

# HIV Post-Exposure Prophylaxis in an Australian Regional Centre: Outcomes from 2011-2014.

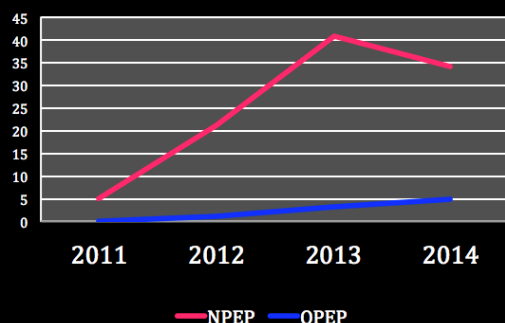
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## Background

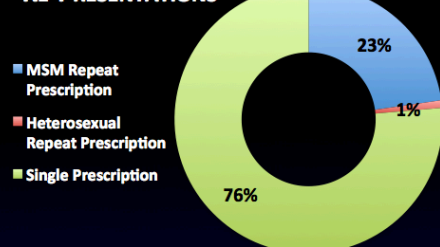
The last decade in Australia has seen the number of HIV diagnoses rise each year. In 2013, 1236 new cases of HIV were diagnosed creating an estimate of 26 800 individuals living with HIV in Australia. The Cairns region in far north Queensland has a population of 224,000 with 450 individuals living with HIV. This places Cairns as the region with the highest prevalence of HIV per capita outside of a metropolitan centre in Australia.<sup>1,2</sup> These figures demonstrate the significant need for further measures to prevent HIV transmission. Post-exposure prophylaxis (PEP) is a pharmacological method of preventing HIV seroconversion after a risk exposure. PEP involves a 28-day course of anti-retroviral medications started within 72 hours of the exposure event. This study aims to characterise the pattern of PEP use, exposure type, re-presentations and patient outcomes for all individuals prescribed PEP in the Cairns region from 2011-2014. The results will represent the last snapshot of PEP utilisation prior to the introduction of pre-exposure prophylaxis.

## Results

### ANNUAL PEP PRESCRIPTIONS



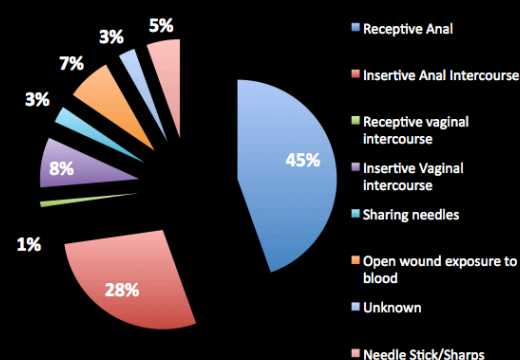
### RE-PRESENTATIONS



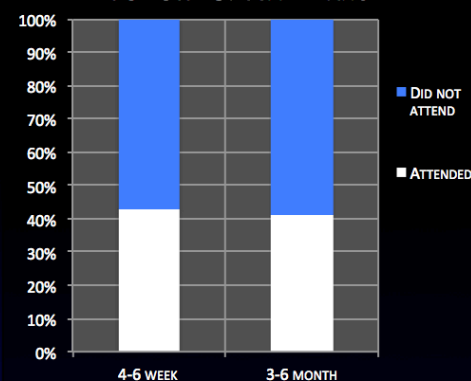
110 prescriptions for post-exposure prophylaxis were identified from 2011-2014. Of these 92% presentations were non-occupational exposures and 8% for occupational exposures. The number of yearly prescriptions increased 8-fold from 2011 to 2013. Men-who-have-sex-with-men (MSM) accounted for 74.5% of prescriptions and 16.5% heterosexuals. 10% of all individuals receiving PEP identified as Aboriginal. Unprotected receptive anal intercourse was the most frequent risk exposure.

26 of the 110 prescriptions (24%) were for re-presentations. All re-presentations were for non-occupational exposures with 92% for MSM. 62% of these individuals re-presented on 3 or more occasions and one individual presented 7 times in a 2-year period. The follow-up rates post PEP were low with 43% returning at the 4-6 week follow up and 41% at 3-6 months. Of all the individuals who received PEP through our service, only one individual went on to seroconvert to HIV. This individual was lost to follow-up and returned to the service 7 months later with a positive diagnosis. This case is not considered a PEP failure due to the individual's ongoing high-risk behaviour post-PEP.

### EXPOSURE TYPE



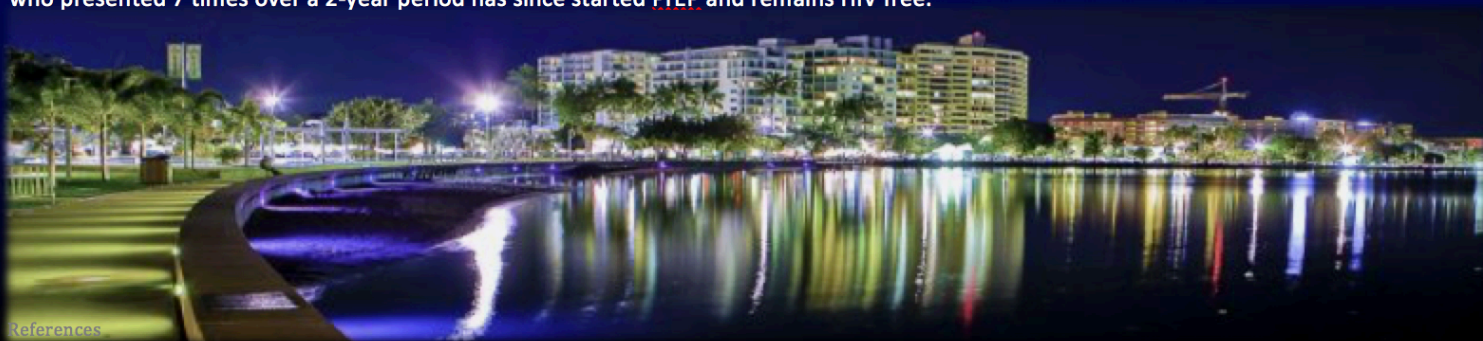
### FOLLOW- UP ATTENDANCE



## Discussion

The increasing rates of PEP prescription over the last 4 years are attributable to both an increase in demand and an increase in education and awareness campaigns targeted at the MSM population and medical practitioners. The 10% prevalence of Aboriginal individuals is an encouraging reflection of Cairns Sexual Health's active involvement with promoting safe-sexual behaviours within this population. Whilst the numbers of MSM and heterosexuals accessing PEP through the service closely reflects the proportion of those diagnosed with HIV in Australia, 33% of the new HIV diagnoses in Cairns for 2014 were in heterosexuals. This suggests that greater awareness of PEP needs to be achieved in at-risk heterosexuals - although a cost-effective method to achieve this is not clear.

The follow-up rate of 41% is lower than expected, however is considerably influenced by the transient population in the Cairns Region with 22 individuals known to have left the district prior to the follow-up time. Re-presentation rates were high for MSM recipients reflecting the significant challenge in encouraging behavioural change for individuals who partake in high-risk sexual behaviours. One individual who seroconverted to HIV presented for PEP on three occasions and was later lost to follow-up. This case emphasises the importance of active follow-up for HIV risk-reduction counselling. The Cairns Sexual Health Service is currently developing a formal follow-up system to improve future outcomes through education about safe-sexual behaviours and as an opportunity to discuss pre-exposure prophylaxis (PrEP). One individual who presented 7 times over a 2-year period has since started PrEP and remains HIV free.



## References

1. The Kirby Institute. HIV, viral hepatitis and sexually transmitted infections in Australia Annual Surveillance Report 2014. The Kirby Institute, UNSW, Sydney NSW 2052.
2. Queensland Health. HIV in Queensland. Queensland Health, Brisbane QLD 4001. July 2014..