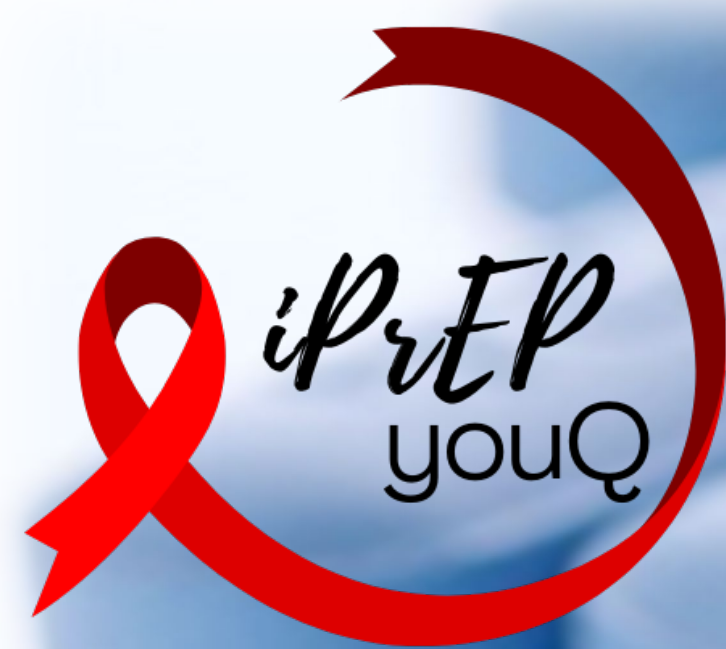




Investigating the factors associated with awareness and use of PEP and PrEP among Queensland tertiary students



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Background

HIV notifications among young Australians increases 13-fold by the time they reach their early 20's [1]. As young adults enter university life, their patterns of behaviour change placing them at increased risk of sexually transmissible infections and HIV increases [2-5]. Pre-Exposure Prophylaxis (PrEP) and Post-Exposure Prophylaxis (PEP) are effective biomedical HIV prevention strategies [6-7], however, little is known about PrEP / PEP knowledge and practices among young Australians. This study investigated awareness and use of PrEP / PEP among Queensland Tertiary students.

Methods

Using data from the 2019 Tertiary Students Sexual and Reproductive Health Survey, descriptive, univariate, and multivariate analysis were conducted (using stata17.0) to investigate potential associations of key variables with PrEP / PEP knowledge and practices. Factors significantly associated with the outcome of interest in the univariate analysis or known to be important factors of HIV risk based on literature were included in the multivariate model. PrEP eligibility criteria were used to assess those eligible for, and currently using PrEP.

Results

The sample consisted of 4,291 tertiary students (median age 21 years). Participant demographics are presented in Table 1.

Factors significations associated with increased awareness of PrEP / PEP (table 2) included:

- Older age, compared to 18-19-year old's (aORs table 2)
- Identifying as non-binary / gender-diverse (aOR PrEP, 8.54 PEP 3.91, p<0.05) or a different gender identity (for PEP aOR 11.81, p<0.05) compared to those identifying as male
- Identifying as MSM* (aOR PrEP 73.25, PEP 24.35, p<0.05), or a man who has sex with men and women (aOR PrEP 11.11, PEP 6.90, p<0.05) compared to heterosexual identifying men
- Having ever had HIV testing (aOR PrEP 2.28, PEP 2.59, p<0.05)
- Condom usage compared to never using condoms (aORs table 2)

Compared to domestic Australian born students (table 2):

- International students had significantly lower odds of PrEP awareness (aOR 0.64, p<0.05)
- International students also had lower odds of PEP awareness though not significant in the final model (aOR 0.93, p>0.05)
- Domestic-overseas born students had lower odds of PrEP & PEP awareness however were also not significant in the final model (aOR PrEP 0.84, PEP 0.83, p>0.05)

Of those that met PrEP eligibility criteria there was high awareness of PrEP (71.2%) and PEP (62.7%). PrEP eligible participants were mostly under 24-years of age (61.0%), with 75.0% reporting never using PrEP.

* MSM = Men who have sex with men

Table 1: Participant Demographics		N = 4,291	%
Age median age = 21 (IQR=19-25)	18-19 years	1,158	27.0
	20-24 years	1,953	45.5
	25-29 years	640	14.9
	30-34 years	243	5.7
	35-39 years	143	3.3
	over 40 years	154	3.6
Gender Identity	Man	1,264	29.5
	Woman	2,921	68.1
	Non-binary, gender diverse	77	1.8
	Different identity	9	0.2
Student Enrolment	Domestic (Australian born)	2,925	68.2
	Domestic (Overseas born)	653	15.2
	International	713	16.6
Sexual Identity	Heterosexual	2,445	57.0
	MSM	99	2.3
	Men who have sex with men and women	108	2.5
	Women who have sex with women	66	1.5
	Women who have sex with men and women	468	10.9
	Unsure	1,105	25.8

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Table 2: Adjusted odds ratios for PrEP and PEP awareness					
		PrEP		PEP	
		aOR	p-value	aOR	p-value
Age	18-19 years	Ref		Ref	
	20-24 years	2.68	0.00	2.12	0.00
	25-29 years	2.65	0.00	2.24	0.00
	30-34 years	2.86	0.00	2.33	0.00
	35-39 years	1.98	0.02	1.97	0.02
	40+ years	1.17	0.63	1.08	0.82
Gender	Man	Ref		Ref	
	Woman	1.48	0.05	1.44	0.08
	Non-binary / Gender diverse	8.54	0.00	3.91	0.00
	Different identify	1.00	(empty)	11.81	0.03
Sexual Identity	Men who have sex with women	Ref		Ref	
	MSM	73.25	0.00	24.35	0.00
	Men who have sex with men + women	11.11	0.00	6.90	0.00
	Men who are unsure	3.46	0.00	1.80	0.12
	Women who have sex with men	0.62	0.00	0.59	0.00
	Women who have sex with women	3.89	0.00	3.20	0.00
	Women who have sex with men + women	1.13	0.49	0.94	0.74
Ever had HIV test	No	Ref		Ref	
	Yes	2.28	0.00	2.59	0.00
	Unsure	0.92	0.63	1.02	0.93
Condom usage	Never	Ref		Ref	
	Rarely	1.27	0.22	1.62	0.02
	Sometimes	1.81	0.00	1.54	0.03
	Most of the time	2.02	0.00	1.92	0.00
	Always	1.72	0.00	1.92	0.00
	N/A	2.37	0.02	1.91	0.09
Student Enrolment	Domestic Australian born	Ref		Ref	
	Domestic overseas born	0.84	0.25	0.83	0.26
	International	0.64	0.01	0.93	0.69

Due to collinearity the following variable were removed from sexual identity field 'women who are unsure' and 'unsure'
'Number of casual partners' and 'country of birth prevalence' were removed as they were not significantly in the final model

Discussion

Our findings suggest many eligible young people are not accessing HIV prevention options, despite government subsidised access now available in Australia for people under the age of 18 [8].

In our study, PrEP / PEP awareness significantly increased with age and being a domestic Australian born student, indicating a gap in biomedical HIV prevention knowledge in people under the age of 20 and among those born overseas.

Of those eligible for PrEP, the majority were under 24-years of age and reported never having accessed PrEP, signifying a need to improve PrEP awareness among young people who may be at risk of HIV.

This research highlights the need for future health promotion opportunities targeting young people. Improving the awareness of HIV prevention among young people could be an important factor in reducing the age-related trajectory of risk seen among youth at risk of HIV in Australia [1].

Addressing our identified gaps in PrEP / PEP awareness will help to improve the sexual health outcomes for young Australians at risk of HIV.

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