

Epidemiological and economic evaluation of NSPs in South Australia

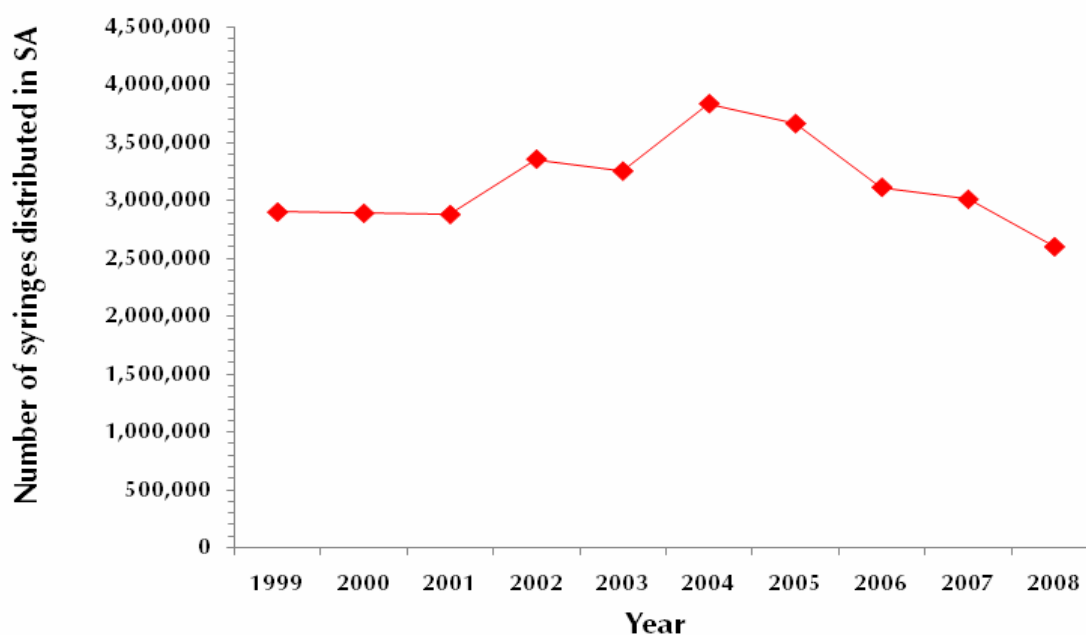


Overview

The ‘Clean Needle Program’, operated by the Drug and Alcohol Services South Australia, commenced in 1989. Pharmacy programs in South Australia for distributing needles and syringes commenced in the early 1990s. South Australia has 81 NSPs, consisting of one primary outlet, 69 secondary outlets and 11 enhanced secondary outlets. There are over 170 pharmacies that sell needles and syringes on a commercial basis. Primary and secondary outlets are based in metropolitan Adelaide and in rural areas. Some outreach services are also provided. Disposal facilities are provided at all community NSP sites, most pharmacies and some local councils also provide disposal facilities.

Number of NSPs:	81 (plus pharmacies)
Syringes distributed 1999-2008:	31,569,283
Average syringes per year:	3,156,928
Total spending 2007/8:	\$1,536,115

Figure 44: Number of needles and syringes distributed in South Australia (1999-2008)



The proportion of Australian IDUs that are in South Australia has remained relatively steady. The number of needles and syringes distributed through NSPs in South Australia increased during 2002-2004 but has started to decline in recent years. The average frequency of injecting by IDUs in South Australia has remained steady but sharing rates have tended to increase slightly. Despite this, the prevalence of HCV among South Australian IDUs has been steady, with a slight tendency for a decrease which is in contrast to most other jurisdictions. The incidence of HIV has remained relatively low among South Australian IDUs.

In 2007/8, 2,763,030 sterile injection equipment units were provided in South Australia: 20% were distributed through secondary sites with 63% of these through enhanced secondary sites. 241,900 needles and syringes were distributed through pharmacies. Pharmacists charge an average of \$5-\$10 per five-pack out-of-pocket costs. The number of NSP sites in South Australia is listed in Table 26. Table 27 reports the spending by financial year in 2008 dollars, unadjusted and adjusted for the consumer price index (CPI).

Table 26: Number of NSP sites in South Australia

	Primary	Secondary	Enhanced secondary
2007/8	1	69	11
2006/7	1	67	9
2005/6	1	65	6
2004/5	1	64	6
2003/4	1	66	6
2002/3	1	66	5
2001/2	1	65	5
2000/1	1	63	5

Table 27: Summary of expenditure on NSPs in South Australia (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	494	456	501	504	430	489	405	401
Disposal equipment	253	233	256	109	260	260	274	227
Safe sex packs	0	0	0	0	0	0	0	0
sub-total	747	690	757	613	690	749	679	629
NSP SUPPORT (\$'000)								
Primary NSPs Operations	182	216	215	215	215	215	215	215
Support for Secondary NSPs	147	309	370	322	388	661	386	637
Transport	0	0	0	0	0	0	0	0
Vending machines	0	0	0	0	0	0	0	0
sub-total	329	526	585	537	603	877	601	853
TOTAL (\$'000) (unadjusted for CPI)	1,077	1,216	1,342	1,150	1,294	1,625	1,280	1,482
TOTAL in 2008 (\$'000) (CPI adjusted)	1,361	1,490	1,597	1,337	1,466	1,792	1,367	1,536

Evaluating current NSPs

The mathematical epidemiological transmission model for HIV and HCV was applied to IDUs and NSPs specifically in South Australia. 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 South Australia with and without NSP distribution of sterile injecting equipment (Figure 45). The estimated number of infections averted is presented in Figure 46. An estimated 122 (89-175, IQR) HIV infections and 8,987 (8,722-9,463, IQR) HCV infections were averted due to NSPs in South Australia.

Figure 45: Estimated HIV and HCV incidence in South Australia with and without NSPs

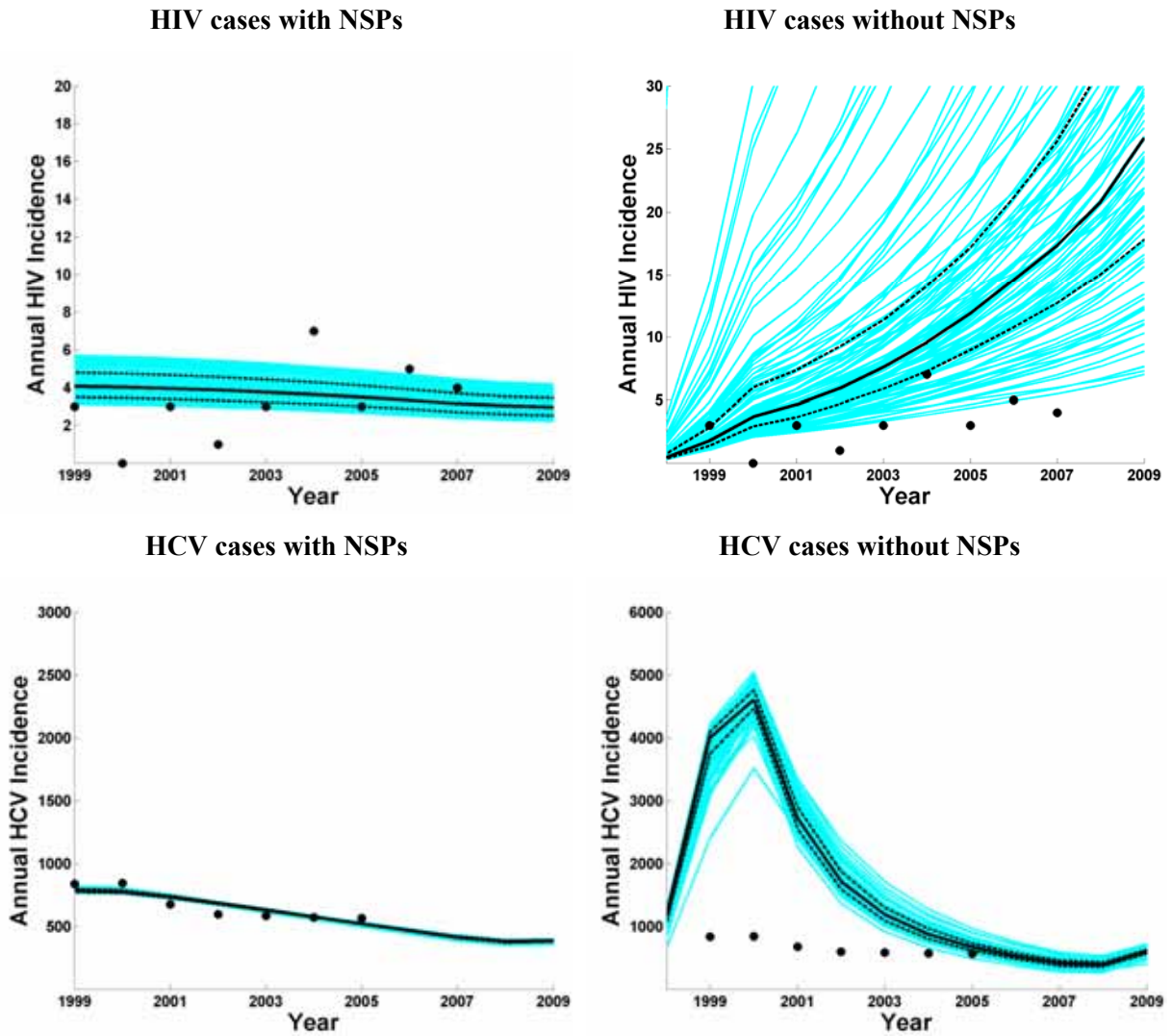
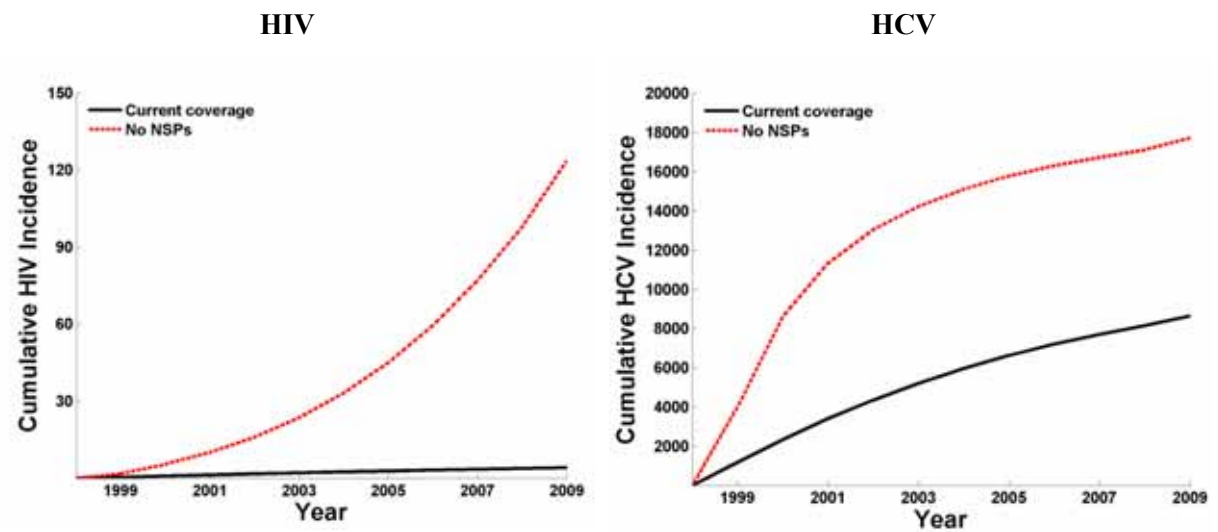


Figure 46: Estimated cumulative number of HIV and HCV cases averted in South Australia due to NSPs



Epidemic projections in South Australia

The South Australian 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 South Australian NSPs.

Figure 47: Projections of the expected number of HIV cases in South Australia according to different syringe distribution levels

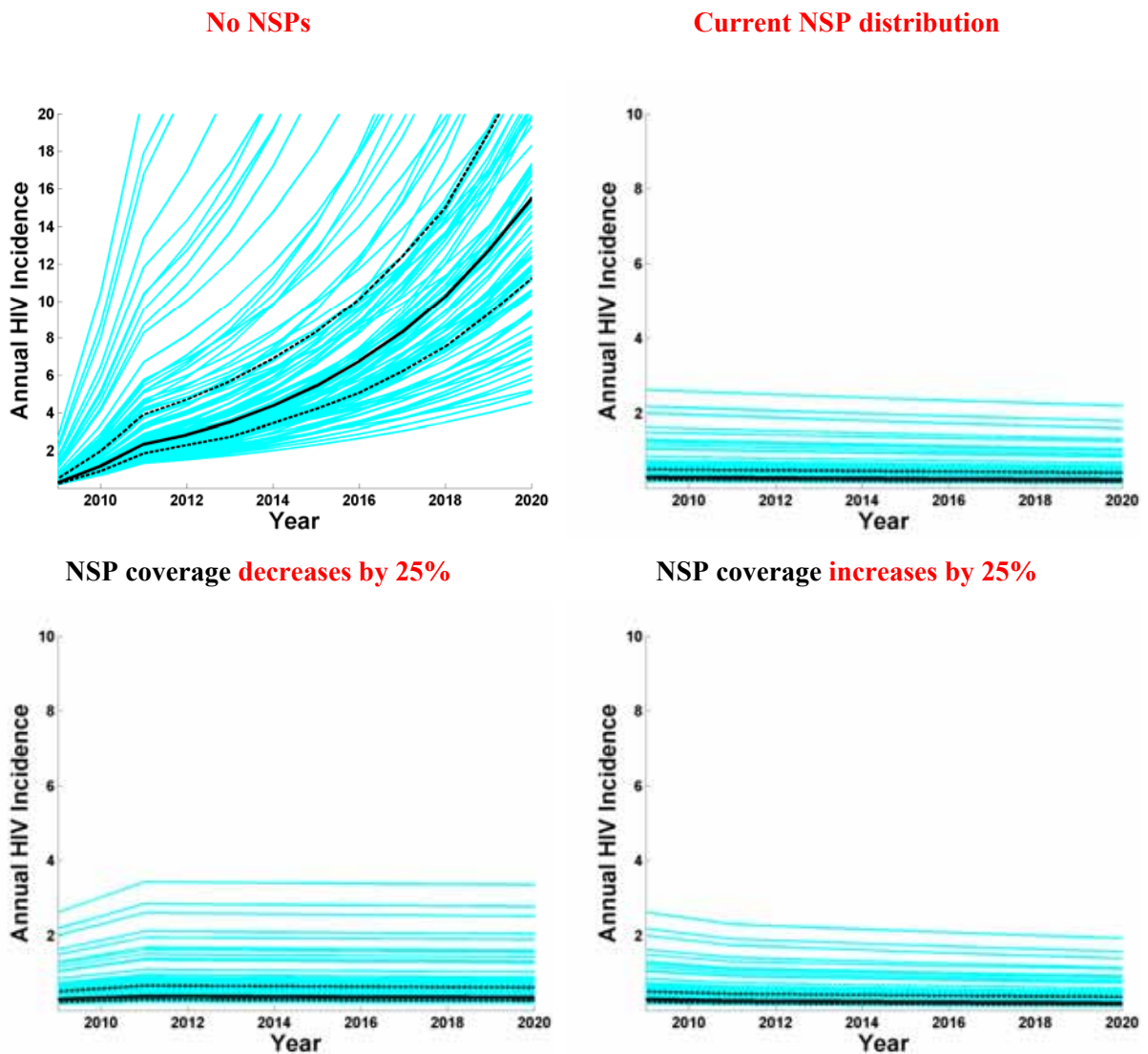
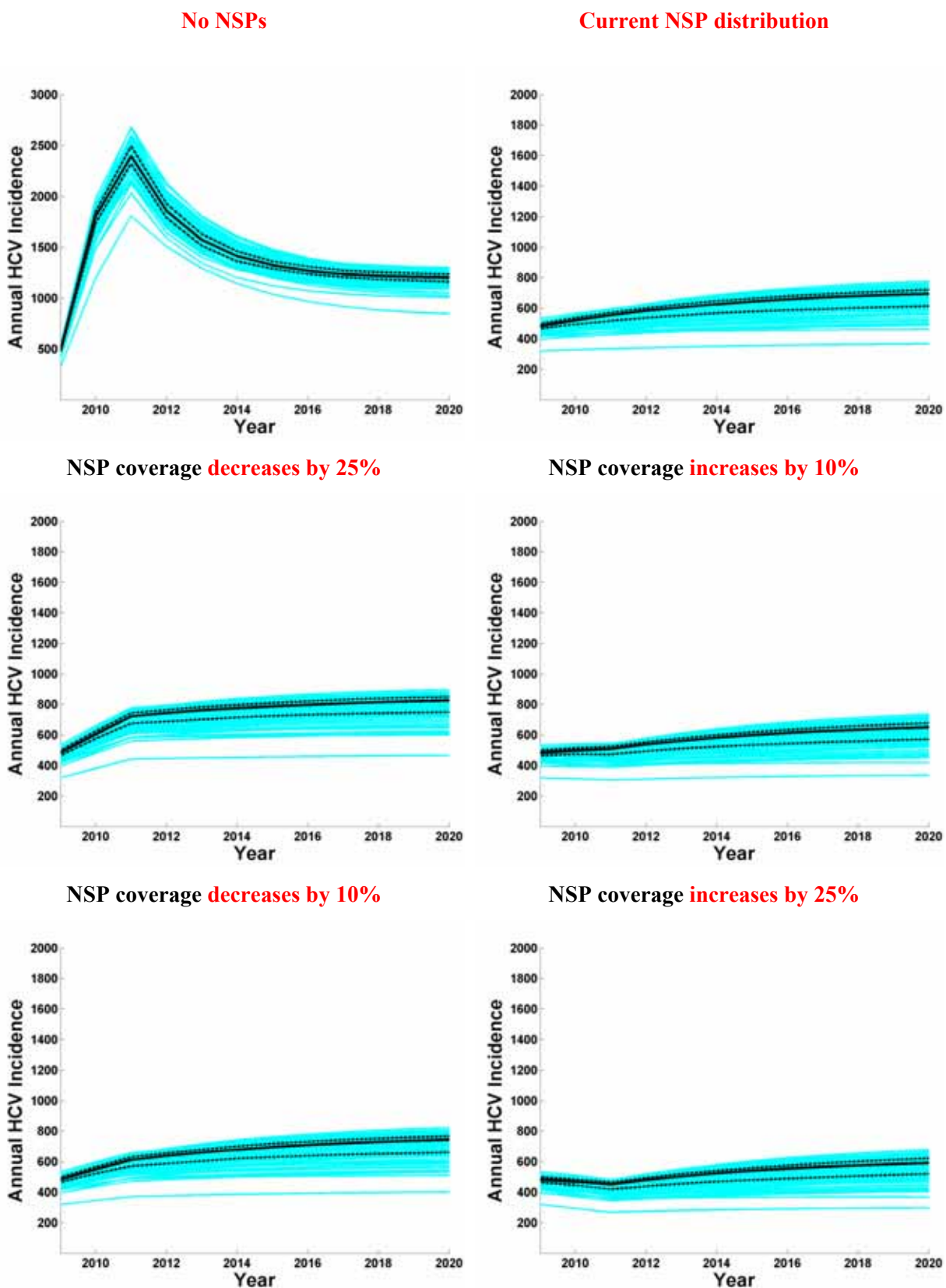


Figure 48: Projections of the expected number of HCV cases in South Australia according to different syringe distribution levels



Economic evaluation of NSPs in South Australia

The spending of \$15m in the funding of NSPs in South Australia from year 2000-2009 has resulted in a saving of \$93m in healthcare costs, with more than 15,000 Disability Adjusted Life Years saved with a net financial saving of \$80m. A summary of the return on investment of NSP funding in South Australia is shown in Table 28. The mathematical and economic modelling estimated that if NSPs are continued at the same level of funding in SA for the next ten years, \$295m of net financial savings will accrue (\$258m discounted at 3%) and for twenty years \$605m (\$458m 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 \$3.85bn (\$1.26bn discounted at 3%).

Table 28: Return on Investment of NSP funding in South Australia (2000-2009)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Healthcare costs saved \$m (IQR)	11 (10-13)	11 (10-14)	10 (9-13)	9 (8-12)	9 (8-11)	9 (7-11)	8 (7-10)	8 (7-10)	9 (7-10)	9 (8-11)
NSP funding \$m (median)	1	1	2	1	1	2	1	2	2	2
Net cost savings \$m (median)	10	9	9	8	8	7	7	7	7	8
DALY gain (median)	1,369	1,573	1,643	1,641	1,611	1,560	1,493	1,427	1,387	1,382

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.