HIV/AIDS mortality in Europe
Monitoring mortality among injecting drug users?

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• Reducing mortality should be a priority of HIV/AIDS policies
• Indicator of ART coverage
• Reduction of mortality is achievable in the EU
• Access to ART should be equitable for all groups
• HIV/AIDS is one of the common causes of deaths reported in cohorts (with external causes of deaths: overdoses, suicides, liver disease, other diseases…)

• QUESTION: How many HIV/AIDS deaths in Europe are accounted for by IDUs? What are the trends?
Objectives

To analyse the numbers and trends of HIV/AIDS related deaths in Europe

• to describe mortality country differences and trends
• to estimate HIV/AIDS mortality attributable to IDU
Methods – source 1

• Two European level sources:
  • EUROSTAT and HIV/AIDS surveillance

• EUROSTAT
  • From general mortality registries (national statistics)
  • Underlying cause of death in medical death certificates coded AIDS (HIV-disease) B20-B24
  • No information on risk group

• B20 Human immunodeficiency virus [HIV] disease resulting in infectious and parasitic diseases
• B21 Human immunodeficiency virus [HIV] disease resulting in malignant neoplasms
• B22 Human immunodeficiency virus [HIV] disease resulting in other specified diseases (e.g. encephalopathy HIV dementia)
• B23 Human immunodeficiency virus [HIV] disease resulting in other conditions (e.g. haematological and immunological abnormalities)
• B24 Unspecified human immunodeficiency virus [HIV] disease (‘AIDS’ and ‘AIDS related complex’)
Methods – source 2

- HIV/AIDS SURVEILLANCE - ECDC
  - Data from national AIDS monitoring systems
  - Reports of all deaths among AIDS cases
  - Causes are not specified
  - The risk group (e.g. IDUs) is reported – we use this to estimate the proportion of HIV/AIDS Eurostat deaths attributable to IDU

Standardised HIV/AIDS death rate per 100000 inhabitants in Europe in 2010

Source: Eurostat HIV-AIDS (ICD 10 B20-B24)
Standardised HIV/AIDS death rate per 100000 inhabitants in 1994-2010

Source: Eurostat HIV-AIDS (ICD 10 B20-B24)
Standardised HIV/AIDS death rate per 100,000 inhabitants, 1998-2010

Source: Eurostat HIV-AIDS (ICD 10 codes B20-B24)
Numbers of HIV-AIDS deaths in 17 countries where data is available since 1994

Source: Eurostat HIV/AIDS (ICD 10 B20-B24)

Year

Total EU 27 in 2010: 4365

Total EU 17 in 2010: 3531

Czech Republic
Denmark
Germany
Ireland
Greece
Spain
Italy
Luxembourg
Hungary
Netherlands
Austria
Poland
Portugal
Slovenia
Finland
Sweden
United Kingdom
Monitoring HIV/AIDS deaths in IDUs?

How many of these deaths are attributable to IDU? Need to estimate the % and numbers of the total. Need to apply to Eurostat numbers the % of IDU observed in the deaths among AIDS cases reported to AIDS surveillance.
Estimated number of deaths in Eurostat attributable to IDU, based on the IDU-related fraction in AIDS deaths 2010.

- Estimated HIV/AIDS deaths others
- Estimated HIV/AIDS deaths attributed to IDU
Estimated mortality rates due to HIV/AIDS attributable to IDU and overdose (DRD) mortality rate

Problem: the 2 sources are increasingly discrepant and the ratio of data from both sources varies between countries
Comparison of the number of HIV/AIDS deaths in Eurostat and deaths among AIDS cases in surveillance data in the EU27 2004-2010

![Graph showing comparison of HIV/AIDS deaths in Eurostat and surveillance data from 2004 to 2010. The graph compares the number of deaths reported by Eurostat and surveillance data for each year, with Eurostat generally showing higher numbers.](image-url)
Comparison of the numbers of HIV/AIDS deaths in Eurostat and among AIDS cases in surveillance 2010

Countries with Surveillance data > Eurostat data
Conclusions 1/3

• Decrease in HIV/AIDS deaths since 1996 (ART) but still
  ~ 5000 deaths/year, concentrated in a few countries
  >1600 deaths may be attributable to IDU in 2010

• Sustained mortality rates after 1996 in Portugal and recent increases in the Baltic countries
Conclusions 2/3

• Increasing discrepancy between mortality statistics and surveillance data

• Large variation across countries due to
  • Increasing non-AIDS mortality among PLHIV
  • Underreporting of AIDS cases and deaths?
  • Coding (differences between countries)
  • Likely different combinations of these factors in different countries
This suggests need for:

- Surveillance of deaths among all HIV cases (not only AIDS cases)
- Include information on cause of death in surveillance
- Assess underreporting of death among AIDS cases in national surveillance
- Compare coding practices
- National level linkage studies between mortality statistics and AIDS surveillance
Thank you for your attention

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