

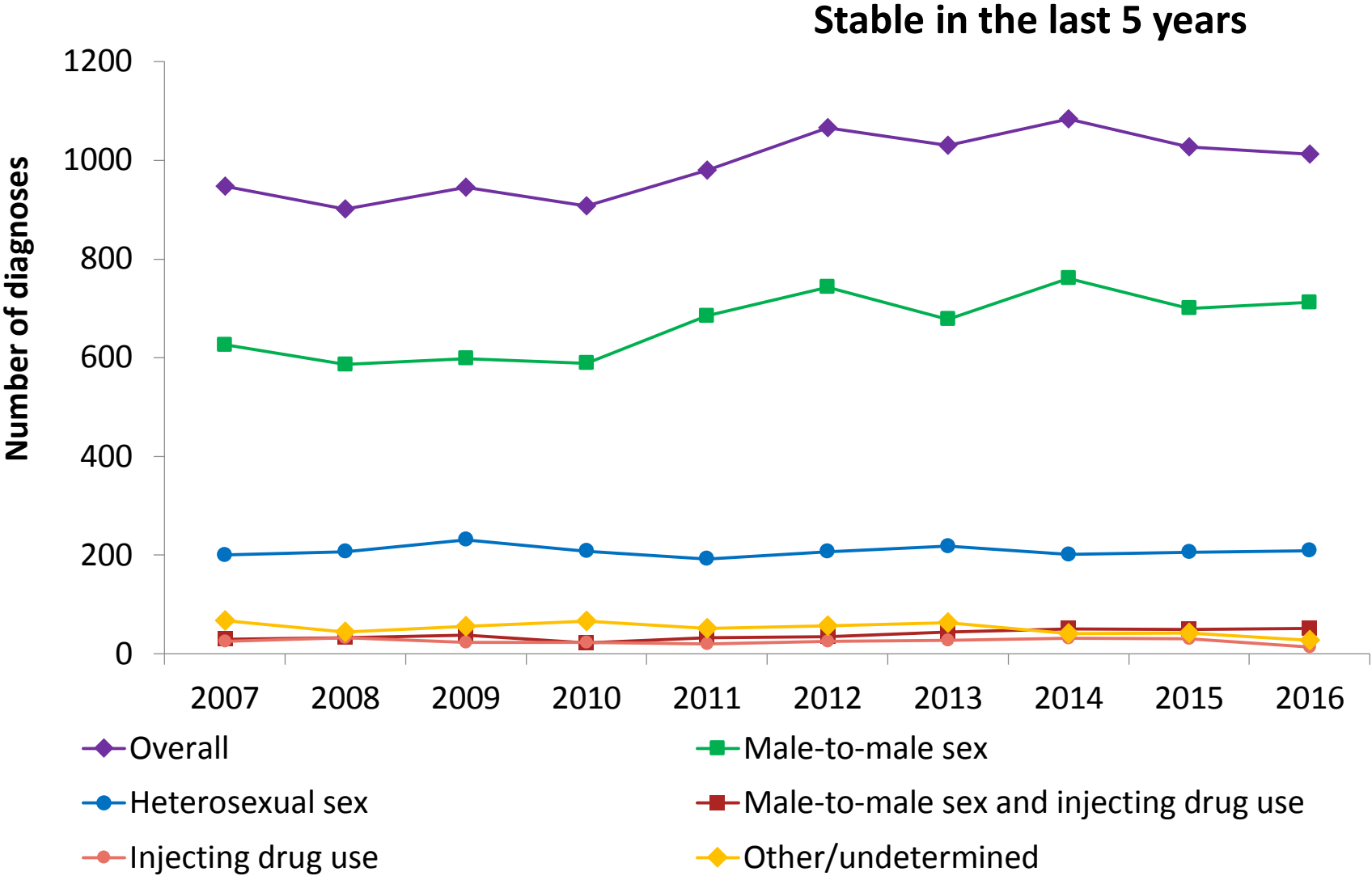
Professor Rebecca Guy

The Kirby Institute

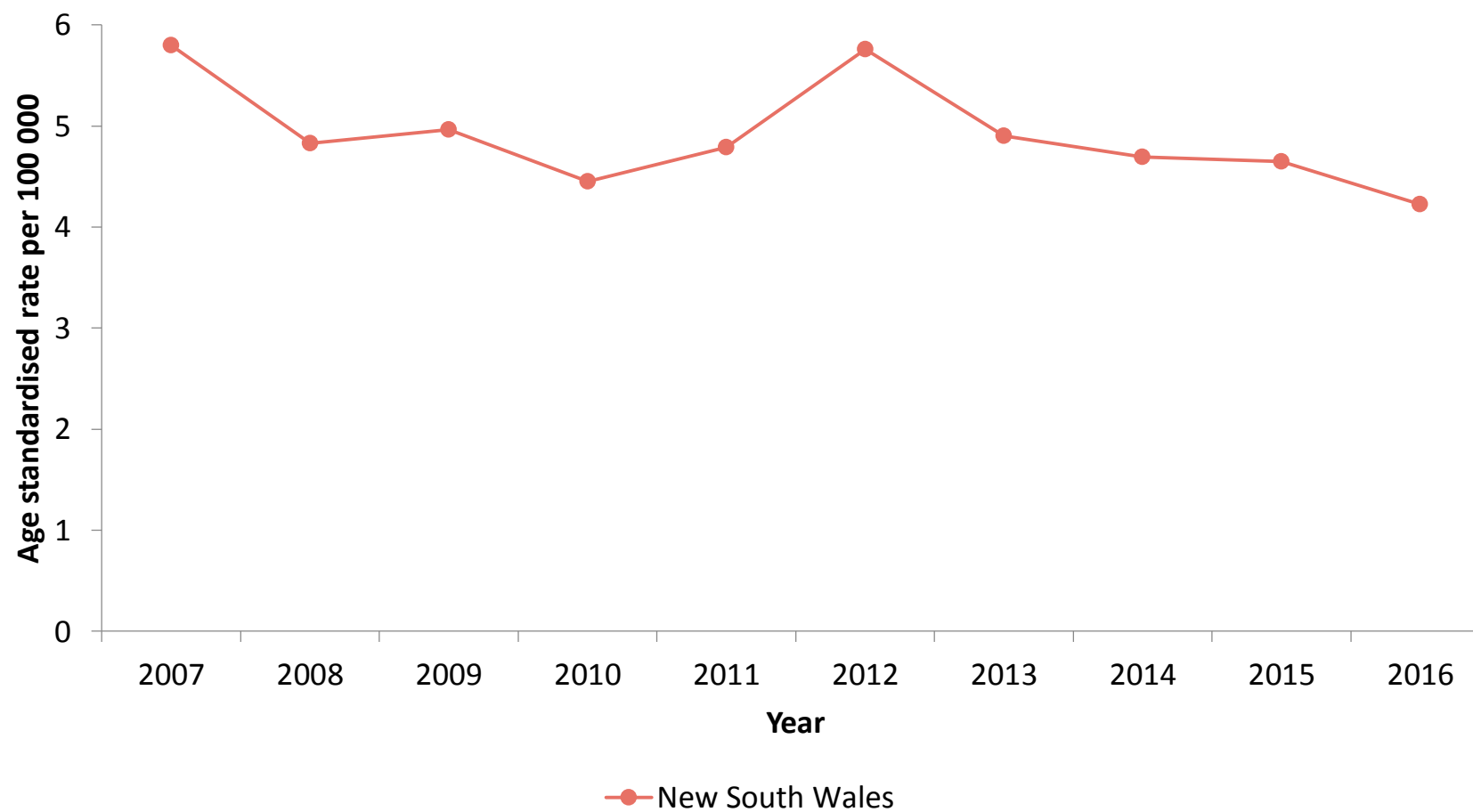
**FUN CHALLENGES
TO DO
WITH FRIENDS**



New HIV diagnoses



HIV notification rate, 2007-2016, by state/territory



Source: State and territory health authorities

HIV notification rate, 2007-2016, by state/territory



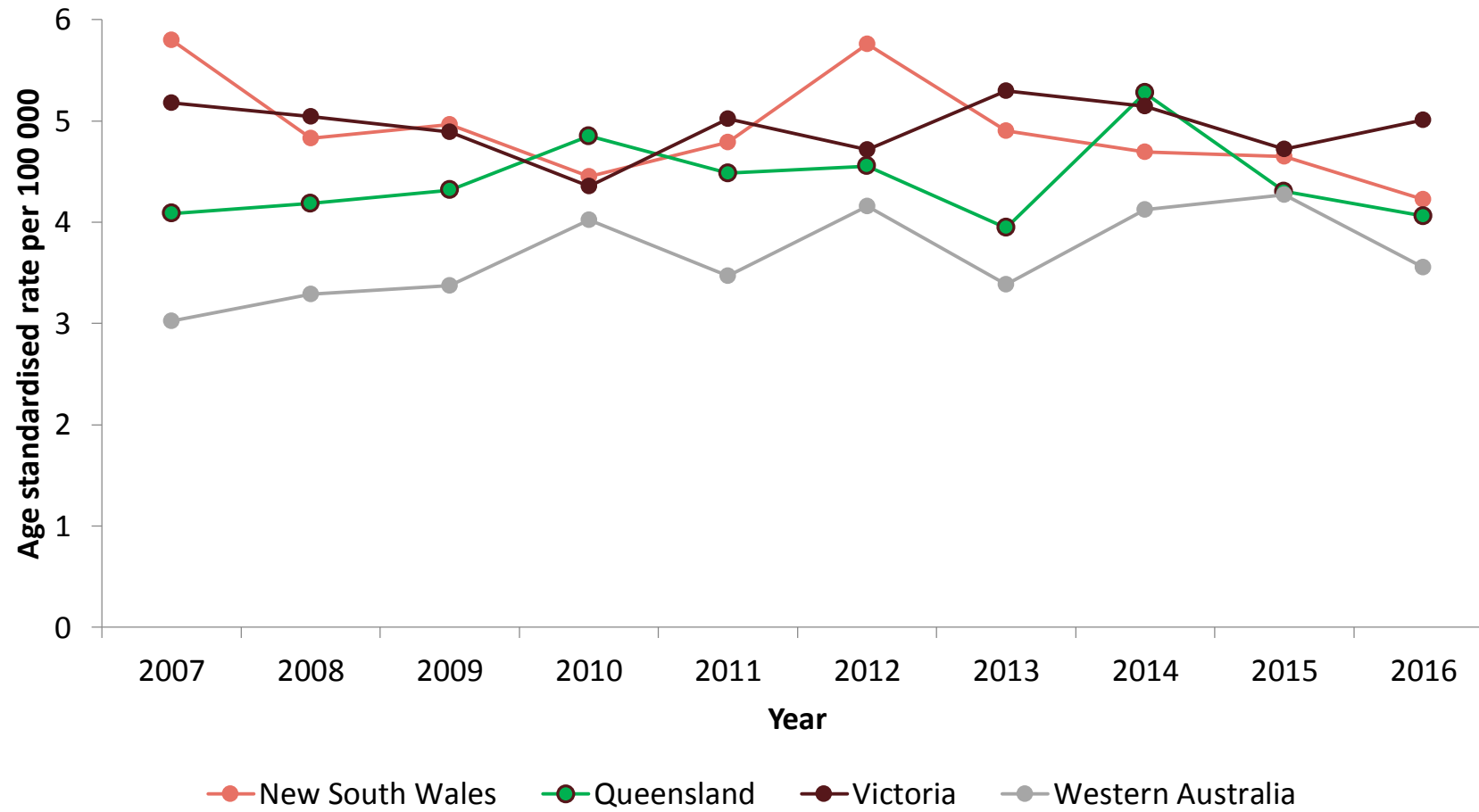
Source: State and territory health authorities

HIV notification rate, 2007-2016, by state/territory



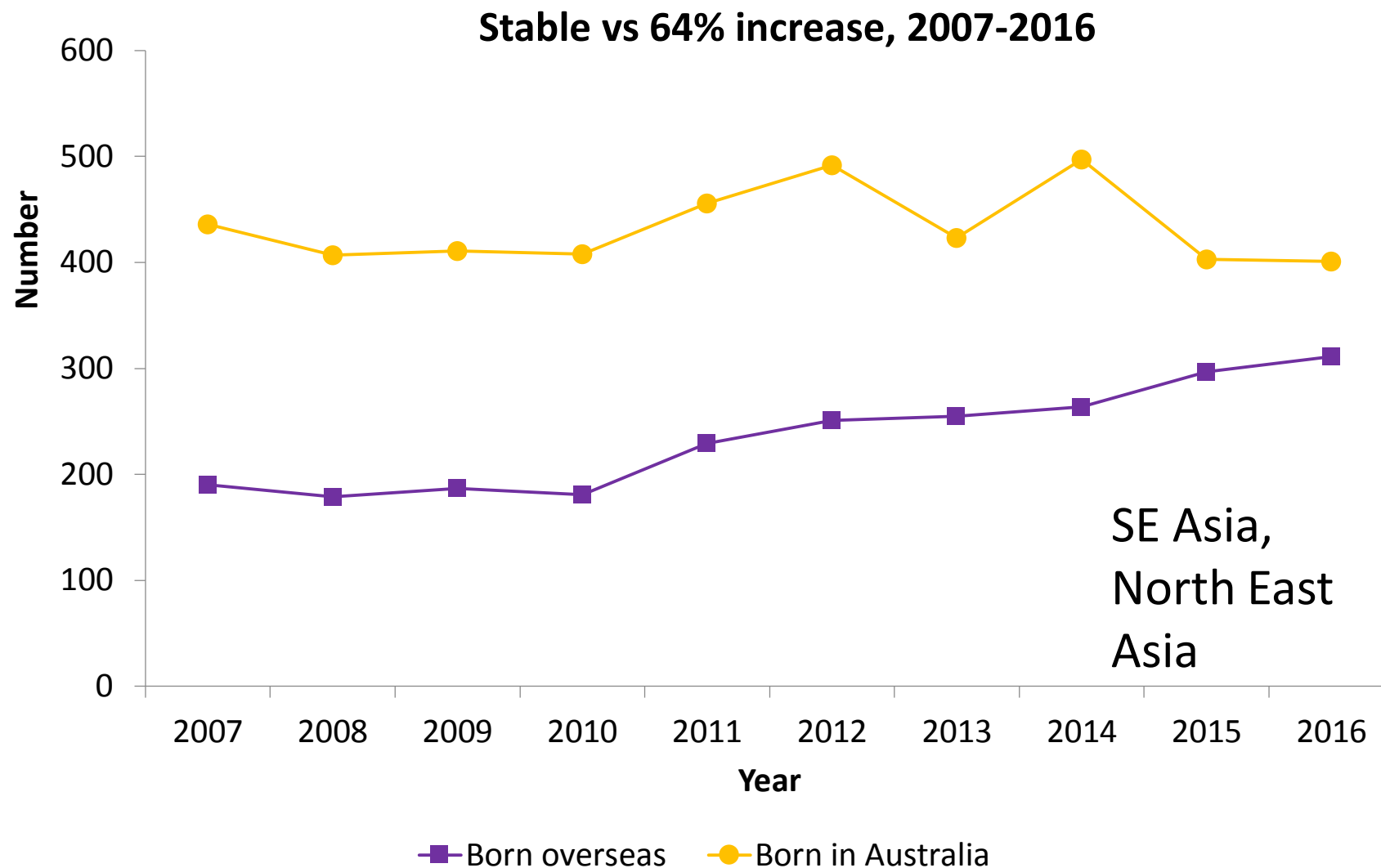
Source: State and territory health authorities

HIV notification rate, 2007-2016, by state/territory

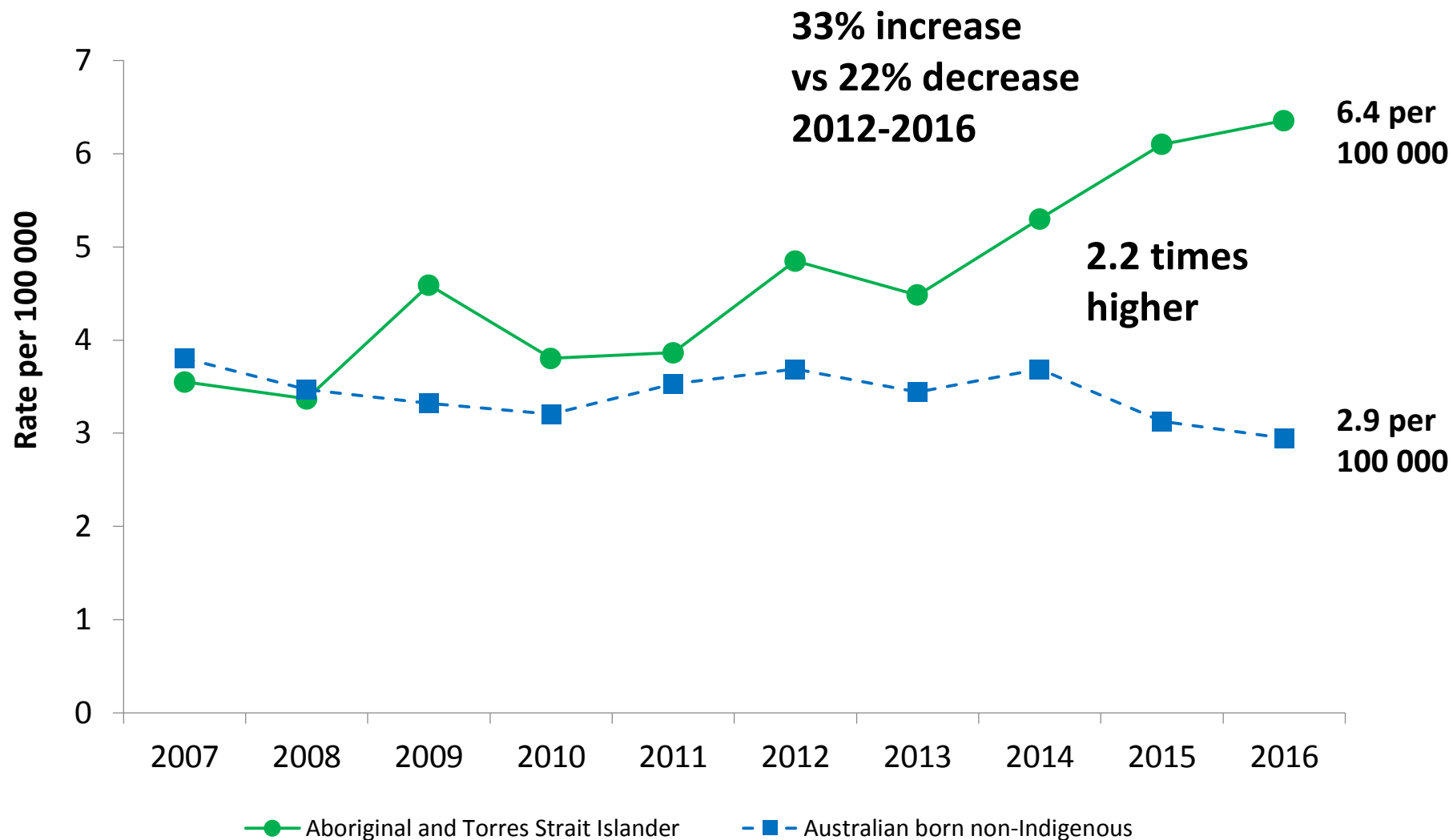


Source: State and territory health authorities

HIV diagnoses in men with male-to-male sex



HIV diagnosis rate by Indigenous status



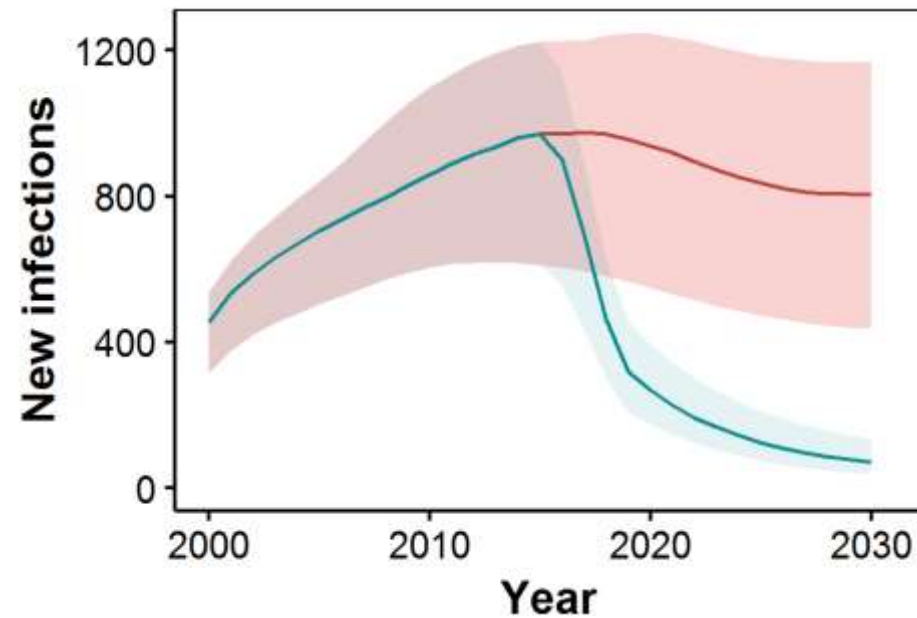
PrEP

- Test and treat recommended globally
- Australia achieved high coverage and likely to be responsible for stable rates
- More needed.....
- PrEP daily tablet, used for treatment
- >99% efficacy if high adherence (Proud study)
- State funded programs
- Cost-effective *(Gray, Kirby Institute)*
- PBS listing 1 April 2018

What is the potential impact of PrEP?

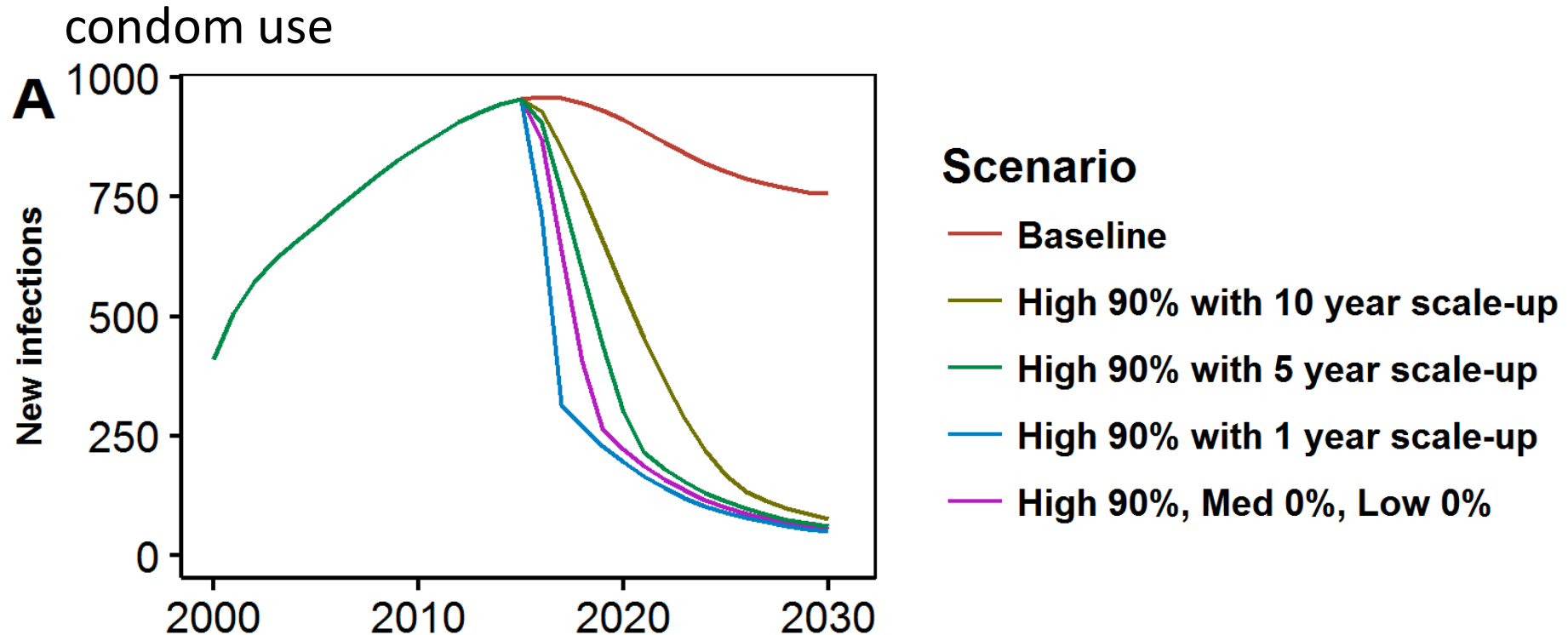
- 90% coverage high-risk men, 3-year scale-up, 90% adherence, no reduction in condom use

New infections and diagnoses in gay men



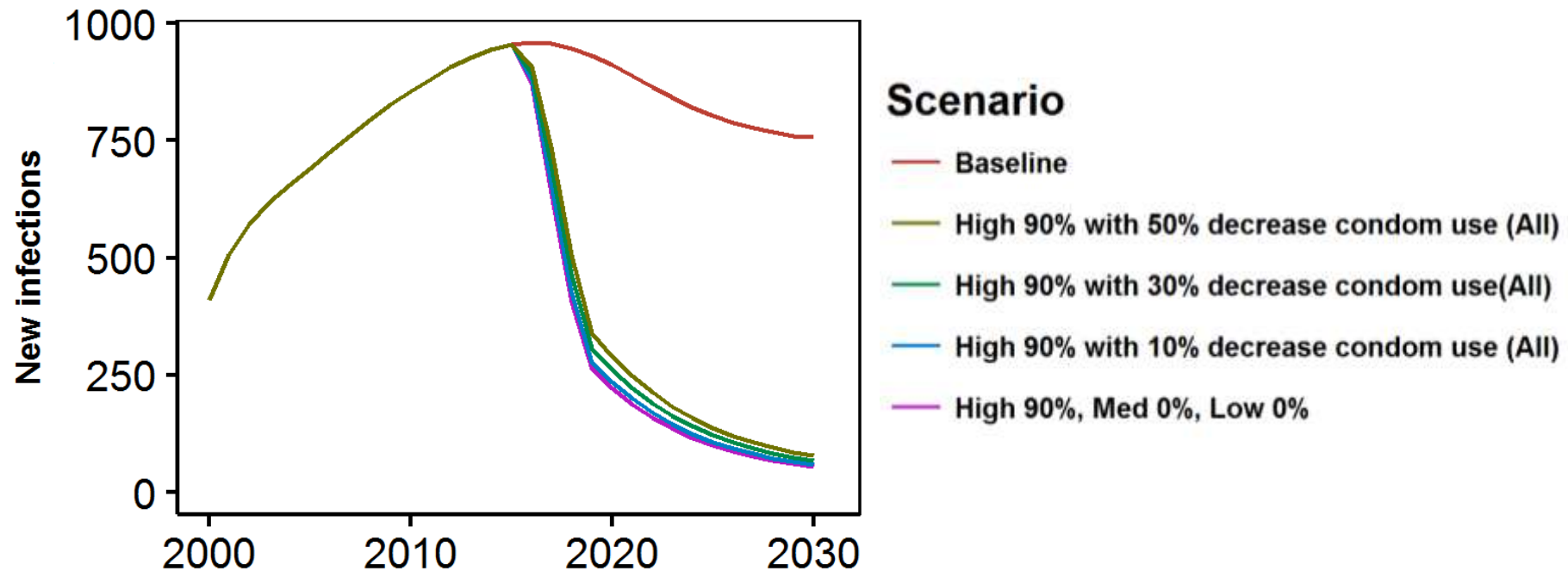
How fast does PrEP need to be rolled out?

- 90% coverage high-risk men, 90% adherence, no reduction in



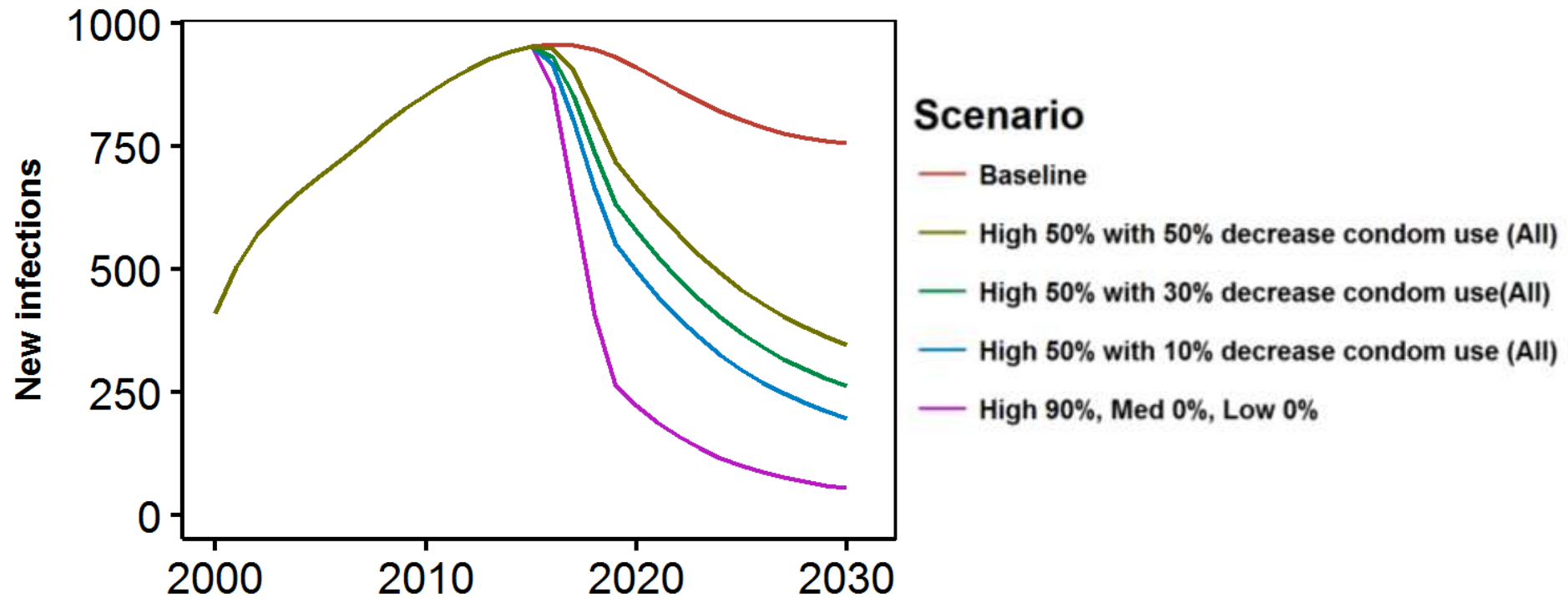
Do we need to worry about reduced condom use?

- 90% coverage high-risk men, 90% adherence, 3-year scale-up, reductions in condom use in the overall gay population
- If high coverage is reached quickly, probably not

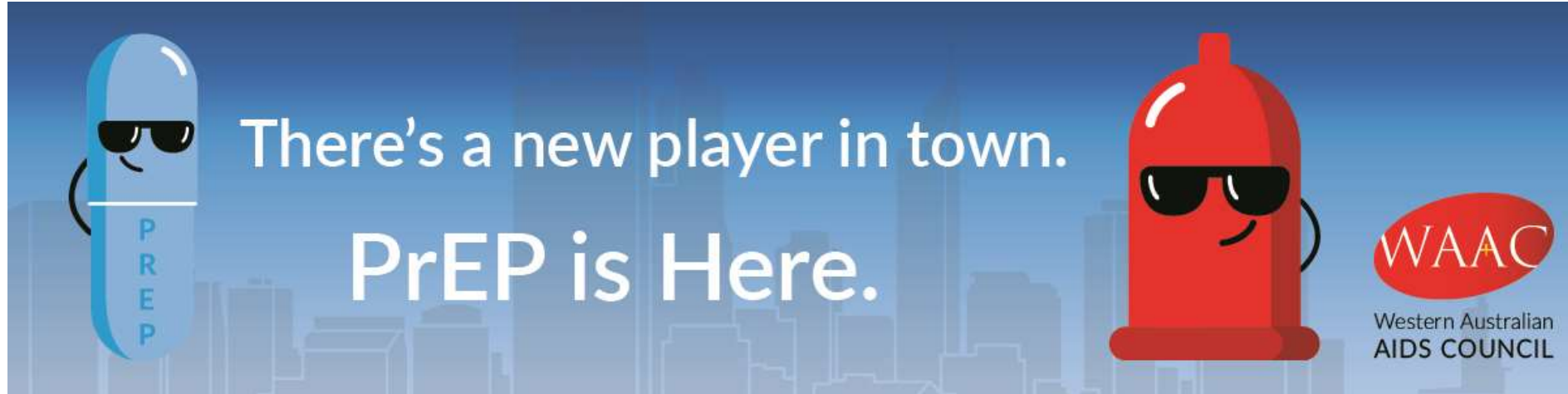


Do we need to worry about reduced condom use?



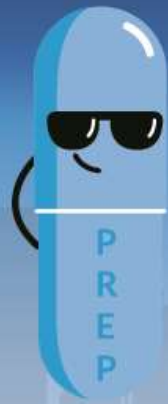
- 50% coverage high-risk men, 90% adherence, 3-year scale-up, reductions condom use in the overall population
- If coverage is low or plateaus, maybe



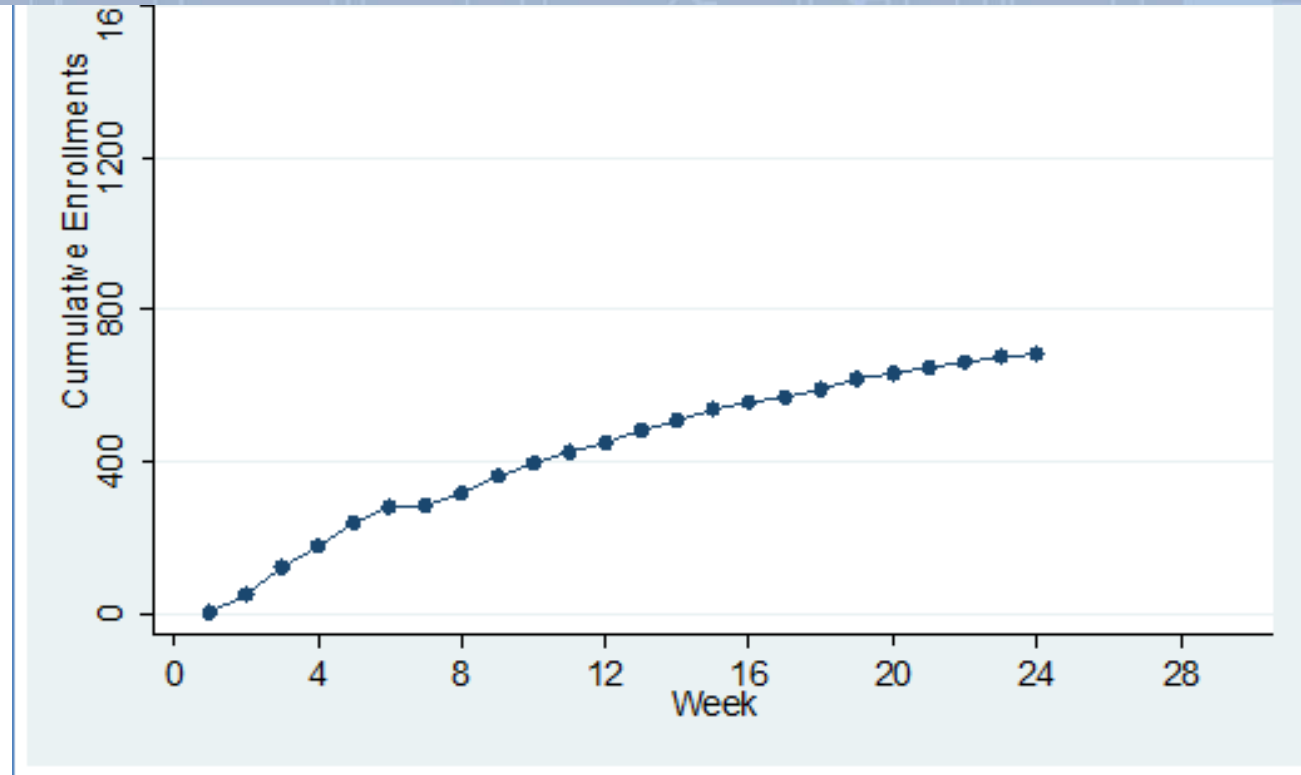
PrEP in WA



There's a new player in town.
PrEP is Here.



Western Australian
AIDS COUNCIL



Challenges in PrEP scale up

EPIC-NSW: Decline in recent infections by age

		HIV diagnoses with evidence of recent infection		
		Before (n)	After (n)	Percentage decline
Age	18-24	21	19	9.5% (95%CI 1.2-30%)
	25-34	58	45	22% (95%CI 13-35%)
	35-44	39	22	44% (95%CI 28-60%)
	45+	31	16	48% (95%CI 30-67%)

Challenges in PrEP scale up

EPIC-NSW Decline in recent infections by region of birth

	Diagnoses with evidence of recent infection		
	Before (n)	After (n)	Percentage decline
Australia	78	40	49% (95% CI 37-60%)
High-income English-speaking country	12	8	33% (95% CI 9.9-65%)
Asia	42	33	21% (95% CI 10-37%)
All other countries	17	21	+24% (95% CI +6.8-50%)

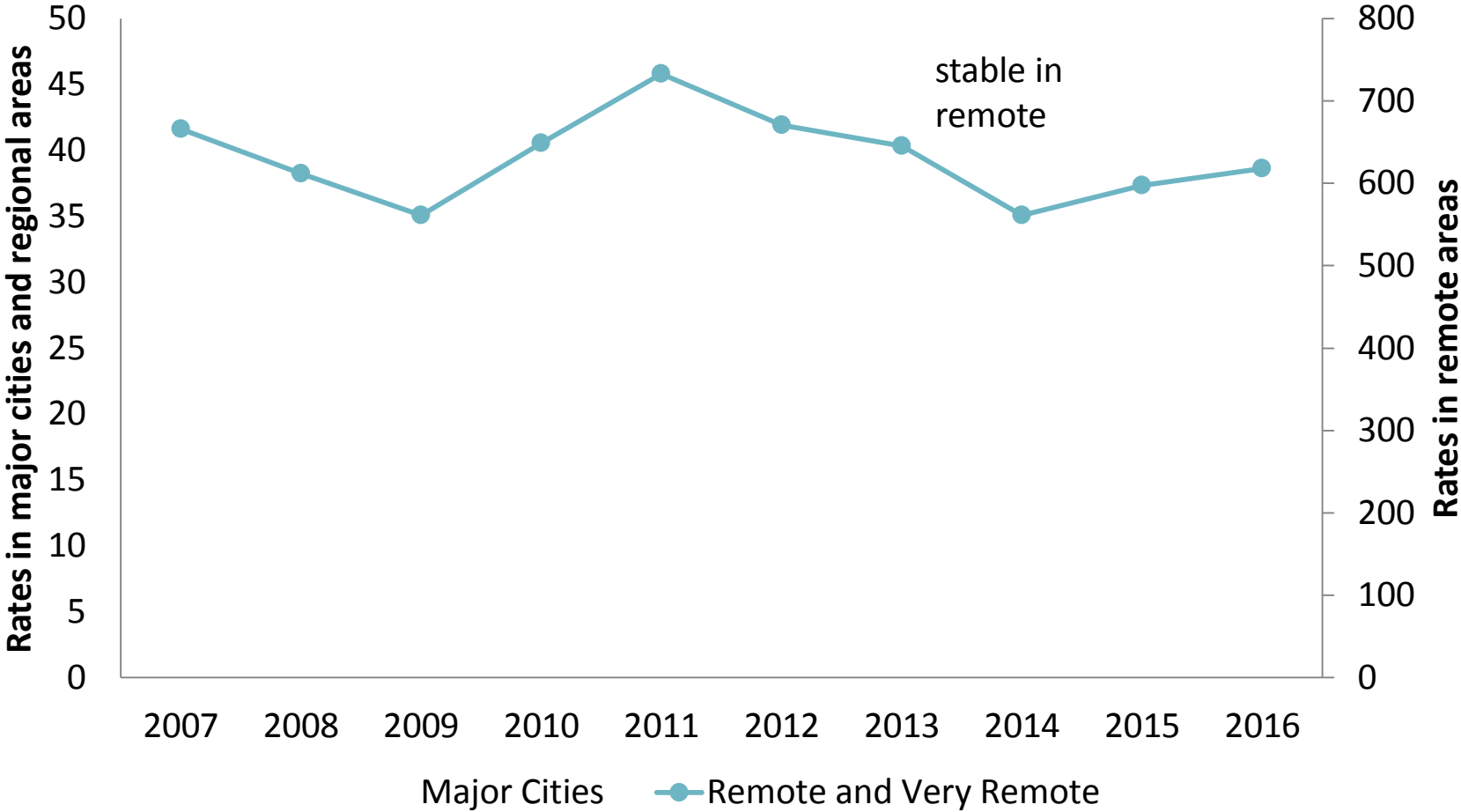
Challenges in PrEP scale up

EPI-NSW Decline in recent infections by area of residence

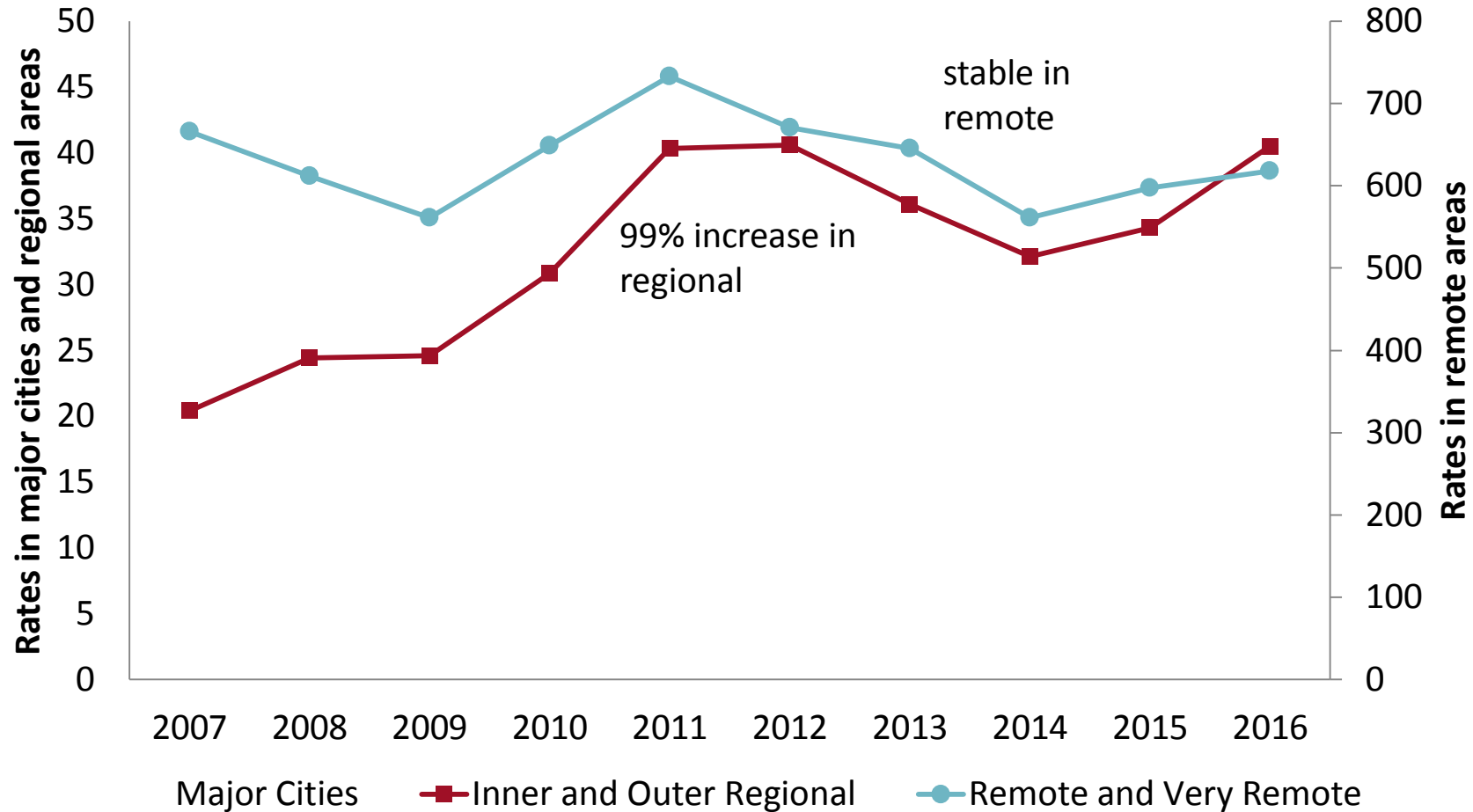
	Diagnoses with evidence of recent infection		
	Before (n)	After (n)	Percentage decline
Gay Sydney suburbs	56	27	52% (95% CI 38-65%)
Other Sydney	69	64	7.3% (95% CI 2.4-16%)
NSW (ex Sydney)	24	11	54% (95% CI 24-74%)

Gonorrhoea in urban heterosexuals

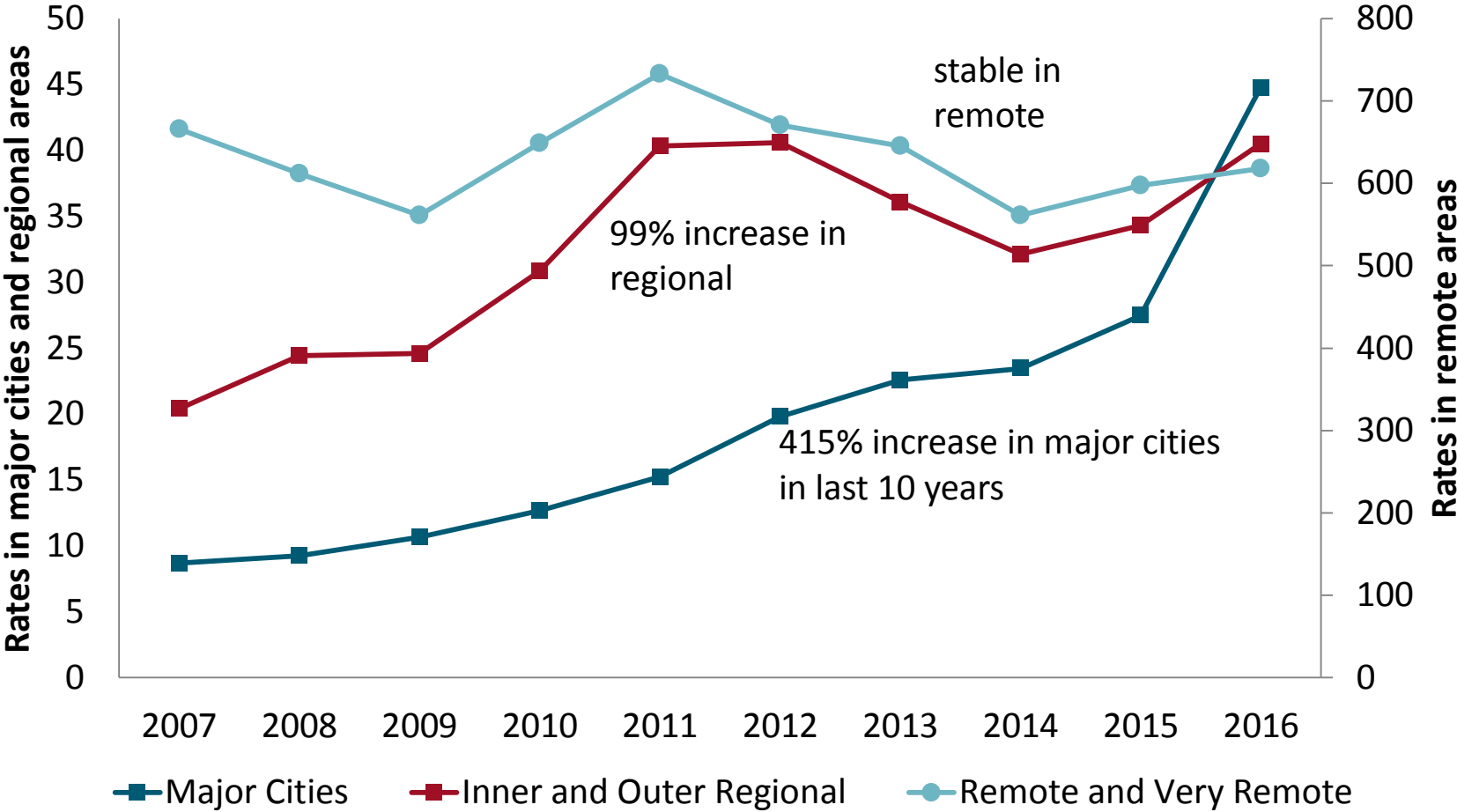
Gonorrhoea notification rate in females by region of residence



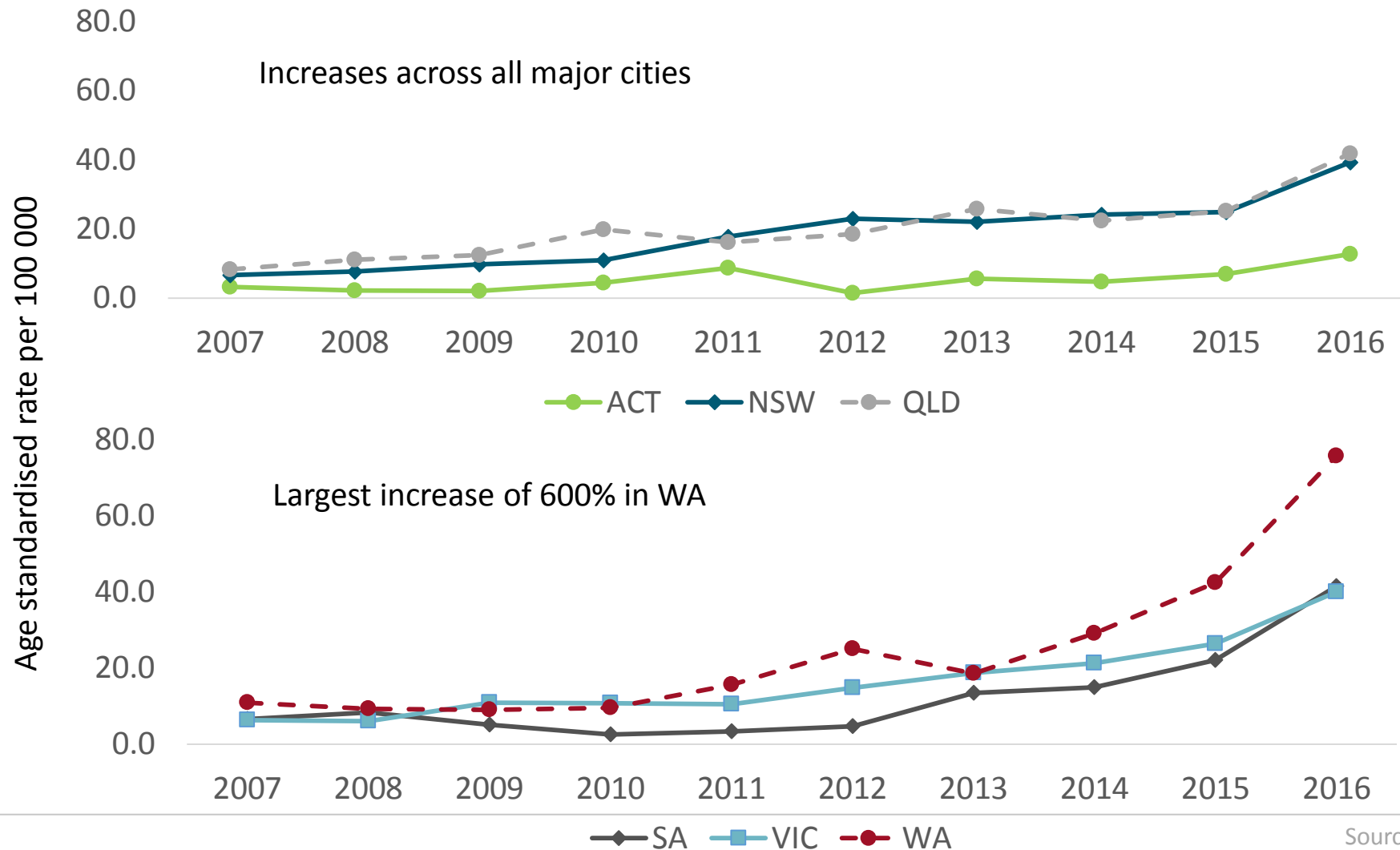
Gonorrhoea notification rate in females by region of residence



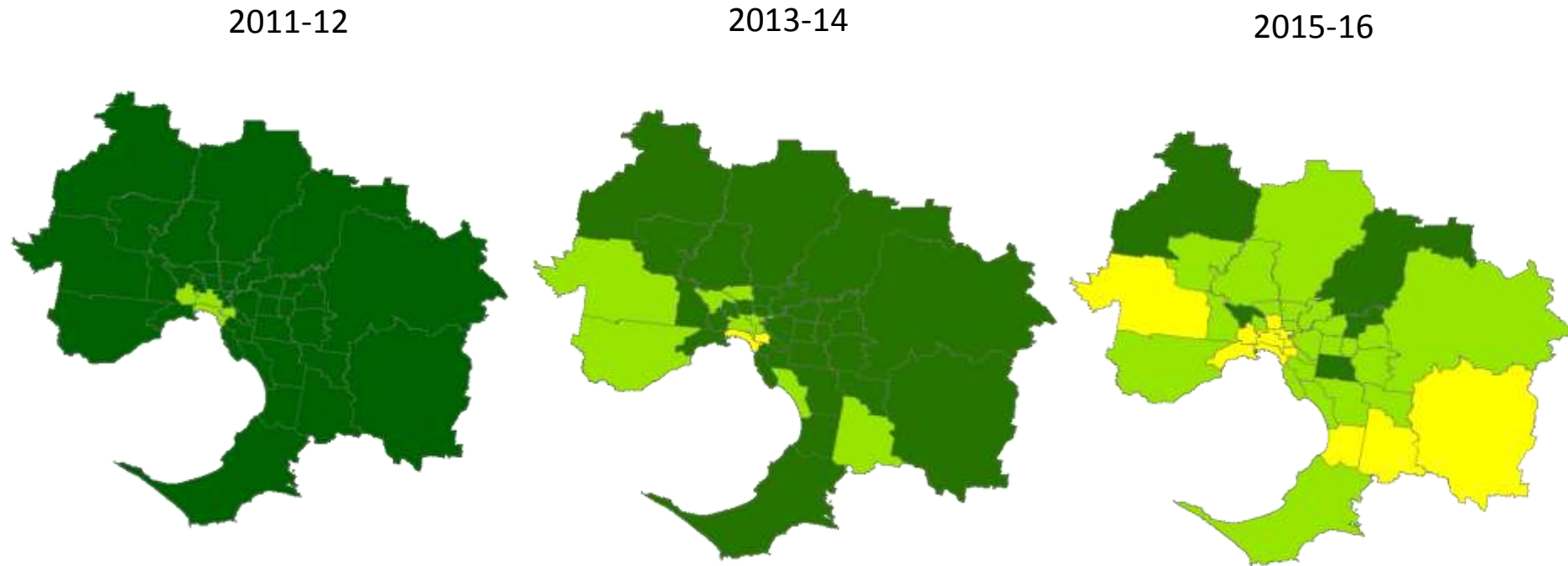
Gonorrhoea notification rate in females by region of residence



Gonorrhoea notification rate, non-Indigenous females in major cities, by state and territory



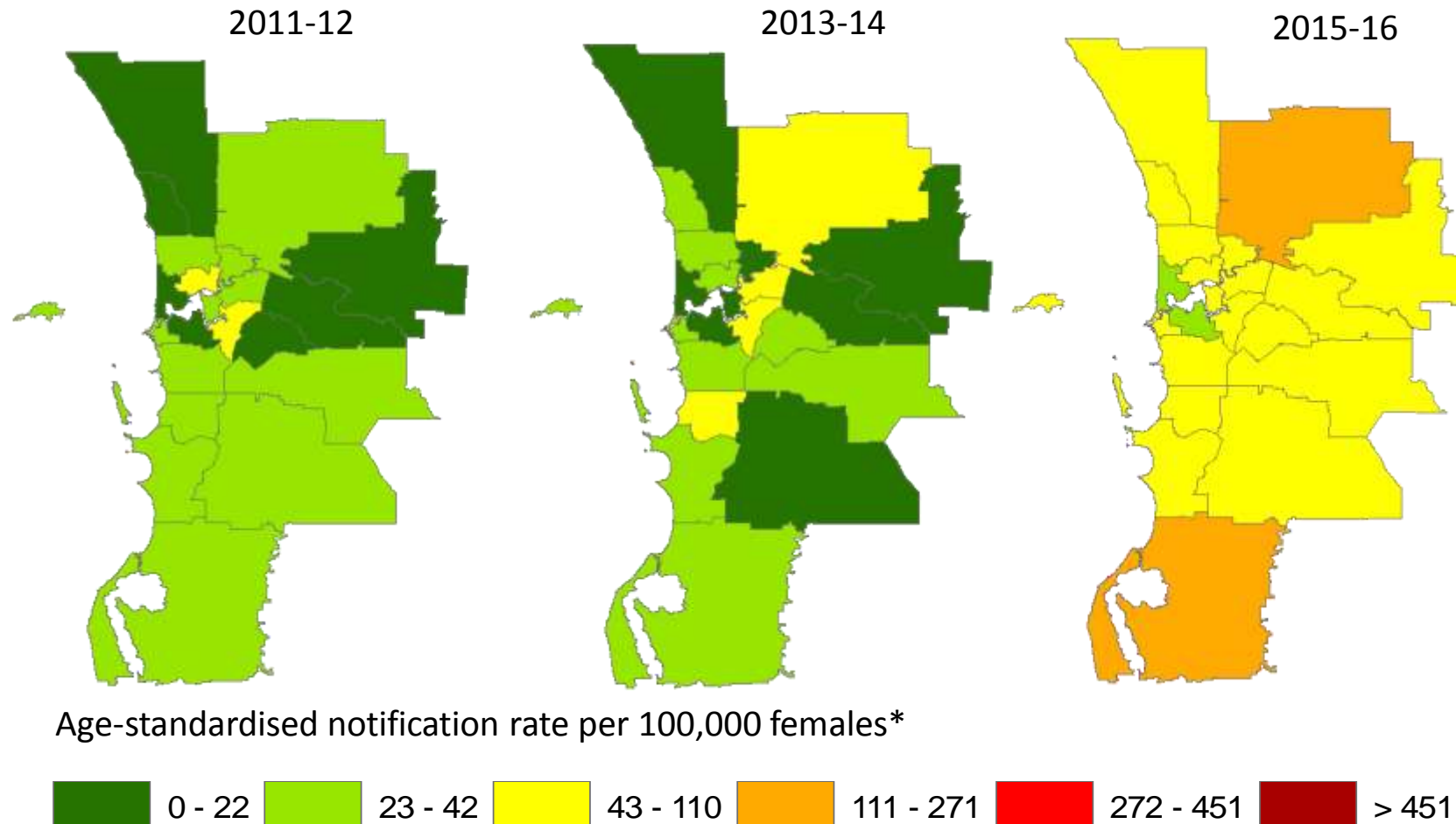
Gonorrhoea notification rates, females, Greater Melbourne



Age-standardised notification rate per 100,000 females*



Gonorrhoea notification rates, females, Greater Perth

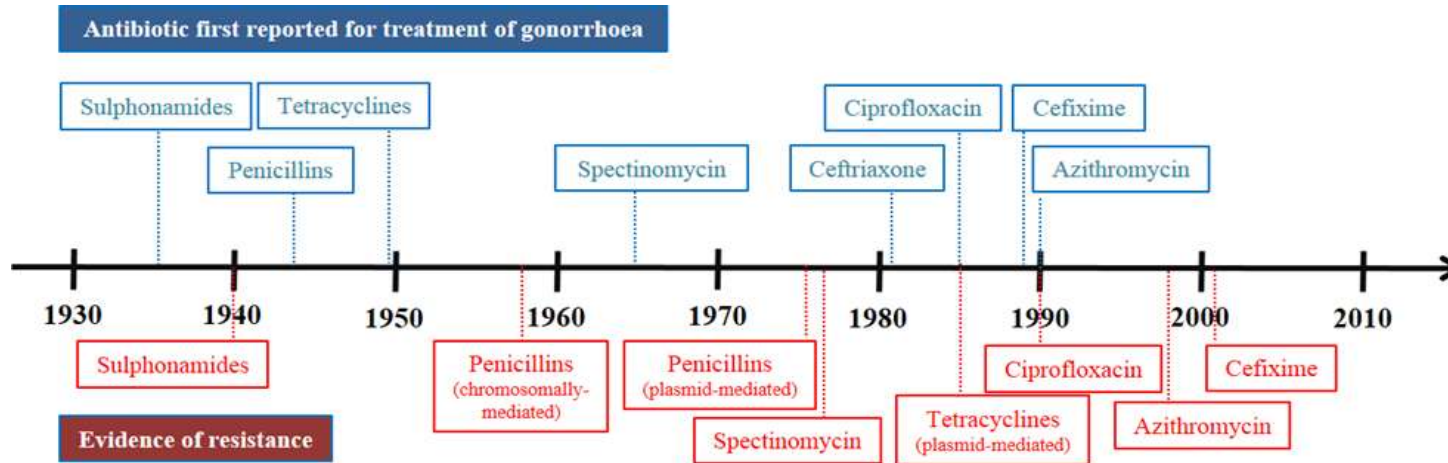


Next steps

- Research into possible reasons for the increase
 - Changes in sexual behaviours – dating apps, practices?
 - Lower socio-economic areas?
 - Inadequate sexual health care access?
- WA study
 - WA Health, Curtin, Kirby, clinics, University of Western Australia
 - Genotyping – local clusters, bridging from MSM?
 - Indepth interviews - context
 - Case control study – risk factors
- Enhanced testing, treatment, contact tracing

Challenges for gonorrhoea control

- Concerns about multi-drug resistance (MDR)
- Ceftriaxone last line therapy for gonorrhoea



- Can we preserve ceftriaxone use?

Challenges for gonorrhoea control

○ Reuse older antibiotics?

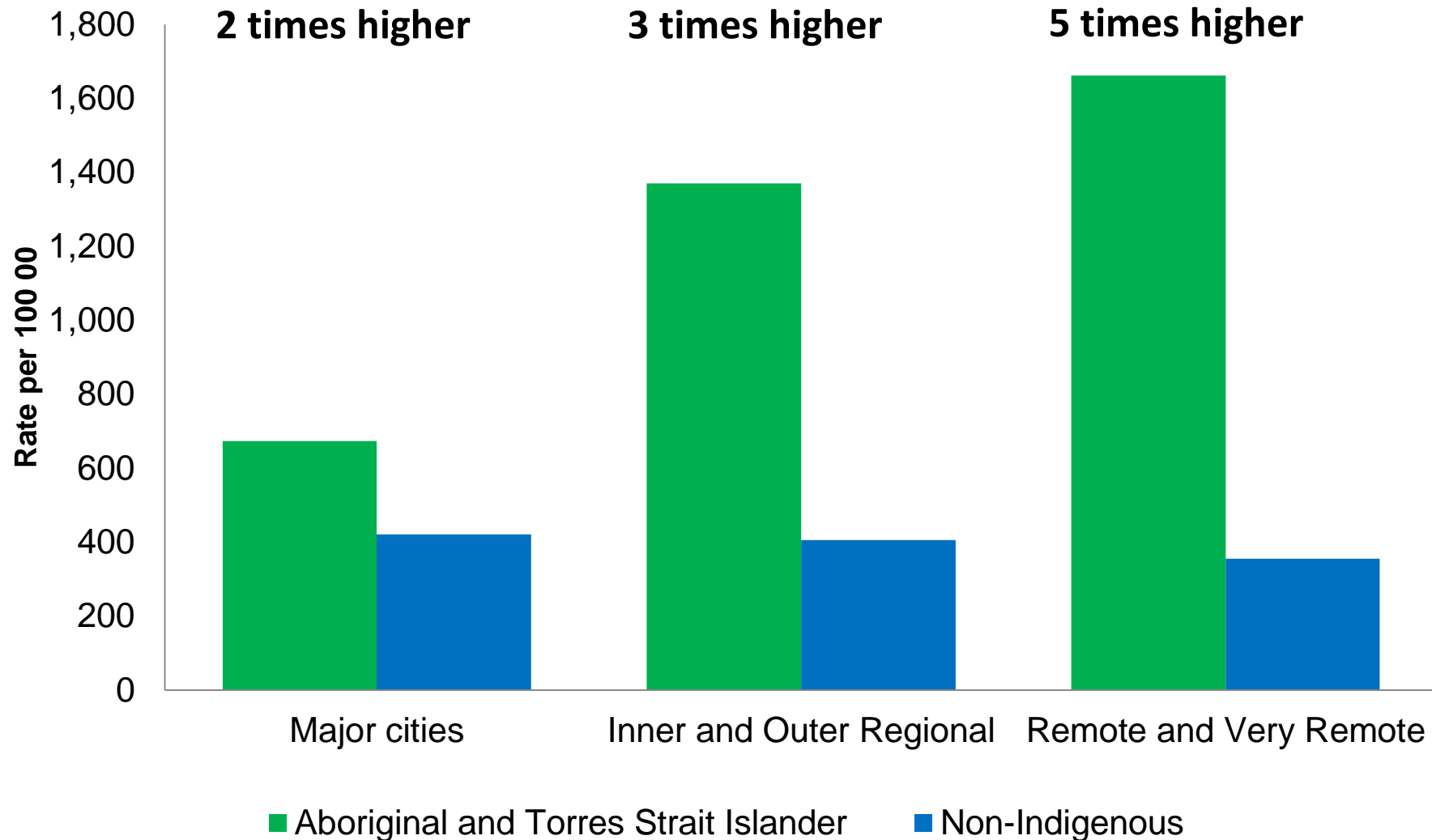
- NHMRC project grant (CI-A Wwhiley), 2017-20.
- Ten sexual health services and labs
- Novel molecular assay – SpeedX
- Real-time results on ciprofloxacin susceptibility
- Approved by the TGA late 2018
- Outcomes: Reduced ceftriaxone use, acceptability

➤ Use less antibiotics?

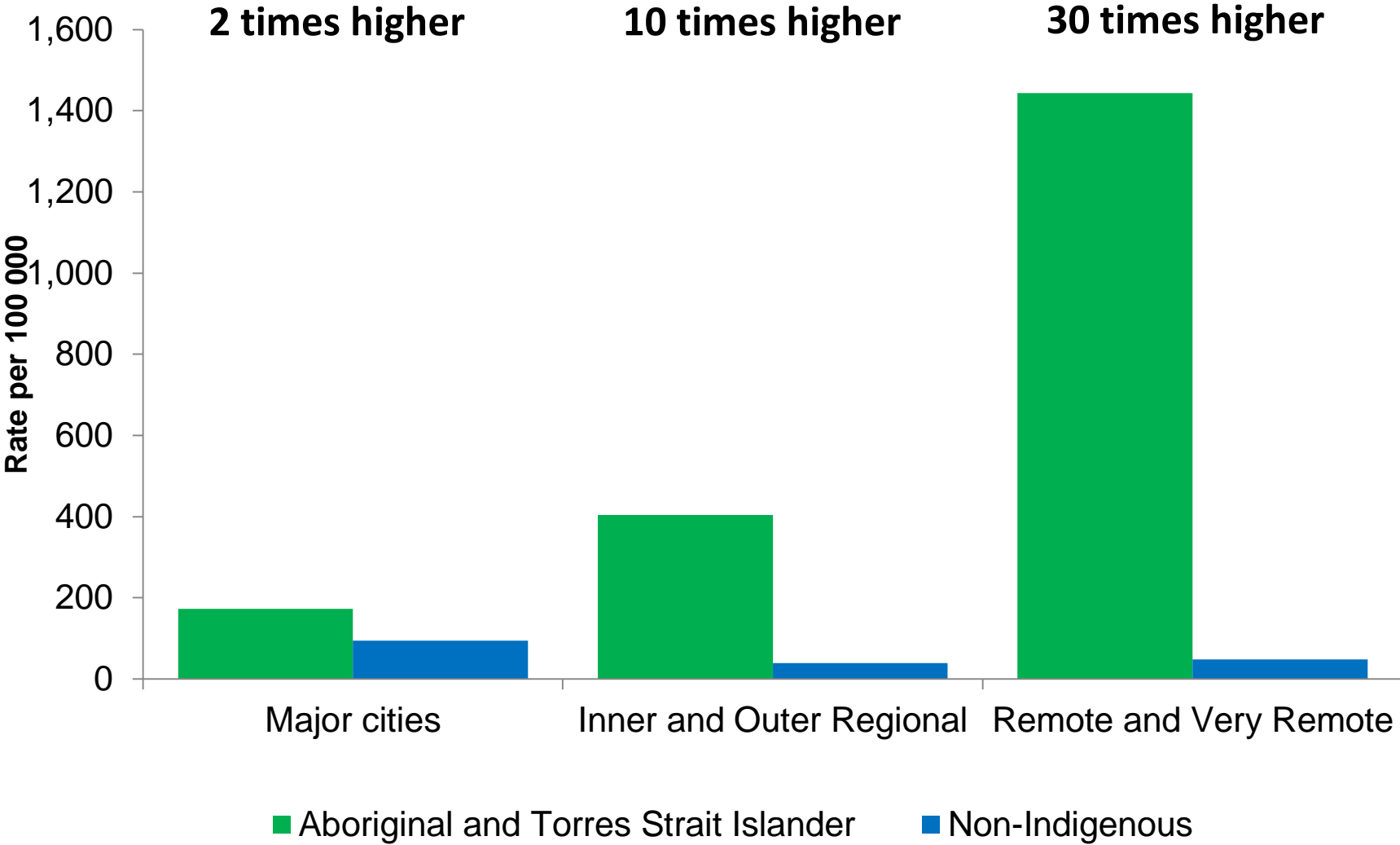
- People presenting to sexual health clinics as contacts?
- Asymptomatic – don't treat immediately, wait for lab test, reduce antibiotic use by 70%
- Applicable to areas/people where low risk of loss to follow up

STIs in remote communities

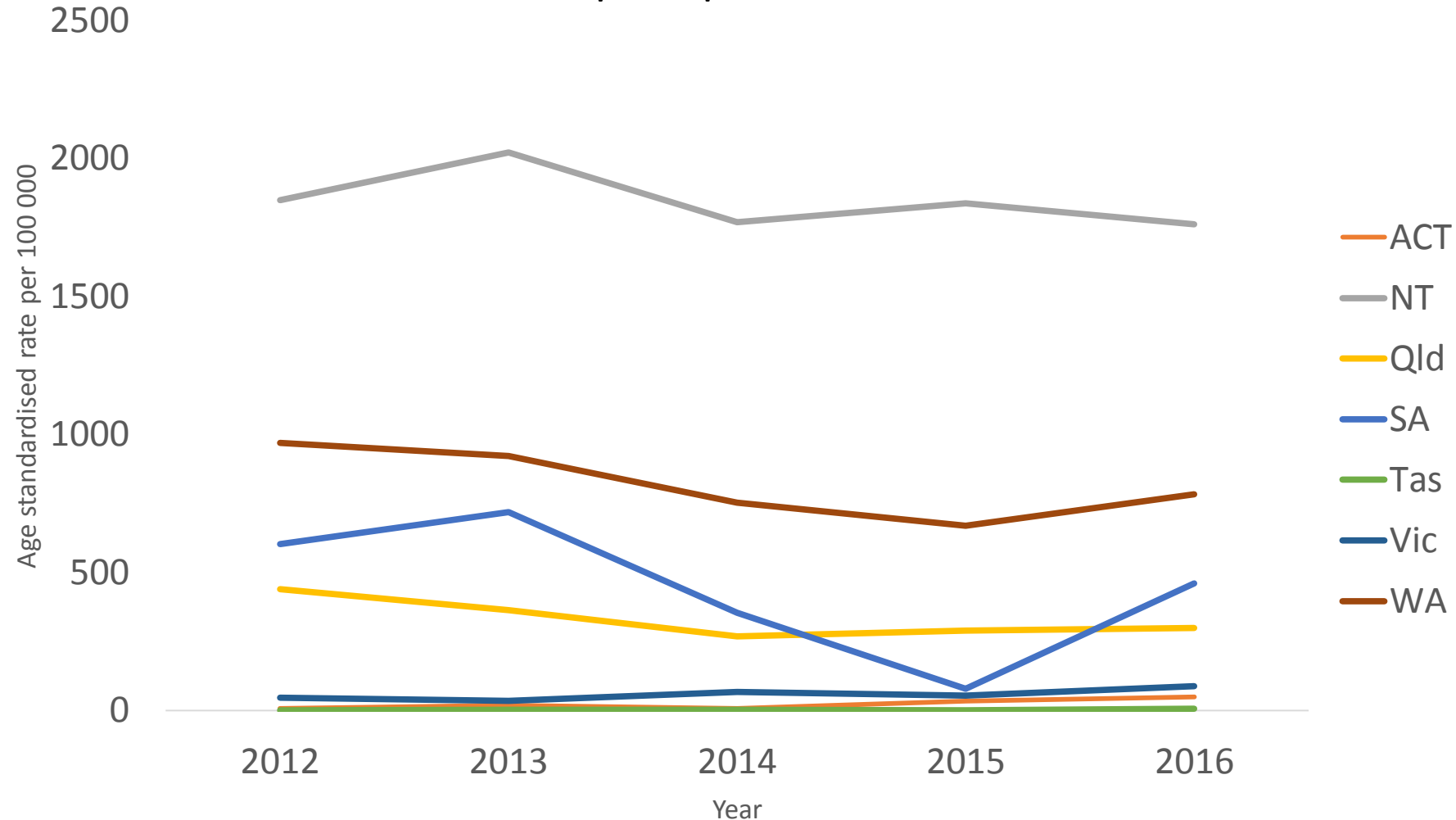
Chlamydia notification rate



Gonorrhoea notification rate



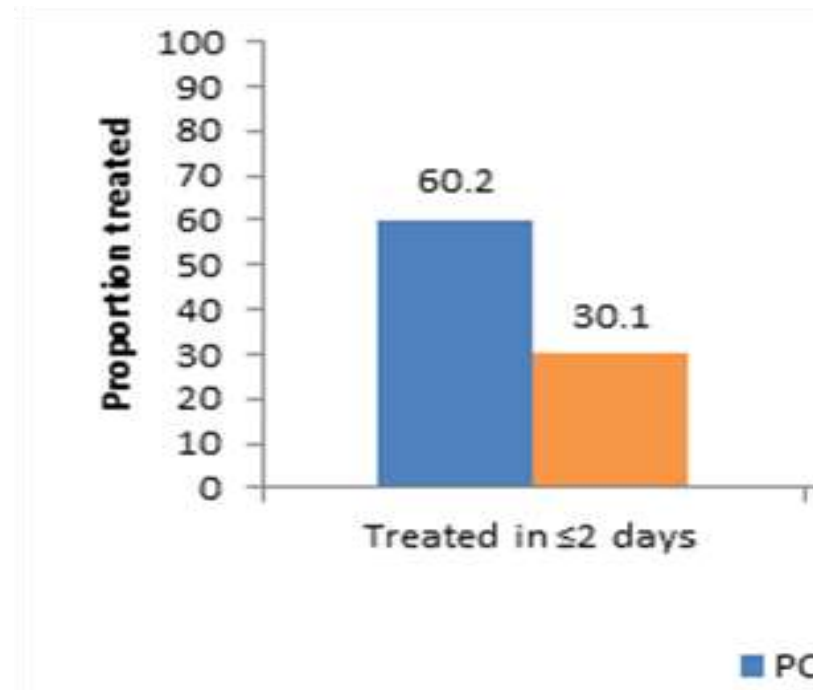
Gonorrhoea notification rate by State/Territory in Aboriginal and Torres Strait Islander people



Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions (Australian Capital Territory, Northern Territory, Queensland, South Australia, Victoria, Western Australia and Tasmania) in which Aboriginal and Torres Strait Islander status was reported for $\geq 50\%$ of diagnoses for each year.

TTANGO

- 20% young Aboriginal people in remote areas not treated (*Guy et al, Sexual Health*)
- Mobility, difficulties recalling, staff turnover (*Hengel, Sex Health. 2015 Aug;12(4):341-7*)
- Trial of chlamydia and gonorrhoea POC tests in 12 remote Aboriginal medical services
- GeneXpert POC device

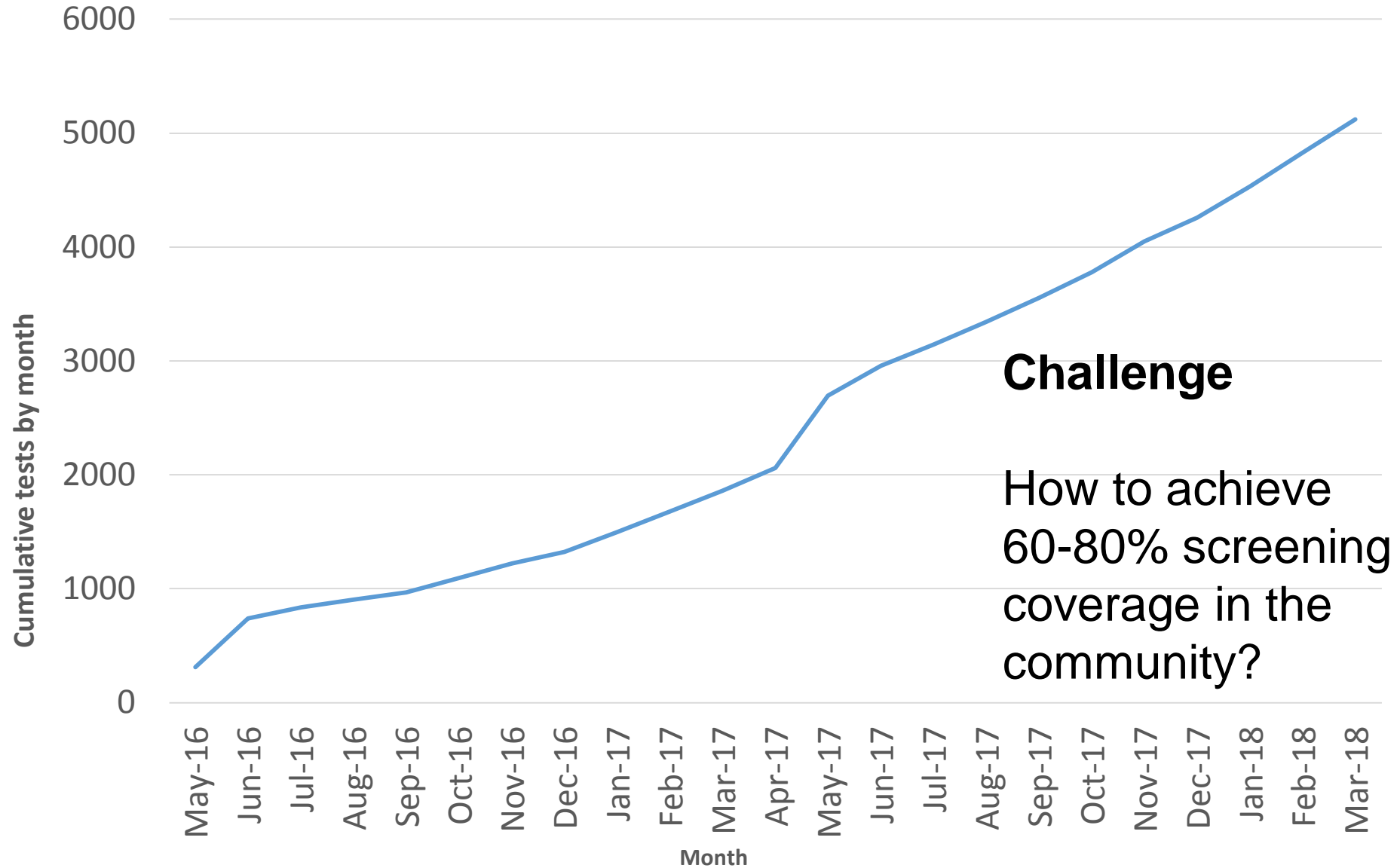


TTANGO2

- AHCWA, NHS, KAMSC, WA Health, Path West, Kirby, Flinders, SAHMRI, others.
- 27 remote Aboriginal health services - 15 in WA
- Impact, sustainability, acceptability, cost-effectiveness
- POC coupled with strategies to increase testing coverage



TTANGO2



Summary

- Surveillance data informs programs and research
- We have many tools available to control HIV, STIs, HCV
- Optimise and scale up use
 - Identify people who are missing out/gaps
 - Understand why – social science
 - Community led
 - Adapt/design, resource interventions
 - Monitor and evaluate

Acknowledgements

- Kirby Surveillance team
- State and Territory health departments
- Office of Health Protection, Department of Health
- EPIC-NSW
- PrEPIT-WA
- TTANGO2 team/investigators
- WA Health
- AHCWA
- SIREN

Thank you and enjoy the meeting

