

Lessons for the Tobacco Endgame from Past Successes with Eliminating Other Hazards: Examples from New Zealand

Nick Wilson, George Thomson, Richard Edwards*

Department of Public Health, University of Otago, Wellington, New Zealand

*Presenter, email: richard.edwards@otago.ac.nz



Te Whare Wānanga o Ōtāgo

Introduction

Achieving the New Zealand Government's Smokefree 2025 goal is likely to require very well designed and appropriately resourced government efforts for a prolonged period. This suggests there is potential value in learning any lessons from past successes with eliminating hazards. We therefore reviewed relevant literature and also reflected on past case studies that some of us have conducted previously (particularly infectious disease hazards [1] and leaded gasoline [2]).



Figure 1: Introduced southern saltmarsh mosquito [SSM], *Aedes camptorhynchus*, now eliminated from NZ

Findings

New Zealand (NZ) has successfully eliminated the infectious diseases of brucellosis, hydatids and polio [3-5]. It also eliminated an imported disease vector, the southern saltmarsh mosquito [SSM] (Figure 1) which was present in at least 10 locations around the country [6] (Figure 1). NZ has also eliminated leaded gasoline, banned the importation of asbestos and banned the use of chlorofluorocarbons (the latter being linked to an international treaty). It has extensive experience in eliminating introduced (non-native) mammalian pests from offshore islands (including mice, rats, cats, goats, pigs, and possums [7, 8] [Figure 2]). More recently it has started on pest elimination campaigns on the NZ mainland eg, fenced "mainland islands" and eliminating deer from one large region of the country.



Figure 2: Introduced brushtail possum – eliminated from offshore islands and in some mainland areas

From this experience, potentially relevant lessons for the tobacco endgame include the following:

- 1) Clear goal setting and sustained government commitment.** For dealing with SSM the bold government goal of elimination was set. Sustained commitment was seen with hydatids – which persisted over decades.
- 2) Sufficient and sustained resourcing** eg, NZ\$ 70 million over 10+ years for successful mosquito (SSM) elimination [6]. For brucellosis resourcing came from both government and levies on farmers.
- 3) Across-government and multi-organization collaboration** (eg, between agricultural and health sectors for hydatids and SSM).
- 4) Non-governmental organization activity.** This was particularly relevant for unleaded gasoline, and continues to be so for ongoing mammalian pest elimination on islands eg, advocacy by both conservation groups and tribal (iwi) authorities representing Māori (the indigenous population).
- 5) Multi-dimensional approach** including new laws and media campaigns. New laws were used for control of leaded gasoline (along with a pricing intervention), for hydatids and for brucellosis control. Mass media campaigns were used for hydatids [9].
- 6) Use of new technologies.** This was been relevant for polio (new vaccine) and pest elimination (bait technology and aerial dispersal of bait).
- 7) Appropriate research infrastructure and surveillance systems.** A strong research base has supported elimination of hydatids, brucellosis, SSM and mammalian pests on islands. The country continues to have a strong surveillance infrastructure in animal diseases (Figure 3).

Likely limitations with generalisability:

- For some of these issues there were favorable economic drivers for control in NZ to protect agricultural production (hydatids, brucellosis, partly SSM). Yet for tobacco elimination, the net economic benefits (while likely to be large) may be more diffuse, long-term and indirect (and there are potential adverse economic harms to retailers etc).

- For some of these issues there was little adverse public impact of control measures, in contrast to 17% of NZ adults being smokers (most nicotine dependent) who may be adversely affected by measures such as tax increases and restrictions on smoking.
- Tobacco industry involves particularly large multi-nationals eg, very much larger than producers of asbestos and lead additives for gasoline.

Conclusion

Policy makers can potentially learn lessons from past hazard elimination successes in their own country (and other countries) as they plan, resource and implement tobacco endgame strategies.

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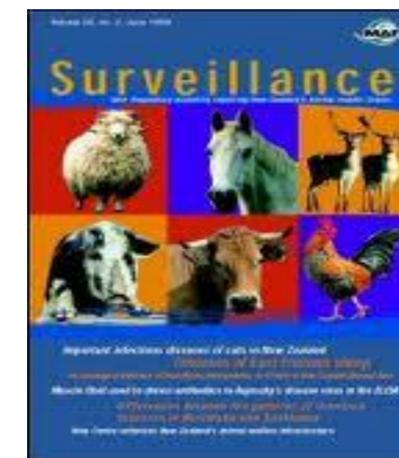


Figure 3: Example of a regular NZ publication with a focus on animal disease surveillance