



Evaluating the cost-effectiveness of needle and syringe programs in Australia

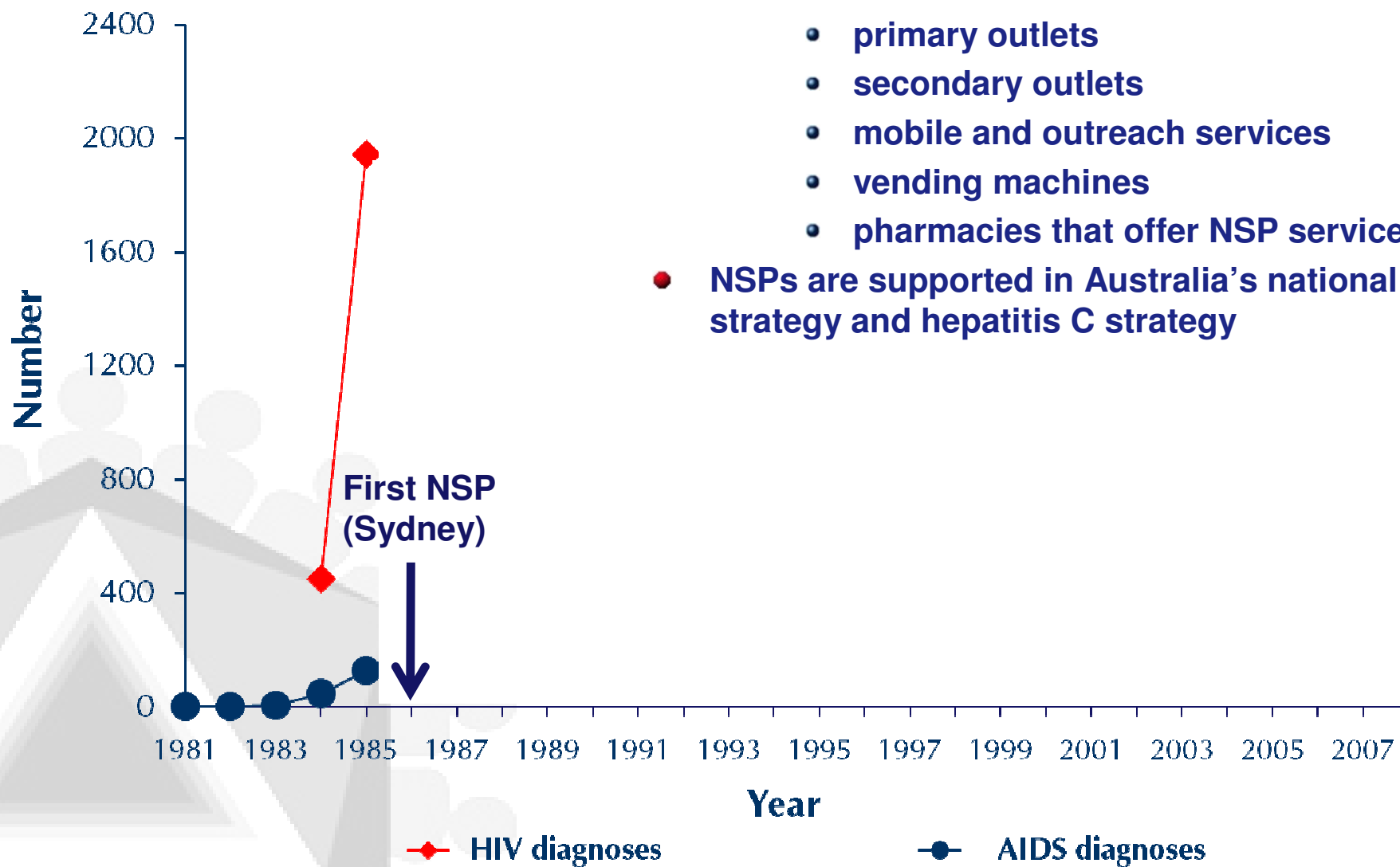
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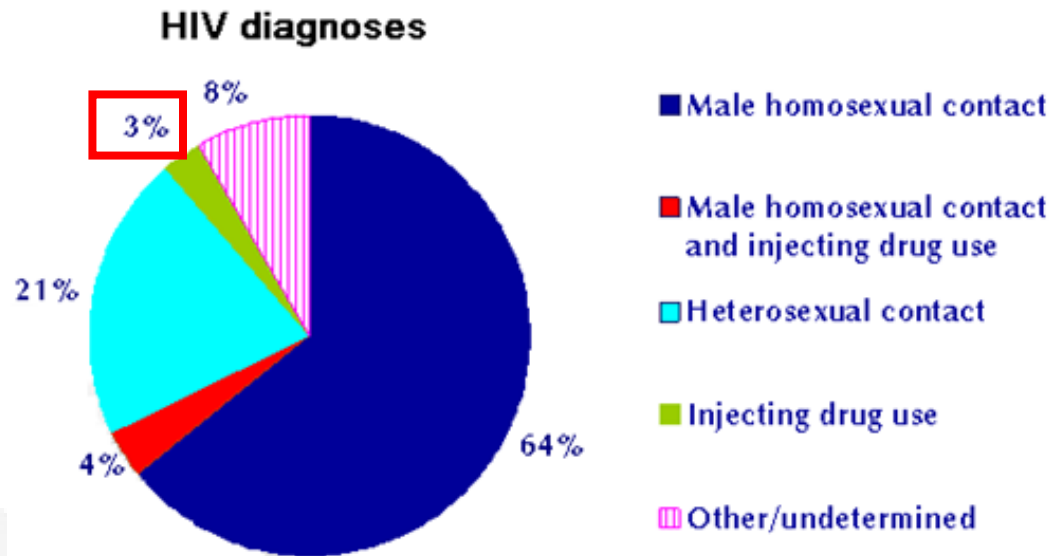


Number of diagnoses of HIV infection and AIDS in Australia

- Now 3000 sites
 - primary outlets
 - secondary outlets
 - mobile and outreach services
 - vending machines
 - pharmacies that offer NSP services
- NSPs are supported in Australia's national HIV strategy and hepatitis C strategy

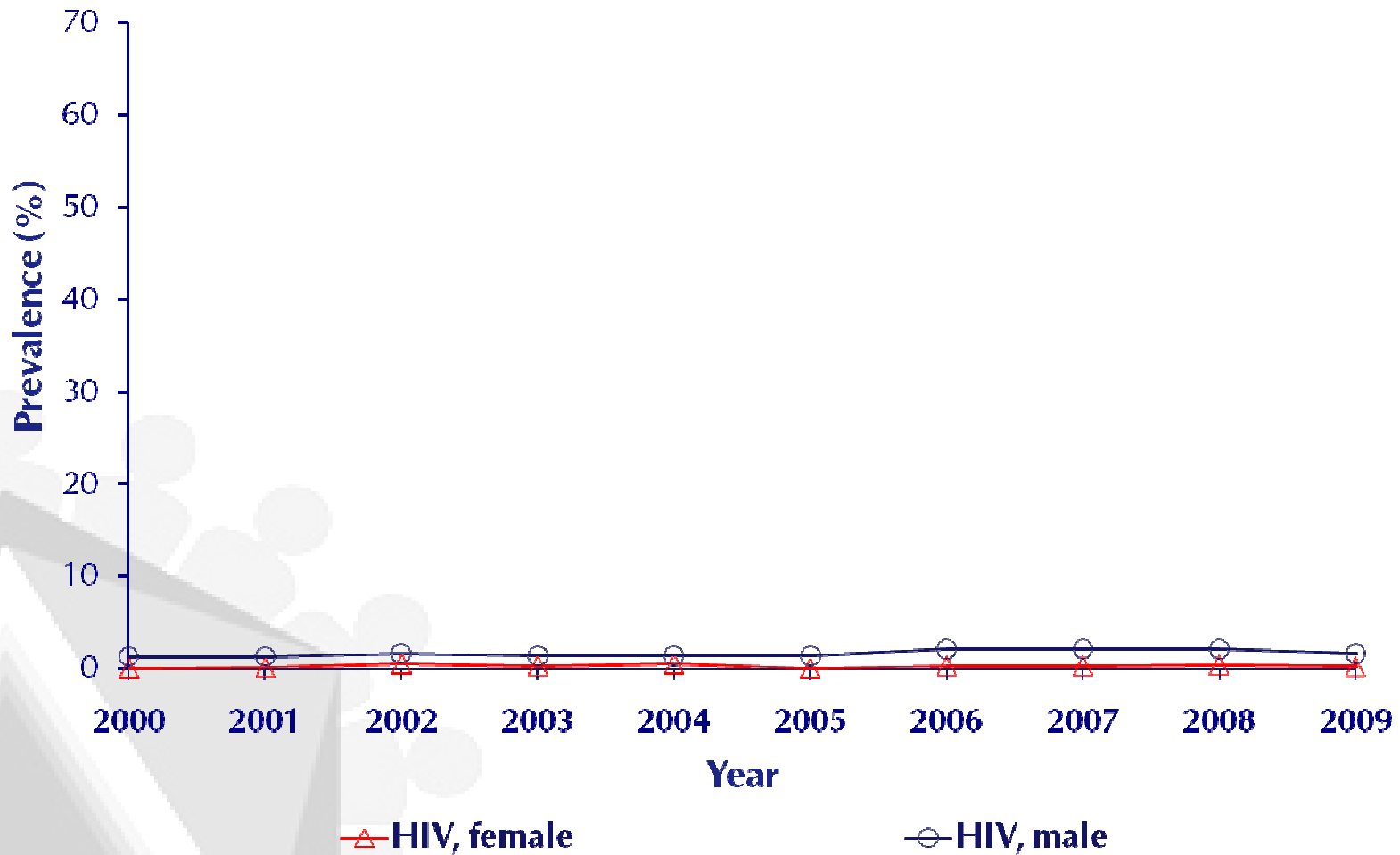


HIV diagnoses by likely route of exposure



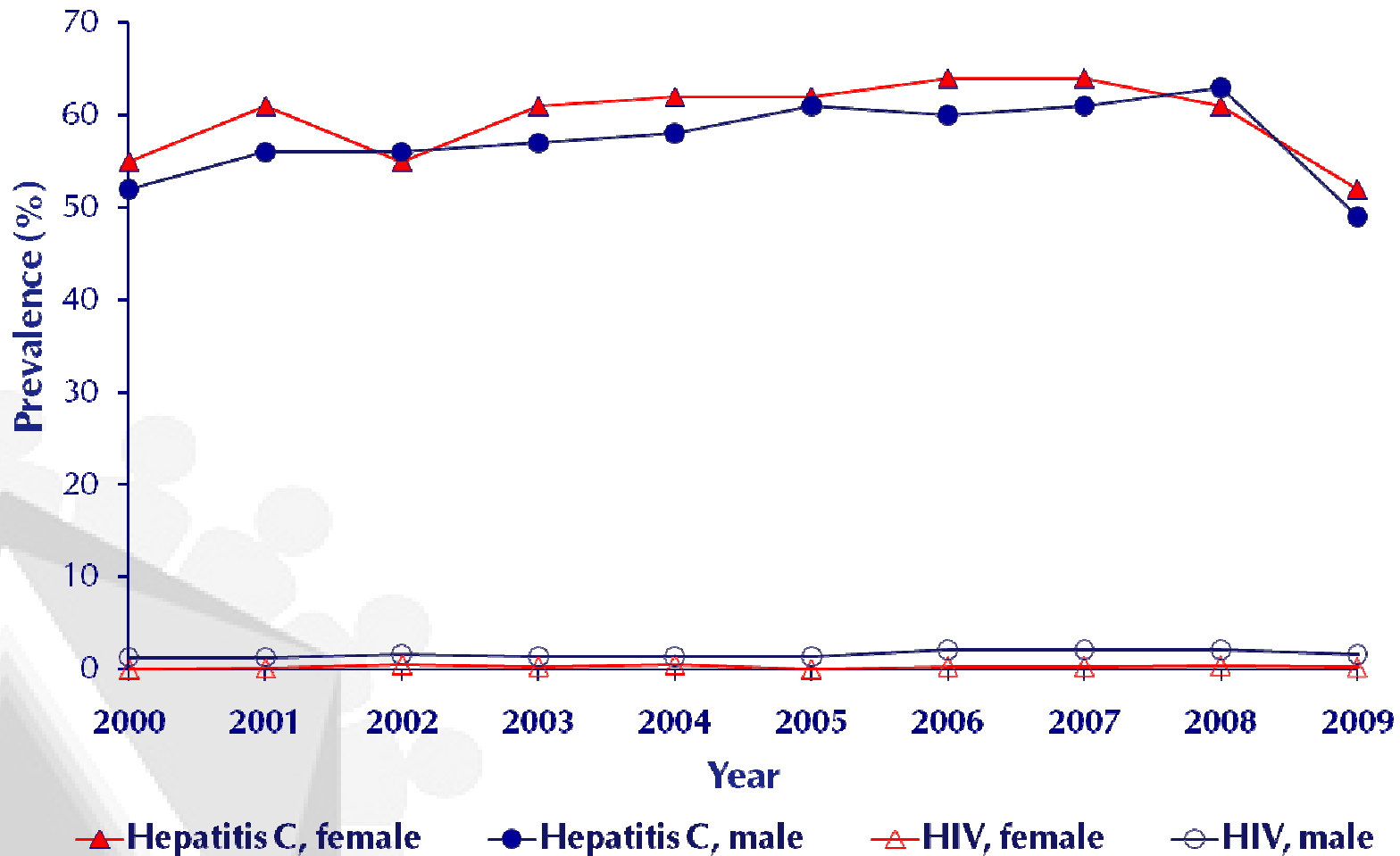
- Widely held belief that our success in preventing a generalised epidemic is largely due to the accessibility and effectiveness of NSPs
- Concentrated to generalised epidemics
 - Asia
 - Eastern Europe

Little HIV among Australian PWID

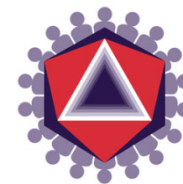


2010 Annual Australian Needle and Syringe Program Report, NCHECR

Considerable HCV among Australian PWID



2010 Annual Australian Needle and Syringe Program Report, NCHECR



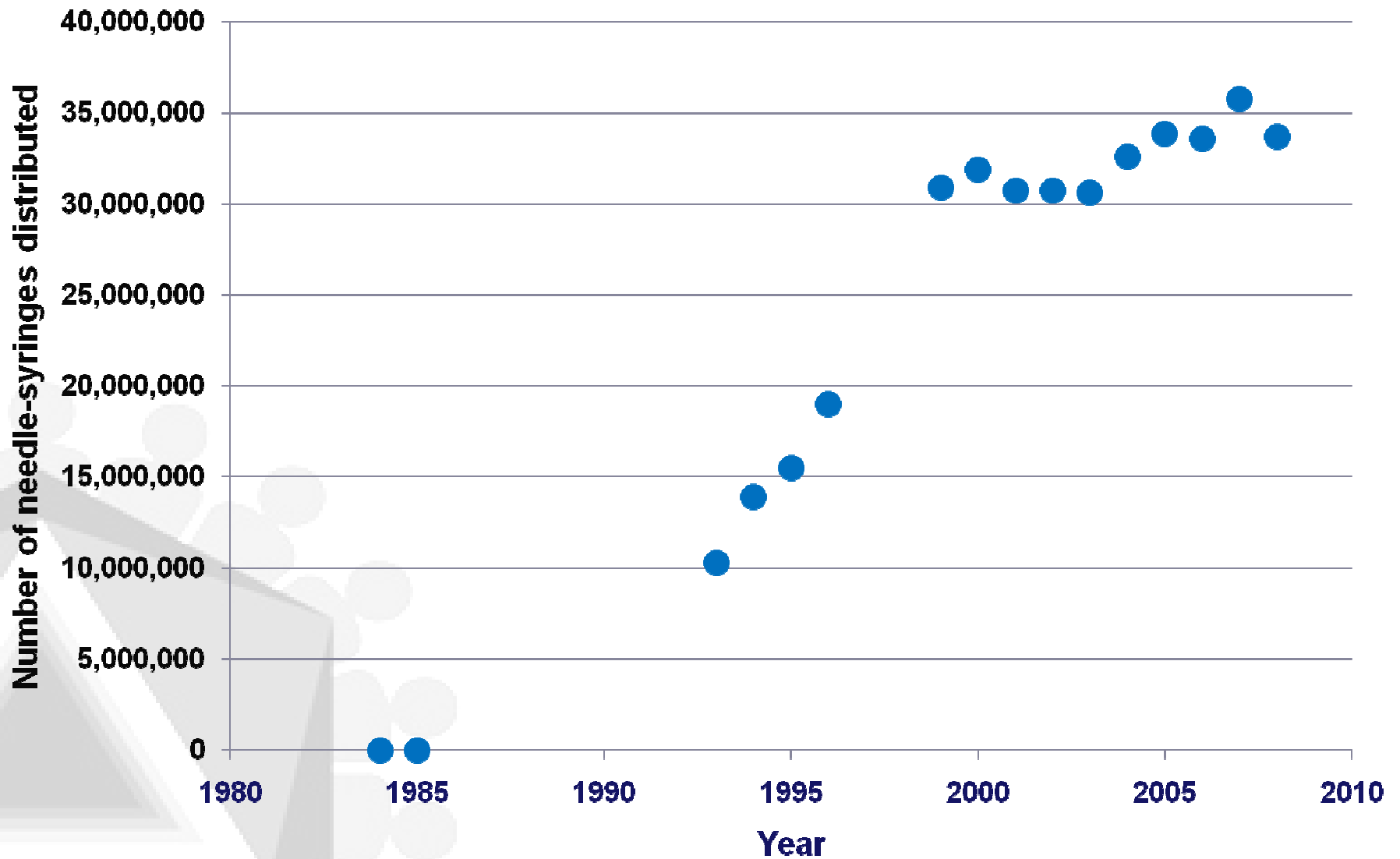
Evaluation of NSPs

- **Epidemiology is not changing**
- **Hepatitis C transmission is not being controlled**
- **What health benefits have NSPs provided?**
- **Was it worth it?**
- **Should we continue to fund NSPs?**

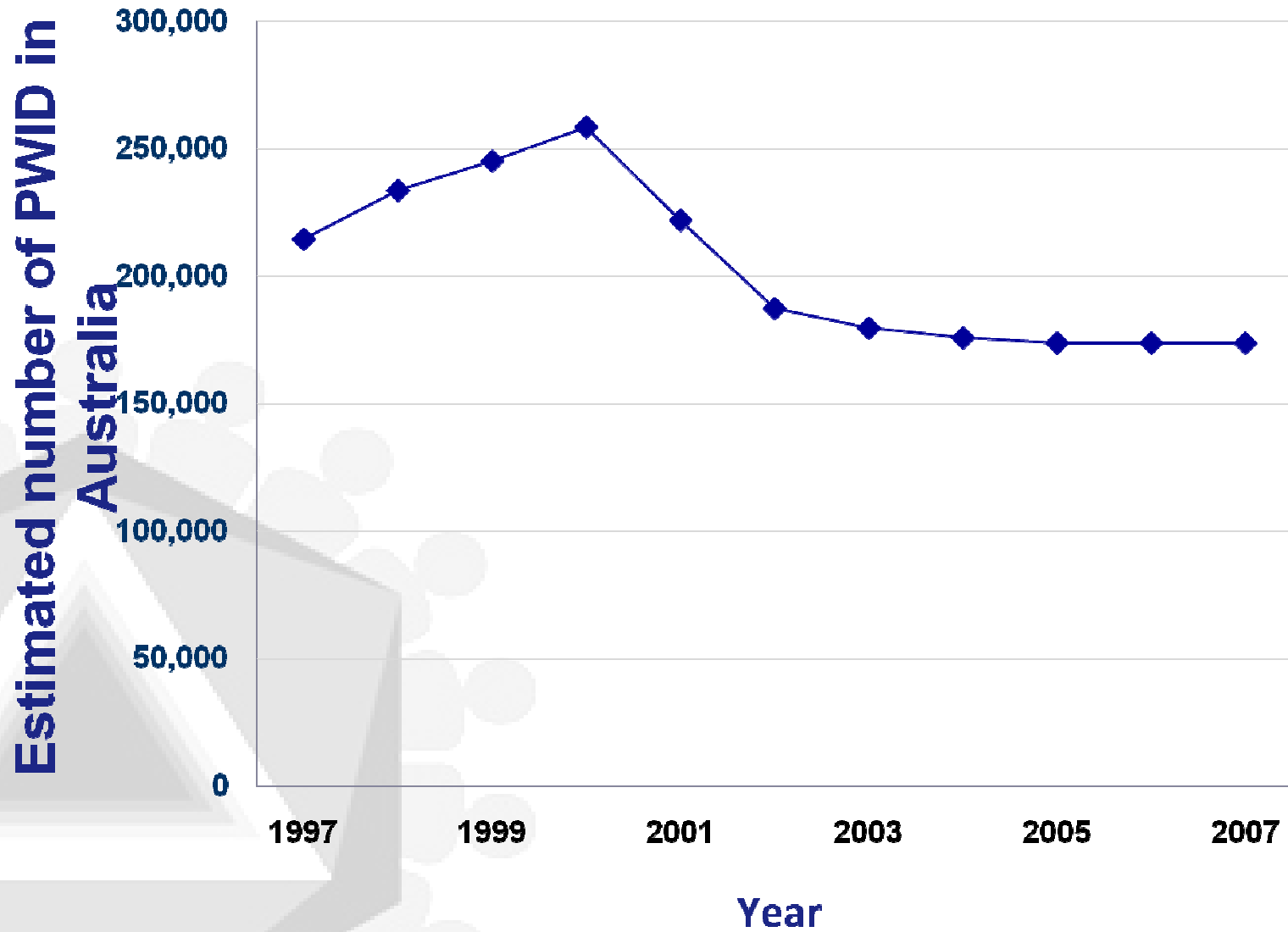




Influence of NSPs

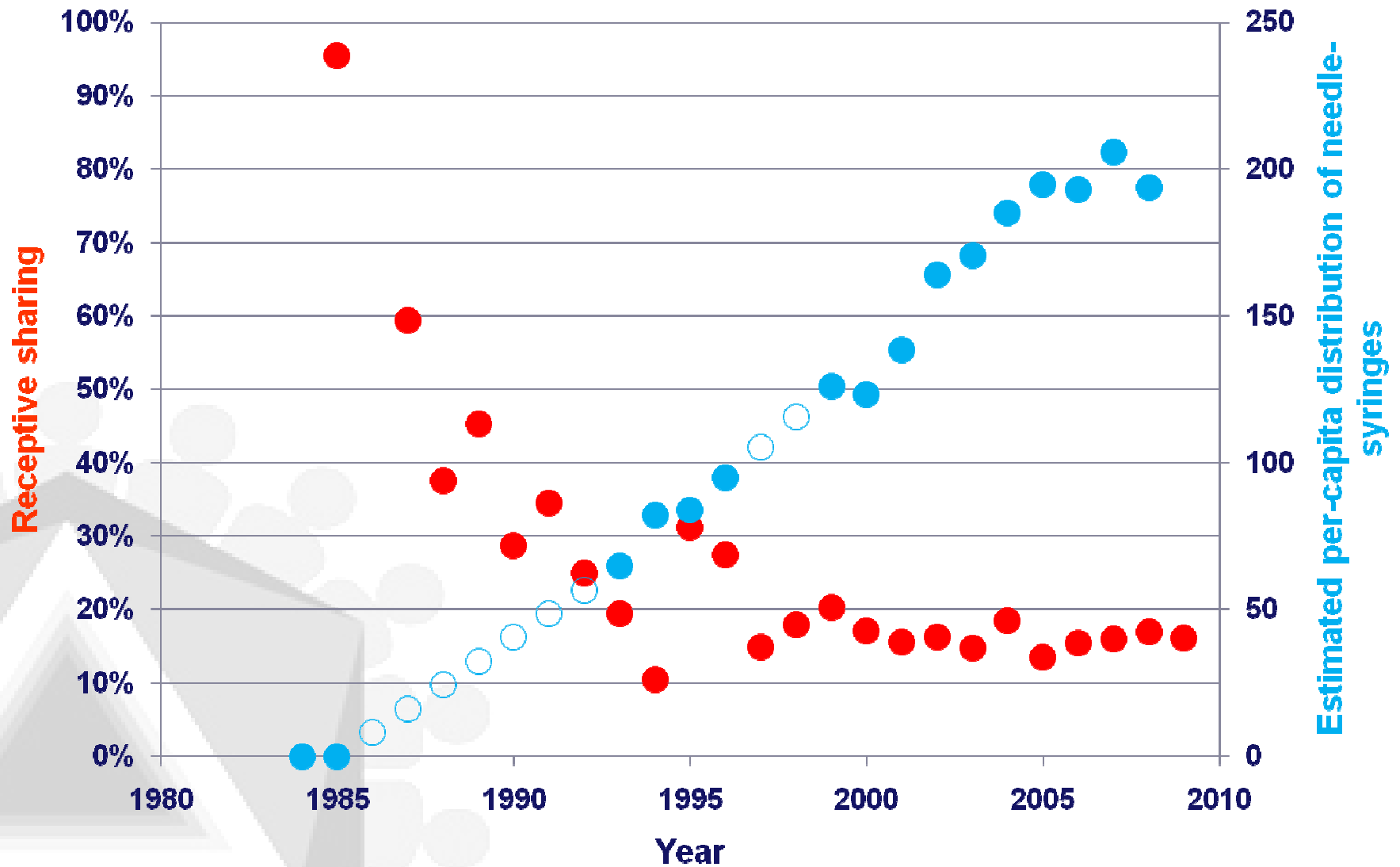


Number of PWID



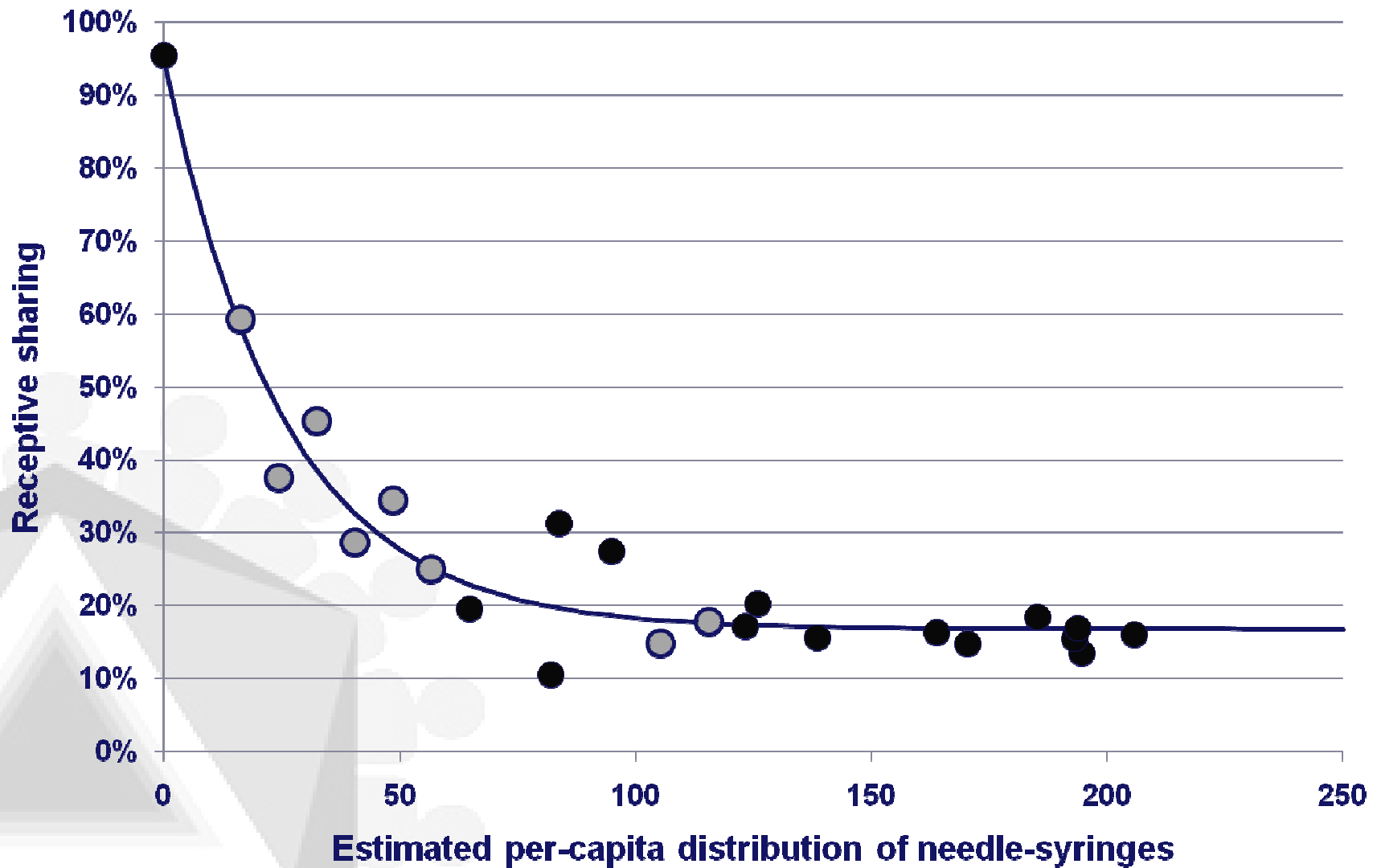


Influence of NSPs

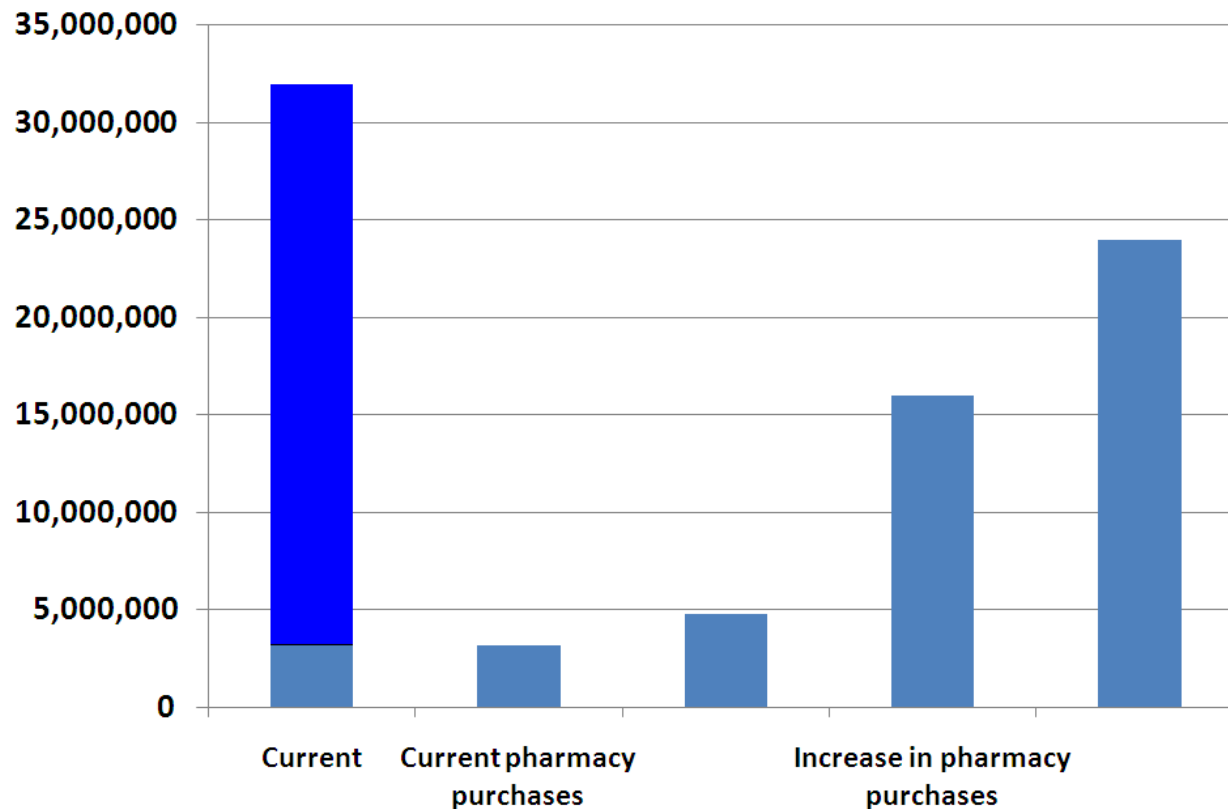




Influence of NSPs

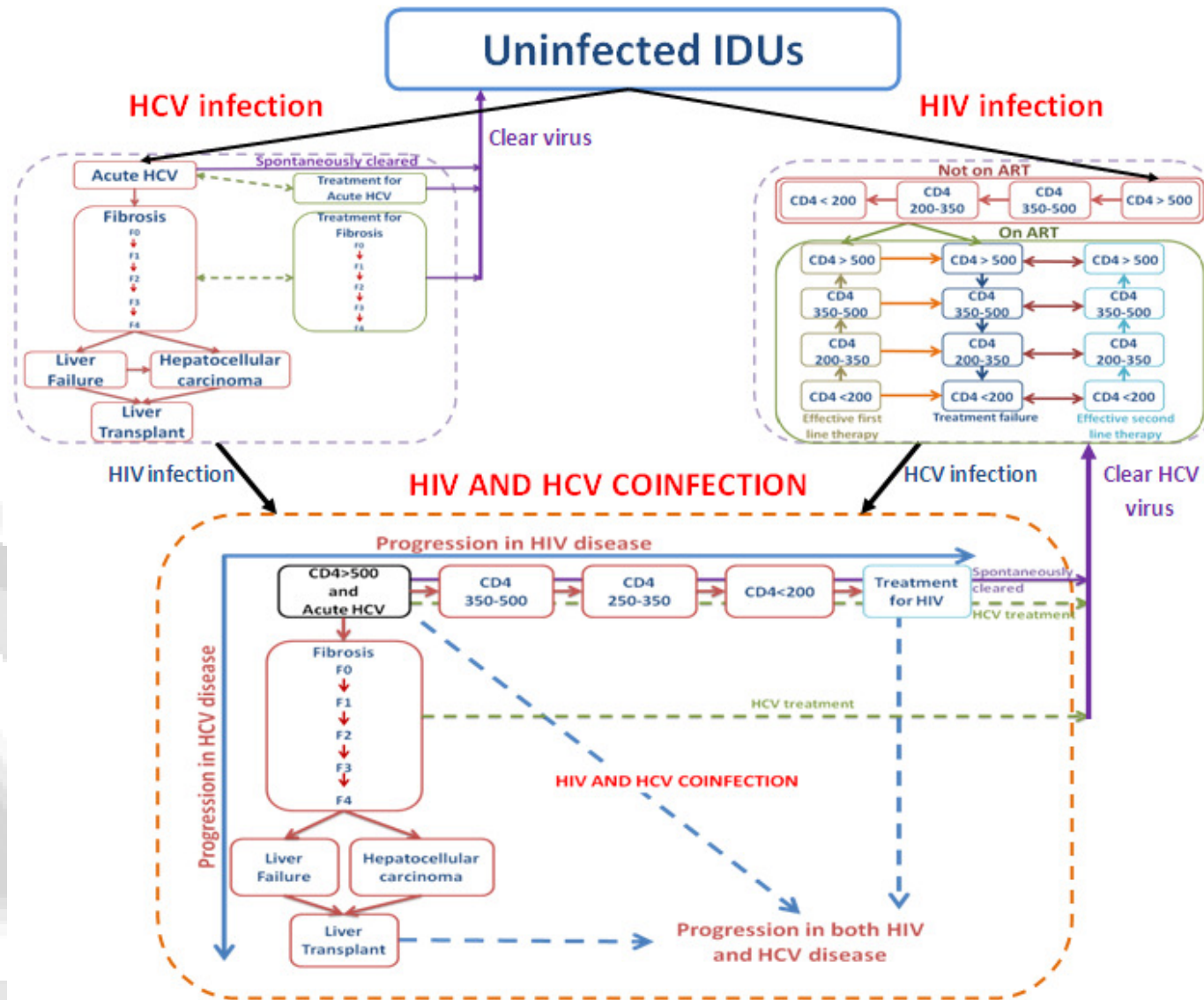


How many needle-syringes in circulation without NSPs?



- Assumed PWID would increase pharmacy purchasing by 50% or 5-times current purchasing
- Corresponding sharing rates from previous graph

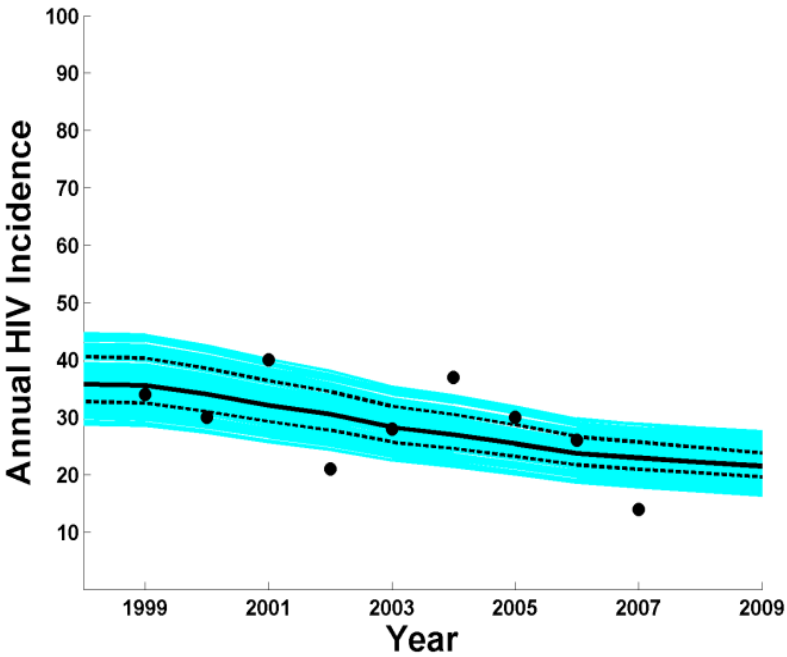
Incorporated in a dynamic mathematical model



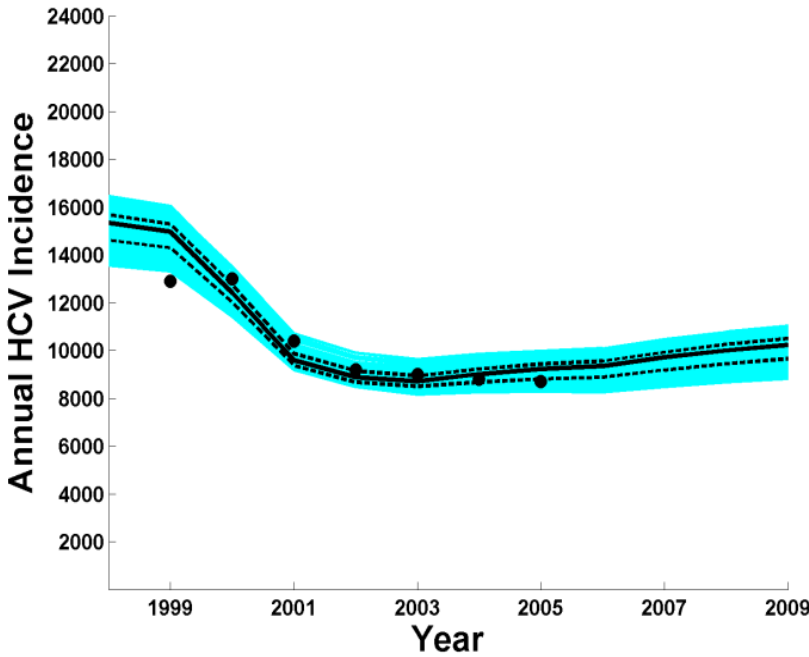
Reproducing past trends



HIV



HCV



Cumulative number of cases averted (10 years)

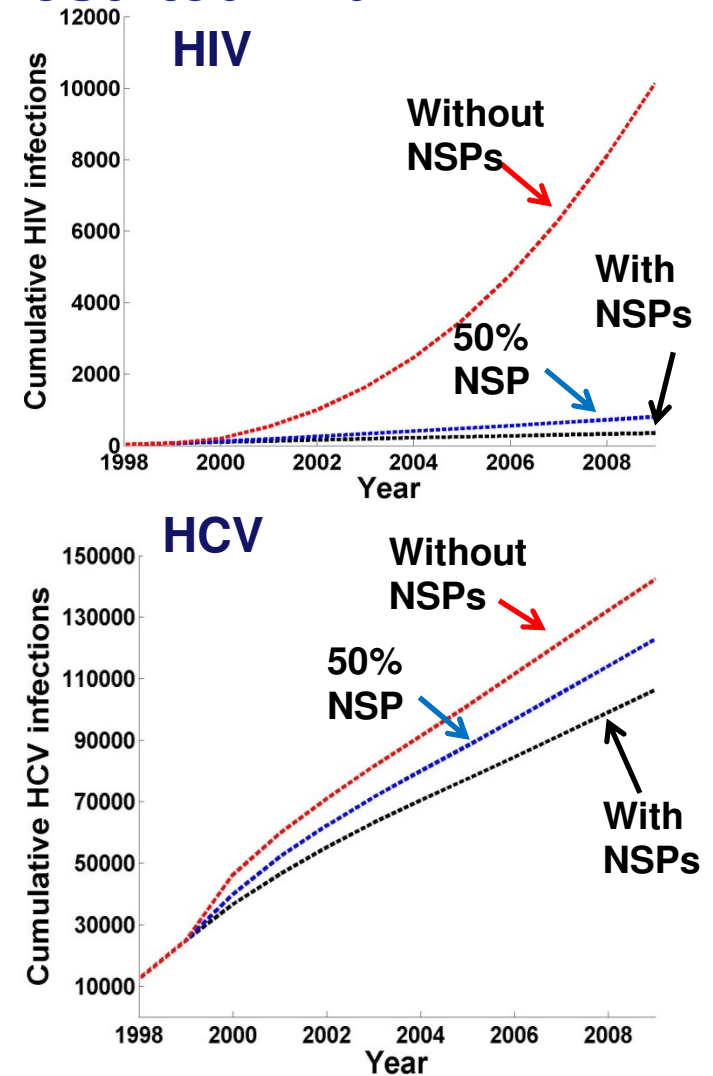


Investment in NSPs (2000-2009) has resulted in an estimated aversion of

- 9,778 (459) HIV infections
 - 1,528 (103) HIV-related deaths
- 35,949 (16,435) HCV infections
 - 31 (13) cirrhosis (F4) cases
 - 2 (1) liver failures
 - ~1 HCC case
 - ~1 liver transplant
 - 3 (1) liver-related deaths

50% increase in pharmacy purchasing

5-times increase in pharmacy purchasing





Economic approach

- **Primary analysis**
 - Health sector (government as third party payer) perspective
 - Most rigorous and conservative
- **Secondary analysis**
 - Including patient/family healthcare costs
 - Including productivity losses and gains





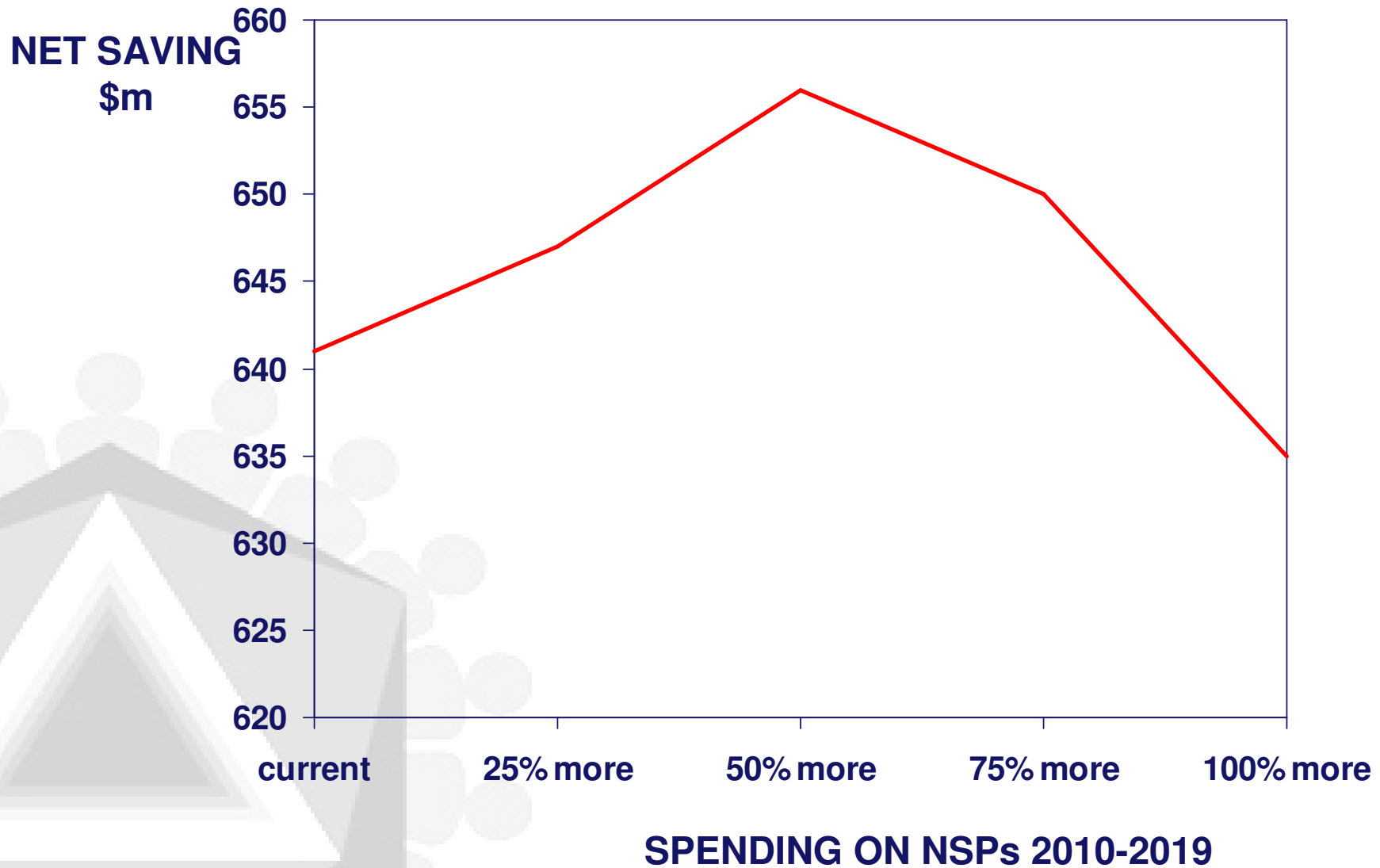
Economic benefit

NSP cost	Healthcare savings	Net Savings
A\$243m	A\$1.28bn	A\$1.03bn

- **A\$2.48bn patient and family healthcare costs saved**
- **A\$5.85bn productivity costs saved**
- **For every \$1 spent,**
 - **\$4-5 will be returned**
 - **and 0.2 days of disability-adjusted life gained**
- **NSPs are very cost-effective compared to other common public health interventions**



Increased spending saves more money



Summary



- **Was it worth it?**
 - Saves lives and avoids sickness
 - Saves money
- **Is continued funding a good idea?**
 - Continued solid returns on investment
- **More or less?**
 - More, if can be delivered effectively and efficiently





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