

Senior Smiles: Cost Benefit Analysis

The Core Principles



Regular visits of the **oral health practitioner** to the facility



Oral health risk assessments and care plans



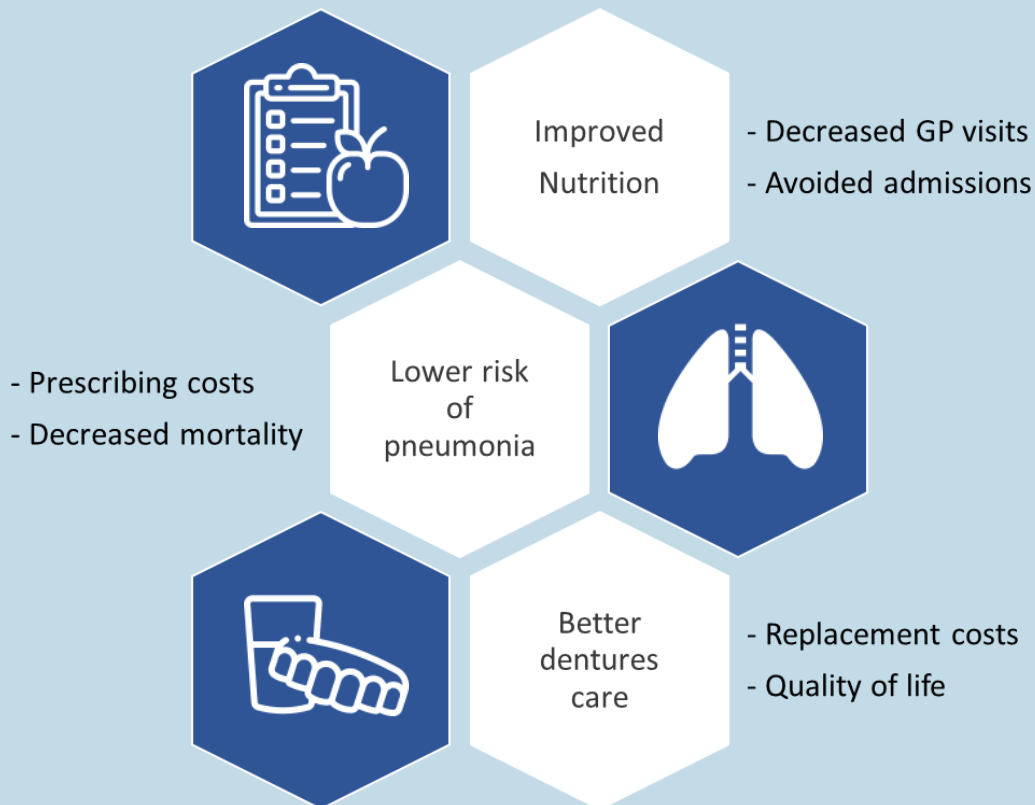
Referral pathways with dentists for more complex needs



Collaboration with the RACF* staff to enhance oral-health skills

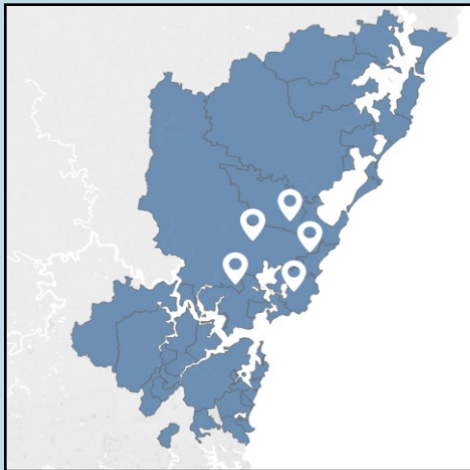
* RACF: residential aged care facility

Some of the Benefits



Spread: What Benefits come with Spreading Senior Smiles?

The 2014 pilot



Yearly NPV* : \$1.35 million



For every **\$1** invested into Senior Smiles,

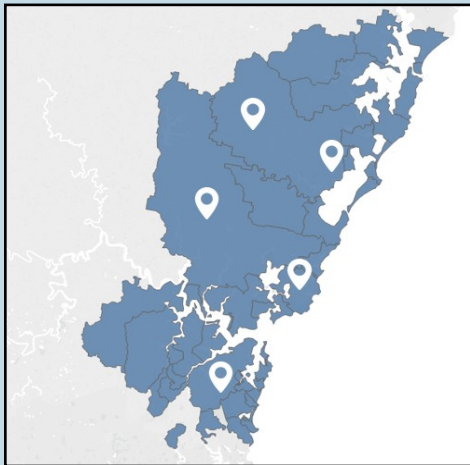


It delivered **\$4.13** of benefits within the healthcare system



and a further **\$4.87** in social benefits

The current project



Yearly NPV* : \$1.83 million



For every **\$1** invested into Senior Smiles,

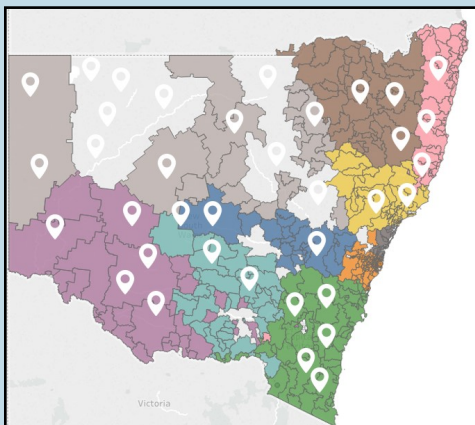


It delivers **\$3.14** of benefits within the healthcare system



and a further **\$3.66** in social benefits

Roll-out in New South Wales



Yearly NPV* : \$143.5 millions



For every **\$1** invested into Senior Smiles,



It would deliver **\$2.40** of benefits within the healthcare system



and a further **\$3.18** in social benefits

* NPV: Net present value (Benefits - Costs)

The Methodology Behind Senior Smiles

In order to evaluate the cost effectiveness of Senior Smiles, the following points had to be identified, monetised, and tested. Below are just a few of key factors which were identified in setting up and delivering the Senior Smiles programme, and each point has a brief description of its significance.

Costs:

- **Programme costs**— Programme costs had to be highlighted in order to calculate the cost benefit ratio. Programme costs refer to the funds invested by Elderslee Foundation for example.
- **Health system costs**— As a result of implementing the programme, money had to be spent to give education sessions to the RACF staff and to pay for the dental hygienists' salary. These examples, to name a few, had to be quantified in order to calculate the cost benefit ratio.
- **Consequential costs**— Consequential costs include outcomes which result in financial hits to the health care system. Costs related to residents referred to public dental clinic for example, is a consequential cost witnessed in the Senior Smiles study.

Benefits:

- **Evidence based**— Project delivery data and literature reviews were the methods used to identify and estimate the benefits produced by Senior Smiles.
- **Monetisation**— To analyse the financial benefits, the outcomes were monetised. Two benefit categories were highlighted: fiscal savings and social value.

Fiscal savings occur when the outcomes of the programme result in a reduction in fiscal expenditure, and fiscal savings can be further categorised to 'cash releasing benefits' (e.g. deprescription of a drug), and non-cash releasing benefits' (e.g. reduced length of stay in hospital).

Social value refers to benefits such as improved health and wellbeing, referred to as 'quality of life benefits'. 'Quality Adjusted Life Years' (QALYs) is a calculation which multiplies the number of years spent in a certain state of health by health state utility based weighting. It is estimated that each 'Quality Adjusted Life Year' is valued at \$42,000-\$67,000.

Other factors:

- **Discount rates**— discount rates had to be applied to all costs and benefits in order to allow comparison to 'present values'. The model followed the Department of Treasure and Finance guidance, and applied a discount factor of 4.0%.
- **Sensitivity testing**— A modelling technique, Monte Carlo analysis, was applied in order to test the impact of variance on the outcomes of interest.
- **Modelled scenarios**— The data available has been used to measure the impact of Senior Smiles in four scenarios: the pilot of the project, the current implementation, the rollout across NSW, and the rollout across Australia.