



# HCV infection and HIV-HCV coinfection among “new” injectors during an HIV outbreak in Athens, Greece: Results from the ARISTOTLE programme

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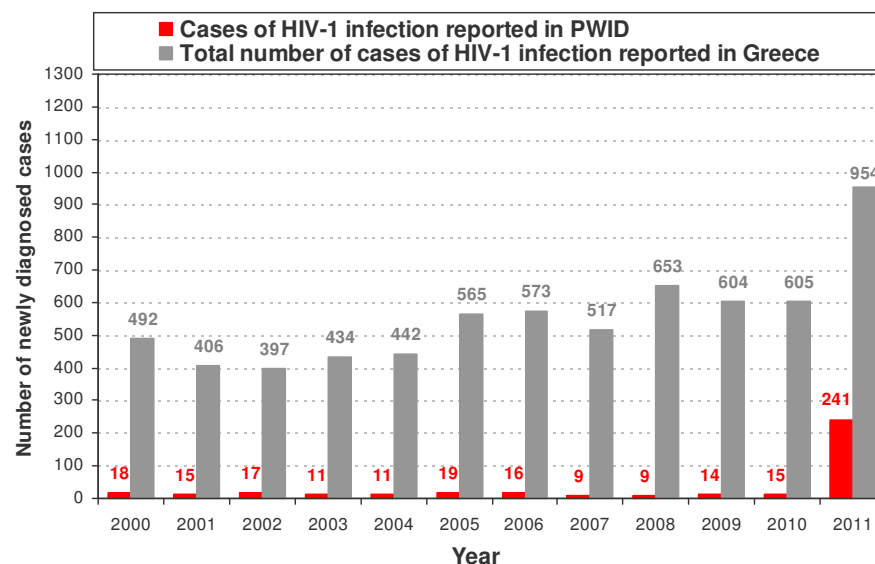
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# ARISTOTLE programme

2011 → HIV outbreak  
among PWID in Athens

*Surveillance data from the Hellenic Centre for Diseases  
Control and Prevention*



## ARISTOTLE programme - Primary aims:

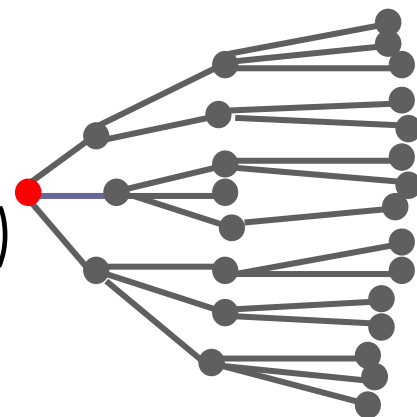
1. To screen for anti-HIV
  2. To provide the WHO/ UNODC/ UNAIDS and EMCDDA/ECDC prevention, treatment and care package.
- To contribute to the decrease of HIV-1 incidence among PWID



# How was ARISTOTLE implemented?

**Sampling method** → Respondent Driven Sampling (RDS)

- 5 consecutive RDS rounds (rounds A – E)
- PWID could participate in multiple rounds but only once in each round.



**Eligibility criteria.** Persons  $\geq 18$  years with valid coupon who:

- Have injected drugs in the past 12 months
- Live in the area of Athens

**Interviews** using an extensive questionnaire

**Blood sample collection** for HIV and HCV testing.



# Aims of this analysis

To estimate:

1. **Anti-HCV prevalence** at 1<sup>st</sup> participation to ARISTOTLE
2. **Prevalence of HIV-HCV coinfection** at 1<sup>st</sup> participation to ARISTOTLE
3. **Incidence of HCV infection**

among “new” injectors (injecting duration  $\leq 2$  years)

**During Aug 2012 – Dec 2013:**

Of 3320 unique PWID

→ 431 new injectors with 1-4 visits



# Anti-HCV infection & HIV-HCV coinfection

Anti-HCV prevalence  
(N=431 new injectors)

**49.9%**  
**95% CI (45.0%, 54.7%)**



HCV-HIV coinfection  
(N=431 new injectors)

**13.9%**  
**95% CI (10.8%, 17.6%)**





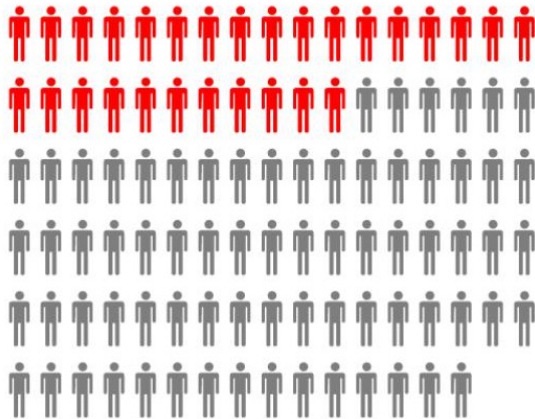
# More on HIV-HCV coinfection:

Among anti-HCV+ new injectors

Among HIV+ new injectors

Co-infection with HIV  
(N=215 anti-HCV+ new injectors)

**27.9%**  
95% CI (22.0%, 34.4%)



Co-infection with HCV  
(N=65 HIV+ new injectors)

**92.3%**  
95% CI (83.0%, 97.5%)



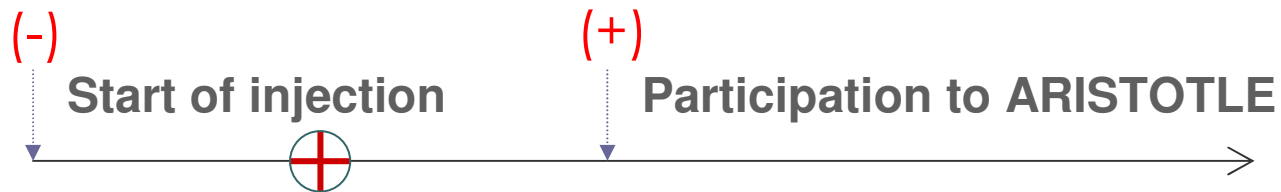


# How can HCV incidence be estimated?

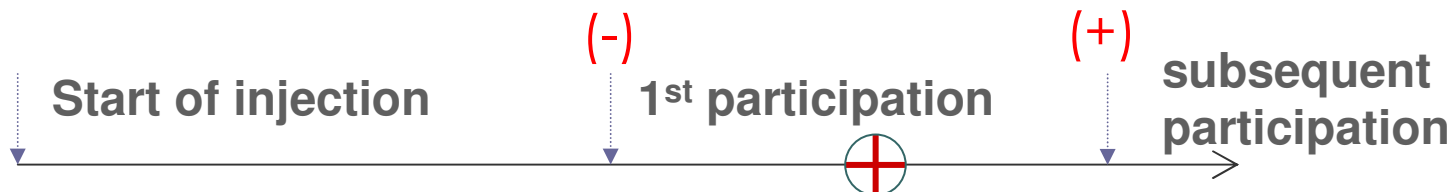
Two approaches:

- i) Data from **all "new" injectors**, assuming that they were seronegative when they started injecting.

Assumption for those found anti-HCV(+) in ARISTOTLE → infection occurred in the midpoint between the initiation of injecting and the time of blood sample collection

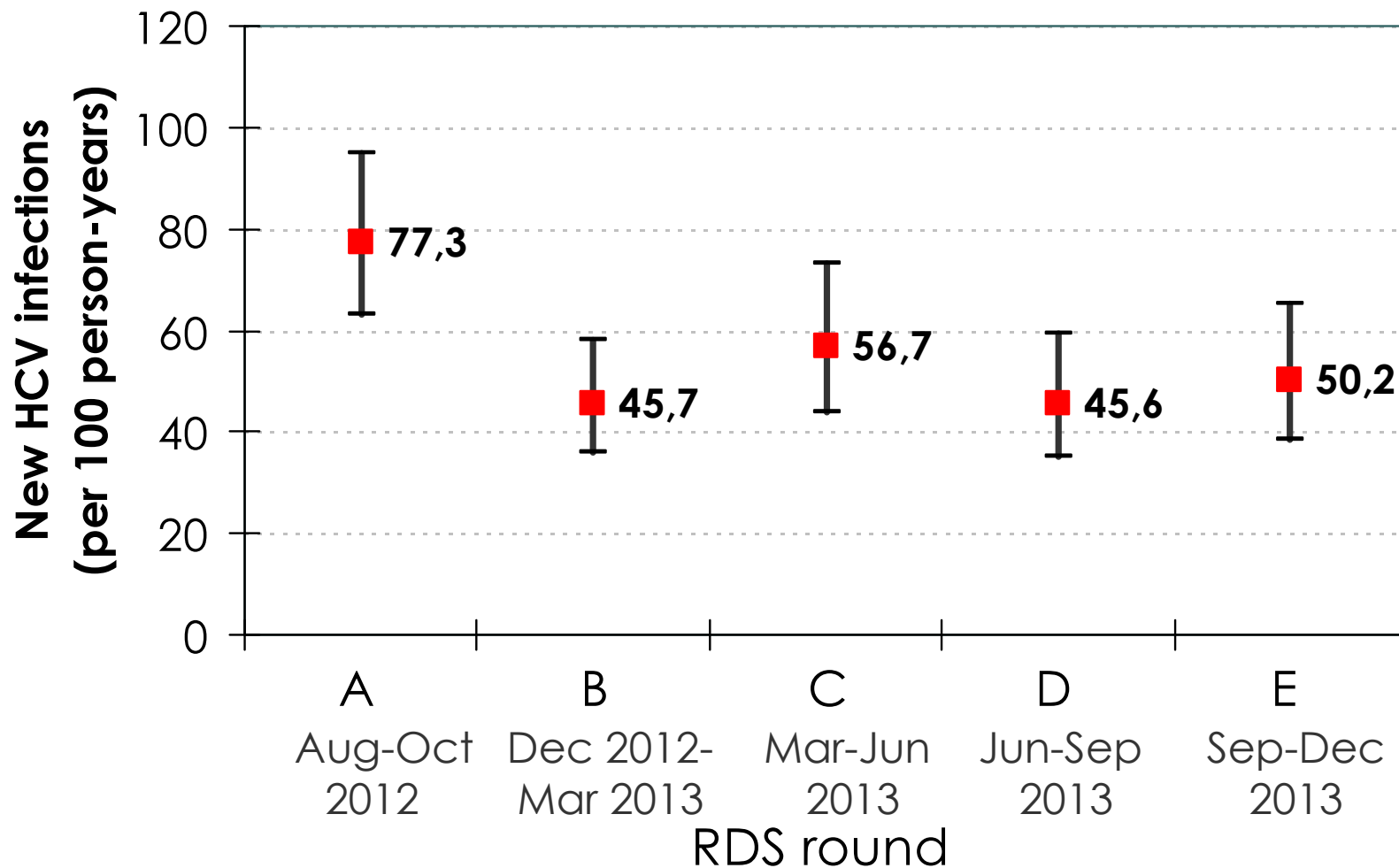


- ii) Data from **"new" injectors with multiple participations who were seronegative at first participation**. For those who seroconverted during the programme, we assumed:





# HCV incidence during the 5 rounds of the programme







# HCV incidence (seroconversions)

- 63 HCV(-) at first participation with multiple visits:
  - 16 seroconverted during ARISTOTLE

**Incidence rate:**

64.6 (39.6, 105.4)

new infections/100 pyrs



# Conclusions

- The prevalence of HCV and HIV-HCV coinfection is very high in the population of "new" injectors in Athens.
- HCV incidence was very high
  - Similar incidence estimates were produced with both approaches (all new injectors vs. cohort with multiple visits)
- Significant implications, e.g:
  - Reaching the targets set by WHO
  - High HCV incidence/prevalence → high prevalence of risk behaviours → potential for further epidemics (as the HIV epidemic in 2011)
  - Acceleration of hepatic fibrosis among HIV-HCV coinfectees



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