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# Recording the sexual orientation of male patients attending general practice

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# **Abstract**

**Background.** Determination of a patient's sexual orientation is important to guide appropriate health care. We assessed how frequently sexual orientation is included in the health records of men attending general practice and factors associated with its recording.

**Methods.** Routine consultation data were extracted from seven Australian general practices in a 2-year period (2011–12) as part of a sexual health testing intervention for gay and bisexual men. We calculated the proportion of male patients with sexual orientation recorded and used logistic regression to determine patient, provider, clinic and community factors associated with recording.

**Results.** There were 12475 men who attended the clinics in the study period and sexual orientation was recorded for 42%, of whom 67% were identified as homosexual, 3% bisexual and 30% heterosexual. Recording ranged from 3% to 81% between clinics. Patient factors independently associated with recording of sexual orientation were: being HIV-positive [adjusted odds ratio (AOR) = 1.2, 95% CI: 1.1−1.4], previous sexually transmissible infection/HIV testing at the clinic (AOR = 1.8, 95% CI: 1.6−2.0), and ≥6 previous clinic visits (AOR =1 .1, 95% CI: 1.0−1.1). Provider, clinic and community factors independently associated with sexual orientation recording were: regularly attending a female GP (AOR = 1.3, 95% CI: 1.1−1.4), ≥4 previous consults with a particular GP (AOR = 1.4, 95% CI: 1.2−1.7), attending a clinic with a high caseload of gay/bisexual patients (AOR = 8.8, 95% CI: 1.6−48.1), and the patient residing in a community with ≥10% same-sex partner households (AOR = 1.2, 95% CI: 1.0−1.3).

**Conclusions.** Sexual orientation was incomplete for more than half of male patients. Initiatives targeting both the patients and providers need to be considered to improve recording.

Key words: Data quality, general practice, primary health care, sexual orientation, sexuality.

# Introduction

Identifying patient sexual orientation can be an important aspect of providing supportive and appropriate primary health care. Gay, bisexual men and other men who have sex with men (GBM) are at higher risk of mental health problems, interpersonal violence, particular cancers, drug and alcohol use and sexually transmissible infections (STIs) (1). For example, GBM have much greater rates of HIV, syphilis, rectal gonorrhoea and

chlamydia than heterosexuals, and as a result sexual health testing guidelines reflect this epidemiology by recommending more frequent asymptomatic screening among sexually active GBM (2). Also, it has been suggested that some GBM and lesbian, bisexual and other women who have sex with women may avoid prevention and treatment services due to fear of sexual orientation disclosure and the perceived insensitivity of health systems to these issues (3). Less engagement with heath care then leads to increased risk of illness.

For GBM, identifying sexual orientation can be a significant way to improve care in the context of general practice (4). Appropriate care for GBM men and other sexual minority groups, however, is only possible if a patient's sexual orientation is considered and, importantly, discussed in a sensitive way. Unfortunately, it is common for general practitioners (GPs) to assume that their patients are heterosexual. This assumption has led to reports of lesbian-identified women receiving irrelevant lectures on birth control, and both GBM and lesbian women have reported that these assumptions decrease trust and confidence in clinicians by adding the additional stress of 'coming out' to the context of health care (5).

Despite many patients reporting an interest in discussing their sexual lives with their GP (6), research has found that only a minority of GPs collect any kind of sexual history detail and that routine collection of sexual orientation information is rare (7). In some cases, doctors may discuss issues related to sexuality and sexual health but not collect details about a patient's sexual orientation (8,9). Surveys from Australia have identified barriers to discussing sexuality, such as time constraints, fears of embarrassment or concerns around discomfort either for themselves or their patients (10,11). Interviews with GPs in the UK also highlighted fear of offense as a barrier to discussing sex and sexual orientation but further noted that time limitations, not wanting to pry, and stereotypes of sexual orientation, ethnicity and patient age also hampered sexual discussion in primary care (12). Most of these studies, however, have focused on sexual histories and sexuality broadly, not patient sexual orientation and have relied mainly upon self-reported data from patients and providers.

In the context of a sexual health testing intervention for GBM, we assessed recording rates of sexual orientation in the records of male patients attending general practices and explored what factors may contribute to sexual orientation being recorded in patient medical records.

#### **Methods**

# Study design

A cross-sectional analysis of routine clinical and laboratory data for male patients attending participating clinics was undertaken.

#### Study sites and setting

Six general practice clinics in Sydney and one clinic in Melbourne participating in a study investigating a GBM sexual health intervention known as 'The eTEST Project' were included in this analysis. The eTEST Project introduced computer prompts and short message service (SMS) recalls in an attempt to increase rates of STI and HIV testing among GBM in primary care. Clinics were located primarily in or around the inner-city and employed between 3 and 17 full and part time GPs.

#### Data sources and variables

Participating clinics used either 'Best Practice' or 'Medical Director 3', which are electronic patient management systems that offer four fixed labels of patient sexual orientation: homosexual, bisexual, heterosexual or the default option, unknown. Study data were extracted from electronic patient management databases using a software program known as the 'Clinical Audit Tool' (CAT), which collected retrospective data for a 3-year period prior to eTEST. Only patient data from males aged ≥14 years were included and data were received in a de-identified line-listed format. Pathology laboratories servicing each clinic also provided de-identified STI and HIV testing information for the same period.

The following data were extracted per clinical consult: sexual orientation, patient age, HIV status, Aboriginal or Torres Strait Islander status, STI and HIV testing, and the provider seen. From these data we created the following variables: ≥1 previous HIV/STI test or none; sexual orientation recorded/unrecorded, and the number of clinical consults between 1 January 2011 and 31 December 2012. Per patient, we identified the GP they attended most regularly and then calculated the number of previous consults they had with that particular GP. Using data from the 2011 Australian Census, we also calculated the proportion of same-sex couple households per relevant postcode, which serviced as a proximity indicator to geographic communities of same-sex attracted people ('gaybourhoods') (13).

As rectal swabs for gonorrhoea and chlamydia are generally only recommended for GBM (2), we used the number of swabs conducted per clinic in 2012 as a marker for each clinic's GBM patient population. This information was available through the extracted pathology data. Clinics with ≥200 unique male patients receiving a rectal swab in 2012 were categorized as having an estimated *high caseload* of GBM patients while clinics with 1–199 swabs were categorized as *low/medium caseload*.

#### Analysis

Data were extracted for the time period of 1 January 2011 to 31 December 2012. The primary outcome under investigation was recording of patient sexual orientation, which was assessed at the last available consultation in this 2-year period.

Logistic regression analysis was used to assess patient, clinician, clinic and community factors associated with sexual orientation being recorded among male patients. Variables were chosen for inclusion in the multivariate model on the basis of a significant univariate relationship with the outcome variable. All analyses accounted for intracluster correlation by clinic. Stata version 12.1 was used to conduct all statistical analyses.

# Results

#### Patient characteristics

The sample consisted of 12 475 male patients, with a median age of 42 years (interquartile range of 30–53) and 1936 (16%) were recorded as being HIV-positive. Of the 56% of patients with Aboriginal and/or Torres Strait Islander status recorded, 1% identified as Aboriginal and/or Torres Strait Islander. Since 2011, nearly half of males (44%) had an HIV and/or STI test and 65% had visited the clinic on five or fewer occasions (Table 1).

# Provider, clinic and community

On the basis of rectal swab collection among male patients, three of the seven clinics were estimated to see a *high caseload* of GBM, which encompassed 6409 men (51% of the sample), while four clinics were identified as *medium/low caseload* (n = 6066, 49%). There was a clear distinction between high and medium/low caseload clinics. In 2012, the number of rectal swabs conducted in high caseload clinics ranged from 1013 to 1587 (median = 1301) and in low caseload clinics ranged from 8 to 59 (median = 48). Patients consulted with a total of 43 GPs, 25 of whom were male and 18 of whom were female. The majority (74%) most commonly saw a male GP. Community concentrations of same-sex partnered households ranged from 0% to 19% (median = 4%) in patients' home neighbourhoods and 2%–19% (median = 13%) in clinic neighbourhoods.

# Sexual orientation recording

At the time of their last consult, the majority of patients (n = 7253, 58%) had the default option 'unknown' recorded for sexual orientation. Among the remaining 5222 (42%) men for whom sexual orientation was recorded, 67% were identified as homosexual, 30% as heterosexual, and 3% as bisexual. Across clinics, sexual orientation recording ranged from 3% to 81% of male patients (median = 49%). Across individual GPs, sexual orientation recording among male patients for whom they predominantly provided care ranged from 2% to 92% (median = 50%). Within clinics, the proportional difference of recording rates between GPs ranged from 3% to 64% (median = 32%).

Sexual orientation recording rates were highest in males aged 40 years and above (52%) compared with younger men (23%; P < 0.001), men recorded as being HIV-positive (71%) compared with HIV-negative (37%; P < 0.001) and among men who had previously received an STI or HIV test at the clinic (62%) compared with those who had not (26%; P < 0.001). The majority of patients attending clinics with high caseloads of GBM patients had sexual orientation recorded (64%), which was true for only 18% of men at medium and low caseload clinics (P < 0.001). Sexual orientation was also recorded more often for patients who attended a clinic in a neighbourhood with  $\geq 10\%$  same-sex couples (56%) compared with clinics with <10% same-sex coupled households (18%; P < 0.001). Table 1 provides a full overview of sexual orientation recording across variables.

# Factors independently associated with sexual orientation recording

In the logistic regression, the following patient-related variables were independently associated with sexual orientation recording among male patients: being HIV-positive [adjusted odds ratio (AOR) = 1.24, 95% CI: 1.09–1.40] compared with HIV-negative, a history of STI/HIV testing at the same clinic since 2011 (AOR=1.81, 95% CI: 1.62–2.02) compared with no test, and six or more previous clinical visits since 2011 (AOR = 1.07, 95% CI: 1.01–1.14) compared with five or fewer.

The following provider, clinic and community factors were also independently associated with sexual orientation recording among male patients: seeing a female GP most commonly (AOR = 1.26, 95% CI: 1.13–1.41), four or more previous consults with patient's most frequent GP (AOR = 1.41, 95% CI: 1.19–1.67), attending a clinic with a high caseload of GBM patients (AOR = 8.81, 95% CI: 1.62–48.05) and residing in a community comprising 10% or more same-sex partnered households (AOR = 1.21, 95% CI: 1.11–1.34) compared with communities with fewer than 10%. The constructed model is detailed in Table 1.

# **Discussion**

This study has shown that less than half of male patients had their sexual orientation recorded, with wide variation across the clinics and among GPs in the same practice. Although patients attending clinics with high caseloads of GBM patients were most likely to have their sexual orientation recorded, over one-third of male patients attending these clinics did not have sexual orientation details in their record. Similarly, patients who lived in neighbourhoods with high proportions of same-sex partnered households were more likely to have their sexual orientation details recorded than patients who lived in areas with fewer

Table 1. Patient, provider and clinic factors and sexual orientation recording among male patients

Indicator	n (%)	Sexual orientation		Unadjusted OR (95% CI)	Adjusted OR (95% CI)	P
		Unrecorded	Recorded			
Patient						
Age in years						
14-39	5420 (43%)	3869 (71%)	1551 (23%)			
≥40	7055 (57%)	3384 (48%)	3671 (52%)	2.71 (2.51–2.92)	_	ns
Recorded aborigina	al/Torres Strait Island	der status				
Unrecorded	5424 (43%)	2988 (55%)	2436 (45%)			
Recorded	7051 (57%)	4265 (61%)	2786 (39%)	0.81 (0.76-0.86)	_	ns
Aboriginal/Torres S	Strait Islander status					
No	6989 (99%)	4237 (61%)	2752 (39%)			
Yes	62 (1%)	28 (45%)	34 (55%)	0.54 (0.32-0.88)	_	ns
HIV status						
HIV-negative	10539 (85%)	6682 (63%)	3857 (37%)			
HIV-positive	1936 (15%)	571 (29%)	1365 (71%)	4.14 (3.72-4.60)	1.24 (1.01–1.40)	0.001
Past STI or HIV tes	st					
No	6938 (56%)	5132 (74%)	1806 (26%)			
Yes	5537 (44%)	2121 (38%)	3416 (62%)	4.58 (4.24–4.94)	1.81 (1.62-2.02)	< 0.001
Previous clinic visit	ts					
0-5	3204 (26%)	5168 (64%)	2905 (36%)			
≥6	4869 (39%)	2085 (47%)	2317 (53%)	1.98 (1.83-2.13)	1.07 (1.01-1.14)	0.030
Community						
Same-sex couples:	patient neighbourho	od				
<10%	8631 (69%)	5543 (64%)	3088 (36%)			
≥10%	3844 (31%)	1710 (44%)	2134 (56%)	2.24 (2.07–2.42)	1.22 (1.11-1.34)	< 0.001
Same-sex couples:	clinic neighbourhood	d				
<10%	4537 (36%)	3738 (82%)	799 (18%)			
≥10%	7938 (67%)	3515 (44%)	4423 (56%)	5.89 (5.39-6.43)	_	ns
Clinic and provide	r					
Clinic caseload of	gay/bi male					
Medium/low	6066 (49%)	4960 (82%)	1106 (18%)			
High	6409 (51%)	2293 (36%)	4116 (64%)	8.05 (7.41-8.74)	8.81 (1.62-48.05)	0.012
Previous consult(s)						
First consult	2401 (19%)	1917 (80%)	484 (20%)			
1–3	3026 (24%)	2017 (67%)	1009 (33%)	1.98 (1.75-2.25)	1.19 (1.02–1.40)	0.030
≥4	7048 (57%)	3319 (47%)	3729 (53%)	4.45 (3.99–4.97)	1.41 (1.19–1.67)	< 0.001
GP gender	. ,	, ,	, ,	,	,	
Male	9451 (76%)	5625 (59%)	3826 (41%)			
Female	3024 (24%)	1628 (54%)	1396 (46%)	1.26 (1.16–1.37)	1.26 (1.13–1.41)	< 0.001

same-sex households. Other clinical situations associated with sexual orientation being recorded were being HIV-positive and previous HIV/STI testing. Seeing a female GP and seeing the same GP were also associated with improved sexual orientation recording.

For male patients, attending a clinic with a large population of GBM patients was most strongly associated with having sexual orientation recorded. This finding is likely indicative of a clinic's connection to GBM communities and its reputation as 'gay friendly'. Such a reputation is important because it signals to patients that they can feel comfortable discussing sexual orientation with their GP and it may attract GPs who are

themselves gay-identified. Doctors employed by these clinics, by virtue of their clientele, may be more accustomed and comfortable asking about a patient's sex life, which GPs in other settings are not (10,11).

Given that sexual histories often collect information about a patient's sexual orientation and that they are most commonly conducted in conjunction with sexual health screening (8), it is not surprising that patients with a past history of STI/HIV testing were more likely to have their sexual orientation recorded than patients not previously tested at the clinic. Patients with HIV were also more likely to have their sexual orientation recorded when compared with HIV-negative patients or patients

for whom HIV status was not recorded. As the transmission of HIV in Australia remains concentrated among GBM (13), GPs may discuss sex and sexual orientation with their HIV-positive patients as part of a larger discussion of living with HIV or in response to questions raised by a patient. In light of the established sexual health testing guidelines for GBM in Australia (3), it is also possible that sexual orientation information preceded HIV status or STI/HIV testing and was the mechanism for testing and, for HIV, subsequent diagnosis.

Patients who most regularly attended a female GP were more likely to have sexual orientation included in their record than patients who saw a male GP. Female GPs tend to spend more time with patients and have been shown to ask more questions generally (14), including about sexual histories, than male GPs (7-10). The findings are consistent with studies examining factors associated with chlamydia testing, with female GPs much more likely to offer a chlamydia test than male GPs (15). Attending the clinic previously and seeing the same GP were also associated with greater rates of sexual orientation completion among male patients. The more times a patient visits the clinic, the more opportunities to collect details about his life, while continuity with the same GP has been shown to foster a higher degree of patient-provider trust (16). This trust is a key component of candid discussions about sex. It is therefore important to consider how provider continuity can be encouraged in general practice. In the UK, some older research has proposed the use of 'personal lists', which attempt to ensure that patients see the same doctor at each visit instead of any doctor who is available (16). That same review also proposed providing higher reimbursements to doctors for consults with 'regular' patients. Another idea is to create small provider units and focus on continuity of care within these teams (17).

It is important to reflect upon the complicated ways in which aspects of patient's sexual lives come to be defined. For many, the relationship between concepts such as sexuality, sexual behaviour, sexual orientation and sexual identity may not be clear and this confusion may confound effective efforts to incorporate these ideas into health management. As an example of this confusion, the concept we have referred to in this paper as 'sexual orientation' is identified in many patient management systems as 'sexuality', even though sexuality as a concept has broad meanings beyond the gender of one's partners. Indeed, questions remain over how labels like 'homosexual', 'heterosexual' and 'bisexual' are interpreted by patients and providers alike. Greater clarity here may be an important step towards understanding how GPs respond to and engage with sexual orientation.

The strength of this study is our consideration of a range of patient, provider, clinic and community factors related to sexual orientation recording. There are also a few limitations. First, the clinics involved with eTEST were invited to participate because

they see a greater proportion of GBM patients than other clinics in the country, and thus our findings are not generalizable to all GP clinics. However, in light of our finding that clinics who serve a large number of GBM are more likely to record sexual orientation than those clinics with fewer GBM patients, it seems likely that recording rates of this variable in other general practices may be even lower than observed here. Also, this analysis did not capture GP motivations or attitudes with respect to sexual orientation or sexual history taking. Finally, it is possible that in some instances GPs are aware of their patients' sexual orientation, but either do not record it or record it in another part of the record, such as the progress notes.

Our findings reveal the need for consideration of strategies aimed at improving sexual orientation recording rates in general practice. Feedback, training and assessment for GPs have previously demonstrated success towards improving data completion rates (18), but it may also be helpful to consider patient-orientated strategies. For example, the organization Gay and Lesbian Health Victoria has produced a poster that reads, 'You don't have to tell us if you're gay or lesbian...but you can.' Clinics could consider including sexual orientation as part of the standard information that they collect when registering a new patient, which would not only improve completion rates but also address the issue that it seems to take multiple visits before these details actually get recorded. Further, it could also help normalize discussions around sexuality and sexual orientation in primary care. There is precedent for this approach in Australia. A similar strategy of collecting Aboriginal or Torres Strait Islander status as part of routine patient intake is recommended by national 'best practice' strategies (19).

Broad discussions about relationships may also be an important strategy for recognizing the complexity of patient sexuality while building trust. If providers ask open-ended and non-assumptive questions about their patients' current and past relationships, natural opportunities arise to collect information about sexual orientation. This approach also recognizes the fluidity of identity and behaviour while signalling to patients that they can feel comfortable to talk about their sexual and romantic experiences, which can assist in building trust and confidence for both patient and provider. These discussions should not be one-offs but continue over the course of a clinical relationship in recognition of shifting dynamics, identities and experiences.

In conclusion, this study outlines high levels of incomplete sexual orientation recording, even within clinics that serve large populations of GBM. The eTEST Project has been informed by this and new strategies, including electronic prompts, patient waiting-room materials and regular GP feedback have been developed to help improve recording rates of sexual orientation in primary care.

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# References

- 1. Dean L, Meyer IH, Robison K *et al.* Lesbian, gay, bisexual, and transgender health: findings and concerns. *J Gay Lesb Med Assoc* 2000; 4: 102–51.
- Templeton DJ, Read P, Varma R, Bourne C. Australian sexually transmissible infection and HIV testing guidelines for asymptomatic men who have sex with men. Sexual Health 2014; 11: 217–29.
- Stein GL, Bonuck KA. Physician-patient relationships among the lesbian and gay community. J Gay Lesb Med Assoc 2001; 5: 87–93.
- Makadon HJ, Mayer KH, Garofalo R. Optimizing primary care for men who have sex with men. JAMA 2006; 296: 2362–5.
- Bonvicini KA, Perlin MJ. The same but different: clinician-patient communication with gay and lesbian patients. *Patient Educ Couns* 2003; 51: 115–22.
- Meystre-Agustoni G, Jeannin A, de Heller K et al. Talking about sexuality with the physician: are patients receiving what they wish? Swiss Med Wkly 2011; 141: w13178.
- Haley N, Maheux B, Rivard M, Gervais A. Sexual health risk assessment and counseling in primary care: how involved are general practitioners and obstetrician-gynecologists? *Am J Public Health* 1999; 89: 899–902.
- 8. Meystre-Agustoni G, Jeannin A, Dubois-Arber F. Talking about sexuality and HIV prevention in medical offices: the situation in Switzerland. *Sexual Relationship Therapy*. 2006; **21**: 289–301.

- Wimberly YH, Hogben M, Moore-Ruffin J, Moore SE, Fry-Johnson Y. Sexual history-taking among primary care physicians. J Natl Med Assoc 2006; 98: 1924–9.
- Khan A, Plummer D, Hussain R, Minichiello V. Sexual risk assessment in general practice: evidence from a New South Wales survey. Sex Health 2007; 4: 1–8.
- 11. Barber B, Hellard M, Jenkinson R, Spelman T, Stoove M. Sexual history taking and sexually transmissible infection screening practices among men who have sex with men: a survey of Victorian general practitioners. *Sex Health* 2011; 8: 349–54.
- 12. Australian Bureau of Statistics (ABS). Same-sex couples in Australian Social Trends. Canberra: Australian Bureau of Statistics; 2013. http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4102.0Main+Features 10July+2013 (accessed on 1 December 2013).
- 13. Gott M, Galena E, Hinchliff S, Elford H. "Opening a can of worms": GP and practice nurse barriers to talking about sexual health in primary care. *Fam Pract* 2004; 21: 528–36.
- Hall JA, Roter DL. Do patients talk differently to male and female physicians? A meta-analytic review. Patient Educ Couns 2002; 48: 217–24.
- 15. Hocking JS, Lim MS, Vidanapathirana J, Read TR, Hellard M. Chlamydia testing in general practice a survey of Victorian general practitioners. *Sex Health* 2006; 3: 241–4.
- Mainous AG 3rd, Baker R, Love MM, Gray DP, Gill JM. Continuity
  of care and trust in one's physician: evidence from primary care in the
  United States and the United Kingdom. Fam Med 2001; 33: 22–7.
- Guthrie B. Continuity in UK general practice: a multilevel model of patient, doctor and practice factors associated with patients seeing their usual doctor. Fam Pract 2002; 19: 496–9.
- 18. Porcheret M, Hughes R, Evans D et al.; North Staffordshire General Practice Research Network. Data quality of general practice electronic health records: the impact of a program of assessments, feedback, and training. J Am Med Inform Assoc 2004; 11: 78–86.
- 19. Australian Institute of Health and Welfare. National best practice guidelines for collecting Indigenous status in health data sets. Canberra: Australian Institute of Health and Welfare; 2010.
- The Kirby Institute. Annual surveillance report of HIV, viral hepatitis and sexually transmissible infections in Australia. Sydney: University of New South Wales; 2013.