Is early antiretroviral therapy (ART) achievable in People Who Inject Drugs (PWIDs) diagnosed with HIV?

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Background

Evidence for antiretroviral therapy (ART) as HIV treatment as prevention (TasP) in parenteral transmission is limited with modelling studies suggesting scale up of ART in this population plays a smaller role in reducing onward transmission than reducing injecting risk. However, early ART initiation has significant individual health benefits with international guidance recommending ART, regardless of CD4 count, from September 2015. Delay in ART initiation to people who inject drugs (PWID) may be due to perceived or actual poor engagement in care and ART adherence. Since the transition to providing early ART worldwide, there is a lack of real world evidence on whether this is achievable in PWID.

The change in international guidance in September 2015 coincided with TasP being implemented as an intervention to tackle an ongoing HIV outbreak amongst PWID in Glasgow City, Scotland.

Methods

We sought to compare time from HIV diagnosis to ART initiation in PWID with another risk group, men who have sex with men (MSM), before and after September 2015.

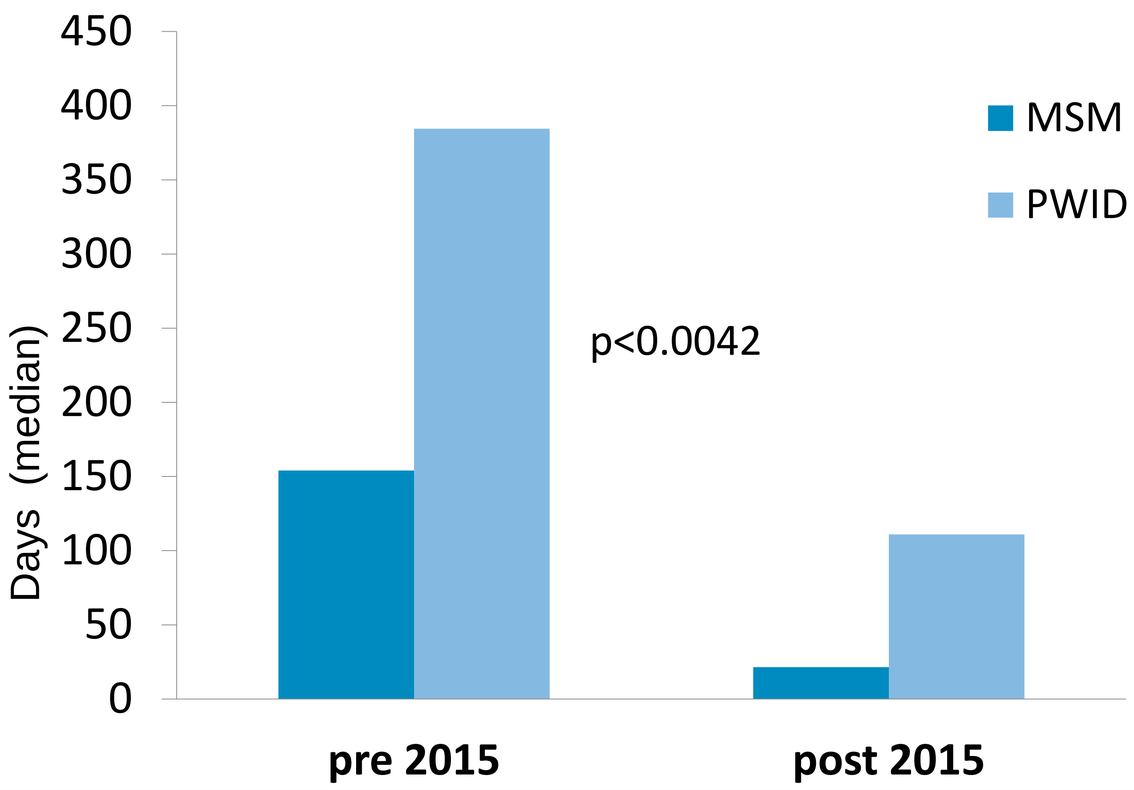
A clinical HIV database was interrogated to identify all those diagnosed with HIV, in Glasgow, from 1 June 2012 – 31 May 2018, with parenteral drug use or MSM identified as a risk factor for HIV acquisition, and who attended our service for first contact with HIV services. Data were collected on basic demographics, date of diagnosis, date of ART start and CD4 count at diagnosis. Analysis focussed on those with baseline CD4 count over 350 cells/cmm, in each group.

Results

Table 1. Basic demographics of study population

	PWID	PWID	MSM	MSM
	Pre Sept 2015	**Post Sept 2015**	**Pre Sept 2015**	**Post Sept 2015**
Total	32	45	72	38
Gender (Male)	23/32 (71.8%)	31/45 (68.9%)	72/72 (100%)	38/38 (100%)
Mean age at diagnosis (years)	38	39	34	35
Mean CD4 count at diagnosis (cells/cmm)	615.6	563.9	614.7	572.1

Figure 1. Time to ART for PWID and MSM, with baseline CD4 counts over 350 cells/cmm0



The median time from HIV diagnosis to ART initiation in MSM was 154 days (IQR 507) before September 2015 and 22 days (IQR 12) after the change in international guidance – **an 86% reduction**.

In PWID, median time from HIV diagnosis to ART initiation before September 2015 was **more than twice as long** than for MSM at 385 days (IQR 569). After the change in guidance, median time to ART initiation for PWID was 111 days (IQR 189) - **a 71% reduction** in time to ART initiation but **more than five times longer** than that the time observed for MSM.

Conclusion

Within this cohort, the newly diagnosed PWID and MSM risk groups are similar in terms of baseline CD4 count. After September 2015, an 86% reduction in time from diagnosis to ART initiation was observed in MSM, compared to 71% reduction in the PWID group, with a much larger individual variation seen in the PWID group. These results demonstrate that early ART is achievable in this complex group but inequity remains between PWID and MSM in early ART provision, despite TasP being implemented as an intervention during an outbreak of HIV amongst PWID in Glasgow City. This is likely due to the complexity of managing HIV in PWID within the traditional HIV service model, which requires more resource and the development of innovative models of HIV care to deliver early ART to this multiply disadvantaged group.

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