PEP in the Era of PrEP:
A study of PEP use at Gold Coast Sexual Health Service since the widespread introduction of PrEP

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Background

- Pre-exposure prophylaxis for HIV infection (PrEP) became widely available in Australia after being listed on the Pharmaceutical Benefits Scheme (PBS) April 1st, 2018.[1]
- With over 16,000 bottles (30-tabs) of PrEP dispensed in Queensland in the last 12 months, PrEP has become a widely acceptable prevention method for those at risk of acquiring HIV infection.[2]
- As new prevention methods become available in the HIV prevention toolkit, other methods may show a subsequent decrease in use.
- For example, the increase in PrEP use has been linked with decreases in consistent condom use in gay and bisexual men.[3]
- The impact of non-occupational post-exposure prophylaxis for HIV infection (PEP), which has been available as a biomedical prevention method prior to PrEP, has not been studied since the widespread introduction of PrEP.

Method

This study is a 6-month observational cohort study with a comparator cohort.

Data was collected by reviewing client notes. All data was de-identified prior to analysis.

All clients who were prescribed PEP at Gold Coast Sexual Health Service for the study periods were included. The two 6-month study periods were:

- 1 March – 31 August 2016 (pre-widespread PrEP use)
- 1 March – 31 August 2019 (post-widespread PrEP use)

Data fields collected included age, gender, Medicare eligibility, use of PrEP in last 12 months, time since last use and partner HIV status.

Data was analysed using the independent t-test to identify differences between 2016 and 2019.

Results

- Numbers of clients accessing PEP at GCSHS increased by 30% between 2016 and 2019, proportionate with a 33% increase in overall activity for the clinic during this time period.
- There was no significant change in gender of clients in the two timeframes, with the majority of PEP being accessed by males, predominantly men who have sex with men (MSM).
- There was a significant increase in Medicare ineligible clients accessing PEP between the two study periods (p=0.011).
- There was a significant increase in clients who had previously taken PrEP in the last 12 months, accessing PEP (p=0.013).
- There was no significant change in partner status over the two periods, with the majority of clients reporting sex with a partner of unknown HIV status.
- Over the 6 month period in 2019, only three individuals accessed PEP on more than one occasion, compared to one repeat PEP presenter in the 2016 period. Of those who repeatedly attended for PEP, only one was Medicare ineligible.

Aims

This project will examine PEP use at Gold Coast Sexual Health Service (GCSHS) comparing 2016 (pre-PrEP) and 2019 (post-PrEP), to determine if PEP prescribing has changed since the PBS availability of PrEP. The aims are:

- To determine numbers of individuals utilising PEP over a 6-month period in 2016 (pre-PrEP), and the same period in 2019 (post-PrEP).
- To determine differences in clients prescribed PEP, including Medicare eligibility status, previous PrEP use, and partner risk over the two timeframes.

Results: PEP in 6-month study periods 2016 & 2019

	2016 Mar - Aug N (%)	2019 Mar - Aug N (%)	p-value
PEP – number of prescriptions	55	72	
Gender			0.273
Male	48 (87)	61 (85)	
Female	6 (11)	8 (11)	
Transgender	1 (2)	3 (4)	
Average age (years)	32.5	36.7	0.027
Mode	28	44	
Max age	57	75	
Min age	17	16	
Medicare Status			0.011
Medicare eligible	52 (95)	58 (81)	
Medicare ineligible	3 (5)	14 (19)	
Taken PrEP in last 12 months			0.013
Yes	1 (2)	9 (12.5)	
No	54 (98)	63 (87.5)	
Partner status			0.364
HIV positive	6 (11)	12 (17)	
Unknown	41 (75)	48 (67)	
Partner on PrEP	2 (4)	5 (7)	
HIV negative (unverified)	6 (11)	7 (10)	
Repeat PEP presentation within 6-month study period	1	3	
Medicare status of repeat attendee - eligible	1	2	
Medicare status of repeat attendee – ineligible	0	1	

Discussion

- Despite widespread availability of PrEP, there has been no reduction in numbers accessing PEP at our service.
- The increase in clients accessing PEP, who had taken PrEP within the past 12 months reflects increased availability of PrEP in 2019. However, it also suggests that for some people there are issues of inconsistent adherence to PrEP, despite ongoing HIV risk.
- Clinicians should continue to discuss the importance of taking PrEP as prescribed with these clients, and trouble-shoot issues of access, cost, side effects, PrEP 'fatigue' and perceptions of HIV risk. Repeat presentations for PEP may be a surrogate marker that the individual is indicated for PrEP, or has adherence issues when it has previously been prescribed. Access to PEP remains an important option for those whose PrEP adherence is inconsistent.
- This study refutes any concern that Medicare ineligible clients may access PEP as a substitute for PBS-subsidised PrEP, which requires Medicare eligibility. Although there has been a significant increase in Medicare ineligible clients accessing PEP in our service, most have not been repeat attenders.
- The ability to discuss or determine partner HIV status prior to engaging in high-risk sex is still lacking, for many MSM on the Gold Coast, identifying a need for further work to enable discussions to occur that are deemed safe and honest by both partners.
- This data will form part of a collaborative project with other large public sexual health services examining PEP prescribing since widespread PrEP use across South-East Queensland.

References

1. Australian Government Department of Health, Pharmaceutical Benefits Scheme. 2018. https://www.pbs.gov.au/industry/listing/elements/pbac-meetings/pbac-outcomes/2017-12/positive-recommendations-12-2017.pdf [verified 11 March 2019].
2. Australian Government Department of Health, Pharmaceutical Benefits Scheme https://www.pbs.gov.au/info/browse/statistics [verified August 2019].
3. Holt M et al. Community-level changes in condom use and uptake of HIV pre-exposure prophylaxis by gay and bisexual men in Melbourne and Sydney, Australia: results of repeated behavioural surveillance in 2013–17. Lancet HIV 2018; 5 e448–56.

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