups. For practical reasons while submitting my applications for PhD progress, I was required to demonstrate understanding of the background literature and pertinent theory in my chosen subject.

The first portion of the Interview schedule consisted of a discussion with participants on what health means to them in a general sense (Appendix 12). Participants were asked to discuss what health issues were prevalent among men their age and among GBMSM in comparison to the wider male population. Participants were asked to identify reasons for any differences identified. For the second part of the interview schedule participants were asked about their awareness of the Human Papillomavirus (HPV). This was followed up with several questions relating to where they first heard of HPV and the extent HPV had been presented to them through the media. The next portion of the interview asked participants about their HPV vaccine-related attitudes and experiences. This included discussion surrounding motivators and facilitators to HPV vaccination as well as suggestions for improving vaccine uptake.

4.6.3 Data generation in practice

This section will outline the methods and considerations considered in setting up and conducting the interviews, including my approach to interviewing and incorporation of the principles of constructivist grounded theory.

GBMSM interested in participating were asked to e-mail or call the investigator. This was to check the eligibility criteria and to forward the study information sheet and consent form. Once contacted, the investigator screened participants asking about their gender, age, and whether they identified as GBMSM or were sexually attracted to men. There were no respondents that engaged which did not meet the study criteria. Everyone had a chance to discuss the consent and their rights to confidentiality and withdrawal via email and face-to-face before the discussion. Individuals were only allowed to participate once.

This study used semi-structured one-to-one interviews; one of the most common forms of data collection used in grounded theory studies. A semi-structured interview approach allowed the researcher to guide the interview in a general direction while being flexible enough to generate and explore new insights about the topic that may not have been previously predicted (Willig, 2008).

Each participant was interviewed once. Interviews were scheduled at a time and place agreed on by the participants and took place in an available private office space at one of three Edinburgh Napier Campuses, or a space hired local to the participant such as the Waverley Care offices in the Highlands of Scotland. A total of 17 participants were interviewed. Some potentially interested parties had contacted the research (n = 6) however were not responsive. The interviewed lasted approximately 32 – 72 minutes and ended when the participant felt they had nothing more to add.

At the beginning of each interview, demographic data were collected from each participant, including age, sexual orientation, number of sexual partners, and vaccination status (see table 5.1) which are relative to their experience and eligibility of vaccination. The interviews were conducted using an interview guide (see appendix 12).

To facilitate the performance of conducting the interviews, guidance outlined in *InterViews* by Brinkmann and Kvale (2015) were consulted (see table 4.2)

Table 4.2 Brinkmann and Kvale guidance for conducting interviews (2015)

Guidance	Suggested action	Action applied in this study
Setting the interview stage	Encourage interviewees to describe their points of view. Interviewers show attentive listening, show interest, understanding and respect. Briefing and debriefing before and after the interview. Allow time for comments after debriefing.	Briefing and debriefing used before and after interviews. Allowed participants to talk about what was important to them. Showed empathy and respect for participant experiences.
Scripting the interview	Interview guide which structures the course of the interview. It will depend on the study whether the guide is followed strictly or not. Seek meaning clarification	Outline of topics to be covered included in the interview guide. Interviews allowed participants to deviate from the script in order to explore what was important to them. The interview guide was used to ensure no topics were missed. The interview guide was informed by previous qualitative evidence synthesis
Interviewer questions	Questions should be brief and simple. An introductory question may concern a concrete situation. Use open questions.	Participants were always asked for their thoughts on what health means to them to ground the study in discussions about health and later HPV as key theme of the project
Second questions	The interviewer needs to learn to listen to what is said and how it is said, be sensitive to situation cues instead of focusing all attention of the interview guide.	Issues that the participant identified were explored further through prompts.

Constructivist grounded theory employs strategies intended to gather “rich – detailed and full – data and place them in their relevant situational and social contexts” (Charmaz, 2014, p. 18). Therefore, the approach of the interview is crucial in achieving this. This is because Charmaz outlines that interviewing is “a gently-guided one-sided conversation that explores research participants’ perspective on their personal experience with the research topic” (Charmaz, 2014, p. 46).

Therefore, in alignment with constructivist grounded theory, “the interview’s approach and way of asking questions, listening and following up what the interviewee is telling are crucial in the co-construction and quality of data” (because the interviews are considered to be “emergent interactions through a mutual exploration of the interviewee’s experience and perspectives” Charmaz and Thornberg, 2021, p. 317).

The interviews were conducted using an interview guide (see appendix 12) thus, these were intended to be personalised and friendly exchanges, during which the semi-structured questioning would ascertain in-depth narratives and salient experiences and perceptions. The topic of HPV as a relative infection related to sex and sexuality could be considered a sensitive topic with which participants were asked to explore.

It cannot be ignored that, given the mutual exchange reflected in a qualitative interview partnership, that personality influences interviewing style and how comfortable an individual can or can be encouraged to share information or explore contradictions and how closely the interview schedule is stuck to. Indeed, Bryman (2016, p. 488) highlights some essential elements for interviewing, which includes “a high level of rapport between interviewer and interviewee, a high degree of reciprocity on the part of the interviewer, the perspective of the [interviewee], and a non-hierarchical relationship”.

Rapport and relationship building

There is a careful balance in the implementation of semi-structured interviewing to be struck. Adams (2010) reports the craft of qualitative interviewing required to become a skilled interviewer involves listening skills and emotional control in order to conduct effective interviews that yield quality data and protects participants.

As a reflexive researcher, after conducting the first interview I was aware that I was quite comfortable using probing questions to further add depth to the interview which reflected a suitable curiosity during interviews. I achieved this by ensuring that participants were comfortable and by demonstrating that I was actively listening, interested, and non-judgemental. That being said, one of the first questions asked to participants (i.e., what comes to mind when you think of 'health'), was broad, open-ended, and reflected the general direction of the research study. As interviews progressed, I used verbal probes to elicit further clarification. Typically, this constituted repeating words used by the interview. The following excerpt from an interview with P008:

Interviewee: because in my head, it [HPV] brings up horrible images of pictures of
[pause] you know

Me: Horrible images, could you tell me what comes to mind?

Interviewee: I think it makes me think about horrible warts and sores

After P008's response, I asked several unplanned follow-up and sensitising questions to continue the discussion. For instance, I asked if talking about genital warts was "something [you're] uncomfortable discussing?" as I could see they were visibly grimaced discussing the consequences of HPV infection and I wanted to explore the potentiality of discussing this in line with how comfortable they were to talk at length about this dimension.

There was a delicate balance between co-operation, exploration, and accommodating the participants' unselfconscious exploration of their experiences throughout the interviews. The interview schedule was considered the passive state in which would provide an adequate exploration of the topic at hand, but, needed pursuing and personalising with each participant. This matched my personality; in that I knew I would not be too aggressive for the situation I was able to accommodate the interviewee with a focus on people with marginalised voices which – unbeknownst to them or not – did not have an easily visible voice in the literature. I tried to ensure my research was

conducted as a mutually collaborative endeavour, with the participants as partners in the research process.

It was essential to establish a relationship of trust with the participants so that they would feel comfortable talking about their experiences. This was paramount as the topic at hand could be considered sensitive given its relation to sex and sexuality. One way to establish rapport in this study implemented was affording the mutuality reflected in being authentic and open to the interviewee's experiences and perceptions. This took the form of explaining, in detail, the reason for conducting the research and how the participants' engagement with the project was meaningful to this – as a doctoral piece of research – as well as advocating for the needs/experiences of GBMSM in Scotland as a collective. By recognising and verbally acknowledging the interviewee as an expert, and that through their participation a deeper understanding will be added to the research, I felt that any perceptions of a hierarchal relationship was assuaged or diminished. Moreover, non-verbal behaviours such as dressing informally, avoiding slang, and taking a conversational tone, I felt, were relevant procedures to engage in to afford relationship building with participants.

Bracketing

Bracketing is another method in which the above balance in the pursuit of the research project was enacted. Bracketing is an essential component of qualitative research which is used by researchers to minimise bias (Hays and Singh, 2012). There are multiple definitions of bracketing within the literature, but, a consistent characteristic of bracketing is the process in which the researcher recognises their values, beliefs, and preconceptions which may bias the data collection and analysis (Tufford and Newman, 2012).

Because of the qualitative evidence synthesis which preceded this study, and the sensitising research brought about through engaging in the doctoral journey, while bracketing is the process of recognition, my experience in engaging with these interviews in terms of enacting bracketing lies more in the school of thought advocated by Munhall's 'unknowing' (Munhall, 2012). Here, the researcher's approach to data collection is parallel to the researcher acknowledging preconceptions and biases and,

to the best of their ability, setting these aside during data collection so they are open to much more clearly understand the unique, distinct, perspectives from study participants. Given this, I am acknowledging the potential paradox of knowing the subject due to prior work and also remaining open by setting this knowledge aside to subjectivity and unique experiences of my participants so as to unknow the literature allowing new meanings to be accessed.

At the beginning of each interview, the aims and objective(s) of the project was explained to the participant by reiterating the research question. Participants were reminded that the interviews were not a test on their knowledge of HPV. Throughout the interviews, participants were asked to elaborate on their responses through the use of prompts and reframing their responses to demonstrate understanding and active listening (Charmaz, 2014).

At the end of the interview all participants were asked if they had any further thoughts or if any key areas were missed that they thought were needed to take forward. Through finishing the interviews this way, participants were reminded that their participation in the interview reflected the ambition of the project which were to hold central their experiences and build on these to answer the project answers.

4.6.4 Organic adaptation of interview schedule

Because CGT is an iterative process, the interview schedule changed twice during the project's duration to explore new issues brought up by interviews.

The first change in the interview schedule related to the performance of the interview following the pilot interview. The lead researcher (LC) reflected on that, while the pilot interviewee had been vaccinated against HPV, questions surrounding their awareness of HPV meant that – with a significant lack of knowledge – participants were unaware of HPV and therefore questions on their appraisal of HPV and its relationship to their health could not be explored with no knowledge of the virus (despite being vaccinated). In response to this, the decision to include a pamphlet relating to how HPV relates to GBMSM health was used.

The second amendment to the interview schedule enabled the exploration or focus on interesting leads to elaborate and refine categories in an emerging theory. For instance, several participants discussed the role of Pre-exposure prophylaxis (PrEP) in shaping their engagement with sexual health services and the awareness of sexually transmitted infections (STIs) and blood-borne viruses (BBVs). Therefore, subsequently, a question relating to the perceived association between PrEP-users and sexual health services and the impact this could have on provision of the HPV vaccine was included.

4.7 Constructivist Grounded Theory Data Analysis

“In short, the logic of grounded theory involves fragmenting empirical data through coding and working with resultant codes to construct abstract categories that fit these data and offer a conceptual analysis of them” (Charmaz, 2011, p. 361).

Central to the grounded theory approach is the notion that the relevant data analysis is a rigorous procedure relating to the inspection of data and experimenting with various ideas or views of the data and developing these into categories until arriving at a logical conclusion of a theory. Indeed, the data analysis process adopted in this project was informed by the coding and categorisation process outlined by Charmaz (2014) *“in which researcher[s] construct their analysis by the method of constant comparison which includes constantly comparing ideas and incidents with each other”* (Charmaz, 2008, p. 82). This approach, while concluding in a substantive grounded theory, is not a linear process. Data analysis within a Constructivist Grounded Theory approach is an iterative cyclical process of sorting data (Charmaz, 2006) involving a cycle of reflection and memoing throughout the research lifecycle with a back-and-forth movement between data collection, analysis, and coding and categories between and across interviews (Charmaz, 2014).

Charmaz (2014) outlines several key factors within constructivist grounded theory data analysis: initial coding, focused coding, categorisation, and theory development. In essence, coding within this approach is a form of data reduction which goes beyond generic analysis of units to a procedural and strategic analysis (Birks and Mills, 2015). As outlined earlier in the chapter, the various schools of grounded theory approaches present varying procedures in the systematic approach to data analysis as shown by Birks and Mills (2015) in the table below.

Table 4.3 Grounded Theory Data Analysis

Coding Grounded Theory ??	Initial coding	Intermediate coding	Advanced coding
Glaser and Straus (1967)	Coding and comparing	Categories and properties	Delimiting the theory
Glaser (1978)	Open coding	Selecting Coding	Theoretical coding
Strauss and Corbin (1998)	Open coding	Axial coding	Selective coding
Charmaz (2014)	Initial coding	Focused coding	Theoretical coding

It is clear, then, that while similarities can be seen in the data analytical approaches housed within alternate schools of Grounded Theory approaches, it is Charmaz (2014) and Strauss and Corbin (1998) with their focus on axial coding which makes them closely aligned. Put forth by Strauss and Corbin (1990, 1998; Straus, 1987), this level of coding relates to categorisation. But Charmaz (2014) posits the framework for axial coding put forth by Strauss and Corbin (1990) as restrictive in the ability to address the phenomenon in practice. In approaching the data analysis for this project an intrinsic benefit was the dynamic, iterative, flexible approach couched within the Constructivist Grounded Theory approach. Adhering to Charmaz's approach to coding, data was analysed following line-by-line coding moving into focused coding. (see table 4.3) Represents the dynamic process of data analysis reflected in a Constructivist Grounded Theory approach.

Charmaz's (2014) 'constructing grounded theory' provided guidance on the coding process, which was used to aid data analysis. In this approach, coding refers to naming segments of data with a label that simultaneously categorises, summarises and accounts for each piece of data (Charmaz, 2014). Figure 4.1 represents the steps taken for data analysis based on the CGT approach (Tweed and Charmaz, 2012, p. 132)

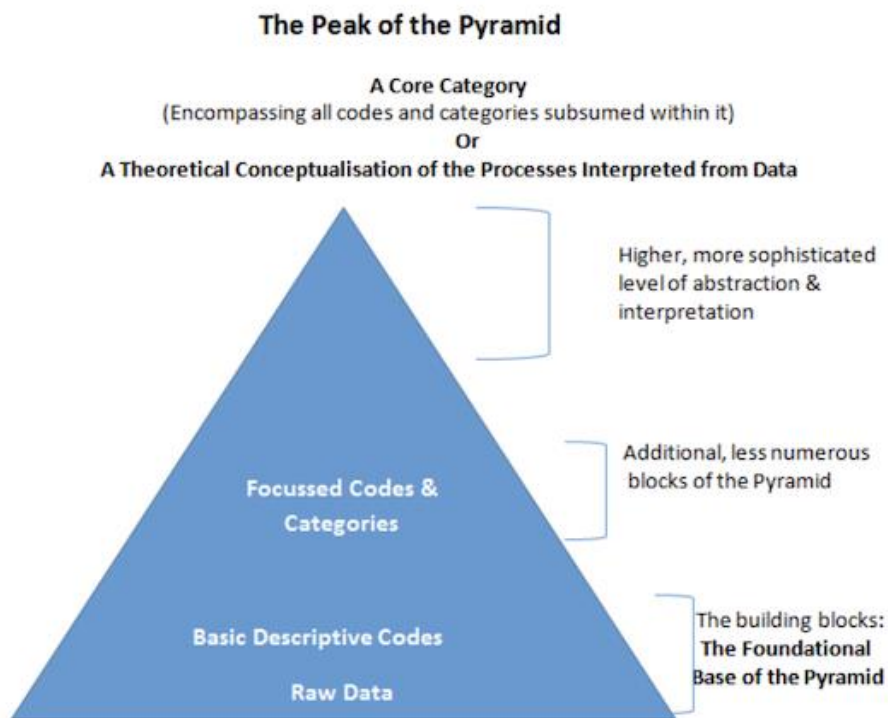


Figure 4.1 The pyramid: data analysis in CGT

4.7.1 Data preparation

Data gathered from the demographic questionnaire was inputted into a secure excel spread sheet and stored separately from the qualitative interview's audio and transcript data (which were also stored separately from one another). These files were labelled corresponding to the participant number. No pseudonyms were used. The key for identifying participants from their pseudonyms, as well as their contact details, were kept separately from the audio and transcript data from the interviews.

Computer Assisted Qualitative Data Analysis Software

All interviews were audio digitally recorded. Because of this, an appropriate decision was made to utilise computer assisted qualitative data analysis software (CAQDAS). Primarily, the rationale for this software is efficiency as it enables the organisation of interview data and the integration of the various concepts and categories engineered from the analysis.

CASQDAS has been used as an aid to support qualitative research. There is a range of CAQDAS technologies on offer, however, aligned with Edinburgh Napier University's technological affordances, nVivo was utilised (Qualitative Research Solutions International). While CAQDAS has been used for decades in alignment with developments of analytical software reflected in quantitative research approaches, a critique exists which stipulates the utility of CAQDAS intrinsically transforms qualitative research into a rigid, automated process. In actuality, it continues to require human interpretation and a mind behind the digital/technological affordances of the software itself. In the context of Constructivist grounded theory, nVivo permits the organisation and retrieval, coding segments of interview data with labels, and creating coding relationships.

This is also in alignment with the epistemological and ontological positions outlined earlier. nVivo is designed with the aim of assisting researchers with qualitative data organisation and analysis. The software permits coding interview data with labels, creating relationships between codes/coding and placing codes and concepts into categories. The software offers the capability to easily navigate documents which would take an overwhelming amount of time with offline options such as papers, highlighters, and physical materials.

4.7.2 Coding in Constructivist Grounded Theory

4.7.2.1 Initial / open coding

Charmaz's initial coding (sometimes referred to as open coding) encouraged sticking close to the data and – where possible – coding for action while being open to all theoretical possibilities. Key questions asked during this initial coding phase began with: '*What does the data suggest/ Pronounce?*' (Charmaz 2006, p. 47, 2014, p. 116) as well as '*What theoretical category does this specific datum indicate?*' (Glaser, 1978).

Throughout coding in a CGT approach – as Charmaz states – it must be acknowledged that the researcher, as a tool and as a research team, '*[we] construct[s] codes... define[s] what we see as significant in the data and describe what we think is*

happening [and] interpret participants' tacit meanings' (Charmaz, 2014, p. 114-116). Line-by-line coding was done in line with Charmaz's approach in order to fracture the data allowing ideas to be stimulated which may not appear if coding for larger themes. It helps "to bring the researcher into the data, interact with it, and study each fragment of it" (Charmaz, 2011, p. 368). Through line-by-line coding, details and patterns which may not be seen at a higher level can be noticed. Further key questions were

- 'What process(es) is at issue here? How can I define it?
- How does this process develop?
- What does the research participant(s) act while involved in this process?
- What does the research participant(s) profess to think and feel while involved in this process? What might [their] observed behaviour indicate?
- When, why, and how does this process change?
- What are the consequences of the process? (Charmaz, 2014, p. 127).

The lead researcher (LC) as a novice qualitative researcher undertook all data analyses in consultation with the supervisory team. Participant narratives were read and re-read and evaluated several times, alone and in reflection to other interviews. This ensured initial codes were "*provisional, comparative, and grounded in the data*" (Charmaz, 2014, p. 117). In doing so, the researcher was able to "*make efforts to learn and examine how [their] past influences the way [they] see the world and the data*" in order to be open to other possibilities and allow initial codes to be reworded to "*improve their fit with the data*" (Charmaz, 2014, p. 117-118).

It must also be acknowledged that the method of constant comparison is used throughout this process. As Bryant (2017, p. 176) states, the purpose of this initial coding is '*to produce useable and useful abstractions.*' This process was necessary to capture detail, differentiations and intricacies within and across interviews, reflecting the participant's described realities, what was being constructed, and the meanings that the researcher – as an interpretivist tool – made of these accounts. These codes were then compared, and their similarities and differences identified in order to form links between the data and more abstract notions.

As the initial/open coding process progressed, and through the process of constant comparison, labels for codes were used and re-worded as appropriate. Conceptual development required going beyond the description of the concept and examining activation or 'gerunds' relevant to the emerging concept. Gerunds are a key characteristic of CGT where the noun form of a verb ending in – 'ing' is used to highlight the process of action (Birks and Mills, 2015). These codes were able to centralise how the "basic problem of the actors is resolved or processed" (Strauss, 1987, p. 32) therefore allowing the meaning to be uncovered (Charmaz, 2014). These were shared with the supervisory team to discuss and evaluate analyses through consultation to develop a theoretical consideration of the data (Holloway & Galvin, 2016).

Once the initial/open codes/gerunds were completed for each interview, the codes were reviewed on nVivo allowing the second cycle, the development of focused codes and categories.

4.7.2.2 Focussed coding

This stage involved reviewing the initial collection of open codes and identifying their resonance in the data – including how frequently they appeared or how significant the meaning was. Focused coding was conducted for each interview. These codes were then considered in reflection to other focussed codes across other interviews. This stage, therefore is based on thematic or conceptual similarities (Saldaña, 2016).

Constructing categories from the initial/open coding bank assisted in the development of focussed coding. Memoing was also vital to audit the analytical thinking required and to reflect how the data was managed. As focused codes were developed, Charmaz, 2014) asks authors to keep in mind the following questions as guidance:

- What do you find when you compare your initial codes with data?
- In which ways might your initial codes reveal patterns?
- Which of these codes best account for the data?
- Have you raised these codes to focus codes?
- What do your comparisons between codes indicate?

- Do your focused codes reveal gaps in the data? (Charmaz, 2014, p. 140-141).

Focused coding allowed the clustering and combination of initial codes for example if the semantics of the codes were similar or related to the same processes. These assisted in elucidating the parameters of some crucial codes and their relevant processes in constructing initial categories. Focused coding assisted in reshaping the data having fractured the data into initial/open codes.

The relative substance or thinness of some codes helped acknowledge and recognise areas that needed further exploration in proceeding interviews and in the data gathered already. The iterative process of reviewing earlier interviews in the face of newly found coding or subsequent – resonate – data ensured that previous interviews captured occurrence of later interviews and vice versa.

4.7.2.3 Theoretical coding

As the final coding stage, theoretical coding presents the refinement of the codes which are considered in relation to other conceptual/conditional categories and specifying – importantly – the relationship between them (Charmaz,2014). Interview transcripts were re-assessed and reviewed in light of the theoretical relationships indicated in the substantive model. This allowed exploration of the codes constructed through the open/focused coding allowing the analysis to move from descriptive to conceptual and ultimately toward the development of the theory through theoretical integration. At this stage, diagramming was repeatedly relied on to aid theoretical integration (Charmaz, 2014).

Through this process the data was theorised allowing a coherent narrative – and analytical – story to be constructed which relied on (and demonstrated) the relationship between codes. This allowed the resonance of each category and the composite codes to be rooted in the data and reflect participants' attitudinal and experiential narratives (constructed by the researcher).

Theoretical coding took place when three main conditional/conceptual categories pertinent to the theory took form. Interviews completed later in the process were coded in relation to these conditional/conceptual categories. The final substantive model was discussed iteratively through supervision. Contributions from these critical discussions helped refine the model and improve its resonance.

4.7.2.4 *Theoretical saturation/sufficiency*

The journey of data collection and the result of 'saturation' continues to be contested within grounded theory – and, more broadly, qualitative – approaches. In qualitative research, samples need to adequately reflect the phenomenon under investigation and – within grounded theory approaches – be guided by the emerging theory (Stern, 2007). A reliance on the size of the sample as a measure of adequacy must be avoided. Methodological considerations such as the nature and purpose of the individual study, the epistemological stance underpinning it, as well as practical considerations around time and resources must all be acknowledged in constructions of the optimum sample size (Baker and Edwards, 2012). These (competing) priorities are emblematic of the complexity within the creativity of a constructivist grounded theory approach.

One conceptualisation of saturation refers to the point at which no new ideas emerge. Bryant and Charmaz (2007) posit this stage should be recognised when researchers yield no new information from interviews, and no new information is discovered during analysis. Similarly, O'Reilly and Parker (2013) argue saturation within grounded theory approaches is when "*categories are fully accounted for, the variability between them are explained and the relationships between them are tested and validated*" (O'Reilly and Parker, 2013, p. 192). Unlike O'Reilly and Parker that frame saturation in testing and validation, Charmaz (2014) defined theoretical saturation as the time when data collection for a category does not demonstrate any new properties or theoretical insights, and there is convincing, robust, dense data with adequate depth and scope to substantiate the theoretical categories. Theoretical saturation also served as emblematic of the quality within a grounded theory study. The process of saturation, in which consistency and relevance of the concepts are progressively established through theoretical sampling to further establish and reinforce the parameters of a

category, helps to ensure credibility by ensuring supporting and disconfirming data receive equal credence.

The researcher made considerable attempts to recruit via alternate routes of recruitment such as community organisations and social media to increase sample diversity and to explore the emerging theory. This was hampered by the PhD timeframe. In this study, theoretical sampling was used to develop the concepts identified by participants as being relevant to *activation*, such as “intended interventions” and “MOT test”. These were raised by participants and therefore noted for inclusion in subsequent interviews to facilitate their development and “saturation”. There was considerable difficulty in locating GBMSM who had not accessed PrEP or who had not engaged with sexual health services. Therefore, it was hoped that saturation would be met with most categories with the sample sized achieved. Indeed, these considerations of the sample are reflected by their ‘information power’ in which, put forward by Malterud, Siersma and Guassora (2016) are influenced by: the aim of the study (the broader the aim, the greater the required sample size); the specificity of the sample (the more specific the characteristics of the participants in relation to the study aims, the smaller the sample size); the theoretical background (the less developed the underlying theory, the greater the sample size); the quality of dialogue (the richer the dialogue in the interviews, the smaller the sample size); and the analysis strategy (the more in-depth the analysis the fewer informants needed).

It is impossible to know the required sample size to achieve theoretical saturation *a priori*. That being said, (crude) suggestions regarding the sufficiency of a sample through its size have been put forward. These have ranged from a minimum of six (Burns and Grove, 1999) to sixty (Creswell, 2007). Informed by Malterud and authors (2016) and Charmaz (2006), the claims made relating from the data yielded in this study must be understood in the context of the sample achieved; while achieving a (somewhat) smaller sample, a rigorous approach to studying the phenomenon under investigation through GT methods to ensure the trustworthiness was implemented.

4.7.2.5 *The use of computer assisted qualitative data analysis software (CAQDAS)*

Having outlined the approach to analysing the data, a discussion surrounding the implementation of this through the use of CAQDAS is warranted. CAQDAS programmes are incredibly useful in their ability to reflect previously conducted paper-and-pen qualitative data analysis.

For example, participant narratives – having been transcribed into word documents – were easily imported into nVivo software as files which allowed the entire data set to be housed in one software application. As there was no strict separation between data collection and data analysis in CGT, previous coding was able to be seen- and evaluated upon – easily as the corpus of data expanded. In line with a grounded theory approach, nVivo as a CAQDA software programme allows the creation of memos to be linked with participant narratives, categories, and subcategories. The software, therefore, assists in the audit trail intrinsic to a CGT approach.

Jackson and Bazeley (2019) outline several benefits to using CAQDA as they have the ability to:

- Mimic manual strategies for handling qualitative data.
- Develop efficiently searchable warehouse of data that records the choices made during analysis and can be examined and re-examined with relative ease.
- Extend the longevity and reusability of data
- Provides a few tools that open new opportunities beyond what qualitative researchers are able to do manually (Jackson & Bazeley, 2019)

For these reasons, and as an experienced user and advocate for computer literacy in education and research, the use of CAQDA was chosen. Despite a plethora of CAQDA software packages being available across the marketplace, a pragmatic decision based on the availability of a pre-paid licence for nVivo through Edinburgh Napier University resulted in nVivo being the chosen package.

4.7.3 Informing Data Analysis: Theoretical Sensitisation

4.7.3.1 *Leventhal's Common-Sense model of self-regulation*

To attenuate to the uptake of the Human Papillomavirus (HPV) vaccine among Gay, Bisexual, and other Men Who have Sex with Men (GBMSM) the determinants of the vaccine uptake must acknowledge the complex structural and environmental inequalities which determine the resources, stressors, opportunities, and illness experiences that ultimately shape individual differences in beliefs about health. Variation in responses to health threat(s) must go beyond disease and treatment related factors and integrate the individual's beliefs about disease and treatment. These beliefs may impact the meaning and relative importance involved in making sexual-health related judgements proximal to the provision of the HPV vaccine in Scotland. Structural inequalities must be addressed, however, psychological factors which may mediate the impact of interventions at the individual level must also be considered.

Stemming from the Health Belief Model, which espouses that an individual who feels susceptible to serious consequences of a health issue may change their behaviour when the benefits outweigh the barriers or costs of adopting a new behaviour, the degree of perceived severity and susceptibility to infection has been explored in several studies examining the acceptability of HPV vaccination among GBMSM. In one of the first cross-sectional studies exploring this, Reiter and authors (2010) prior to the licensure of the HPV vaccine among men in the US, in their aim to characterise HPV vaccine acceptance, found most men (79%) had heard of HPV, however, knowledge levels about HPV tended to be low. This includes an understanding of HPV causing genital warts (46%) and cancer (anal cancer = 32%, penile cancer = 28%, oral cancer = 25%). It must be acknowledged that this study had no participants who had received the HPV vaccine (Reiter et al., 2010).

Indeed, it was not until November 2010 that the HPV vaccine was approved for the prevention of anal cancer and anal intraepithelial neoplasia in both men and women. Therefore, as Reiter (2010) demonstrated a high degree of acceptability with regard to a hypothetical HPV vaccine, Wheldon and colleagues (2011) sought to understand

psychosocial correlates of HPV vaccination intention among young GBMSM during September and December of 2010. In their study, among eligible GBMSM ($n = 179$), intent to be vaccinated was positively associated with perceived severity ($p < 0.05$). Indeed, in a multimodal approach to HBM model constructs, Wheldon et al. (2011) demonstrated that vaccine intent was largely driven by attitudes towards the vaccine and beliefs about getting vaccinated where those most likely to receive the HPV vaccine perceived stronger physical and psychological benefits from vaccination (Wheldon et al., 2011).

Unlike Pap smear testing for HPV DNA among women to screen for cervical cancer, no routine testing in the US was implemented for anal cancer among GBMSM. With a growing evidence base reporting proximal factors like an increased attendance to STI screening among GBMSM impacting likelihood to being offered the HPV vaccine in the US (Lawton et al., 2013), Cummings et al. (2015) sought to assess HPV vaccine attitudes, acceptability and uptake among a national sample of GBMSM aged between 18 to 26 in December 2011 ($n = 1457$). Increased acceptability among this sample was associated with a recommendation for the HPV vaccine from a healthcare provider and with a greater worry about getting infected with HPV (Cummings et al., 2015). Being tested for an STI in the past year was also associated with an increased acceptance. Decreased acceptability in this sample was associated with safety concerns over the vaccine, greater shame associated with HPV infection, and perceived resistance to infection. Shame associated with vaccination, the belief that HPV vaccination only helps women, and belief that HPV can lead to a serious illness were not associated with HPV vaccine acceptability. In this sample, very few (4%) GBMSM were offered the HPV vaccine from their healthcare provider despite a growing body of evidence demonstrating how integral this recommendation is for GBMSM-HPV vaccine uptake (Holman et al., 2013). Thus, a year after Wheldon et al (2011)'s data collection period, Cummings et al (2015) reinforce the markedly low rates of HPV vaccine uptake emerging in the US despite a generally high acceptance rate for the vaccine.

A similarly emerging issue in the provision of the vaccine among these early-implementation studies is that of the GBMSM disclosing their sexual identity/behaviour(s) to their healthcare provider. This may have a role to play in the

recommendation of the HPV vaccine to some GBMSM. The complexity of this is reflected in the GBMSM data which reflected disclosure was not associated with higher or lower acceptability of the vaccine but was significant in uptake of the vaccine. Indeed, ad hoc analyses reported GBMSM HPV vaccine was only 13% uptake during 2011 (Reiter et al., 2015). Within a UK context, Nadarzynski and authors (2018) explored sexual orientation disclosure to a healthcare provider and the age of disclosure among GBMSM (n =1508) and its relation to HPV vaccine uptake. Approximately 26% of participants had not disclosed their same-sex experiences to a healthcare provider. Amongst those who had, the median age of disclosure was 19 years (13-50). A trend was found in which those who reported lower access of sexual health services and difficulties in discussing sexuality were less likely to accept the HPV vaccine.

In a different cultural context, research conducted by Lau et al (2013) in Hong Kong similar explored HBM-related constructs relating to HPV and HPV vaccination among GBMSM (n = 542). The 4-valent Gardasil was licensed in Hong Kong in 2006, with the 2-valent Cervarix being licensed in 2008 and the 9-valent Gardasil being later approved in 2015 (Choi et al., 2018). From data collected in between September 2010 through to January 2011, Lau and colleagues similarly found low knowledge and common misconceptions among HPV. Approximately 40% of participants perceived HPV infection prevalence to be more than 10% and 55% believed infectivity of HPV to be high or very high in severity (Lau et al., 2013). Like that of Reiter (2010), Lau found a marginal amount (36%) of participants recorded associating HPV infection as a causal factor in penile or anal cancer. In exploring corresponding knowledge and perceptions of HPV vaccines, the majority (67.7%) of participants considered HPV vaccines to be beneficial in preventing genital warts, penile and anal cancer (55.9%) with lower results reflecting misconceptions including the HPV vaccine preventing sexually transmitted infections other than genital warts (29.2%) and treating genital warts (38.2%) and treating cancers (17.2%).

An unexpected finding from this study reported that a number of GBMSM who engaged in unprotected anal intercourse (UAI) were significantly less likely than others to find HPV vaccines acceptable. Lau et al. (2013) speculate that the motivation to use condoms correlates closely with that of taking HPV vaccines as a means of HIV/STI

prevention. A positive association between unprotected anal intercourse (UAI) and lower acceptability of HPV vaccine would then be resulted given the notion those who have lower perceived severity of HIV/STI infection. Indeed, while a high percentage of participants perceived high infectivity of HPV among GBMSM, only 6% perceived a high or very high chance in contracting HPV in the future (Lau et al., 2013). This reflects a trend in having high perceived risk for others but low perceived risk for oneself in contracting HPV. Therefore, a growing need for increasing the risk of HPV and its sequelae is needed.

Turning to the United Kingdom, where a female-only vaccination was implemented until 2017 across the 4 nations, Sadlier et al. (2016) conducted a cross-sectional survey to examine HPV vaccine acceptability and associated factors among GBMSM (n = 302) in Ireland between January and April 2014 (Sadlier et al., 2016). Reported perceived severity of HPV infection matched that of earlier studies with GBMSM perceiving HPV infection to be high in GBMSM in Ireland (24%) as well as infectivity of HPV to be high (44%) and the belief of being infecting HPV being high (33%). Within this sample, 46% reported HPV being likely to cause genital warts and 26% perceived that HPV was highly likely to cause penile or anal cancer. Unlike previous studies, healthcare provider recommendation was not examined in this study. Acceptability of the HPV vaccine was highest (78%) among participants if the efficacy was outlined and the vaccine came at no cost (65% acceptance with efficacy and cost of 100€, 51% acceptance with efficacy and cost at 300€ and 31% unconditional).

Observable limitations of these studies include their relatedness to the provision of the HPV vaccine which has progressed across many affluent countries over the past decade which presents the context of the time in which these studies were conducted. Moreover, limitations of these studies include the cross-sectional design and heterogeneity of measures used to quantify HPV-related behaviours. The self-administered questionnaire design also presented the issue of missing data and thus findings must be interpreted with this limitation in mind. Moreover, these findings are limited in their applicability to understanding vaccination behaviours among GBMSM in Scotland generally as many of these studies focused on perceptions prior to licensure or proximal factors related to perceptions in unvaccinated populations, rather than on vaccination-related decision-making during vaccination programme

implementation. Taken together, however, these studies continue to highlight a pattern of discordance between lay understanding of HPV and its infectious sequelae and the provision to screen, test, and provide a vaccine in mitigating HPV infection; specifically, where control of HPV-related disease progression relates to vaccination, social mobilisation actions and the representation of HPV impacting the health of GBMSM should be considered when delineating public health policies.

As outlined above, psychosocial processes related to HPV among GBMSM represent a complex representation built about HPV which includes the belief and perception of risk and HPV can have an impact on the way the individual may exercise their response to vaccination as a manifestation of an action performed by an individual to maintain their health, life and well-being.

- Therefore, identifying factors and processes that determine the willingness to receive the HPV vaccine among GBMSM is highly valuable in order to develop effective interventions that promote vaccination willingness and achieve the goal of eradicating anal cancer prevalence among this sample.

GBMSM's illness representations regarding HPV may be important predictors of their vaccination behaviour, but the complexity of these have not been investigated in a systematic qualitative manner. This thesis utilised health belief theories including CSM to examine HPV vaccination. The cognitive illness representations depict GBMSM's common or 'lay' understanding of an illness. GBMSM utilise these illness representations to make sense of the symptoms (e.g., genital warts) and to guide their coping behaviours from the disease (e.g., vaccination). This self-regulation of health behaviour occurs in the context of the individual's self-system, which consists of socio-demographic characteristics of the individual and barriers to health behaviour. As GBMSM-HPV vaccination continues in Scotland, it is critical to examine factors affecting HPV vaccination among GBMSM. Illness representations of HPV and affective responses to HPV vaccination among GBMSM were examined.

4.7.3.2 *Illness Representations about Human Papillomavirus (HPV) and perceptions about HPV vaccination as determinants of the willingness to receive the HPV vaccine.*

This thesis is seeking to understand factors that influence an individual's health behaviours and beliefs relating to HPV and HPV vaccination. Explanatory theory and health belief models assist in understanding and predicting health behaviours and the application of such models allow effective interventions to be developed. One health belief model in line with this is that of Leventhal's Common-Sense Model of self-regulation V qualifies as a suitable theoretical approach to inform the exploration of HPV vaccination willingness among GBMSM in Scotland as it describes general psychological factors and processes that are involved in the (pharmacological) management of past, current and future health threats (Leventhal et al., 1997). The CSM is a theoretical model attenuating to factors that influence health behaviours and outcomes. Within this, illness representations describe people's beliefs regarding a disease or symptom and can thus determine a person's assessment of an illness or health behaviour (Leventhal & Cameron, 1987; Leventhal et al., 1997). The CSM contends that a parallel process occurs in symptom evaluation, with cognitive and affective responses both involved in triggering health behaviours. The parallel response aims to understand how individuals adapt to health threats by examining threats from the individual's perspective and, accordingly, how this perception may influence a response or coping strategy. The CSM and its constructs will be discussed in detail outlining the content of illness representations characteristics.

4.7.3.3 *Characterisations and attributes of the CSM*

The CSM espouses that illness representations are subjective beliefs and emotions about an illness that are formed by an individual after recognising a (potential) health threat. Cognitive representations contain identity (beliefs about the (number of) symptoms attributed to the illness), timeline (the duration), consequences, and causes of the illness, and possibilities to prevent, control and cure the illness ("control"). Illness representations are idiosyncratic to the individual based on their understanding and development of their representations, meaning that individuals may experience the same illness or understanding of that illness in different ways. Later, a sixth dimension

of illness coherence was added to the model which refers to whether the individual thinks about a threat in a coherent way referring to whether the individual's idea of the solution to an illness is aligned with their idea of the cause of the illness. Affective responses refer to the (mostly negative) emotions elicited by the illness, for example concern, fear, and upset (Leventhal et al., 1998).

In CSM, memories of senses and/or experiences connected to illness and health form a construct known as a 'prototype'. These prototypes active the illness representation which serves as a mental schematic for a given illness at a given point in time (Leventhal et al., 2016). Illness representations are constructed by individuals and are informed by these prototypes, as well as the influences of race, gender, culture, interactions with others and the media (Leventhal et al., 2016). The memories and sensations integrated into prototypes are matches to illness representations along the six aforementioned dimensions to inform a construct known as an 'action plan'. This consists of a specific action to be taken (e.g., taking medication) and the timing of that action, the expected outcome (e.g., resolution of symptoms). Thus, the health threat is attenuated too by means of this action plan.

As mentioned, illness coherence is a construct within the model which implies that the way an individual conceives a certain illness or health threat in terms of identifying the illness, understanding the illness, perceived risk of developing the illness, as well as perceived control over the illness, and the perceived timeline of the illness will shape the way they respond to that threat (Leventhal et al., 2003). Illness coherence entail's an individual's personal understanding of an illness or a health-related context, that is, the extent to which it makes sense (Hall et al., 2004). It may be that an individual without HPV may perceive themselves to be at low risk of contracting the virus – as has been established among GBMSM – and thus may decide the vaccine is not needed. On the other hand, the same individual may perceive themselves to be very high risk of contracting the virus – as has also been established among GBMSM – and see greater value in having the vaccination. Illness coherence differs from knowledge in that an individual may know all the correct facts about HPV and the associated vaccine but may feel confused or overwhelmed by this knowledge. Illness coherence extends on knowledge by represented the degree of confidence the individual is in their understanding of HPV and the associated vaccine (Kaptein & Broadbent, 2001).

Therefore, it cannot be ignored that enhancing illness coherence may increase enactment of certain preventive and protective health behaviours, for example, HPV vaccine uptake.

The aim of this thesis is not to test the Common-Sense Model, which is beyond the scope of the research. This model is important as it serves as a justification for attenuating to the cognitive/emotional representations of the sample. Indeed, understanding acceptability as it sits within the context of sexual health services in Scotland delivering a range of health care interventions (e.g., drug, screening, and self-management), acceptability reflects the inference from participants' behaviour, notably in the levels of consent to participate in a degree of uptake, adherence, or engagement (with the intervention).

4.8 Representing the coding procedure(s)

4.8.1 Data preparation

The audio recordings of interviews were transcribed verbatim by the researcher (LC). The researcher's decision to personally transcribe the audio recordings was based on the rationale that this process allows the researcher to get close to the data and build sensitivity. Indeed, by engaging in this process, coding can be applied directly in response to hearing and interpreting pauses, allowing coding to also illuminate the co-constructed exchange between the researcher and participant (Craig et al., 2021). Moreover, while time-consuming, this choice was also based on my understanding of how audio data can be represented in different ways and levels of detail in transcription, thus making transcription a subjective – rather than objective – process which delegating to others would have been reduced or the interpretation affected.

Participant interviews were transcribed verbatim, excluding minimal encouragers used by the interviewer such as 'yeah' or 'right' or 'aha'. By transcribing in this manner, participants' words need to be analysed and central to the data analysis in which every utterance from the researcher would detract and since the study aimed to generate an understanding of participants' experience this was appropriate.

Following transcription, the transcripts were then imported into a computer-assisted qualitative data analysis (CAQDAS) software called NVivo (Version 20 for Mac).

4.8.2 Data Analysis

As has been outlined, data analysis is a comprehensive procedure which involves the inspection of - and experimenting with - various ideas or (re)views and development of categories within the data collected until arriving at a logical point which aids theory development. It is an iterative process as outlined by Charmaz (2006) and involves continual reflection about the data.

The arrows on the diagram shown in figure 4.2 evidence that grounded theory analysis is evolving and non-direct, and hence iterative, approach which occurs concurrently and involves the integration of data collection, synthesis, and synchronised theorising. This process was continuous until the theory had developed. Efforts were made to incorporate some of the methodological concepts after transcription of initial interviews and reflection by exploring the upcoming concepts and information by further interviews.

Constant comparative methods are a distinguishing feature of grounded theory in which data, categories, and concepts are compared with each other (Charmaz, 2003; 2014). Another characteristic is that of initial analysis and data generation happening concurrently. This is key as experiences, narratives, and perceptions raised by participants in initial interviews can be followed up in subsequent interviews.

Throughout this process, as is emblematic of constructivist grounded theory, I was able to reflect upon and consider my positionality in the process of data collection (with regards to coding and interview questions) down to the analysis. Although the participants provided the key information, I posed the questions and identified specific areas to be explored including those that needed further clarification and exploration.

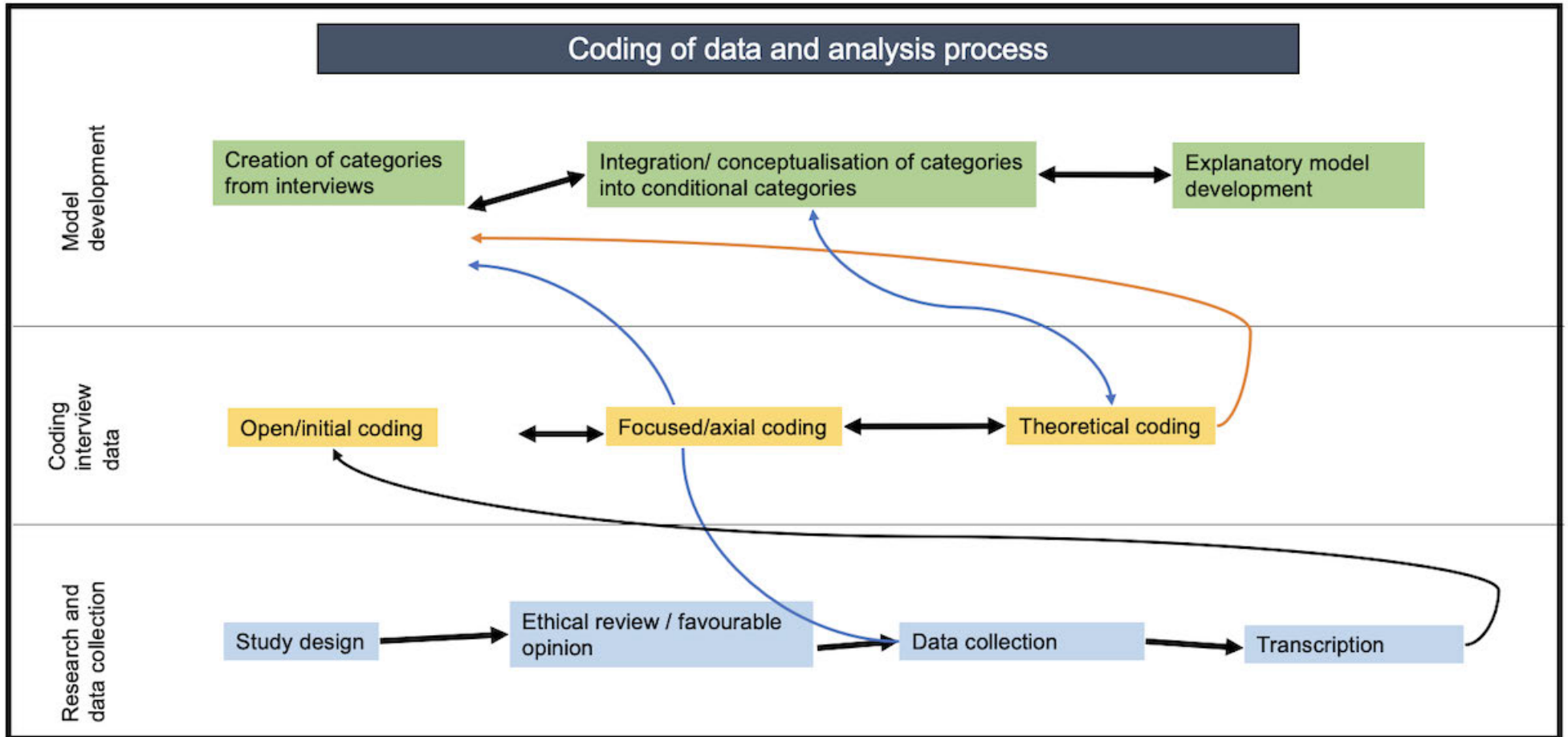
As mentioned, there is somewhat of a paradox in grounded theory analysis – one in which is reflected in both stating the analysis is a staged approach while also accommodating for an iterative cycle when engaging such approach. One manner in which this paradox manifested was the data generation itself. This is because the interviews were scheduled intrinsically at a time which could accommodate participants and so this left me with little or no time – in some instances - to go through

the process of transcribing, conducting initial analysis, and constant comparative method) between data generation.

17 semi-structured one-to-one interviews were used in this study. I transcribed all of the interviews as this was fundamental to the analysis process as it allowed me to immerse myself into the data. Opportunities were made available as a result, to evaluate myself not only my opinions and views received, questions posed, but also to observe some mannerisms in how I and how participants responded to the interview schedule.

In this research, the possibilities within the data analysis were available based on information gained during the research process. The documentation of activities was comprehensive and at times difficult to maintain. Supervision session and dialogue between myself and my supervisors became a source of reflective accountability. The presentation of the data analysis enacted in this work was through 'written accounts' in which I presented some key thinking and reflections during supervision. These meetings sat within the process outlined in figure 4.2.

Figure 4.2 Data analysis process (iterative)



4.8.3 Initial data coding

The first approach to data analysis is through 'open coding'. This analytical phase is characterised by information being gradually made sense of and ideas and their properties being recognised. This stage best characterises the process where identification and creation of numerous codes representing different ideas, or a combination of ideas are identified (Charmaz, 2014). These emerging concepts are solely from the data collected. The openness to new avenues of thinking, allowing the relationships between codes to emerge, is required and the forcing of themes to be avoided. Through constant comparison, codes were captured and condensed (i.e. capturing codes that reflect meanings related to a phenomenon happening within the data and are seen as important or draw the researcher's attention (Charmaz, 2006, p. 48).

The initial (open coding) stage was carried out line by line. It was imperative to use words or direct phrases from the data if deemed important to the topic area. To commence my initial coding, I roughly sorted my data through microanalysis by analysing each transcription line by line and generating nodes (labels) on NVivo and Microsoft Word interchangeably (Charmaz, 2014). This created awareness regarding the thickness and thinness of the data I was working with (Jackson and Bazeley, 2019). The reason for such an approach was to have a pictorial perspective as well as not to deviate too far from the meaning of the information provided (see Table 4.4 for an example of a participant's coding process).

Table 4.4 Sample tabulated coding process

Example of focused codes			
Participant's	Open coding	Focused Coding	Theoretical coding
<i>... Health, I mean, it is what it is healthy means... I'm not sure like not having any sort of sickness or illness that needs to be managed through medication or someone looking after you know eating your give a day and going to the gym regularly and having your water and lots of quality sleep you know being all those things makes me feel better about myself like I'm doing my part I'm also in the process of joining a rugby club to help regiment myself</i>	<p>Not having a sickness or illness</p> <p>Eating healthy</p> <p>Being healthy</p> <p>Looking after yourself</p> <p>More confident more comfortable</p> <p>Feeling of control</p> <p>Regimenting behaviours</p>	<p>Absence of illness</p> <p>Defining what health is by what it isn't</p> <p>Meanings of health</p> <p>Risking health</p>	<p>Theorising health</p> <p>Meanings of health</p>
<i>Good colour foods healthy lifestyle makes me feel better and makes me feel better sexually you know for me it's getting checked after 12 weeks but I'm on the discovery program... A drug trial to monitor PrEP but I don't know what drug I've got they won't tell me but it's been two years now so I must be on the proper one either way and I've lost some weight which might be a side effect and my live gets checked every 12 weeks too</i>	<p>Eating healthy</p> <p>Healthy is sexual</p> <p>Drugs trial</p> <p>Randomised controlled trial</p> <p>Healthy over time</p> <p>Checked regularly</p>	<p>Being responsible</p> <p>Getting checked</p> <p>Meanings of health</p> <p>Time and health</p>	<p>Theorising health</p> <p>Managing health</p>

<i>Someone who has someone is just someone that's generally like fit... who is not necessarily like body type but just can go out on a walk without wheezing or like healthy skin too</i>	Associating healthy with body	Physicality	Doing health
	Breathing and exercising	Meanings of health	Being healthy
	Pleasant experience of physicality		

During the initial/open coding stage I was mindful of preconceptions and their influence on data analysis, and, paradoxically, aware that 'no sense at all can be made of a data corpus' without the use of sensitising concepts as well (Charmaz, 2014, p. 156). A considerable benefit of grounded theory analysis is the ability to be swayed and navigated into capturing connections in the participants' accounts and identifying differences. Where possible, I used codes *in vivo* codes to generate simple and precise terms, which captured experiences and perspectives in the data for use later in the theory (Charmaz, 2014, p. 134). As I was coding line by line, I was able to see sections of the interview and how they related to the research question(s), and where these could be grouped/coupled. A sample from the appraising primary care services conditional category is provided below (see table 4.5).

Table 4.5 Sample of creating initial codes

Accessing services	Similarity with nurses working in health settings
Engaging with health services	Cultural beliefs
Ongoing health issues (diabetes)	Inclusion of some staff not others
Volunteering with some services	HIV-related health services
Positive experiences with services	General health and different settings
Easy access to clinics	No discrimination
Easy appointments	Trusting different types of doctors
Knowledge of where services are locally	Who is involved in sexual health
Association of clinic and stigma	Relationship with healthcare provider
Fear of clinic stigma	Routinely going back
Invitation to clinic	

Insufficient time with doctor	Healthcare providers helping with
Positive about different settings	confidence
Testing experiences	Hearing about others' experience
Outness as positive	Anticipating good relationships with services

4.8.4 Constant comparison method

Sorting through the initial/open codes and developing categories, sub-categories and relationships therein helped me to understand what the forming categories did and did not represent. This allowed for the curation (as opposed to emergence) through exploration procedurally. The linkage of categories represent how I made sense of the data collected. I moved across interviews and their interpretations, experiences, and perceptions, using a mixture of nVivo, Microsoft word, and PowerPoint. All these reflected the materiality of the thought process; how best to navigate through the use of arrows, boxes, labels, in order to render an obfuscated pattern made clear.

To enact this, as part of the constant comparison method, I compared data with data and data with codes (Charmaz, 2014). As I compared interviews and incidents, I created reflections on these and also discussed these in supervision. Memoing reflexively was a practice I struggled to engage with outside of dialoguing with colleagues and supervisors. I was able to fill my thinking with asking my supervisors specific questions in relation to new and emerging thoughts. For example, following the first couple of interviews, interviewee 3 and 4 had begun involving the role of pre-exposure prophylaxis in their interviews and consideration of sexual health, which spurred me to reflect on the inclusion of other interventions in the form and function of this thesis (see figure 4.3)

Figure 4.3 Reflecting on emergence of HPV in data

<p>E-mail to Supervisors (ahead of supervision meeting)</p> <p>Human Papillomavirus (HPV) is not being considered in isolation. Why do some remember or not recall when others remember clearly? It would be useful to explore. What is creating this lack of salience? Is it organisational? Personal? Both? Who created the operating procedure for healthcare providers in bringing up the vaccine? Does such exist?</p>

A process of constant comparison was employed to achieve the analysis directed at generating a model. This involved finding similar instances which were coded under the same category to generate clusters of codes which seemed to relate to each other. The data was interrogated in accordance with Glaser's suggested questions (quoted below) for constant comparison (Glaser, 19878, p. 57) to focus the mind of the researcher on generating theory.

- “What is the data a study of?” These questions help to question if the original ideas concerning the research still remain. By asking if the original research question of substantive area of research remains constant, the researcher is guided to reduce the inherent bias trying to make the research conform to initial expectations.
- “What category does this incident indicate”? This question helps prevent the researcher from getting lost in the data and forces them to generate codes related to other codes.
- “What is actually happening in the data?” This question is concerned with the basic social psychological process faced by the participants and how it is resolved. Such a questioning process aids the researcher in focusing on the development of a core category

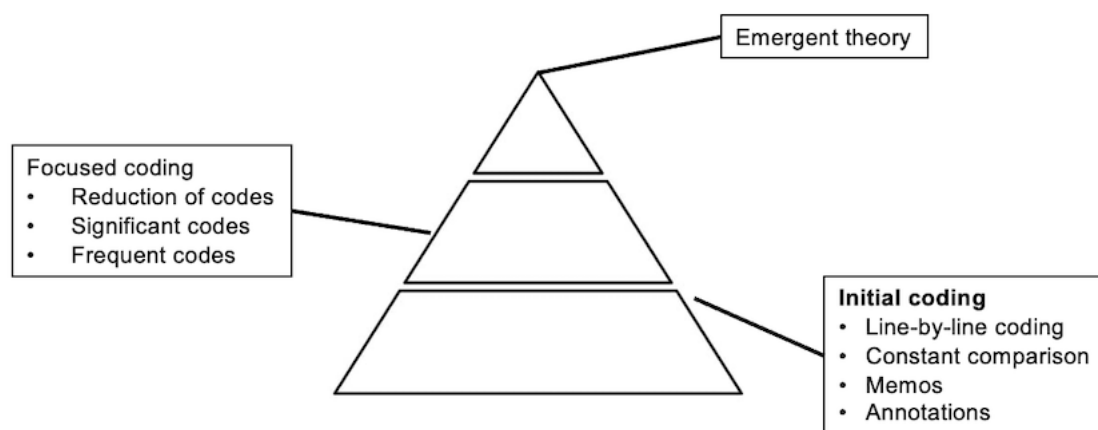
4.8.5 Focused coding

The next step was focussed coding, which is more direct, selective, theoretical and abstracted than open coding. Focussed coding (sometimes referred to as axial coding) was employed to categorise and sort out the recurring codes identified and created

during the open coding phase. It was also used for building categories around the initial/open codes (Charmaz, 2014).

Saldana (2013) states that focussed coding “is used to sort out codes frequency, relationships, and central codes” (p. 264). I used initial coding to review codes independently and then as I coded other interviews I recategorised. This method of constant comparison enabled me to identify dimensions, conditions and relationships in the category which formed theoretical properties (Glaser & Strauss, 2009). In the selective stage, I used the most significant or frequent initial codes to develop the theory. This condensed and sharpened my work (Charmaz, 2014). This process is visualised in Figure 4.4.

Figure 4.4 Process of theory construction

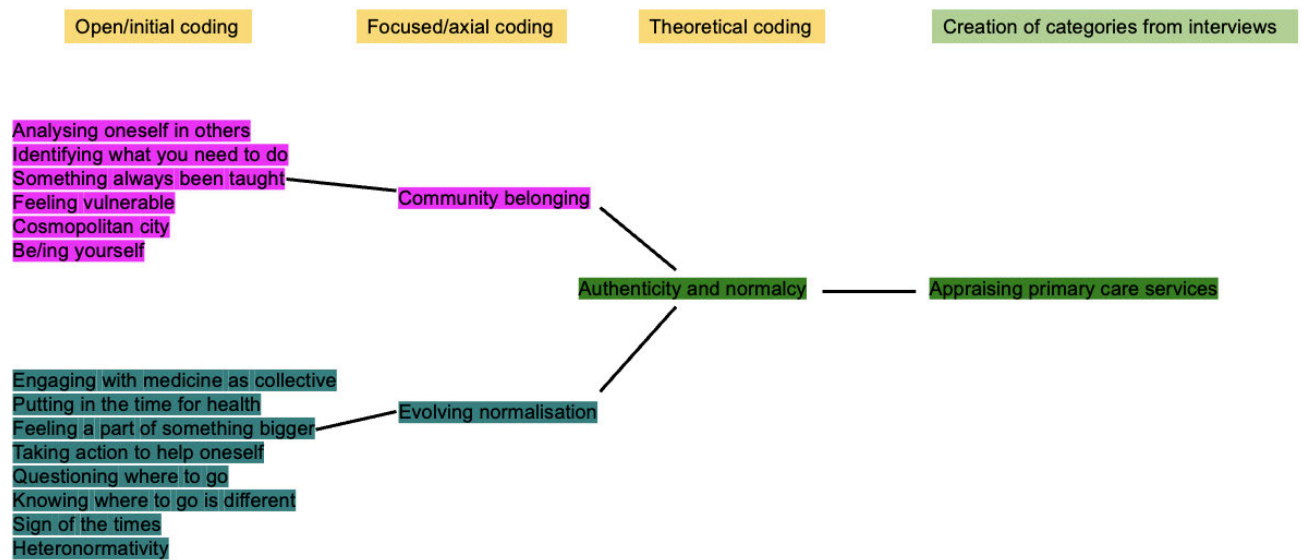


As I focus coded, there was a fluctuation and fluidity in moving backwards and forwards through the data – trimming excess to unveil the core of the analytical form. By using computer software, I started sorting and integrating codes developed. I sifted through the codes to identify the most significant and frequent codes to develop focused codes that would explain large sections of data (Charmaz, 2006).

A worked example of a part of the coding process leading to the development of category Appraising Primary Care Services is provided in figure 4.5. Here, the open codes are given coloured stripes from nVivo and grouped with the process of these

moving from open to reduce into focused codes and displaying the pathway to being part of the final conditional category.

Figure 4.5 Creating the property Authenticity and Normalcy as part of conditional category development



In doing this, comparisons were drawn between codes developed from one interview and across different interviews which helped to identify patterns I could see through analysis (which did not 'emerge', as Braun and Clarke would recommend). In this process, the properties of these codes were curated. An example of focussed coding is provided in appendix 15

4.8.6 Theoretical Coding

Theoretical coding is a higher and sophisticated level of interpretation which allows the researcher to further conceptualise the categories developed during focused coding by specifying their relationships (Charmaz, 2006). Examining and specifying relationships between and among different focussed codes helps in integrating them into smaller or more analytical conditional categories. This process was undertaken in collaboration with supervisors. The example provided in figure 4.5 documents how a

conditional category 'Appraising Primary Care Services' was identified with 'Authenticity and Normalcy' forming key parts of the theoretical coding drawn from earlier focused and then prior open coding procedures.

It seemed that an important step to create the context of HPV vaccination was the decision making and lived experience surrounding the connection between identity and the health services being negotiated. I compared interviews to look for similarities and differences in the emerging pattern on how salient this was among participants. I explore the concepts of community and the role of identity in later interviews. When the concept and forms of community, variations in how the participants' identity was enacted surfaced. Hence, further analysis and exploration led to refinements and developments of the conditional category "Appraising primary care services", which reflected that facilitating external (the systems and institutions, the knowing and engagement of services as performances of belonging) and internal (the normalisation, discourse surrounding performance of what the individual does and this being in alignment with the 'time') were identified as important constellations surrounding the relationship with other conditional categories.

The above sections have discussed the implementation of different levelling of coding, drawing upon recommendations of various GT researchers. Identifying a core category which relates to other categories is also crucial for generating and integrating theory. While Charmaz (2006) rejects the necessity of identifying a core category, I believed that 'Navigating Agency' pulled all the standing of the conditional categories, explaining the core social process as it relates to answering the research question. I could see that the core category was manifesting itself as I explored the relationship between the conditional categories. 'Navigating Agency' which explicates the navigation of knowledge of oneself, the permeability of services, and encompasses the knowing and not knowing at the intersection of control related to intervention agreement and engagement were automatically related to the conditional categories. Figure 4.6 summarises the organisation of the multi-level codes used for developing theory.

Figure 4.6 Process of theory construction

Navigating Agency				
Navigating agency	Conditional Category	Focussed Coding	Properties	
	Theorising health	Meaning of health		Multiplicity of health
				Absence of disease
		Predisposing health		Distinct from heteronormativity
				Promiscuity
		Temporalising health		Accepted risks of STIs
				Permanency and transiency
	Being responsible for health		Performing responsibility	
	Representations of Human Papillomavirus	Being independent from HPV		Not remembering
		Lacking knowledge and misconceptions of HPV		Genital warts
		Encountering HPV vaccination		Uptake
				Non-uptake
		Suggestions improvements for GBMSM-HPV vaccination		Knowledge and awareness raising
	Improvement in information and service delivery			
	Appraising Primary Care Services	Authenticity and normalcy		Community belonging
				Evolving normalisation
		Culturally competent (sexual) healthcare		Knowing and not knowing service use
		Heteronormativity		Different services

4.8.7 Theoretical saturation, sampling, and sufficiency.

Theoretical sampling in grounded theory studies has been characterised to reflect when a study concludes once theoretical saturation has been achieved (Glaser &

Strauss, 1967). Saturation, then, could be understood to be when collecting data up to a point where no new information or insight is obtained. In constructivist grounded theory, theoretical saturation is similarly described as a situation in which new data does not generate new theoretical understanding, and no new properties of core theoretical categories are developed (Charmaz, 2006). This would mean, then, that the analysis has accounted for the full spectrum of variation of the topic being investigated.

The concept of theoretical saturation has been criticised as it suggests a tangible state which is not practically feasible for many researchers. Gilgun (1994) argues that “researchers may never reach an absolute saturation” (p. 188). Indeed, they argue that grounded theory research is “forever open coded” as it remains “open to the possibility that the next case will challenge the existing constructs” (p.118). The claim surrounding the adequacy for estimating the sample size required for saturation further has no guidance (Charmaz, 2006).

As an alternative and more attainable concept, the notion of “theoretical sufficiency” has been introduced as a goal for theoretical sampling. Theoretical sufficiency can be used to describe a state in which the coding process is adequate (see data analysis). In the case of this project, the end of the sampling was reached when I was approaching a point at which I felt increasingly confident that I kept hearing the same stories from interviews which offered no new insights. In view of the controversy surrounding the issue of data saturation and in line with Day’s suggested term of ‘theoretical sufficiency,’ I decided to stop collecting data when I felt that these had sufficiently clarified the relationships between my main categories during the final stages of theorising. In fact, towards the end of my data collection, clarification of these relationships became the sole focus of my data collection and analysis.

4.9 Constructivist Grounded Theory Interviewing and Analyses: Manifestations of reflexivity

4.9.1 Introduction

Much of this thesis has spent time discussing the researcher as a tool – a primary mechanism within the qualitative methodological approach reflected in constructivist grounded theory and its application to the research reported. It is pertinent, then, to reconsider this discussion – how the relative position and perspective of myself as the researcher within the lifecycle of this project has been, and what has informed considerations and perspectives which satellite the ‘doing’ the data collection interviews and subsequent analyses.

I employ the following section informed by auto-ethnography, which allows investigation of personal experience where the purpose is to allow the features of ‘culture’ conveyed here to be familiar to the reader regardless of their – and my – positionality in the occupation of such ‘culture’ (Ellis, Adams, & Bochner, 2011). This is further supported by reflections on qualitative practice in the considerations of the ways in which the actions and understandings of myself as the researcher contributed to the modes in which was done. Therefore, by exploring my positionality and the mediating relationship between the social and the cultural, this section aims to be reflexive in line with the expectations of qualitative rigour.

The results presented in Chapter 5 represent an end-point of the doctoral research journey, including experiential learning which cannot be interpreted as independent in the journey of producing this thesis. As the doctoral journey progressed, there were, as in any project, challenges and unexpected developments, relative decisions being made in response to these (in alignment with the supervisory time) which may be excluded in the conventional description of a research output.

As part of a commitment to reflexivity, in this section, I take this as an opportunity to align with Gough, who reports such reflexivity offers a ‘critical attitude towards locating the impact of the research(er) context and subjectivity on project design, data collection, data analysis and presentation of findings ... which facilitates insights into the context, relationships and power dynamics germane to the research setting (Gough, 2003, p. 22).

Reporting this reflexive practice is not to be indulgently self-referential, but to provide enough information in the critique of the work explicated here that the reader might be

satisfied that I have been self-critical in the work as the individual producing such work and to reflect on my own experience including wider issues surrounding social science research and practice. Indeed, this is congruent with Charmaz's (2006) view that 'acknowledgement and self-reflection of one's positionality is critical for both the grounded theory researcher and research process' (p. 482).

4.9.2 Qualitative interviewing at the intersection of sexual identity

With regard to my positionality within the research, Maykut and Morehouse (1994, p. 123) purport that the qualitative researcher's perspective is 'perhaps a paradoxical one: it is to be acutely tuned-in to the experiences and meaning of systems of others – to indwell - and at the same time to be aware of how one's own biases and preconceptions may be influencing what one is trying to understand'.

The researcher's membership in a group, or multiple groups, is relevant as this plays a direct and intimate role in the data collection and analysis. Indeed, Rose (1985) relayed 'there is no neutrality. There is only greater or less awareness of one's biases. And if you do not appreciate the force of what you're leaving out, you are not fully in command of what you're doing' (Rose, 1985, p. 77).

As a queer-identifying man, it cannot be ignored that the health of other gay, bisexual, and other men who have sex with men (GBMSM) to some degree involves me in some shape or form. The topic of understanding targeted HPV vaccination, this thesis, may readily invoke negative associations of self-indulgence. But underlying these associations is that of subjectivity.

As a burgeoning researcher, I have been taught that "good" research is often objective research characterised by a distant or unbiased researcher which is independent or impartial to the topic. Subjectivity, then, is not highly valued and may bely a sense of self-involvement. At the same time, in engaging with this qualitative work, I am reminded that such types of qualitative inquiry are fraught with challenges for the researcher, requiring a 'balancing act' (Jones, 2005, p. 764) as the researcher must negotiate attention to cognitive domains of 'trust' while expressing the affective dimensions of one's narrative (Paton, 2002).

I am mindful of is the pursuit of studying HPV vaccination. This PhD was one that was advertised very broadly – simply, the intersection of HPV and ‘men’. I had recently completed an MSc by Research in Psychology in England which explored HIV prevention through mobile health (*mHealth*) technologies among men who have sex with men, and so I felt a growing sense of want - and confidence - to explore men’s health. Therefore, I’m mindful that my passion was tethered to doing research and that is why I was getting this PhD and sought to become an applied health researcher at the intersection of men’s health.

Prior to this corpus of work, I did not understand how people conducted research, especially those who were invested in particular (qualitative or quantitative) modes of inquiry and how close this was to how people viewed themselves as scholars and as people. As I became more involved in research, the questions I asked, how I was asking them, and how I sought to address these questions were inextricably linked to how I viewed myself as a researcher and concerns related to establishing legitimacy in this career.

This project, early in my career (I hope), was navigated because I wanted to better understand health interventions and health research and how large-scale interventions (like vaccination programmes) are engaged. In particular, I wanted to understand why some people receive interventions and others may not. I went into the study wanting to know more; however, knowing that all ‘men’ was too broad of a subject, I focused on a particular population of GBMSM. This, then, has an early element of ‘me-search’ in that I am a queer man with the same or similar risk profiles which made my participants eligible for the research and eligible for the intervention I was researching. Given this, I still sought to be “objective” and to do “good research” at the intersection of qualitative research studying HPV-GBMSM vaccination and create a degree of separation from my topic and who I am as a researcher and my positionality.

I viewed the research process as a rational one, in that the question and problem guided the methods I used. Even though I intellectually understood that my research approaches were tied to my worldview and how I understood knowledge, the growing

understanding of how these are tied to my worldview is a sophisticated intellectual understanding still being fully realised. I found myself replicating the same research methods studying I had received – that the research is tied to the research question.

While I still agree to that to a certain extent, I understand through this process that it is more complex and that questions we ask and methods we use are very much tied to who are as researchers. There has been a realisation through my navigation of the intrinsic “messy” nature of qualitative work (Clarke, 2021, p.1) in that research methods or questions do not exist in a vacuum or independent of one another, including the one writing. There is serenity in the understanding that there is a greater interplay between who I am as a person and who I am as a researcher. This has manifested in the portrayal of the data and the architecture of this thesis – it has taken a certain amount of time coming into my own sense of self as a person and researcher.

In this thesis, the data and its presentation reflect a degree of jadedness that I still negotiate. I understand, now, that I will continue to be concerned with the perceptions of others, and readers, that this research could be perceived as self-focused or self-referential and so to attend these concerns I have written myself out of the process. In this moment, as this doctoral work sits at this juncture of my career as a researcher, it is only through mindfulness and a degree of hindsight that I can reflect on how the research endeavours many (lucky) individuals are afforded to engage with will forever have some degree of overlap to the one researching. This research is not something that is self-centred and self-referential in ways that seem narrow and self-serving, but is a manifestation of a mode of inquiry that has helped me maintain the desire which was reflected in my want to research and be an applied health researcher – to inform change and to make the health of those akin to my positionalities in their many identities better.

4.9.3 Qualitative interviewing at the intersection of sexual identity

The context of the methods implemented in this research is important to acknowledge as it is crucial to ask how aspects of the context influence the research and the people involved.

In this project, social media and third sector organisations were used to disseminate recruitment information for GBMSM. The decision to use these methods cannot be separated out from myself as an individual. I am not native to Scotland, and had indeed moved to Scotland because of this research. Therefore, it cannot be ignored that this had an impact on myself as the researcher and the research environment which created a context for the reality of interview participants. In this section, I pay particular attention to the influence of the research context at the intersection of my positionality.

This divergence from an aligned social/cultural position with GBMSM was discussed in project meeting and supervisions which provided critical spaces for reflexive practice. Reflections on design and recruitment permitted a discussion on gaining entry and constituting spaces for qualitative interviews when the time for primary data collection was approved. The decision, then, was – in relation to my new-entry status into Scotland – to seek out collaboration with GBMSM-adjacent organisations as gatekeepers to Scottish GBMSM in which to engage with through qualitative interviews. Gatekeepers are individuals or organisations who ‘stand between the data collector and a potential respondent. Gatekeepers, by virtue of their personal or work relationship to a respondent, are able to control who has access, and when, to the respondent’ (Keesling, 2008, p. 299).

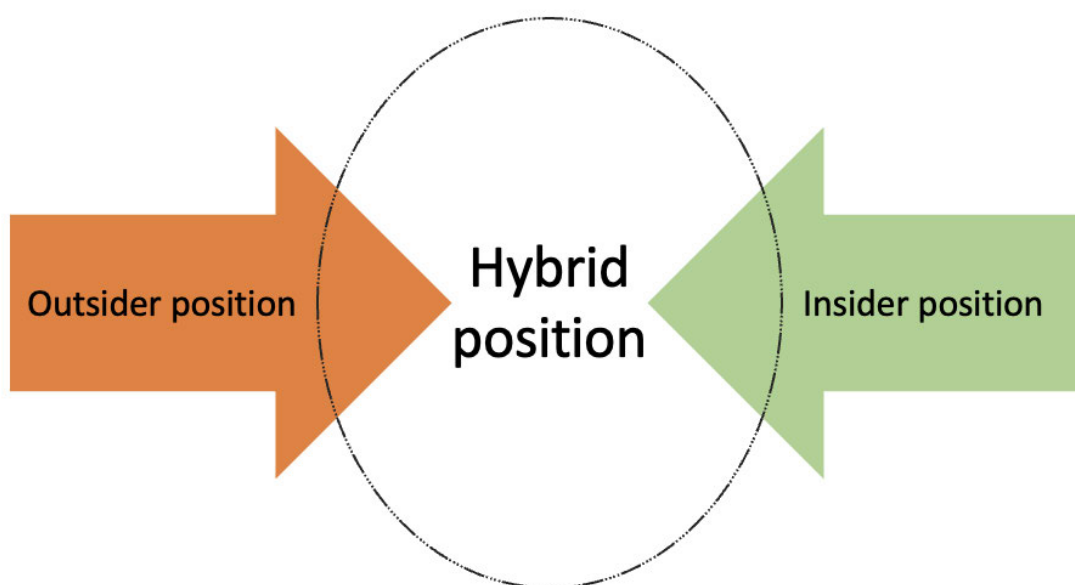
The utility of using organisations to assist dissemination and recruitment is not uncommon in qualitative research and in relation to health-related research. This project is no different and relied on the goodwill of gatekeepers at Waverley Care, Scotland’s leading HIV and Hepatitis C charity and LEAP Sport Scotland. As I was aware that gatekeepers can facilitate or hinder the researcher, as they have autonomous right to permit or deny access to their information, space, and personally, I conducted a presentation prior to recruitment to explain the research and address any concerns regarding the research aims and objectives. This is important as it aligns with that of De La Cuesta Benjumea (2014) in how “gaining entry into the field is, in truth, a process in which personal relationships play a fundamental role” (p. 483). These relationships played an important role in gaining access to the participants in question. This will also, indirectly, impact who participated in the study also.

4.9.4 The researcher-participant relationship

For this particular project, my location as researcher with some commonalities with the subject and participants is a unique one; one in which both I and my participants experienced and voiced. This is the greyed 'researchscape' as outlined by Jootun et al (2009, p. 42) in which postulate a researcher must take a hybrid position, neither outside nor inside: a researcher who undertakes research in practice area of others and is familiar with that research area

Throughout reflecting on the process of the study, the significance and dynamics of (my)'self' and that of [the] 'others' within the field research must be acknowledged as these empower the understanding and interpretation of the research findings presented (Allan and Arber, 2018). An informed reflexive consciousness on this relationship is critical to support the promotion of transparency, trustworthiness and increased legitimacy to this doctoral research. A relationship that is based on trust should be created and strengthened between myself as the researcher and the participants I am researching with. This is true across all ethnic, racial, economic, and gender boundaries as the status or identified I self-identify with influence the research process (Buscatto, 2016).

Figure 4.7 Hybrid position of outsider-insider perspective



(Adapted from Jootun et al (2009, p. 44)

Being an outsider with a different nationality and cultural background had some advantages. I could probe Scotland-specific experiences and insights without taking them as absolutely right or natural, and could provide insights from a new lens. Likewise, interview participants tended to provide detailed explanations about the socio-cultural systems navigated, as they may have assumed ignorance as a foreigner.

This allowed the concerns of sex and sexuality – adjacent to the topic of HPV and HPV transmission – to be explored in more detail. My English nationality placed me as an outsider, but sometimes I was repositioned by participants as a queer person who (may) share common values and social systems. Here, I could reflect on the degrees of proximity between myself and participants (Ganga & Scott, 2006). During some interviews, while participants expressed their experiences of positive healthcare, or personal reflections on being a part of a (LGBTQ+) community, I felt a strong unfolding of empathy keeping in toe with the rhythm of the interview.

Navigating participant recruitment as a recent entry into Scotland is an experienced faced as being part of my position as an outsider researcher. While I have argued that my queerness affords some degree of congruence with GBMSM, as mentioned, the experience of GBMSM is not monolithic and therefore personally – and intellectually – the understanding of the lived experience of Scotland-residing GBMSM is a knowledge created and crafted during this doctoral work. As a queer English person, my understanding of national- and regional-level interventions supporting GBMSM, though limited, was assuaged by occupying a perceived relevance to participants.

4.10 Summary

This chapter outlined and rationalised the approach to primary Constructivist Grounded Theory study used to answer the research question:

“What factors contribute to – and influence – the receipt of the Human Papillomavirus (HPV) vaccine among Gay, Bisexual, and other Men who have Sex with Men in Scotland?”

Consistent with CGT, data analysis was ongoing throughout the data collection and culminated in the construction of a substantive grounded theory. Chapter 5 will present the theory and study findings.

5 Chapter 5: Findings

What will this chapter discuss?

This chapter will:

- Present the primary research grounded theory and its constituent parts
- Substantiate the proposed theory with quotes from interview data
- Document the relationship between categories as outlined in the theory

5.1 Introduction

The following findings chapter presents the details analysis and creation of the Constructivist Grounded Theory (CGT) model of the perceptions and experiences of seventeen gay, bisexual, and other men who have sex with men (GBMSM) of Human Papillomavirus (HPV) and HPV vaccination (see figure 5.1). These were created from the seventeen participants (see table 5.1).

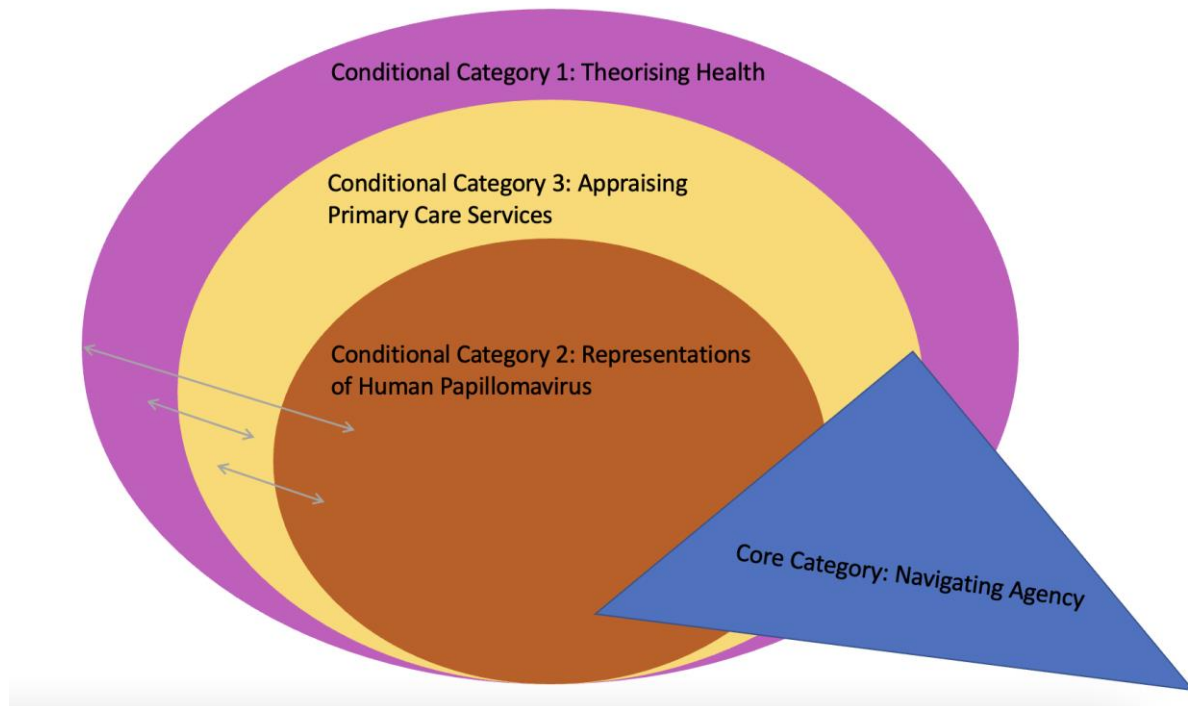


Figure 5.1 Diagram of the primary CGT model

This chapter will outline the categories which are presented and analytically interpreted. The aim of this chapter is to present the interpretive findings in a way that displays the conceptual depth resulting from the analyses with a discussion of how these results are situated in the literature in the discussion section later.

S/No	Pseudonym / PS Number	Age	Gender	Sexuality	Ethnicity	Employment	HPV Vaccination Status (Out of 3)	Health board
1.	LF/ P001	28	Cis male	Gay	White Scottish	FT Employed	3	Lothian
2.	JG/ P002	33	Cismale	Bisexual	White Scottish	FT Employed	3	Lothian
3.	MW/ P003	35	Cismale	Gay	White English	Student	3	Lothian
4.	SW/ P004	29	Cismale	Gay	White British	Student	Unsure	Lothian
5.	JB/ P005	28	Cismale	Gay	White Scottish	FT Employed	Unsure	Lothian
6.	JW/ P006	32	Cismale	Gay	White Scottish	FT Employed	3	Lothian
7.	AR/ P007	42	Cismale	Gay	White Scottish	Student	3	Lothian
8.	IM/ P008	48	Cismale	Bisexual	White Polish	FT employed	0	Tayside
9.	PK/ P009	34	Cismale	Gay	White Scottish	FT Employed	1	Lothian
10.	SM/ P010	27	Cismale	Gay	White Scottish	Student	0	GGC
11.	BM/ P011	28	Cismale	Gay	White British	FT Employed	0	Lothian
12.	HM/ P012	24	Cismale	Gay	White Scottish	Student	Unsure	GGC
13.	KM/ P013	29	Cismale	Gay	White Scottish	FT Employed	2	Tayside
14.	SiM/ P014	28	Cismale	Gay	White Scottish	FT Employed	3	Lothian
15.	LB/ P015	29	Cismale	Gay	White Scottish	FT Employed	1	Borders
16.	JT/ P016	24	Cismale	Gay	White Scottish	FT Employed	3	Borders
17.	DL/ P017	31	Cismale	Gay	White Scottish	FT Employed	3	Borders

Table 5.1 Primary research study participant demographics

However, it must also be noted the creativity and inspiration borne out of CGT analysis. As Charmaz (2011) describes:

“The acts involved in theorizing foster seeing possibilities, establishing connections, and asking questions... When you theorize, you reach down to fundamentals, up to abstractions, and probe into experience. The content of theorizing cuts to the core of studied life and poses new questions about it... Constructing theory is not a mechanical process. Theoretical playfulness enters in. Whimsy and wonder can lead you to see the novel in the mundane (pp. 135–136).”

Each of the three conditional categories and their constituent parts are conceptually related (Birks and Mills, 2015) with each accounting for factors that relate to the core category. This construction is directly related to the research question.

Across several (re)iterations of the grounded theory process is the utilisation of diagramming. For Strauss and Corbin diagramming is central to the coding process reflected in logic diagrams such as flow charts (Strauss and Corbin, 1990, 1998). As a tool denoting the analytical process couched within the construction of the findings in this chapter, there were several reconstructions of the grounded theory presented. Diagramming assists in the management of dense and significant analyses which represented – and was a result of – a stringent and arduous, critical and cyclical process of data analysis and reflection. As the analytical journey developed and the conceptual depth set forward the diagrams evolved and developed too. Diagrams afforded the possibility to manifest the process of generating, exploring, and recording ideas which plagued the writing up stage of this thesis. Thus, the advantage of diagrams in that they allowed a *‘visual representation often [clarifying] the author’s thinking and increases the reader’s comprehension’* (Whetten, 1989, p. 491) was enacted.

5.2 A Grounded Theory Model of Locating Human Papillomavirus (HPV) vaccination in the sexual health of Gay, Bisexual, and other Men who Have Sex with Men (GBMSM)

For clarity, each of the core and conditional categories are summarised thus:

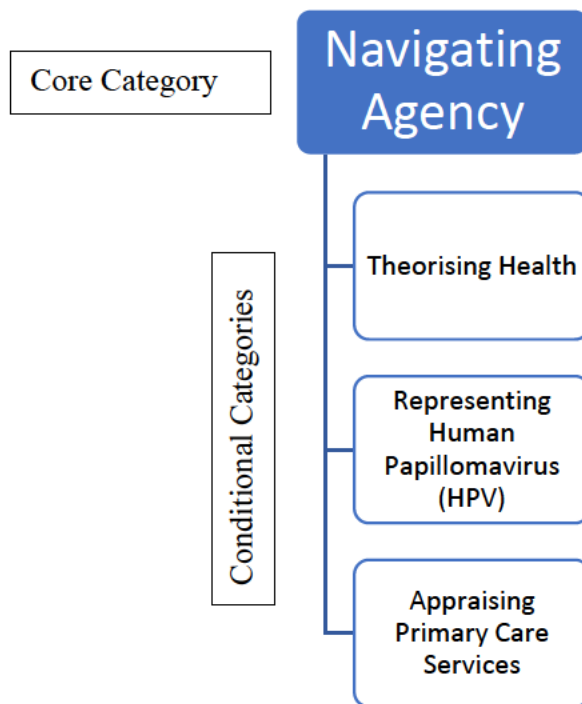


Figure 5.2 A layered matrix model of the primary CGT model

The Core Category: Navigating Agency – this represents participants’ journey of engaging with healthcare and the experiences of brokering control and vulnerability in the navigation of health interventions. This includes

- **Conditional Category 1: Theorising Health**
- **Conditional Category 2: Representing Human Papillomavirus (HPV)**
- **Conditional Category 3: Appraising Primary Care Services**

A model to illustrate the inter-relationship of the constructed categories has been created (see figure 5.2). The model is deliberately designed with the categories outlined in concentric circles to convey the systemic and dynamic processes – rather than linear – encompassing how GBMSM think, relate, and enact HPV vaccination.

This means that GBMSM may be engaging in all processes concurrently rather than consecutively and may be in different stances in the consumption of the HPV vaccine. The data have suggested that GBMSM tend to engage in several positionality and reflexive processes relating to their health regardless of experiencing HPV vaccination. The arrows on the diagram, which connect each of the circles with each other, represent the inter-relationships between categories and their properties.

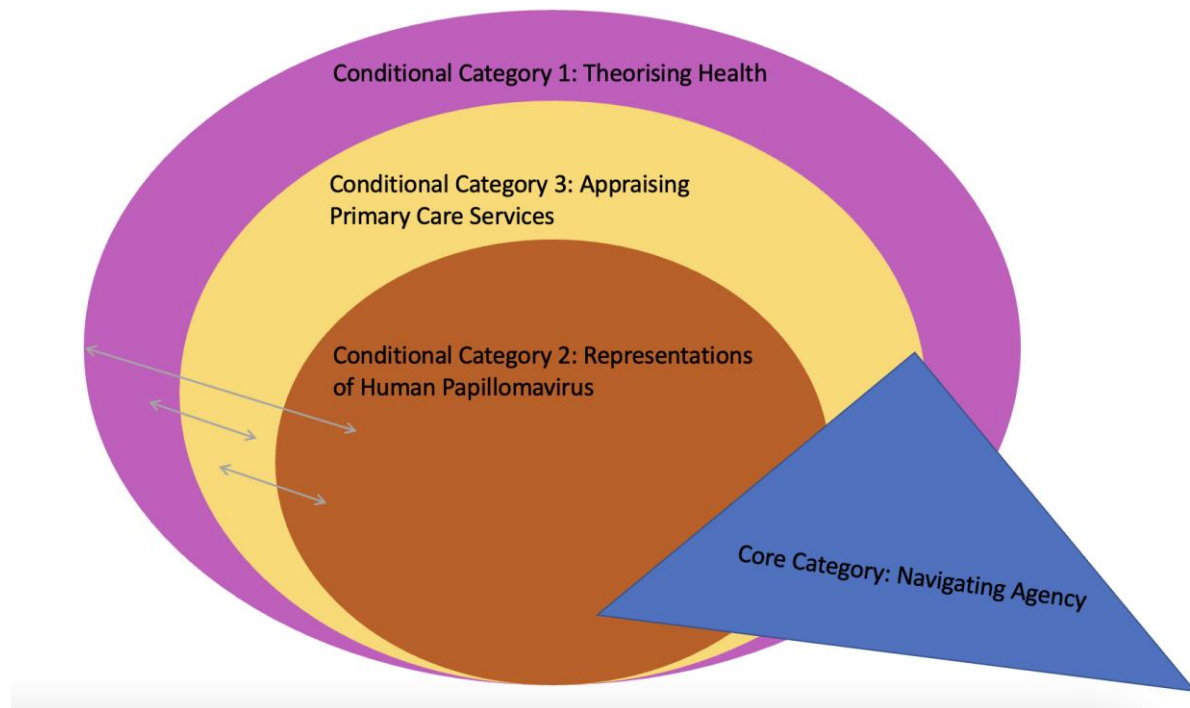


Figure 5.1: Diagram of Grounded Theory

5.2.1 The core category 'navigating agency'

'Navigating agency' relates to the relational processes GBMSM engage in when navigating the clinical presentation of threats to their health (such as HPV) in the institutional setting(s) such as the clinic mirrored with their understanding of the presented threat. This process of reflection, lending control over the assertion of decision making, reflects a social process which strives to achieve a healthy equilibrium when the construction of a threat simultaneously with its prevention co-occurs. Navigating agency' serves as the central mechanism for understanding GBMSM-HPV vaccination from the GBMSM perspective. As a substantive theory underpinning the experience of GBMSM with HPV vaccination, 'navigating agency' necessitates GBMSM organising and navigating a constellation of individual autonomy and self-governing of one's behaviours to reflect upon oneself and their

health constituted within social relations and intertwined with the construction of identity. This core category reflects the feeling of positioning one's understanding of their health and situating this in a new biomedical intervention (vaccination) to prevent a newly articulated threat to health.

The development of 'navigating agency' as the core category, encompassing three conditional categories, emerged from analysis of the data which is central to any grounded theory (Strauss and Corbin, 1998). This core category had centrality in the data as it was pivotal to participants' relationship with HPV vaccination and had variability in that, though conditions vary, the central meaning remains constant. The core category was prominent throughout the data and explained how participants initiate, manage, process, and enact HPV vaccination.

5.2.2 Conditional Category 1: Theorising Health

Foremost, understanding where HPV knowledge and experiences are located within the sexual health of GBMSM must be cognisant of the related beliefs which influence the participants' approach to conceiving health and illness and ultimately the receipt (perceived or experienced) of the HPV vaccine (see figure 5.3)

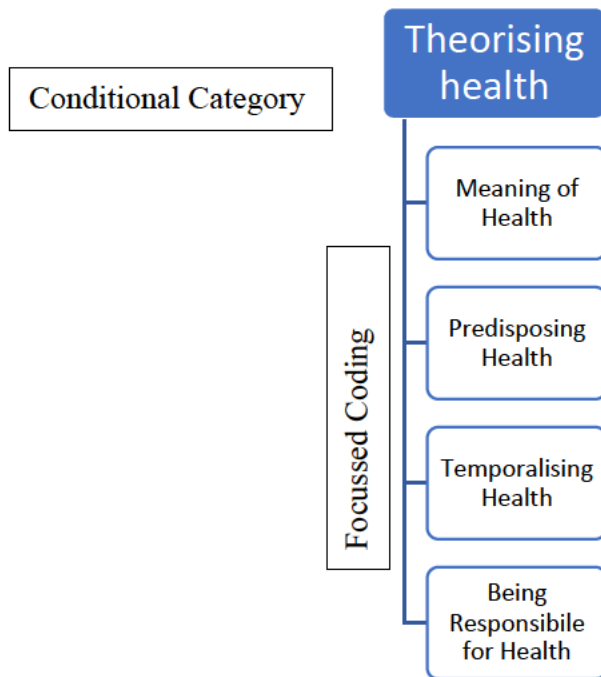


Figure 5.3 Conditional Category: Theorising Health

This is pertinent as definitions of health and healthy behaviours are considered constructs that can be formed and changed overtime. The ways in which the local (in relation to primacy, not geography) “world” of culture in which GBMSM construct their macro views on health and their social location in relation to them was described which provided a theoretical foundation for which their attitudes and perceptions of HPV and HPV vaccination is situated within and plays off. Health amongst participants was couched within capability – the act of being healthy is *doing* something to enact health namely through fitness and lifestyle.

Health and well-being were also perceived from a socio-political context. Achieving and maintaining good health through adopting a healthy lifestyle (with considered practices relative to this) were intrinsic to being a healthy gay, bisexual, or man who has sex with men. There was a sense among GBMSM that health was ever-present in the consciousness of them as LGBTQ+ people (predisposing one’s health). GBMSM appeared to attenuate to several relational processes to their health explored in ‘temporalizing health’. GBMSM also discussed what health meant and the parameters of this involved in ‘multidimensional state(s) of health’ as well as the ‘narratives of responsibility’ relating to maintaining health.

'Theorising Health' as a Conditional Category is borne out of an analysis which considers the ways in which participants thought about 'health' and the properties of 'health'. Data analysis, as outlined below, demonstrates how this conditional understanding of health is pivotal when considering the opportunistic offering of the HPV-GBMSM vaccination programme as a mechanism to engage with 'health'. The properties of health and how they are combined into an understanding of what 'health' is from participants' narratives demonstrates the salience of 'health'.

Moreover, to optimise our understanding of, and opportunities to positively influence, lay GBMSM's health-related behaviours reflected in HPV vaccine uptake, it is essential to understand the health worldviews of GBMSM as target recipients of the vaccine. To understand the processes which influence HPV-GBMSM vaccination this conditional category serves to outline how the concept of 'health' is embedded within a network of health ideas, expectations, practices, and institutions.

The ways in which participants outlined the properties of 'health' was the first conditional category to emerge from the analyses. It represents one of the main theoretical contributions of this thesis. Participants specifically discussed a, relatively homogenous, set of practices related to enact and manifest 'health'. This category began to be constructed after a series of initial codes were compiled from the initial interviews. Using constant comparative method to look for similarities and differences between the interviews, a reoccurring pattern was noticed within the data. I considered what these codes implied. I began to consider and combine initial codes which assisted the analytic direction of this conditional category. Promising tentative categories and conceptual properties began to be manifested as interviewed proceeded. The category 'Theorising health' was constructed from a series of focused codes: 'meaning of health', 'predisposing health', 'temporalizing health' and 'being responsible for health'.

5.2.2.1 Focussed Code: Meaning of Health

As a focussed code within 'Theorising Health', 'meaning of health' focuses on how participants construct definitions of health (and illness). A distinct point in this category is that participants were not asked to examine any illness-specific beliefs and

behaviours related to specific populations afflicted with, or at risk from, a particular illness (e.g., the health beliefs of gay men of HIV infection). Questions posed about health to participants were very open-ended. For example, ‘*what comes to mind when you think of ‘healthy’?*’ or ‘*What does ‘health’ mean to you?*’ (see figure 5.4). Yet, across the interviews, participants often struggled to account for and define what health meant for them:

Interviewer: When you hear the term ‘healthy’, what comes to mind?

P007: “Erm, healthy? [pause] Go into the gym, going out for a run, not eating rubbish. Erm yeah

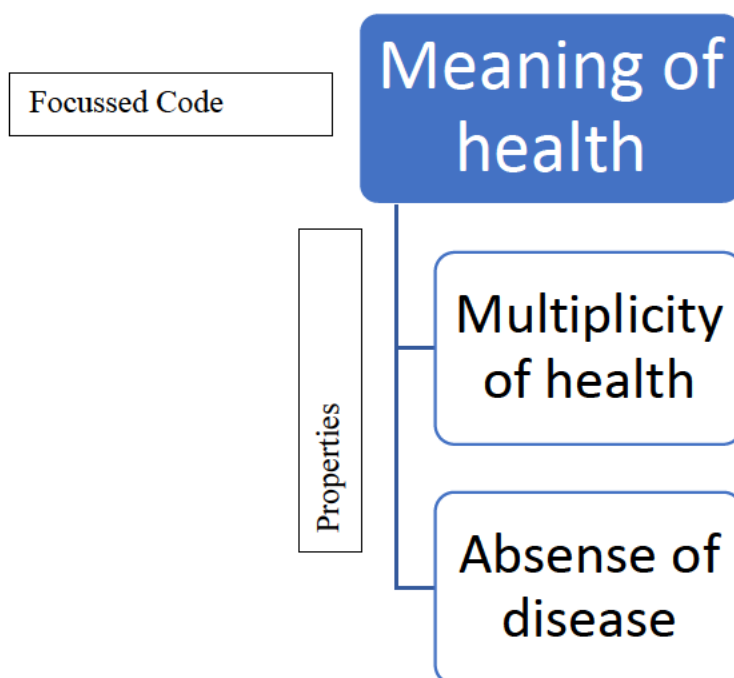


Figure 5.4 Properties of Meanings of Health

Throughout the interviews GBMSM gave insight into their views on health and what health means to them and how health intersects with other aspects of their lives. GBMSM perceptions and constructions of health and illness are presented under the following properties: 1) Multiplicity of Health, and 2) Absence of Disease

5.2.2.2 Multiplicity of health

The theme 'multiplicity of health' occurred most consistently in participants' narratives where they were first considering health and the discourse of its description. For many participants, the body as a manifestation of health was frequently described such as

'arm health...physical health rather than anything else comes to mind' (LB).

Participants often associated functioning at a variety of levels as reflective of being healthy. Some examples provided were what participants felt were normal activities, such as:

'go about [your] normal life' without anything impeding on you' (JB)

Or from participant JW:

"So for me to be healthy is to not become diabetic and be fairly fit, and be energetic and be able to walk three flights of stairs and not be all puffy and not be able to continue with your day."

The ways in which the health served as a function was especially marked by discussions of independence and freedom. The potential for one's health to become unhealthy is therefore marked by measuring the extent to which one can function. As said by HM:

"Having no condition or ailment that kind of stops you from living your day to day life you know to be able to do things with you friends like go for hikes or runs or walks or even play sports and to just be the same as everyone else you know not being the first out of breath or you know singled out as the slowest"
(HM, 24, Gay)

More complex and sophisticated descriptions of health drew in the idea of well-being where some participants accounted for mental-health and emotional states. Perceiving health as a combination of the physical as well as the emotional was also apparent in the interviews. For example, JT described health as the physical

'and obviously mental health important as well, like knowledge knowing your triggers yeah'.

This was extended in some participants that also thought health was also multifaceted. For example, PK considered health to be

'kind of firstly healthy and happy and two is to be physically well I think it has two strands'.

Indeed, the emotional state of the individual was further explored in MW (34, Gay) that said:

"To be healthy [is] to have a good positive mental attitude and taking care of yourself you know things that are basically all of those trying to be as positive as possible avoid things that stress you out and get you down"

5.2.2.3 Absence of disease

The property 'absence of disease' was created to encapsulate the consideration participants afforded to considering their health in a reflection of not being impacted by illness. Although none of the participants reported living with any health conditions, the findings suggest that they have a particular attention to considering optimal health as their physical/emotional wellbeing being impacted. 'Absence of disease' also speaks to some of the responses that participants employed as a way of navigating stigma attached to some health conditions, and to protect themselves from the potential of experiencing stigma-related to health conditions.

The category emerged as initial codes and how these were raised when a consistent pattern, unprompted by participants, considered health as free from illness. For example:

'...not require any medical intervention to be able to independently live and achieve the things [you] want to do' (BM, 29, Gay).

In this view, BM considered their health to be independent of medical intervention. This was similar with SiM who also considered health to:

'not having any sort of sickness or illness that needs to be managed through medication'.

Further to this, participants emphasised a range of (daily) operations considered integral to health and wellbeing such as exercise, eating healthily, taking vitamins, avoiding a poor diet. As JT described,

"It [health] would be like to eat healthy to exercise like maybe once or twice a day or a week to make sure they're going outside every day".

The ways in which the health served as a function was especially marked by discussions of independence and freedom. The potential for one's health to become unhealthy is therefore marked by measuring the extent to which one can function. As said by HM:

"Having no condition or ailment that kind of stops you from living your day-to-day life you know to be able to do things with you friends like go for hikes or runs or walks or even play sports and to just be the same as everyone else you know not being the first out of breath or you know singled out as the slowest"
(HM, 24, Gay)

5.2.3 Focussed code: Predisposing one's health

This focussed code represents participants' system of knowledge relating to their thoughts, understanding, and knowledge of what societal environment shapes the health and their location within it. Data implies that the societal environment could either enable, enhance, or present threats to their health distinct to others. One facet of this system of knowledge is how participants consider themselves about their social location.

Through analysis of participants' narratives some elements of health related to the conditions which shape it were discussed in two concomitant arms: **distinct from heteronormativity and promiscuity.**

The theme predisposing one's health (see figure 5.5) – is a consideration of how participants considered their epidemiological category (e.g. as gay, bisexual, and other men who have sex with men) as way to interact with each other, and previous threats to health considering them at risk. How participants socially organised themselves related to their health is important and is pivotal when considering patterns of health prevention and promotion efforts targeting these.

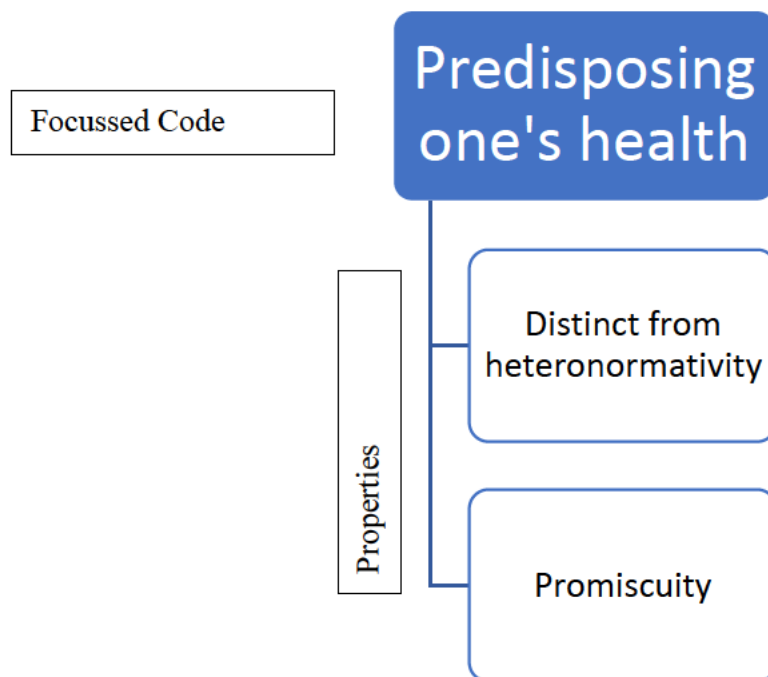


Figure 5.5 Properties of Predisposing one's health

Predisposing one's health focuses on how participants discussed the meaning making of themselves as individuals and co-located within their sexual orientation relative to risk and threats to their health (outlined above). Therefore, popular knowledge, moral reasoning and cultural presumptions that may enhance or reduce biotechnologies must be considered to ground knowledge for their relative practices.

When discussing experiencing the construct of health (as outlined above), the lack of universal pattern of health demonstrated how participants' experiences of health intersected with their social location as GBMSM. The theme of 'predisposing one's health' focuses on how participants accounted for the multiple roles/statuses that they occupy at any given time. For many participants their belonging to identities such as their age, gender, and sexual orientation. These represented social forces and

overlapping systems of influences which shaped participants' perception of antecedents of risks to their health.

As a property of 'Theorising Health', then, 'predisposing one's health' centres upon issues relating to the view of health through the prism of GBMSM identity. From these narratives, participants discussed, with varying degrees, how them being GBMSM positioned their health differently to that of their heterosexual male counterparts. Participants' predisposition as GBMSM is an important, pervasive, narrative across interviews as several GBMSM-related influential conditions were mentioned including: GBMSM drinking more to assuage the prevalence of depression among gay men, heightened culture of capsulised sex, social isolation or being disconnected to one's 'community'.

5.2.3.1 *Distinct from heterosexual population*

The ways in which GBMSM viewed and experienced their health were illuminated through their descriptions of their social location as a counternarrative to the heteronormative dominant narrative in society reflected in 'straight' men (and the perceived construction of how heterosexual men consider their health). These counternarratives of distinctness created an orientation for how GBMSM participants construed their health and different degrees of risk reflected in their identity.

Below, LB, discussed how the casualisation of sexual cultures among GBMSM impacted his view of how he situated himself within this pervasive discourse:

"I think there's a danger of ... exploring quite deeply for that sort of sexual things you enjoy and you like or you put yourself into situations that maybe heterosexual people wouldn't put themselves into as quickly And there's certainly an idea that has the same relationship with the sort of casual nature of sex among gay people and heterosexual people you know they don't really have those forms of relationships but I don't know, I wouldn't think there was that sort of same instantaneous for heterosexual people unlike with gay men you know you can log on to an app that is specifically designed for that and I don't hear that from my straight friends... maybe they use them to get out their

frustrations with themselves which then goes back to how easily you can find yourself in a compromising scenario I don't know you know"

As demonstrated by LB account above, some participants were conscious of how STIs/BBVs were more pervasive in GBMSM when compared to heterosexual men. This brought to attention:

"...yeah you know everyone today can obviously get STDs as well and its quite high rates generally but it's seen more in gay people than straight people don't think about how that different exists how you get the STI you know" (SiM)

Some participants articulated other heightened threats to health for GBMSM compared to heterosexual men:

"...I would say gay and bisexual men are more prone to drinking, because in my experience, mental health issues affect a large proportion of gay men and bisexual men. So, they drink to forget or help. They take drugs to forget or help. They never go and seek help for it though really" (MW)

5.2.3.2 Promiscuity

A clear distinction, then, was made between participants' understanding of the risks attached to being GBMSM in reflection to the lack of shared experience of risk for heteronormative males. Many participants described a normative assumption being made of GBMSM that they are more promiscuous and more likely to have more sexual partners than heterosexual relationships:

"[They] all think that being gay means sleeping with every guy around [SOUTH EASTERN CITY]" (HM)

"Some guys are just really easy and so it makes us all look like we're promiscuous. I'm not. It does get frustrating sometimes having to say you know just 'cos am gay doesn't mean I sleep with more guys" (DL)

5.2.4 Focussed code: Temporalising Health

This focused code refers to the construction of illness as it relates to the transience and temporality of infection in some sexually transmitted infections (STIs) and how this is placed at odds with some blood borne viruses (BBVs) including syphilis. Thus, while internalised conceptions of health (outlined above) were documented in participants' accounts, another central process to theorising health was how participants considered time and the concept of risk and measured this against sexuality and health (see figure 5.6)

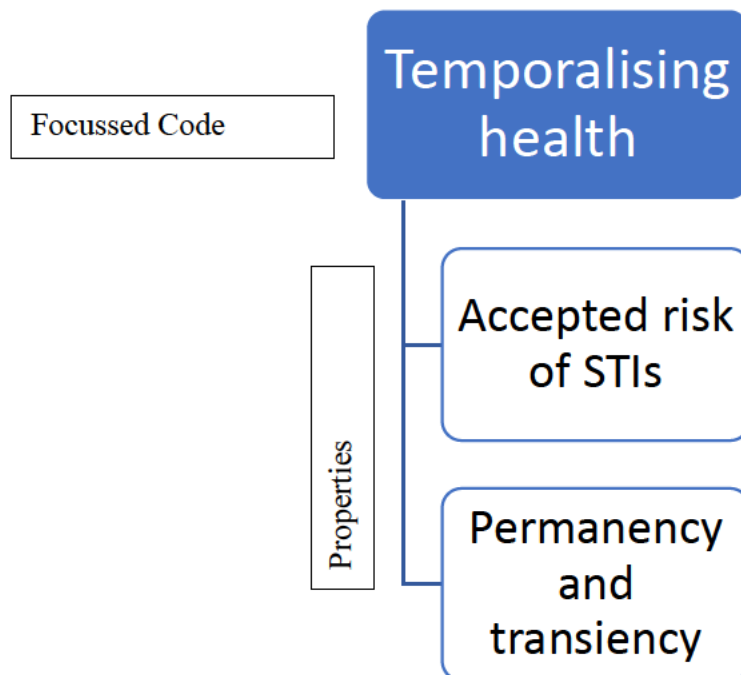


Figure 5.6 Properties of Temporalising Health

5.2.4.1 *Accepting risk of STIs*

Acceptance encompasses a process of coming to terms with a perceived (and real) heightened risk of sexually transmitted infections (STIs) and bloodborne viruses (BBVs) among GBMSM. Participants reported that – through this process – there came a knowledge and a sense of ubiquity that the sex life of GBMSM posed a higher level of risk of STIs and BBVs intrinsic to being GBMSM. BM addressed the notion that the ‘context’ (later considered to be the LGBTQ+ community) offered a presumption of being exposed to an STI/BBV.

“...I don’t know yeah I mean I suppose the context in the context that it’s something that most people will get and potentially get away and so potentially will go away a bit in the same way as kind of herpes” (BM)

“Who hasn’t had the clap [Chlamydia] these days” (JG)

It was reported by participants that acceptance of this perceived susceptibility to STIs/BBVs demonstrated a heightened health consciousness for GBMSM. As KM described:

“I think we [GBMSM] probably worry about it more, I think we probably are conscious of our health more than they are and yeah, ”d go with that... I think that’s because I think there’s a potential that the potential infections that can be contracted more easily through our sexual activities and cause us to be slightly more concerned and I think there’s an educational point around that that’s not necessarily there is just for us to be concerned about I think everyone needs to look after their sexual health and take it very seriously.

Regarding the recognition of STI infection and its perceived heightened prevalence amongst GBMSM, some participants had considered this due to public health promotion messages and the perceived saliency to their health. The internalisation of these messages sometimes led GBMSM to consider each other for presenting and maintaining this risk (as discussed in promiscuity). It also often led participants to consider threats to their health as inevitable, especially if the individual was aware of the risks in the type or sex they enjoyed:

Interviewer: *“Have you ever asked anybody to not engage in a certain type of practice when you’ve previously found it to be putting you at risk of a re-infection?”*

“Yeah and no I mean it’s not like I’ve ever had an infection before I’ve just, like, spoke to them and say “you know what, we want to do this so let’s do this” like before when I had gonorrhoea I wasn’t sure how the guy gave it to me but I had a relationship before that where we didn’t do much like this was gonna happen” (DL)

In some situations, then, the give and take between knowing and risk and the relative inevitability was conscious for some participants. As KM later discussed:

“But I think we perhaps know slightly more and therefore what is slightly more or don’t know enough and therefore make mistakes or act in a way that we shouldn’t and therefore worry after that”

5.2.4.2 Permanency and transiency

The participants’ assessment of the temporality of some threats to health was a constant factor which shaped how they theorised their health in the interviews. Many participants discussed that while STIs may be more common among GBMSM, the implications regarding how long the STI/BBV impacted their health influenced perceived severity. HIV was the BBV which all GBMSM argued was incredibly devastating to their health because of the irreversibility of its acquisition

“Obviously the big one being HIV and any other sexually transmitted infections comes second to that and Chron’s disease is a big issue that nobody talks about too... especially where gay men are concerned to me you have more classic forms of HIV and gonorrhoea and syphilis and those sorts of standard ones if you like I guess” (HM)

The interview data characterised a pattern of reflection and risk stratification in how participants perceived the degree of severity of some BBVs and how these were then compared to some STIs which then were reflective of their overall constructions of health. Some participants shared the perspectives that STIs such as chlamydia and gonorrhoea were low in perceived severity, for some participants, because they could be treated or cured. Since some STIs require an injection or course of antibiotics, such decision making then – as presented by JG – is reflective of wider thinking informed by age:

‘I don’t think it affects [younger GBMSM] as much as it should. For example, in their head there’s a cure for everything almost now when actually there’s not I

mean HIV is not curable its preventable but its only preventable with condoms more so and there's types of syphilis out there that are not curable by tablets at the moment or injection so I think there a bit sort of complacent of everything at the moment... It comes from because you go to the [SOUTH EASTERN CLINIC] and they'll say 'right you've got gonorrhoea, here's a jab to arm or chlamydia here's four tablets take them don't have sex for 10 days' or three weeks or whatever the thing I and then there's just something good to go again"

Moreover, in line with some affective thinking considered in the view that some BBVs and widely STIs are manageable, some participants employed the heuristic in assessing other GBMSM as a vehicle for mitigating permanent and transient infections:

"There comes a point where you can just tell who is who in [SOUTHERN EASTERN CITY] and whether they're bringing more than just what's in your pants into your bed with them" (BM)

5.2.5 Focussed code: Being responsible for health

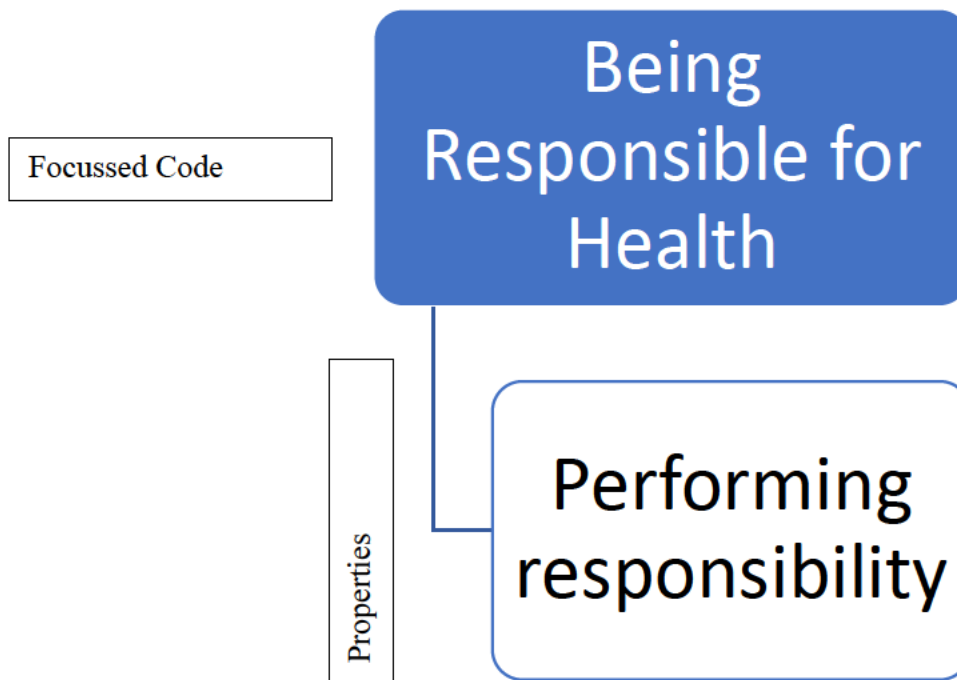


Figure 5.7 Properties of Responsible for Health

A consistent social process identifiable within the data relating to participants' constructions of their own individual behaviours as they relate to their health was the perceived importance of responsibility (see figure 5.7)

Many participants described STI and HIV testing as an intrinsic part of how they maintained their health manifested through knowing their STI/HIV status(es). Often participants cited the recommended HIV/STI testing period of every 3 months as outlined by the British Association for Sexual Health and HIV (BASHH):

"...yeah I go out and get tested every 12 weeks like I should" (KM)

This viewpoint is succinctly captured by another participant who stressed being mindful of risk pre-emptively:

"...Look after myself too like going to the clinic taking responsibility for myself to know what am getting myself into the next time so to speak" (SW)

Clinical attendance, then, to some participants positions themselves as actively being responsible. The imperative of engaging with STI/BBV testing as one mechanism for responsibility is situated in the Self and moralised as doing the right thing by engaging with their health.

“You can’t wait for symptoms you gotta go out and get tested or just not sleep with guys cos then you’ll get something” (JG)

The consumption of STI/BBV testing is then a manifestation of health one should be buying into, and practising given the predisposition of STIs/BBVs among GBMSM considered (and outlined above). Accounts of STI/HIV testing were framed within an ethic of care in which one should assimilate into a healthy lifestyle for themselves and for potential sexual partners in the community. As PK explained:

“I didn’t get tested as much as I should but since breaking up with [BOYFRIEND], I don’t know, you don’t want to be that guy thinking back on what you could’ve done before you got something”

Some participants described engaging with testing services as a responsible action because it was an established collective responsibility:

“In the gay community very much think it’s [sexual health testing] just standard practice. And I suppose I do, ”I’ll say ‘hey, get down and get tested’ Because I know I give [FRIEND] grief sometimes and [they] do go eventually when it comes to it and we all forget we all forget to go or don’t feel the need to ‘cos we don’t have any symptoms.” (LF)

Other participants noted personally engaging with BBV/STI testing without symptoms as the status quo and considered considering them being GBMSM within a shared community:

“and it’s up to all of us to make sure that we know that’s going on with each other’s health, to that degree, and our own health. If you’re thinking we’re being

responsible people, because having any sort of STD or virus just makes life a little bit more horrible” (JT).

5.2.6 Summarising Theorising Health

Across this conditional category, a perceived health consciousness routed in participants' identity as GBMSM and couched within health promotion messages and the context of their health being impacted by – and having the propensity to impact – other GBMSM health is explored. However, participants have divergent experiences both direct and indirectly shaping assessments of threats to their health which is informed by how long they may suffer from such a health threat. At the same time, the definitions of health considered by participants are reflective of pervasive health promotion messages of health and/or experiences of illness or the absence of disease. GBMSM reported generally feeling like the construction of their health were rationalised and – through considering what they are at risk of by being GBMSM – was constructed reflecting their social location.

5.2.7 Conditional Category 2: Representations of Human Papillomavirus (HPV)

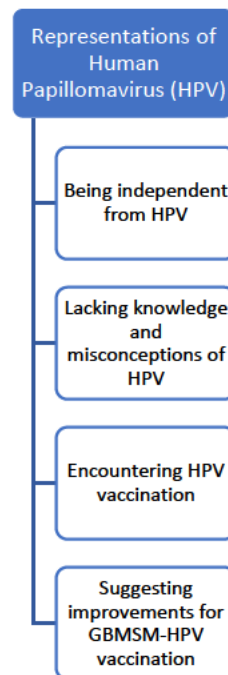


Figure 5.8 Conditional Category: Representations of Human Papillomavirus

The conditional category 'Representations of HPV' (see figure 5.8) was developed to consider knowledge of how GBMSM perceived HPV infection; their understandings were constructed based on their interactions with, and meanings of, the social world related how they – as GBMSM – navigate its relevance and relevance to their health. Accordingly, GBMSM presented considered, distinct, views, beliefs, and meanings related to HPV and HPV infection. This considered why it is a problem for female populations and not themselves. By examining these perceptions and beliefs, the proposed conditional category provides an explanation for why GBMSM present high degrees of informational needs related to HPV, HPV infection, regardless of vaccination status.

Within this study, GBMSM constructed their views of HPV and HPV infection based on their understandings and meanings they ascribed to social systems and institutions such as the NHS and their schooling experiences. HPV infection was not viewed merely as a health threat or an infection. GBMSM views towards HPV and HPV-related infections and cancers were closely linked to socially constructed perspectives of themselves and the distinctness of being GBMSM, what degree of independence from

some health threats this afforded such as pregnancy, which strongly influenced their perceptions and relationship with perceived female-only issues.

HPV infection and associated cancers were not recognised by GBMSM as a health issue pertinent to them. Nearly all participants referenced being surrounded by the HPV vaccination programme implemented from 2008 where school-aged girls were being vaccinated against HPV. Hence, participants did not see any reason that they should be at risk of HPV and associated infections, or how HPV could be linked to their health.

Gaining a detailed understanding of the meaning of HPV and HPV vaccination from GBMSM perspectives helps us understand why GBMSM are unaware or less aware of HPV and its associated infections. This understanding may also explain why, as the emerging research demonstrates, despite GBMSM having little understanding of HPV and HPV vaccination, GBMSM are likely – or readily – to accept the HPV vaccine. Accordingly, the following sections focuses on the understanding of HPV and HPV vaccination through the perceptions and experiences of GBMSM and how the process of how they came to understand it relevance to their health.

5.2.7.1 Being independent from HPV

In almost all interviews, the notion of being independent or removed from HPV infection (and associated sequelae) emerged. Participants described a low understanding of how HPV impacted the health of men and of GBMSM specifically. Many perceive themselves having never discussed HPV with other men or GBMSM. By not talking about HPV, it was inferred that infection was not something that impacted the lives of men. Thus, not talking about HPV and its relevance meant that the potential for infection (and its consequences) was not occurring. One participant discussed this separation:

“I think it’s because like, they [school setting] made it such a big hype that the girls had to get this [vaccine], because obviously, not obviously but girls would show off that this fact they were getting this jag in their arm, maybe tears in the hallway and things like that, because they had to get this vaccine, they were

scaring them to be like, 'you could get cervical cancer if you don't get this vaccine' and this probably made some others just think that, oh, it's just a girl's thing kind of thing. I's not-- I think that a boy shouldn't have to worry about like, they didn't say that HPV at all"

Another participant also discussed the school setting fostering a degree of independence from HPV vaccination for boys:

"Possibly because due to teenage girls get it when they're at school so I think I remember that happening when I was at school and I think it was probably more an emphasis on girls being immunised and so I think and then the boys would get, like, we have a bit of time that you get your TB jag in school and then that's all happened at the same time so I think that age then that is predominantly a woman that receives the vaccine not boys" (JW)

A third participant illustrated the last of relevance demonstrated through a female-only vaccination programme (mainly through high schools) that left them thinking they – as GBMSM – were independent from HPV infection and HPV vaccination:

"I know it's related to sexual health... not a lot of people know about it I don't think or it's just like not misinformation but you hear that they cannot abbreviation or acronym of HPV but I don't remember ever being really told about it in school, but I don't know much about it" (HM)

Indeed, another participant extended this lack of understanding from a school setting across their lifespan to present:

"...there was no-- there was no real information anywhere that I was exposed to that told me to go in start that process [of vaccination] and before the nurse spoke about it no one shared any information on it and that goes into going from high school to going to college to going to university it wasn't something that was spoken about" (IM)

In these excerpts, participants interpreted from their lack of inclusion in the implementation of HPV vaccination and wider discourses rationalising the provision of the vaccine for women only that the HPV vaccine were not important. These institutions did not stress the need for them to consider the relevance of HPV to their health. Was it important in recognising the ways in which HPV was conveyed to the wider public is the lasting internalisation of HPV being a health issue for women. By identifying HPV vaccination as a prevention for cervical cancer, the connection of HPV to anogenital cancers and the health of men is reflected in the lag of corresponding perceived independence from the virus.

5.2.7.2 Lacking knowledge and misconceptions of HPV

As outlined in the 'Being Independent from HPV focussed code, the lack of perceived resonance among participants relating HPV to their health sets the platform illustrating a considerable misunderstanding that HPV (and vaccination against it) is equally important for both males and females.

Many participants spoke about their observations of the general lack of awareness amongst themselves and of the wider GBMSM community in relation to HPV and HPV vaccination. As one participant stated that some of the confusion the mode of transmission or HPV stemming from a lack of discussion in the school setting:

“Yeah, so that’s quite an interesting one cos I didn’t-- I never knew much about that [HPV] when I was young actually. So, when I first was getting it [the vaccine] like in 2018 that’s when it came back to my thinking you know you don’t really think about things like that because from what I remember is we never really talk much about it as any sexually transmitted infections or STD I know everyone’s at risk of HIV, so ’ve read and read up against that. So, for me I know HPV can be sexually transmitted but it may not be as well so you can’t necessarily see a risk from a sexually transmitted activity” (DL)

For some participants, the knowledge of HPV was purely limited to conceiving it as a sexually transmitted infection:

Interviewer: "When you hear the term HPV, what comes to mind?"

Interviewee: "*A sexually transmitted infection...I know that it's a virus that is potential dangerous not particularly serious but can be serious in certain circumstances*" (BM)

Other participants were aware of the relevance of HPV and genital warts:

"I instantly think of genital warts and also, I think warts in general, like, I don't know if it's related, but I always think of like, verruca. And, yeah, stuff like that" (SM)

Knowledge of HPV – couched in its symptoms – did vary among participants. Some participants, like AR, had a greater knowledge of HPV impacting men and women:

Interviewer: "*Could you describe what your understanding of it [HPV] is?*"

Interviewee: "*So I know that in men, other than the fact that, it can be fairly asymptomatic, and yet when you have it and you don't have any symptoms but symptoms that you might find are at warts so genital warts like you know peanuts or whatever and then I think in women it's the same but in women it can also cause like cervical cancer or something like that and then in men I didn't really know much else*"

Accordingly, participants had confusion surrounding the ways in which HPV is transmitted.

"I didn't realise I forgot it was like skin to skin, which is pretty nuts" (JG)

"I didn't even think about how it was how it's how it spread but the fact that it's just like warts you know essentially your skin to skin contact is not surprising but the surprising thing is that it didn't come to my mind when I was thinking about it" (AR)

5.2.7.3 Focused code: Encountering HPV vaccination

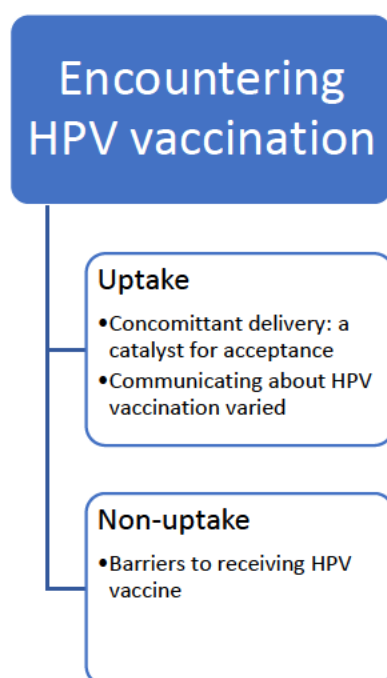


Figure 5.9 Properties of Encountering HPV Vaccination

A primary finding of the experiences of participants in this study was the omission of actively seeking out HPV vaccination (see figure 5.9). Participants in this study did not discuss engaging with HPV sources of information prior to being offered the vaccine in the clinic setting.

Most of the participants who recalled being offered the HPV vaccine began their narratives from similar perspectives, articulating that HPV vaccination was not something that they had been aware that they were eligible for before encountering being offered the vaccine. All participants in this study were accepting of the HPV vaccine. In this manner, this was the explicit mention of having intent to receive the HPV vaccine, having already received one of the doses, or statements that vaccination made sense and were conceived as worthwhile or if a healthcare provider were to recommend being vaccinated, they were likely to be vaccinated (indicating intent). Important point here and one that came up earlier related to accepting of health professionals and treatments from health professionals

5.2.7.3.1 Uptake

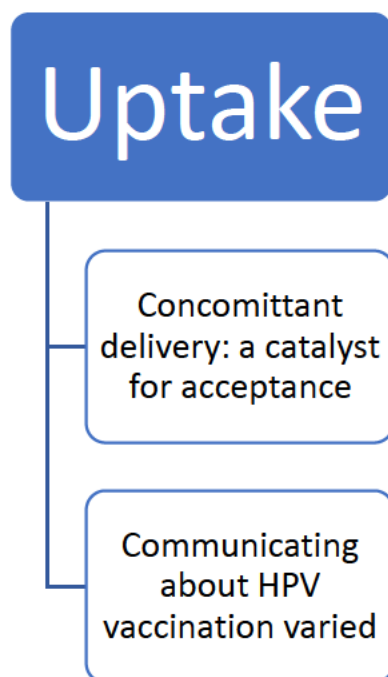


Figure 5.10 Properties of uptake

This subcategory presents factors that are grounded in participants' experiences of HPV vaccination and considerations, or views expressed by participants that could facilitate vaccination (see figure 5.10)

5.2.7.3.1.1 Concomittant delivery: catalyst for acceptance

When analysing the narratives of encountering HPV vaccination in more detail, participation in sexual health screening, seeking out PrEP were described as an opportunity to receive the HPV vaccine, accompanied by the relief that participants were being tested for STIs. While the accessibility of the HPV vaccine was not something participants were aware of, for those who had received the HPV vaccine, all expressed acceptance and commitment to completing all vaccines scheduled. For example, SiM:

"...so I actually hadn't realised that they were offering it to men who had sex with men before that so when I went in for one of my routine sexual health visits where I was getting a full suite of tests and the health care professional just asked me at the time if I would be willing to receive the HPV vaccine. Obviously,

I had known up to that point about the whole you know girls getting vaccinated for it and the sort of cancers that it could be linked to at the time and because of what I studied I understood that it was also linked to prostate cancer and things”

The timing of the HPV vaccination dosage schedule also aligned closely with the provision of other sexual health interventions such as PrEP for PK:

Interviewer: *Just to unpack that a bit more then so when you were offered the vaccine, could you run me through that process?*

Interviewee: *So I went in for a routine sexual health test and I had a discussion in relation to PrEP I buy my own PrEP so they were like would you like me to and carry out a routine test on your kidney or liver whatever it is they do for PrEP and then they said I see you not have HPV vaccine and it’s something that we’re offering today to men who have sex with men would you like that*
[PK]

Engagement in HIV prevention contributed to the receptiveness of JW who also described the process of seeking PrEP informing HPV vaccine receipt in the clinical encounter:

“So I went along for sexual health screening, just a general one and then we were talking about all the things that I was being consulted for considered for PrEP so then that then brought about the fact that I had a lot of, or not a lot of higher percentage of partners and having unsafe sex, which put me at higher risk or the need for PrEP and then she mentioned the given the HPV the sort of under 45 thing, she recommended that I should do that” [JW]

Concomitant delivery was also interpreted as a facilitator by JB:

“...If you’re already talking about somebody how they can prevent HIV you can obviously bundle that in at the same time saying while you’re here why don’t you get this vaccine it prevents this disease and nice benefits yeah, I think it

makes sense to do to offer as much protection as possible as a single point because gay men only really want PrEP these days”

5.2.7.3.1.2 Communicating about the HPV vaccine varied

There was little remembered by participants relating to the content discussed in being offered the vaccine by healthcare professionals. Some participants expressed the idea that information was very little, including JT.

“Erm not really no, I can’t [remember]. I know that they said it was a good idea because like, HPV can obviously lead to other things, but I don’t think it leads— - I can’t remember. No, I can’t remember what they said.” [JT]

“”d also say the person who gave it to me didn’t really inform me that much in relation to what it was other than as a gay man we’re offering you the HPV vaccine” [PK]

Some participants indicated that the healthcare providers did discuss in greater detail the process of being vaccine:

“The journey [of vaccination] was a lovely nurse, and in [CLINIC NORTH EASTERN SCOTLAND] who was very excited to know that I had not had the vaccine but was happy to get it and along with other vaccines for other STIs STDs and so she gave me the me the pamphlet at the time, ran me through the course of treatment and before I knew it my arm was in a little sling and getting the injections” [KM]

Some participants recalled a discussion focussing on sexual contact and the risk of skin-to-skin contact at risk with other sexual behaviours serving as a mechanism for highlighting the transmission for HPV:

... I was asking about PrEP at my local GUM clinic, which is the [CLINIC SOUTH EAST SCOTLAND]. And she said, have you ever had it [the HPV vaccine]? No I says I thought it was primarily for women and she’s all know now we offer it to everyone who has multiple sex partners obviously I’ve just gone

through how many people I've slept with protected and unprotected obviously you can get it [HPV] through skin to skin condoms and so condoms won't work so the best prevention is vaccination so she offered me a series of three injections I've had all three. [MW]

"Yeah they say to me because, because, of like you're having unprotected sex then it's going to come you're going to come into contact with it because its skin to skin contact so obviously there's a high chance I can be exposed to genital warts and sorts etc so this is it like if left untreated that can cause serious complications so for me I was happy to obviously have it cos of the long term complications that can cause so I said I didn't know anything about that to her and the complications about the vaccine can leave you can quite sore it did actually sting a bit so I was dumb for about two days and then she's like you'll have to come again because this is only the first dose and have to repeat to be fully protected so I went back again October then January" [DL]

In discussing the HPV vaccine, some participants describe how healthcare providers brought up other vaccines in recommending the HPV vaccine:

"I think it was textbook play. And given that hepatitis B, that I either had A and B or C or whichever kind of one it was and yeah, it was fine. Just got offered at once and haven't been for a check-up. And that was fine" [LB]

"And because I'd already done and was happy with the Hep B vaccine, it was kinda like the next thing, or the one of the few things that I should do that I hadn't considered or done already" [JW]

5.2.7.3.1.3 Non-uptake

Non-participation in HPV vaccination was often not considered as a conscious decision due to lack of knowledge uncontrolled or unknown concerns or issues relating to HPV (see independence from HPV).

5.2.7.4 Non-attendance

The reasons for non-uptake focussed on the clinical setting of sexual health services which were discussed practically and temporally. For example, from BM who has not received the HPV vaccine:

“Yeah I think I think potentially there could be my perception would be you would have yeah my perception would be that you’d have to be fairly comfortable in that environment and comfortable with yourself to be interacting with that place and perhaps if you slightly or if you were on the sensitive if you’re on the fringes of being comfortable with yourself you might not you might say I’d be a very different atmosphere to being offered the vaccine in a school setting if that makes sense”

Exposure to HPV vaccination was also considered by JB who cannot recall if they have had the vaccine:

“Well, it’s difficult to suppose if they’re only offering it at clinics that in itself is a limitation of offering the vaccine”

The decision-making process to participate in sexual health testing/screening is temporally bound because of the participants’ lives. The decision to go for testing, and be exposed to HPV vaccination, was also time constrained and identified as a barrier.

“The one clinic in [WEST SCOTLAND] you’ve got very limited teams, you can only actually go like very early Monday morning and that is it for the week like when I went I think if it was more readily available with more teams throughout the day that would coax more people into going also the fact that sometimes people you know it’s a bit taboo still to talk about your sexual health or like to want to go and sit in a room with a bunch of other people who are going to also be tested I think it’s a bit nerve wracking for somebody to maybe put in like a situation with a nurse because sexual health and actually being able to go to the appointment I would just rather come straight go to one with a person rather than like sitting with different people and what not”

These results can be considered in reflection of the non-habitual testing or lack of internalisation of guidelines regarding STI/BBV testing [ergo, not being exposed to being offered].

5.2.7.5 Focussed code: suggesting improvements for GBMSM-HPV vaccination

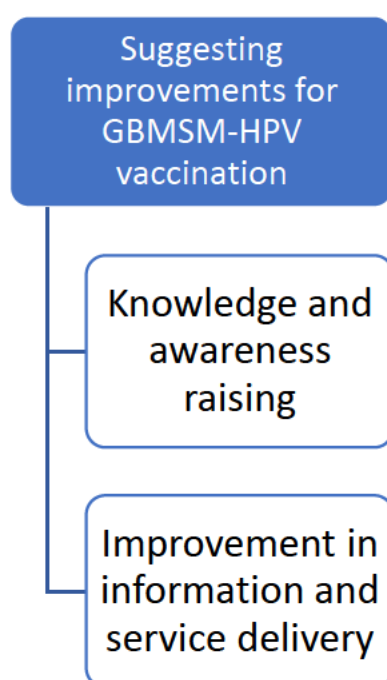


Figure 5.11 Properties of Suggesting improvements for GBMSM-HPV vaccination

Suggestions for improving GBMSM-HPV vaccination centred on mechanisms for disseminating information conveying the risk HPV poses for GBMSM and the format of these campaign these efforts (see figure 5.11)

5.2.7.5.1 Knowledge and awareness raising

All participants, stemming from a consistent perception of a lack of relevance between GBMSM and HPV, felt more could be done to improve awareness and help GBMSM receive the HPV vaccine. Participants expressed ideas and suggestions about improving perceptions and uptake. Indeed, as KM outlined:

“I think there needs to be there needs to be regular campaigns to the general public about looking after their sexual health I mean there needs to be comfortable looking after your normal health because we put so much time into

promoting and healthy living and exercising and eating well whereas we don't necessarily for sexual health and it's just as important and so it deserves the same airtime as those other areas"

Social campaigns for GBMSM-HPV vaccination needed to be implemented as JT considered:

"HPV is not probably talked about like enough I don't see much in advertisements and 'like you should get tested' and 'you should get this vaccine' is it's not advertised at all. "ve not seen it anyway" [JT]

Therefore, as social campaigns were considered an important awareness-raising tool, awareness in the form of community engagement was considered.

"I would say that in the community we need to have more of an awareness about it and if it's specifically something within the gay community, you know, and then when we're at GUM clinics, for example, have posters of it you know have graphic posters of genital warts, you know, 'are you vaccinated?' and get people thinking about what the vaccines actually for" [PK]

Indeed, the considered dichotomy of HPV and HIV also appeared when considering ways to empower and educate GBMSM to getting vaccinated, as JW describes:

"I can only gauge on how I become aware of other things and so in bars that I frequent then there's posters about HIV and like and yet the yesterday in the bar it was interesting how over the years HIV this stigma and even the way people react to it has changed because in the poster says you can't get HIV from a positive person provided they're controlled by their medication, etc. Whereas the posters before that were quite unique to get tested loud, I usually go so I think the posters are quite effective in the gay community against you know you're not going to catch everybody by at least a few if you're out I gay or bisexual man or whatever, then chances are from going to a gay bar or saunas or whatever then they might see a poster"

Providing information on HPV and HPV vaccination through social media (including Twitter, Grindr, Facebook) were considered as participants considered the reach these mechanisms must reach GBMSM:

“I think honestly it would just be social media social media is a major thing and you see the adverts on for example Instagram and Facebook i”s more Instagram you’ll be flicking through stories and that will come up with an answer that something I think more awareness on social media is needed” [SM]

5.2.7.5.2 Improvement in information and service delivery

Some participants were sceptical of having a targeted GBMSM-HPV vaccination programme as it required attendance and a dependence on sexuality disclosure, as SiM considered:

“I think it’s quite challenging because you you’d expect that gay and bisexual men sort of admit that they’re gay and bisexual and so there’s a suite of the men who have sex with men community that are completely missed in that vaccination programme that specifically requires them to admit that and it would, it would be something if I were in control of blanket and a vaccination programme in in the leaflet that you’ve just shown me, it specifically stated in one of the sentences that it’s best to be vaccinated before sexually becoming sexually active and so I would probably do a similar programme to what was done originally where you know younger girls the age of 14 were vaccinated with HPV while they were in school”

As an extension of the discussions moving the vaccination programme from being targeted for GBMSM, JT recommended:

“It should be just mandatory like if you’re getting if you’re there every three months to kind of obviously you can’t you can’t actually make vaccines mandatory for people like that. I”s their choice if they were to take it or not but to kinda like probably talk about it more to even opt it to just anyone that any

man any gay man or any straight man that comes into the clinic to get tested you know 'here's a pamphlet' do that 'I highly recommend you do it, do it now'

The notion of coming out as a means of addressing specific healthcare needs while reluctant to do so was further reflected by IM:

"The world has changed yes but my coming out process has been really tough for me I started to experience feelings when I was younger but I'm still not comfortable in myself but I needed this [HPV vaccine] I would have to get comfortable telling a basically complete stranger"

The content of the information recommended to be used in the future was also important to participants. Participants felt that information needed to relate HPV to both men and women regardless of sexual orientation/identity. Some participants considered messages that outlined the scary nature of HPV-associated infection including PK:

"you know, the smoking adverts, you know, to scare you into stop smoking kind of have something that's visually there that makes people think that Yeah, I want to get vaccinated against that"

In terms of service delivery, suggestions included encouraging uptake by providing the HPV vaccine in other settings to improve access to the vaccine such as appointments in GP services, more drop-in services. Other suggestions included having greater availability in community testing clinics outside of NHS premises as well.

"I suppose most people will be attending the sexual health clinic because they've got a reason to go there so perhaps you're, you know, you're, you're, yo"re appealing to your target audience? And, perhaps more so... but yeah, I mean, it would be great if they had it in other areas, if, you know, we went to the doctor and got, you know, the average GP but I imagine it probably boils down to money, and staffing, and there is things" (SW)

5.2.7.6 Summarising Representations of Human Papillomavirus

Across this conditional category, the perceived relevance of HPV and the meaning GBMSM associated with it and HPV vaccination was analysed. Analysis presented a constellation of conditions which limit the place of HPV in the understanding and meaning of health and engaging with health promotion materials relevant to threats to GBMSM health. The conditions of provision were further scrutinised in the analysis revealed while knowledge and awareness may be low, these do not necessary preclude the acceptance of the HPV vaccine among GBMMS. Demystifying some of the misconceptions regarding HPV and its impact on GBMSM health as seen from participants' perspectives require new innovations to cut through and disseminate the relevance of the vaccine.

5.2.8 Conditional Category 3: Appraising Primary Care Services

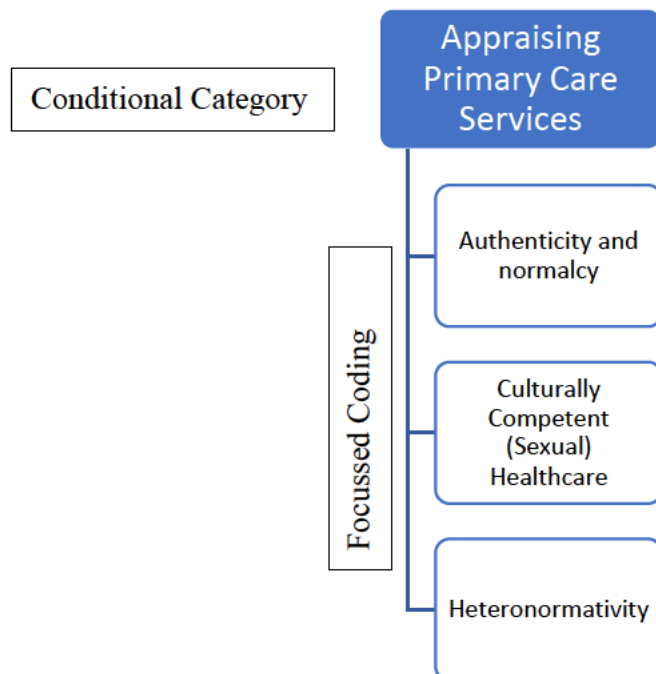


Figure 5.12 Conditional Category Appraising Primary Care Services

The conditional category ‘Appraising Primary Care Services’ relates to the ways in which participants experienced areas of social epidemiology including the nature of GBMSM sexual health engagement regarding the physical and social context of where sexual health promotion and reception takes place. This includes interpersonal process that influenced thoughts, feelings, or behaviours related to sexual health services (see figure 5.12). The key insight from this category was that **experiences of authenticity regarding sexual identity influenced participants’ engagement with primary care (sexual) health services**. The multiple properties this category arose from questions related to the perception and experiences of sexual health and GP services (appendix 12). Participants spoke in-depth about the role their sexual identity played. Similarly, there was a focus on the services and the contexts they present reflecting instances of inclusivity and exclusivity (through heteronormativity). Three properties were constructed and were coded as the following:

- Authenticity and Normality

- Culturally Competent (Sexual) Healthcare
- Heteronormativity

5.2.8.1 Focussed code: Authenticity and normalcy

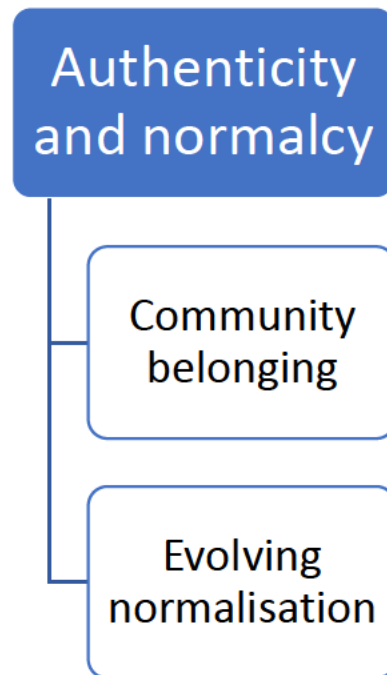


Figure 5.13 Properties of Authenticity and Normalcy

5.2.8.1.1 Community belonging

Several participants discussed the implicit ubiquity of sexual health services among GBMSM as a community (see figure 5.13). This related to the sexual health service's ability to empower individuals to explore, and disclose, their sexual orientation with sexual health service healthcare providers. This manifestation of authenticity regarding their sexual identity/orientation and behaviours allowed GBMSM to engage with sexual health services more readily:

"It's just something we do – I think it was one of the first places I ever got an STI test and have been going back every couple months for years and years it's a given really" (LF)

Some participants who lived in more cosmopolitan, urban, areas described a set of practices that allowed their sexual health engagement to be synonymous with a set of practices associated with the gay life of that geography:

*“Going to [CLINIC] is something that [SOUTH EASTERN CITY] gays do”
(Participant??)*

“I mean it’s like what [SOUTH EASTERN CITY] is known for: [NHS Clinic] and [Community clinic] where you just go and can almost see the say guys at the bar you know” (JB)

5.2.8.1.2 Evolving normalisation

The normality of seeking out information or engaging with sexual health services related to one’s sexual health needs provided an explanatory insight into how GBMSM developed a sense of acceptability that contributed to understanding their health. This was demonstrated in GBMSM narratives. It was evident participants were aware of the location and services provided and construed sexual health services as ever present:

“You know you’ve got [EDINBURGH SERVICE] or [GLASGOW SERVICE] you just find them whenever you move about everybody knows of them” (LB)

*“...I suppose accessibility fear not fear yeah, accessibility I suppose and the kind of maybe slightly clandestine nature of [sexual health services] kind of”
(BM)*

However, while knowledge of services was observed in participant narratives, this did not always equal attendance. Some participants made this distinction:

“...yeah, I’ve known about [EDINBURGH CLINIC] but you know you get into a relationship and you don’t sleep with anyone else, not going out to clubs to pull anymore and you’re just sorted so don’t go” (PK)

Participants’ narratives established a shared built understanding of the pervasive buy-in of sexual health services among LGBTQ+ people. This is key as the perceived normality of sexual health service engagement was demonstrated to be a driver in establishing a pattern of behaviour engaging with services. Participants noted a strong norm in their social circles that indicated high degrees of awareness and engagement with sexual health services. Consistent use of services was evaluated positively among participants:

“When I first moved to [CITY IN NORTHERN SCOTLAND] it was my friend who took me to the clinic because I tended to just get tested back home when I didn’t know as many people up here now” (SW)

“Yeah, I didn’t know where to go so after googling I asked my friend ‘hey it’s a bit awkward but do you need to go to [EDINBURGH CLINIC] we could go together” (DL)

This reflected the perception that engaging with sexual health service had become normalised among participants through the assessment of other LGBTQ+ people’s behaviours being a powerful psychosocial influence on participants’ engagement. Therefore, this dimension of sexual health services being socially approved by LGBTQ+ people in the abstract by participants represents a widespread belief attributing LGBTQ+ identity synonymously sexual health service engagement.

The perception of readiness to engage with sexual health services seen through the lens of one’s sexuality often continued to relate to how GBMSM discuss sex and sexuality. Many participants discussed the social context of sex and sexuality often citing social media, or in LGBTQ+ venues such as bars, and saunas and as a matter for the ‘community’ at large. This resulted in discussion(s) of sex being considered as an approachable discussion for many GBMSM and a mechanism for learning about alternative forms of sexual expression and in reflection of this being tested for

behaviours related to their sexual activities. Most participants gave reasons for this socio-cultural consideration, such as LB that stated:

“Sex is everywhere you know we see it now in films like Brokeback Mountain or on Skins and I’ve even thought ‘oh what’s that’ and then my friends have also watched that show with the thing I’ve not done so then we talk about it and what we think about it and I’ve not really felt weird broaching talk about things like snowballing [laughs]”

This discussion represents how some GBMSM are prepared to instigate or discuss sex if the opportunity come about. When these discussions did occur – be that through experience or the media – these discussions served to provide support and advice allowing a greater understanding of their own and of other’s sex lives (and the potential risks involved).

The opportunity to discuss sex in a social context was further framed in a discussion of contemporary, pervasive, societal attitudes to GBMSM and their sex lives. Couched in discussion surrounding the temporality of attitudes by – and toward – GBMSM and sex and sexuality, participants constructed the notion that the societal taboos experienced by previous generations or in previous decades were diminished and the community continued to reap the rewards of LGBTQ+ liberation which facilitated an openness discussing sex:

“My boyfriend is about 8 years younger than me and when we both went to the clinic was so so different. I journeyed to another town to get a test back in the 90s so my dad didn’t see me down [CITY IN NORTHERN SCOTLAND]. I led a very conservative life back then and [BOYFRIEND] can’t even think of what that is like.” (JG)

The positionality of sexual health services in the lives of some GBMSM, then, is complicated by the socio-political position of GBMSM and the perceived/experienced adversities experienced over time. Therefore, considering the social acceptability of sex and sexuality, thus, cannot be ignored from the myriad of factors which may play a role in the degree of identity authenticity experienced by GBMSM which facilitate

how comfortable they feel in engaging with services related to the sex and sexuality they occupy.

5.2.8.2 Heteronormativity

Participants discussed the role of (perceived and experienced) discrimination as a facet informing their engagement with sexual health and GP services. Some of the participants' narratives discussed experiences of mistreatment by health professionals, including feeling judged for the 'lifestyle' they discussed with GPs and/or being considered deviant because of the sex they reported. The potentiality for an adverse clinical encounter was noted by one participant:

“I was talking about a problem I thought I had. I thought I had genital warts. And he was all that I can only happen if you're a gay male who has gay sex. ”m like what I am gay. And he had slightly startled look on his face that he moved his chair away. And I didn't like that and actually filed a complaint against him. I thought it was unprofessional, whatever personal feelings he has. That shouldn't affect the way he practices medicine.” (MW)

While experienced incidents of discrimination due to being GBMSM were infrequently discussed, the perception of their potentiality was felt amongst nearly all participants. These incidents were compounded by discussions surrounding the relationship between GP and them as GBMSM patients. Disclosing one's sexuality was therefore a principal practice for manifesting their health needs in the GP context. Participants discussed how the change in nature (heteronormativity in GP services compared to sexual health services) cultivated an unease of being openly gay to the healthcare provider:

“I think with GPs it's kind of like a family run business kind of way like it's you've went to your doctor for years you know your parents or your grandparents that kind of thing so maybe it's like talking to a family member you wouldn't want to disclose that so I think it gives their anonymity and i's your own privacy you don't have to have to disclose to someone that you know and that potential is you know regular basis” (HM)

As context for potential heteronormativity, one participant discussed how their experience of the GP service perpetuated their experience of heteronormativity through the questions the healthcare provider asked:

“You know it’s just the simple stuff they don’t get right. Like they asked me how many girls I slept with which I laughed and said zero and it took him a good second for it to click that am here for a sex issue but it’s nothing to do with a girl [laughs]” (MW).

5.2.8.3 Culturally Competent Sexual Health Care

The discussion above explored the specific experiences and perceptions of heteronormativity shaping participants’ valuation of primary care and the relevance and resonance to their health. Beyond describing heteronormativity framed in GP practice, participants also discussed how this shaped their reliance on sexual health services. The benefits of sexual health services were framed as being congruent to treating to all their needs holistically integrating their sexual identity in the receipt of the sexual health care services.

Although questions centred on the provision of the HPV vaccine in sexual health services, descriptions of other healthcare settings naturally arose in how participants compared/contrasted their experiences. Participants’ narratives discussed the relevance of the sexual health service to their health needs and discussed several reasons for the perceived heightened degree of relevance of the service over other primary care settings such as general practice (GP) services. Moreover, specific manifestations of differences compared between sexual health services and other primary care services were described by participants.

For instance, several participants felt that the healthcare providers working in a sexual health would be more knowledgeable of their health needs compared to GPs. This was illustrated by (JT):

“Most of the people working at [CLINIC IN EDINBURGH] seem to know what they’re talking about, and they’re not shy asking you questions or anything like that”

The knowledge of primary care services were also framed in participants’ understanding what services were offered. For example, SM noted:

“Walking into the doctor’s I wouldn’t even know if I’d even know they could help me with anything sexual anyway”

Participants often expressed using sexual-health focused materials such as websites from specialist services when seeking out information related to their sexual health in opposition to GP services. This was within a particular narrative:

“I go to like you know NHS sources and like [sexual] clinic websites so I think there’s a clinic in London or something but it has it has like a website 56 Dean Street that sounds familiar it’s [IN LONDON] like some like that and then they’ve got like a website that has lots of information about stuff and but this is like when I was younger I am like it’s not like ”m constantly keeping up to date with like developments in gonorrhoea so maybe I should but general information like I would never speak to my GP for example” (AR)

Regarding STI testing, specialist sexual health services were often considered more approachable as the offered drop-in services as opposed to booking an appointment with one’s GP:

“In an ideal world I’d go to my GP for testing cos it’s down the street [laughs] which I think would be great but that would be good for me but not everybody I can imagine it would be awkward now that I think about it” (PK)

“I’ve gotten so used to drop-ins I’ve not considered anything else. Drop-ins just fit in for me and my work and, you know, just going as opposed to planning it out helps me get it done quicker” (JB).

Other participants frequently described this perceived degree of heightened medical understanding of healthcare providers in sexual health services relevant to their needs in reflection of GP practice experiences which were inadequate to assist them with their health as GBMSM. A frequent discussion among interviewees was the way healthcare providers would engage with GBMSM in the clinical encounter. A consistent discussion from participants discussed how the way healthcare providers talked to them and through provision of healthcare helped them feel at ease with the help they intended to receive related to their health.

“GPs just don’t talk about gay sex in general or don’t know how to” (SM)

“You know my GP back home was an old man and he made it feel like going into any detail about what I was up to was just wrong” (LB)

Positioned as the antithesis of this, sexual health services were described as inclusive and supporting environments where healthcare professionals ‘go about it [treatment] differently]. In these discussions, better communication was experienced both interpersonally between the GBMSM as a patient and through the process of accessing an STI testing appointment as described by LF:

“You go in you get your number and you speak to the receptionist who triages you before seeing the nurse or doctor. There’s a form that you fill out where you give your details and it asks about your sexuality and who you sleep with so even then they ask it an open way for everyone [pause] it’s just so easy”

Similar benefits were reported by another participant who found the procedure of STI testing equally inclusive:

“We’ve just gotta fill in a form and am sure that’s passed to the doctor seeing you so regardless of your issues you don’t have to go a long way to say who you sleep with or what you identify as so it makes it easy to go and tell someone what you get up to which my GP definitely do”

“Definitely in the cities like [WEST CENTRAL BELT] or [EAST CENTRALBELT] they don’t think about it but it’s so so necessary for people in [NORTHERN CITY] (IM)

The role of communication continued to be a cornerstone of the clinical encounter reflecting how GBMSM perceived the acceptability of primary care settings. This extended to how healthcare professionals, in the sexual health services, engaged with GBMSM:

“You gotta be inclusive so one of the biggest things I want when talking about my balls is that they care or at least look like they do and that they don’t judge me for what I get up to when I tell them all the stuff I do [laugh]” (JG)

Consequently, some GBMSM were hesitant to engage with GP services given this lack of aligned health service provision, for example:

“You know at least at [CLINIC IN GLASGOW] they’ve got pamphlets with two guys on ‘em, at [GP SERVICE] there’s just stuff about pregnancy and I guess they’re important too but aren’t they supposed to include other issues they treat too?” (SM)

“Yeah I just GP as a family doctor scenario” (HM)

5.2.8.4 Summary: Appraising Primary Care Services

The category ‘Appraising primary care services’ described within this section emerged from data that builds upon participants’ understanding of the services they appraise are suitable for their health needs and key characteristics that coalesce into an evaluation of suitable services to meet these needs. Though GBMSM discuss varying experiences of equality, the experience and how this shapes utilisation of healthcare services is more complex. In relation to sexual health services, in which the HPV-GBMSM vaccination programme is offered, a range of relevant topics have been discussed in which GBMSM feel they need to navigate whether that be in the abstract of administrative, coordinating these services into their health.

The category provides insight into how GBMSM locate sexual health services in the ecology of their health and lives more generally. The data from this category also indicated that interacting with the sexual health service context provided participants the opportunity to appraise their social location and assess this in shaping what services they engage with. Moreover, in this category, where participants experienced or perceive their health needs would not be met due to the context of the health service, their sense of engagement diminished.

5.2.9 The inter-relationship between identified categories

At the heart of the model is, intentionally, theme 2 “Representations of Human Papillomavirus” (see figure 5.14) This highlights how GBMSM consider and construct the virus and situate their experiential learning of this and relate this understanding to their health. This might include the becoming knowledgeable of HPV through the media, through friends, or through the clinical encounter in which the HPV vaccine is being provided. GBMSM related their construction of the HPV vaccine built from the experiences and theorising – and agency navigating – embedded within the other categories. The relationship between conditional categories is diagrammed below:

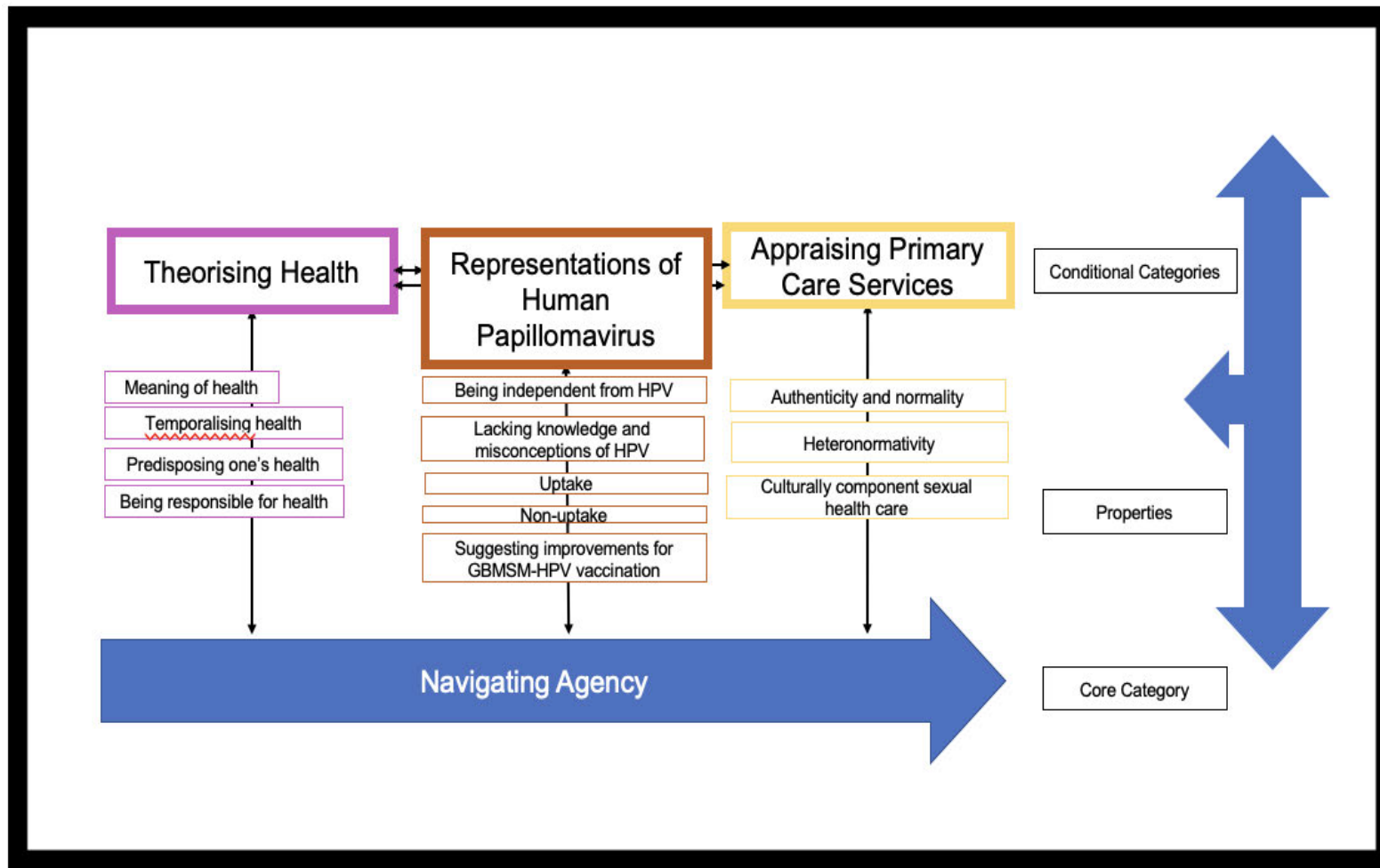


Figure 5.14 The inter-relationship between identified categories

5.3 Conclusion of findings

The experiences of GBMSM relating to HPV and HPV vaccination, how they make sense of their health and how they make sense of healthcare services provides a rich and textured account of contemporary GBMSM lives and the enactment of specific sociocultural practices. The accounts presented across these findings contain both conscious decisions of health seeking behaviours and how their social location informs and is bound up within internal thought processes and external actions which coalesce – and are antecedents for – how GBMSM represent and receive the HPV vaccine.

When considering their health, GBMSM consciously position their sexuality and sexual identity; in *Theorising Health* GBMSM gave explicit accounts of how these shape and inform the construct of health and why they perceive threats to their health in varying ways and divergent from heterosexual populations. Throughout the interviews GBMSM accounted for various ways of how this theorising of health assists and enacts how they situate themselves to – and in their relationships with – primary care services; for GBMSM, the institutions that can assist and help with their health is important. Not only do their appraisals of health intuitions impact how they view their own health, but also how they traverse health services. The HPV vaccine – situated in the sexual health service context – therefore cannot be independent from these cultural systems of existence. How HPV was represented amongst participants demonstrated how these systems can inform the receipt of a vaccine experienced

The focus of this chapter was the conceptualisation of findings which led to the derivation of the core category: navigating agency. Navigating agency shows the relationships between the categories discussed above and how they fed into this core category. This was explained through 3 conditional categories and their constituent properties. These were: theorising health, representations of human papillomavirus, and appraising primary care services. The next chapter will discuss the key findings of this study.

6 Chapter 6: Discussion

6.1 Chapter Overview

The aim of this chapter is to examine and discuss the literature associated with the research categories and subcategories described in the Findings chapter above and considering the research aims and how the research findings extend or add to our understanding of HPV vaccination in light of the literature reviewed. The discussion chapter seeks to take stock of the research, examining its quality and contribution. Implications will be considered in relation to policy and practice relating to the HPV vaccination of GBMSM. The findings will also be considered considering issues related to the COVID-19 pandemic. The research will be assessed relating to a discussion of the strengths and limitations and recommendations for future research will be provided.

6.2 Overview of thesis chapters

The paucity of evidence relating to HPV-GBMSM vaccination acted as a central premise for this research. This was therefore explored, qualitatively, and gained an in-depth insight into the meaning making associated with HPV and HPV among GBMSM and influential phenomena that create a constellation of conditions reflected in the Scottish HPV-GBMSM vaccination programme. Chapter 2 provided a systematic review examined qualitative literature describing GBMSM perceptions and attitudes toward HPV vaccination and synthesised what was known about how GBMSM pre-licensing of the HPV vaccine thought and perceived of it. Chapter 3 introduced the methodology of the primary research including the researcher's philosophical viewpoint and justification for the qualitative approach. Chapter 4 focused on the methods of the study and the principles of CGT. Chapter 5 focused on the findings, showing a nuanced presentation of three conditional categories and one core category generated from the interview data. Chapter 6 discusses the findings presented in Chapter 5 against the backdrop of other relevant literature. Finally, Chapter 7 provides implications for policy and practice, then, as to conclude, an indication of contribution to knowledge and future directions.

This discussion chapter also demonstrates new literature which is pertinent to the discussion and situates the findings (outlined below). The grounded theory with its

constituent conditional categories and properties directed me to new literature in the emergence of the grounded theory to be considered once it had been presented. Sticking to the literature outlined in chapter 1 in which situated the study overall would have not done justice to the findings as they extend the topic broadly (chapter 1) and the findings of the review in chapter 2. If I were to stick to evidence originally critiqued, this would have limited the grounded theory into pre-conceived categories from the literature and diminish the amount of evidence which the grounded theory could be reflected against.

6.3 Situating the findings in the literature

After completing the introductory chapter (chapter 1) and the systematic review chapter (chapter 2), I put the literature aside, returning to it only once my analysis was completed and I had developed my grounded theory. This is in keeping with some reflections of grounded theory treatment of the literature such as Martin (2019) who proposed that researchers use the findings of a literature review to choose what to explore, rather than base their studies on them (Martin, 2019). This was reflected in this study as the PhD funding associated with the project was attached to understanding HPV among men. As a researcher building on the academic work which focused on the lived experiences of GBMSM, it can be acknowledged that a particular research bias in the attending of sexual minorities influenced the decision to focus on GBMSM. The (self) awareness of what to investigate cannot be chosen independent of the researcher's current knowledge, and the decision what to research should not be stifled by prior experience leading to a heightened understanding of methodologies and theories which have been used prior. In this vein, the focus of men and HPV was merely the springboard for setting the context in which preliminary and substantive reading created the setting for with regard to the primary research conducted in chapter 5 (Hallberg, 2010).

While some grounded theorists use the literature as data and integrate it into their findings, or the thinking of their findings, I implemented returning to the literature once the theory was presented. While returning to the literature during the analytical process was considered, it was determined that the quality of the analysis was better served in the context of presenting new findings produced from a Scottish audience to avoid any unintentional influence in the development of the categories and core categories.

Moving forward, Stern (2007) highlighted the importance of situating the emergent theory within a body of knowledge and adding to the extant literature to demonstrate its contribution to knowledge within the field (Stern, 2007). Moreover, situating the emergent theory in the literature enables comparison and contrast with present work (Ramalho et al., 2015). This is in line with Glaser (1998) who argues that concerning which literature is relevant cannot be known until the end of the analysis. Only once has a sufficient robustness of the grounded theory been achieved can the literature be searched and adequately reflected against the proposed theory. Moreover, while different schools of thought regarding literature are still debating its timeliness and position with the GT analysis, Charmaz (2006) and Glaser (1998) advocate for an openness in the inclusion of new evidence when considering the grounded theory.

The process of the doctoral journey has meant the procuring of participants' meanings and experiences as they relate to HPV and HPV vaccination in Scotland. Utilising a CGT methodology has meant the data in this pursuit has been considered, fractured, (re)constructed and presented (diagrammatically and) in a narrative. When returning to the literature, then, the nuances of the conditional categories must be considered in their alignment and divergences from the literature. It is in this consideration, when asking 'how does my grounded theory compare with the literature?' and 'what does my data look like in the face of the literature?' that I considered restructuring the findings into three 'I' dimensions:

Firstly, the role of **identity** and its ever-present construction as my participants considered their meaning making of HPV in relation to them being male, a sexual minority, and their Whiteness.

Secondly, I considered the role of **institutions** and the health systems that my participants referred to and the implementation of the GBMSM-HPV vaccination in Scotland.

Thirdly, I considered the role of **information** and the manners in which this was considered – or not considered – as a precursor to HPV vaccination amongst my participants.

Based on the emergent theory, it is argued the location of HPV and HPV vaccination are situated in a complex system GBMSM's health and the relationship between their **identity** and its relation the health system and the constituent **institutions** which may (or may not) disseminate pertinent **information** to present HPV as a health threat known to the eligible GBMSM as part of the targeted HPV vaccination programme.

This encountering of HPV vaccination has been reported to be enacted in a social process which is manifested through a clinical encounter with a healthcare professional. These developing layers within the implementation of the HPV-GBMSM vaccination programme licensed by the Scottish Government, then, are reflections of both broad socio-cultural positioning of GBMSM as well as narrow experiences of healthcare interactions. Although there is evidence of such discussions relating to provision of the HPV vaccine in the literature – as evidenced by Chapter 2 – on interpersonal communications, there is a significant gap in the literature regarding addressing the processes employed in providing the HPV vaccine such a particular way as reflected by GBMSM themselves in Scotland which was reflected in the grounded theory presented.

The context of GBMSM-HPV vaccination in Scotland must recognised, when considering the grounded theory presented in Chapter 5 and before revisiting its constitutions in the lens of the three 'I' dimensions. More recent evidence from Public Health Scotland published data reporting on the total 4 years of HPV vaccination (July 2017 – June 2021) has been published and this is reported below (see table 6.1):

Table 6.1 HPV-GBMSM Immunisation July 2017-- June 2021

Scotland	Completed	In Progress	Total
July 2017-- June 2018	3,934	1,971	5,905
July 2018-- June 2019	1,726	1,562	3,288
July 2019-- June 2020	589	1,265	1,854
July 2020-- June 2021	160	957	1,117
Total 4 year period	6,409	5,755	12,164

As can be seen from the table above, the total number of HPV vaccination completion rates is dropping year on year. Of the 12,154 GBMSM who entered the vaccination programme, 53% (6,409) have completed the full vaccination programme (three doses for those aged 15 years and over (see figure 6.1). While it is proclaimed that all NHS boards have been offering the vaccine to eligible individuals, there is significant variation in HPV uptake and completion being reported 4 years on from the vaccination programme beginning. Vaccination has ranged from 54% to 89% uptake (*HPV vaccination statistics for men who have sex with men, Scotland, 2021*).

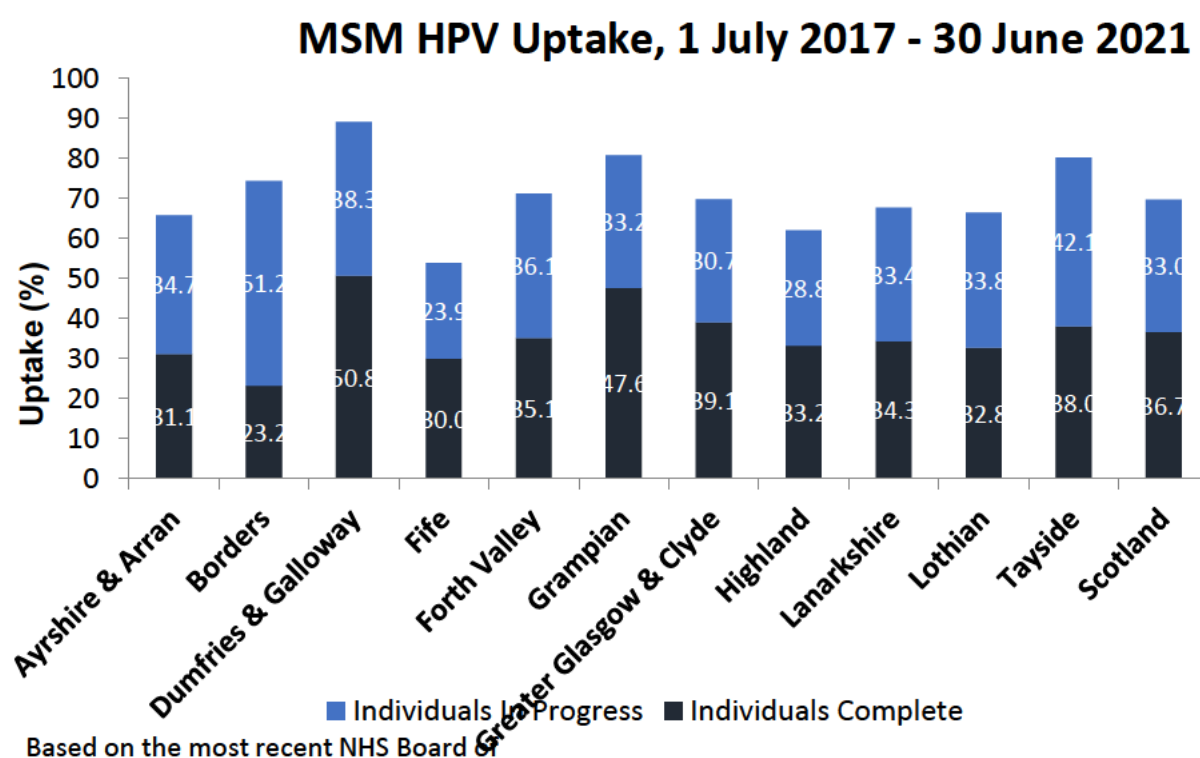


Figure 6.1 Data from Public Health Scotland on HPV vaccination Statistic for GBMSM (01 July 2017 to 30 June 2021)

When I commenced the study no behavioural research literature exploring the provision of the HPV vaccination among Scottish GBMSM. This remains the case, however, some evidence has emerged. Frankis and authors (*unpublished*) found, in the SMMASH3 survey, that 81.6% of participants (n = 1378) were aware of HPV and 76.9% (n = 1294) were aware of the vaccine. However, 43.6% (n = 731) of survey

participants did not know that the vaccine is provided for GBMSM for free and over half (57.5%, n = 961) were not vaccinated.

These results are in line with more recent quantitative cross-sectional data in England which reported under half (40.9%, n = 47/115) of participants had not been offered the vaccine, eight (7%) participants had been offered the vaccine but not received it, fourteen (12.2%) had one dose, seventeen (14.8%) had two, and twenty-nine (25.2%) had all three (Stearns et al., 2020).

6.3.1 Identity

Identity is an essential component brought to the forefront of the grounded theory as elucidated on by participants. The findings reflected in Chapter 5 outline the role of sexual identity as an intrinsic dimension between GBMSM, society, and HPV vaccination. The role of identity and its position within the Self has been outlined in the literature by Erikson (1971) who defined identity as “the ability to experience one’s self as something that has continuity and sameness, and to act accordingly” (Erikson, 1971, p. 42).

The underpinning of participants’ sexual identity as GBMSM cannot be removed from their eligibility of a targeted vaccination programme predicated on such an identity. With specific reference to participants’ understanding of their eligibility based on this, participants’ evoked a reflection of the social norms espoused in societal guidelines which their identity and, by virtue, the HPV-GBMSM vaccination programme sits outside of such “normative creativity” (Bilodeau & Renn, 2005, p. 25).

The tensions between participants’ eligibility for HPV vaccination by virtue of their identity in the absence of a gender-neutral vaccination programme evokes the distinguishing of ‘subjective’ and ‘objective’ identities as outlined by Bilgrami (2006). Here it is posited that subjective identity is what the individual conceives themselves to be whereas objective identity is how the individual might be viewed independently of how they see themselves (Bilgrami, 2006). Given this context, the primary findings

outlined in Chapter 2 and described in Chapter 5 continue to demonstrate the potential barrier to healthcare access stemming from pernicious expressions of stigma and discrimination in line with GBMSM identity (Fredriksen-Goldsen et al., 2013; Ruben & Fullerton, 2018).

Moreover, identity as a grouping based on eligibility, such as the social identity of being gay further reflects the complexity of the vaccination programme and engaging with HPV vaccination as reflected in conditional category 3 (chapter 5). Scholarship on the impact of multiple identities is further reflected in the grounded theory in which the saliency of sexual identity in relation to multiple dimensions of participants' identities (sexual orientation, race, culture, gender, religion, class) was scrutinised and reflected in the unidimensional eligibility of the vaccination programme (Jones & McEwen, 2000).

The disclosing of one's identity – the openness about one's sexual identity as GBMSM with healthcare providers was a salient phenomenon captured in the systematic review (chapter 2) and in the findings chapter (chapter 5). To predicate the eligibility of HPV vaccination on being GBMSM is considered in relation to Alderson (2003) who proposed that gay men are often informed, influenced, and shaped by their interactions and subsequent reactions to social environments (Alderson, 2003). Indeed, participants relayed the limitations of having to disclose their identity (or behaviour) to healthcare providers. The notion that sexual orientation disclosure to non-LGBTQ+ individuals, including healthcare providers, which in turn is linked to heightened self-esteem and motivation to engage in health-seeking behaviours has been supported across several studies (Riggle et al., 2017; Wagner et al., 2012; Whitman & Nadal, 2015).

This requirement is further a limitation of the implementation of the targeted vaccination of GBMSM more broadly which limits the efficacy of vaccine the more sexual partners the GBMSM has and therefore disclosure is required before or as soon as possible after sexual activity for the vaccine to be effective. This limitation has further been discussed in the literature in which sexuality disclosure may occur years after sexual debut and after multiple partners (Nadarzynski et al., 2014; Rank et al., 2012). The inverse, disclosing sexuality, has been shown to increase the uptake of

HPV vaccination when compared to those who did not disclose. For example, Oliver et al. (2017) found GBMSM who disclosed same-sex sexual attraction or behaviour were 1.42 likely to receive the HPV vaccine (Oliver et al., 2017).

The decision to frame HPV vaccination targeting GBMSM as independent of wider male populations is a significant limitation of the HPV-GBMSM vaccination programme. Participants in the current study perceived the limitation in the reach and presentation of the vaccine when determined by sexual identity. This is in line with previous research which documents GBMSM are not a homogenous group, with a complex variation in the sexual identity, sexual preferences, and sexual behaviours among GBMSM (McAloney-Kocaman et al., 2016). Moreover, it cannot be ignored that the two/seventeen participants identified as bisexual in the current research. The limited understanding of non-gay identifying GBMSM in the literature is limited. However, evidence has suggested that the reported behaviours of those who identify as bisexual, or as heterosexual but have occasional sexual encounters with another male and/or transgender women are largely covert, inhibiting disclosure to healthcare professionals as well as receiving approach interventions relevant to sexual practices (Reback & Larkins, 2013). Indeed, in a recent meta-analysis, Restar et al (2019) reported in a sample of cisgender male sexual partners of transgender women that over 30% were HIV positive, approximately 9% were unsure of their HIV status, and under half (46%) self-reported condomless anal sex (Restar et al., 2019) .

Therefore, more research is required to understand the unique needs of non-gay identifying GBMSM in the provision of the HPV vaccine in light of complex issues such as comfort with sexuality. This is because the relevant ease in contemplation, communication, and enactments of sexuality and sex (Syme et al., 2019), in the presentation to a healthcare provider which conveys eligibility for HPV vaccination may be more delayed than onset of same-sex sexuality activity for some GBMSM. This, then, may impede access to HIV/STI-related services, including HPV vaccination. It is widely known that the HPV vaccine works best when provided as early as possible or prior to sexual onset (Markowitz et al., 2012).

6.3.2 Institutions

The institution as a context – the sexual health service – reported in the current study played a significant role in having the HPV vaccine being bound in the broader interventions in this setting. Provider recommendation of the HPV vaccine has been reported to be a strong predictor of HPV vaccination among adolescents including teenage boys and girls (Ylitalo et al., 2013). Evidence in the current study further complicates the role in which HPV vaccination recommendation plays in the provision of the HPV vaccine for GBMSM targeted vaccination strategies.

While much research has explored provider recommendation quantitatively by exploring this through reported frequencies, this study operationalised the reported provider recommendations and previously documented challenges (Gilkey et al., 2016). In being in a sexual health service, findings in this research are in line with previously documented causal evidence which demonstrated in-person recommendations from clinicians in a clinical setting leads to an increase HPV vaccination rate (Malo et al., 2018).

Participants who had experienced HPV vaccination or were considering HPV vaccination in their sexual health reported that they would be willing to receive the vaccine or received the vaccine if recommended by their clinician. Most participants further believed that vaccination would be acceptable in the wider GBMSM community related to healthcare provider recommendations. Participants outlined that the prevention of anal cancer and genital warts would be beneficial to GBMSM and GBMMS would be happy to engage with this to reduce these risks. The current findings is consistent with findings from other studies in the UK (pre-licensing) which showed that GBMSM would be acceptable of the HPV when recommended by a clinician (Nadarzynski et al., 2014).

The limited HPV vaccination uptake and coverage of this population is not exclusive to Scotland. In a study published after data collection, Grewal et al (2021) in exploring the HPV vaccination uptake among GBMSM in Canada's largest cities (2017 – 2019) found the Canadian HPV-GBMSM vaccination programme uptake ranged from 26% - 35% initiation with completion rates ranging between 43-66% (Grewal, Deeks, Hart, Cox, De Pokomandy, et al., 2021). These results are in line with a similar time-limited

funded HPV-GBMSM catch-up vaccination programme in Victoria, Australia using sexual health clinics (McGrath et al., 2019). Retrospective data analysing HPV vaccine uptake between April 2017 and December 2017 found only 58.2% (n = 1134/1947) were offered the HPV vaccine. The overall HPV vaccine coverage of this cohort was 42.6% (n= 830). It cannot be ignored that this programme was a catch-up to the gender-neutral vaccination programme implemented in Australia since 2013. In a US context, while HPV vaccination has been licensed for over 14 years, vaccination has continued to be sub-optimal in targeting adolescents (Elam-Evans et al., 2020)

Stearns et al (2020) found those who were gay were more likely to be vaccinated than bisexual men (Stearns et al., 2020). It cannot be ignored that the sample size (n = 115) is very small when comparing gay and bisexual men. For those who were eligible for the vaccine, Stearns et al (2020) found those who attended the clinic where the vaccine was offered, 70% (n = 63) had been offered the vaccine (33.3%, n = 30) had not. Similar results have also been seen in a Canadian context reported by Grewal et al (2021) in which only 13-28% of participants had received one dose two-years after a targeted vaccination programme had been introduced (Grewal, Deeks, Hart, Cox, & De Pokomandy, 2021).

The limited HPV-GBMSM vaccination uptake must be considered in light of the history of the Scottish female-only vaccination programme which began in 2008 (Kavanagh et al., 2014). As reported by Kavanagh et al (2014), this school-based vaccination programme has seen over 90% of girls receiving at least 1 HPV vaccine dose. Moreover, as evidence in 2019/20, rates of HPV vaccination among girls in school-based programs in Scotland were 85.8% and 85.1% the year prior. Across Europe, a significant proportion of countries who have implemented female-only vaccination have achieved rates over 80% were implemented in school or in public health centres (Drolet et al., 2019). Causally, a decrease of HPV 6/11/16/18 infection, genital warts, low-grade cytological cervical abnormalities, 5 and histologically proven cervical abnormalities has been observed after HPV vaccine introduction (Drolet et al., 2019).

To conclude, the targeted HPV-GBMSM vaccination programme is further contextualised in the national structured programmes proximally in 31 European countries. Free of charge vaccination programmes in School-based settings have

been observed to substantiate high vaccination programmes among those eligible. Monitoring the contextual mechanisms which support the high rates in this setting was reflected among participants in the current study which acknowledged the barriers and facilitates of the sexual health clinic. Monitoring both HPV vaccination implementation and sharing lessons learned which shape engagement is warranted given the public health relevance to achieve high vaccination rates among non-herd immunity GBMSM.

6.3.3 Information

Many studies have explored and evaluated the predictive nature of individuals' knowledge, attitudes, and perceptions of HPV vaccination. It is argued that knowledge is a central mechanism for behaviour change in which once the individual acquires relevant knowledge and actively thinks the health issue this can rise to a belief and a positive to change can be adopted. This has been reported in evidence in which these are determinants of vaccination willingness (Nickel et al., 2017). Indeed, evidence has documented that GBMSM with high-levels of HPV-related knowledge were more willing to receive HPV vaccine (Cooper et al., 2017; Sadlier et al., 2016). Findings from the current research suggest that a number of GBMSM were not familiar with HPV vaccination or their knowledge and awareness of HPV vaccination as they have experienced the vaccine was limited suggesting it is crucial what threat HPV is to GBMSM health. Nonetheless, GBMSM regardless of HPV vaccine dosage history were accepting of the HPV vaccine.

This was firstly found in the systematic review (chapter 2) and later expanded upon the findings (chapter 5) when considering the limited understanding of HPV in men's health. The findings of the primary research complicate the role in which information plays in the willingness among GBMSM to be vaccinated against HPV. The role in which information played in the current study was not construed as being a direct influencing factor to acceptance. Information or the lack of information pertaining to HPV infection and its associated diseases did not play a contributing role in the decision-making processes of how GBMSM in their characterisation of receiving the HPV vaccine. Rodriguez et al (2020) in a systematic review of factors associated with HPV vaccination among adolescents reported personal knowledge of HPV and HPV

vaccination was significant predictive factor in HPV vaccination uptake (Rodriguez et al., 2020).

Further comparisons to the literature are exemplified in the role in which information about HPV contributes to the perceived severity of HPV infection. In this primary research, participants were unaware of the relationship between HPV infection and anal cancer. It has previously been reported that GBMSM are typically unaware of the role of HPV in associated cancers such as anal and penile (Poon et al., 2018). Primary results further demonstrated an inconsistent level of knowledge across participants in their understanding of the link between HPV and cancer as well as prevention and cure. These findings extend an understanding of how awareness of HPV and specific HPV-related knowledge is required for GBMSM at population-level as significant knowledge gaps exist, while further de-escalating the role in which the gaps in knowledge may preclude an individual receiving the HPV vaccine. Findings relating to how participants' construed HPV as a threat to their health demonstrated an independence to HPV in their knowledge and understanding of sexual health and blood borne viruses pertinent to GBMSM. These results are line with previous literature which documents that GBMSM are receptive of HPV vaccination while not perceiving themselves at risk of HPV and its associated diseases (Nadarzynski et al., 2017; Nadarzynski et al., 2014).

The complex nature in which information must also be understood against a backdrop of evidence which documents the limited knowledge and understanding of HPV among men and GBMSM. In this study, participants' limited knowledge relating to HPV must be placed in context of a heightened reported knowledge and salience relating to HIV and HIV prevention. Participants reflected those sources of health promotion offered very little information on HPV when considering the campaigns on HIV symptoms and prevention and other STIs like syphilis.

The need for greater dissemination of HPV as a threat which extends beyond female health was reported in the primary research. Such mechanisms of cascading information regarding HPV like social media campaigns and a heightened presence of HPV literature in clinical settings were reported by participants.

6.3.4 Interaction

'Navigating agency' was the core category identified during analysis. As stated in the findings chapter, 'navigating agency' is the GBMSM participant being able to navigate the engagement with healthcare institutions and the experiences of brokering control and vulnerability in this navigation as they relate to health interventions. The conditional categories were underpinned by the 'navigating agency' core category as previously outlined in figure 5.4.

This category indicates that GBMSM may make theories of their health, may represent HPV and appraise primary care services along different trajectories relating to their engagement in how they navigate their health and health services. Moreover, this reflection of asserting or acquiescing control about decision-making relating to sexual health and blood borne virus service provision – including HPV vaccination – is a social process which is exchanged between the GBMSM patient and the institution, including the healthcare provider.

The term agency is – and its navigation – is a reflection of how participants' conceptualise their individual autonomy and the capacity to make choices, self-governing one's behaviour, and to reflect upon their own actions as constituted within social relations and intertwined with the construction of identity (Burkitt, 2016). Indeed, Giddens and Archer consider agency in terms of an actor's reflexivity, as agents choosing a course of action in circumstances where decisions can or could not be acted upon (Archer & Vandenberghe, 2005). The engagement of the complex relationship between the GBMSM participants' identity, the sexual health institutions, and the role of threats construed as specific to GBMSM reflected in the targeted vaccination programme.

In a similar vein, the process of participants' experiences of navigating agency and its presentation in the conditional category is further reflective of Edward's (2006, p. 172) concept of 'relational agency' which refers to the 'capacity to work with others to expand the object that one is working on and trying to transform by recognising and accessing the resources that others bring to bear as they interpret and respond to the object' (Edwards, 2006). More specific to 'encountering HPV' the differing of

subjectivities relating to HPV vaccination – the object – enables the communication and encountering of HPV in the clinical encounter which Edwards considers as ‘an enriched understanding of the problem space, works back on the mindsets... and these may in turn be enriched by the interpretation of others’ (Edwards, 2006, p. 174-5).

This agency represents a symbolic resources GBMSM participants drew upon to assist this navigation (or awareness of it) in the eventuality of HPV vaccination, enabling them to define, interpret, and reflect on and make sense of targeted vaccination programmes. This, then, relates to the theoretical perspective as outlined in the Chapter 3 when discussing symbolic interactionism as providing a focus for the study of meaning, interaction, and interpretation of actors in shaping behaviour

The term ‘symbolic resources’ refers to those resources which enable an individual to make the transition between different social, cultural, and temporal contexts, providing them with the symbolic means of making sense of situations and managing interactions with others (Zittoun et al., 2003).

The grounded theory presented in the Findings chapter documented the processes GBMSM engage and navigate through to engage with their sexual health. The HPV vaccination programme, then, presents an ideal opportunity to explore this as the provision of the HPV vaccine in Scotland which was dependent on the securing and engaging in the process of sexual health testing within the sexual health service (Pollock et al., 2018).

6.4 Conclusions relating to the grounded theory

This research sought to understand how GBMSM perceived and understood HPV and HPV vaccination and attitudes proximal to this. Using a CGT approach, a framework was curated which explained three distinctive but connected concepts; how GBMSM view their own health (and factors informing this), how GBMSM view the health system (and their position in relation to it in society and the system in relation to their health)

and how GBMSM perceive and experience HPV and HPV vaccination (and the processes relating to this). The CGT proposes that GBMSM engage in a navigational process mediating medical/health-related knowledge and the perceived agency in the uptake and receipt of health interventions when proposed simultaneously with the internalisation of this health intervention being preventative to a health threat that may not have been fully understood.

Given the lack of a gender-neutral vaccination programme when participants contributed their experience and perceptions, the HPV-GBMSM vaccination programme provided a unique and valuable insight into the provision of a vaccine for a specific minority population in a unique setting. The assessment of the location of this vaccination programme enables the identification of barriers and facilitators to the provision of the HPV vaccine in this population. By being informed by the socio-ecological model and other health-related theories of acceptability, this study builds on research previously documenting the high degree of acceptability reported by GBMSM (including pre-licensing). This project evidenced factors associated with acceptability of HPV vaccination are likely to be related to the perception of health informed by sexual identity and the clinical environment.

6.4.1 Contribution to knowledge

In line with Charmaz's consideration of usefulness (outlined below), it is important to first – having been guided through the grounded theory – to ask how the work contributed to knowledge. This research makes both a methodological and empirical contribution to knowledge.

Methodologically, this research contributed to knowledge in the following ways. It contributes to the methodological development of CGT by reflecting upon some of the pragmatic difficulties which have arisen when trying to research with minority populations and researching with these guided by principles of GT and CGT. By using the CGT, a methodology that, as far as I am aware, has not been utilised when elucidating GBMSM perspectives as they relate to HPV and HPV vaccination. It has

shown that CGT is a methodology that is highly relevant when researching sexual minority health.

Substantively, this research has contributed by developing a nuanced understanding of HPV vaccination as it relates to GBMSM that is grounded in the primary findings and analysis and is contextualised in the wider evidence and policy. In the literature review no study has sought to understand HPV vaccination from Scottish GBMSM. The primary research showed that GBMSM's perceptions, experiences and navigation of HPV and HPV vaccination are multi-dimensional and comprised of key processes of 'theorising health', 'appraising primary care services' and 'representations of HPV'. Within these conditional categories are dimensions which were identified and interact dynamically. The core category of 'navigating agency' had relevance to all the conditional categories and the connection between the dimensions were non-hierarchical, fluid, and contextual.

6.5 Discussing the methodology and methods

6.5.1 Reflection on sampling

6.5.2 Discourse of sexuality identity

As stated in chapter 4 of the thesis, the study sought to recruit GBMSM across Scotland to participate in the primary research. In this section, I situate the position of this project as it exists in the possibility of doing applied health research with sexual-nonconforming men in Scotland. In this project, 'LGBTQ+' was used to include individuals who identify as gay, bisexual, trans, non-binary, genderqueer, gender diverse, gender nonconforming, or queer as well as those who are encompassed under the public health terminology of 'gay, bisexual and other men who have sex with men' (GBMSM). It is worth emphasising, then, that this terminology is not universal and not intended to be problematic when viewed cross-culturally. This thesis has outlined the structural and social inequalities reflected in patterns of LGBTQ+ health in the UK. This highlights the importance of placing a discussion of terminology reflected in who is being discussed. A considerable shift in public health terminology toward the use of the term GBMSM could be argued to be an attempt to separate sexual identity and sexual risk behaviour. Indeed, sexual orientation disclosure

provided an analytical exploration in Chapter 5. The utilisation of GBMSM, it was hoped, was useful for addressing much of the stereotyping and stigmatisation inherent in risk group narratives related to all homosexually behaving men being glossed as 'gay' which may not be a label with which individual men can identify with and therefore alienated them from the project and broader health-related interventions.

Relatedly, the terminology used in the project advertising and indeed the title of this thesis, could be considered to perpetuate the assumption that the diverse group of GBMSM subsumed under this label share certain broad features that would warrant them being categories into a singular, vulnerable, population. It could be perceived that the complex social and cultural meanings of sexual identity are universal to those who participate in same-sex or gender-congruent behaviour, which further reduces sexual behaviour. By presenting a reductionist approach to the broad range of meanings, behaviours, social contexts, and identities associated with different subgroups of 'LGBTQ' community in the framing of this research title, the issue of language-alignment with the very population intended to engage in research is created.

It cannot be ignored that the majority of participants in this research were cis-gay-white-men. A limitation, then, is that the sexual minority of the sexual minority (e.g. queer-identifying, trans, non-gender-conforming) and the relevant nuances of their local realities and the way social stigma is expressed and the implications of this at the intersection of health and HPV vaccination is not accounted for in this work. Ironically, this thesis acknowledged and recognises the experiences of stigma and discrimination among LGBTQ+ people and the utility of understanding the precise structural, social, and psychological bases for these connections when delivering health interventions.

This study encountered some delays relating to recruitment and data collection. Practical issues arose in theoretically sampling participants, as it was difficult to decide the right participants in terms of those who received the HPV vaccine and those who have not. This decision needed to also be made in reflection of participants who may accurately or inaccurately recall their HPV vaccination status. Charmaz (2006, p. 96) defined theoretical sampling as "to elaborate and refine the categories constituting

your theory". The reality of theoretical sampling was much more complicated considering pragmatic issues such as time, ethical, and resource constraints which impacted sampling.

All participants were purposively selected/recruited to the study by various means. However, the reality that some GBMSM remembered their vaccination status, some didn't, and some were unsure is an adequate reflection of the provision in Scotland and reported in other countries. A major strength in the recruitment of the study was the diversity in age and vaccination status of participants. This was done purposively to gain the views of GBMSM with varying encounters of HPV and HPV vaccination.

6.5.3 Examining the quality of the research

As discussed previously, the appropriateness of quality criteria and the use of such criteria in the evaluation of qualitative research has little agreement (Mays and Pope, 2000). Despite this debate on what qualitative criteria is, in accordance with CGT, this research draws on specific evaluative criteria as outlined by Charmaz (2006) to assess the value of the study. These assessments contrast with positivist research which is assessed on criteria such as validity, generalisability, reliability and neutrality. Instead, Charmaz suggests the combination of 'credibility, 'originality', 'resonance' and 'usefulness'.

6.5.3.1 Credibility

Credibility refers to the logic and conceptual grounding associated with research (Birks and Mills, 2011). When considering credibility, several questions need to be considered. One is 'familiarity' with the studies phenomenon (Charmaz, 2006). This is a particular strength of this thesis as a systematic review and qualitative evidence synthesis were completed prior to primary data collection. These informed an empirical background and orientation into researching the place of HPV and HPV vaccination in the sexual health of GBMSM in a Scottish context and informed the initial topic guide.

The research also exhibits strong connection between the data and findings/analysis. Adherent to constant comparative methods, and an iterative, reflexive, approach to

data analysis the synergy between these is clear. Coding, memoing and the use of direct quotes enhance the credibility of this research as they demonstrate and strengthen the link between data and the presentation of the findings.

Regarding Charmaz's (2006) question of "is data sufficient to merit claims?", the goal of this research was to achieve theoretical sufficiency. Sufficiency, then, does not mean the frequency of which something is stated, or an experience communicated. Indeed, it may be that a particular experience of presentation in the interview offers something insightful and therefore becomes an important part of the analysis. This is further evidence in the omission of measuring frequency of data per se, instead data analysis coded for potential theoretical development. Thus, despite there being only 17 participants, the richness of the data allowed theoretical development.

Homing in on Charmaz's discussion around enabling the reader to make an 'independent assessment', the high level of transparency relating to the substantive outlining of codes, focussed codes, theoretical codes and the conditional codes I believe facilitates the reader's ability to achieve this. TO this end, providing a detailed account of epistemological and ontological positions, the data collection and analysis, and findings documents an audit trail of accountability in the research which the reader can interpret and be guided along.

6.5.3.2 Originality

Originality refers to the research providing an innovative understanding the phenomenon being instigated (Charmaz, 2006). This research offered a new conceptual rendering of the data through the identification of three conditional categories (and their associated dimensions) and a core category which was present throughout these. The analysis and findings led to the development of a grounded theory relating to navigating agency for GBMSM. This can be considered original as the systematic review in chapter 2 highlighted provided some indication of the constellation of experiences surrounding HPV vaccination among GBMSM but lacked theory building.

The social and theoretical relevance of this thesis and the challenges of its current concepts and practice are further considered in usefulness.

6.5.3.3 Resonance

Whether the research holds meaning and relevance to whom it may be relevant reflects its resonance (Birks and Mills, 2011). The in-depth analysis of the core category and three conditional categories provided and identifies a fullness of GBMMS's perceptions and experiences and practices as these relate to HPV and HPV vaccination. Indeed, the nature of the research using interviews and informed by a socio-ecological underpinning has enabled the in-depth exploration of these reflected in the breadth and depth of the conditional and core categories.

Resonance further relates to how the theory developed would or can be understood by participants or others. Put another way, the degree to which participants could accept that the theory developed reflects their perceptions and experiences. This research did not offer the chance to review the transcripts of their interviews (prior to analysis). Therefore, reflecting on the resonance of this thesis this could have been more robust. The use of participants validation, for example, may have promoted further resonance. This could have been achieved by presenting participants with the analysis in earlier stages and asking for feedback on if this reflected their perceptions and experiences.

Regarding the analyses offering GBMSM 'deeper insights about their lived worlds'; this research shows the complex relationships between health, the health system, and the engagement and enactment in the decision-making relating to GBMSM health as described by participants. Specifically, the findings of this thesis could provide insights to GBMSM and professionals working with them (for example in health promotion) about 'theorising health' and 'appraisals of primary health services'.

6.5.3.4 Usefulness

Usefulness broadly refers to when the findings and emergent theory might be useful to others (Charmaz, 2006). Given the ongoing health promotion and policy endeavours focusing specifically on GBMSM as key or vulnerable populations (for example them being at heightened risk of Hepatitis C, HIV, and syphilis), and

associated factors such as othering within a heteronormative society, it is argued that the findings of this thesis are particularly useful.

6.5.4 Reflections on the research process

As has been stated prior, my positionality cannot be ignored in influencing the research, by way of explaining these influences, I hope to maintain methodological rigour and establish transparency by way of engaging in reflexive thinking throughout. In recognising my limited research experience, and my influences and potential bias, it was important to identify evidence that supported the research interest and ensured this supported the research questions. In this sense, the resonance of the project rationalised itself as the inception of the HPV-GBMSM vaccination programme had been launched with no evidence exploring the experiences of GBMSM in Scotland. Previous quantitative research by Nadarzynski et al (2017) documented a substantive understanding but from a quantitative approach which, I felt, did not consider the lived experience. Drawing on systematic review and thematic synthesis methods outlined in Chapter 2, the primary research question embraced the complex and messy nature of qualitative research to generate new findings.

My experience of engaging with a Constructivist Grounded Theory approach is equally complicated. There was considerable learning experienced in being reflexive and sitting with one's potential biases and remaining open to unexpected results emerging from the study. During the qualitative interviews, I referred to the semi-structured protocol but remained open to whatever emerged naturally. During data analysis, there were several weeks of substantive data engagement and also avoidance. Recognising the emotional and mental level of clarity and mindfulness required throughout the iterative process.

My final reflection is related to the methodology as a practice. As outlined, grounded theory accommodates the complex, the messy, the uncharted, contingent, and dynamic realms of behaviour and experience (Charmaz, 2014). The inductive nature of this approach, while affording being open and indeterminate, also required me to stay close to the research question.

Using grounded theory methods necessitated me to engage in a process that was more inductive but planned. Inductive in the same that I needed to afford myself and participants room to explore new experiences and realms related to the project but planned in the sense that I needed the research questions to be as appropriately and fully answered as possible. A core reflection is that conducting grounded theory is both accommodating for conflict between uncertainty in exploration and rigidity in procedural expectations of the doctoral journey needing to be satisfied.

Staying close to the research question was difficult as (the data suggested) little experience and perceptions had been had related to HPV vaccination. Moreover, and unlike HIV as reported, the vaccination programme received little discourse in the public health arena. Therefore, while retaining a conditional category within the data output, in being conscious of the shifting focus surrounding HPV, I wanted to ensure that the participants' stories and contexts which informs the provision of the vaccine were captured so as to help me understanding their understanding and experiences. I also felt that I wanted participants to feel heard and to be able to tell their stories as part of my interviews. But, there was uncertainty about how much I could shift the focus away from the line of questioning, that being about HPV vaccination.

I felt this conflict much of the way throughout the iterative data process. I was unsure what was relevant, and felt uncertain about my findings, feeling that they were not useful, or vague. However, as I developed categories, and refined my findings, I felt that I was able to make my research process both planned and emergent. However, I consider being open and inductive, yet focused and planned to be the most difficult part of using the grounded theory method.

I found it useful to reflect on all facets of the research process including my positionality and uncertainty using grounded theory methodology. I hope that in being explicit about my role as researcher within this study, I bring a sense of transparency to my findings and thesis as a whole.

6.6 Concluding the discussion chapter

In this chapter, the grounded theory model presenting HPV-GBMSM vaccination was introduced and explained, guided in a discussion with the literature. This study's findings were compared with previous literature, highlighting similarities limitations, and extending previous discussion regarding HPV vaccination. In addition, the concepts identified in these study's findings were further explained in the context of wider literature in other fields, including relevant public health literature and policy.

One of this study's significant presentations was the fact that it provided an insight and deeper understanding of the meaning of HPV vaccination perceived and experienced by GBMMS in Scotland that could inform the delivery and planning of targeted interventions in this geographical area. Additionally, this study addresses the gap in the existing literature by addressing experiential and affective influences in understanding and explaining HPV vaccination-related behaviours and social conditions which may have been neglected in the construction of the HPV-GBMSM vaccination programme.

Finally, the results from this study propose and highlight the complexity surrounding influences on HPV-GBMSM vaccination program. These results go beyond the social, psychological, geographic and economic context and include social epidemiological issues related to identity, institutions, and information related to health in a contemporary context related to sexual minority men in Scotland. The model developed highlighted that engagement with HPV vaccination was affected by a number of complex factors that may predispose GBMSM across key domains of their health. These factors include awareness, attitudes, emotions, and experiences. A combination of these factors may lead to a possibility of being independent to HPV vaccination or a delay in engagement.

The perceived engagement with HPV vaccination complicated the notion of information being a predictive factor of uptake and perceived susceptibility in the acceptance of the vaccine. Participants did not present an account of fear associated with vaccination more broadly. Barriers, however, to the institution(s) offering the HPV vaccination presented a combination of factors that may be inter-related, such as the engagement of a reflexive process understanding threat's to GBMSM health more broadly. These may influence health and culturally oriented beliefs due to

misconceived knowledge and stigmatisation of GBMSM-related sexual practices increased awareness, education of health professionals, and creating innovations in settings which can provide vaccination could lead to improved uptake.

The following chapter will discuss the research implications and conclusions.

7 Chapter 7: Study implications and conclusions

7.1 Implications for policy and practice

This section considers the lay or 'everyday' usefulness of this research in the context of recent and current Scottish social care policy and practice relating to targeted interventions for GBMSM. As presented in Chapter 2 and later expanded on in Chapter 5, the promotion of targeted GBMSM vaccination programmes should be considered in the landscape of health interventions currently commissioned as they relate to health policy.

The findings of this research have shown that GBMSM engage in a navigational process of understanding of their health when presenting in a clinical context (primary care, for example) and the ways in which they perceive some health threats relevant to their own is complex. These findings are compatible with current policies which emphasise preventive measures such as the provision of PrEP in sexual health and blood borne virus services. However, while the issues of these interventions being provided in a clinical setting are argued to be relating to patient management (such as identifying eligibility by reporting sexual behaviour and identity), there is variance and dissonance between participants' narratives presented in this thesis regarding the *meaning* of these interventions and how these policies are best achieved with regard to the mechanisms of delivery.

Within policy, there is also a strong emphasis on GBMSM's functional literacy in relation to accessing the services in which the vaccine is provided and due to this emphasis, current policy may fail to fully account for the multi-faceted processes evidence in how GBMSM theorise their health, access the clinical services, and therefore are provided the HPV vaccine. The findings showed that GBMSM's constructs of the clinical environment and the representation of HPV in their health have much broader scope than simply offering the vaccine as they are eligible due to them being GBMSM, and highlighted the importance of knowledge and awareness and how participants considered this awareness in relation to their health. Thus, there remains a possible gap around how clinical and third sector support services in relation

to sexual health can best support a relational, rather than a linear, understanding of HPV in the health of GBMSM.

The findings also showed that when GBMSM consider HPV there are informational needs or support to facilitate their perceived inclusion of HPV vaccination in the health interventions relevant to their health, and their response to this may be complex and delicate. For example, findings illustrated that there is an appraisal process that informs engagement with certain health services and a reluctance on the part of some GBMSM to present to clinicians their eligibility for the HPV vaccine by virtue of the sexual behaviour or identity. Such feelings meant that acceptance of the vaccine and support (particularly in the wider context of HIV prevention) is countered by participants' constructs of the health systems they do or do not engage in. Thus, for policy and practice to be most effective, there needs to be recognition on the part of both policy makers and practitioners of the complexity of feelings and decision making that GBMM often experience in terms of how they feel about accessing interventions relevant to their sexual health and accepting support and or assistance within that health service context.

The findings also showed that GBMSM's representation of HPV was not only constructed in relation to their current lived experienced but was informed by a perceived collective history relating to health promotion messages. Personal biography and lived experienced affected the relevance of HPV in their health as it relates to the perception of HPV being a threat and the severity ascribed to it. However, GBMSM couched this perception in relation to other STI and BBVs such as HIV and a primary focus of their health consciousness in the prevention of acquiring and transmitting HIV. There is the possibility, therefore, that to be most effective, policy and practice needs to fully recognise and value the assimilation of public health messaging internalised by GBMSM as well as generational cohort ideas about the perceived severity of some STI and BBVs and consider how these impact and position HPV and HPV infection and its sequelae.

Policy and practice that are congruent and meaningful to the (changing) assessments of health, health behaviour, and acceptance of health interventions are most likely to receive the greatest degree of acceptance and uptake from that targeted; ultimately,

policy should be consistent with the needs of those who are eligible to receive the intervention. Thus, understanding what influences the acceptance and receipt of the HPV vaccine as they relate to GBMSM perceptions and experiences is fundamental to the effective implementation, and a failure to appreciate fully the meaning of the intervention (HPV vaccine) and the context in which it is being provided in and by whom may mean difficulty arises.

7.2 Directions for future research

An additional consideration when evaluating the ‘usefulness’ of a study is the need to ask, “can the analysis inspire future research?” The analysis, findings, and subsequently grounded theory development have been carried out in this thesis point to several possibilities for further research:

- A longitudinal research design would allow further exploration of the dynamic way in which GBMSM’s representation of HPV and HPV vaccination are enacted and how this evolved over time in response to the vaccination schedule.
- This research has shown that GBMSM engage a relational process of understanding of their health, the clinical setting, and HPV which stands in stark contrast to the narrow, removed, interpretation of ‘uptake’ rates dominant in policy reporting. Further research could focus on how GBMSM perceived sexual health services and what uses these serve in the management of their sexual health and how best these can promote the relational processes outlined.
- This research has also shown that GBMSM’s meaning of HPV vaccination is response to socio-cultural circumstances and the response to HPV vaccination shifts to the perceived situation of themselves and in relation to heteronormativity. In policy, however, independence from the norm through a targeted vaccination program may present a binary – something you are or

something you do or don't do. Further research could focus on how GBMSM perceive the provision of the HPV vaccine considering gender-neutral vaccination programmes in order to explore how best to incorporate targeted and universal vaccination programmes.

- As presented earlier, this research aimed to achieve theoretical sufficiency meaning that the theory developed is open to further development. Further research could continue to apply a CGT approach to develop or test proposed conditional categories, applying constant comparative methods to data collection to develop the substantive theory presented in Chapter 5 with the aim being theoretical saturation.

7.3 Strengths and limitations of the study

7.4 Strengths

Results obtained from this research were obtained from 17 participants through semi-structured interviews from GBMSM who were eligible to receive the HPV vaccine in Scotland. The study is rooted in an interpretivist paradigm and as such should be considered in the implementation of the HPV-GBMSM programme's longevity, Scotland as a geographic and cultural context, and the data collection period (Charmaz, 2014). Procedures undertaken to achieve rigour were presented and discussed in Chapter 4. The issues will not be repeated here. However, a couple of methodological approaches, namely situating the literature will be addressed.

A methodological strength intrinsic to (some applications of) Constructivist Grounded Theory, and which enhanced credibility, is the literature and its chronology in the study. I conducted a qualitative evidence synthesis in 2019 and 'completed' this review prior to the implementation of the primary research. The main argument in favour of this procedure is that – by not repeatedly returning to the literature – I was able to reassure that my theory was grounded in the data which was collected as part of the primary study. For example, central concepts surrounding theorising health and barriers to some services were addressed in the literature, but it is reassuring to discover that the dimensions of this reflected in my study was perceived analytically separate to these earlier studies.

7.5 Limitations

While two participants identified as bisexual, the remaining identified as gay. The framing of the research, as a study reflecting MSM attitudes to HPV vaccination, therefore falls foul to the same limitation of 'identity' outlined earlier. Moreover, the role in which sexual identity of a majority gay identifying GBMSM participant pool offers the limitation that non-gay identifying GBMSM may have contributed to that data in new ways which may have challenged and nuanced the current findings further. Therefore, issues of representativeness are present in the current study. The small number of participants must be considered. The chosen sampling methods outlined in chapter 4 were considered in relation to time and ethical implications. On the other hand, generalisability in qualitative research is not (and should not) be a priority, as the mechanisms in which methods and relevant methodologies can capture meanings are varied. Moreover, given the interpretivist which posits there is no single interpretive truth in research approaches; "it is the world of lived experience and so can deliver significant insights and knowledge" (Denzin & Lincoln, 2005).

The framing of the research – exclusively focusing on Human Papillomavirus experiences and perceptions – when attempting to recruit participants may have severed as a barrier to engagement. Indeed, the target sample population were GBMSM so may have had ulterior motives for participating in the research. But, as a result of this experience, the sample demonstrated a profound level of reflection contributing to the rich insight into their perceptions of HPV vaccination. Future studies should consider the role of de-stigmatising language and affording in the presentation of the research a broader scope such as talking about 'men's health' which could welcome participants which may not intrinsically know the research question subject matter but can speak to the lived experience which aren't consciously connected to the investigation.

This study provides valuable insights of GBMSM's views of HPV and HPV vaccination and how the conditions which influence HPV vaccination in Scotland. The eventual worthiness of this study relates to the "richness, depth and sufficiency" of the theory

presented (Charmaz, 2006, p. 18), While there may be the potential for personal bias influencing the research process and laterally the viability of the findings, this was addressed and minimised using reflexivity and supervision. It cannot be ignored that, given the interpretivist approach, the salience of codes, categories, and the model may be validly re-interpreted by

7.6 Reflecting on the research process

In commencing this research, I set out to gain an insight into the perceptions and experiences of GBMSM as they relate to HPV and HPV vaccination. When preparing to undertake this research, it became clear that a level of unknowing, independence, and confusion about HPV and the relevance of HPV vaccination existed. If interventions are to be targeted, if the clinical setting is to be used despite known structural and social barriers, an increased focus on clarifying the meaning of health threats to GBMSM which may previously not have been considered needs to be developed in the policy architecture.

The development of understanding barriers to and facilitators of HPV and HPV vaccination moving beyond the systematic review chapter and found in the data analysis presented in the findings aimed to document a tool for consideration in which to enhance provision. The meaning making of GBMSM as they understood their health and perceived relevance and risk of HPV was resulted in a range of thoughts and feelings in which to learn from.

The experience of undertaking the research has had significant personal outcomes. Through professional challenge and debate, I have experienced the process of deconstructing and reconstructing knowledge, understanding beliefs, at many times uncomfortable, but always resulting in growth. The doctoral journey for me has been a long one with many breaks. Breaks to understand the world of research as it relates to the Scottish Government (for 3 months), breaks to suspend my doing of the research to retain a semblance of my own mental health, and many extensions to writing and 'finishing' this thesis.

In the face of this, I have encountered a complex system of how some GBMSM understood and experience their health and these have strengthened my perspective of health (service) research as a mechanism for leveraging new and innovative ways of informing and constructing health policy. At time of writing, I recognise that the learning from this thesis has already informed policy work which I have been involved in – to develop models of the future of new services which disaggregate health from the health service.

7.7 Conclusion

The body of work presented in this thesis suggests that perceptions relating to HPV and HPV vaccination are situated in a complex, cascading, model of meaning making in relation to health, threats to health, health institutions, and the acceptance of health interventions in the clinical encounter. Considering evidence documenting that low awareness of HPV, low uptake rates of the HPV vaccination programme, and low perceived risk relating to HPV-related cancers, this research adds to the evidence relating to the constellation of barriers experienced and perpetuated in a targeted HPV-GBMSM vaccination programme.

This research includes GBMSM reporting experiences and meaning of HPV vaccination as well as those making sense of HPV vaccination while being eligible but having not received the vaccine. It must be recognised that the socio-cultural conditions in which GBMSM navigate external to the clinical environment in which the HPV vaccine is offered must be part of the narrative when considering HPV vaccine 'uptake' rates in Scotland. For those previously engaging with sexual health and blood borne virus services, HPV vaccination has been construed as another service in which adds to the litany of provisions provided in the clinical encounter. For those, HPV vaccination is an intervention which can be easily co-opted into the service procedures.

The complexity, then, is situated in the constellation of conditions which create barriers to being offered the HPV vaccine in that scenario. Against a milieu of stigma, discrimination (experienced and perceived), unawareness, willingness, and

positioning within society, HPV vaccination must be considered for those who do not engage regularly with the institutions that provide the vaccine.

Finally, the objective of this thesis was to explore how GBMSM make sense of HPV and of HPV vaccination as the Scottish Government implement a targeted HPV-GBMSM vaccination programme. The qualitative systematic review and evidence synthesis indicated patient-, and provider-level factors that influence HPV vaccination. In the primary research, the meaning associated with HPV and HPV vaccination in a Scottish context was understood in the constellation of GBMSM sexual health more broadly and enacted inter-personally with sexual health services. Participants understood HPV and HPV vaccination in the lens of a substantive history of public health messaging, heteronormativity, othering, and in the contemporary space of new biomedical interventions such as PrEP in the pursuit of preventing the acquisition and transmission of HIV. All these factors coalesced and influenced engagement theoretically and experientially with HPV vaccination and decisions and motivation of therein.

7.8 Post-Doctoral Research

Charmaz (2014) highlights that an emerging grounded theory provides a preliminary foundation of knowledge, which researchers can build upon. The model of HPV-GBMSM vaccination provides such a foundation, however, in order to strengthen this model, further empirical investigation is required. This could be achieved through post-doctoral research to explore the permeability of sexual health and other healthcare settings (such as primary care) as new models of HPV vaccine delivery which can meet the needs of those who have not yet seen the success of prophylactic vaccination. That being said, gender neutral vaccination programmes are becoming increasingly prevalent globally.

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Appendix

Appendix 1: Systematic Review Search Strategy

Appendix 2: Systematic Review PRISMA flowchart

Appendix 3: Extracted data from Systematic Review Studies

Appendix 4: CASP Toolkit Scoring

Appendix 5: Illustrative Coding for QES

Appendix 6: Tabular of Analytical and descriptive themes

Appendix 7: School of Health and Social Care Ethics Application

Appendix 8: Primary Research Study Advert

Appendix 9: Permission from Waverley Care

Appendix 10: Participant Information Sheet

Appendix 11: Participant Consent Form

Appendix 12: Participant Demographic Questionnaire

Appendix 13: Participant Interview Schedule

Appendix 14: Participant Debrief Sheet

Appendix 15: Coding process to category development Coding process to category development

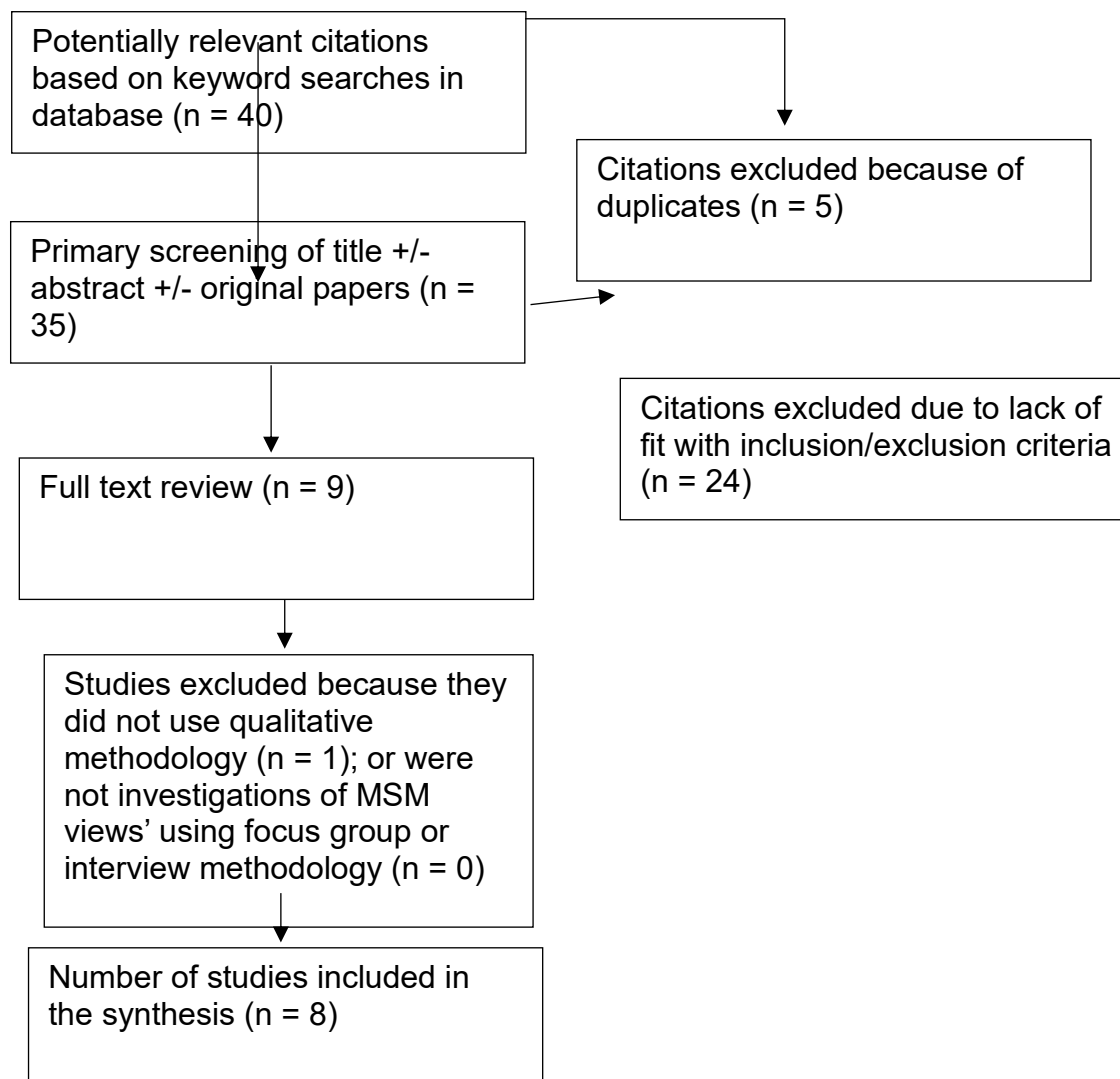
<i>Appendix 1: Systematic Review Search Strategy</i>						
	PsycINFO	Medline	Embase	CINAHL (76)	ASSIA	Web of Science
Vaccination	DE Immunization "Vaccination",ti.ab. "Immuni?ation",ti.ab.	(MH "Immunization+") AB Vaccination OR TI Vaccination AB "Immuni?ation" OR TI "Immuni?ation" AB "vaccination*" OR TI "vaccination*"	Exp Immunization/ "vaccination*".ti,ab. "immuni?ation*".ti,ab.	(MH "Immunization"/) "Vaccination*".ab,ti. "Immuni?ation*".ab,ti. "Vaccine*".ab,ti.	("vaccination").ab,ti. ("immunization").ab,ti. Immunization/	("vaccination"),ti.
Human Papillomavirus (HPV)	DE "Human Papillomavirus" "Human Papillomavirus".ti,ab.	"Human Papillomavirus")	Exp Wart Virus/ "HPV".ti,ab. "Human Papillomavirus".ti,ab.	(MH "Papillomaviruses"/) "HPV".ab,ti. "Human Papillomavirus".ab,ti.	("Human Papillomavirus").ab,ti. ("HPV").ab,ti. Human papillomaviruses/	("Human papillomavirus"),ti. ("HPV"),ti.

Genital human
papillomavirus
infection/

Qualitative	DE "Qualitative Research"	(MH "Qualitative Research")	exp research/	qualitative (MH "Qualitative Studies"/)	Qualitative research/ Qualitative methods/
	DE "Interviews"+	(MH "Interview")	exp interview/	(MH "Anthropology, Cultural")	Qualitative data/ Qualitative analysis/
	DE "Observation Methods"	(MH "Observation")	exp observational method/	(MH "Ethnographic Research")	("grounded theory").ab,ti.
	"interviews*".ti,ab.	(MH "Interviews as Topic"/)	"interview*".ti,ab.	(MH "Interviews/")	("interview").ab,ti.
	"Focus group*".ti,ab.	(MH "Focus Groups")	"focus group*".ti,ab.	(MH "Structured Interview")	("focus group").ab,ti.
	"Ethnogr*".ti,ab.	(MH "Focus Groups")	exp ethnography/	(MH "Focus Group")	("ethnog").ab,ti.
	DE "Ethnography"	(MH "Anthropology, Cultural+")	"thematic analysis".ti,ab.	(MH "Nonexperimental Studies"/)	("thematic analysis").ab,ti.
	"Thematic analysis".ti,ab.	"thematic analysis".ti,ab	"grounded theory".ti,ab.	(MH "Content Analysis")	
	"Grounded theory".ti,ab.	"thematic analysis".ti,ab	"interpretative phenomenological analysis".ti,ab.	(MH "Thematic Analysis")	
	"interpretative phenomenological analysis".ti,ab.	"Grounded theory".ti,ab.	"content analysis".ti,ab.		
	"content analysis".ti,ab.				

“Interpretative phenomenological analysis”.ti,ab.
 “Content analysis”.ti,ab.
 “Framework Analysis”.ti,ab.
 "framework analysis".ti,ab.
 (MH Theory“)
 “Grounded Qualitative* Anthropology* Ethnog* Interview* “Focus group*” Observation* “Content Analysis” “Thematic Analysis” “Grounded Theory”

Population (“men who have sex with men”) (MH “Homosexuality+”) (MH “Homosexuality, Male”) AB “Men who have Sex with men” OR TI “Men who have Sex with men”) (MH exp men who have sex with men/ “men who have sex with me*”).ti,ab. (MH “Men Who have Sex with Men”) “men who have sex with men”.ab,ti. (“men who have sex with men”).ab,ti. (“Men who have sex with men”),ti. Homosexuals/

Appendix 2: Systematic Review PRISMA flowchart

Appendix 3: Extracted data from Systematic Review Studies

Manuscript information	Authors	Fontenot et al., 2017	Galea et al., 2017	Grace et al., 2018	Gutierrez et al., 2013	Kesten et al., 2019	Koskan et al., 2018	Nadarzynski et al., 2017	Wheldon et al., 2017
	Title	Increasing HPV vaccination and eliminating barriers: Recommendations from young men who have sex with men.	HPV vaccine knowledge and acceptability among Peruvian men who have sex with men and transgender women: A pilot, qualitative study.	HIV-positive gay men's knowledge and perceptions of Human Papillomavirus (HPV) and HPV vaccination: A qualitative study.	Acceptability of the Human Papillomavirus Vaccine Among Urban Adolescent Males.	Mixed-methods study in England and Northern Ireland to understand young men who have sex with men's knowledge and attitudes towards human papillomavirus vaccination.	Anal Cancer Prevention Perspectives Among Foreign-Born Latino HIV-Infected Gay and Bisexual Men.	Perceptions of HPV and attitudes towards HPV vaccination amongst men who have sex with men: A qualitative analysis.	HPV vaccine decision-making among young men who have sex with men.
	Country	USA	Peru	Canada	USA	UK	USA (Miami)	UK	USA
	Journal	Vaccine	PLOS One	PLOS One	American Journal of Men's Health	BMJ Open	LGBT Health	British Journal of Health Psychology	Health Education Journal
	Year	2016	2017	2018	2013	2019	2018	2017	2017
Participants	HPV status determined?	58.8% had initiated HPV vaccination and 35.3% had completed the 3-dose series	N/A	N/A	"None of the males self-reported HPV vaccination" (2010)	N/A	N/A	N/A	5 identified that had received at least one dose of the HPV vaccine
	Number of participants	25	36	25	41	18	33	32	22

	Age range of participants	<i>M</i> = 20.8	<i>m</i> = 26	<i>m</i> = 50.44	<i>mdn</i> = 18	<i>m</i> = 20.5 (16-24)	<i>M</i> = 44 (22-68)	<i>mdn</i> = 25	<i>R</i> = 18 - 26
	Sexual identity of participants	<i>N</i> = 24 Gay	"Gay", not self-identifying as gay, MSM, and TW paid sex workers.	24 "Gay men" and 1 "two-spirit"		MSM	"GBM"	GBMSM	95% identified gay, one bisexual
	Other relevant sociodemographic	62.8% of participants reported having flu vaccine. 76.4% oral, anal, and vaginal intercourse	Two focus groups with MSM and 1 focus group with TW	Living with HIV	77.4% African American	3 Focus Groups in Northern Ireland	N/A	N/A	
Methods	Study design	6 FG + 4 Is	3 FG + 15 Is	25 Is	4 FG – TPB	4FG - PAPM	33 Is	4 FG + 13 Is	22 Is - IM
	Scope of study	To (1) elicit YMSM's beliefs about their risks for and fear of HPV infection and vaccination, to (2) describe YMSM's perceived benefits of obtaining HPV vaccination, and (3) describe YMSM's perceived barriers to, and facilitators of, HPV vaccination initiation and completion.	HPV vaccine knowledge, acceptability, social and community concerns (impact of vaccines on an individual's social life and sexual practices), and participation in HPV vaccine research.	Inductively examine participants' narrative accounts of their knowledge, experiences, and perceptions related to HPV and HPV vaccine in order to understand the production and organisation of HPV health literacy and vaccine uptake	To understand knowledge, attitudes, and intentions toward vaccination of MSM.	To understand YMSM's knowledge and attitudes towards HPV vaccination	To explore the perspectives, barriers, and facilitators related to both primary (HPV vaccine uptake) and secondary (anal cancer screening) prevention among foreign-born (not including Puerto Rican populations) Latino HIV-infected GBM	To explore the perceptions of HPV and attitudes toward HPV vaccination	To (1) describe salient beliefs related to HPV vaccination among YMSM, determine factors that underlie these beliefs, and describe a model for HPV vaccine decision-making
	Recruitment method		Convenience sample	Purposive	Convenience sample	Convenience Sample	Convenience Sample	Convenience sample	
	Recruitment setting		Outreach workers in a community health centre, bars, clubs, saunas.	Recruited GBMSM as part of anal screening 'HPV-SAVE' programme	Recreation centres, public libraries, non-profit organisations	LGBTQ organisations, university student union and societies, and social media	Fliers in various health-related organisations (health department, no profit organisations, LGBT community health centre)	Three-trained students distributed leaflets in gay bars, a sauna, clubs, and cafes and social media	Student Pr Groups and virtual sites

Methods of analysis		Systematic, comparative, content analysis	Grounded Theory (Charmaz)	“iterative rounds of coding by two members”	Thematically	Content Analysis	Framework analysis	Content analysis
Themes	a) Low HPV knowledge and awareness, b) positive vaccine beliefs, c) perceived stigma, d) facilitators of HPV vaccination	<ul style="list-style-type: none"> • Purpose of vaccines and the HPV vaccine • Acceptability and motivation for HPV vaccination • HPV vaccination and sexual behaviour • Social aspects and HPV vaccination 	<ul style="list-style-type: none"> • Vaccination history • Vaccine decision-making and risk perception • HPV, gendered risk perceptions, and vaccination knowledge • Gendered associations and the role of physicians in decision-making • Cost as a complex barrier to vaccine access 	<ul style="list-style-type: none"> • Awareness and knowledge of HPV and the vaccine • Risky Healthy Behaviours and HPV risk Perception • Attitudes, norms, and intentions to vaccinate • Decision making about HPV vaccination 	<ul style="list-style-type: none"> • Willingness to be vaccinated • Implementation recommendations 	<ul style="list-style-type: none"> • Knowledge/awareness about HPV and the HPV vaccine • Anal Cancer Screening • Psychosocial barriers to Anal Cancer Screening • Anal Dysplasia self-screening • Education Preferences 	<ul style="list-style-type: none"> • Awareness about HPV, • Beliefs about HV • Perceptions of genital warts • Perceptions of HPV-related cancers • Attitudes towards targeted HPV vaccination for MSM • Eligibility on sexuality perceived as barriers to HPV vaccination • Perceived motivational barriers • 	<ul style="list-style-type: none"> • Behavioural beliefs • Normative beliefs • Control beliefs

	<i>Primary Qualitative Studies</i>	CASP Item									
		1. Are the results valid?	2. Is a qualitative methodology appropriate?	3. Was the research design appropriate to address the aims of the research?	4. Was the recruitment strategy appropriate to the aims of the research?	5. Was the data collected in a way that addressed the research issue?	6. Has the relationship between researcher and participants been adequately considered?	7. Have ethical issues been taken into consideration?	8. Was the data analysis sufficiently rigorous?	9. Is there a clear statement of findings?	10. How valuable is the research?
	Fontenot et al., 2017	Yes	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes	Yes	Valuable
	Galea et al., 2017	Yes	Yes	Yes	Yes	Yes	Can't tell	Can't tell	Yes	Yes	Valuable
	Grace et al., 2018	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes	Yes	Yes	Valuable
	Gutierrez et al., 2013	Yes	Yes	Can't tell	Yes	Yes	No	No	Yes	Yes	Valuable
	Kesten et al., 2019	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Valuable
	Koskan et al., 2018	Yes	Yes	Yes	Yes	Yes	No	Can't tell	Can't tell	Yes	Valuable
	Nadarzynski et al., 2017	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Valuable
	Wheldon et al., 2017	Yes	Yes	Can't tell	Yes	Yes	Yes	Yes	Yes	Yes	Valuable

Appendix 5: Illustrative Coding Matrix for QES

Analytical theme						
The limited perceived relevancy of HPV among GBMSM				The role and influence of sociocultural context and care experiences on HPV-GBMSM vaccination		
Descriptive themes						
Lack of information on HPV and HPV vaccination	Feminisation of HPV	Informational needs	Cascading HPV Information	Healthcare Providers and Practices as a determinant of HPV vaccination	Healthcare provider recommendation as a determinant of HPV vaccination	The role of disclosure as a determinant of HPV vaccination
Code (examples)						
Preventative vaccinations	Separate to men	Needing to know	Settings of sexual health knowledge	Competency	Not without being asked	Disclosure
What is HPV?	Girl, girls, and women	Not needing to know it all	Where to promote health	Working with minorities	Controlled vs happening	Separate Identity

Uncertainty and questioning knowledge levels	Already different – cervical cancer	Confirming knowledge	Comparing lifestyles with others	Reluctance to engage	Opportunist	Knowing vs not knowing
Hierarchy of memories on knowing physical/conversational	Othering	Accepted, does not need more information	Receiving information	Local practitioners' local needs	Routine service(s)	'being' gay
Not knowing, not wanting to know	Cervix is central	Accepted, requires more information	Peers, friends, mentors	Reactive and proactive	Initiation	Isolation from community
Illustrative quotes						
<i>I've never thought about gay men being especially at risk for HPV</i> (Fontenot, 2017)	"MSM are not prepared to receive the vaccine because they are not aware of the issue, and some will not do it of their own accord. In other words, they	"I had no idea that it caused all of those cancers. I think if that was made public [people would get vaccinated]" (Fontenot, 2017)	I think that would be really helpful in keeping track of what you've had done, because right now I have no idea and I have to fill out this sheet with all	Increasing competency, honestly, of like healthcare provider who... don't work with queer populations or are not queer identified themselves" is	I would want them to approach me. I wouldn't go out of my way to go and get it. (Kesten, 2019)	"[participants] are often not comfortable with disclosing their sexuality because of stigma" (Onyeabor)

	<p>either don't know about it or they ignore it."</p>		<p>my vaccinations and I have no idea how to get that information" (Fontenot, 2017)</p>	<p>necessary as it "the doctor's job to make sure that [you're] comfortable and speaking to them about whatever (Fontenot, 2017)</p>		
<p>[Older] MSM were unaware of HPV and were unable to recall any information related to the HPV (Nadarzynsk, 20177)</p>	<p>"I know that it's more dangerous for girls. It can cause genital warts and it can also increase their chances of cervical cancer?" (Nadarzynski, 2017)</p>	<p>"knowing the facts is the most important part because once you know then you realize this shouldn't be disregarded and there's a vaccine you should</p>	<p>When you're receiving that [heterosexual relationship education] in school, (...) it just reinforces the fact that you're (...) not relating to it</p>			<p>"It's personal [the decision to be vaccinated]. They will mock me if I am vaccinated because... They will think I like faggots, and then the entire</p>

		<p>probably get” (Fontenot, 2017)</p>	<p>means that you’re not normal like everyone else, so you don’t want to speak about it. So, it would just be better if it [HPV vaccine education for MSM] was just part of that education anyway. (Kesten, 2019)</p>			<p>neighbourhood will know” (Peruvian MSM) - Galea 2017</p>
<p>Despite a perceived lack of knowledge about HPV and the vaccine and the threat posed to men, most</p>						<p>“I would just feel weird talking to someone about that [HPV vaccine], I would</p>

<p>partici- pants were willing to receive the vaccine and wanted more information. (Kesten, 2019)</p>						<p>not know their views on LGBT people. So, I feel like there may be some bias in the information they could give me. Even though it's unprofessional” (19 years, Asian American Unvaccinated) - Wheldon 2017</p>
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Appendix 6: Tabular of Analytical and descriptive themes

Analytical Theme	Descriptive Theme
The limited perceived relevancy of HPV among GBMSM	Lack of information on HPV and HPV vaccination
	Feminisation of HPV
	Informational needs
	Cascading HPV Information
The role and influence of sociocultural context and care experiences on HPV-GBMSM vaccination	Healthcare Providers and Practices as a determinant of HPV vaccination
	Healthcare provider recommendation as a determinant of HPV vaccination
	The role of disclosure as a determinant of HPV vaccination

Appendix 7: School of Health and Social Care Ethics Application

SCHOOL OF HEALTH AND SOCIAL CARE

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APPLICATION FORM FOR PROJECT ETHICAL APPROVAL

Project title: Men who have Sex with Men's knowledge and perceptions of Human Papillomavirus (HPV) and HPV vaccination: A qualitative study.		Version no: 2.2
Full name & title: Mr Lewis Clarke		School: School of Nursing, Midwifery & Social Care
E-mail address: [REDACTED]		Telephone: [REDACTED]
Postal address: Sighthill Office 1.B.29 Edinburgh Napier University, School of Health and social Care, Sighthill Court, Edinburgh, EH11 4BN		
Status: Staff (Edinburgh Napier University) <input type="checkbox"/> Student (Edinburgh Napier University) <input checked="" type="checkbox"/> External Applicant <input type="checkbox"/> Please provide additional details below:		
Other researchers (name, role & affiliation): Professor Brian Williams, Supervisor; Dr. Carol Gray-Brunton, Supervisor; and Dr. Janette Pow, the Director of Studies. All members of staff Edinburgh Napier University.		Matriculation Number: 40335416 Degree programme: PhD
Independent advisor: Janyne Afseth; Edinburgh Napier University		Level of study: MRes/MPhil/PhD
Financial support from outside Edinburgh Napier University (amount & source): £0		
Project start date: March 2019		Project duration: 10 months (November 2019)
Date application submitted: January 15th 2019		Ref no. (LEAVE BLANK): Click here to enter text.

YOU MUST ANSWER ALL QUESTIONS		YES	NO	N/A
1	Will you describe the main procedures to participants in advance, so that they are informed about what to expect in your study?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Will you tell participants that their participation is voluntary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Will your participants be able to read and understand the participant information sheet?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Will you obtain written consent for participation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	If the research is observational (including tape and video), will you ask participants for their consent to being observed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	Will you tell participants that they may withdraw from the research without penalty and without reason?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	With questionnaires and interviews, will you give participants the option of omitting questions they do not want to answer?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Are the data to be stored anonymously (i.e. the identity of the person is NOT linked directly or indirectly with their data)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Will you debrief participants at the end of their participation (i.e. give them a brief explanation of the study and an opportunity to ask questions)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Will the research involve deliberately misleading participants (deception) in any way?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12	Is there any realistic risk of any participants experiencing either physical or psychological distress or discomfort?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13	Is the information gathered from participants of a sensitive, personal or contentious nature?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Will any payment or reward be made to participants, beyond reimbursement or out-of-pocket expenses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1 5	Do participants fall into any of the following special groups? <i>If the answer is YES, indicate which group(s) by checking the appropriate box(es).</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> Children (under 18 years) or Children in local authority care <input type="checkbox"/> Clinical population <input type="checkbox"/> People with mental health issues <input type="checkbox"/> People in custody <input type="checkbox"/> People with learning or communication difficulties <input type="checkbox"/> People engaged in illegal activities (e.g. drug-taking)			
<p><i>NOTE: You may also need to obtain clearance from Disclosure Scotland or an equivalent authority.</i></p>				

You must check **either Box A or Box B** below and provide **all** relevant information in support of your application in the Details of Project section. If you answered **NO** to any of **questions 1-10**, or **YES** to any of **questions 11-15** (with a shaded background), then you **must** check Box B.

DETAILS OF PROJECT

1. **Background information** (300 words maximum; references should be cited and listed)

The Human Papillomavirus (HPV) causes approximately 500 oropharyngeal, 300 anal and 200 penile cancers in men (Parkin, 2010). Men who have sex with men (MSM) bear a disproportionate burden of these clinical cases attributable to HPV when compared to their heterosexual counterparts (Grulich et al., 2012). The HPV vaccine – a prophylactic vaccine – prevents against a number of oncogenic strains of the virus leading to the development of the aforementioned cancers (Muñoz, Castellsagué, de González, & Gissmann, 2006). Moreover, around 44,000 MSM (of the estimate 515,000 MSM population) living with HIV (Public Health England, 2014; Office of National Statistics, 2015). These men are 38 times more likely to develop anal cancer compared to HIV-negative men (Frisch, Briggar, & Goesdert, 2000). While the UK is among a number of developed countries implementing a female-

targeted HPV vaccination programme, these provide little to no benefit among MSM (Ali et al., 2013).

From July 2017, Scotland has offered MSM up to the age of 45 the HPV vaccine when accessing sexual health services. While the vaccine has been demonstrated to be efficacious in preventing anal condylomas among MSM (Swedish & Goldstone, 2014), much research evidenced that MSM have very limited awareness of HPV and its associated cancer risks (Nadarzynski, Smith, Richardson, Jones, Llewellyn, 2014). Despite this, several studies report the willingness of MSM to be vaccinated once informed (Gerend, Madkins, Phillips, & Mustanskim, 2016; Wheldon et al., 2011). In response to this, the UK health departments introduced HPV vaccination for MSM. In England, this manifested as a pilot programme from 2016 and later developed into a full roll-out programme delivered in sexual health and HIV clinics. In Scotland, this manifested as a full roll-out (without pilot) from July 2017 implemented in the same way. Uptake in the English and Scottish HPV-MSM vaccination programmes were 46% and 66.7%, respectively. To the best of the research team's knowledge, there is currently no published qualitative research that focuses on the HPV vaccination practices of MSM living in Scotland. Therefore, the aim of this study is to explore the perceptions of HPV and attitudes toward HPV vaccination among Scottish MSM.

(Ali et al., 2013; Frisch et al., 2000; Gerend et al., 2016; Grulich et al., 2012; Muñoz et al., 2006; T. Nadarzynski et al., 2017; Parkin, 2011; Wheldon et al., 2017)

2. Aims & research questions

To explore factors affecting HPV vaccine uptake among MSM eligible for the national programme. Research questions will:

- Describe the salient perceptions, experiences, and beliefs among MSM related to HPV vaccination;
- Determine factors which underlie these, and;
- Provide recommendations to inform the future provision of the HPV vaccine for MSM in Scotland.

3. Participants

4. *Number & nature of sample:*

The priority population of this study were MSM between the ages of 18 and 45 who may or may not identify as gay or bisexual (referred to here as MSM). This exploratory research is based on the notion that asking MSM to reflect on their knowledge, perceptions, and experiences of HPV, HPV vaccination, and disclosing their sexual identity and/or behaviour will provide highly relevant data to build a comprehensive and robust theory of HPV vaccine receipt (rather than superimposing a model and testing for conformity). As such, in order to answer the research questions, put forward, a purposively selected of (self-identifying males who report an instance of sex with another male) MSM will be chosen to participate in the qualitative data collection methods (discussed below). Table one is a summary of this.

Table one: number and nature of participants

Data collection method	Number of participants	Type of participants
Interviews	25	Self-identified MSM

5. *Inclusion/exclusion criteria: Men who have sex with men (MSM)*

This criterion is congruent with the characteristics of those eligible for the HPV vaccination programme for MSM as outlined by the Chief Medical Office.

Participants will need to self-identify with the following criteria to participate in the study. Those not self-identifying with the follow will be excluded from participation:

- At least 18 years old
- Male sex assigned at birth
- Resident in Scotland
- Report at least one instance of sex with a man
- Able to speak and understand English
- Willing and able to provide informed consent

6. *Recruitment of participants:*

Recruitment will be conducted between March and November 2019. There are three methods of recruitment: posters, online advertisement, and face-to-face engagement.

- Poster, leaflets and adverts

An A3 poster and A6 leaflets are developed to advertise individual interviews, explaining that the discussions are for gay and bisexual men about their views on sexual health and vaccinating against sexually transmitted infections.

Participants are offered a £20 gift voucher to thank them for their time. The poster emphasised that all discussions were anonymous and confidential. Potential participants were able to tear off a part of the poster with the study investigator's email address.

The posters and leaflets were distributed among various community locations in Edinburgh and Glasgow such as gay bars, saunas, clubs and cafes where MAMS were likely to visit. These will also be circulated to LGBTQ+ 3rd sector organisations.

- Online advertisement

The poster used for this study will also be posted on social media (e.g. Twitter). Specific accounts relating to LGBTQ+ health and Scottish LGBTQ+ health will be targeted to disseminate the advertisement. Edinburgh Napier University, University of Edinburgh, University of Glasgow, and Glasgow Caledonian University LGBT student societies will also be contacted to distribute the e-mail contacting the e-poster. Any potential MSM visiting these pages, social media accounts, or privy to the student societies will be able to anonymously view the investigator's contact details.

- Face-to-face engagement

Waverly Care – a national HIV and Hepatitis charity, and SX Scotland – a subset of Waverly Care focusing on the sexual health of MSM in Edinburgh and the Lothians, have agreed to collaborate with the identification of potential participants and the dissemination of study documents (see appendix). The study will be advertised in the branches of these 3rd sector organisations and during community outreach meetings.

In all methods of recruitment, MSM interested in participating are asked to e-mail Lewis Clarke. This will facilitate a discussion checking the eligibility criteria and to provide (potentially again) the study information sheet and consent form. Lewis Clarke, once contacted, will screen participants asking about their gender, age, and whether they identify as MSM or were sexually attracted to men. Respondents that do not meet the inclusion criteria were thanked for their interest and encouraged to take part in any future studies. The contact details of respondents who met the inclusion criteria will be entered into a database / spreadsheet. These individuals will be contacted by Lewis Clarke to arrange a specific time and location for the interview. All individuals will have the opportunity to discuss consent and their right to confidentiality and withdrawal via e-mail and face-to-face prior to the interview. Individuals will be interviewed once.

7. Outline of methods & measurements (*approx. 500 words*)

Qualitative interviews will be the exclusive data collection method. This method will generate rich descriptions of the salient beliefs, experiences, and perceptions of Scottish MSM regarding HPV, HPV vaccination, and disclosing their sexual identity and/or sexual behaviours to relevant healthcare providers.

- If MSM are interested in participants, they will firstly be knowledgeable of the study from the participant information sheet (see appendix). Following further correspondence as initiated by the potential participant, an individual interview will be arranged at the participants' convenience (to be organised in Glasgow or Edinburgh based Waverly Care offices or one of Edinburgh Napier University's three campuses of which a meeting room will be booked).
- Prior to beginning the interview, participants will be asked to provide signed consent forms (see appendix). Participants will also be asked to complete an anonymous demographic information questionnaire (see appendix 3);
- Following the procedure aimed at ensuring participants are fully informed and have provided consent, the interviews will proceed. Interview questions will ask participants to engage in a critical discussion of their knowledge, perceptions, and experiences pertaining to HPV, HPV

vaccination, and disclosing their sexual identity and/or sexual behaviours to healthcare providers (see interview schedule in appendix)

- Interviews will take place between March 2019 and November 2019. It is anticipated that individual interviews will approximately last up to 45 minutes. This is summarised in table four.
- Participants receive a £20 shopping voucher for participation in the study

With participants' permission, all data collection methods will be audio-digitally recorded on a password protected Dictaphone. Recordings will be transferred to the University network storage. Only the CI will have access to this data. The CI will transcribe data collected verbatim. Audio-recordings will be deleted once transcribed. Participants will not have the opportunity to check the transcription of the data as data collection and data analysis will occur concomitantly.

Data will be inductively analysed as informed by the principles of grounded theory: a rigorous and methodological process which focuses on theory building, which embraces context and moved beyond description (Charmaz, 2014). Data analysis will be iterative through constantly comparing interviews collected. Lewis Clarke will perform this iterative process and report the ongoing of this to the academic supervisors (experienced in qualitative analysis). Emerging concepts will be presented and explained through visual data methods to an independent researcher (not attached to the research team but knowledgeable of the subject at hand), for further reflection.

The short demographic questionnaire contained few questions (see appendix). The participants will be asked to tick boxes that best represent how they feel about themselves including how they identify their sexuality, sexual behaviours, and sexual history (with possible 'rather not say' options). The questionnaire contains questions pertaining to; age, ethnicity, age of first male-male sexual encounter, number of years and/or months they have lived in Scotland, and employment status.

Demographic data will be inputted into an electronic file, stored on the University network storage space, and the hard copy destroyed. The CI and research team

employed at Edinburgh Napier University will have access to the demographic questionnaire. Data will be stored until project completion. Data will be destroyed adhering to Edinburgh Napier University's guidelines.

Reference

8. Risks to participants, university or the researcher (Please consult the Risk Assessment Folder on web page)

Potential participants may be unsure about the purpose of the research, anxious about levels of disclosure or privacy. To alleviate these issues, the research team will ensure participants are provided with the study's information sheet, data privacy form, and treated with dignity and respect and that information regarding the purpose of the research is conveyed in plain English. where the potential for the interview schedule (see appendix) may evoke feelings of distress or discomfort, this will be dealt with in the following ways;

- 1) Participants will be told of the nature of the research project before participating when given an information sheet (see appendix), prior to participating;
- 2) Participants will be reminded that they have the right to withdraw from the research at any stage with participation being entirely voluntary (see appendix);
- 3) Participants will be reminded that they are not required to answer/discuss any questions/topics which they do not wish to (see appendix);
- 4) If a participant is affected by a particular issue raised during an interview and this is perceived by myself I will suggest the participant to stop their participation in the research before any further feelings of distress or discomfort are experienced;

Risk to members of the research will be minimal. Lewis Clarke will be conducting the fieldwork. Supervisors will be informed of the time and location of interviews and will be contactable if required. Lewis Clarke will carry Edinburgh Napier University

ID at all times. Lewis Clarke has sufficient experience conducting qualitative methods of data collection regarding sexual health and sensitive topics. All interviews will be conducted in a private meeting room (or bookable space at Edinburgh Napier University) that is safe and accessible for both researcher and participants.

9. Consent and participant information arrangements, debriefing

Throughout the data collection, consent will be treated as an ongoing process. This process is:

- (1) An information sheet will be provided to participants before they decide to participate or not (see appendix). Participants will be asked to retain a copy of this information sheet that does not contain any sensitive or potentially harmful information. Participants have the opportunity to ask the researcher any questions relating to prospectively participating and for these to be addressed to their satisfaction before deciding to participate.
- (2) Prior to any data being collected, the CI will introduce the research project to participants and describe what participants should expect of their participation. These will mirror considerations outlined in the information sheet (see appendix). At this stage, participants will be asked to provide written consent to participate in this research (see appendix). Any person who does not wish to participate will not be required to do so. Those who do not provide a signed consent form will not be permitted to participate in the research.

Following data collection, participants will be debriefed (see appendix).

Participants will be asked to retain the debrief file for their documentation.

10. Ethical considerations raised by the project and how you intend to deal with them.

The current project seeks to ask MSM to reflect on their knowledge, perceptions, and experiences of HPV, HPV vaccination, and disclosing their sexual identity and/or behaviours to healthcare providers. While sexual health can be considered to be a 'sensitive' topic, there are no considerable ethical implications from this study applicable to researcher and/or participant. This study will, moreover, be reinforced

by the British Psychology Society (BPS) Code of Ethics (2009) which encourage a number of ethical issues to be considered, as reflected by adhering to: the principles of respecting participants, privacy and confidentiality (as outlined in the data management plan, see appendix), data management (see appendix), informed consent (see information sheet and consent form in appendix), in acknowledging and adhering to participants' right to participate and right to withdraw from the project at any time.

Disclosure management:

The research team recognises that while the research process itself and the disclosure it implies can prove beneficial or cathartic for some interviewees, nonetheless investigating the sexual health topic at hand may provide a platform for participants to disclose sensitive information that may not be identifiable prior to participating in the study. If a participant discloses a mental health issue / potentiality or experience in engaging in illegal activity during the interview and/or if participants become distressed (during the course of the interview) the researcher (LC) will seek to terminate the interview and provide participants with follow up information for support for relevant services: for example Waverly Care's support services for those living with HIV or Edinburgh's LGBT Health and Wellbeing charity (both free and confidential services). Information for these follow up services will be included in the debrief form (see appendix 5) and will be given to all participants (regardless of disclosures during participation). Data collected to the point where the interview is terminated due to participants' disclosure of sensitive information (mental health issue / potentiality to engage in illegal activities) will be destroyed as per Edinburgh Napier University guidance on the safe disposal of confidential waste and not included in the study.

DECLARATION

There is an obligation on the researcher to bring to the attention of the Faculty Research Ethics Approval Sub-Group any issues with ethical implications not clearly covered by this application form.

I request ethical and governance approval for the research described in this application. I have read Edinburgh Napier University's policies and guidelines relating to ethics and governance in research, and those of relevant professional bodies (e.g. BPS, BSA, IFPA, SIR, NMC) and agree to abide by these.

A I consider that this project has no significant ethical implications to be brought to the attention of the Faculty Research Ethics Approval Sub-Group

B I consider that this project may have significant ethical implications to be brought to the attention of the Faculty Research Ethics Approval Sub-Group

Signature Lewis Clarke

Date 15/01/19

I am the Director of Studies or supervisor for this research. I have read this application and approve it. I do not consider that any part of the research process will cause physical and/or psychological harm to participants, or be detrimental to the reputation of Edinburgh Napier University.

Signature Janette Pow

15/01/19

Date

- You must also attach Participant Information Sheet(s), Consent Form(s), as well as copies of any questionnaires, details of interview questions you plan to use, debrief sheets and notices advertising the study. You may need to create different versions of these materials (e.g. parental Participant Information Sheet and Consent Form if research involves

children); if so, all the different versions should be attached. Materials should be printed on paper headed with the University logo.

- If you will be recruiting participants via an outside organisation and/or will be conducting research on the premises of an outside organisation, you must provide a copy of written permission from the appropriate organisation(s).
- Submit the completed and signed form (with supporting materials) to Hilary Sawers, Hilary H.Sawers@napier.ac.uk 3.B.43, Sighthill Campus, Sighthill Court, Edinburgh, EH11 4BN; an electronic copy should also be sent to: ethics.fhlss@napier.ac.uk.

Appendix 9: Permission from Waverley Care



Waverley Care Glasgow
12 Queens Crescent
Glasgow G4 9AS
Tel: 0141 332 2520

Dear Lewis Clarke,

I am writing to you to confirm that I agree to your request for a collaborative relationship to support you in the remit of your research project *Men who have Sex with Men's knowledge and perceptions of Human Papillomavirus (HPV) and HPV vaccination: A qualitative study*, subject to the institutional approval from Edinburgh Napier University required to conduct primary research. Where appropriate, I approve of this research to be facilitated by Waverly Care volunteer-staff and/or conducted on Waverly Care premises.

Best wishes



Ruth McKenna
Research and Engagement Manager

www.waverleycare.org

Registered Office
Waverley Care, 3 Mansfield Place, Edinburgh EH3 6NB
Tel: 0131 558 1425 Email: info@waverleycare.org

Scottish Charity No. SC036590
Company Limited by Guarantee No. 253063
17295

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Information Sheet – Individual Interviews

Title: Men who have Sex with Men’s knowledge and perceptions of Human Papillomavirus (HPV) and HPV vaccination: A qualitative study.

You are being invited to take part in a research study. Before you decide to participate, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

Why have you been chosen?

You have been selected for the following reasons:

- You are at least 18 years old
- You reside in Scotland
- Report at least one instance of sex with another self-identifying male
- Willing and able to provide informed consent

We would like to find out about your views of the HPV vaccine even if you don’t know much about it.

What is the study about?

This study aims to find out about Men who have Sex with Men (MSM)’s views about the Human Papillomavirus (HPV) vaccine. The HPV vaccine was introduced in

Scotland in 2008 to young girls aged 12 – 13 years to protect against strands of the sexually transmitted HPV which in some cases can lead to cervical and other types of cancers. The vaccine is not currently being provided to boys in the UK, however MSM can receive the HPV vaccine from sexual health services. It is important to find out about what MSM think about this vaccine and their thoughts on how it is provided to MSM across Scotland.

What am I being asked to do?

You are being asked to take part in a one-hour interview (just the researcher, Lewis Clarke, and yourself). We would like to know more about your views about this vaccine, your thoughts on how it is being provided, your thoughts on the need for MSM to tell their healthcare provider they have sex with men is needed in order to be eligible to receive the vaccine. There are no right or wrong answers. With your permission, the interview will be recorded and typed up so that the transcript can be studied and compared with other interviews.

Is this confidential?

Yes. Your participation in the study would be anonymous and confidential. You may be identifiable from recordings of your voice, but only the research team would have access to this and the recording will be destroyed once transcribed word for word. All personally identifiable words will be removed from transcripts and it would not be possible for you to be identified in any reporting of the findings. All tangible documents such as the consent form will be stored on a secure university premises, digitised and stored on the University's encrypted V drive. Data will be stored for 5 years and then destroyed. You are free to withdraw from the study at any time without giving a reason and your data would be immediately destroyed. You are also free to refuse to answer questions at any time during the interview. If you would like to remove your data after the interview, you have up to 2 weeks to contact the research team.

What if I don't want to take part?

You should only take part if you would like to. You are free to withdraw from the study any stage without giving a reason.

What will happen to the findings?

The findings will give some understandings of MSM's views of the HPV vaccine and how it is being provided. The findings may be presented at a conference or published in a journal. Findings will also be provided to local sexual health services.

Where can I get more information about this study?

You can contact the researcher directly for more information:

PhD student and principal investigator: Lewis Clarke ([REDACTED]).

If you want to speak to someone who knows about the study but who is not directly involved then you can contact:

Independent advisor:

Janyne Afseth

Lecturer

Population and Public Health

Edinburgh Napier University

E: [REDACTED]

T: [REDACTED]

Appendix 11: Participant Consent Form

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Edinburgh Napier University Research Consent Form

Title of Project: **Men who have Sex with Men's knowledge and perceptions of Human Papillomavirus (HPV) and HPV vaccination: A qualitative study.**

Edinburgh Napier University requires that all persons who participate in research studies give their written consent to do so. Please read the following and, initial against each, and at the end sign the document if you agree with what it says.

INITIAL

1. I freely and voluntarily consent to be a participant in the research project on the topic of HPV-MSM vaccination in Scotland to be conducted by Mr Lewis Clarke who is a research student at Edinburgh Napier University.
2. The broad goal of this research study is to explore the knowledge, experiences, and perceptions among Men who have Sex with Men (MSM) regarding HPV, HPV vaccination, and sexual identity and/or sexual behaviour disclosure. Specifically, I consent to take part in an interview that should take no longer than one hour.
3. I confirm that I am happy to be referred to by a pseudonym for this research. This will mean that my name will not be linked with the research materials, and I will not be identifiable in any report subsequently produced by the researcher.

4. I consent to the audio-digital recording of data collected or the researcher taking field notes. I understand this audio-digital recording will be deleted once transcribed by Lewis Clarke.
5. I also understand that if at any time during the interview I feel unable or unwilling to continue, I am free to leave. That is, my participation in this study is completely voluntary, and I may withdraw from it without negative consequences.
6. In addition, should I not wish to answer any particular question or questions, I am free to decline.
7. I understand that any information disclosed during data collection that cannot be held in confidence (relating to past and/or future harm) will be passed onto an appropriate person.
8. I have been given the opportunity to ask questions regarding the interview and my questions have been answered to my satisfaction.
9. I have been through the project consent form with the investigator. I consent to take part in this project and agree that my participation has been fully explained to me. I agree to this interview being recorded. My signature is not a waiver of any legal rights. Furthermore, I understand that I will be able to keep a copy of the informed consent form for my records.

Name of Participant Date Signature

I have explained and defined in detail the research procedure in which the respondent has consented to participate. Furthermore, I will retain one copy of the informed consent form for my records.

Researcher

Appendix 12: Participant Demographic Questionnaire

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Project title: Men who have Sex with Men's knowledge and perceptions of Human Papillomavirus (HPV) and HPV vaccination: A qualitative study.

Demographic Questionnaire

We are interested in your lived experience of HPV, HPV vaccination, and disclosing your sexual identity and/or behaviours to a healthcare provider.

The questionnaire will take fewer than 5 minutes to complete.

Please take a moment to read the accompanying information sheet which tells you why we are collecting this information. Please read this before answering the questions.

By completing this questionnaire, you are confirming that:

- You have read the participant information sheet
- You have received enough information about the study
- You agreed to take part in the study

You understand that you do not need to take part in the study and that you are free to withdraw: (a) at any time, (b) without having to give a reason for withdrawing, and (c) without detriment to you

About you

1. Gender

Female

Male

Female/Male does not describe me, I prefer... _____

2. My age is _____ years

3. I am sexually attracted to

Men

Women

Both men and women

Rather not say

4. I have lived in Scotland for _____ years, _____ months

5. How male sexual partners have you had in your life (this includes masturbation, oral and penetrative sex)?

None (Go to Q8)

Less than 5

5 or more

6. At what age did you have your first sexual encounter with a man? _____ years

7. Have you ever disclosed to your doctor (or nurse) that you have had sex with men?

Yes

No

Not sure

Not applicable

8. My ethnic origin is _____

9. I am

Full-time employed looking for a job on a disability support

Part-time employed a student other _____

Appendix 13 Participant Interview Schedule

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The logo for Edinburgh Napier University, featuring a large red triangle pointing to the right, partially overlapping the text 'UNIVERSITY'.

Semi-Structured Interview Schedule

Interview Name:

Interview Pseudonym:

Job role:

Date of Interview:

Time of Interview:

Introduction

Thank you for your interest in taking part in this interview. Can I first ask that you have had an opportunity to read the information sheet?

Just before we begin, I will introduce this research, so you will have an understanding of what to expect when the interview begins. As well as this, I will go over some of the practical aspects for this interview.

So, this research aims to gain an understanding of your knowledge, perceptions, and experience of HPV, HPV vaccination, and disclosing your sexual identity / sexual

behaviours to healthcare providers. The aim of this interview is to draw on your experiences of these relating to this topic.

This interview will be audio-digitally recorded. If preferred I will instead make hand-written field notes. If at any point during the interview you feel uncomfortable, let me know, and we will stop. Continued participation will be voluntary and at your own discretion. You will remain anonymous and there will be no trace to your name during publication.

Finally, if you are happy to participate, can I ask you to sign the consent form, acknowledging you have read the information sheet and accept to the conditions to taking part.

GBMSM-HPV interviews

[Informed consent process completed]

Thank you for agreeing to take part in this interview.

A key aim of this study is to gain an in-depth understanding of how HPV vaccination can best be delivered to gay, bisexual, and other MSM. As part of this research we are conducting qualitative interviews to learn from MSM across Scotland.

Warm-up/General Questions:

- Just to begin with, then, what comes to mind when you think of 'health'?
 - Probe: What does it mean to be healthy?
 - Probe: What does healthy look like?
 - Probe: How is being healthy performed?
- Do you think your perceptions of health are common amongst [demographic]?
 - Probe: do you think attitudes to health have changed over time?
- What are some of the health concerns of [demographic of participant]?
 - Do you think there are differences in things that affect [e.g. heterosexual]

- What do you think causes those differences?
- Where do you get your general health information from?
 - What sources do you use?
 - do you usually follow the advice given out on them?

Awareness of HPV

- Have you ever heard of HPV what comes to mind?
- Have you ever been offered the HPV vaccine?
 - Could you run me through that process?
 - *If yes:* If so, how many doses? How old were you when you received your first dose of the vaccine? Do you have any comments on your experiences of receiving this vaccine?
 - *If no:* Has your healthcare provider ever discussed this with you? Has it ever been specifically recommended/not recommended for you? Would you consider getting it?
 - When was it first brought to your attention in the discussion?
 - What do you recall of what the clinician said about the vaccine?

Vaccine specific questions

- Who should get this vaccine? Should it be available to everyone?
- What do you see as barriers to accessing this vaccine?
 - i. Probe: would having to pay for the vaccine be a barrier for you?
- Do you have concerns about the HPV vaccine? (Probe: safety, effectiveness, etc.)
- Do you usually get vaccines?
 - i. Are you against them?
- Did you know that girls and women had the vaccine covered before boys and men got coverage?
 - i. How do you feel about this?
- Do any of these policy issues –which men and boys were originally not covered—affect how you think about the HPV vaccine?

- How do you think your experience of sexual health services relates to having the HPV vaccine?

[SHOW PARTICIPANT BROCHURE]

- What particularly comes out to you when reading that?
- Is there anything new that you hadn't thought about in relation to HPV before?
- What do you think about HPV's relationship to certain cancers?
- Is there something that you feel you don't know about HPV that you want to learn more about? Why is that?
- When thinking about your health (physical, mental, sexual)— the treatments you are taking, your medical appointments, other infections or issues—how does HPV risk and anal cancer fit into all of this for you?
- How important is HPV as a health concern for you? Why is that? Is HPV more or less of a concern as other STIs to you?
- How important is anal cancer as a health concern for you? Why is that?

HPV, Sexual Practice and Social Context

- How important do you think HPV is as a health concern for gay men in general?
 - For gay men living with HIV? Why do you think that is?
 - Do you perceive there to be a difference between these groups?
- Do you think there are generational differences when thinking about HPV?
- Have you talked with any of your friends (straight, gay, HIV-positive, HIV-negative) about HPV/treatment/vaccination? Are there differences of opinion?
 - Do you think people are talking enough about HPV?
 - Why do you believe this?
- Do you think the association between HPV and cervical cancer has affected how *men* think about the disease?
 - Do you think that because we are talking about the anus this affects how people talk about anal cancer and HPV? Why is that the case?

- Do you think that people need to disclose to their new sexual partners if they have (or have had) HPV? If they think that they might have HPV? If they have (or have had) anal pre-cancer or cancer? Is this your same opinion for other STIs?
- How do you think recent advancements in HIV prevention will affect HPV and anal cancer risk? (Probe: PrEP, probe undetectable viral load).
- Are there any other social issues (explain: how people are interacting with each other) that you think I should be aware of related to HPV and anal cancer

Sexuality disclosure

- How comfortable are you with discussing health issues related to your sexual health with a clinician? Why do think this is the case (why are you uncomfortable or uncomfortable)?
 - *If uncomfortable:* what could make you feel more comfortable about talking about your sexual health and anus?
 - *If comfortable:* was this always the case? If not, how did you develop this comfort?

General Overview and Conclusion

35. Finally, do you have any additional comments to share regarding how vaccine programs can best be delivered to gay, bisexual and other men who have sex with men?

36. Thinking about our discussion what information and what services, if any, do you feel that you need? What recommendations do you have for us on HPV education?

37. Do you have any feedback about this interview?

Thank you for your participation in this interview.

Edinburgh Napier

UNIVERSITY



Final Statement/Debrief

Thank you for spending time participating in this study. The data you have provided for this study will be collated with a range of healthcare provider's experiences providing the vaccine here in Scotland. Taken together, these results will be used to gain an understanding of the implementation of the HPV-MSM vaccination programme from both perspectives.

This research was collected in line with three themes. These were:

- 1) MSM knowledge, perceptions, and experiences related to HPV and HPV vaccination
- 2) To identify provider-, and clinic-level factors affecting provision of the HPV vaccine for MSM
- 3) Barriers and facilitators to MSM sexual behaviour and/or sexual identity disclosure to healthcare providers

The next stage of this research is to analyse these results and attempt to create robust theory of providing the vaccine as part of a targeted vaccination programme.

I am of course happy to answer any additional questions you may have. I can do this just now or else my contact details are included in the information sheet.

Lastly, you have the right to withdraw your data within two weeks of initial data collection. After two weeks it will be impractical to remove your data as this will be combined with all other results from this study. In order to do this please contact either

myself, supervisors, or the independent advisor to this project on the contact information provided on the information sheet. This includes:

PhD student and principal investigator: Lewis Clarke [REDACTED]

Director of Studies: Dr Janette Pow [REDACTED] (Edinburgh Napier University, Sighthill campus)

Independent advisor: Janyne Afseth

Lecturer

Population and Public Health

Edinburgh Napier University

E: [REDACTED]

T: [REDACTED]

Follow Up Services

If you have been affected by issues discussed during the interview please seek assistance from the following relevant services for **free and confidential individual support**:

Scotland-wide Services and Waverly Care Edinburgh

3 Mansfield Place

Edinburgh

EH3 6NB

Telephone: 0131 558 2425

www.waverlycare.org

LGBT Health and Wellbeing

9 Howe Street

Edinburgh

EH3 6TE

Telephone: 0131 662 32838

www.lgbthealth.org.uk

Appendix 15 Coding process to category development

Below is a walk-through process of how participants' words were selected as meaning units and then became in vivo codes, researcher's codes, properties, and a conditional category. The category demonstrated is *Representations of Human Papillomavirus*. Below are some examples of different lengths of meaning units, from a sentence, paragraph, to a section.

Sentence	<p>I know it's related to cervical cancer yeah, not a lot of people know, or it's just like, not misinformation, but you hear that they cannot abbreviation or acronym of HPV, but I don't remember ever being really told about it in school</p> <p>Participant HM</p>
Paragraph	<p>It must have been like years and years ago. I think when I when I was like younger as like 18 like only really knew about like HIV, and then, like, everything else is going to lump together. And then I think HPV then like new you learn about gonorrhoea and syphilis, and then eventually, like chlamydia, and then you get to HPV, so I think probably must be like, maybe 15 years ago, I think, I don't know. Probably because like I heard about on TV or something, or it was all in probably a dozen TV show or something.</p> <p>Participant AR</p>
Section	<p>Interviewer: So, what comes to mind when you hear the term 'HPV'?</p> <p>Participant: Erm I'm not sure, I think I know what it means</p> <p>Interviewer: And what does it mean?</p> <p>Participant: Erm Human Papillomavirus not sure if that is one word or two, I remember hearing about it in school or may it was the news or maybe I remember them both [laughs]</p> <p>Interviewer: Can you give me an idea of why you remember it being related to school?</p>

	Participant: Yeah, cos it's a virus that causes ovarian cancer if I'm right and it's something that can be – that the females tend to get than males – and therefore then the discovery of vaccines and they decided that they're going to give it to teenage girls before they start being sexually active
	Participant LF

An example of an in vivo code from two instances from the same participant can be seen below. Small segments, shown underlines, of the two instances that were concatenated to develop an in vivo code. From instance 1 and instance 2 the following in vivo code was created: technology-enabled guidance

Instance 1	It shouldn't just be spoken about when you need it you need to know to need it. <u>Speaking about it</u> should raise awareness like this is.
	Participant MW
Instance 2	Definitely increased media presence. Like advertisements, alerts. It's your health at the end of the day, it should be as important as a famous singer or movie star or cheap holidays. It's your health
	Participant MW

Through constant comparison, this in vivo code was associated with other coded instances. At this point, codes became summaries using the researcher's words to paraphrase the particular phenomenon.

Instance 3	And so in bars that I frequent, then there's posters about HIV. And like, and like yesterday in the bar I was at I thought of something interesting, like how over the years about HIV, there was this stigma about having HIV and even the way people react to HIV has changed. Because in the poster, it says, well, you can get HIV from exposure to someone who doesn't know their status even from a one time hook up, but then there's U=U now so provided
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	they're controlled by their medication then transmission is different etc. Whereas the posters before that were quite unique to get tested loud, I usually go. So I think the posters are quite effective in the gay environment against and you're not going to catch everybody by at least a few. If you're if it's a gay or bisexual man or whatever, then chances are from going to a gay bar or saunas or whatever. That may be see the poster, I guess.
	Participant JW

Instance 3 was coded: advertising online and offline. The coded instances coalesced during the constant comparison method into the property: Suggesting improvements for GBMSM-HPV vaccination which formed a dimension of Representations of Human Papillomavirus.

