



Declining HIV diagnoses and rising PrEP uptake in Auckland, New Zealand: successes and challenges

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Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND

**MEDICAL AND
HEALTH SCIENCES**

Acknowledgements

PLWH

Gay and bisexual men

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No conflicts to declare



**MEDICAL AND
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Context

- NZ low-level epidemic concentrated in MSM, ↑ **2014-2016**
- **Auckland** has concentrations of MSM and is HIV epicentre
- Condom use historically **high**, HIV testing **moderate**
- PrEP demonstration project Auckland (AKL) February 2017
- PrEP government funded Mar 2018
- CD4 prescribing threshold for ART removed June 2017

Questions

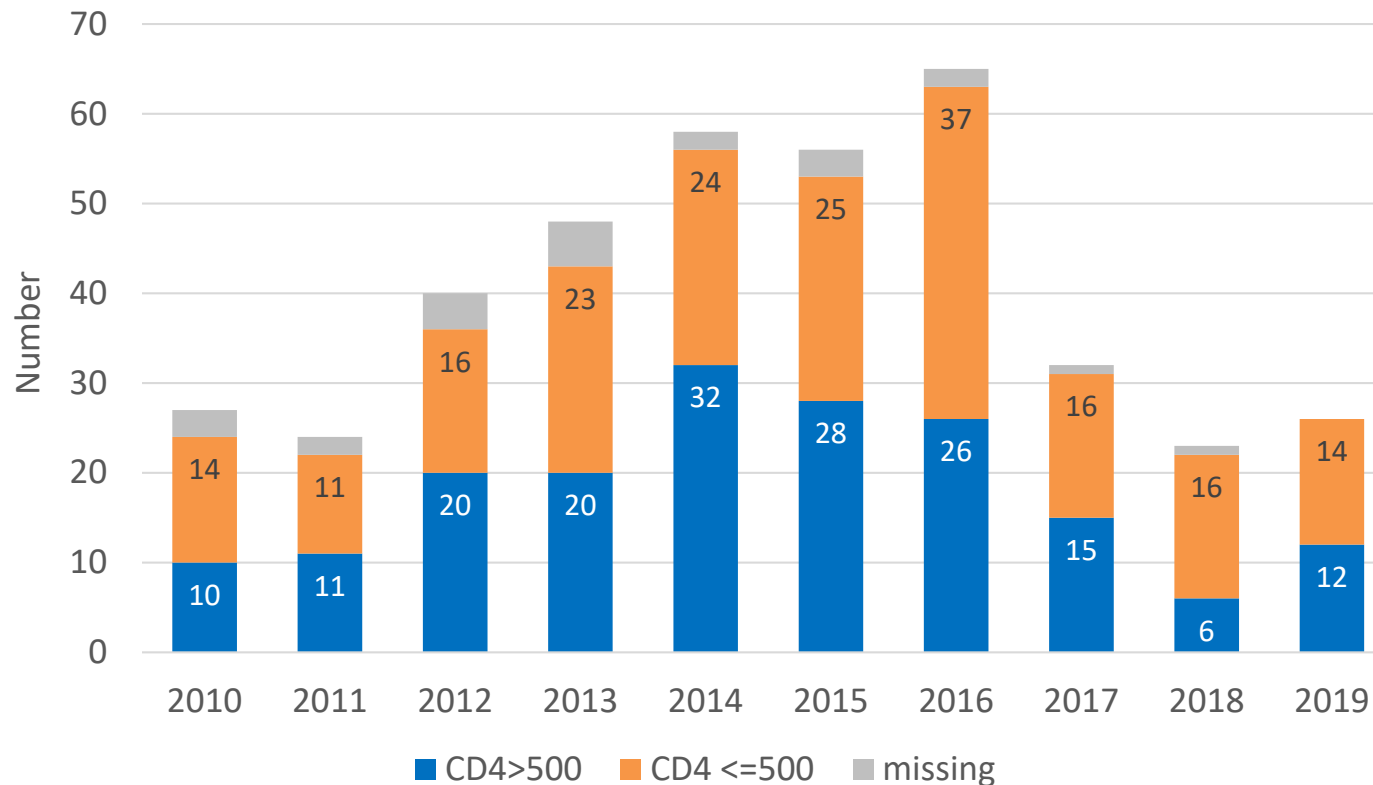
- Has combination HIV prevention **reduced incident HIV in Auckland?**
- Have benefits been **evenly experienced?** Or diff. for subgroups?
- **Combine** epi and behavioural data to improve explanatory power

HIV epidemiological surveillance

- New HIV diagnoses (cases) 2010-2019
- **Contracted in NZ (i.e. local transmission)**
- **Living in Auckland**
- Focus on trends in **“recent” infections**
- CD4 count (>500 “recent”, ≤500 “prevalent”)
- Age (under 30, 30 and older)
- Ethnicity (Māori, non-Māori)

New HIV cases: MSM in AKL (total)

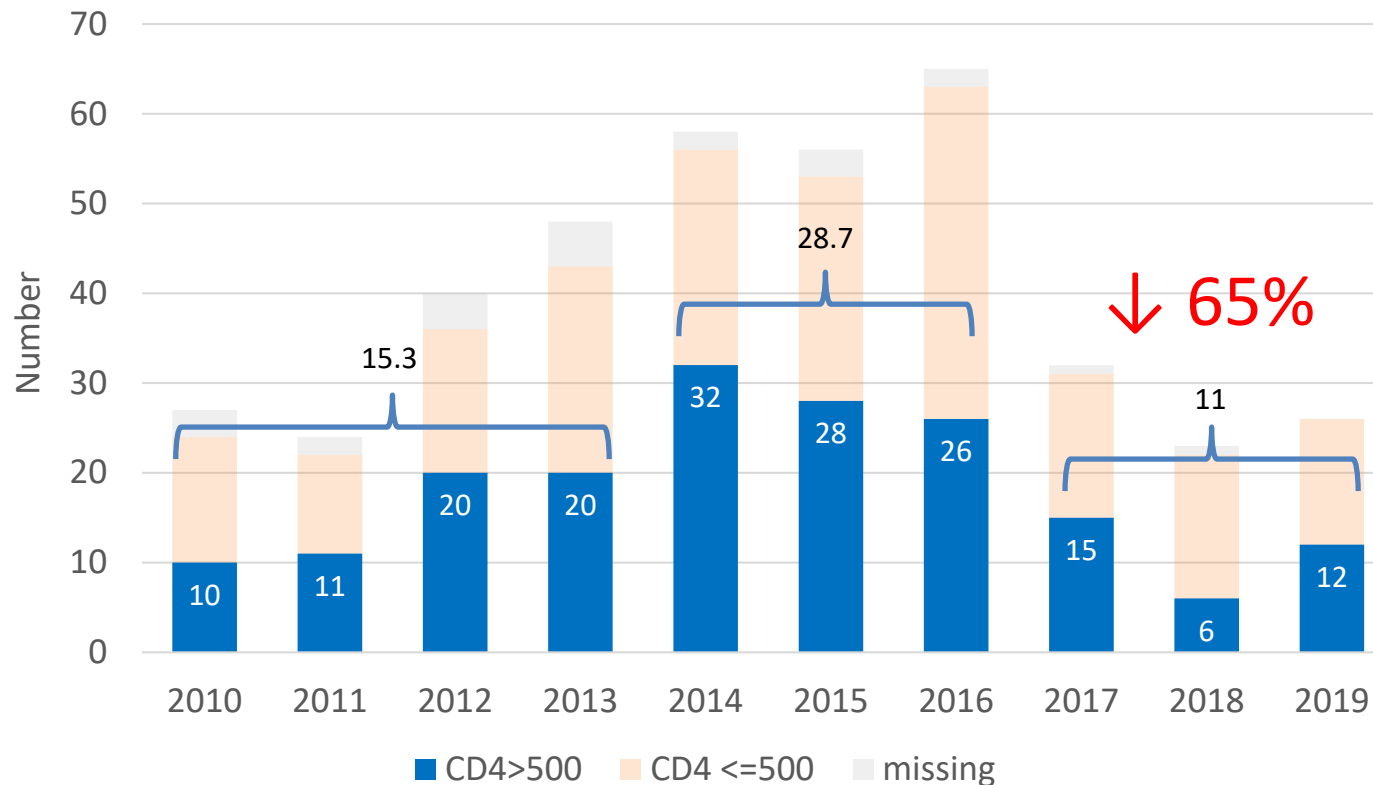
n=376 (+23 CD4 missing)



- 24 (2010)
- ↑63 (2016)
- ↓26 (2019)
- 48% "recent" infection

New HIV cases: MSM in AKL (total)

n=376 (+23 CD4 missing)



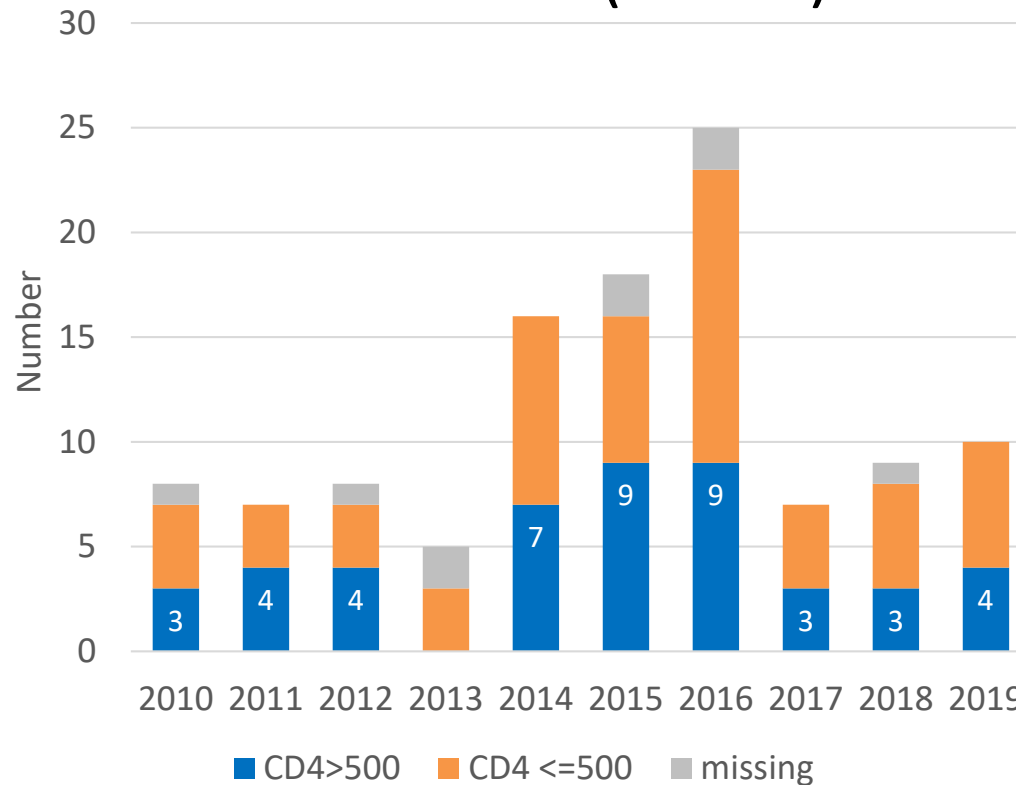
- 24 (2010)
- ↑63 (2016)
- ↓26 (2019)
- 48% "recent" infection

Of "recent", 3 phases

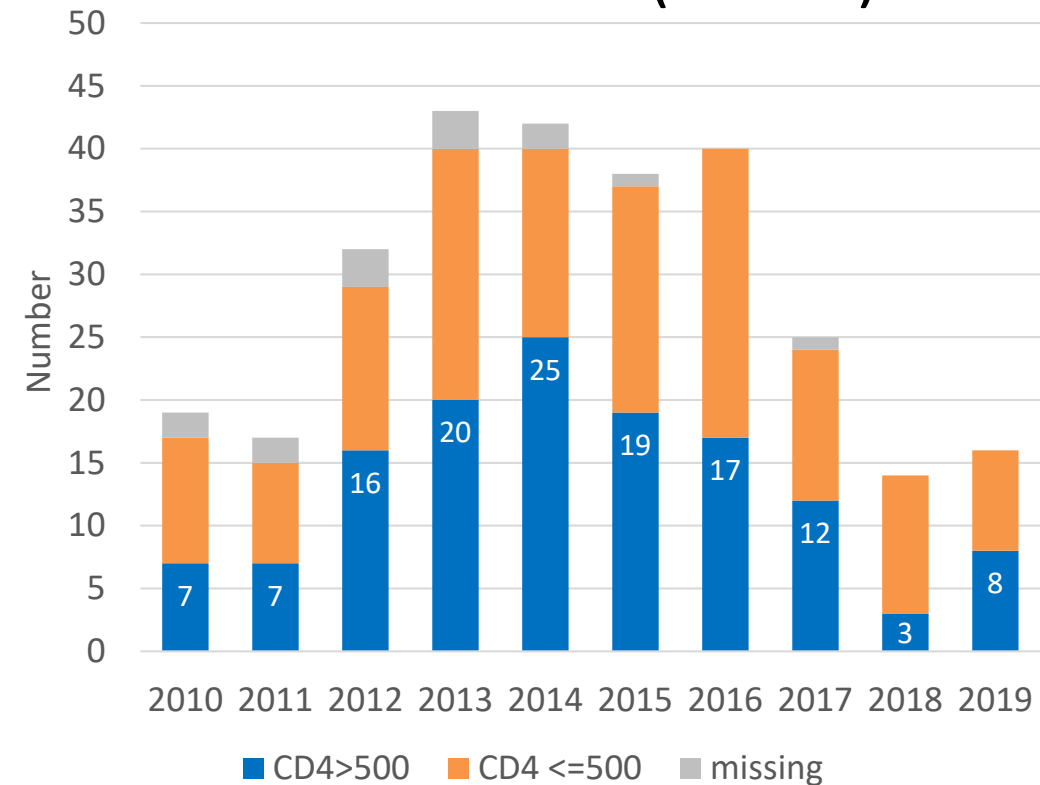
- 2010-13: 15.3 p/a
- 2014-16: 28.7 p/a
- 2017-19: 11 p/a

New HIV cases: MSM in AKL (Age)

Under 30 (27.7%)

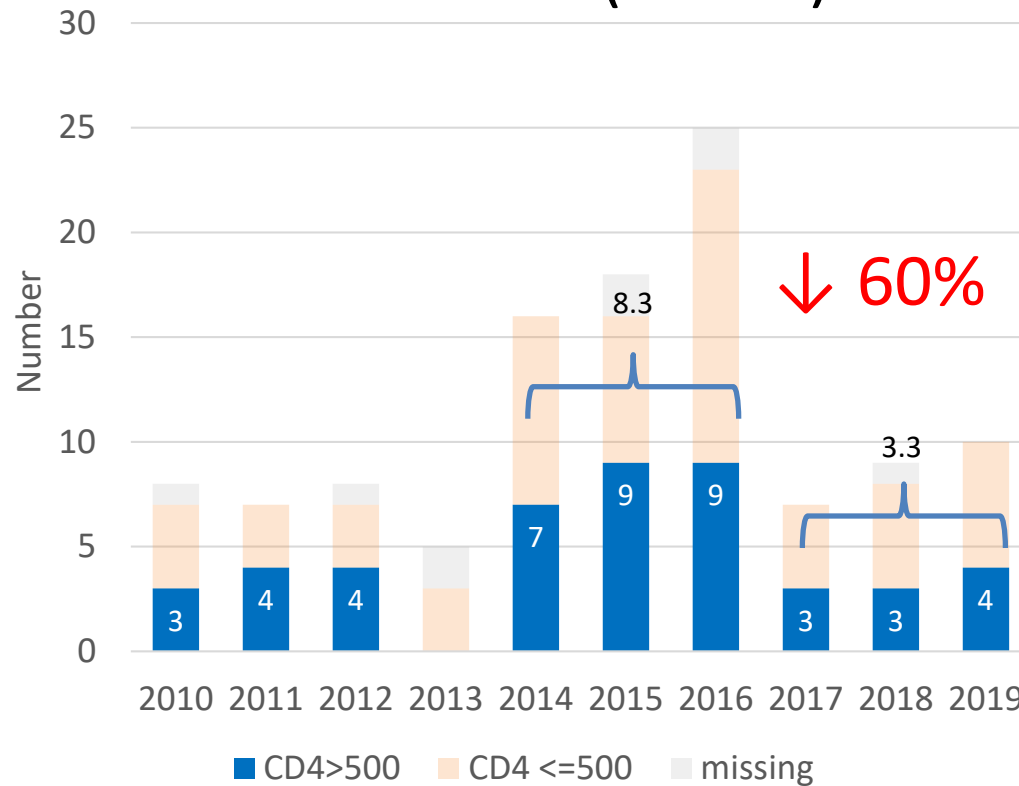


30 or older (72.3%)

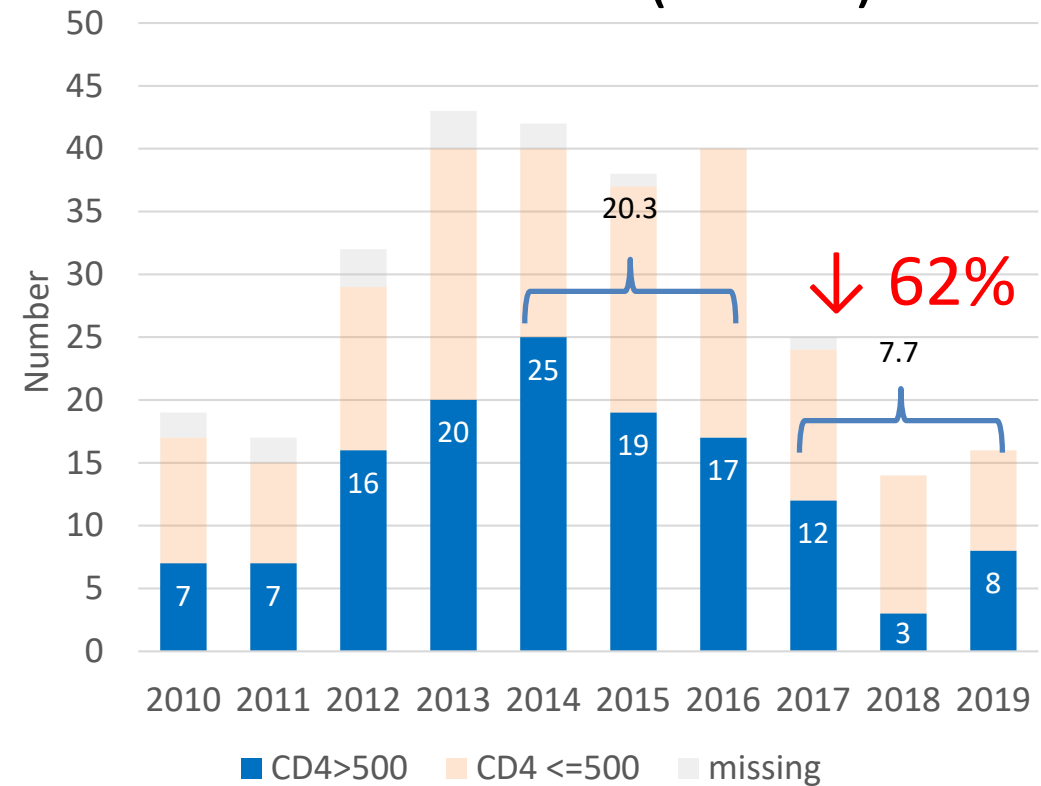


New HIV cases: MSM in AKL (Age)

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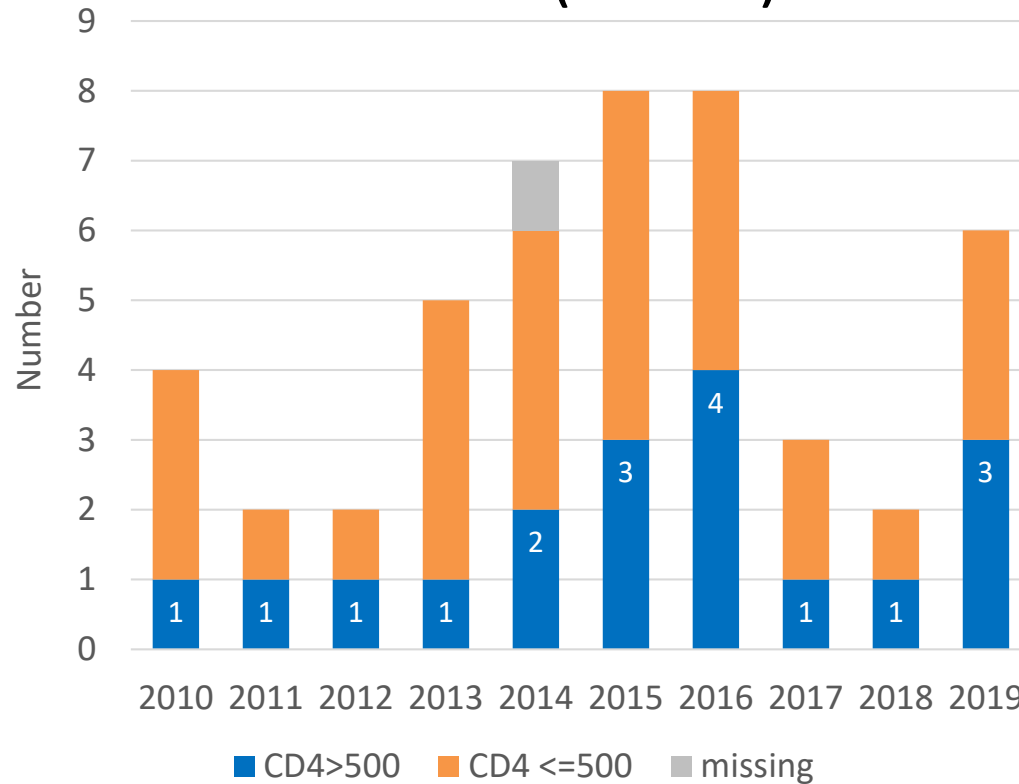


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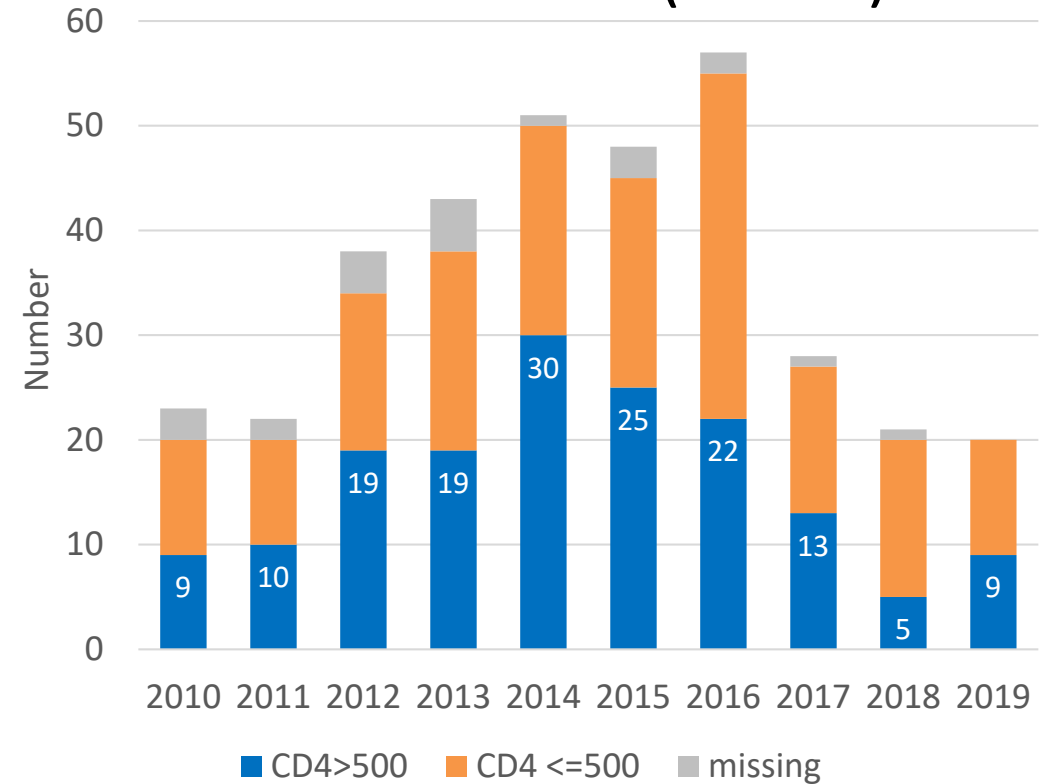


New HIV cases: MSM in AKL (Ethnicity)

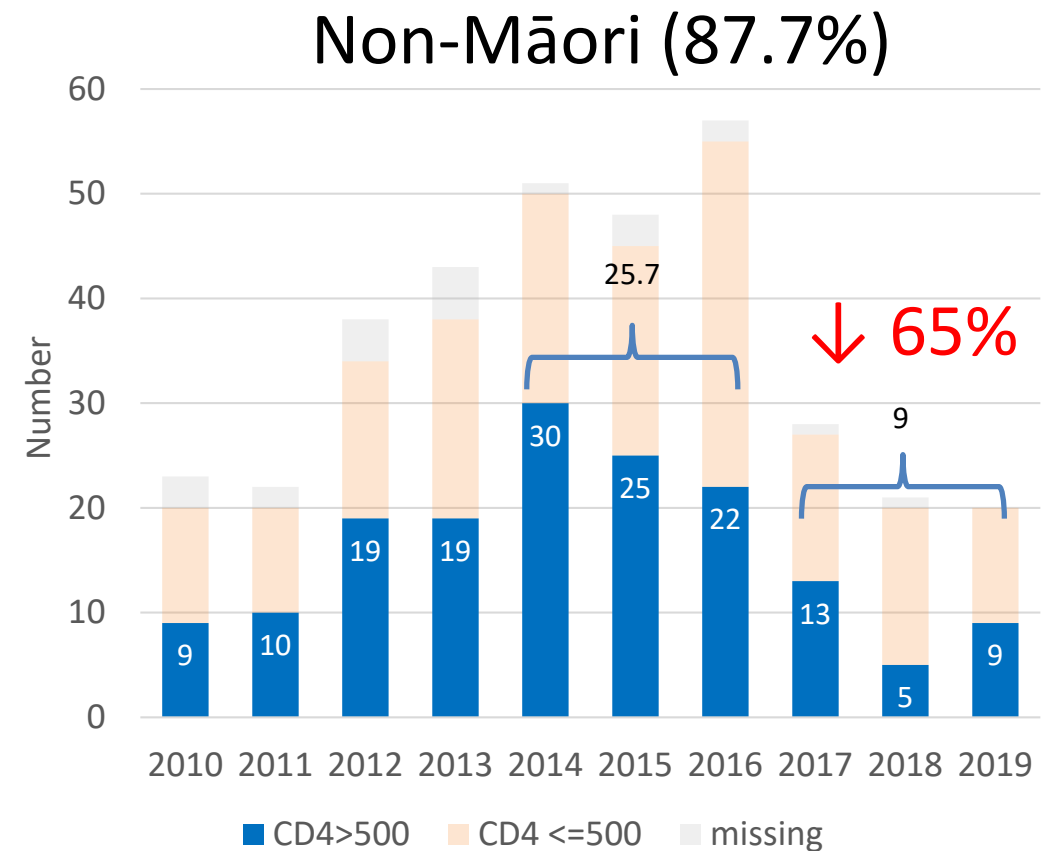
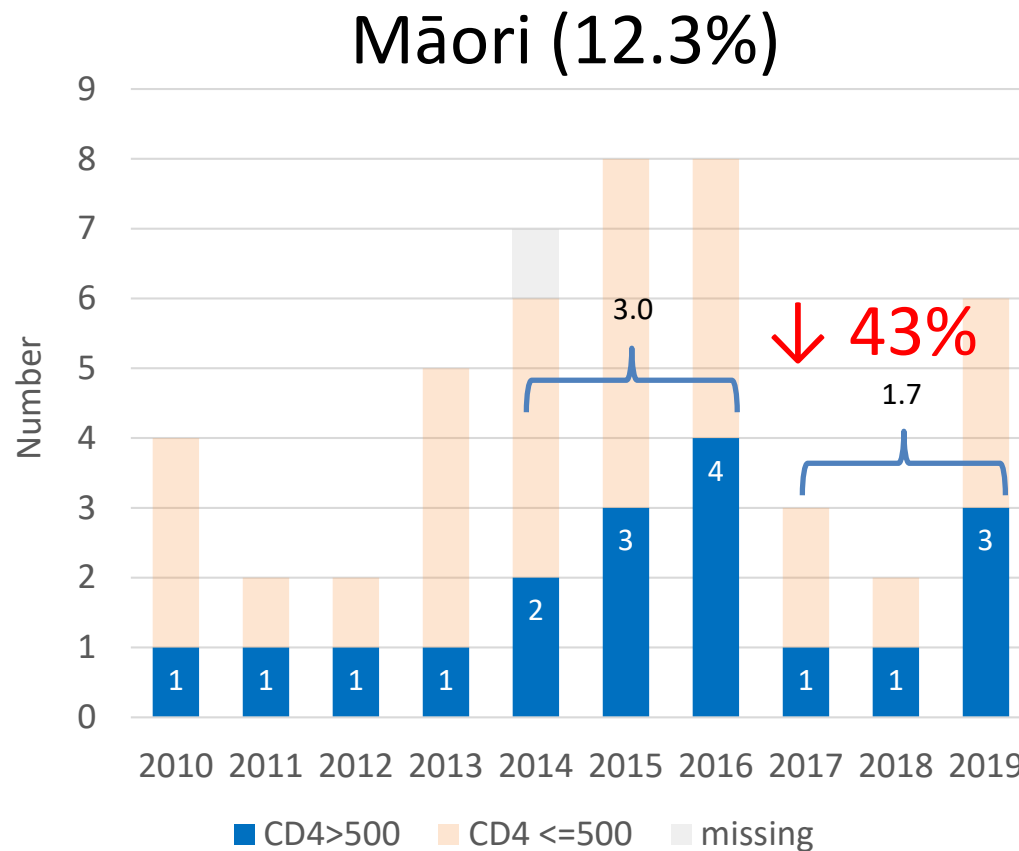
Māori (12.3%)



Non-Māori (87.7%)



New HIV cases: MSM in AKL (Ethnicity)

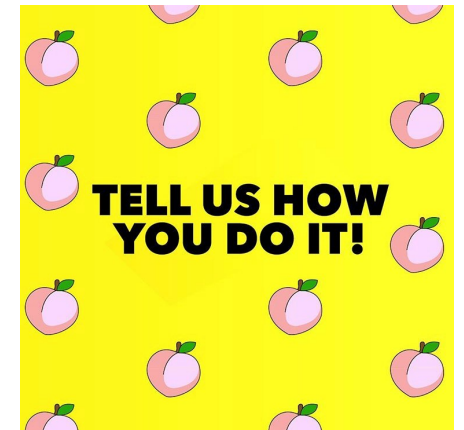


HIV behavioural surveys

- Gay men's Online Sex Survey (GOSS) 2011, 2014
- Ending HIV evaluation surveys 2016-2019
- Denominator:
 - Auckland, non-HIV positive
 - Anal intercourse with casual partner <6mths
- Measures:
 - 100% condom use ("No CLAI")
 - HIV- PrEP
 - CLAI tested -ve <6mths
 - CLAI tested -ve >6mths ago
 - CLAI never tested

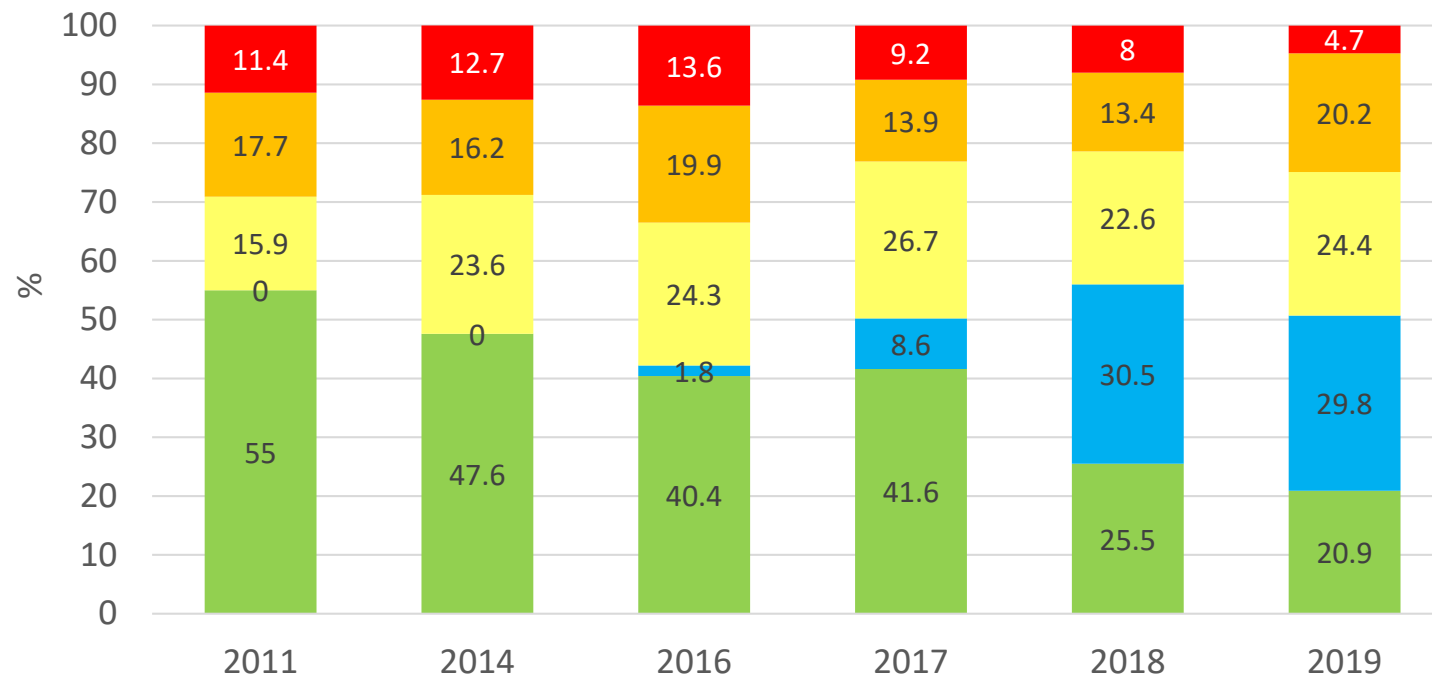
Analysis:

- Total
- Māori vs non-Māori
- Age <30 vs 30+
- <10 partners vs 10+



HIV prevention behaviours: AKL (total)

Anal intercourse with casual partners <6m (n=1,962)



↓ *CLAI never tested*

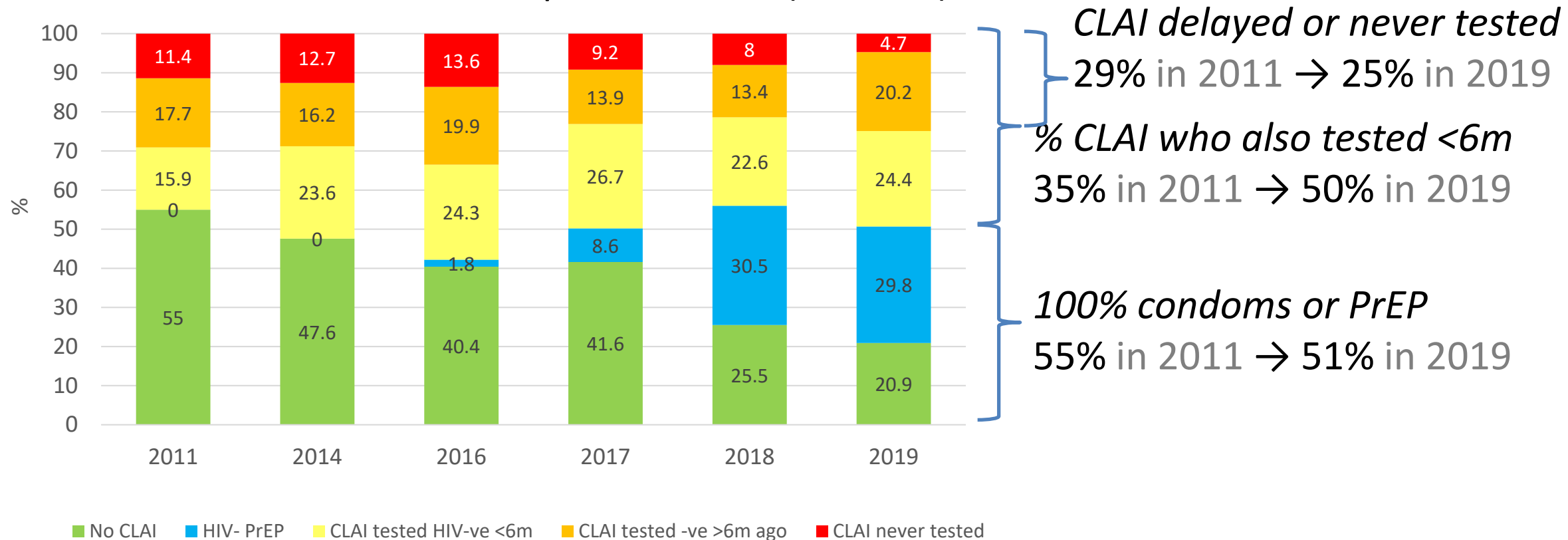
↑ *PrEP*

↓ *100% condom use*

■ No CLAI ■ HIV- PrEP ■ CLAI tested HIV-ve <6m ■ CLAI tested -ve >6m ago ■ CLAI never tested

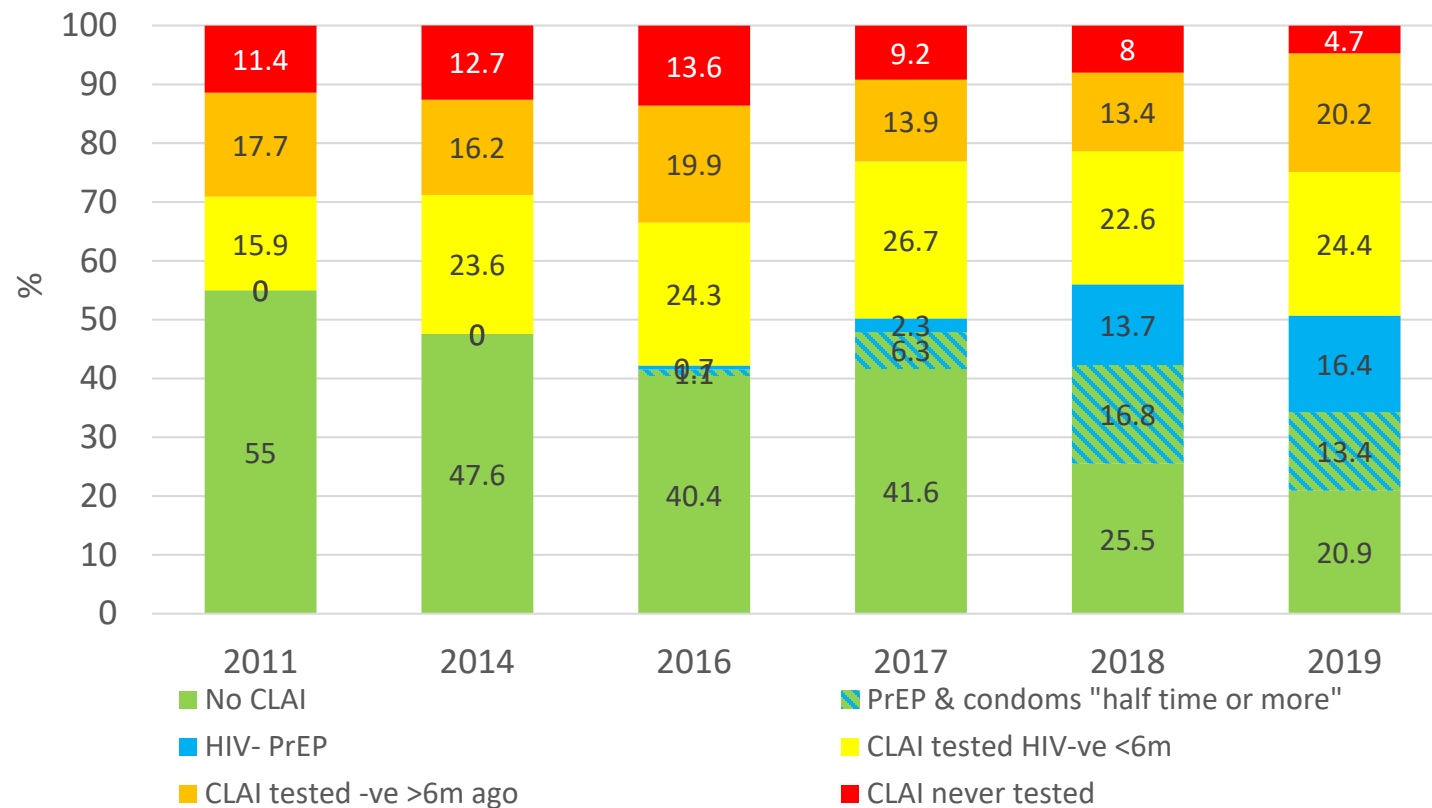
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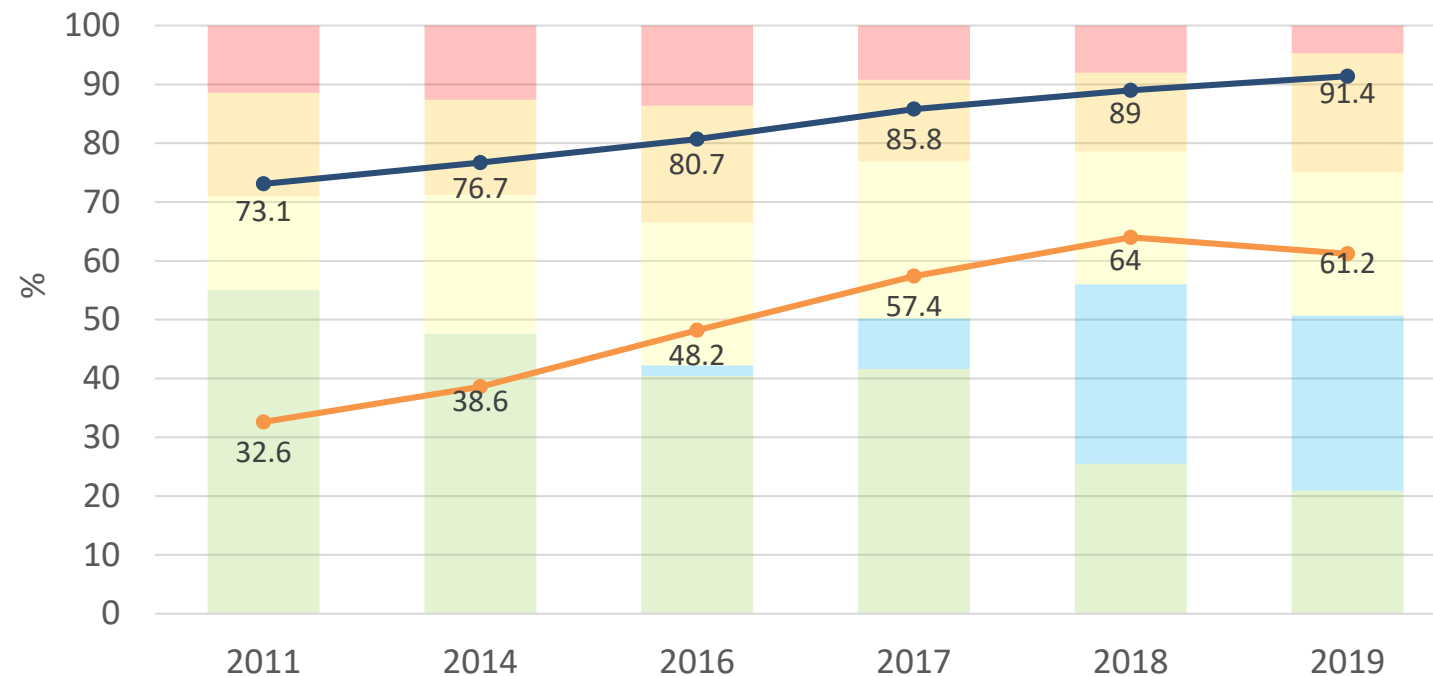
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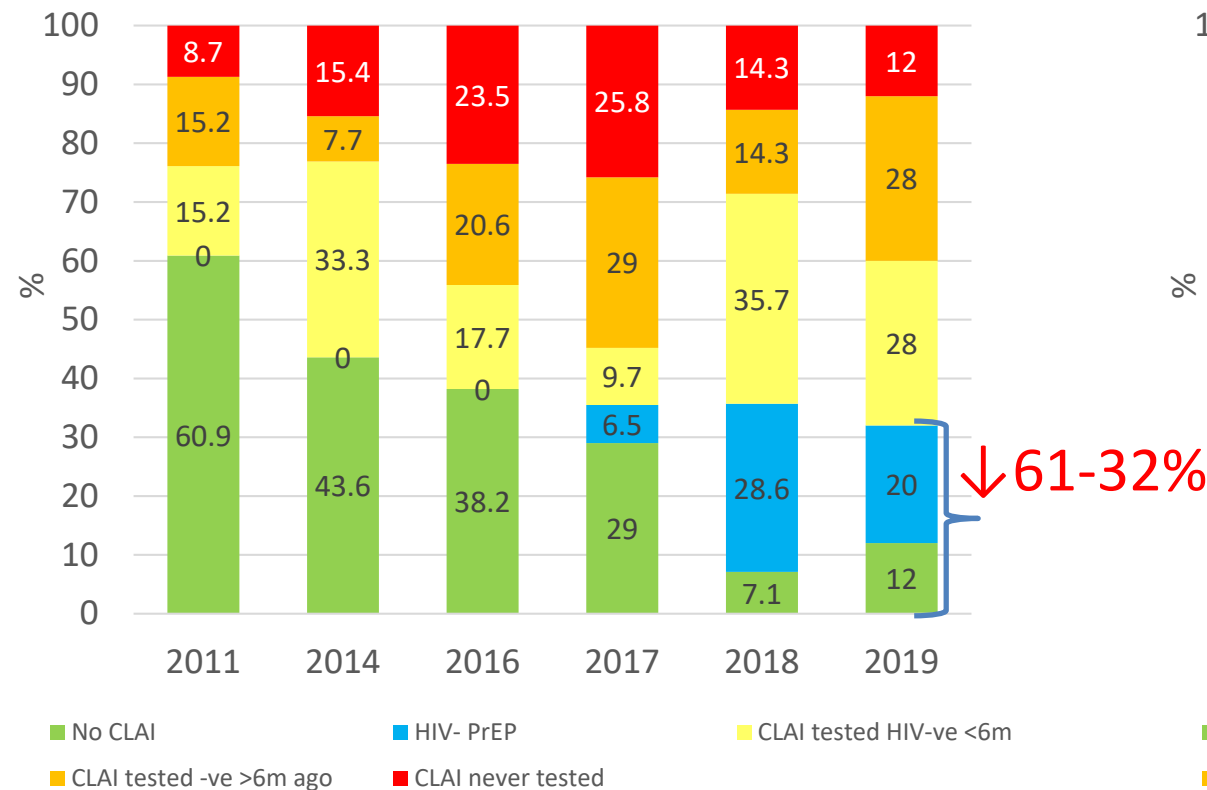


↑ ever tested overall

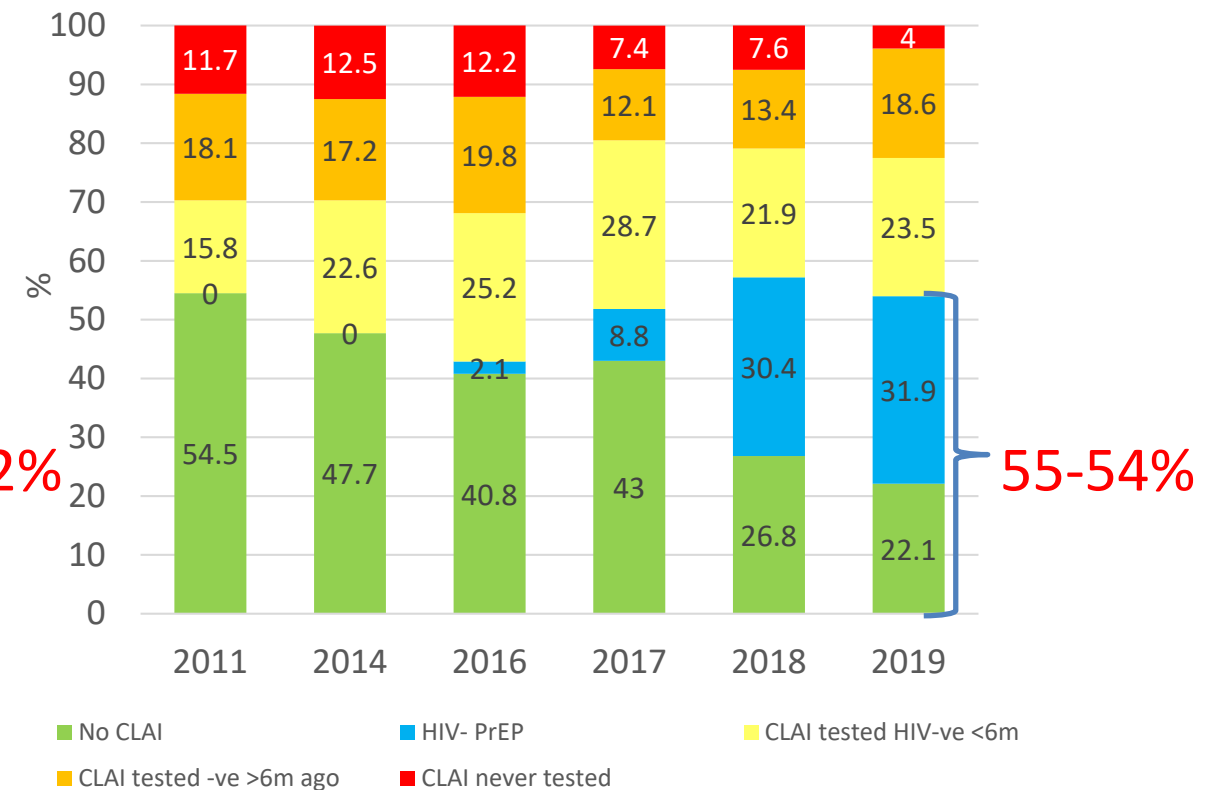
↑ tested <6m overall

HIV prevention behaviours: Ethnicity

Māori (9.8%)



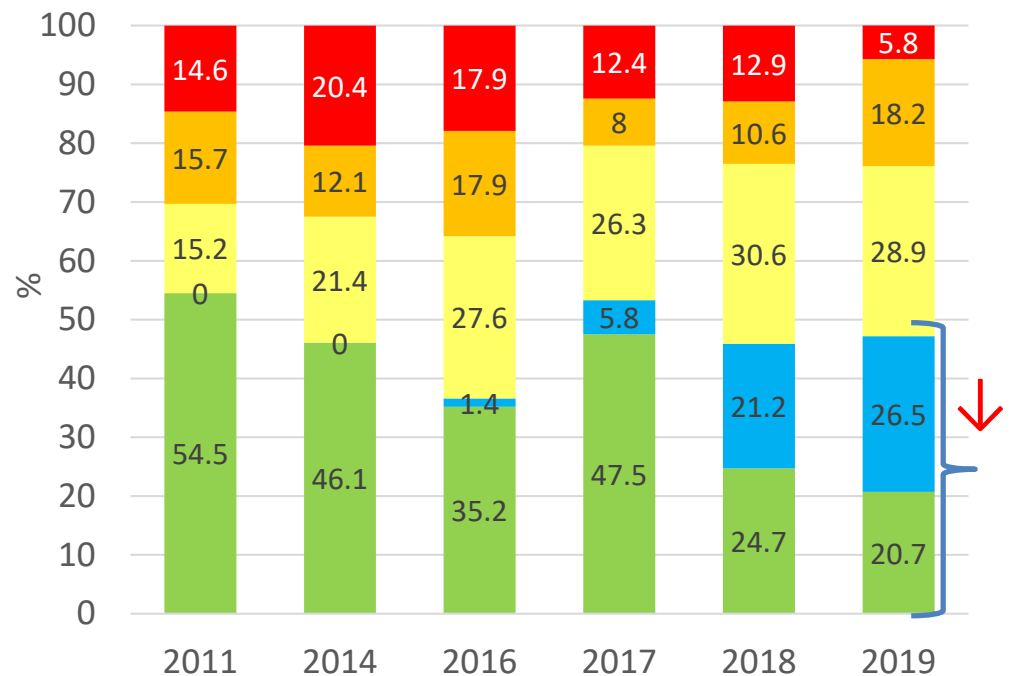
Non-Māori (90.2%)



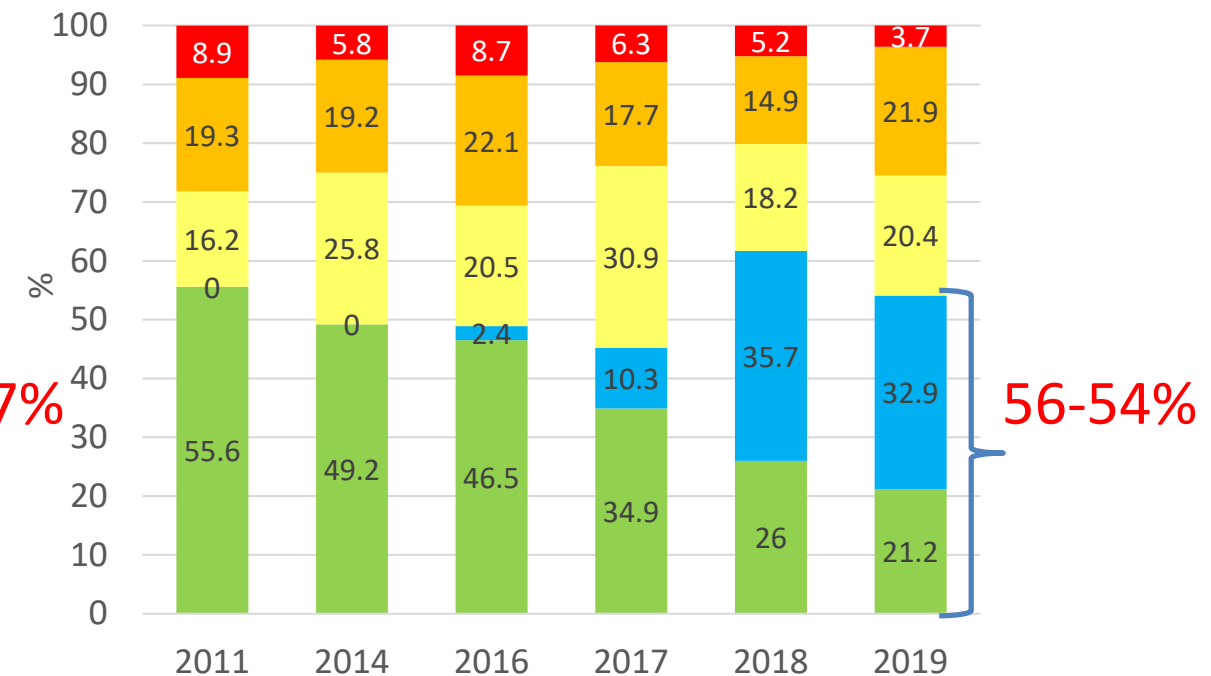
HIV prevention behaviours: Age

Under 30 (45.1%)

30 or older (54.9%)



↓ 55-47%



56-54%

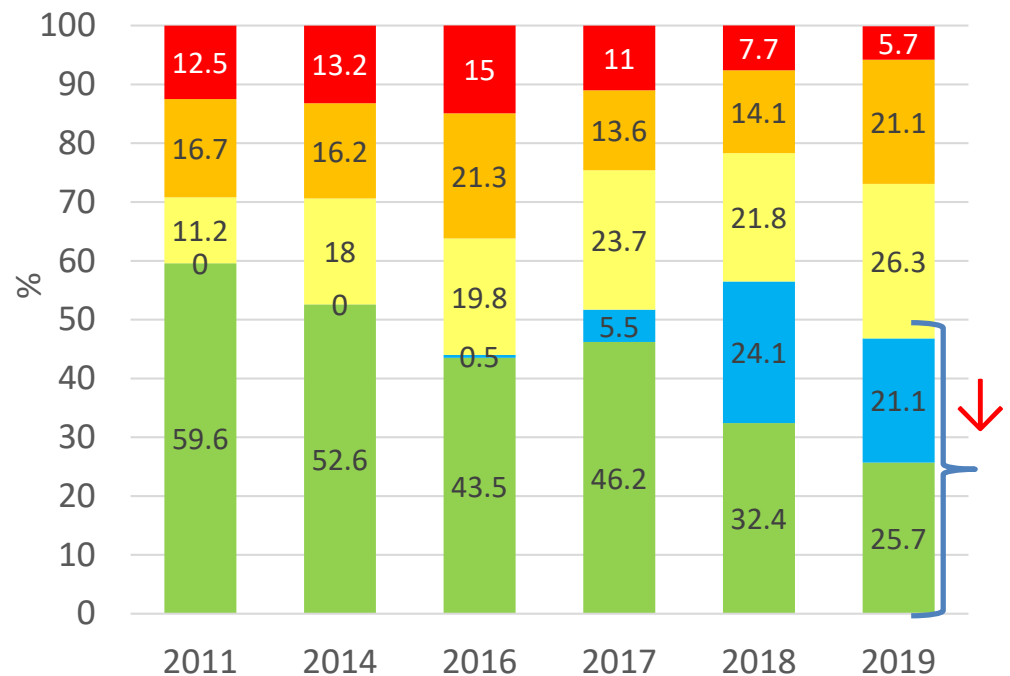
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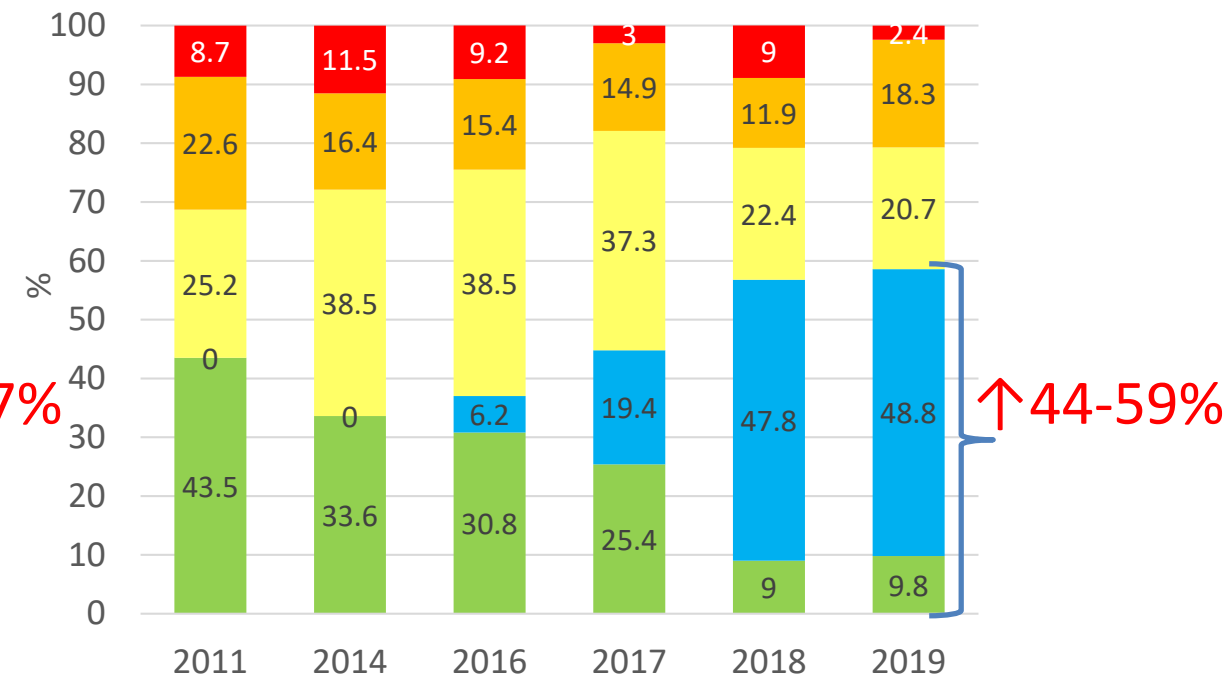
HIV prevention behaviours: Partner no.

Up to 10 partners <6m (73.7%)

>10 partners <6m (26.3%)



↓ 60-47%



↑ 44-59%

■ No CLAI ■ HIV- PrEP ■ CLAI tested HIV-ve <6m
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Strengths

- ↑ Explanatory power
 - Combining epi and behavioural surveillance
 - Granular data (domestic transmission, ethnicity, sexual activity, measures)
 - Coincident with combination HIV prevention policy shifts

Limitations

- HIV epidemiological surveillance
 - diagnoses not incidence
- HIV behavioural surveillance
 - Sampling and participation biases (two studies)
 - Denominator limited to casual anal intercourse partnering

Summary

- ↓65% in “incident” HIV diagnosed among MSM in Auckland since PrEP Mar 2017
- Reduction similar across age, ethnicity (?)
- PrEP and condom substitution, combined “% protected” stable 2011-2019
 - PrEP uptake best in **highly sexually active MSM**, overall ↑44-59 “% protected”
 - **Recent HIV testing doubled** overall 32-61% 2011-2019
 - Both ↓ HIV transmission (primary and secondary prevention)
- Consistent fraction engaging in CLAI and not testing (29-25%)
 - Testing and PrEP uptake higher among non-Māori

Acknowledgements

PLWH, Gay and bisexual men

Co-authors Sue McAllister, Adrian Ludlam, Jerram Bateman

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