Mortality and causes of death among HIV patients in Brighton and Hove 2017-2020

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Background

- In 2017, Brighton and Hove became the first Fast Track City in the UK giving it both political and clinical commitment to achieving the 'Getting to Zero' targets by 2030.
- The focus of this audit was to determine progress toward the getting to 'zero AIDS-related deaths' target, and understand the proportions of other potentially preventable causes of death¹.
- Since 2013, HIV deaths in London have been audited annually by the London HIV Mortality Review Group².
- Here we present the results of the first audit of HIV deaths in Brighton and Hove, over the period 2017-2020; an extension of the London review.
- The results will assist with the rollout of the National HIV Mortality Review. They will reflect the demographics of people in our cohort; predominantly white males, most of the population over 35 and the majority of transmission through sex between men³.

Methods

- Multiple sources of information were extensively searched for each patient and data entered onto the PHE/BHIVA online reporting form.
- Information submitted included:
- Lifestyle risk factors ART use and clinical
- Comorbidities
- Cause of death
- End of life care

Not HIV-related:

- Suicide

HCV-related

Risk factor-related

Vaccine-preventable

markers

- Potentially preventable deaths were categorised as:

HIV-related:

- AIDS-defining illness
- <1 year since diagnosis
- Not virally suppressed

Results

- There were 75 deaths in total across the four years. Deaths were predominantly in males (92%; 69/75).
- Cause of death was ascertained for 99% (74/75) of people.
- Causes of death overall are illustrated in Figure 1.
- Figure 2 shows causes of potentially preventable deaths, accounting for 28/75 (37%).
- Directly HIV-related deaths accounted for 7% (5/75).

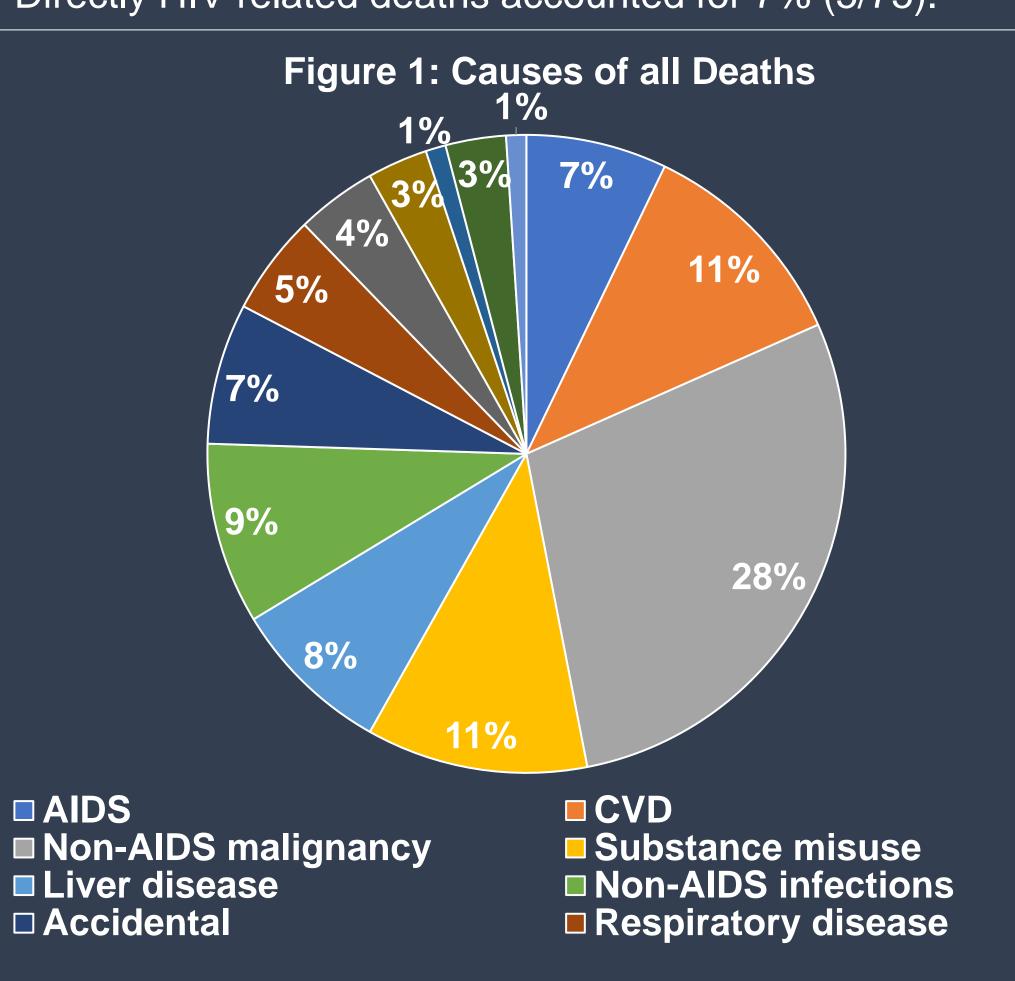
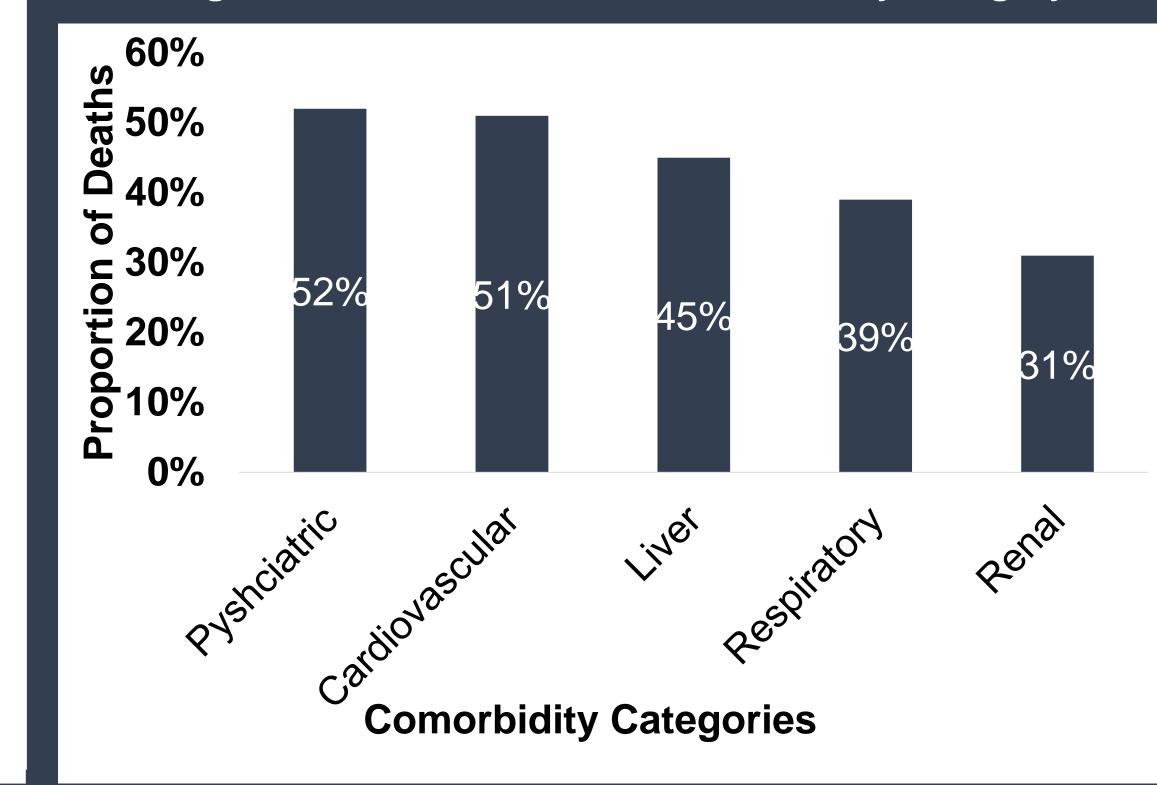


Figure 3: Prevalence of Comorbidities by Category



- 99% (74/75) had at least one comorbidity (Figure 3).
- 52% (39/75) of people had a mental illness, of which three quarters were depression.
- 67% (50/75) of people had at least one lifestyle risk factor in the year before death (breakdown in Figure 4)
- Those due to lifestyle risk factors were the most common among potentially preventable deaths (71%; 20/28).

Figure 2: Causes of Potentially Preventable Deaths

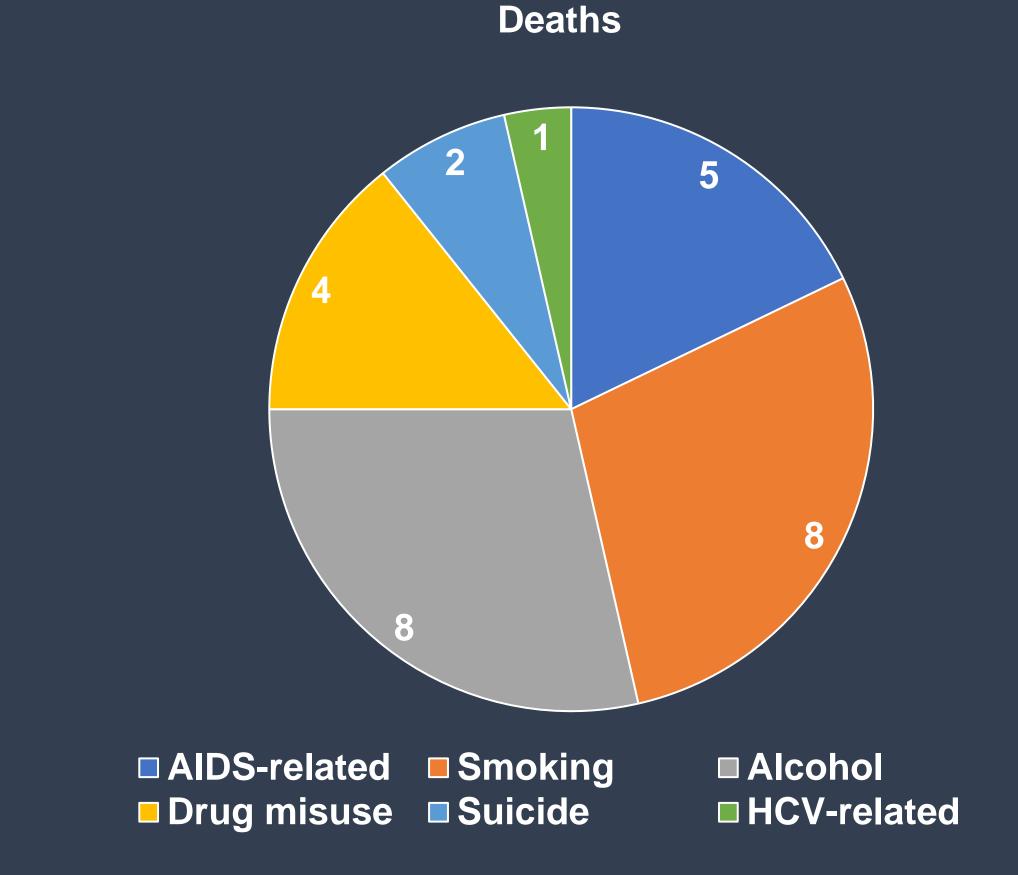
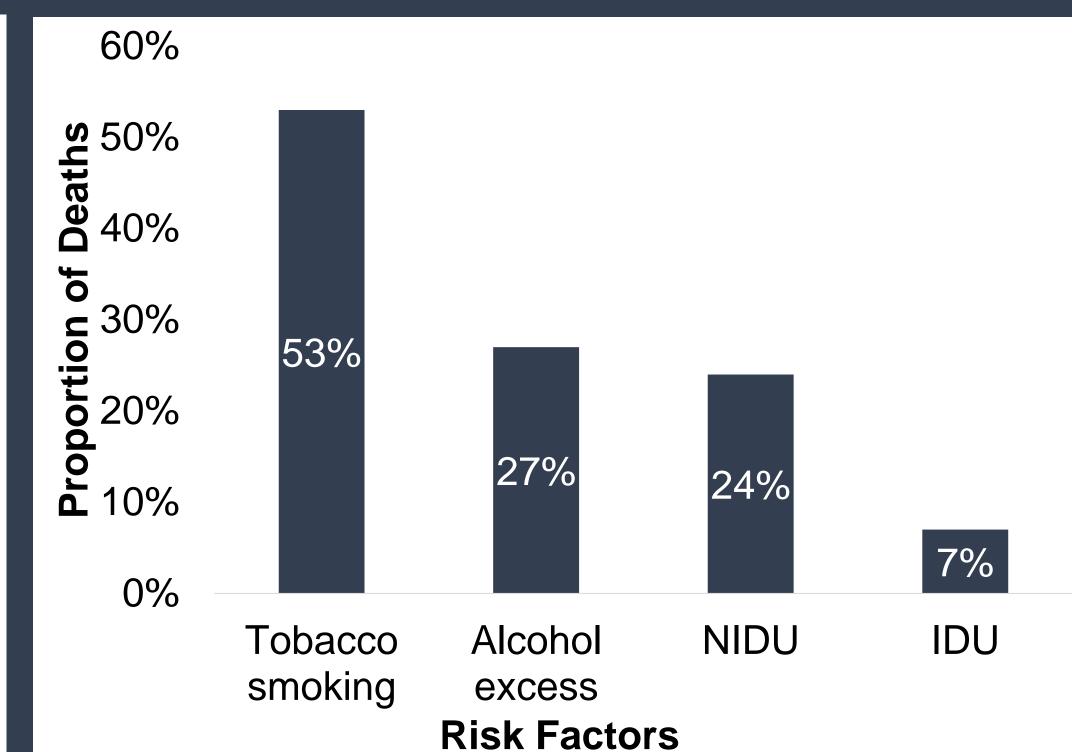


Figure 4: Prevalence of Risk Factors in Year Before Death



Discussion and Conclusions

- In Brighton and Hove, we are starting from a low baseline of AIDS-related deaths.
- This makes it difficult to significantly improve each year but is it a positive from the perspective of ongoing care for our cohort.
- 40% (2/5) AIDS-related deaths were related to late diagnosis, and an additional 40% were associated with poor ART adherence.
- The numbers of potentially preventable deaths from non-AIDS causes remain high, due to a higher prevalence of risk factors than the general population compounded with the impact of HIV infection⁴⁻⁶.
- Furthermore, comorbidities were common, particularly depression and cardiovascular disease.
- Regular clinical visits provide opportunities to monitor and review medications and clinical markers. However, these meetings also act as a gateway to advocate for heathy lifestyles, providing support and referrals where necessary to help reduce the impact of smoking, substance misuse, and comorbid conditions.
- We have a responsibility to reduce *all* potentially preventable deaths and by targeting those due to lifestyle factors and comorbidities, we may be able to significantly reduce allcause premature mortality among people living with HIV in Brighton and Hove.

References

- UNAIDS. Getting to zero: 2011-2015 strategy. Geneva; 2010. Croxford S, Miller R, Post F, Harding R, Lucas S, Figueroa J, et al. Cause of death among HIV patients in
- London in 2016. HIV Medicine. 2019;20(9):628-33. Fast Track Cities. Brighton and Hove Towards Zero HIV Taskforce. Year 1 report. 2018.
- Durvasula R, Miller TR. Substance abuse treatment in persons with HIV/AIDS: challenges in managing triple diagnosis. Behav Med. 2014;40(2):43-52.
- Helleberg M, Afzal S, Kronborg G, Larsen CS, Pedersen G, Pedersen C, et al. Mortality Attributable to Smoking Among HIV-1-Infected Individuals: A Nationwide, Population-Based Cohort Study. Clinical Infectious Diseases 2013:56(5):727-34.
- Helleberg M, May MT, Ingle SM, Dabis F, Reiss P, Fätkenheuer G, et al. Smoking and life expectancy among HIV-infected individuals on antiretroviral therapy in Europe and North America. Aids. 2015;29(2):221-9.









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