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Suggested Reference

Saxton, P. J. (2014). HIV epidemiology and behavioural outcomes – towards control? In 20th International AIDS Conference. Melbourne. Retrieved from <http://pag.aids2014.org/session.aspx?s=1052>

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HIV epidemiology and behavioural outcomes – towards control?

Satellite session:

Primary prevention of HIV among gay men: why do we need it?

Dr Peter Saxton

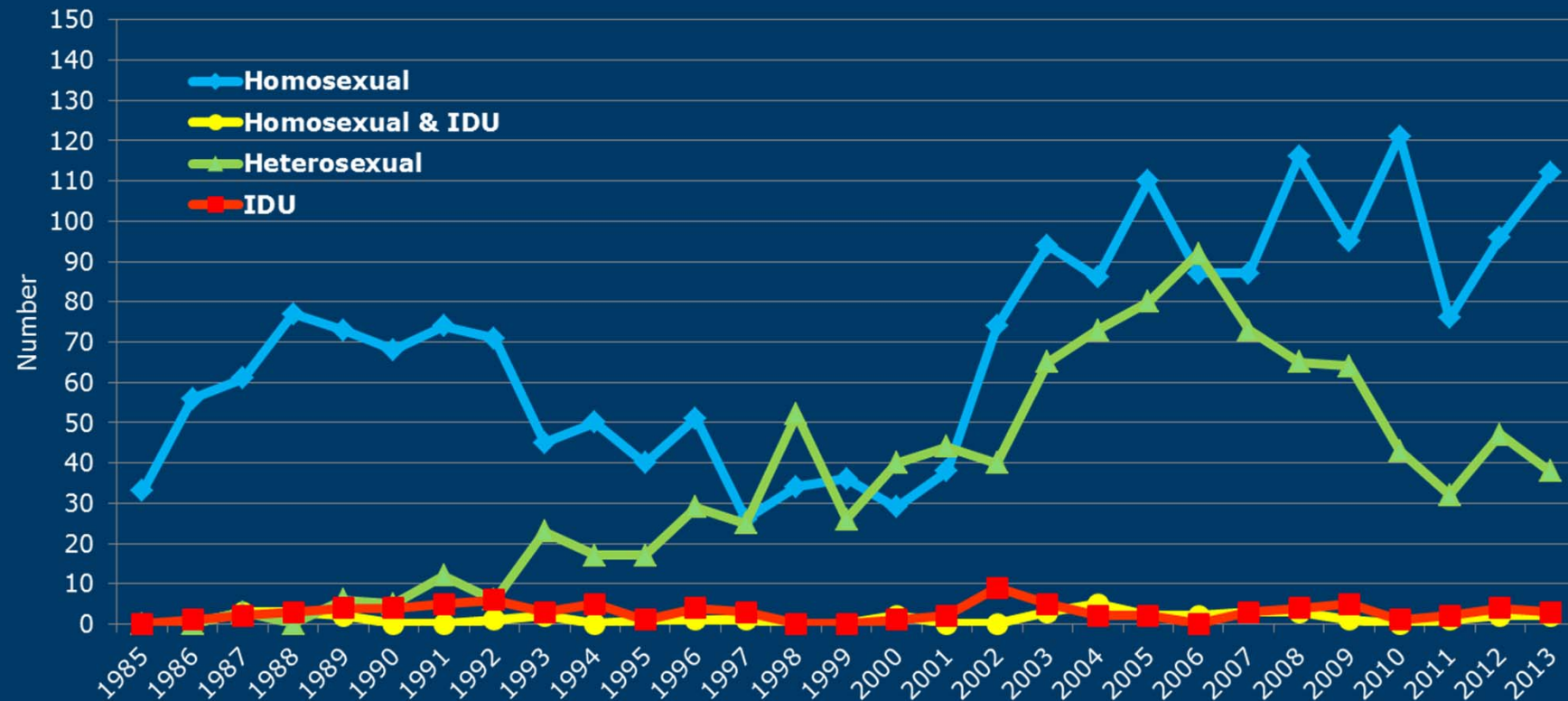
Director, Gay Men's Sexual Health research group

AIDS 2014 Melbourne 20-25 July

Main messages

- Low HIV prevalence and steady HIV diagnoses
- Sexual partner patterns for MSM are complex
- Condom use high
- Attitudes about condoms affirmative

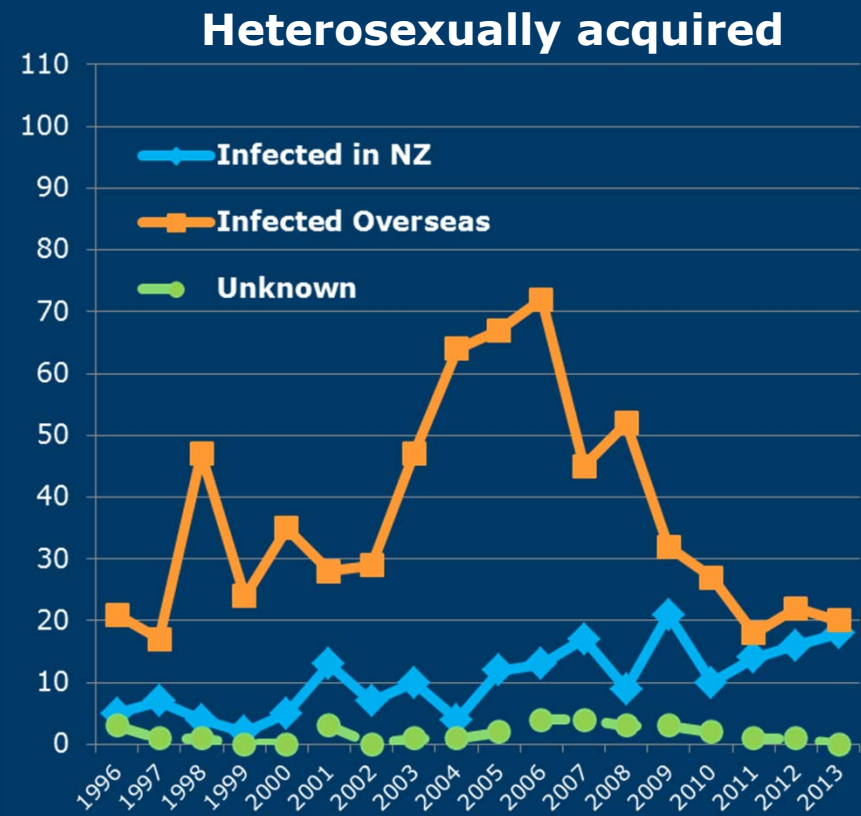
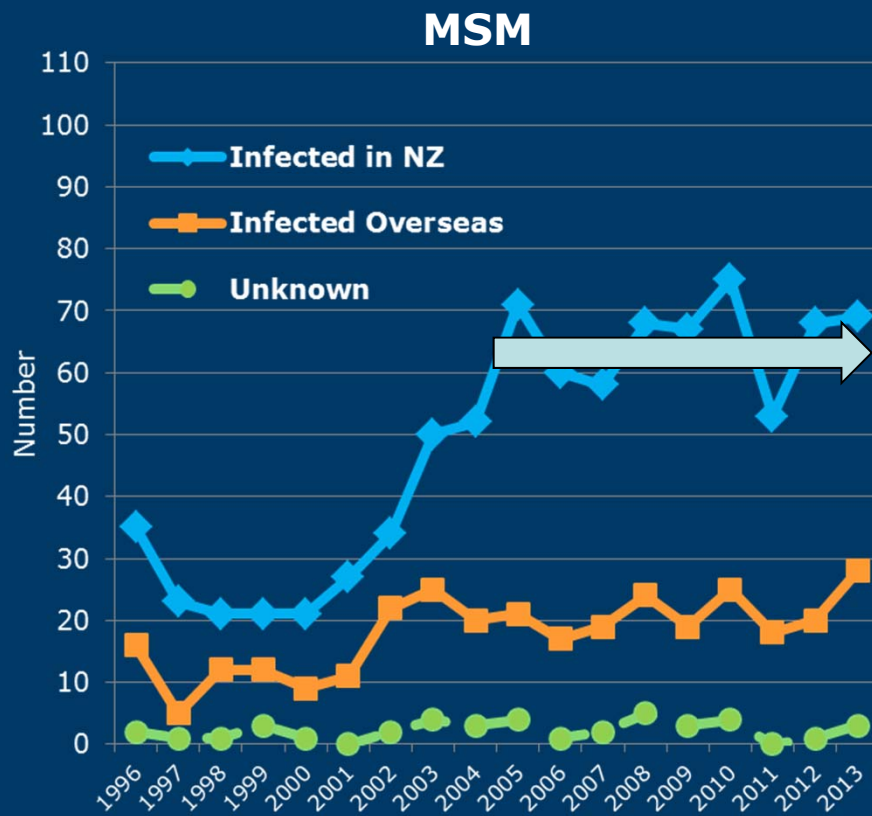
Annual numbers newly reported with HIV in New Zealand, 1985-2013 by mode of transmission



Source: AIDS Epidemiology Group, Department of Preventive and Social Medicine, University of Otago.

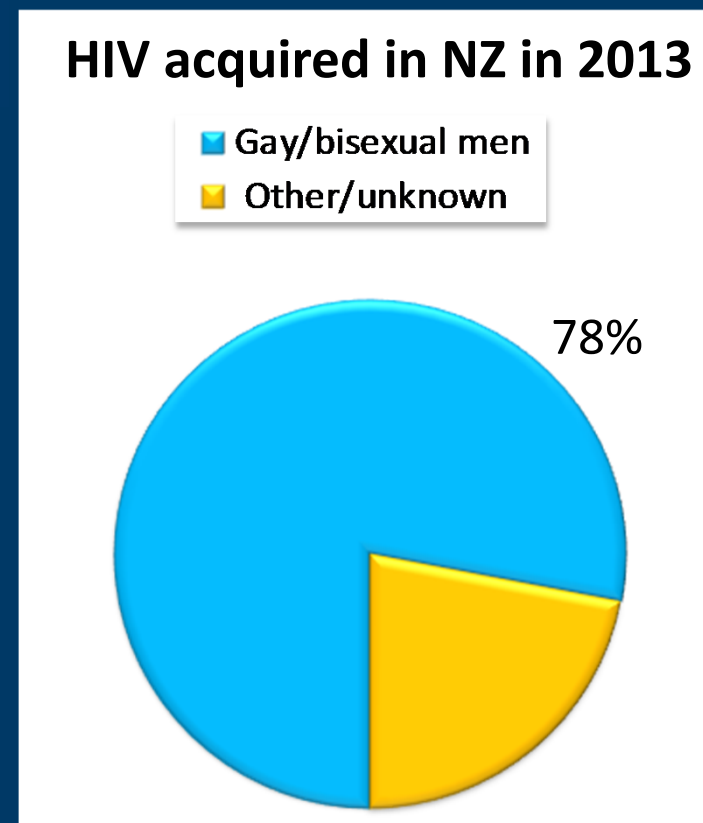
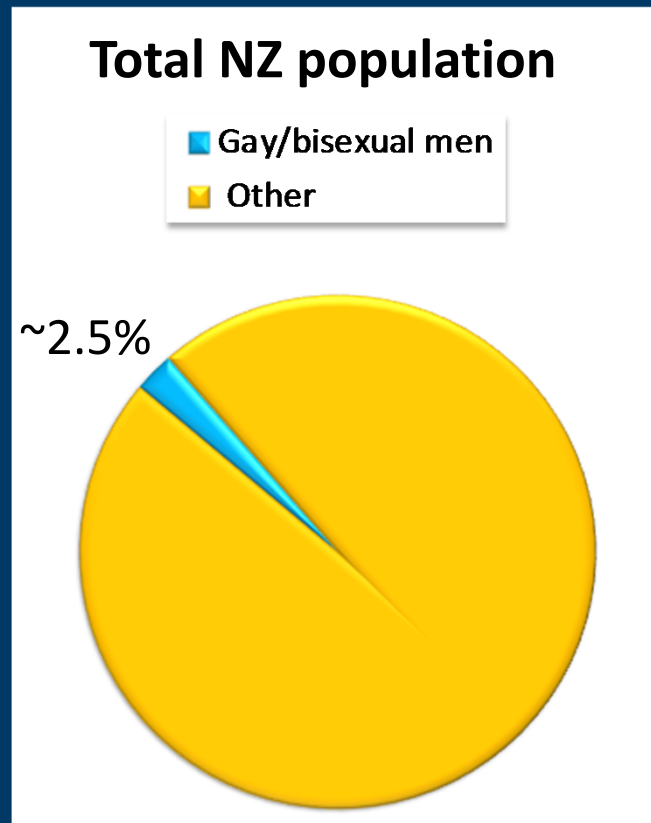
Note: Includes HIV cases newly reported by Western Blot antibody testing and viral load testing.

Annual numbers newly diagnosed with HIV in New Zealand, 1996-2013 by place of infection



Source: AIDS Epidemiology Group, Department of Preventive and Social Medicine, University of Otago.
 Note: Includes HIV cases newly diagnosed by Western Blot antibody testing and viral load testing.

HIV transmission in NZ concentrated among MSM



Note: (1) Includes both homosexual/bisexual and homosexual/bisexual/IDU

(2) In 2013, 90 people diagnosed with HIV were thought to have been infected in New Zealand of whom 70 (77.7%) were MSM.

Source: AIDS Epidemiology Group, Department of Preventive and Social Medicine, University of Otago on 12 June 2014.

HIV prevalence in MSM ~ 5%

Sentinel sexual health clinics 2005/6

Group	% HIV +
MSM	4.41
People who inject drugs (non-MSM)	0.32
Heterosexual men	0.12
Heterosexual women	0.14
Current sex worker	0.00

Source: McAllister et al. *Int J STD AIDS* 2008; 19:752-757.

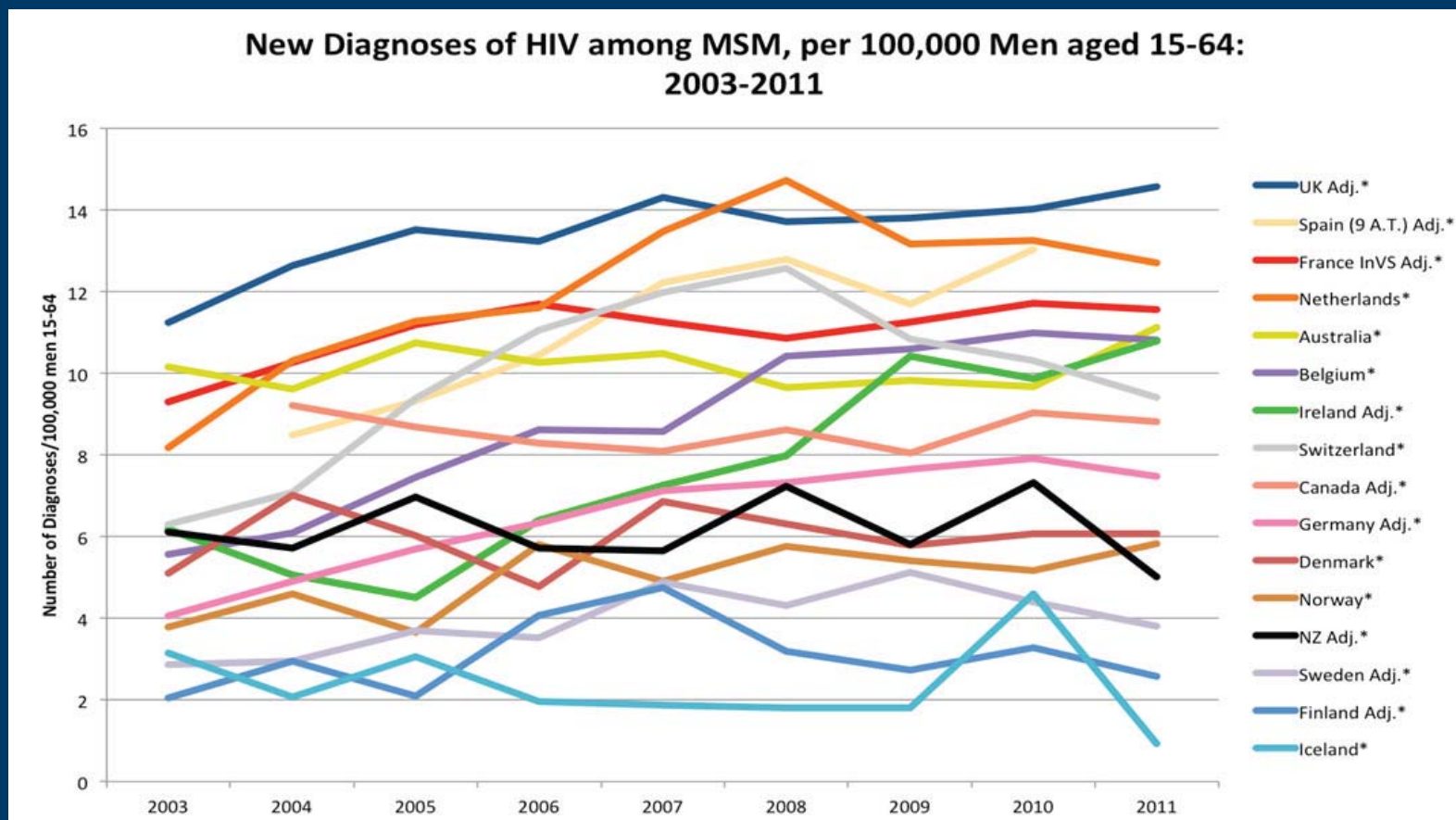
Gay community venues 2011 (Auckland)*

Group	% HIV +
MSM (AKL)	6.0
MSM (NZ, Not AKL)	4.8
MSM (Not NZ)	13.7

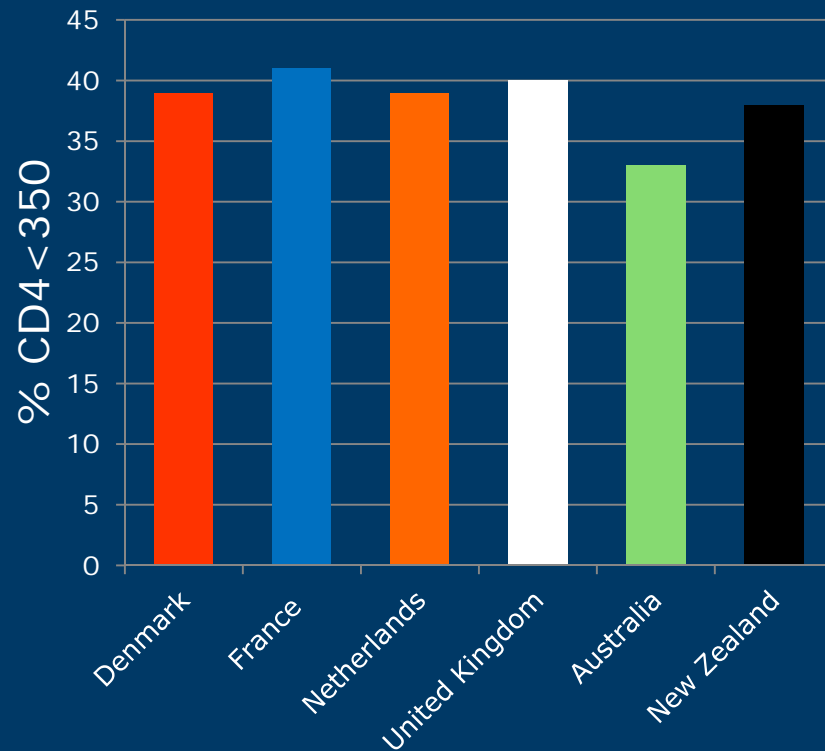
***overall 1.3% undiagnosed**

Source: Saxton et al. *BMC Public Health* 2012. 12:92.

In lowest third of countries, per capita HIV diagnoses among MSM

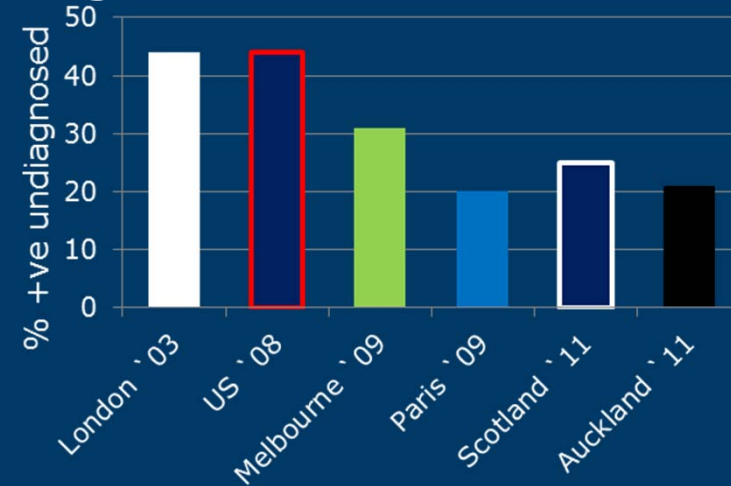


“Late” HIV diagnoses among MSM with CD4 <350 in northern European countries*, Australia and NZ (2005-10)



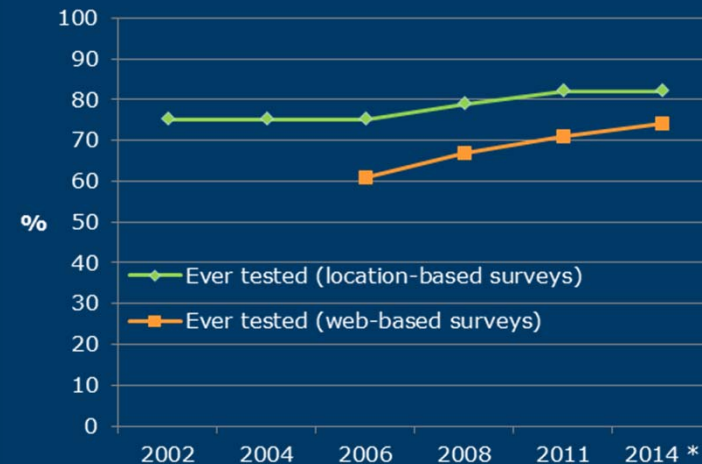
* For which CD4 information available for >50% new diagnoses
 Source: Dickson et al. *HIV Medicine* 2012, 13:182-19.

Undiagnosed HIV infection among MSM



Source: Saxton et al. *BMC Public Health* 2012, 12:92.

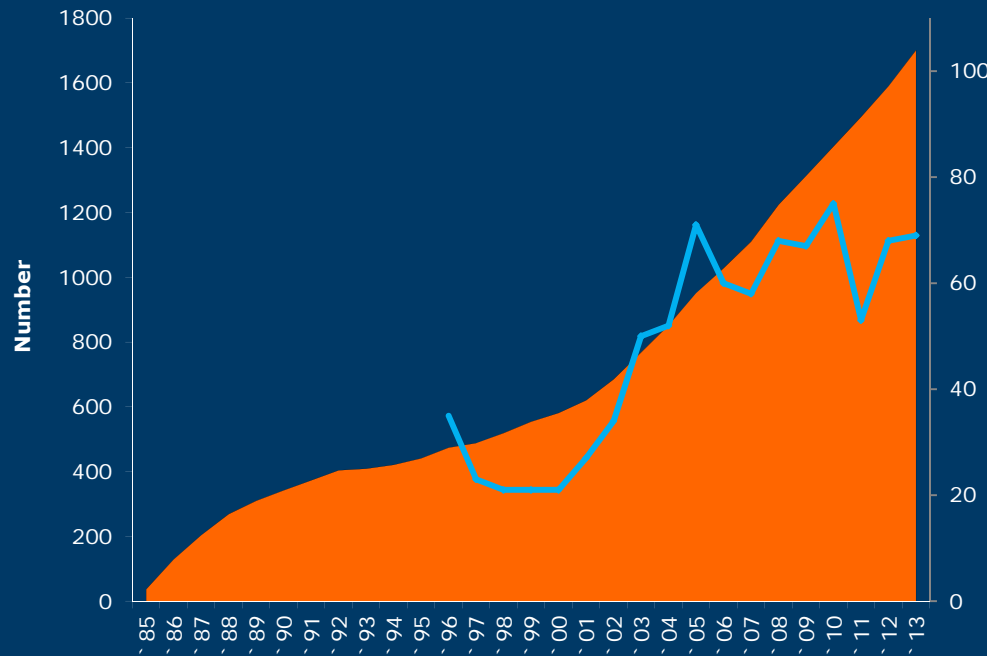
Increase in HIV testing among MSM



Source: Saxton et al. *Sex Transm Infect* 2014, 90(2), 133-138.

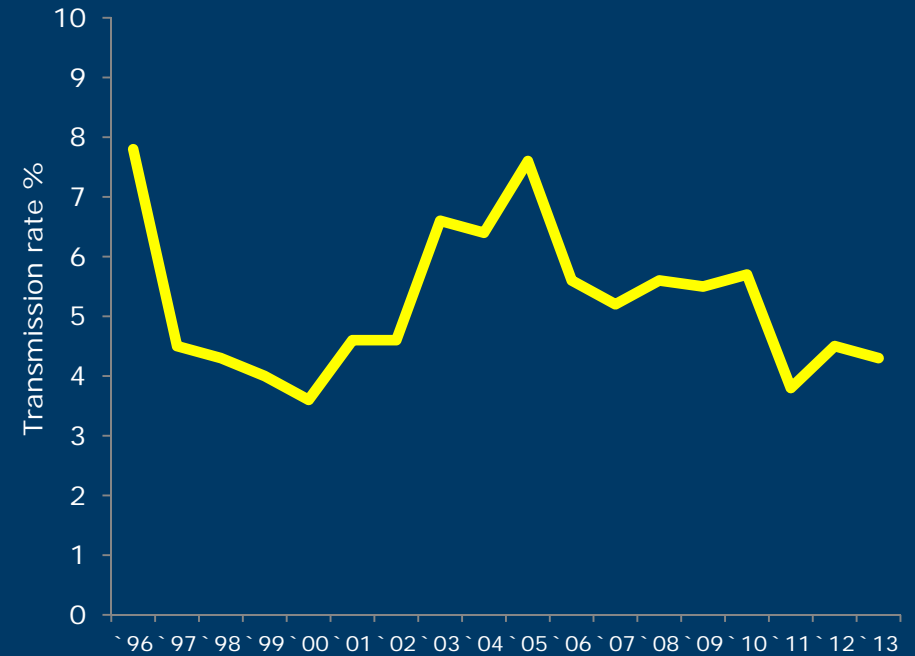
Transmission rate declining

Estimated no. MSM living with diagnosed HIV



Source: Saxton et al. *Int J STD AIDS* 2012; 23:274-279. (updated estimates)

HIV incidence : prevalence pool ratio among MSM



Source: Saxton et al. ISSTD, 2009 Jun 28–Jul 1, London. (updated estimates)

Reproductive rate = $\beta c D$

Average probability of transmission per contact



Anal sex /
condom use

Sexual contact patterns



Sexual connectivity

Duration of infectiousness

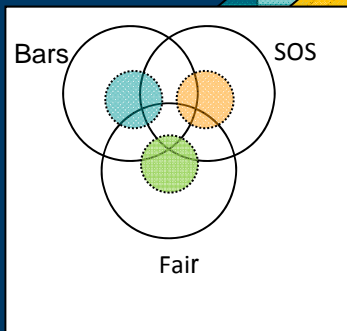




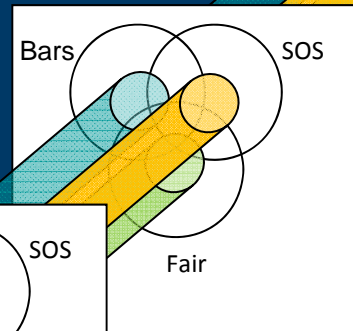
Gay Auckland Periodic Sex Survey (GAPSS)

Recruitment at Big Gay Out, then bars and sex-on-site (SOS) venues simultaneously over subsequent week

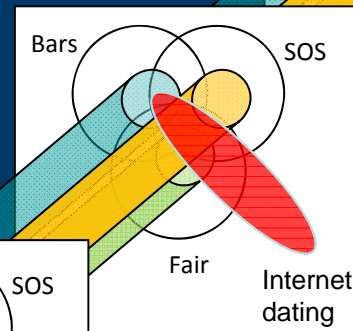
2002
n=812



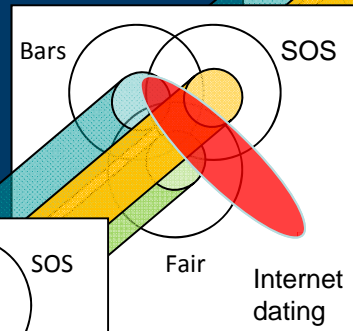
2004
n=1220



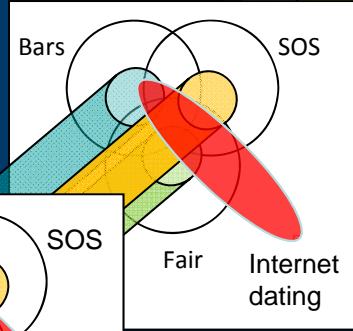
2006
n=1228



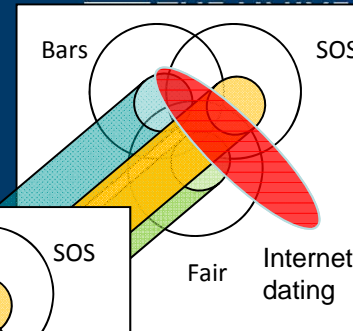
2008
n=1527



2011
n=1320



2014
n=1459



2014
N=1852

2011
N=1917

2008
n=1477

2006
N=2141

Gay men's Online Sex Survey (GOSS)

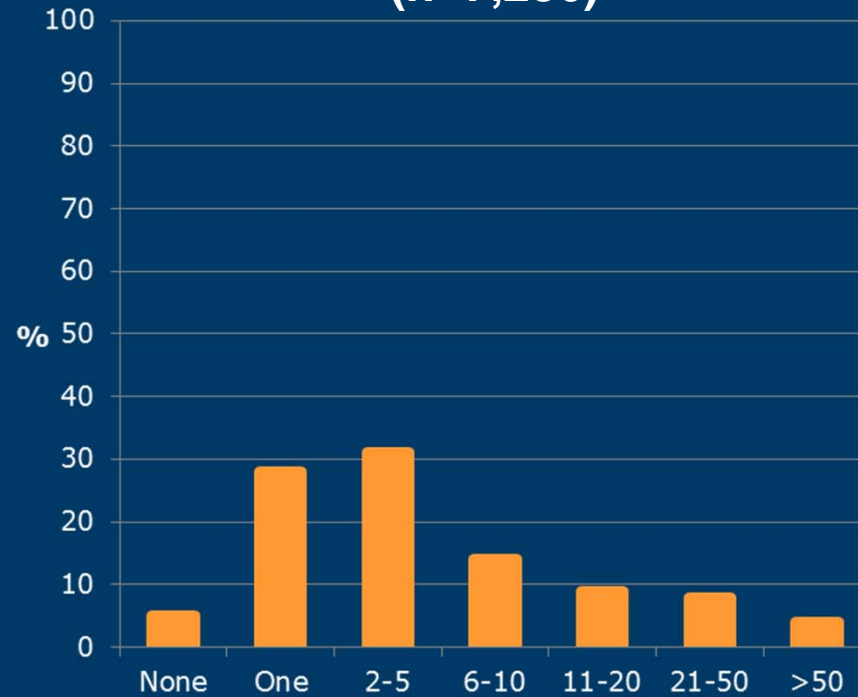
Recruitment starts after GAPSS on Internet dating sites.

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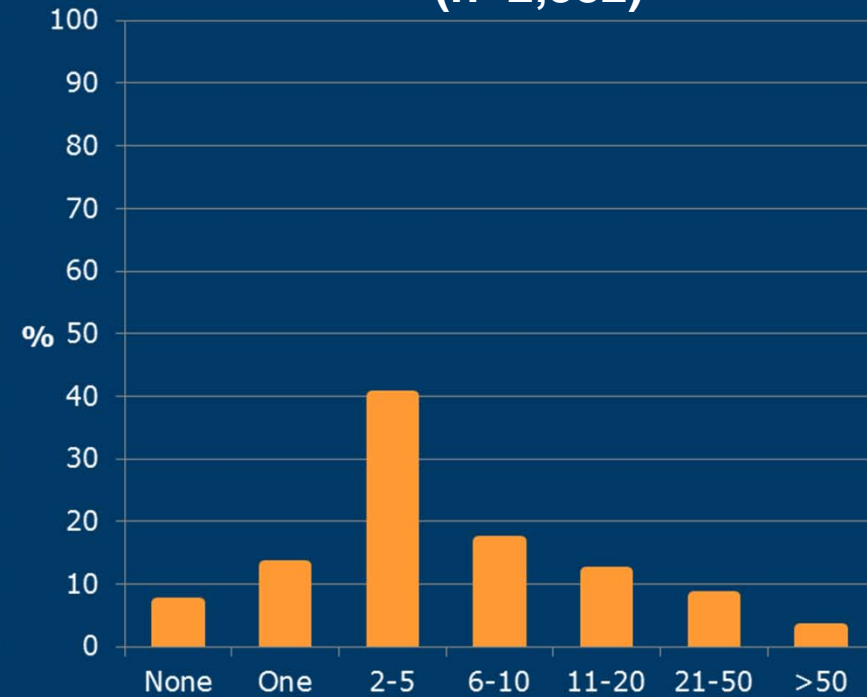
Short gap length

No. of male sexual partners <6 months

GAPSS
(n=7,286)



GOSS
(n=2,382)

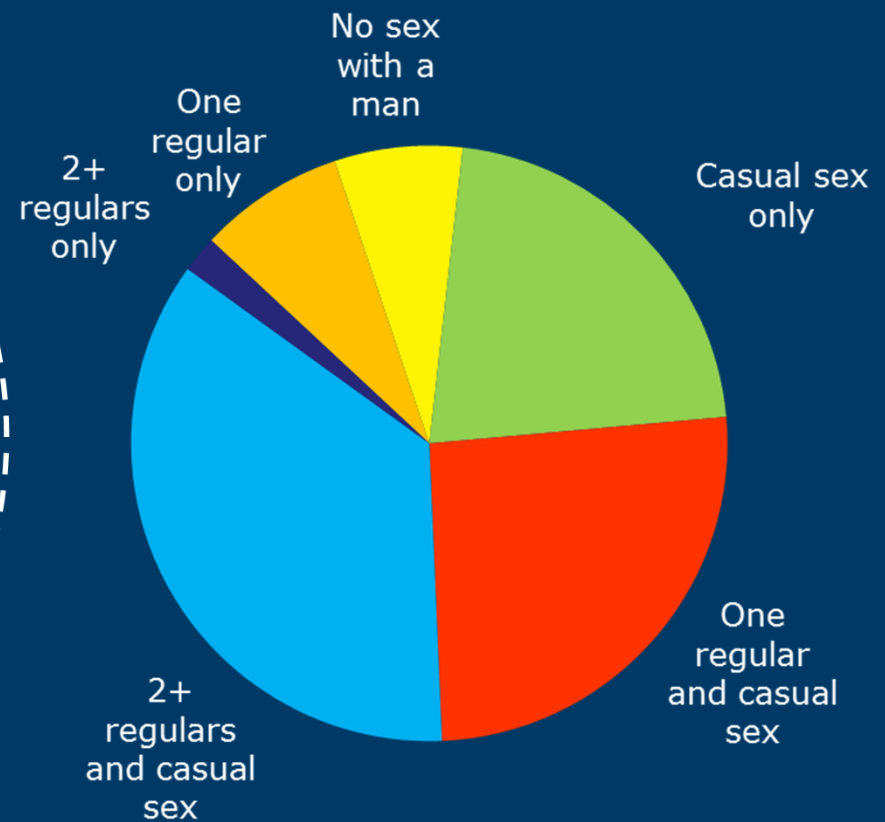
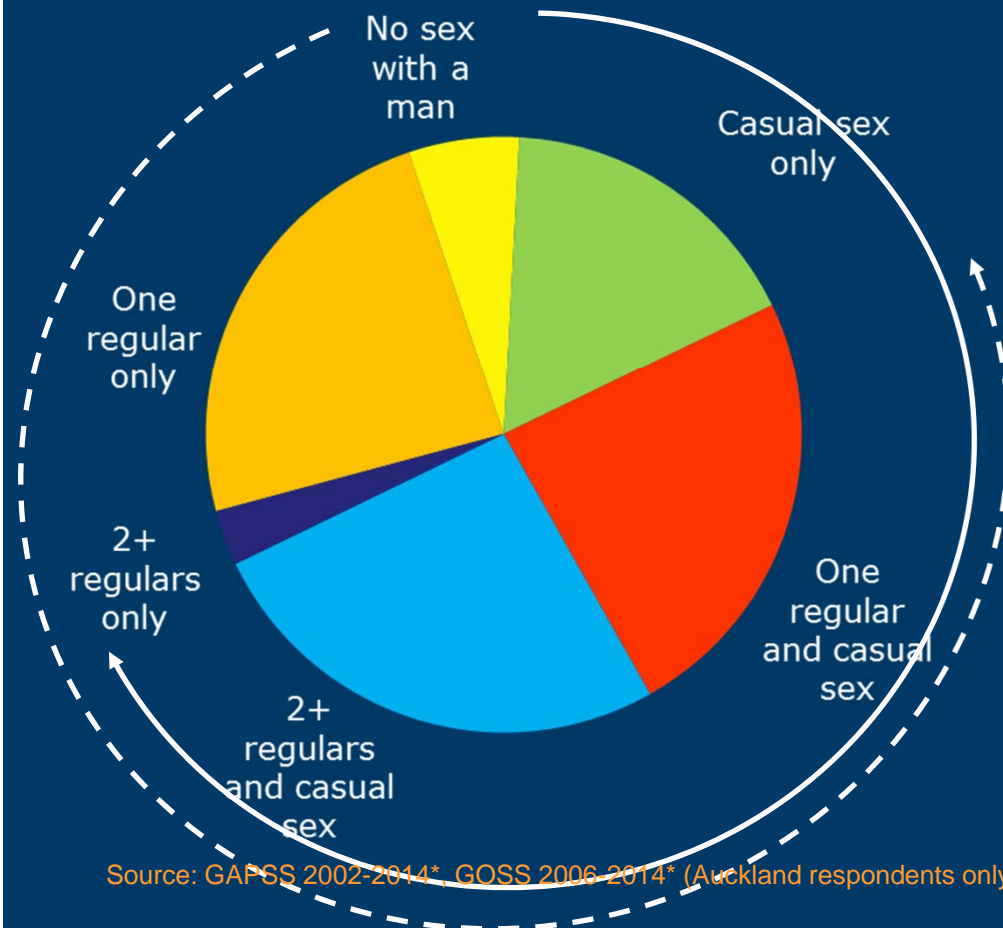




Sexual partnering is complex

GAPSS
(n=7,013)

GOSS
(n=2,308)



Source: GAPSS 2002-2014*, GOSS 2006-2014* (Auckland respondents only). * preliminary data



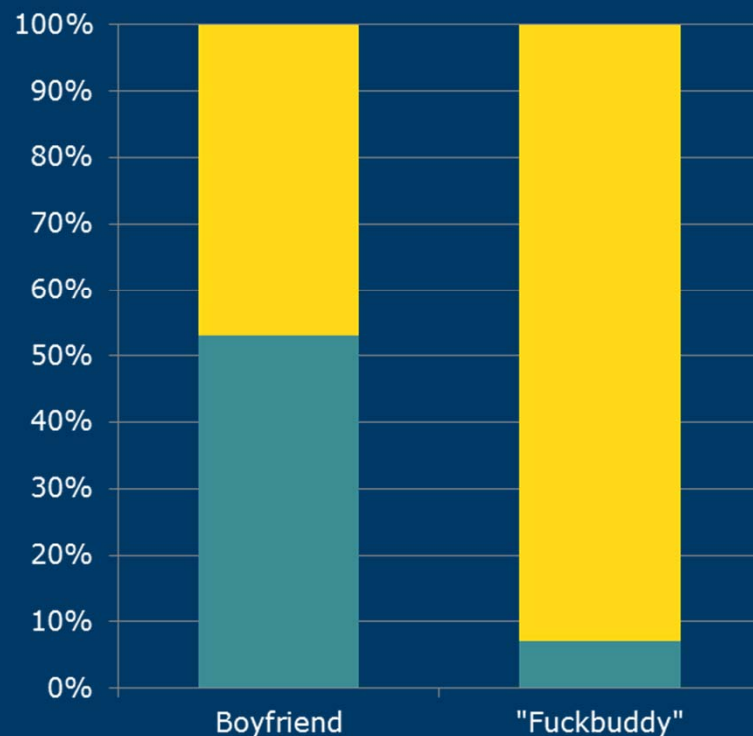
Concurrency is common

GAPSS
(n=2940)

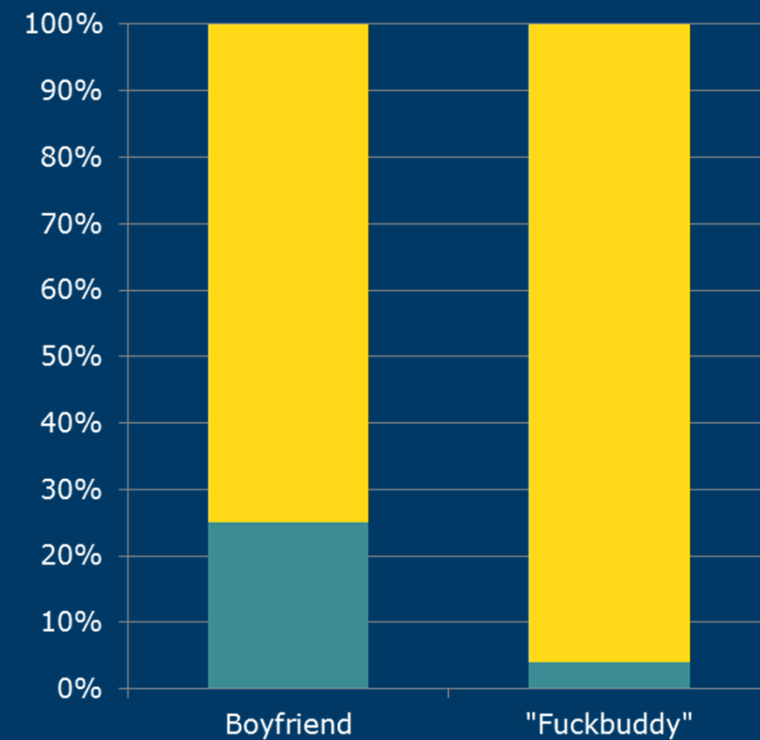
Sexual exclusivity among MSM who have a current regular partner (BF or FB)

GOSS
(n=714)

■ Exclusive <6 mths ■ Non-exclusive



■ Exclusive <6 mths ■ Non-exclusive



Source: GAPSS 2002-2014*, GOSS 2006-2014* (Auckland respondents only). * preliminary data .
Denominator is respondents with a current regular sex partner of at least 6 months duration.



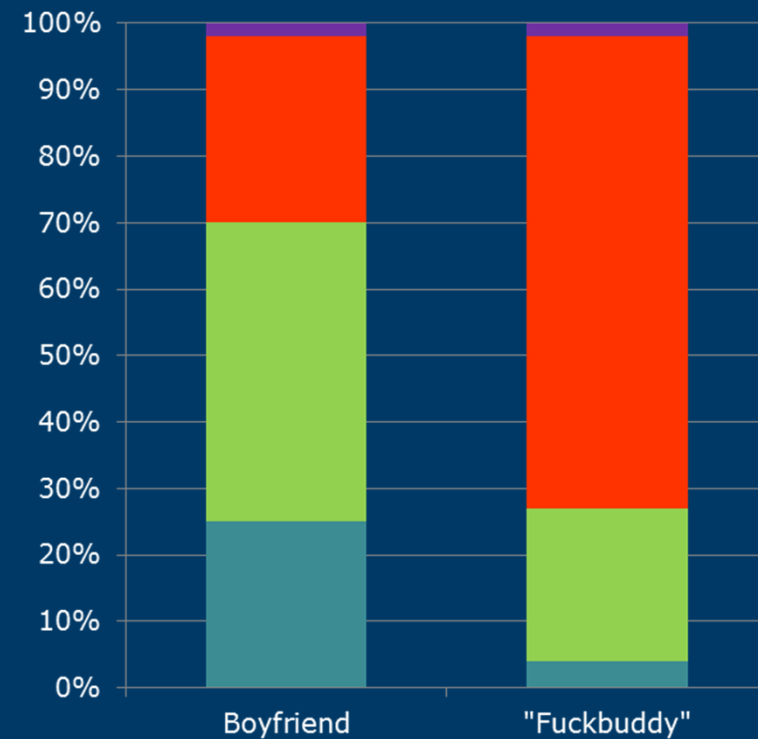
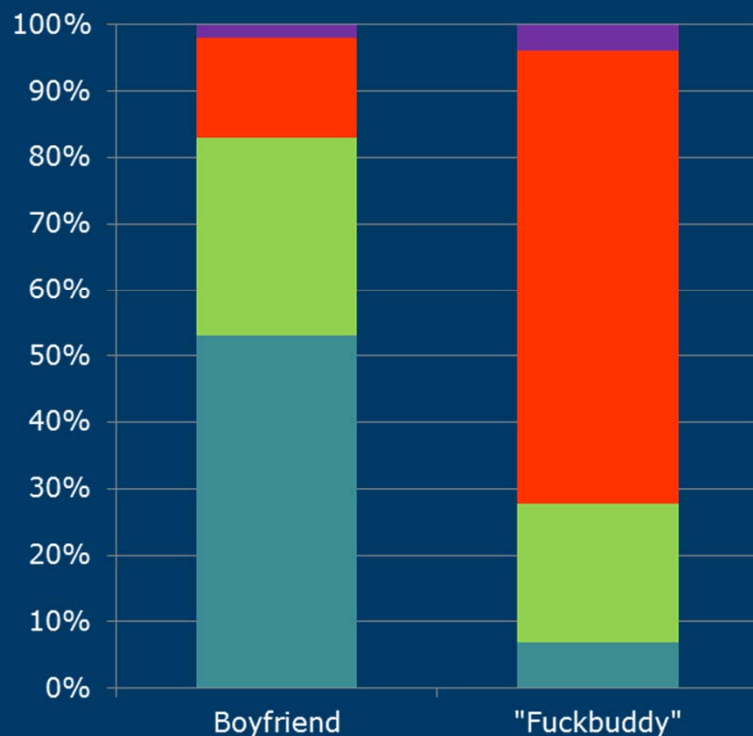
Concurrency is common

GAPSS
(n=2940)

Sexual exclusivity among MSM who have a current regular partner (BF or FB)

GOSS
(n=714)

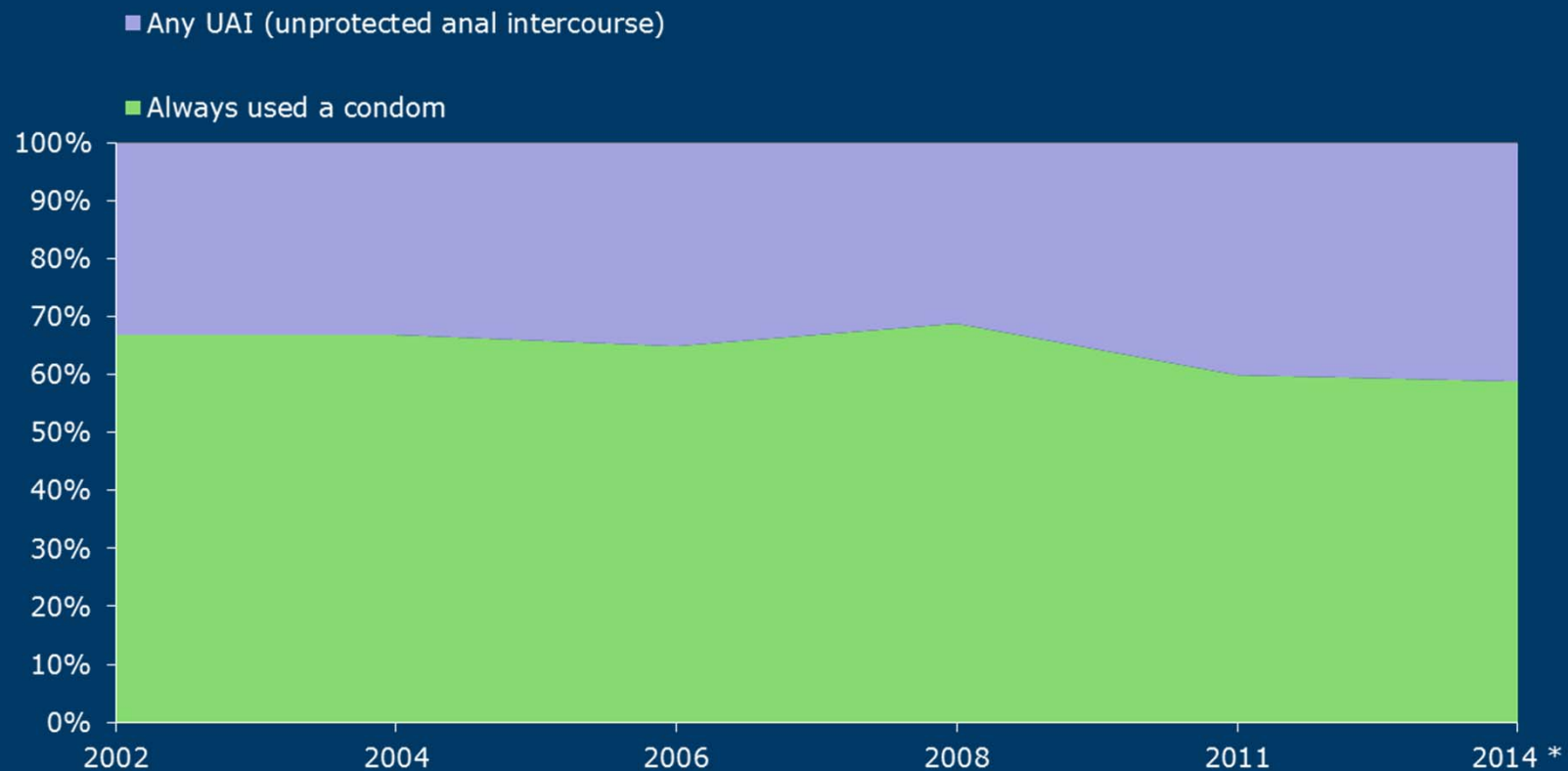
■ Casual only ■ Casual and regular ■ Regular only



Source: GAPSS 2002-2014*, GOSS 2006-2014* (Auckland respondents only). * preliminary data
Denominator is respondents with a current regular sex partner of at least 6 months duration.

Condom use

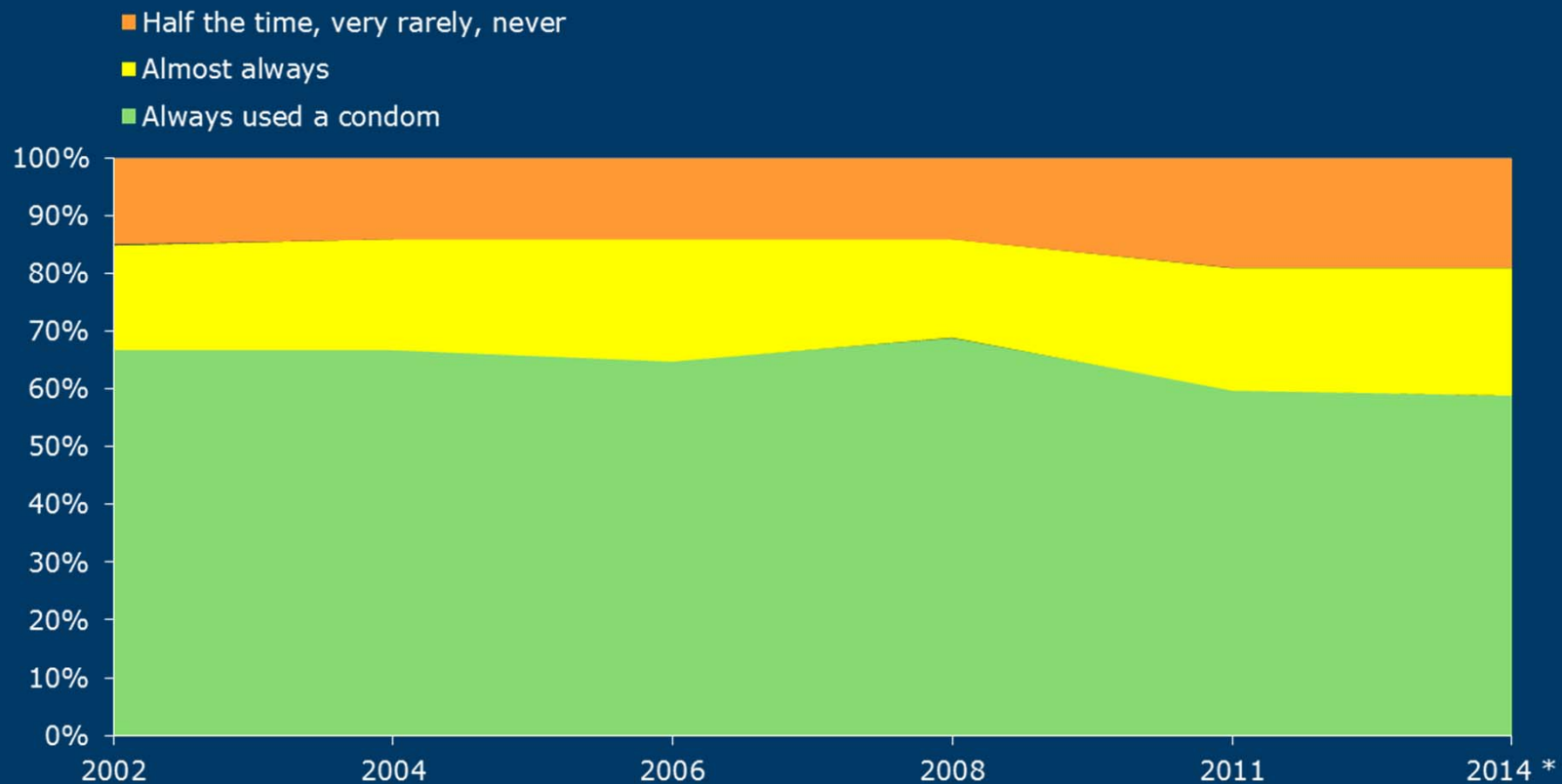
During anal intercourse with casual partner/s <6 months



Response options: "always", "almost always", "about half the time", "very rarely", "never". Separately for insertive and receptive anal intercourse.
Source: GAPSS. * preliminary data

Condom use

During anal intercourse with casual partner/s <6 months



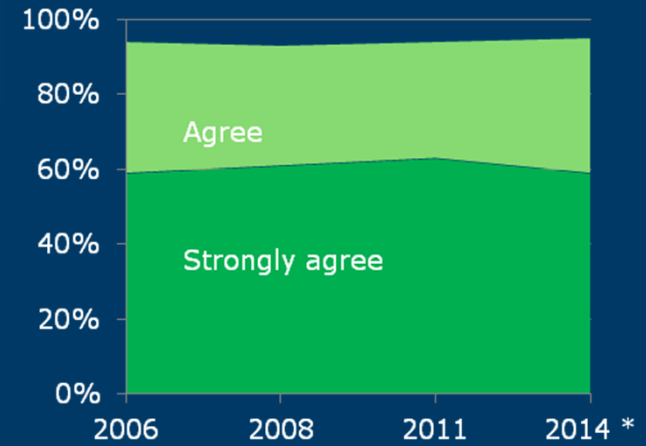
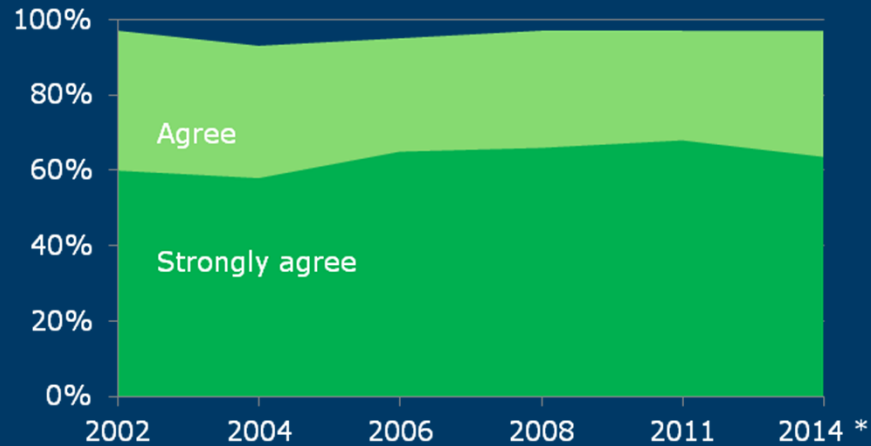
Response options: "always", "almost always", "about half the time", "very rarely", "never". Separately for insertive and receptive anal intercourse.
Source: GAPSS. * preliminary data

Attitudes

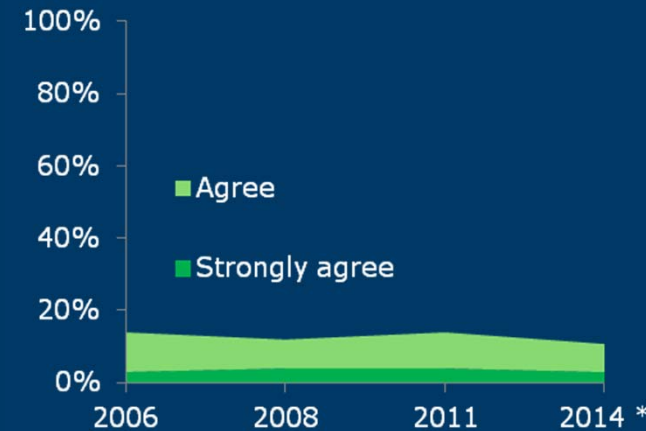
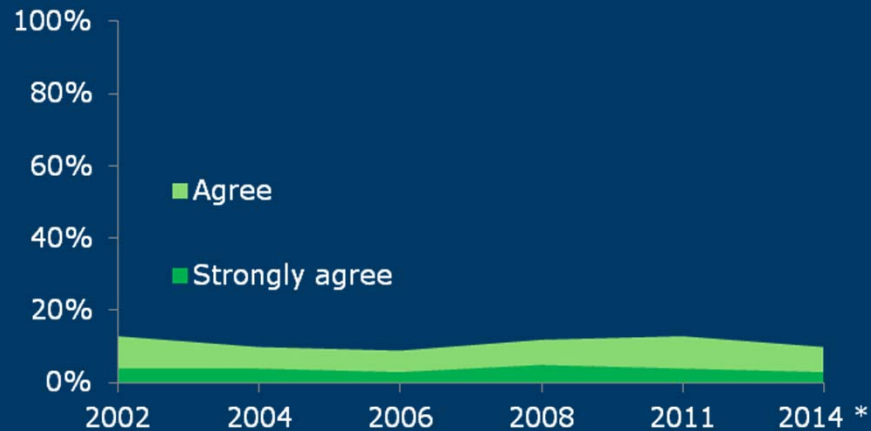
GAPSS

GOSS

“Condoms are OK as part of sex”



“I would sometimes rather risk HIV than use a condom for anal sex”



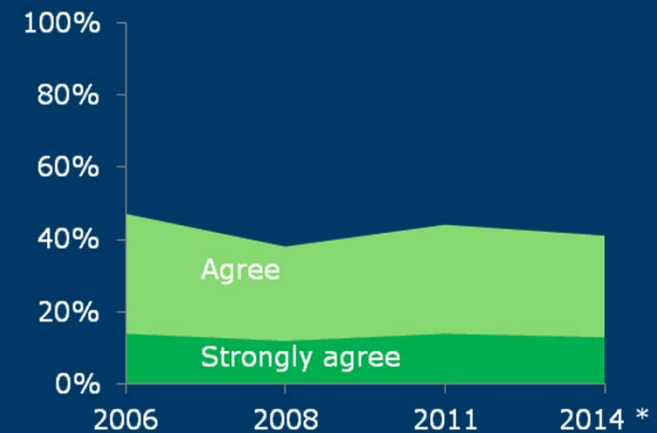
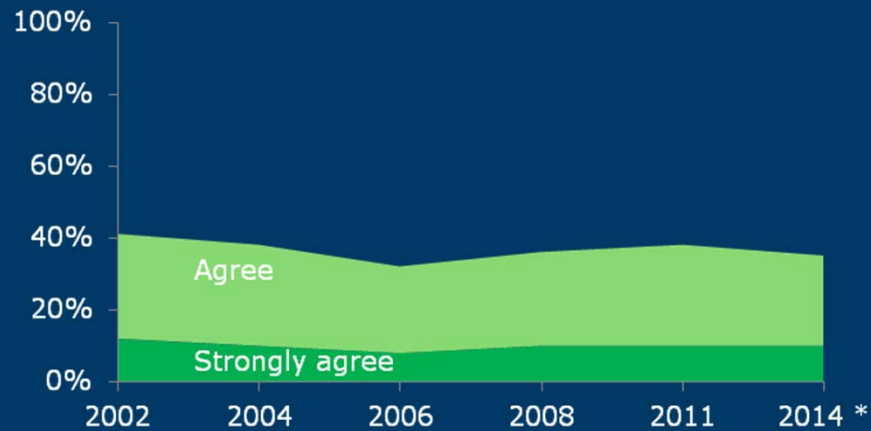
Response options: “strongly agree”, “agree”, “disagree”, “strongly disagree”.
 Source: GAPSS 2002-2014*, GOSS 2006-2014* (Auckland respondents only). * preliminary data

Attitudes

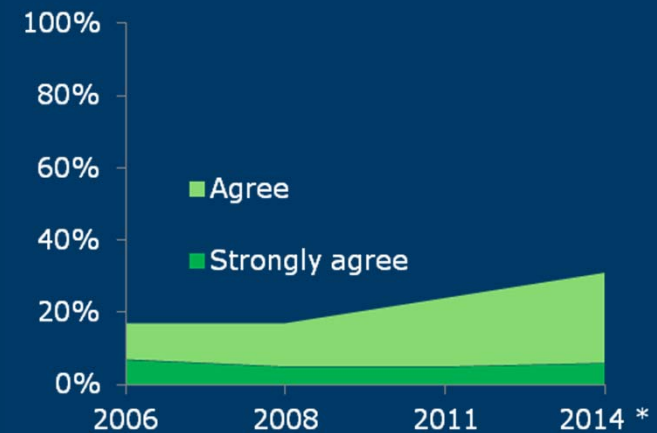
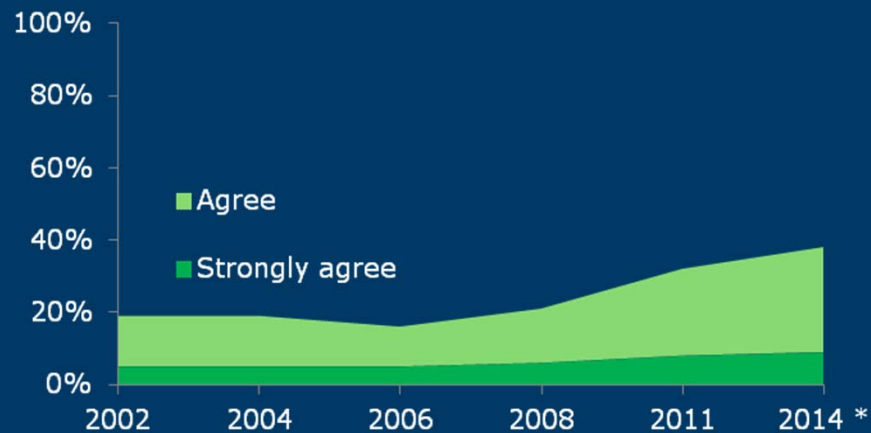
GAPSS

GOSS

“I don't like condoms because they reduce sensitivity”



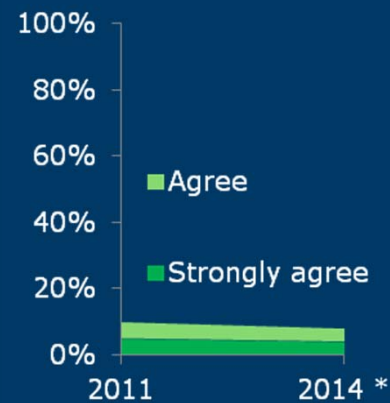
“HIV/AIDS is a less serious threat than it used to be because of new treatments”



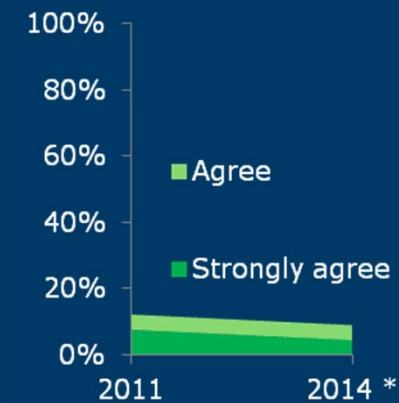
Attitudes

“I would never be willing to use condoms for anal sex”

GAPSS



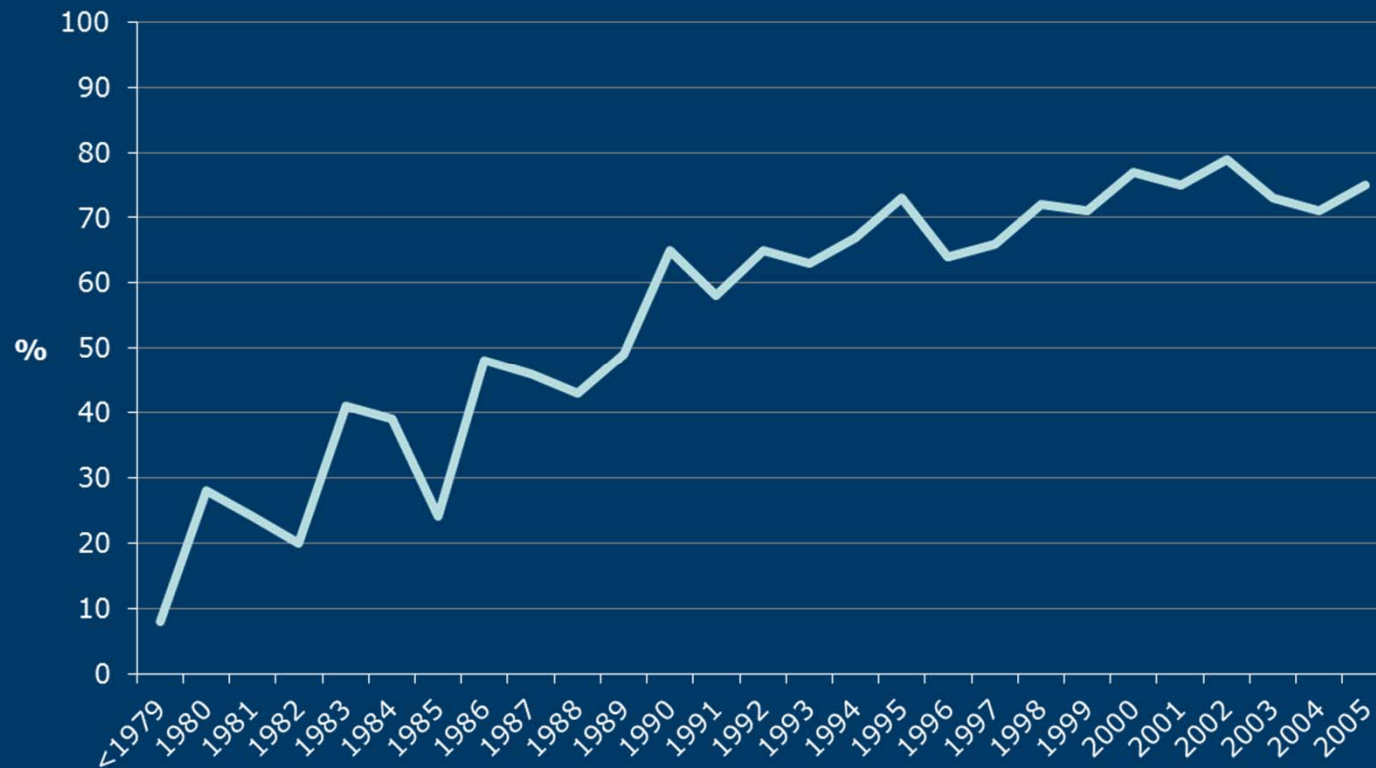
GOSS





Condom use at first sex

By year of first anal intercourse



Thanks

**A/Prof Nigel Dickson; Director, AIDS Epidemiology Group,
University of Otago**

Tony Hughes; Scientific Director, NZAF

Acknowledgements

AIDS Epidemiology Group data

A/Prof Nigel Dickson (Director), Bible Lee

GAPSS / GOSS behavioural surveillance study

A/Prof Nigel Dickson (AEG), Tony Hughes (NZAF)
14,841 responses from participants 2002-2014

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NZAF Fellowship
Ministry of Health
University of Auckland School of Population Health PBRF travel award
Health Research Council of NZ
University of Otago Division of Health Sciences Postdoctoral award

Permission for these preliminary GAPSS GOSS 2014 data to be presented at the AIDS 2014 Conference has been granted by the New Zealand Ministry of Health who funded these surveys. The Ministry will be receiving a series of scheduled reports on GAPSS GOSS 2014 findings for review commencing in September 2014.

Photographs courtesy of NZAF, Charlie Hautono.

POSTERS

TUPDC0104 Ethnicity classification approaches and implications for surveillance

WEPE133 “Long tailed MSM”: MSM with frequent partner change in location-based surveillance

WEPE134 “Long tailed MSM”: MSM with frequent partner change in web-based surveillance

THPE154 Disparities in sexual health and behaviours among MSM by ethnicity

THPE155 “The testing gap” MSM who have not tested since their last episode of unprotected casual anal sex



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