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Using record linkage to assess the impact of late presentation for care and treatment on short-term mortality among HIV-infected adults in rural South Africa

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Objectives

To assess the impact of late presentation (CD4 cell count <200 cells/μl at presentation) for care and treatment on short-term mortality (death within a year of presentation) among HIV-infected adults in rural South Africa.

Approach

We applied deterministic and probabilistic record linkage approaches to link adult patients seeking care and treatment for HIV from a health facility between 2007 and 2013 to population under continuous surveillance by the Agincourt Health and Demographic Surveillance System (HDSS) in rural northeast South Africa. The resulting record-linked dataset was thereafter analysed to estimate short-term mortality (death within a year of presentation) differences in late presenters (initial presentation at health facility with CD4 cell count less than 200 cells/μl) and early presenters (presentation with CD4 cell count of 200 or more cells/μl). In the linked dataset, CD4 cell count was extracted from the health facility database where as date of death came from the HDSS database.

Results

A total of 3,553 patients who sought care and treatment for HIV at Bhubhezi clinic between 2007 and 2013 were linked to the Agincourt HDSS surveillance population. Proportion of patients classified as late presenters was 60.9%. Short-term mortality was 8.9% (317/3,553): 11.1% among those who presented late and 5.5 % among those who presented early ($P < 0.001$).

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Conclusion

Record linkage facilitated the assessment of the impact of late presentation for care and treatment on short-term mortality among HIV-infected adults in rural South Africa. In the population studied, late presentation is high and is contributing to high mortality among people living with HIV. Strategies that would facilitate early presentation are needed in order to reduce mortality among people living with HIV.