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# Introduction

Health in Men (HIM) is a long-term study of an open cohort of HIV negative gay and bisexual men. It has two arms: a socio-behavioural arm consisting of regular interviews about the impact of HIV on the sexual and social lives of the men in the study; and a clinical arm consisting of serological testing for HIV and other sexually transmissible infections. The data collected allow socio-behavioural data to be directly compared with clinical data.

The study was funded initially (2001–2002) by the Commonwealth Department of Health and Ageing and New South Wales Health Department. From mid-2002 funding is primarily provided by the US National Institutes of Health as part of an HIV vaccine design and development project (NIH/NIAID/DAIDS: HVDDT Award N01-AI-05395).

A collaborative partnership has been established between the National Centre in HIV Social Research and the National Centre in HIV Epidemiology and Clinical Research at the University of New South Wales, the Australian Federation of AIDS Organisations and the AIDS Council of New South Wales to advise and assist with the general direction of the HIM study. The cohort itself is jointly administered through the two National Centres.

Initial entry into the study is through the socio-behavioural arm. The men are recruited primarily through gay community events, institutions and networks in Sydney. Annual intakes of 500 men are planned from 2001–2004. The initial requirement is a face-to-face structured interview and a blood test for HIV. Participants are also given the option to be tested for other sexually transmissible infections but this is not an essential requirement for participation in the study.

Full follow-up face-to-face interviews are conducted annually with brief update interviews conducted by telephone at six months after each face-to-face annual interview. Clinical assessment data are collected at the time of the annual interview and results are forwarded to the participants' preferred doctors.

To be eligible for the study individuals must be an HIV negative man who has had sexual contact with at least one other man during the previous five years *or* who identifies as homosexual, *and* they must either live in Sydney *or* be a regular participant in gay community networks, events and venues in Sydney. Participants can withdraw from the study at any time.

Related to this study are the Positive Health (pH) cohort study of HIV positive people and the Seroconversion Study which examines in greater detail issues about seroconversion. Participants in HIM who seroconvert may participate in the pH and Seroconversion studies. Common questions are used in the studies to ensure compatibility of data.

A description of the sample of 450 HIV negative men enrolled into HIM in 2001 is reported here. This report describes data from the baseline interviews conducted during the first recruitment phase of the project. More detailed analyses will continue and will be published as they are completed. The data presented here are not final and further analyses may necessitate some reinterpretation of the findings. Furthermore, longitudinal data are not addressed here but will be included in future reports.

## Questionnaire

The baseline questionnaire was the product of several months of deliberation and consultation. It was adapted from instruments used in previous studies and included questions taken directly from such studies to ensure comparability. The earlier studies included the Social Aspects of the Prevention of AIDS project (SAPA) (Connell, Crawford, Kippax et al., 1988); the Sydney Men and Sexual Health study (SMASH) (Prestage, Noble, Kippax et al., 1995); and the Male Call study (Crawford, Rodden, Kippax et al., 1998). Working with these earlier documents, the HIM project team consulted broadly to determine issues that were relevant to an HIV vaccine preparedness cohort *and* to building and sustaining community interest and involvement.

The final version of the baseline questionnaire was 82 pages long and contained over 800 items of information. The length of the interviews was between ninety minutes and two hours. Although the interview was necessarily complex, there were relatively few difficulties with its administration and most participants provided positive and supportive feedback.

The major sections of the interview schedule were:

- Demographic Details (37 items)
- Attitudes and Knowledge about Vaccines and HIV (95 items)
- Sexuality and Sexual Identity (50 items)
- Sexual Relationships and Sex Practices with Men (281 items)
- Health and Related Behaviours (153 items)
- Involvement with Gay Community (49 items)
- Contact with the HIV Epidemic and Relationship to People with AIDS (15 items)
- Recreational Drug Use (38 items)
- Discrimination and Harassment (18 items)
- Additional Optional Items Regarding the Most Recent Sexual Encounter (94 items)

## Sample selection

Representative samples of gay and other homosexually-active men are not possible as the population cannot be enumerated (Gagnon, 1988; Coates, Soskolne, Read et al., 1986). Samples of homosexual men are largely dependent on the methods of recruitment. Such methods can include: venue-based recruitment; 'snowballing'; magazine self-complete questionnaires; telephone surveys; on-site surveys at locations frequented by homosexually-active men; advertising in media used by homosexually-active men; and recruitment of clinical attendees. Each of these methods will produce a different sample. Also, certain sub-populations are consistently under-represented in most samples of homosexually-active men, particularly those men who are not socially attached to gay community life, men who are not themselves homosexually-identified, men who are behaviourally 'bisexual', working-class men, young men and older men, and men from minority cultural backgrounds (Connell, Crawford, Kippax et al., 1988; Connell, Dowsett, Rodden et al., 1991).

One solution to this problem is to use wide-ranging recruitment methods to draw a series of samples that can then be examined for diversity.

In this study, our focus was primarily on gay men and other men closely involved in gay community life. Our purpose was to examine behaviours and relative risks for infection among those at the heart of the HIV epidemic. In Australia, this is mainly homosexually-active men who are strongly attached to gay community life. Therefore, our recruitment strategies were primarily centred on gay community institutions, organisations, events, venues, networks and subcultures.

The issue of confidentiality is a particular concern. Homosexuality still carries considerable prejudice and discrimination, and it is not always possible for those who engage in homosexual practice to do so openly. This makes participation in HIV-related research difficult, particularly in a project such as HIM, which involves a long-term commitment and requires personal contact details. Although HIM can guarantee confidentiality, it cannot guarantee anonymity. It is likely that those men who are relatively comfortable with their homosexuality and who are associated with gay community life will find it easier to participate in the study than 'closeted' and more socially isolated men.

The long-term nature of the study also highlights the issue of commitment. Participants must be willing and able to commit to continuing involvement.

Given these constraints, HIM is primarily a study of male participants in Sydney gay community life. A broad range of recruitment strategies were adopted including recruitment through gay venues, events and organisations; 'snowballing' through friends of participants; referrals from earlier studies; recruitment through gay and community organisations' mailing lists; referrals from medical practitioners; and recruitment via magazine advertisements and websites.

# Demographics

The men recruited into HIM in its first wave of data collection were drawn from diverse sources (see Table 1). The majority were recruited through gay community events and venues, gay press advertisements and notices, gay organizations, or by word of mouth. Approximately 10% were participants in the earlier SMASH study, which ran from 1993 to 1999 (Prestage, Noble, Kippax et al., 1995). Former SMASH participants we were able to contact were invited to join HIM.

**Table 1 : Source of recruitment (n = 449)**

	n	%
Gay community events	163	36.3
Through friends	70	15.6
Previous SMASH study	51	11.4
Gay press	37	8.2
AIDS Council or gay organisations	34	7.6
Gay venues	29	6.5
Internet	23	5.1
Doctor's clinics	18	4.0
Periodic survey	12	2.7
Other	12	2.7

Separate analyses revealed that for many measures, recruitment source was not a significant mediating factor (except where differences such as age, residence and ethnicity were specifically targeted and, hence, to be expected).

Among men recruited through key community sources, there were few demographic differences and most were not significant. Men recruited through SMASH tended to be a little older, as is to be expected of men who participated in a study that had commenced eight years earlier. Men recruited at gay community venues and events tended to be more involved in aspects of gay community life. Given that these men were mostly recruited through gay bars and other social venues, their greater participation in the gay 'scene' is not surprising.

The age of the HIM participants recruited in the first year ranged from 18 to 75 years (median = 36). As shown in Table 2, approximately two-thirds of the respondents were under the age of 40. It is such younger men who would be potential participants in a future phase III vaccine trial.

**Table 2 : Age of participants (n = 450)**

	n	%
Under 25	46	10.2
25-29	75	16.7
30-39	176	39.1
40-49	114	25.3
50 and above	39	8.7

As expected, the majority of the HIM participants were Anglo-Celtic/Australian (Table 3).

**Table 3 : Ethnicity (n = 449)**

	n	%
Anglo-Celtic/Australian	348	77.5
European	54	12.0
Asian/Pacific Islander	31	6.9
South/Latin American	8	1.8
Middle Eastern	4	0.9
Aboriginal/Torres Strait Islander	1	0.2
Other	3	0.7

A slight majority of men in HIM had no religious affiliation or were atheist or agnostic (see Table 4). Among those who had religious affiliations, most were of the Christian kind.

**Table 4 : Religion (n = 448)**

	n	%
None/atheist/agnostic	255	56.9
Catholic	54	12.0
Anglican	34	7.6
Other Christian	37	8.3
New Age	26	5.8
Buddhist	17	3.8
Other	25	5.6

As shown in Table 5, over three-quarters of the HIM participants were in full-time employment. Few men were in receipt of pensions or other social security benefits. Only one man was engaged predominantly in sex work, although more men had been paid for sex in the previous six months (see Table 20) and at least some of these continued to earn at least a proportion of their income through sex work.

**Table 5 : Current employment status (n = 450)**

	n	%
Full-time	354	78.7
Part-time	43	9.6
Unemployed/student	34	7.6
Pension/social security benefits	9	2.0
Doing sex work	1	0.2
Other	9	2.0

As with other surveys of gay men, there was an over-representation of men in managerial and professional roles (see Table 6). Likewise, there was under-representation of men in 'blue collar' occupations such as plant operation or labouring.

**Table 6 : Current occupational categories (n = 448)**

	n	%
Managerial	97	21.7
Professional	172	38.3
Paraprofessional	33	7.4
Trade	16	3.6
Clerical	24	5.4
Sales or personal services	73	16.3
Plant/machine operation/driving	5	1.1
Labouring	6	1.3
Not in workforce/student/pensioner	22	4.9

Like other samples of gay men, the HIM study recruited in the first year large proportions of men with university qualifications. Most of the participants had at least completed the Higher School Certificate (HSC) or Year 12.

**Table 7 : Highest level of education (n = 448)**

	n	%
Up to school certificate	46	10.3
HSC/Year 12	63	14.1
Tertiary diploma, trade certificate/TAFE	92	20.5
University undergraduate	155	34.6
Postgraduate	92	20.5

The majority of the men in the HIM study lived in 'gay Sydney', which comprised inner city areas, some Eastern suburbs and neighbouring areas (see Table 8). The remainder were mostly from other parts of Sydney, with a few participants from other cities or rural areas of NSW.

**Table 8 : Current residential location (n = 449)**

	n	%
Gay Sydney	326	72.6
Western Sydney	25	5.6
Other Sydney	90	20.0
Newcastle or Wollongong	2	0.4
Canberra	1	0.2
Rural NSW	5	1.1

Note: 'Gay Sydney' includes the postal codes of 2000 to 2012, 2015 to 2017, 2021 to 2044, 2050 and 2052.

Table 9 shows that slightly more than 70% of the HIM participants recruited in the first year had been living in Sydney for more than five years. Few of the participants were recent arrivals in Sydney.

**Table 9 : Length of residence in Sydney (n = 450)**

	n	%
< 1 year	23	5.1
1-2 years	40	8.9
3-5 years	65	14.4
More than 5 years	320	71.1
Living elsewhere	2	0.4

Just over half of the HIM participants 'currently' had regular male partners. As shown in Table 10, three participants had both male and female partners at the time of interview. Among those who had a current, regular, male partner (n = 254), 142 (55.9%) were living with their partner.

**Table 10 : Gender of current regular partner/s (n = 450)**

	n	%
Male	251	56.4
Male and female	3	0.7
No partners currently	196	43.5

Table 11 shows that around 8% of the HIM men recruited in the first year had children and among them, over half (22 out of 33) had dependent children (under the age of 18).

**Table 11 : Children (n = 448)**

	n	%
No children	415	92.6
Children under 18	22	4.9
Children 18 and above	11	2.5

# Sexual relationships

In the six months prior to the survey, over two-thirds of HIM participants had a primary regular partner. Nearly 17% of the total sample had other regular partners.

**Table 12 : Reported sex with male partner/s in the previous six months (n = 450)**

	n	%
Primary regular partner	305	67.8
Other regular partner/s	74	16.4
Casual partner/s	360	80.0

Note: Categories are not mutually exclusive.

## Male partners in the previous six months

Most commonly, the HIM participants had between two and ten male sex partners in the previous six months (see Table 13). Over a third of the men had more than ten male sex partners during this period.

**Table 13 : Number of male sex partners in the previous six months (n = 450)**

	n	%
None	5	1.1
1	82	18.2
2-5	120	26.7
6-10	75	16.7
11-50	134	29.8
More than 50	34	7.6

Of those who had regular partner/s in the previous six months, Table 14 shows that the majority had one regular male partner.

**Table 14 : Number of primary/other regular male partner/s in the previous six months (n = 306)**

	n	%
1	235	76.8
2	35	11.4
3	21	6.9
More than 3	15	4.9

As shown in Table 15, among those who had casual partner/s in the previous six months, slightly less than a half had between two and ten casual male partners and approximately the other half had more than ten casual male partners.

**Table 15 : Number of casual male partner/s in the previous six months (n = 360)**

	n	%
1	25	6.9
2-5	98	27.2
6-10	67	18.6
11-50	142	39.4
More than 50	28	7.8

## Female partners in the previous six months

Very few men in HIM had any sex with women in the previous six months (see Table 16).

**Table 16 : Number of female sex partner/s in the previous six months (n = 450)**

	n	%
None	433	96.2
1	14	3.1
More than 1	3	0.7

## Current sexual relationships with men

Table 17 shows that at the time of the interview, nearly one-fifth of the HIM participants were in a monogamous regular relationship and almost a third had both regular and casual partners.

**Table 17 : Current relationships with men (n = 450)**

	n	%
No male partners currently	27	6.0
Casual male partner/s only	169	37.6
Primary regular male partner only (monogamous)	89	19.8
Several regular but no casual male partners	19	4.2
Both regular and casual male partners	146	32.4

Among those who currently had a primary regular partner, nearly 80% reported that they had been in such a relationship for at least 6 months. As shown in Table 18, over a quarter of the HIM participants were in a relationship which had lasted for more than five years.

**Table 18 : Length of relationship with current primary regular partner (n = 253)**

	n	%
<6 months	55	21.7
6-12 months	37	14.6
1-2 years	50	19.8
3-5 years	45	17.8
More than 5 years	66	26.1

## Finding male partners

As shown in Table 19, the five most common places for men to meet male sex partners were: gay bars/dance bars, friendship networks, gay saunas, private gay parties and the internet. Of note, nearly 50% of the HIM men used the internet in the last year to find male sex partners. Also, considerable proportions of HIM participants reported using pools and beaches, mixed bars, gay dance parties, gay social groups or events, gay sex clubs or sex-on-premises venues, beats and trips overseas. Few men utilised sex workers.

**Table 19 : Places to find male sex partners (in the previous 12 months) (n = 450)**

	n	%
Gay bars/dance bars	323	71.7
Straight bars	68	15.1
Mixed bars	176	39.1
Gay dance parties	222	49.3
Private parties with other gay men	238	52.9
Gay sex parties	73	16.2
Gay social groups/events	157	34.9
Through friends <sup>1</sup>	253	56.3
Gay saunas	251	55.8
Gay sex clubs/sex-on-premises venues	158	35.1
Leather clubs/scenes	79	17.6
Beats	164	36.4
Gay brothels/parlours/escorts/street sex workers <sup>1</sup>	29	6.5
Sex shops/Adult video parlours/backrooms	125	27.8
Gyms/sports clubs with large gay clientele	102	22.7
Pool/beach commonly used by gay men	190	42.2
Gay phone lines	59	13.1
Gay press ads	79	17.6
Straight press ads	13	2.9
Internet	223	49.6
At work	68	15.1
Trips to other countries	111	24.7
Other <sup>2</sup>	41	9.3

Note: Categories are not mutually exclusive.

<sup>1</sup>Missing n = 1; <sup>2</sup>Missing n = 9.

## Sex work

Although 96 men (21.3%) had ever been paid for sex during their lifetime, only a few had been paid for sex in the preceding six months (Table 20). Also, few of the HIM men paid others for sex in the six-month period, although 117 men (26.1%) had done so during their lifetime. One participant reported sex worker as his occupation (see Table 5).

**Table 20 : Sex work in the previous six months (n = 450)**

	n	%
Was paid for sex	14	3.1
Paid others for sex	28	6.2

Note: Categories are not mutually exclusive.

# Association with gay community

The HIM participants were predominantly gay or homosexually identified (Table 21).

**Table 21 : Self-identification (n = 450)**

	n	%
Gay/homosexual/queer <sup>1</sup>	425	94.4
Bisexual	16	3.6
Other	9	2.0

<sup>1</sup>40 self-identified as 'homosexual' and 5 as 'queer'.

As shown in Table 22, almost two-thirds of participants had a large proportion of gay friends.

**Table 22 : Number of gay friends (n = 450)**

	n	%
None	1	0.2
Some or a few	168	37.3
Most or all	281	62.4

Table 23 further illustrates gay connectedness with nearly two-thirds of men in HIM spending 'a lot' of free time with other gay men.

**Table 23 : Proportion of free time spent with gay men (n = 450)**

	n	%
None	2	0.4
A little	28	6.2
Some	123	27.3
A lot	297	66.0

As shown in Table 24, the majority of HIM participants read every issue of local gay newspapers and some issues of national gay magazines.

**Table 24 : Readership of gay press (n = 450)**

	n	%
Local gay newspapers <sup>1</sup>		
Never	3	0.7
Some issues	129	28.8
Every/most issues	316	70.5
National gay magazines		
Never	137	30.4
Some issues	237	52.7
Every/most issues	76	16.9

<sup>1</sup>Missing n = 2.

# HIV and the epidemic

## HIV testing

The majority (over 70%) of HIM participants had an HIV test in the last year with a large proportion having had a test in the previous six months (see Table 25).

**Table 25 : Time since most recent HIV test (n = 450)**

	n	%
< 1 week	2	0.4
1-4 weeks	48	10.7
1-3 months	103	22.9
4-6 months	99	22.0
7-12 months	70	15.6
1-2 years	66	14.7
More than 2 years	37	8.2
Never tested	25	5.5

Table 26 shows that of those in a relationship, almost three-quarters had an HIV negative partner. Around 16% of the men in HIM did not know their current/most recent primary regular partner's HIV status.

**Table 26 : HIV status of current/most recent primary regular partner (n = 291)**

	n	%
Negative (Sero-concordant negative)	215	73.9
Positive (Sero-discordant)	29	10.0
Unknown (Sero-nonconcordant)	47	16.1

Based on the participants' understandings or assumptions, Table 27 shows that among those who had other regular partners, over 60% had such a partner in the previous six months whose HIV status was unknown.

**Table 27 : HIV status of other regular partners in the previous six months (n = 74)**

	n	%
Negative	30	40.5
Positive	8	10.8
Unknown	45	60.8

Note: Categories are not mutually exclusive.

## Contact with the HIV/AIDS epidemic

Table 28 shows that the majority of the HIM men had some contact with people living with HIV. Over a third had a current/former partner whose HIV status was positive. About 9% of men in the first enrolment intake of the HIM cohort were currently living with an HIV positive person. Approximately 20% of the participants personally knew someone who had tested HIV positive for the first time (i.e., they had seroconverted) during the previous year.

**Table 28 : Contact with HIV positive people (n = 450)**

	n	%
Personal acquaintances who are HIV positive		
None	68	15.1
1	47	10.4
2	46	10.2
3-5	123	27.3
6-10	62	13.8
More than 10	98	21.8
Don't know their HIV status/NA	6	1.3
Close friends who are HIV positive		
None	110	24.4
A few	181	40.2
Some	69	15.3
Most or all	17	3.8
Don't know their HIV status/NA	73	16.2
Free time spent with HIV positive people		
None	80	17.8
A little	124	27.6
Some	92	20.4
A lot	76	16.9
Don't know their HIV status/NA	78	17.3
Current/former HIV positive partner/s	166	36.8
Living with HIV positive person/s <sup>1</sup>	42	9.4
Personal acquaintances who were diagnosed HIV positive in the previous 12 months		
None	314	69.8
1	67	14.9
2	15	3.3
3-5	10	2.2
Don't know/NA	44	9.8

<sup>1</sup>Missing n = 1.

Most of the HIM participants personally knew someone who had died following AIDS, but relatively few in the past year (see Table 29).

**Table 29 : Contact with people who died following AIDS (n = 450)**

	n	%
Personal acquaintances who died following AIDS (ever)		
None	144	32.0
1	54	12.0
2	45	10.0
3-5	74	16.4
6-10	38	8.4
More than 10	93	20.7
Don't know	2	0.4
Personal acquaintances who died following AIDS (in the previous 12 months)		
None	330	73.3
1	40	8.9
2	18	4.0
3-5	7	1.6
6-10	2	0.4
Don't know/NA	53	11.8

## Post-exposure prophylaxis (PEP)

In the total sample, 353 men (78.4%) had some knowledge of post-exposure prophylaxis (PEP) and among them, 29 men (8.2%) reported ever receiving PEP.

# Sexually transmissible infections (STIs) and hepatitis A/B vaccination

Nearly half of the HIM men reported having had a test for STIs in the previous six months. Over 10% of the men had never tested for any STIs (see Table 30).

**Table 30 : Time since last test for STIs (n = 450)**

	n	%
< 1 week	4	0.9
1-4 weeks	36	8.0
1-3 months	86	19.1
4-6 months	87	19.3
7-12 months	67	14.9
1-2 years	53	11.8
More than 2 years	64	14.2
Never tested	53	11.8

Table 31 shows that among those who had ever been tested for any STIs prior to their entry into the study, according to their reports on the results of these tests, non-specific urethritis or Chlamydia was the most frequently implicated STI.

**Table 31 : STI tests ever (n = 397)**

	Never n (%)	Over 12 months ago n (%)	In the past 12 months n (%)
Anal gonorrhoea (n = 393)	343 (87.3)	40 (10.2)	10 (2.5)
Oral gonorrhoea (n = 396)	359 (90.7)	28 (7.1)	9 (2.3)
Penile gonorrhoea (n = 396)	274 (69.2)	94 (23.7)	28 (7.1)
Syphilis (n = 397)	369 (92.9)	26 (6.5)	2 (0.5)
Non-specific urethritis/Chlamydia (n = 397)	249 (62.7)	111 (28.0)	37 (9.3)
Sexually transmitted bowel infection (Giardia, Shigella) (n = 397)	349 (87.9)	28 (7.1)	20 (5.0)
Genital warts (n = 397)	354 (89.2)	35 (8.8)	8 (2.0)
Anal warts (n = 397)	306 (77.1)	74 (18.6)	17 (4.3)
An episode of genital herpes (n = 397)	338 (85.1)	35 (8.8)	24 (6.0)

Note: Categories are not mutually exclusive.

Of the 450 men recruited in 2001, 434 (96.4%) consented to screening for hepatitis A, hepatitis B and syphilis. Over two-thirds tested positive to hepatitis A virus (HAV), indicating either prior infection or vaccination, the other one third remained susceptible to hepatitis A (shown in Table 32).

**Table 32 : Hepatitis A serology test (n = 434)**

	n	%
Positive	294	67.7
Negative	140	32.3

Table 33 shows that one in five had serological evidence of previous hepatitis B virus (HBV) infection. Over half tested HBV surface-antibody positive, which is evidence of vaccination. The other quarter remained susceptible to hepatitis B infection.

**Table 33 : Hepatitis B serology test (n = 430)**

	n	%
Prior infection	87	20.2
Vaccinated	227	52.8
Negative	116	27.0

With regard to syphilis (Table 34), 21 men tested positive, indicating previous or current syphilis infection. Among them, 2 were suspected new infections while the rest reported syphilis infection in the past.

**Table 34 : Syphilis serology test (n = 432)**

	n	%
Previous infection	19	4.4
Current infection	2	0.5
Negative	411	95.1

# Sexual practice and safe sex

## Sex with primary regular partners

The following Table 35 has two parts. The first is based on the total sample and shows that approximately two-fifths of the men reported any unprotected anal intercourse with their regular primary partner in the previous six months. The second is based on a reduced sample and shows that among those who had a primary regular male partner in the six months prior to the survey, nearly two-thirds had any unprotected anal intercourse.

**Table 35 : Condom use with primary regular male partners in the previous six months (n = 450)**

	n	%
Total sample		
No such partner	145	32.2
No anal intercourse	41	9.1
Always protected	76	16.9
Any unprotected	188	41.8
Men who had a primary regular partner		
No anal intercourse	41	13.4
Always protected	76	24.9
Any unprotected	188	61.6

Table 36 shows engagement in unprotected anal intercourse (UAI) by match of serostatus in primary regular relationships. As shown, UAI was much more common in sero-concordant relationships.

**Table 36 : Condom use and match of HIV serostatus in primary regular relationships (n = 291)**

	No UAI n (%)	Any UAI n (%)
Sero-concordant negative (n = 215)	61 (28.4)	154 (71.6)
Sero-discordant (n = 29)	15 (51.7)	14 (48.3)
Sero-nonconcordant (n = 47)	32 (68.1)	15 (31.9)

Among the 291 men who had a primary regular partner, over a fifth had no agreement regarding sexual practices within the relationship.

**Table 37 : Agreements with primary regular partners about sex within relationships (n = 291)**

	n	%
No sex	1	0.3
No anal intercourse	11	3.8
Anal intercourse always with a condom	72	24.7
Anal intercourse can be without a condom	23	7.9
All anal intercourse is without a condom	121	41.6
Other	1	0.3
No agreement	62	21.3

There was a higher percentage of men who had not reached any agreement with their primary regular male partner in terms of sex outside the relationship (Table 38). Approximately a quarter of the men agreed not to have casual sex.

**Table 38 : Agreements with primary regular partners about sex outside the relationship (n = 291)**

	n	%
No sexual contact with casual partners	74	25.4
No anal intercourse with casual partners	37	12.7
All anal intercourse with casual partners is with a condom	94	32.3
Anal intercourse with casual partners can be without a condom	1	0.3
Other	6	2.1
No agreement	79	27.1

Around a fifth of the overall sample reported that they had broken their agreements (Table 39). Among them, over half ever told the other partner, yet less than a quarter ever renegotiated agreements with their primary regular partner.

**Table 39 : Broken agreements within primary regular relationships**

	n	%
Ever broken (n = 450)	59	13.1
Ever told each other about broken agreements (n =58)	34	58.6
Ever renegotiated agreements (n = 59)	14	23.7

Note: Categories are not mutually exclusive.

## Condom use with other regular male partners

In the HIM study, ‘other’ regular male partners were differentiated from ‘primary’ regular male partners and were investigated separately. Among those men who had other regular male partners (n = 74), less than a half had any unprotected anal intercourse. Table 40 shows that, compared with those who engaged in unprotected anal intercourse with a primary regular partner, fewer men engaged in unprotected anal intercourse with their other regular partners.

**Table 40 : Condom use with other regular male partners in the previous six months (n = 450)**

	n	%
Total sample		
No such partner	376	83.6
No anal intercourse	9	2.0
Always protected	30	6.7
Any unprotected	35	7.8
Men who had other regular partners		
No anal intercourse	9	12.2
Always protected	30	40.5
Any unprotected	35	47.3

Table 41 shows unprotected anal intercourse (UAI) with other regular partners against participants’ understandings or assumptions of their other regular partners’ serostatus. The numbers are small and should be interpreted cautiously.

**Table 41 : Condom use with other regular partners by partners’ serostatus**

	No UAI n (%)	Any UAI n (%)
HIV negative other regular partner/s (n = 31)	17 (54.8)	14 (45.2)
HIV positive other regular partner/s (n = 8)	3 (37.5)	5 (62.5)
Unknown status other regular partner/s (n = 43) <sup>1</sup>	17 (39.5)	26 (60.5)

Note: Serostatus categories are not mutually exclusive.

<sup>1</sup>Missing n = 2.

## Sex with casual male partners

Tables 42 and 43 show that over half of the participants in the HIM cohort who had casual partners in the previous six months did not disclose their HIV status to any casual partners. Likewise, over half did not know the HIV status of any of their casual partners.

**Table 42 : Participants' disclosure of serostatus to casual partners (n = 360)**

	n	%
Told none	199	55.3
Told some	132	36.7
Told all	29	8.1

Very few men told their serostatus to all casual partners (Table 42) and, similarly, routine disclosure to participants was very low (Table 43).

**Table 43 : Casual partners' disclosure of serostatus to participants (n = 359)**

	n	%
Told by none	201	56.0
Told by some	140	39.0
Told by all	18	5.0

Based on the participants' understandings or assumptions of their casual partners' serostatus, Table 44 shows that among those who had such partners, most of the men had some casual partners whose HIV status was unknown. A small percentage of the HIM participants believed that they had had casual sex with HIV positive casual partners in the previous six months.

**Table 44 : HIV status of casual partners (n = 360)**

	n	%
Negative	78	21.7
Positive	50	13.9
Unknown	342	95.0

Note: Categories are not mutually exclusive.

The following Table 45 has two parts. The first is based on the total sample and shows that slightly less than a third of the men had any unprotected anal intercourse with casual partners in the previous six months. The second is based on a reduced sample and shows that among those who had casual partners in the six months prior to the survey, slightly over a third had any unprotected anal intercourse with casual partners and nearly two-thirds of the men did not engage in anal intercourse or always used condoms for casual anal intercourse.

**Table 45 : Condom use with casual male partners in the previous six months (n = 450)**

	n	%
Total sample		
No such partner	90	20.0
No anal intercourse	47	10.4
Always protected	178	39.6
Any unprotected	135	30.0
Men who had casual partners		
No anal intercourse	47	13.1
Always protected	178	49.4
Any unprotected	135	37.5

Table 46 shows that in the six months prior to the baseline interview, among those who had HIV negative casual partner/s, slightly over a half engaged in any unprotected anal intercourse in such contexts. Around three-quarters of the HIM men who had HIV positive casual partner/s engaged in any unprotected anal intercourse. Around two-thirds of the men who had casual partner/s of unknown serostatus engaged in any unprotected anal intercourse.

**Table 46 : Condom use with casual partners by partners' serostatus**

	No UAI n (%)	Any UAI n (%)
HIV negative casual partner/s (n = 78)	38 (48.7)	40 (51.3)
HIV positive casual partner/s (n = 50)	12 (24.0)	38 (76.0)
Unknown status casual partner/s (n = 341) <sup>1</sup>	115 (33.7)	226 (66.3)

Note: Serostatus categories are not mutually exclusive.

<sup>1</sup>Missing n = 1.

# Drug use

Table 47 shows that the most frequently used drugs were Marijuana and Amyl/Poppers with well over half of the men reporting any use in the previous six months. Ecstasy or other forms of MDA was also used by over half of the HIM participants. Some used one drug in particular and others reported using various combinations of drugs during the six months prior to the survey.

**Table 47 : Drug use in the previous six months (n = 450)**

	Never n (%)	Once or twice n (%)	Once per month n (%)	At least once per week n (%)
Marijuana (n = 450)	199 (44.2)	122 (27.1)	55 (12.2)	74 (16.4)
Amyl/Poppers (n = 449)	176 (39.2)	103 (22.9)	77 (17.1)	93 (20.7)
Cocaine (n = 449)	317 (70.6)	92 (20.5)	35 (7.8)	5 (1.1)
Methamphetamines (speed/crystal) (n = 450)	272 (60.4)	118 (26.2)	47 (10.4)	13 (2.9)
Other Amphetamines or Uppers (n = 444)	393 (88.5)	34 (7.7)	13 (2.9)	4 (1.0)
Ecstasy or other forms of MDA (n = 449)	184 (41.0)	146 (32.5)	92 (20.5)	27 (6.0)
Psychedelics/Hallucinogens (LSD) (n = 450)	394 (87.6)	47 (10.4)	9 (2.0)	0
Downers (Barbiturates, Tranquillisers) (n = 450)	377 (83.8)	38 (8.4)	21 (4.7)	14 (3.1)
Heroin, other opiates or painkillers (n = 450)	447 (99.3)	2 (0.4)	0	1 (0.2)
Other 'party drugs' (Special K or Rohypnol) (n = 449)	328 (73.1)	85 (18.9)	27 (6.0)	9 (2.0)

Note: Categories are not mutually exclusive.

Viagra was ever used by less than one-fifth of the men in the HIM cohort (Table 48). There was no difference between use of Viagra within regular relationships and use during casual encounters.

**Table 48 : Use of Viagra**

	n	%
Ever used Viagra (n = 450)	82	18.2
With primary/other regular partners (n = 307) <sup>1</sup>		
Never	259	84.6
Occasionally	44	14.4
Often	3	1.0
With casual partners (n = 360)		
Never	297	82.5
Occasionally	58	16.1
Often	5	1.4

<sup>1</sup>Missing n = 1.

Relatively few of the HIM participants (only 16 men all told) injected any drugs in the six months prior to the baseline interview (Table 49).

**Table 49 : Injecting drug use in the previous six months (n = 450)**

	n	%
Cocaine <sup>1</sup>	3	0.7
Methamphetamines (Speed/Crystal) <sup>1</sup>	12	2.7
Other Amphetamines or Uppers <sup>1</sup>	2	0.4
Ecstasy or other forms of MDA <sup>1</sup>	2	0.4
Psychedelics/Hallucinogens (LSD) <sup>1</sup>	0	–
Downers (Barbiturates, Tranquillisers) <sup>1</sup>	1	0.2
Heroin, other opiates or painkillers <sup>1</sup>	0	–
Other 'party drugs' (Special K or Rohypnol) <sup>2</sup>	1	0.2
Steroids for bodybuilding/sports <sup>1</sup>	5	1.1
Any injecting drug use	16	3.6

Note: Categories are not mutually exclusive.

<sup>1</sup>Missing n = 1; <sup>2</sup>Missing n = 2.

Among those who had injected drugs during the six months prior to the survey, only one man reported reusing a needle after someone else had used it. No participants had reused needles or other injecting equipment when injecting steroids in the same period. As the percentages presented in Table 50 refer to a reduced base (i.e., based on 16 men who had injected drugs in the previous six months), caution should be taken when interpreting these data.

**Table 50 : Reuse of needles or other injecting equipment in the previous six months (n = 16)**

	n	%
Drugs other than steroids		
Reused a needle after someone else used it	1	6.3
Reused other injecting equipment after someone else used it	4	25.0
Steroids		
Reused a needle after someone else used it	0	–
Reused other injecting equipment after someone else used it	0	–

Note: Categories are not mutually exclusive.

# General health and well-being

The vast majority of HIM participants self-rated their general health as good, very good or excellent (see Table 51).

**Table 51 : Self-reported general health (n = 449)**

	n	%
Poor	4	0.9
Fair	45	10.0
Good	122	27.2
Very good to excellent	278	61.9

Of the men who used condoms, nearly half reported any associated erection difficulties (Table 52). Less than half of the HIM participants encountered erection difficulties not associated with condom use. Nearly one-fifth of the participants 'occasionally' or 'often' experienced premature ejaculation. Among those who had any receptive anal intercourse in the previous six months, over a third reported difficulties. Nearly a quarter of the men were dissatisfied with sex at some point and to some degree in the previous six months. Over a third reported loss of libido during the six months prior to the interview.

**Table 52 : Sex problems in the previous six months (n = 450)**

	n	%
Erection difficulties associated with condoms (n = 325) <sup>1</sup>		
Never	172	52.9
Occasionally	120	36.9
Often	33	10.2
Other erection difficulties (n = 450)		
Never	251	55.8
Occasionally	184	40.9
Often	15	3.3
Premature ejaculation (n = 450)		
Never	360	80.0
Occasionally	82	18.2
Often	8	1.8
Receptive anal intercourse difficulties (n = 434) <sup>2</sup>		
Never	261	60.1
Occasionally	135	31.1
Often	20	4.6
Don't know/NA	18	4.1
Sexual dissatisfaction (n = 447)		
Never	336	75.2
Occasionally	100	22.3
Often	11	2.5
Loss of libido (n = 450)		
Never	287	63.8
Occasionally	147	32.7
Often	16	3.6

<sup>1</sup>Includes only those who used condoms for insertive anal intercourse.

<sup>2</sup>Includes only those who had any receptive anal intercourse (with or without condoms).

For those who reported any receptive anal intercourse (with or without condoms) during the six months prior to the interview (n = 434), a small proportion reported problems associated with anal tearing. However, a substantial proportion reported problems associated with 'occasional' anal bleeding in the previous six months.

**Table 53 : Anal trauma in the previous six months (n = 434)**

	n	%
Anal tearing		
Never	378	87.1
Occasionally	49	11.3
Often	2	0.5
Don't know	5	1.1
Anal bleeding		
Never	315	72.6
Occasionally	113	26.0
Often	4	0.9
Don't know	2	0.5

Note: Includes only those who had any receptive anal intercourse (with or without condoms).

Table 54 shows that over half of participants in the first wave of HIM cohort enrolments experienced some form of abuse or discrimination related to their sexual orientation in the previous twelve months. Verbal abuse or harassment was the most frequently reported form. Of note, 14 participants reported that they were bashed in the past year.

**Table 54 : Experience of homophobic abuse and discrimination in the previous 12 months (n = 450)**

	n	%
Verbal abuse or harassment <sup>1</sup>	246	54.8
Physical threat or intimidation	77	17.1
Being pushed or shoved	43	9.6
Being bashed	14	3.1
Refusal of service	22	4.9
Refusal of employment or promotion <sup>2</sup>	22	5.0

Note: Categories are not mutually exclusive.

<sup>1</sup>Missing n = 1; <sup>2</sup>Missing n = 8.

Of the men who had experienced any of the above forms of abuse or discrimination in the previous 12 months (n = 247), 86 (34.8%) reported that they told nobody or did nothing about it.

Five participants (1.1% of the total sample) reported being sexually assaulted in the previous 12 months.

# HIV vaccine attitudes

A large number of items about attitudes toward HIV vaccines and HIV vaccine trials were included in the questionnaire. Each item was accompanied by a four-point Likert scale of 'strongly disagree' (= 1) to 'strongly agree' (= 4). 27 of the items formed four scales of HIV vaccine attitudes (Van de Ven, Bartholow, Rawstorne et al., 2002). Throughout, some items were reverse-coded so that a higher score is associated with a more positive attitude toward HIV vaccines and HIV vaccine trials.

## Comfort with participation in HIV vaccine trials

This scale contains eight items, for example: 'I would worry about confidentiality if participated in an HIV vaccine trial'; 'Not knowing if I receive the vaccine or the placebo would make me very uncomfortable'; and 'I worry that if I have the HIV vaccine this might pass the real virus on to me'.

As shown in Figure 1, the mean of this scale was 2.72. As a group, the men were somewhat to reasonably comfortable about participation in HIV vaccine trials.

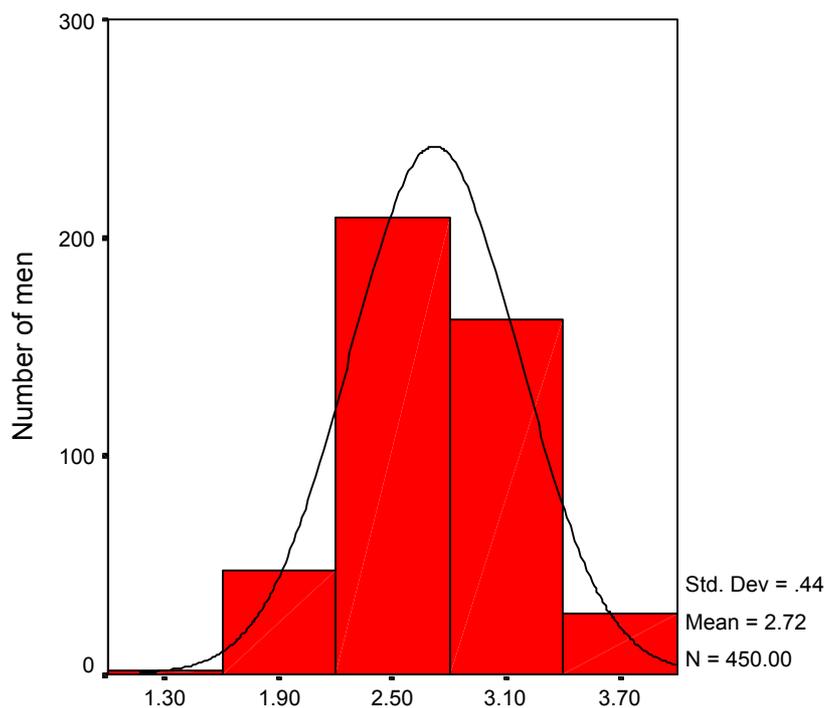


Figure 1. Comfort with participation in HIV vaccine trials

## Confidence in HIV vaccines/vaccine trials

This scale is composed of ten items, for example: 'Everyone who receives an HIV vaccine in a trial will be immune from infection'; 'There will be an effective HIV vaccine within 5 years'; and 'I would lower my chances of getting infected with HIV if I participated in an HIV vaccine trial'.

Figure 2 shows that with a mean of 2.18. These men, as a group, were not overly or unrealistically confident about HIV vaccines or HIV vaccine trials.

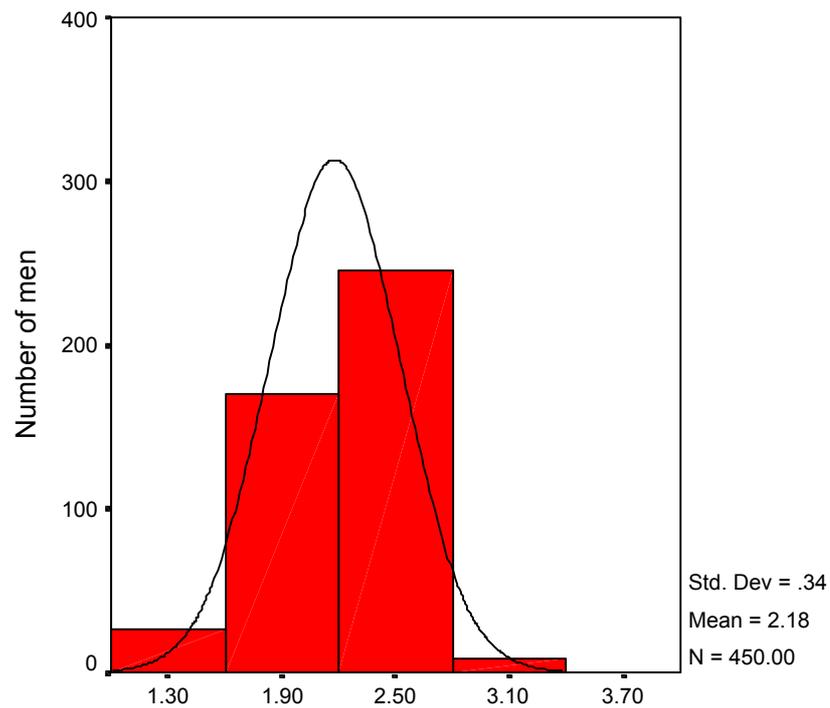


Figure 2. Confidence in HIV vaccines/vaccine trials

## Sexual freedom

This third scale has six items, for example: 'Being in an HIV vaccine trial means that you don't have to be as careful about using condoms'; 'An effective vaccine will make safe sex less important'; and 'If I were in an HIV vaccine trial I would be more likely to have unprotected sex'.

As shown in Figure 3, the majority of the HIM participants were fairly realistic in relation to the implications of HIV vaccine and vaccine trials for sex practice (mean = 2.13).

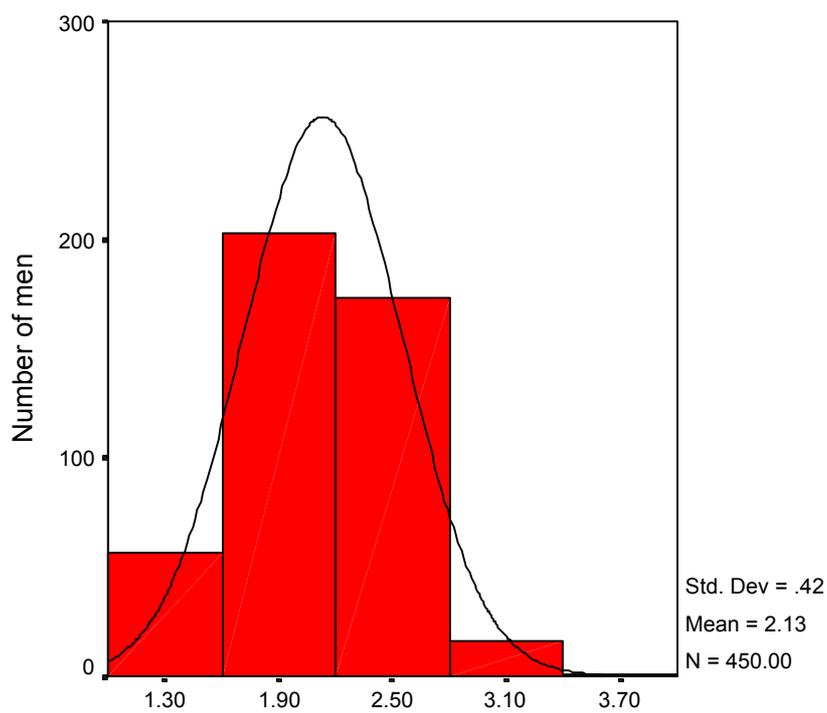


Figure 3. Sexual freedom

## Willingness to participate in HIV vaccine trials

There are three items in this scale, namely: 'I would participate in an HIV vaccine trial even if I thought the vaccine might not work'; 'I want to take part in HIV vaccine trials because I think it will benefit me personally'; and 'Gay men have nothing to lose by participating in an HIV vaccine trial'.

The distribution of the scale scores, as shown in Figure 4, approximated a normal curve with a mean equal to the median (2.50). It suggests that most of the participants in the HIM study at interviews in 2001 were neither overly willing nor unwilling to participate in HIV vaccine trials.

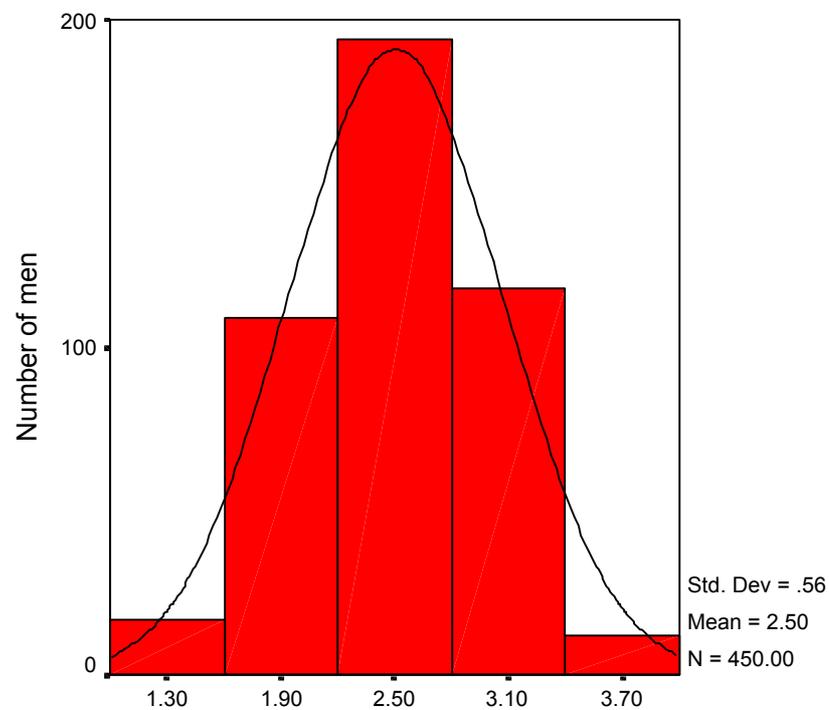


Figure 4. Willingness to participate in HIV vaccine trials

# Summary

The key findings from the first wave (2001) of enrolment into the HIM cohort of HIV negative men (N = 450) are summarised as:

- The majority of the men were recruited through gay community events and venues, gay press advertisements and notices, gay organisations, or by word of mouth. [Table 1]
- The age of the participants ranged from 18 to 75 years with a median of 36. [Table 2] Over three quarters of the men were in full-time employment; [Table 5] approximately 60% were in managerial or professional roles; [Table 6] and over half had attended university. [Table 7]
- The majority of the men lived in 'gay Sydney' [Table 8] and most of them had been living in Sydney for at least five years. [Table 9]
- At the time of the interview, nearly one-fifth of the men were in a monogamous regular relationship and almost a third had both regular and casual partners. [Table 17]
- Among those who currently had a primary regular partner, nearly 80% reported being in a relationship for at least 6 months. Over a quarter of the men had been in a relationship for more than five years. [Table 18]
- The most common places to meet sex partners were gay bars/dance bars, friendship networks, gay saunas, private gay parties and the internet. [Table 19]
- The men were predominantly gay or homosexually identified [Table 21], with almost two thirds having a large proportion of gay friends [Table 22] and spending a lot of free time with other gay men. [Table 23]
- Over 70% of the men had an HIV test in the 12 months prior to the interview. [Table 25]
- Of those in a primary regular relationship, almost three-quarters had an HIV negative partner. Around 16% of the men did not know their primary regular partner's HIV status. [Table 26]

- The majority of the men had some contact with people living with HIV. Over a third had a current or former partner whose HIV status was positive. Approximately 20% of the participants personally knew someone who had tested HIV positive in the previous year. Most of the men personally knew someone who had died following AIDS, but relatively few in the previous year. [Table 28]
- Nearly half of the men reported having had a test for STIs in the previous six months. [Table 30]
- Of the 434 men who consented to screening for hepatitis A, B and syphilis, one third remained susceptible to hepatitis A [Table 32] and around a quarter to hepatitis B. [Table 33]
- Of those who had a primary regular male partner in the six months prior to the survey, nearly two-thirds had any unprotected anal intercourse. [Table 35] Unprotected anal intercourse (UAI) was much more common in sero-concordant primary regular relationships. [Table 36]
- Among the 74 men who had other regular partners, less than a half had any UAI. [Table 40]
- Among those who had casual partners in the six months prior to the baseline interview, nearly two-thirds did not engage in anal intercourse or always used condoms for casual anal intercourse. The remainder of those with casual partners (slightly over a third) engaged in any UAI. [Table 45]
- The most frequently used drugs were Marijuana and Amyl/Poppers with over half of the men reporting any use in the previous six months. [Table 47] Sixteen men ever injected any drugs in the six months prior to the survey and among them, only one man reported reusing a needle after someone else had used it. [Table 50]
- The vast majority of the HIM participants self-rated their general health as good, very good or excellent. [Table 51] Nearly half of the men who used condoms reported any associated erection difficulties. [Table 52]
- For those who reported any receptive anal intercourse, most did not report any anal tearing but some reported problems associated with 'occasional' anal bleeding. [Table 53]
- Over half of the participants in the first wave experienced some form of abuse or discrimination related to their sexual orientation, with verbal abuse or harassment being the most frequently reported form. Fourteen participants reported being bashed. [Table 54] Of the men who had experienced any abuse or discrimination in the previous 12 months, a third told nobody or did nothing about it.
- The majority of the men felt reasonably comfortable about participation in HIV vaccine trials. [Figure 1] As a group, they were not overly confident about HIV vaccines or vaccine trials. [Figure 2] The majority were realistic about the impact of HIV vaccines and vaccine trials in relation to implications for sex practice. [Figure 3] As a group, the men were neither willing nor unwilling to participate in HIV vaccine trials. [Figure 4]

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