

Background

- Despite widespread, sustained testing for chlamydia in many high income countries, there remain questions about the population impact of chlamydia testing
- We present epidemiological trends in chlamydia testing and diagnoses in Denmark (1991 to 2011) & describe cases and controls for **The Danish Chlamydia Study**

Key Messages

- Very large, nationally-representative, individual-based database linking chlamydia test history with hospital outcomes
- Describe the epidemiology of chlamydia testing, infection and complications over nearly 20 years in a population with widespread, free testing and treatment in the post-NAAT era
- This database has been compiled in the context of an expanding, modern control programme and will inform chlamydia control policy internationally

Method

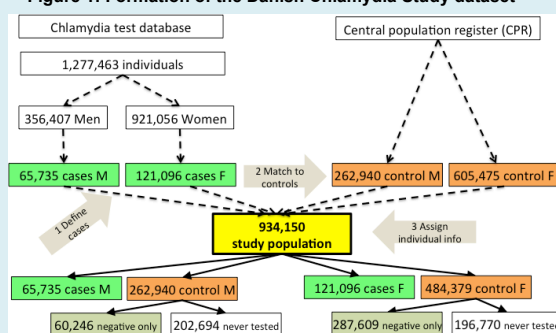
The Danish Chlamydia Study is a unique database of individuals involving linkage of administrative health data, chlamydia tests and hospital records.

The laboratory dataset contained 4,150,498 chlamydia test records from 1,348,058 individuals (1/1/1991 to 2/11/2011).

Cases were selected based on any positive chlamydia test and controls matched (4:1) on age and gender from the Danish population register. There are 934,150 unique individuals in The Denmark Chlamydia Study. All data on chlamydia testing, demography and hospital admissions were extracted, see **Figure 1**.

We analysed trends in testing and diagnosed incidence of chlamydia and selected reproductive outcomes in men and women in Denmark. The proportion ever tested and test positivity were calculated by age, gender and calendar year.

Figure 1: Formation of the Danish Chlamydia Study dataset



Results

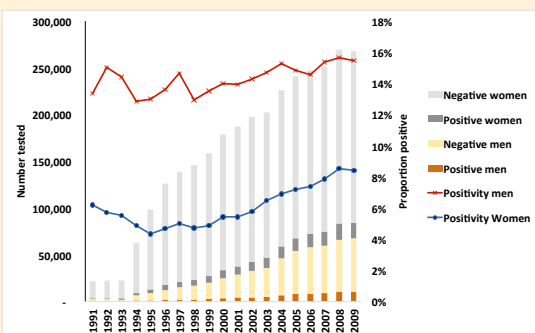


Figure 2: Chlamydia test volume (by test result) and test positivity in Denmark from 1991 to 2009 in men and women

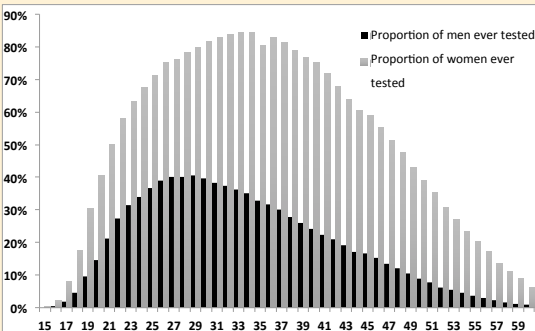


Figure 3: The proportion of individuals in the population in 2011 who have ever been tested for chlamydia (men and women)

The cleaned laboratory dataset (1 confirmed test result per person, per day) consists of 3,298,104 test records with 264,410 (8%) positive chlamydia diagnoses. 1,277,463 individuals were tested (346,235 men and 904,587 women)

Test volume has increased over time: **Figure 2**

Nearly all women and almost half of men in Denmark have been tested for chlamydia by age 30: **Figure 3**. Most individuals had only negative tests: 80% of men and 86% of women.

Figure 4 shows the positivity in each calendar year (a, c) and by age (b, d)

Positivity in men has remained stable over time (4a) and in different age groups (4b)

In women there appears to be increasing positivity in young women (15-19) over time (4c)

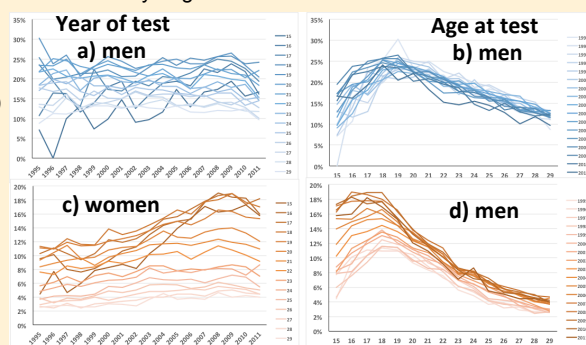


Figure 4: Trends in positivity in young men (a,b) and women (c,d) aged 15-29, tested for chlamydia from 1995 to 2011

- Nearly 1 million individuals are included in the Danish Chlamydia Study dataset out of a total Danish population of 5.6 million:

- Women (aged 15-44): 574,679 individuals had 1,807,618 tests and 20,912 (3.6%) reproductive outcomes
- Men (aged 15-64): 325,337 individuals had 291,655 tests and 9,698 (3.0%) reproductive outcomes

Conclusions

This large, rich dataset including long term follow up of a nationally representative sample of men and women from Denmark is a step forward in addressing questions about the population impact of chlamydia screening

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