

Epidemiological and economic evaluation of NSPs in Victoria

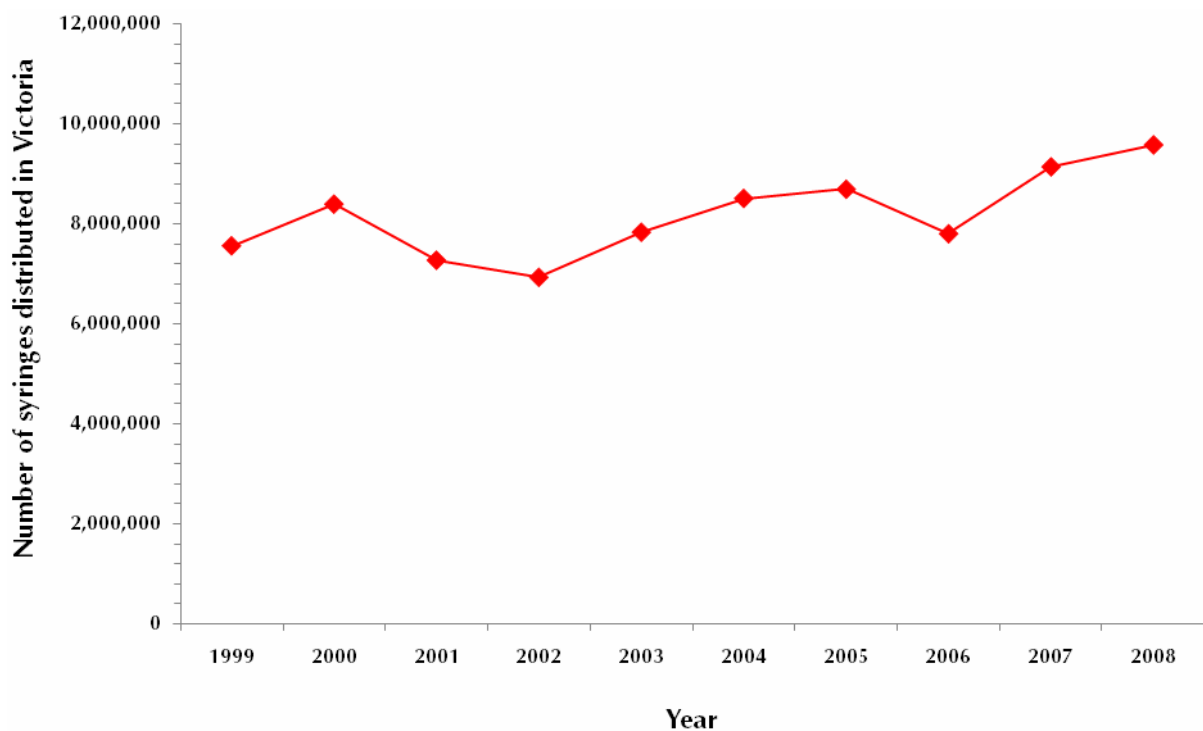


Overview

Needle and Syringe Programs commenced in Victoria with four pilot programs in 1987. In 1988, the program was expanded state-wide. Of the 285 registered programs in Victoria, 19 are primary outlets, including 12 mobile services that are fully funded through the program. Four programs are partially funded enhanced secondary outlets, 43 are pharmacy based and the remaining 219 are secondary outlets. Of the total 285, 194 were supplied with injecting equipment for distribution to clients in 2008. All NSPs provide disposal facilities. More than 900 pharmacies sell injecting equipment on a retail basis.

Number of NSPs:	194 (plus 902 retail community pharmacies)
Syringes distributed 1999-2008:	81,659,050
Average syringes per year:	8,165,050
Total spending 2007/8:	\$8,248,694

Figure 54: Number of needles and syringes distributed in Victoria (1999-2008)



The proportion of Australian IDUs in Victoria has remained relatively steady. The number of needles and syringes distributed through NSPs in Victoria has increased substantially. There is no clear trend in the average frequency of injecting by IDUs in Victoria; however, it appears that after a reduction in the injecting frequency at the beginning of the decade, there has since been a modestly increasing trend. Sharing rates have been increasing slightly in Victoria. The prevalence of HCV among Victorian IDUs has been steadily increasing over the last decade. HIV incidence is steady or slightly decreasing among Victorian IDUs.

In 2008 calendar year, 9,569,336 syringes were provided in Victoria: 45.8% through primary sites; 7.8% through enhanced secondary sites; 36.9% through unfunded secondary sites and 9.6% through retail community pharmacies.

Retail community pharmacists charge an average of \$5.75 per five-pack out-of-pocket costs. Vending machines are not available. A Disposal Helpline has been established to advise community members on the safe disposal of inappropriately discarded injecting equipment and to coordinate retrieval by NSP or local government services where required. The number of NSP sites in Victoria is listed in Table 32. Table 33 reports the spending by financial year in 2008 dollars, unadjusted and adjusted for the consumer price index (CPI).

Table 32: Number of NSP sites in Victoria

	Primary	Enhanced Secondary	Secondary	Pharmacy NSP
2008	19	4	141	30
2007	19	4	140	13
2006	19	4	134	10
2005	19	4	139	11
2004	19	4	132	8
2003	18	5	122	9
2002	18	5	115	9
2001	18	5	111	9
2000	17	6	108	9

Table 33: Summary of expenditure on NSPs in Victoria (2000/1-2007/8)

	2000/1	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8
Consumables (\$'000)								
Sterile injecting equipment	1,096	880	897	1,158	1,190	1,084	1,171	1,448
Disposal equipment	186	194	175	244	292	220	272	424
Safe sex packs	15	52	70	69	52	63	76	71
sub-total	1,297	1,126	1,142	1,470	1,535	1,368	1,519	1,943
NSP SUPPORT (\$'000)								
Primary NSPs Operations	3,105	3,713	3,475	4,323	4,551	4,028	5,274	5,566
Support for Secondary NSPs	233	173	182	186	363	321	330	365
Transport	68	59	58	64	70	78	71	82
Vending machines	0	0	0	0	0	0	0	0
sub-total	3,405	3,945	3,715	4,574	4,984	4,427	5,675	6,013
TOTAL (\$'000) (unadjusted for CPI)	4,702	5,071	4,857	6,045	6,519	5,795	7,195	7,956
TOTAL in 2008 (\$'000) (CPI adjusted)	5,945	6,217	5,780	7,027	7,386	6,387	7,681	8,249

A detailed breakdown of the data from Victoria is presented in Table 34; it should be acknowledged that a number of line items may not directly contribute to averting just blood borne virus transmission, but the sector's costs are included. All data were included in the summary in Table 33.

Table 34: Detailed summary of expenditure on NSPs in Victoria (2000/1-2007/8)

	2000/1 (\$'000)	2001/2 (\$'000)	2002/3 (\$'000)	2003/4 (\$'000)	2004/5 (\$'000)	2005/6 (\$'000)	2006/7 (\$'000)	2007/8 (\$'000)
Needles and syringes	798	620	643	789	878	779	874	1019
Sharps disposal containers	186	194	175	244	292	220	272	424
Alcohol swabs	121	105	104	149	116	124	110	173
Bags and boxes	15	13	14	22	8	14	15	15
Store, distribution and needle-kit assembly	94	83	78	134	119	90	100	159
Condoms and lube	15	52	70	69	52	63	76	71
Postage	68	59	58	65	70	78	71	82
CONSUMABLES	1,297	1,126	1,142	1,470	1,535	1,368	1,519	1,943
NSP agency funding (base)	2,627	2,768	2,908	3,045	3,365	3,459	3,627	4,090
Steroid peer education program	62	62	65	66	68	69	71	73
NSP agency funding (non-base)	160	-	42	574	144	4	150	544
REGIONAL SERVICE AGREEMENT	2,849	2,830	3,016	3,685	3,577	3,532	3,848	4,708
NSP sector advocacy	145	102	207	260	256	221	368	238
Harm reduction conference	20	20	21	63	104	22	53	61
Sector training	14	257	1	-	402	110	561	390
NSP recruitment	-	-	-	-	-	21	22	-
Safe needle disposal strategy projects	-	251	-	-	-	-	107	-
Disposal helpline	-	96	61	62	77	65	67	69
Disposal services	76	82	77	88	118	120	127	102
Disposal bin enclosures	-	-	-	-	-	11	34	13
Data entry	18	36	26	22	24	14	10	7
Information resources	20	8	2	64	6	40	48	1
Research and evaluation	49	10	72	-	130	-	45	11
IT and audit	-	-	-	1	-	-	7	53
HPS salaries and oncosts (not including NSP- IS EFT or other corporate support)	212	239	223	319	278	258	363	342
Administration	3	13	10	10	12	12	17	18
SECTOR SUPPORT	556	1,115	699	889	1,407	895	1,828	1,305
TOTAL NSP EXPENDITURE	4,702	5,071	4,857	6,045	6,519	5,795	7,195	7,956

Evaluating current NSPs

The epidemiological transmission model for HIV and HCV was applied to Victoria. The model was used to evaluate current NSPs versus no program and to project likely epidemiological impacts of potential changes to the program. The model estimated the expected number of HIV and HCV cases in Victoria with and without NSP distribution of sterile injecting equipment (Figure 55). The estimated number of infections averted is presented in Figure 56. An estimated 5,516 (3,794-7,819, IQR) HIV infections and 18,878 (17,426-21,049, IQR) HCV infections were averted due to NSPs in Victoria.

Figure 55: Estimated HIV and HCV incidence in Victoria with and without NSPs

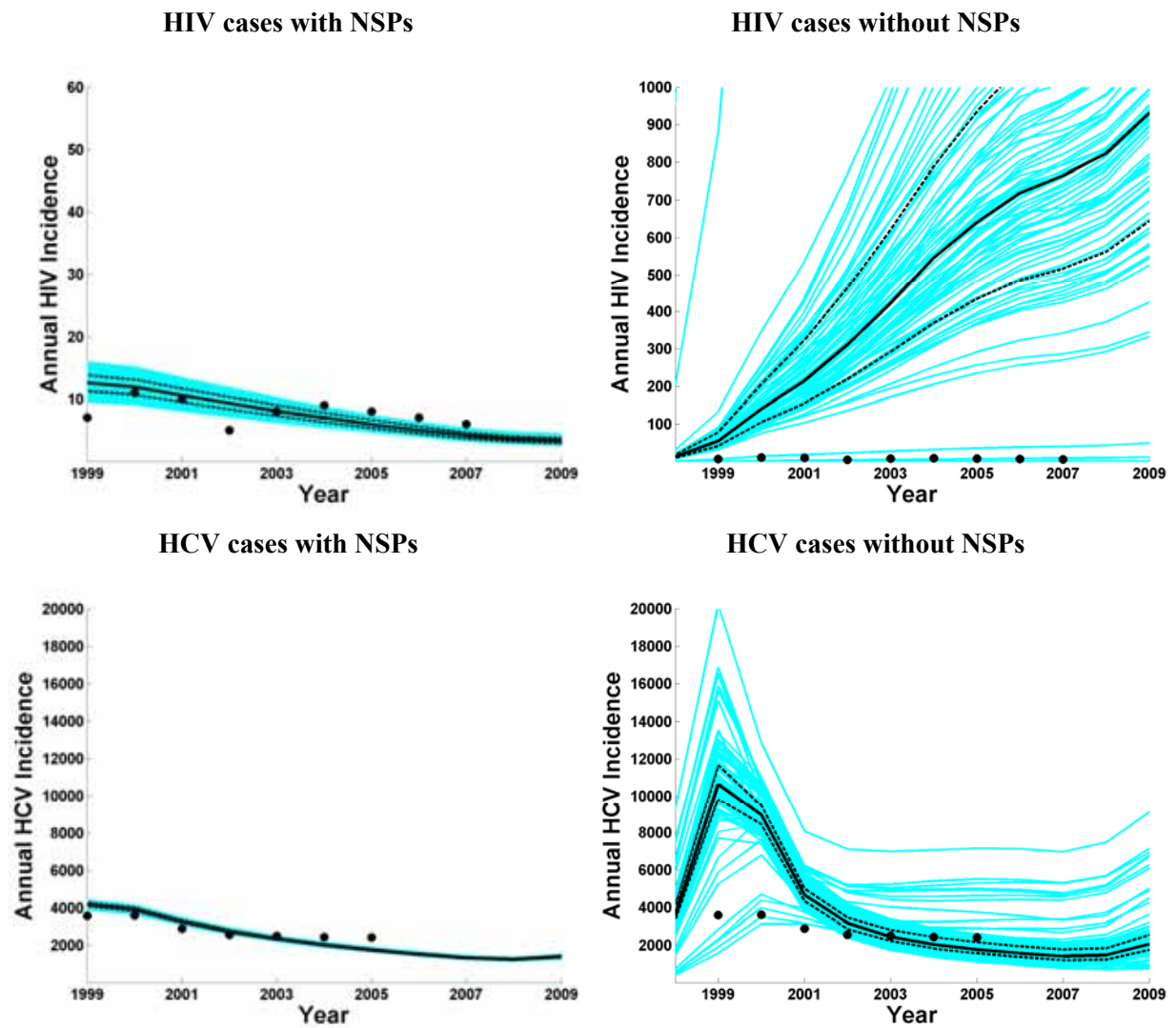
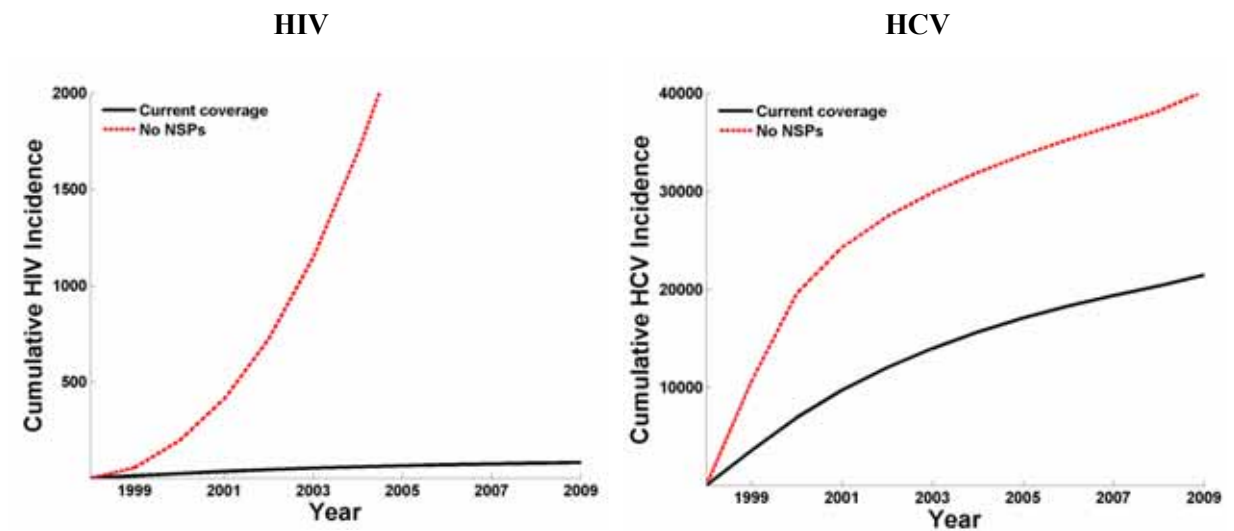


Figure 56: Estimated cumulative number of HIV and HCV cases averted in Victoria due to NSPs



Epidemic projections in Victoria

The Victorian model was used to calculate projections of the expected number of HIV and HCV cases in the future, according to scenarios whereby current syringe distribution levels are maintained or if there are increases or decreases in the provision of syringes through Victorian NSPs.

Figure 57: Projections of the expected number of HIV cases in Victoria according to different syringe distribution levels

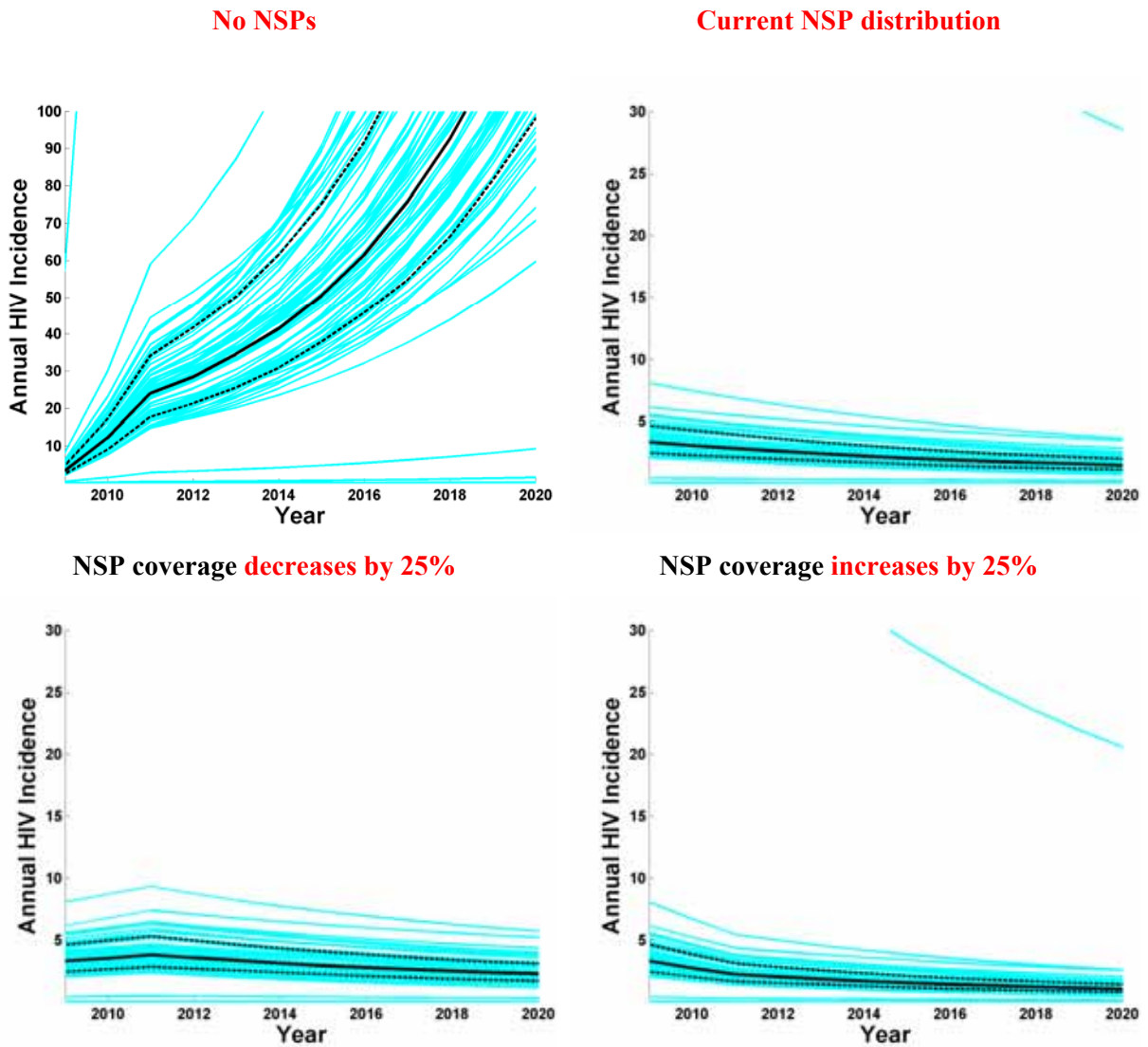
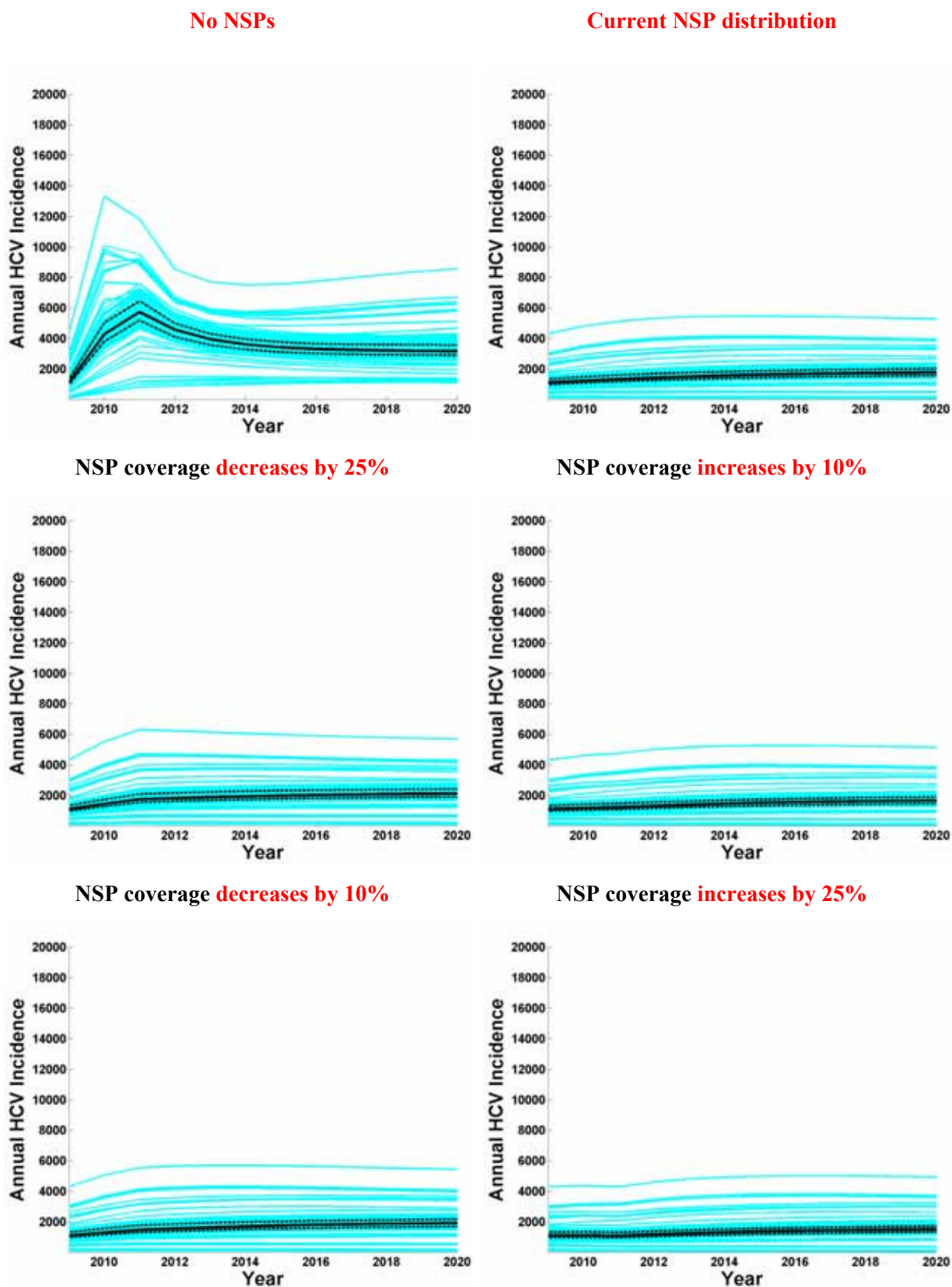


Figure 58: Projections of the expected number of HCV cases in Victoria according to different syringe distribution levels



Economic evaluation of NSPs in Victoria

NSP spending in Victoria of \$71m has resulted in a saving of \$224m in healthcare costs across the 10 years from 2000 to 2009, yielding net financial savings of \$153m, as well as more than 33,000 Disability Adjusted Life Years saved. A summary of the return on investment of NSP funding in Victoria is shown in Table 35. The mathematical and economic modelling estimated that if NSPs are continued at the same level of funding in Victoria for the next ten years, \$133m of net financial savings will accrue (\$106m discounted at 3%) and for twenty years \$354m (\$237m discounted at 3%). The lifetime net present value of investment in NSPs that took account of all healthcare costs and savings (but not costs associated with productivity losses) would be \$4.53bn (\$1.31bn discounted at 3%).

Table 35: Return on Investment of NSP funding in Victoria (2000-2009)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Healthcare costs saved \$m (IQR)	20 (18-24)	18 (16-21)	18 (16-22)	18 (16-23)	20 (17-24)	21 (18-26)	22 (19-28)	25 (21-31)	29 (24-36)	33 (27-41)
NSP funding \$m (median)	6	6	6	7	7	6	8	8	8	8
Net cost savings \$m (median)	14	12	12	11	12	14	15	17	21	24
DALY gain (median)	2,574	2,835	2,961	3,039	3,135	3,284	3,512	3,750	4,079	4,557

Please note that any inconsistencies between the figures presented in the above text and table are due to rounding. Additionally, the results for each jurisdiction are provided to assist in assessment of local return on investment. The small numbers in some jurisdictions may distort parameter uncertainties and should not be used to compare one jurisdiction with another.