Kirby Institute

Rapid HIV testing increases testing frequency among gay and bisexual men: a controlled before–after study.

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Background

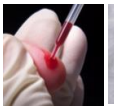
- HIV diagnoses among gay and bisexual men (GBM) in Australia have increased in the past decade
  - One quarter of GBM diagnosed late (CD4 count <350) *(Kirby Institute, 2015)*
- HIV testing and treatment is a key prevention focus
  - ~10% of gay and bisexual men (GBM) never tested *(Hull et al, CSRH 2015)*
  - ~50% of high risk GBM re-tested after 6 months *(Callander et al, Kirby Institute, 2015)*
  - Testing guidelines for high-risk GBM: 3-6 monthly
- *NSW HIV Strategy 2012-2015* goal to increase testing

Rapid HIV testing at the Point of Care (PoCT)

- Barriers to HIV testing
  - Annoyance at returning for results
  - Stress in waiting for results *(Conway et al, JAIDS, 2015)*
- Rapid HIV testing acceptable and preferred by GBM (*Conway et al, PLOS one, 2015*)
- Rapid HIV testing impact
  - High yield of new HIV cases in private clinics and community based sites *(Eu et al, Sex Health, 2014; Muelbroek et al, HIV Med, 2014)*
  - Increase number of men presenting for tests *(Gibson, SF AIDS Foundation, 2014)*
  - High rates of previously untested clients *(Ferrer et al, Sex Trans Infect, 2015)*

Rapid HIV testing at the Point of Care (PoCT)

- RCT in a sexual health clinic
  - Does rapid testing increase testing frequency?
  - Individual men randomised to RCT or not
  - No Xpress services or promotion
  - Men returned early for next test
  - No overall increase in HIV testing frequency *(Read et al, BMJ 2013)*
- First HIV rapid test approved by Therapeutic Goods Administration in December, 2012




Study Aim

- Assess the real world impact of rapid HIV testing at PoCT

Methods

- Trinity Uni-Gold HIV-1/2 Ab rapid test (10 min incubation)
- Clinics integrated rapid test into routine care (single consultation)
  - Rapid test result at visit
  - Parallel HIV serology on 4th gen immunoassays
- Client records extracted from clinics
  - 8 public sexual health clinics
  - 1 private general practice clinic
  - 1 community site


Methods

- Client survey at 5 clinics
- Promotion of rapid HIV testing (by ACON, NSW Health, clinics)

Impact evaluation design

Rapid testers
(*n*=4,889)

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Historical control
(*n*=8,714)
RHT not available

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Concurrent control
(*n*=6,464)
Non-rapid testers

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(*n*=6,464)
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Paired control (Rapid testers)
Attended before and during study period (*n*=901)

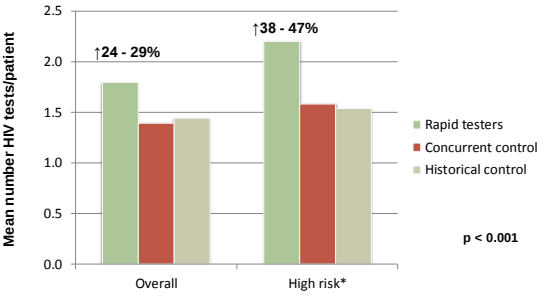
Impact indicators

- Mean number of HIV tests in 12 months
- Mean time between HIV tests (days)

Characteristics of study groups

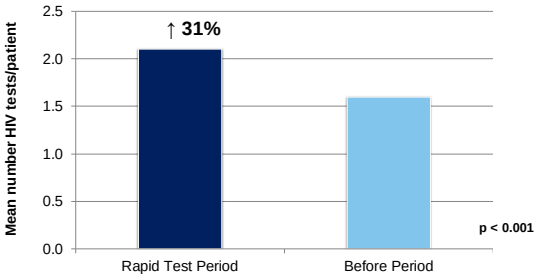
		Historical Control n=8,714 %	Concurrent Control n=6,464 %	Rapid testers n=4,889 %	P value
Age group (years)	<30	39.4	38.3	43.6	
	30-39	31.0	29.9	31.9	<0.01
	40+	29.5	31.8	24.5	
High-risk		40.0	29.8	41.5	<0.01

Testing frequency in a year

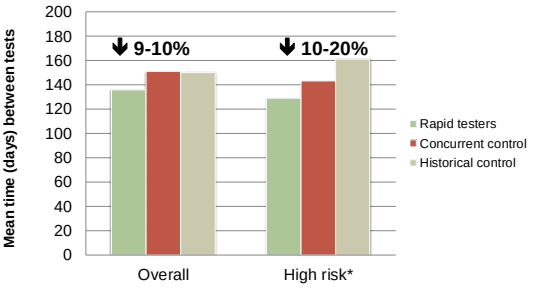


*High risk = > 5 partners in 3 months; > 20 partners in 12 months

Testing frequency in paired sample (attended before and after rapid testing introduced)

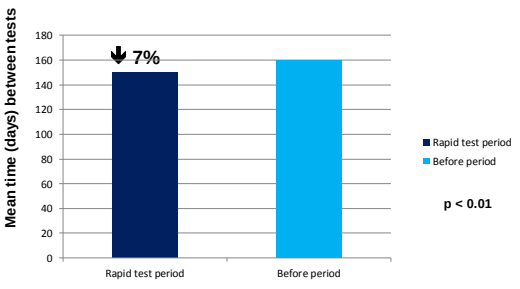


Interval between HIV tests

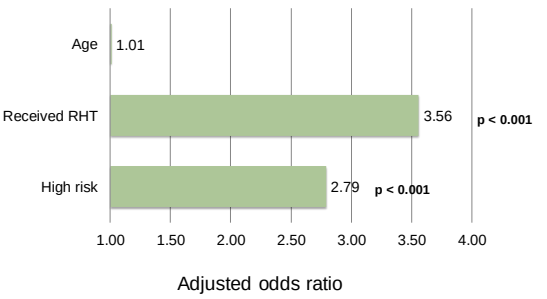


* High risk = > 5 partners in 3 months; > 20 partners in 12 months

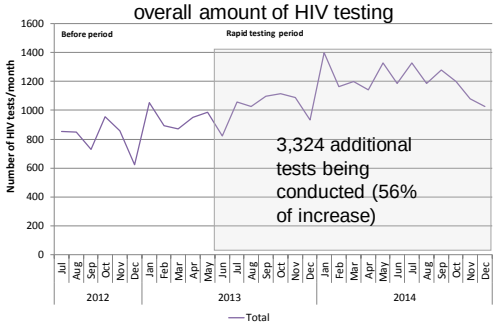
Interval between HIV tests in paired sample



Multivariate analysis Outcome: >2 tests in 12 months



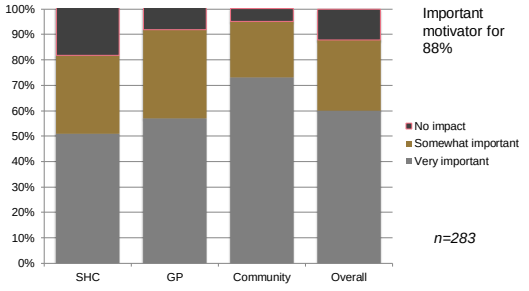
Contribution of increased HIV testing frequency to overall amount of HIV testing



Characteristics of men in the patient survey

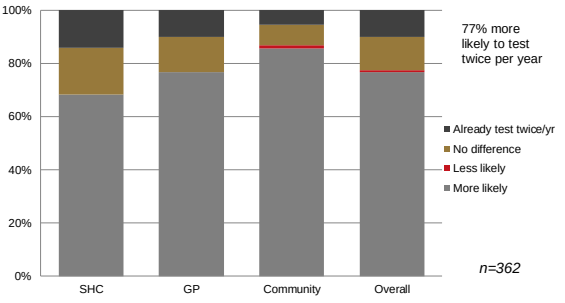
	Total n=369
Median age (IQR)	30 (25-38)
Country of birth	
Australia	94%
Identified as	
Gay/ homosexual	88.6%
Bisexual	9.2%
Last HIV test	
<12 months ago	75.9%
12-24 months ago	7.9%
>24 months ago	5.4%
Never tested	7.3%
Rapid test ever	
Yes	60.2%

Importance of rapid HIV testing availability as a motivator for testing*



*Among those who were aware the service was offering rapid HIV testing before visit

Likelihood to test for HIV twice a year if rapid HIV testing available



Limitations

- Not a randomised controlled trial
- Controlled for main patient factors known to influence testing
- Other unmeasurable factors may have influenced outcomes
- Included three control groups, including concurrent control, to overcome potential for external events to influence outcome
- Also conducted survey, which supported findings

Conclusions

- Rapid testing increased
  - Test frequency, reduced interval between tests
  - In turn, the overall amount of HIV testing increased
- Greater increases in testing frequency among high risk men
- Promotion of rapid testing likely to have played a role
- To realise benefits, rapid HIV testing should be performed with 4th generation EIA/pooled RNA
  - Rapid HIV test sensitivity in acute infections (57%) *(Keen, IAS, 2015)*
- Rapid HIV testing is important as a testing option to increase HIV testing among GBM

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