

## DFID SRH & HIV RPC at the XVI International AIDS Conference, Toronto, 2006

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### Abstract

#### **TUPE0576 - Model projections on the required coverage of syringe distribution to prevent HIV epidemics among injecting drug users**

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**Background:** Although syringe distribution is effective in preventing HIV transmission amongst injecting drug users (IDUs), there is little evidence on the required coverage to substantially reduce HIV transmission.

**Methods:** A mathematical model is developed to explore the relationship between the endemic HIV prevalence among IDUs and the coverage of syringe distribution. Data from IDU populations in UK and Belarus are used to explore the implications of increasing coverage, and the effect of changes in other behaviours.

**Results:** Projections suggest there is a coverage threshold, which, if reached could lead to substantial decreases in HIV prevalence. The threshold largely depends on the frequency that IDUs inject and (safely) re-use their syringes, and corresponds to <4 syringe sharing events per IDU per month. Other factors such as the injecting cessation rate and efficacy of syringe cleaning only have substantial impact near threshold coverage levels.

**Conclusions:** Our results support a policy of increasing the coverage of syringe distribution, but highlight the difficulty in producing a universal coverage target. Great public health benefit could be conferred by encouraging the safe re-use of an IDU's own syringes and small stable injecting groups. Policies that discourage this will negate the impact of syringe distribution interventions.