SHIFTING MORTALITY TRENDS AMONG PERSONS WITH HIV AND INJECTION DRUG USE OVER 30 YEARS

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AIDS Linked to the IntraVenous Experience

Background

The AIDS Linked to the Intravenous Experience (ALIVE) study is a long standing community based cohort study based in Baltimore, MD since 1988. The study recruited people with history of injection drug use (PWID), and followed up semiannually with survey questionnaires, physical examinations, and laboratory testing. Since the initial cohort, four waves of recruitments were conducted in 1988-1989, 1994, 1998, and 2005-2008. The ALIVE study is a reflection of the HIV epidemic within the key PWID population in the United States.

With secular changes in primary etiologic factors (ART uptake, aging, drug use behavior), the landscape of cause-specific mortality in the PWID population might have changed over time. The purpose of this study is to describe the all cause and cause-specific mortality within this population.

Mortality Ascertainment

All enrolled participants were matched with the National Death Index record.

Three independent physician reviewers reviewed the causes of death and categorized them into 3 major groups (AIDS/infectious disease deaths, chronic disease related deaths, overdose/drug/violence-related deaths)

Drug Abuse Information

Active injection drug use information was collected through semi-annual surveys. Drug abuse information was further assessed through the Drug Abuse Screening Test (DAST-20), which is a validated 20-item instrument to evaluate the severity of drug abuse. A score of 11-15 is considered a substantial drug problem, and a score over 16 is considered a severe drug problem.

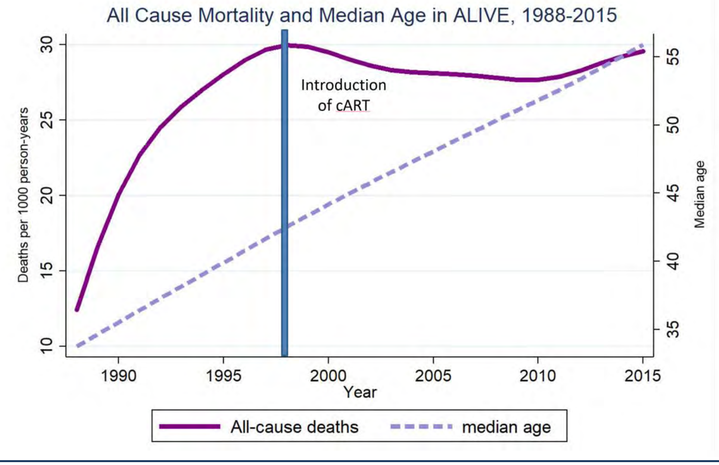
Baseline Characteristics

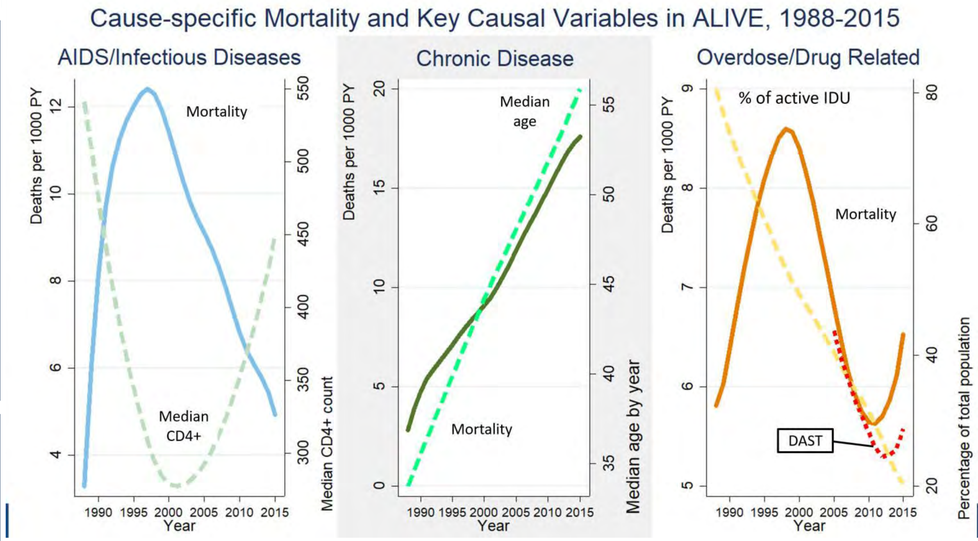
	Dead	Alive	P-value
Age (IQR)	37 (32-42)	35 (30-42)	<0.001
Male gender (%)	1594 (77.0)	1959 (71.9)	<0.001
Black (%)	1828 (88.3)	2194 (80.5)	<0.001
High school (%)	873 (42.3)	1230 (45.3)	0.04
HCV status (%)	1315 (91.1)	1608 (77.2)	<0.001
HIV status (%)	767 (62.0)	471 (38.1)	<0.001

There were total of 4,794 participants, 1,238 infected with HIV, and 75,327 person-years of follow-up with 2,070 observed deaths.

Among all deaths, 714 (35%) were AIDS and infectious disease related, 796 (39.2%) chronic disease related, and 522 (25.7%) overdose/drug/violence related.

Among all deaths in HIV+ participants, 589 (59%) were AIDS and infectious disease related, 216 (21.8%) chronic disease related, and 186 (18.8%) overdose/drug/violence related.





- Leading chronic disease related deaths in ALIVE: cardiovascular deaths (N=241), malignancy deaths (N=206), liver disease deaths (N=123), and cerebrovascular deaths (N=51).
- Among all overdose/drug/violence-related deaths, 350 (67%) died from overdose/poisoning.

Conclusion

- All-cause mortality rate among PWID have plateaued since 2001
- Expected decline in AIDS-related mortality occurred concurrent with ART uptake
- Rising rates of chronic disease mortality demonstrate the critical importance of chronic disease management in the aging population
- Recent resurgence in drug-related deaths is likely related to non-injection and prescription opioid use and represents an urgent need for intervention in this population