Changes in PrEP prescribing across Australian primary care and sexual health services following COVID-19 social restrictions

Michael Traeger, Burnet Institute

Prital Patel, Jason Asselin, Tobias Vickers, Carol El-Hayek, Allison Carter, Kathleen Ryan, Edwina Wright, Christopher Fairley, Anna McNulty, Norm Roth, Robert Finlayson, Charlotte Bell, Basil Donovan, Rebecca Guy, Margaret Hellard, Mark Stoové
on behalf of ACCESS

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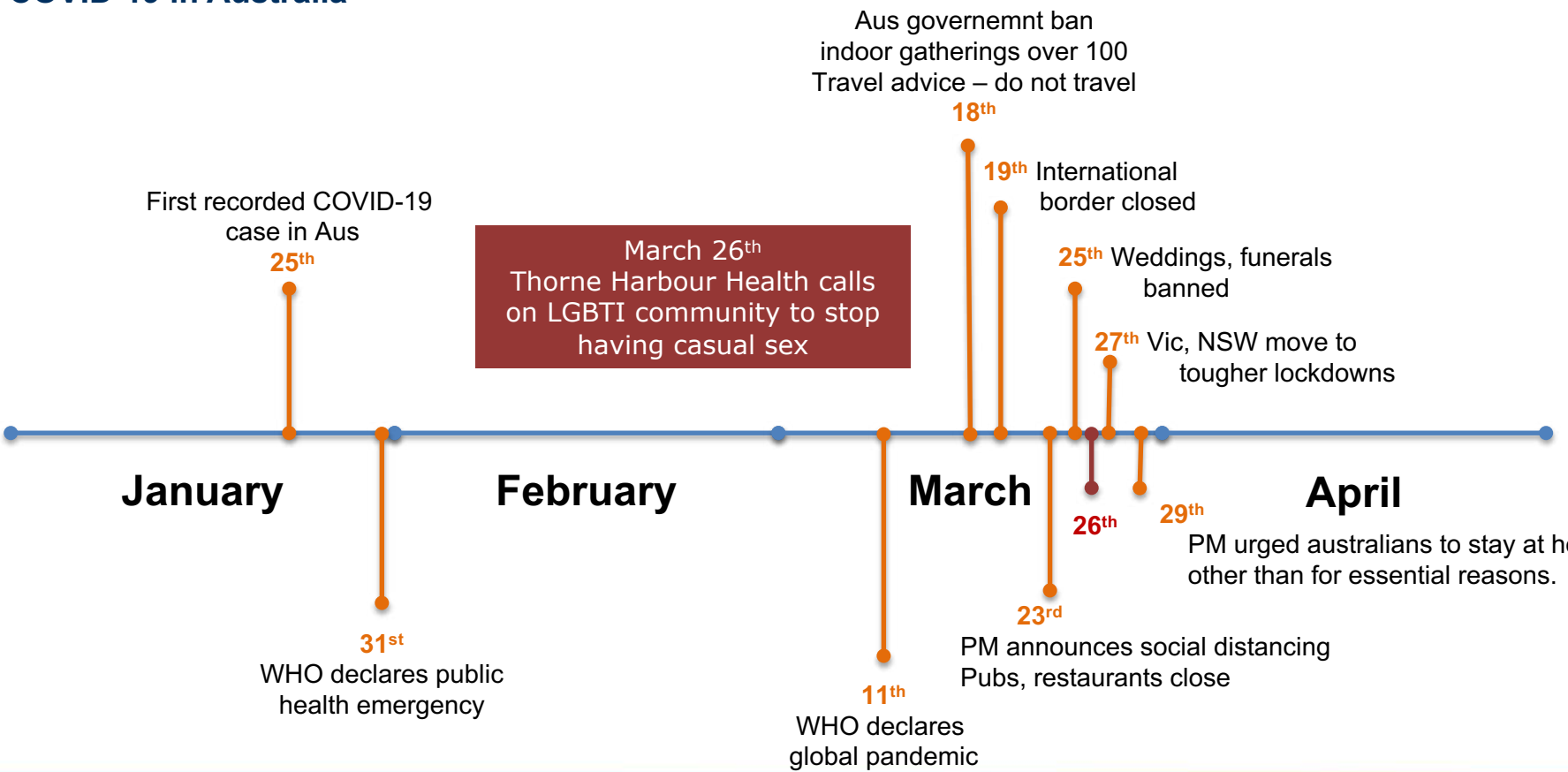
COVID-19 in Australia



How has COVID-19 impacted

Casual sex?

HIV prevention?

PrEP use?

Effects of COVID-19 – Early evidence

- Melbourne Sexual Health Centre reported a **decline in PEP dispensations** following lockdown in Melbourne, followed by a quick return.
  - Chow E et al, Lancet HIV, 2020

- Online cohort data shows a **84% decline in casual sex** during April among gay and bisexual men following concern towards COVID-19.
  - FLUX Study, Hammoud M et al, JAIDS 2020

- Survey data from PrEP users at MSHC shows that **28%** of PrEP users **ceased daily PrEP use** in May following lockdown.
  - Chow E et al, Open Forum Infect Dis, 2020

Effects of COVID-19 – Early evidence

- Evidence suggests casual sex has decreased, and some GBM have stopped using PrEP
- Not clear if those who have stopped PrEP are still attending services to receive PrEP prescriptions
- Are cohort/clinic data reflective of national trends?
- Do these trends continue in the months post-restrictions?

AIM

- Assess the impact of COVID-19 related restrictions on PrEP prescribing in Australia

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Australian Collaboration for Coordinated Enhanced Sentinel Surveillance of Blood-borne Viruses and Sexually Transmitted Infections

- National sentinel surveillance project
- Monitors blood-borne viruses and sexually transmitted infections
- Been running for over 10 years

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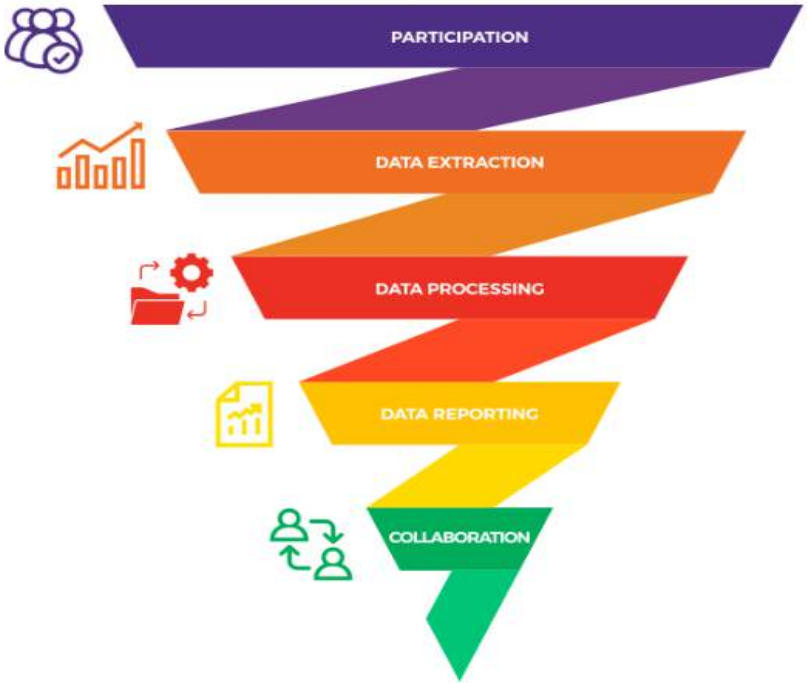

- Sentinel clinics are chosen based on priority populations
- Specialised data extraction software **GHRANITE** installed on the server at participating clinics
- Patient data are deidentified **at the clinic**, then sent to Burnet Institute
- Patient records are linked across services using a highly sensitive probabilistic linkage algorithm
- Provides line-listed data for HIV, viral hepatitis, STIs, prescriptions, diagnoses and consultations

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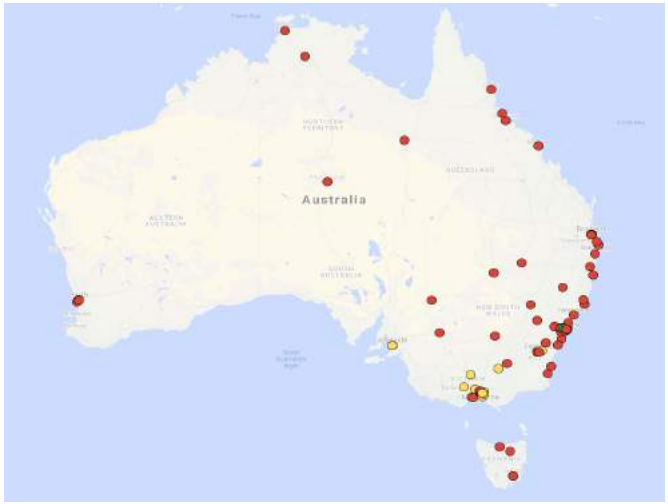


- Nationally representative
- Sentinel clinics – highcaseload HIV clinics
- High coverage of PrEP users nationally

- Routinely collected clinical data
- Allows for examining outcomes across discrete time intervals
- Ongoing data extraction

Methods

Data extracted from

42 services

in each state (except NT)

Tenofovir/emtricitabine prescriptions

among HIV-negative individuals

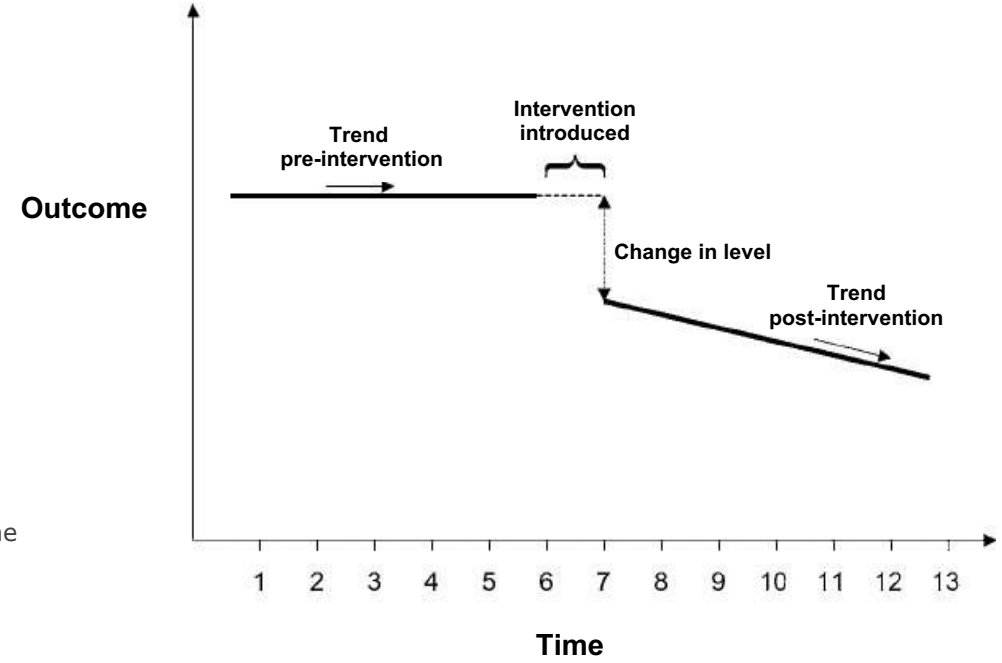
(excluding PEP)

1st January 2019 – 30th June 2020

Interrupted time-series analysis
of weekly PrEP prescriptions
before and after COVID-19 restrictions

Interrupted time-series analysis

- Performs two separate linear regressions
- Estimates a trend (slope) pre and post an intervention (break point)
- Estimates the immediate change at the intervention

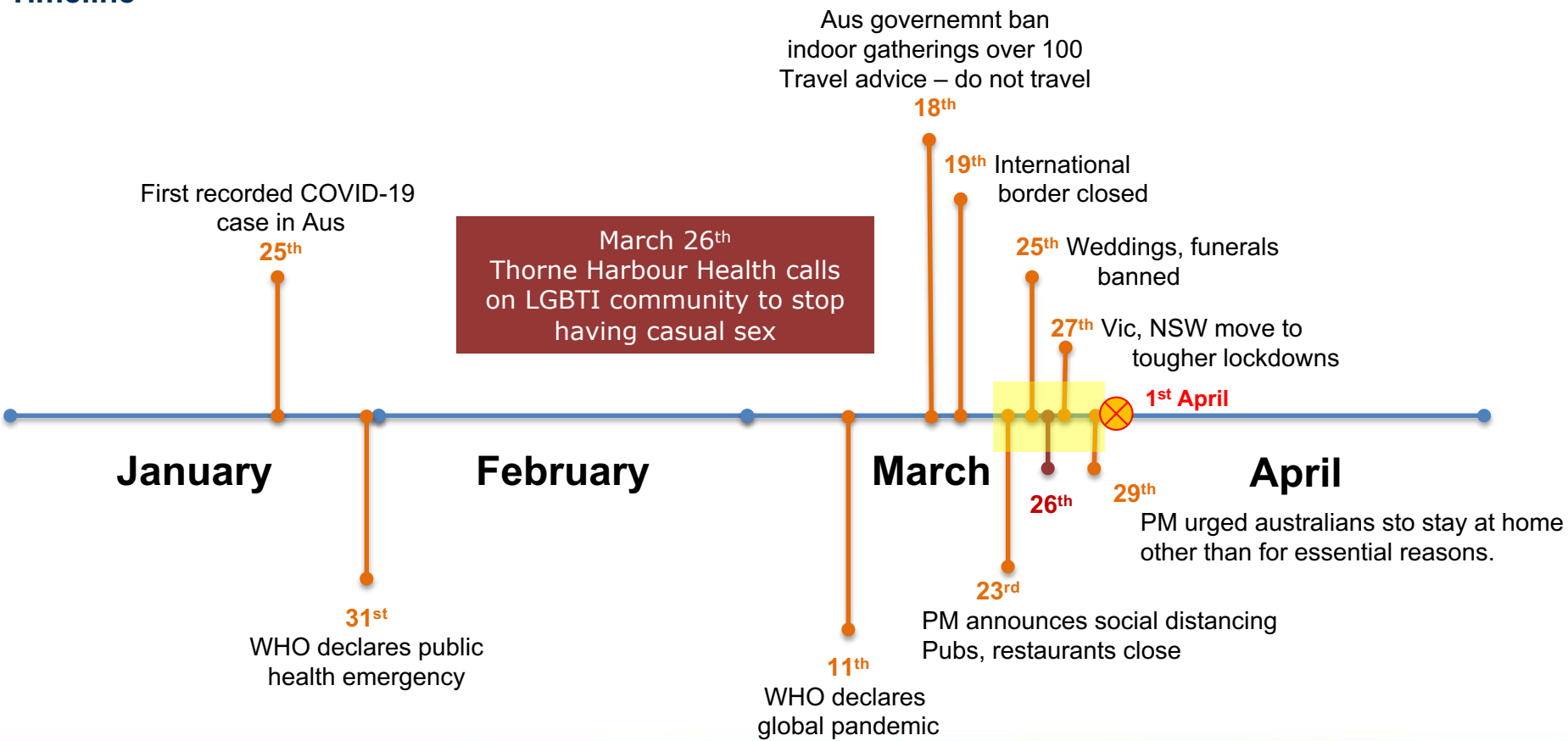


Our analysis:

- **Outcome:** Weeky number of PrEP prescriptions across the entire ACCESS network
- **Interruption:** 1st April 2020
- **Pre-restrictions:** 1st Jan 2019 – 30th May 2020
- **During-restrictions:** 1st April 2020 – 30th June 2020

} Calculated the mean and the slope

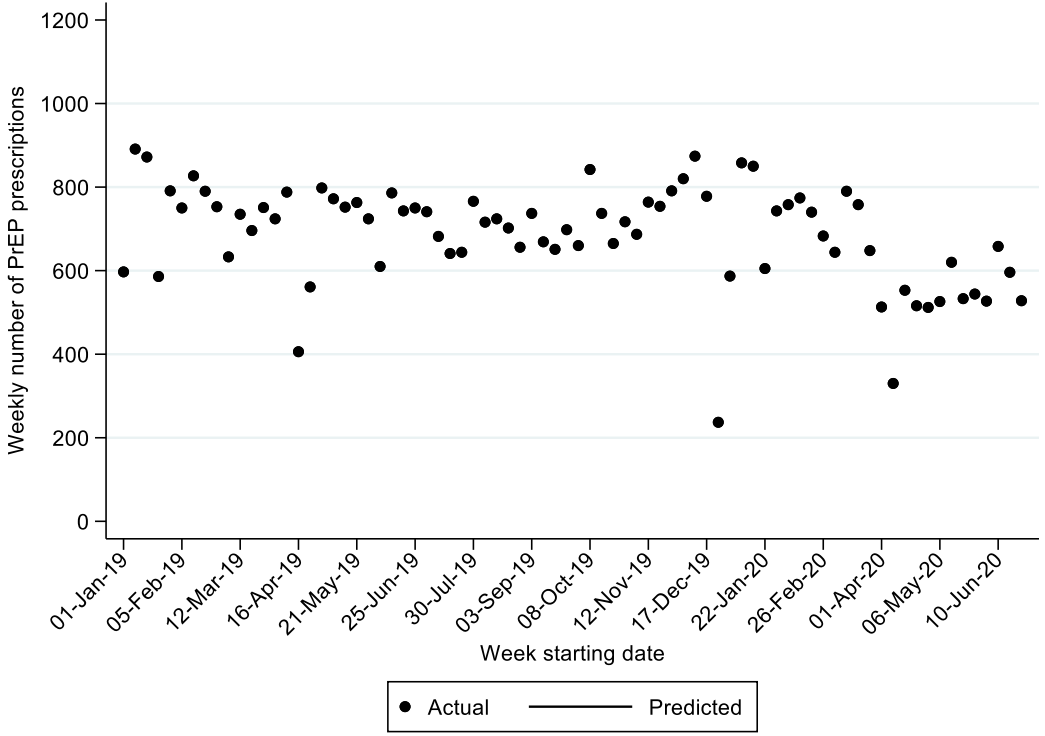
Timeline


Aus governemnt ban
indoor gatherings over 100
Travel advice – do not travel
18th
19th International
border closed
First recorded COVID-19
case in Aus
25th
March 26th
Thorne Harbour Health calls
on LGBTI community to stop
having casual sex
25th Weddings, funerals
banned
27th Vic, NSW move to
tougher lockdowns
1st April
January
February
March
April
26th
29th
PM urged australians sto stay at home
other than for essential reasons.
23rd
PM announces social distancing
Pubs, restaurants close
31st
WHO declares public
health emergency
11th
WHO declares
global pandemic

Results

52,596 PrEP prescriptions

19,879 individuals (96.3% male)



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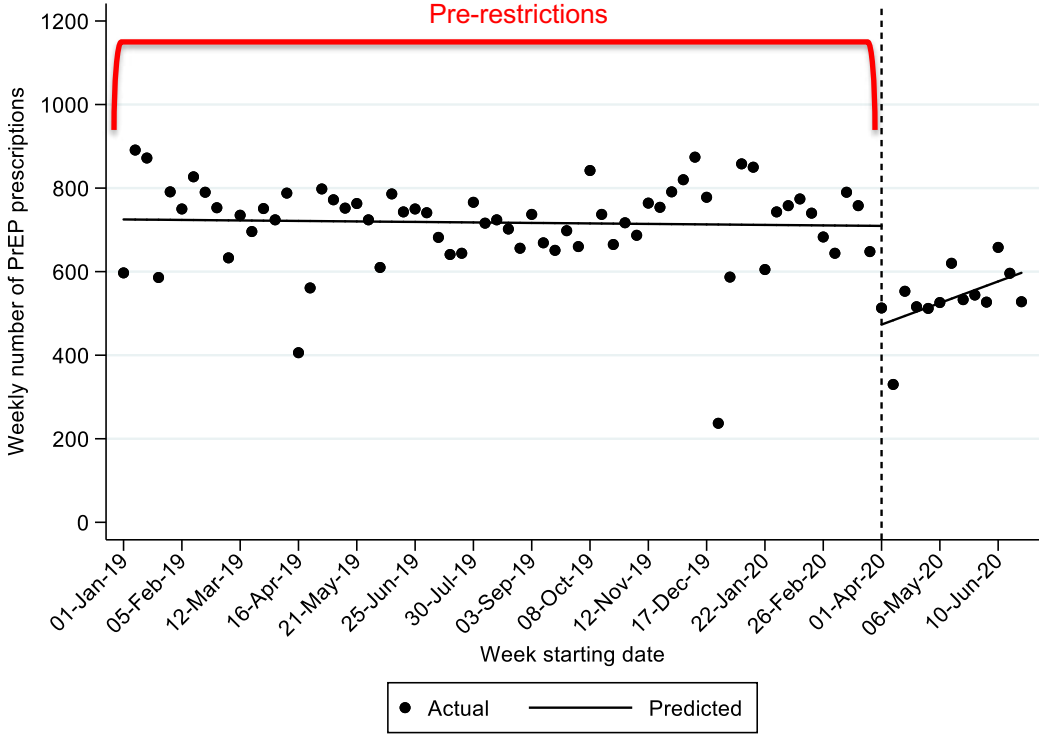

Pre-restrictions

Mean = 718 / week

Trend = -0.2 / week (P=0.743)

Results

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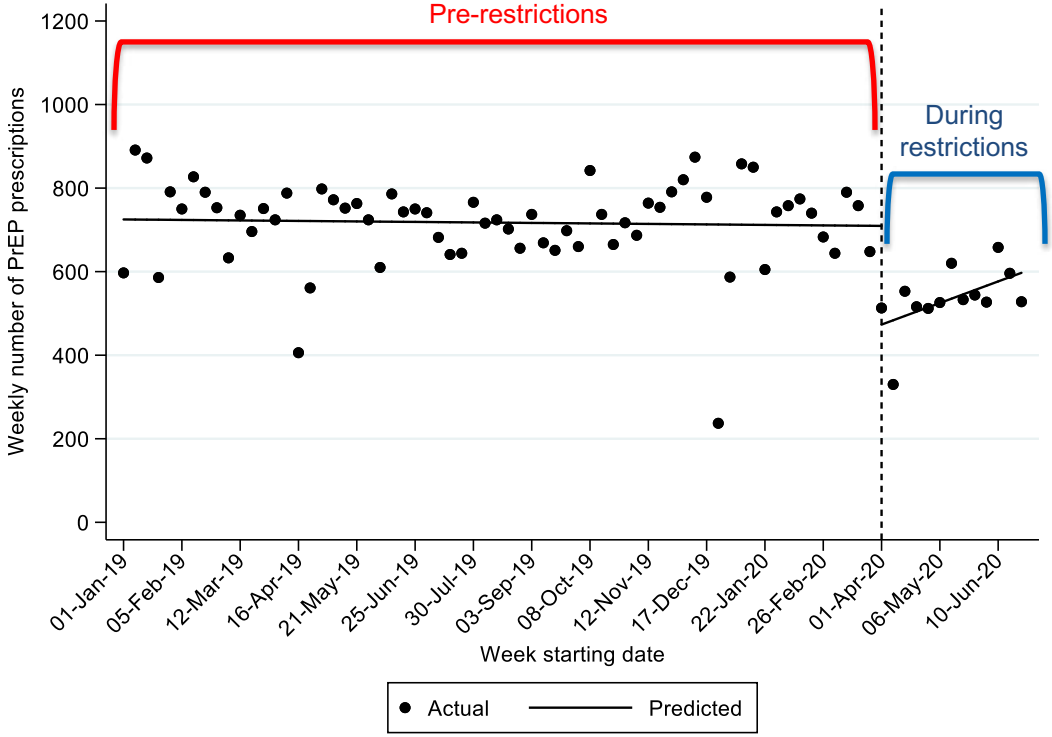

Pre-restrictions

Mean = 718 / week

Trend = -0.2 / week (P=0.743)

During restrictions

Mean = 543 / week

Trend = +10.6 / week (P=0.178)

Results

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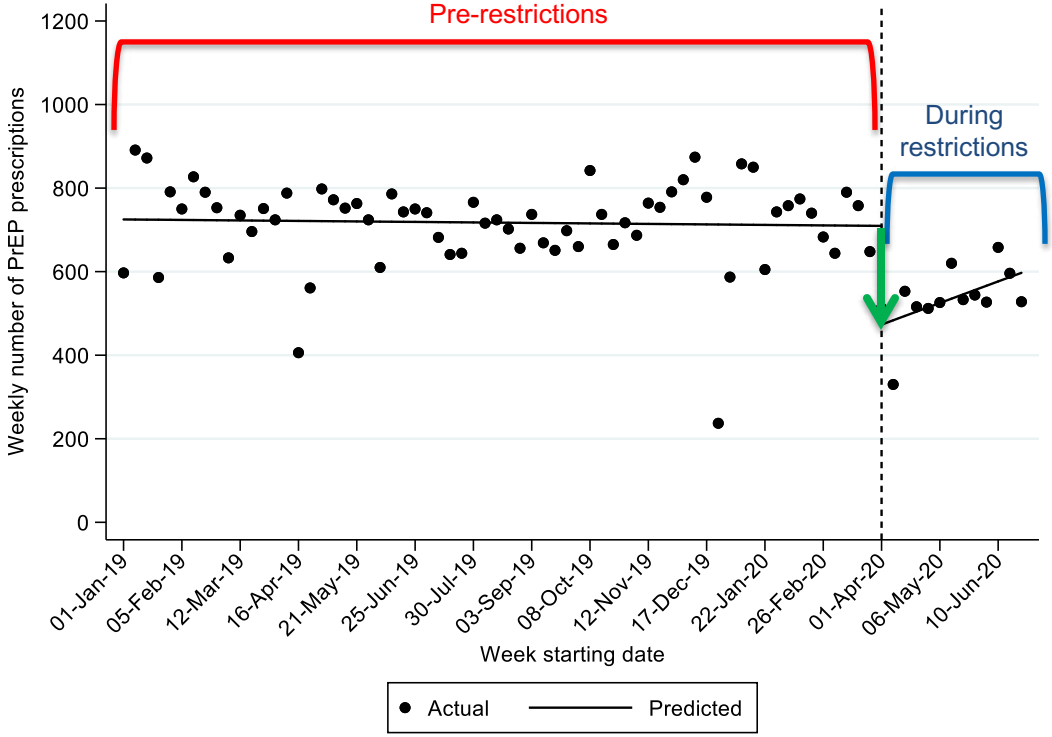

Immediate drop

-226 / week

33% decline

Results

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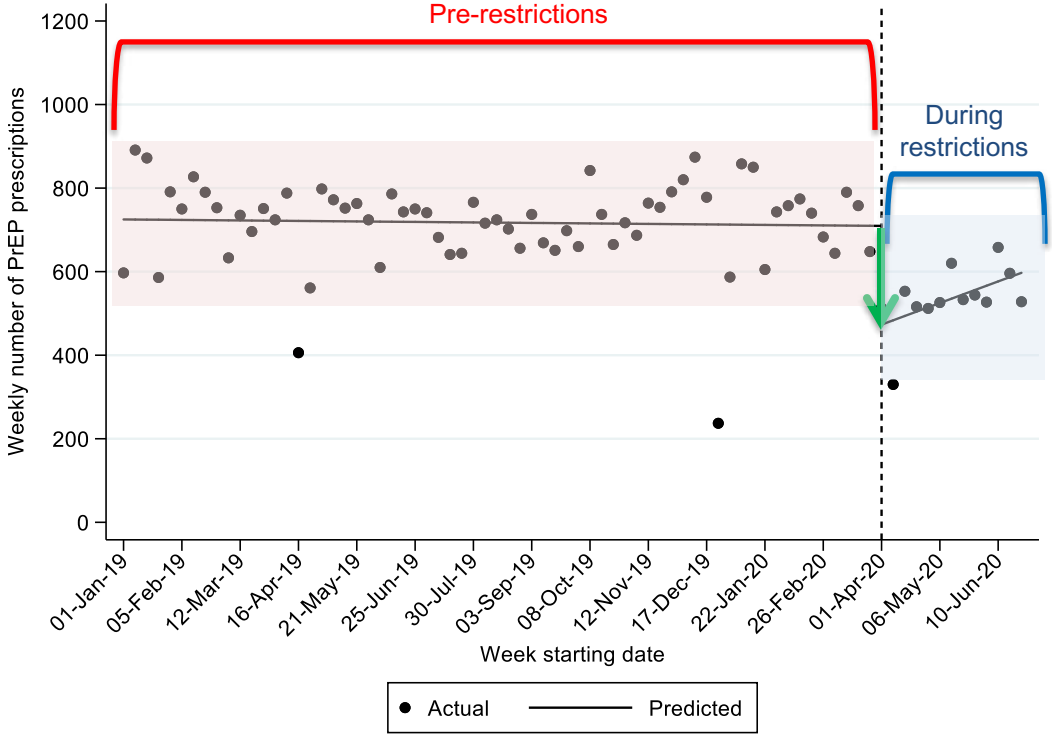
19,879 individuals (96.3% male)



Immediate drop

-226 / week

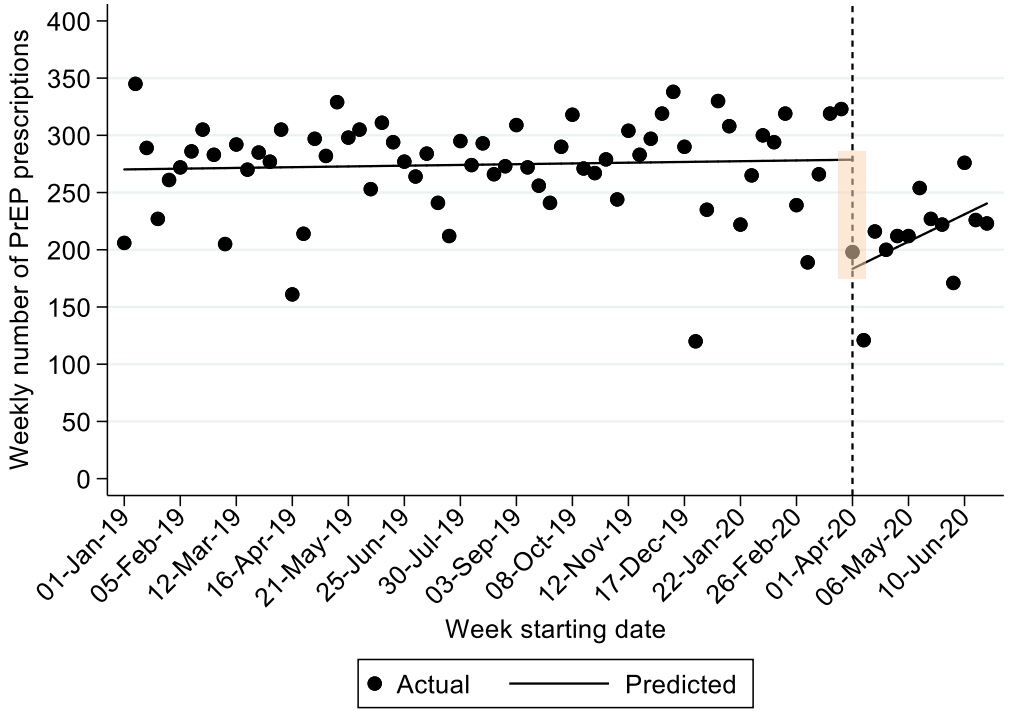
33% decline

Difference in means

24% difference

Victoria

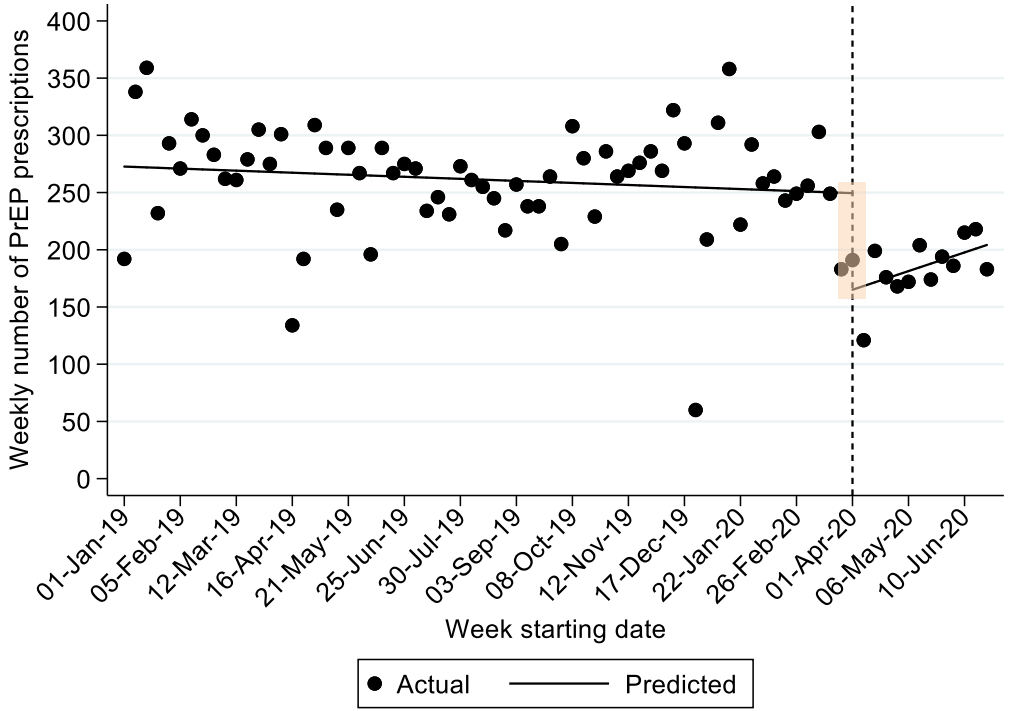
39.6%
of PrEP scripts
in ACCESS



Pre-restrictions mean	274 / week
During restrictions mean	212 / week
Mean difference	23%
Drop	36% *P*<0.001

New South Wales

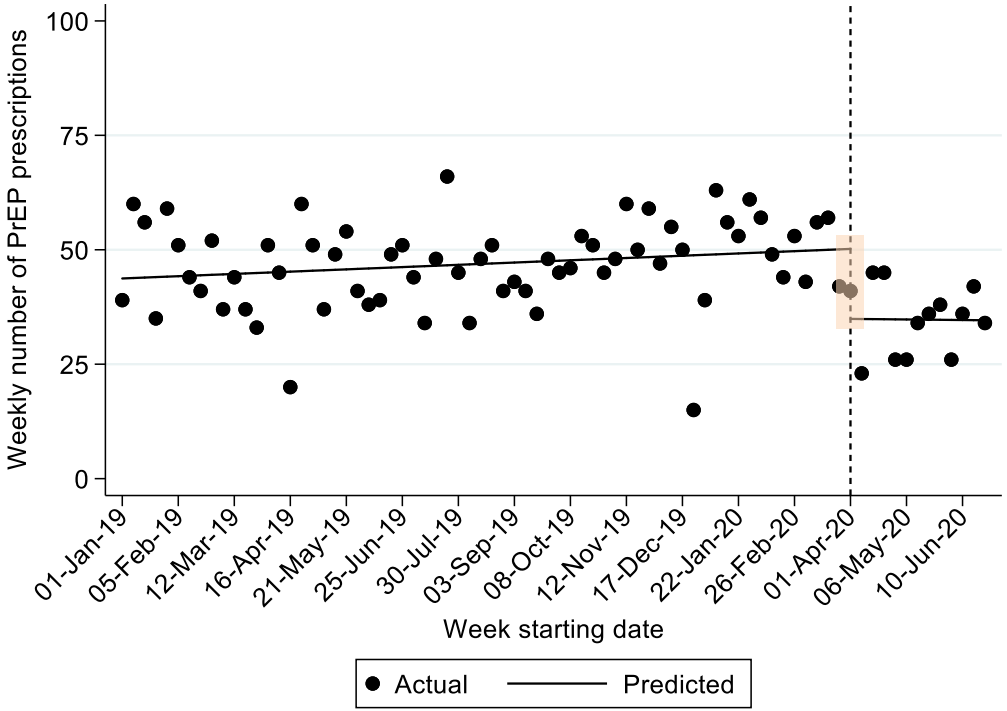
37.3%
of PrEP scripts
in ACCESS



Pre-restrictions mean	261 / week
During restrictions mean	185 / week
Mean difference	29%
Drop	34% *P*<0.001

South Australia

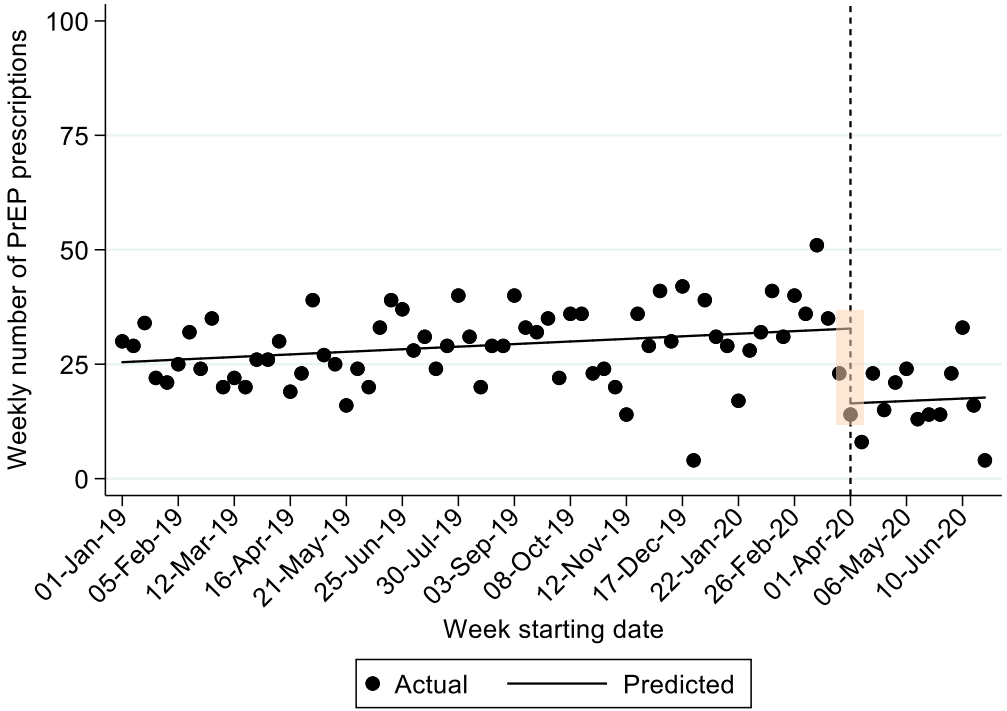
6.7%
of PrEP scripts
in ACCESS



Pre-restrictions mean	47 / week
During restrictions mean	35 / week
Mean difference	26%
Drop	30% *P*=0.001

Australian Capital Territory

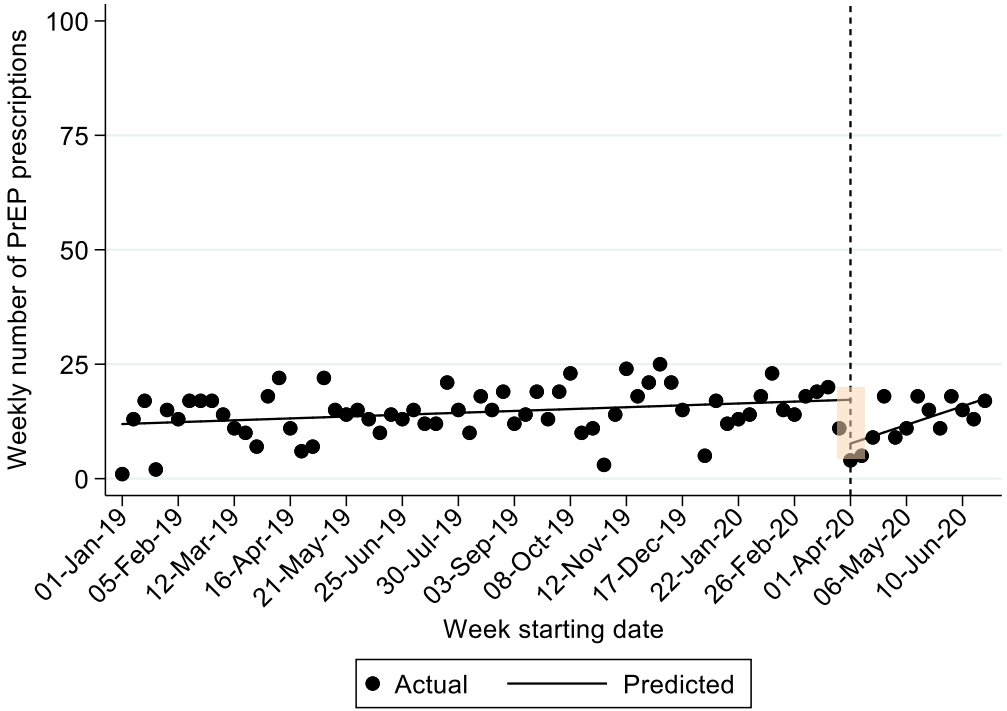
4.1%
of PrEP scripts
in ACCESS



Pre-restrictions mean	29 / week
During restrictions mean	17 / week
Mean difference	41%
Drop	50% *P*=0.001

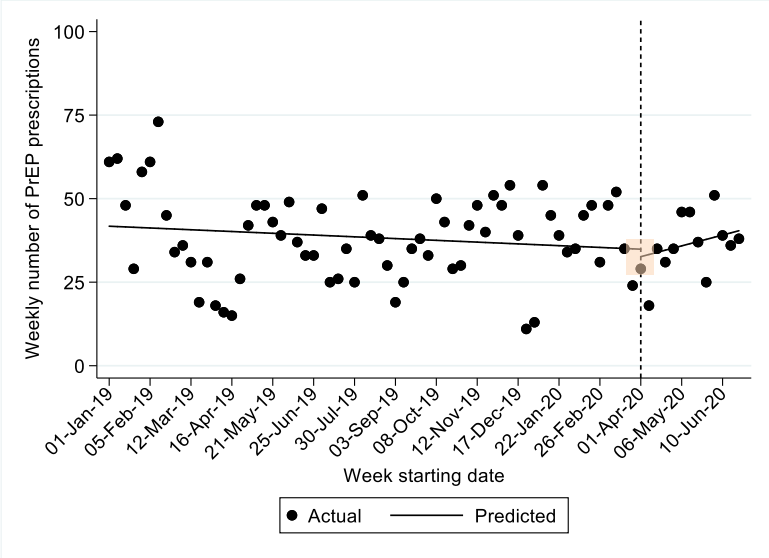
Tasmania

2.1%
of PrEP scripts
in ACCESS



Pre-restrictions mean	15 / week
During restrictions mean	13 / week
Mean difference	14%
Drop	55% *P*=0.002

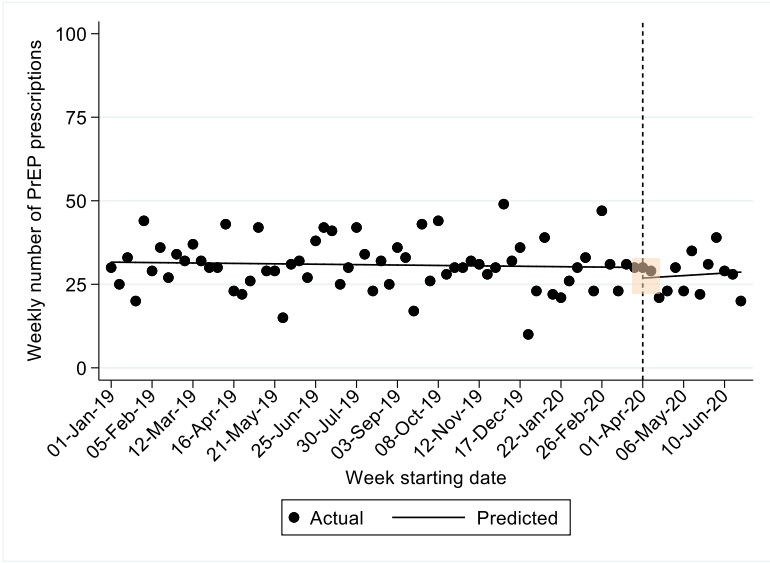
Western Australia



5.7%
of PrEP scripts
in ACCESS

7% drop
P=0.806

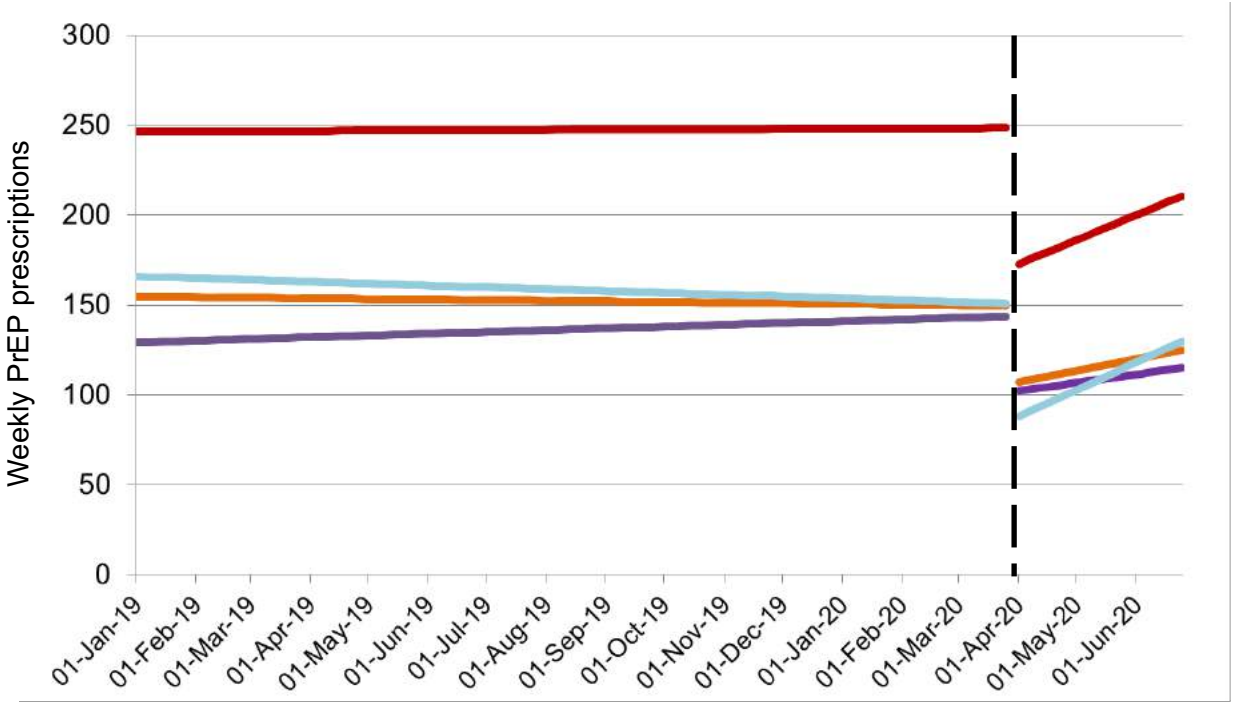
Queensland



4.6%
of PrEP scripts
in ACCESS

8% drop
P=0.404

PrEP prescribing by age agroup



	Immediate drop at April 1st
16-29 years	**41.7%**
30-39 years	**30.4%**
40-49 years	**28.3%**
50+ years	**28.7%**

Summary

- **PrEP prescribing dropped** following COVID-19 restrictions in Australia
- Data suggest some bounce-back in the first 3 months of restrictions
  - Declines likely reflect decreased casual sex
  - May also be due to decreased attendance at clinical services
    - Many clinics offered telehealth
    - Issues around wanting to attend services
  - Ongoing COVID transmission and further lockdowns likely to have additional effects
- **Greater drops** in PrEP prescribing among **young people**
  - Reflective of trends prior to COVID-19
    - PrEPX study – greater cessation among <30 year-olds (Ryan et al, IAS Mexico, 2019)
    - PBS data – greater cessation among <30 year-olds (Medland et al, abstract #184)
  - Differential behaviour change or change in PrEP use
  - Potentially less likely to have longer clinic / GP relationships

Summary

- **Rapid changes in behaviours, PrEP prescribing and PrEP use may have implications for HIV and STI transmission**
  - Not yet clear the impact on HIV / STI testing
  - Less casual sex may be beneficial for STI transmission
  - However, only if testing is maintained / returns to adequate levels once sex restarts
  - If casual sex returns to pre-COVID levels, will need a timely return in PrEP prescribing and use
- GBM may need **support to restart PrEP**
  - HIV testing if restarting PrEP after casual sex
  - Support to transition to on-demand PrEP
- **Ongoing behavioural and epidemiological monitoring** of the effect of COVID-19 on sexual health, HIV and STIs

Other work

- **Abstract #123 & #124**

  Week-on-week changes in sexual behaviour and PrEP use among Australian gay and bisexual men during COVID-19 restrictions

  Garrett Prestage

- **Abstract #114**

  Dramatic decline in HIV pre-exposure prophylaxis (PrEP) use and sexual behaviour among gay and bisexual men following COVID-19 physical distancing restrictions in Australia: Results from a 2014 prospective observational study and implications for trends in HIV.

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Michael Traeger, MSc(Epi)
PhD student, Burnet Institute

michael.traeger@burnet.edu.au