

## HIGH LEVELS OF ALL-CAUSE MORTALITY AMONG PEOPLE WHO INJECT DRUGS IN GREECE IN 2018–2022

### Authors:

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**Background:** High mortality rates have been well documented in people who inject drugs (PWID). However, we currently lack recent estimates of all-cause mortality among PWID, in particular during the COVID-19 pandemic period, and there are no estimates for the PWID population in Greece. We sought to assess all-cause mortality rates and associated predictors among PWID in Greece during 2018-mid 2022.

**Methods:** Data were obtained from two community-based programs implemented in Athens (ARISTOTLE) and Thessaloniki (ALEXANDROS), the two largest cities in Greece. Participants were aged  $\geq 18$  with history of injection drug use. Crude mortality rate (CMR) and age-, gender- and calendar-year standardized mortality ratios (SMR) were estimated. Vital status was obtained from the National Hepatitis Registry. Predictors of mortality were assessed using a Cox proportional-hazards model, controlling for gender and age.

**Results:** Among 2,433 PWID, 243 (10.0%) died over a total of 6,649 person-years of follow-up. The CMR [95% confidence interval (CI)] was 3.50 (3.08–3.97) deaths per 100 person-years; 3.03 (2.58–3.57) in Athens and 4.56 (3.74–5.57) in Thessaloniki. An increasing trend in CMR was observed over the period 2018–2022 in Athens ( $p$  for trend=0.004). The overall SMR (95% CI) was 17.17 (15.14–19.47) per 100 PYs; 15.10 (12.85–17.75) in Athens and 21.72 (17.78–26.53) in Thessaloniki. The SMR

was particularly increased in younger ages, females, those injecting daily, and HIV-infected PWID. Older age, living in Thessaloniki, Greek origin, homelessness, daily injecting drug use, HIV, and HCV infections were independently associated with all-cause mortality. Follow-up will be updated until the end of 2022.

**Conclusion:** All-cause mortality among PWID in Greece during 2018–2022 was high, with the population in Thessaloniki being particularly affected. These data contributed to the introduction in the Greek Parliament of new legislation to increase the access of naloxone to PWID, peers, families, and NGOs.

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