



**Health**

Hunter New England  
Local Health District

**Scale up of a multi-strategic intervention to increase implementation of a school healthy canteen policy:  
The *healthy food@school* program**

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# Acknowledgement of Country



I would like to acknowledge the traditional owners of the land we are meeting on today, and pay my respects to elders past, present and future

# Background



- Implementation of healthy food guidelines in schools is a recommended child obesity prevention strategy.
- Without population wide implementation, the benefits of these guidelines will not be realised.
- Limited evidence base regarding strategies to increase school implementation.
- Further research identifying strategies that are effective.



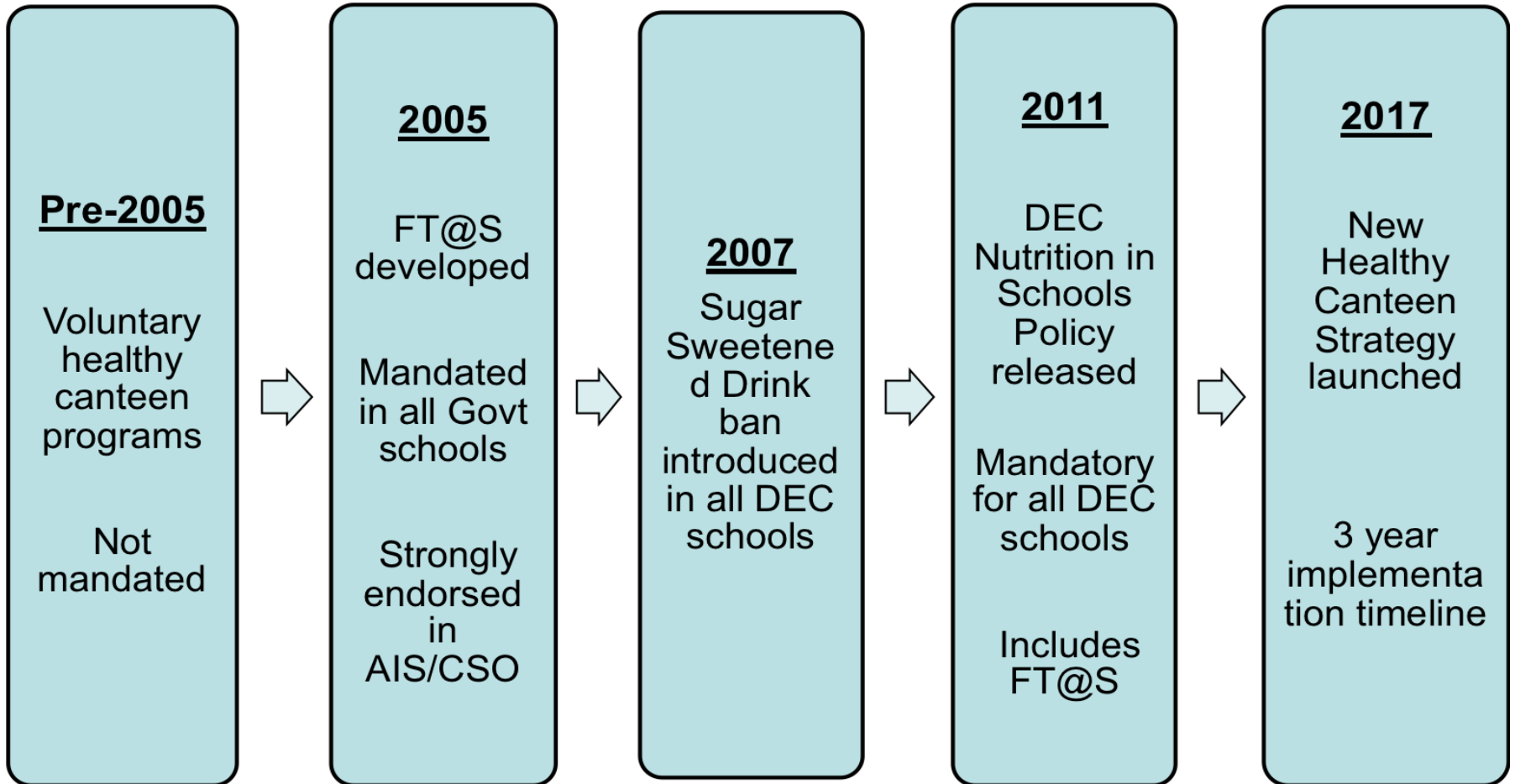
# Background



- Poor implementation.
- The effectiveness of, and the ability to deliver strategies across a large number of schools is unknown.
- The aim of this study is to assess the effectiveness of an program to support implementation, at scale, of a healthy canteen policy in Australian primary schools.



# Background





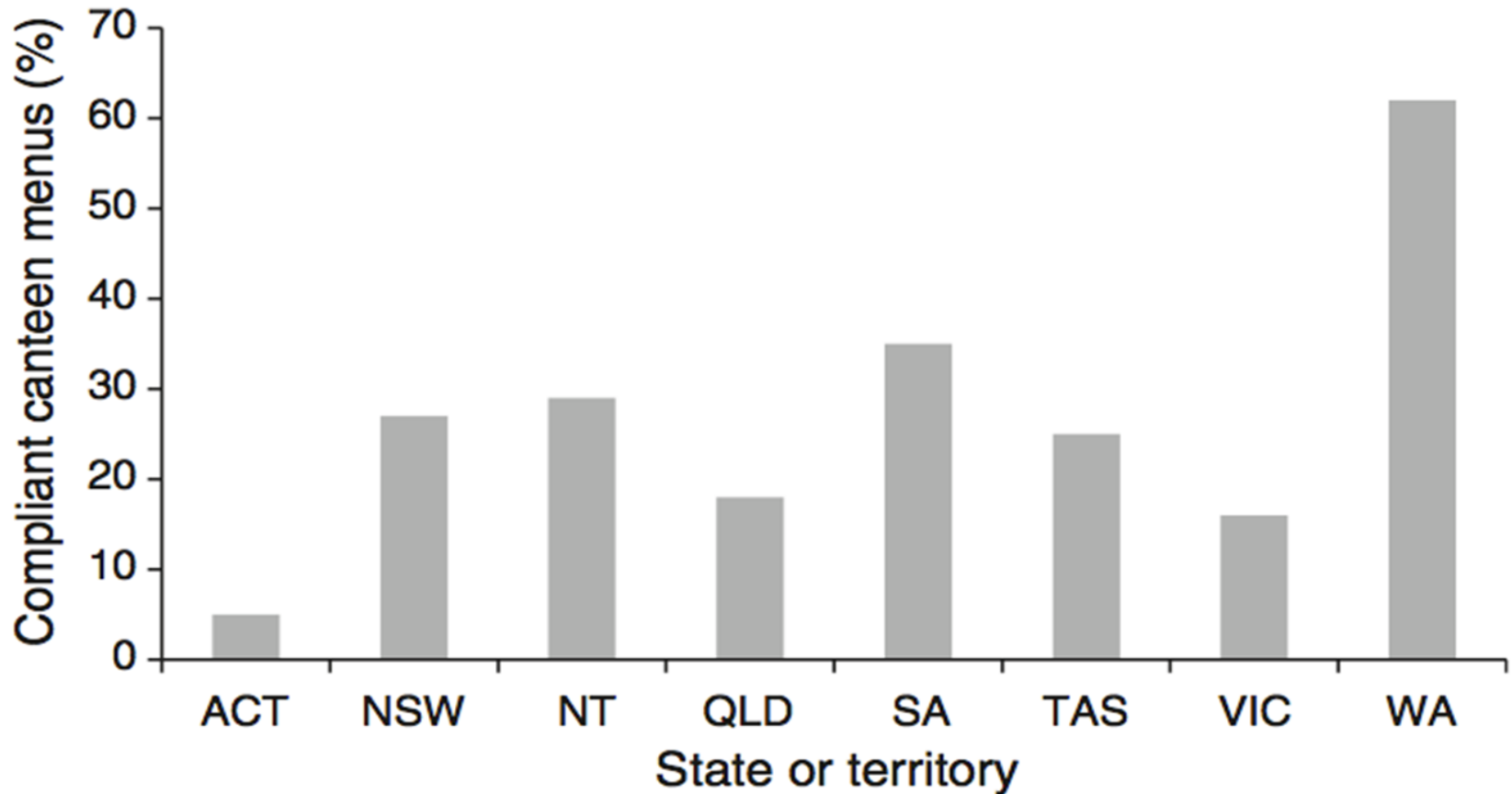
Classification and examples of Red, Amber and Green items based on "Fresh Tastes @ School"

Red foods	Amber foods	Green foods
<p>'Red' foods are nutrient poor, high-energy foods such as confectionary, deep fried foods and chocolate coated or premium ice creams.</p>	<p>'Amber' foods are considered to have some nutritional value however if consumed in large amounts can contribute to excess energy intake such as full fat dairy products, processed meats, some snack food bars and biscuits, some savoury snack foods, some muffins and cakes, some ice creams and dairy desserts.</p>	<p>'Green' foods are considered to provide good sources of nutrients such as fruit, vegetables, reduced fat dairy products, lean meat, fish and poultry and bottled water.</p>





# Policy Implementation



*Woods J. et al (2014). Australian school canteens: menu guideline adherence or avoidance? Health Promotion Journal of Australia; 25, 110-115*

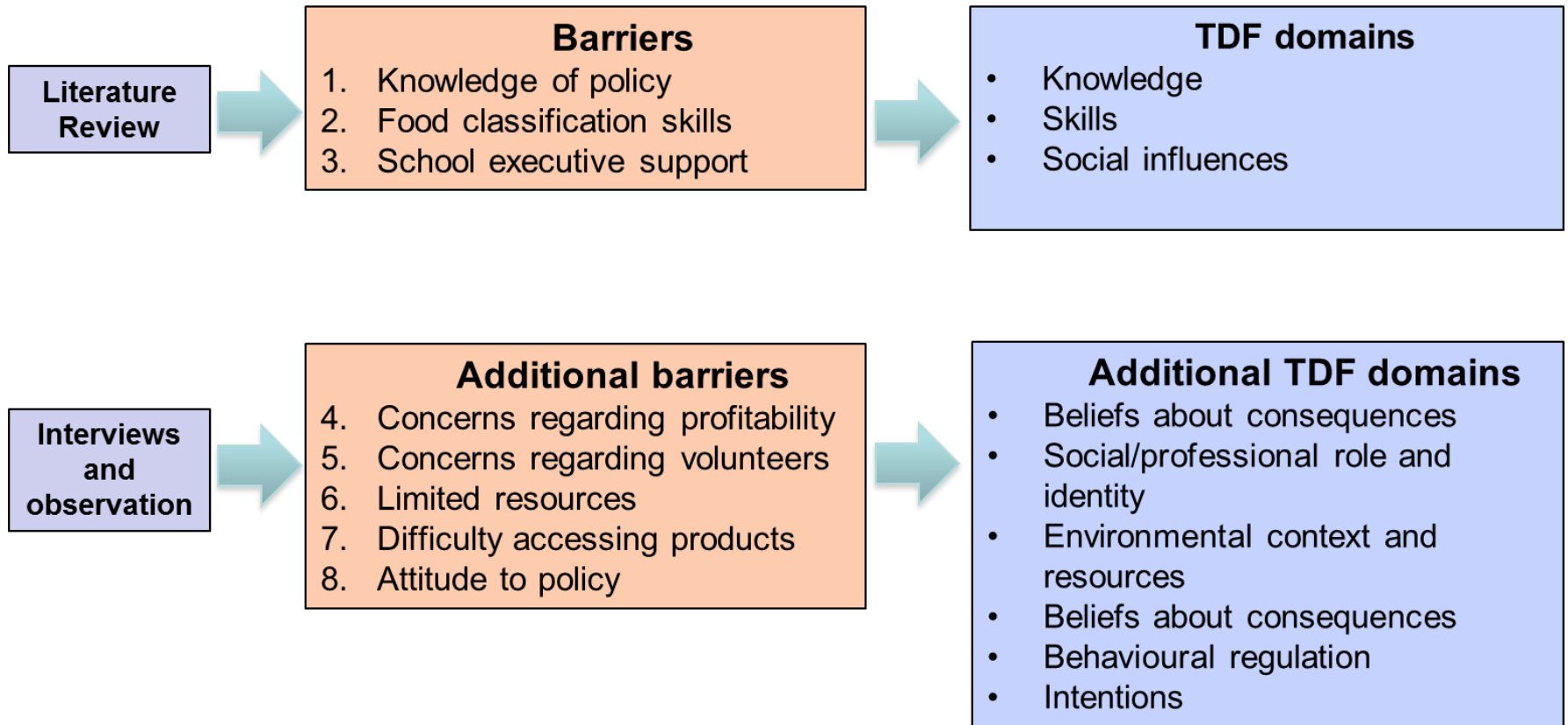


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**Good for kids**  
good for life



# Barriers and Enablers





# Designing an implementation intervention



- Step 1** • Who needs to do what, differently?
- Step 2** • Using a theoretical framework, which barriers and enablers need to be addressed?
- Step 3** • Which intervention components could overcome the modifiable barriers and enhance the enablers
- Step 4** • How can behaviour change be measured and understood?

# Designing an implementation intervention



- The conduct of serial controlled implementation trials (3) using common designs and methods;
- Objective measurement of child nutrition intake (food purchases) and school guidelines adherence (menu audits);
- Cost-effectiveness analysis of different strategies (3 RCTs);
- Different modes of support delivery, including face-to-face, telephone and text messaging

# Designing an implementation intervention



- High Intensity RCT – multi-strategic, face-to-face visits, regular contacts, 4 menu audits across the school year.
- Medium Intensity RCT – multi-strategic, similar strategies to high intensity, telephone/email/SMS support, 2 menu audits across the school year.
- Low Intensity RCT – focus on audit and feedback, between 1-4 across the school year.



# Methods / Strategies: *healthy food@school*



- A non-controlled before and after study design involving a multi-strategic intervention over a 9mth period.
- 157 primary schools located in the Hunter New England region, NSW.
- Diffusion of Innovations Theory guided development and the RE-AIM model was used to evaluate the project.
- Implementation strategies: Leadership, training, resource provision, audit and feedback, implementation support, consensus processes.



# Strategies for rural / small schools



- Canteen product database - developed and placed on the project website (Good for Kids. Good for Life website) to provide access to a range of potential products coded according to the state healthy canteen policy.
- Tools and resources – small school resources identifying additional barriers and suggestions.



# Evaluation adaptation



- RCTs - involved comprehensive menu audits conducted by trained dietitians.
- ***Healthy food@school*** program – development of a ‘Quick Menu Audit’ tool to assess menus.
- Validated through on-site observations.
- Menu items classified based on assumptions developed through extensive knowledge of products.





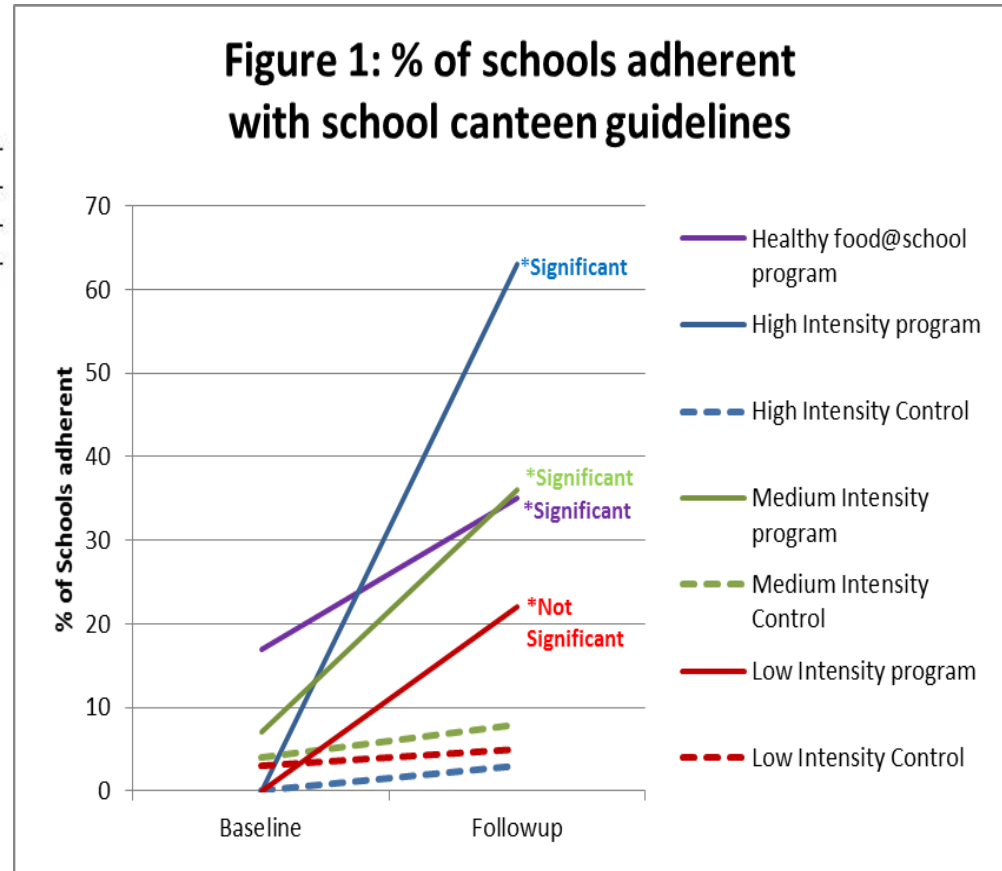
# Results



Table 1. Program development - cost and cost effectiveness

Cost per school	
High Intensity	\$4771
Mid Intensity	\$2216
Low Intensity	\$2101
ICER per % point increase in school adherence	
High Intensity	\$2982
Mid Intensity	\$2627
Low Intensity	\$4730
Relative cost effectiveness: ICER High versus Mid	
	\$3312

Non-significant compared to High Intensity



# Results



- Of the 173 schools eligible to participate in the study, 40% (n=69) were located in rural Local Government Areas.
- Baseline: 168 (97%) schools provided a menu / Follow-up: 157 menus.
- 35% (55/157) of all schools at follow-up compared to 17% (29/168) at baseline (OR= 2.7 (1.6-4.7), p=0.0003) had menus compliant.
- Compliance in schools in rural areas (38%), urban areas (35%) and with >20% Aboriginal student enrolment (35%) were similar.

# Results



- No statistically significant difference between characteristics such as school size ( $p=0.779$ ), geographical location ( $p=0.428$ ), socio-economic status ( $p=0.17$ ), canteen management ( $p=0.115$ ), or days of operation ( $p=0.761$ ) in terms of compliance at follow-up.
- Small schools (<160 students) ( $p=0.002$ ), schools categorised as being in lower socioeconomic regions ( $p=0.01$ ) and those located in outer regional or remote areas ( $p=0.04$ ) were more likely to NOT provide a menu at follow-up.

# Implications



- Higher prevalence of adherence associated with greater intensity of intervention.
- Adaptation and consideration of resource availability needs to be considered.
- Increase in implementation requires proactive practice change support strategies (not simply passive information/resource provision).
- The release of a new Healthy Canteen Strategy may need different and/or additional strategies.

# Take home message...



- Evidence-based implementation program can be effective in increasing school canteen compliance with healthy food canteen policies.
- Addresses barriers to compliance for schools.
- Potential to guide the wide-scale adoption and implementation of effective healthy eating programs across all Australian schools.

# Acknowledgements



- NSW Department of Education, NSW Ministry of Health, HNE Primary schools.
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