

Wellbeing and Vitality in Education: evaluation of the WAVE programme 2016



Canterbury
District Health Board
Te Pōari Hauora o Waitaha

Information Team, Community and Public Health
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1 Summary

Over the past decade South Canterbury DHB (SCDHB) and Community and Public Health (CPH) have developed a unique health promotion programme in education settings across South Canterbury that is tailored to the needs of our young people. WAVE (Wellbeing and Vitality in Education) is based on the best international evidence for health promotion in education, Health Promoting Schools (HPS).

This report provides results of the 2016 evaluation of the WAVE programme. We used both key informant interviews and a survey of all participating education settings. Results show that all education settings in South Canterbury were participating in WAVE. This included 44 early childhood education settings, 36 primary schools, 10 high schools and 4 tertiary providers, with approximately 14,000 students in total. Settings reported a high level of engagement with WAVE (87% engaged or very engaged), a statistically significant improvement from previous evaluations. Almost all settings reported being satisfied or very satisfied with WAVE (97%). Other statistically significant results were noted, including in the areas of school policy and professional development.

For this report, the four key areas of nutrition, Smokefree, SunSmart and physical activity were chosen to highlight the impact of WAVE between 2012 and 2016. Results included a number of statistically significant improvements between 2012 and 2016 including: an increase in the proportion of settings with staff that have completed professional development on nutrition in the previous 12 months; an increase in the proportion of settings that had a Smokefree policy that covered outside boundaries; and an increase in the proportion of settings that had a policy on increasing physical activity. After ten years of embedding WAVE within South Canterbury education settings there was overall agreement among those interviewed that WAVE has been a successful programme in South Canterbury. Success factors included:

- that WAVE has listened to and collaborated with school communities and continues to evolve to meet local needs
- that WAVE is seen as making a difference for students in all areas of health including physical and mental health and wellbeing
- that the priority and focus of WAVE is the students
- that WAVE has strong partnerships with education settings and their communities (this has included understanding the busy nature of settings and accommodating this into planning)
- that WAVE targets and works to reduce inequalities in health, with a particular focus on improving Māori health.
- that WAVE is seen as *“the trusted voice for all things health”* and a *“one stop shop”* for advice, assistance and resources to enable health promotion in education settings, including the provision of professional development, and
- that evaluation is built into the WAVE programme.

WAVE has enabled health promotion to become business as usual in education settings in South Canterbury, with the settings reporting improved student wellbeing. WAVE is valued by both health and education sectors in South Canterbury. Interviewees supported continuation of WAVE, particularly in terms of its impact on student outcomes.

2 Background

School-based health promotion has been shown to be effective in many areas of health (Aked et al 2010), including reducing smoking uptake in young people (Thomas et al 2013), improving nutrition and physical activity and reducing overweight (Wang and Stewart 2013), promoting mental health and reducing depression, violence, and substance abuse (Weare and Nind 2011; Foxcroft and Tsertsvadze 2011; O'Neill et al 2011) and reducing risk-taking behaviours in sexual health (Shepherd et al 2010). Progress has also been made in ensuring better sun protection practices in schools (Giles-Corti et al 2004; Jopson and Reeder 2006).

Characteristics consistently identified with successful health promotion programmes in schools include school policies and procedures that place a high priority on healthy behaviours (Weare and Nind 2011; Wang and Stewart 2013). Professional development for teachers is critically important to ensure long-term viability of health education within the school (St Leger and Nutbeam 1999; Moynihan et al 2015). Teachers who have received health promotion training tend to be involved more frequently in health promotion projects and have a more comprehensive approach to health education (Jourdan et al 2008). School-based programmes can further promote and reinforce their messages if they link with families and create partnerships with the wider community.

WAVE

WAVE includes the characteristics of successful programmes noted above. The International Union for Health Promotion in Education's guidelines (IUHPE 2009) have noted the importance of continuous, active commitment, appropriate capacity building for staff and key partners, and the provision of adequate resources to ensure long-term sustainability (Viig et al. 2012; Simovska et al 2015).

WAVE was developed in 2007 by South Canterbury DHB (SCDHB) and Community and Public Health (CPH, the Public Health division of the Canterbury District Health Board, which provides public health services to SCDHB) on the understanding that education settings are a key site for health promotion because: students are at an age when many lifestyle patterns are being established; education settings are credible, authoritative environments; almost all children and many young people are engaged in education; and education settings also provide extensive links into the wider community. The focus of WAVE, in accordance with IUHPE guidelines (2000, 111-112), has been on a combination of the curriculum, the environment, partnerships (between health and education) and school policies.

The objectives of WAVE as stated in the Strategic Plan 2015-20 include that WAVE effectively engages with all education settings; that increased opportunities are provided to support education settings for healthy choices by students, families and staff; and that teachers are supported with appropriate professional development and resources. From its inception, WAVE has been regularly evaluated to inform its further development.

3 Evaluation Methods

Researchers have continued to highlight the challenges of evaluating school-based health promotion programmes and determining how best to measure success (IUHPE 2009; Pommier, Guevel et al. 2010; Cognition Education 2011). However, sustained changes in education settings over time can be measured (Inchley, Muldoon et al. 2006), for example the ways that schools adapt HPS practices may be tracked at a school or operational level. Inchley et al (2006) argue that greater recognition needs to be made of the steps schools make towards rethinking their practice and embracing the HPS concept. In the light of New Zealand research (Cushman and Clelland 2012) that suggests a continuing lack of understanding of the HPS concept, a focus on school practices appears sensible. WAVE's approach to impact evaluation was informed by the HPS model, focusing on sustained changes achieved in education settings across the domains of curriculum, environment, partnerships and school policies. The evaluation aim was to assess change over time at the level of the whole school environment.

This evaluation considers the performance of the WAVE programme, using both quantitative and qualitative methods. Survey questionnaires were administered to the key WAVE contact at each setting by their WAVE facilitator during term 4, 2012 (n=77) and terms 3 and 4, 2016 (n=88). Survey results are compared between 2012 and 2016. Qualitative interviews with key stakeholders from the health and education sectors in South Canterbury (n=12) took place in October and November 2016. In addition a focus group was conducted with secondary school students belonging to the student WAVE team (n=10) of a participating secondary school in November 2016. For this report, four key areas were chosen to focus on to highlight the impact of WAVE between 2012 and 2016. The key areas are nutrition, Smokefree, SunSmart and physical activity.

Background and relevant contextual information for each key area has been provided by the Timaru-based WAVE Team

4 Survey

Survey findings for 2016 show statistically significant¹ results across the areas of engagement, effectiveness of professional development and professional development in mental wellbeing and nutrition.

Engagement

↑ in the overall engagement with WAVE 2012 vs 2016

those *engaged* or *very engaged*

68% in 2012 to **87%** in 2016

4.1 Engagement and satisfaction

Satisfaction

satisfied or very satisfied with WAVE

Almost all settings

97%

There has been a significant improvement in the overall engagement of education settings with WAVE, with those engaged or very engaged with WAVE increasing from 68% in 2012 to 87% in 2016 ($p=0.009$). In addition, almost all settings reported being satisfied or very satisfied with WAVE (97%).

4.2 Professional development

There was a significant improvement in the effectiveness of professional development in the previous 12 months in enhancing education settings staff's delivery of health education in the curriculum, with 84% of settings reporting professional development as effective or very effective in enhancing staff's delivery of health education in 2016, compared to 62% in 2012 ($p=0.007$).

In addition, there were significant improvements in the proportion of staff that have had professional development in health education topics between 2012 and 2016. In general the level of coverage of professional development in health education topics was stable over this time period, however there were statistically significant increases in both mental wellbeing and nutrition when comparing 2012 with 2016. Results indicate that the professional development topic of Smokefree in primary schools is an area that could be enhanced (19% of primary schools reported that their staff had received professional development in Smokefree in 2012 compared with 3% in 2016).

Professional development

effective or very effective[†] in enhancing delivery of health education

62% in 2012 vs **84%** in 2016

↑ in the proportion of staff completing PD in mental wellbeing & nutrition

¹ Statistical significance is presented, with a p value of <0.05 indicating a statistically significant difference between 2012 and 2016. Significant differences are few in number and are noted in the text, with differences described otherwise not being statistically significant. When a significant change has been found a graph has been provided. P values were calculated for all setting types combined. Non-significant changes between 2012 and 2016 are noted when the difference is 10 percent or greater. Note that not all settings had data available at both timepoints for comparison between 2012 and 2016. The number of settings included in these comparisons is noted in the relevant figures.

4.3 Nutrition

Schools and early childhood education settings with healthy eating embedded through school life demonstrate marked improvements in attendance, attention, behaviour, and levels of concentration among students². There is strong evidence that school gardens support children's vegetable and fruit consumption and willingness to try new vegetables³

For education settings, factors that influence the food choices of children and young people include: contractual agreements between canteen managers and school business managers that do not have specific food and nutrition guidelines, the abundance of local dairies and fast food outlets within 400m of schools, and sponsorship of school fundraisers and sports teams' by junk food or sugary drink companies.

In 2009 the Ministry of Education removed the clause in the National Administration Guideline (5) which stated "where food and beverages are sold in schools' premises, to make only healthy options available". In 2016, the Ministry of Education and Ministry of Health recommended that all schools have a water and milk – only policy.

Although food and nutrition is a core requirement of the Health and PE Curriculum, student and staff combined WAVE teams drive many 'nutrition related initiatives' across other areas of the curriculum. WAVE has worked with settings to provide healthier options in their canteens and to develop edible gardening and cooking skills programmes. In more recent years, professional development has included adopting and reviewing healthy eating policies, edible gardening workshops, and encouraging healthy options for provision or selling.

Timaru District Council provide all schools in the Timaru district with compost for their edible gardens. Community groups such as Rural Women and church groups work with some schools to support cooking skills programmes for parents, and breakfast or lunch programmes.

4.3.1 Key findings

- **Almost all ECE and primary schools in South Canterbury had nutrition-related initiatives, such as edible gardens (98% of ECEs, 97% of primary schools). Almost four fifths of high schools had nutrition-related initiatives (79%).**
- **There has been a significant increase between 2012 and 2016 in the proportion of settings with staff that have completed professional development on nutrition in the previous 12 months. There has also been an increase between 2012 and 2016 in the proportion of settings with nutrition policies or guidelines.**
- **Student WAVE teams have led a number of nutrition-related initiatives. Examples from the previous 12 months included: providing a shared breakfast which aimed to promote healthy eating, planning a school garden, and advocating for healthy changes to the options available at the school café.**

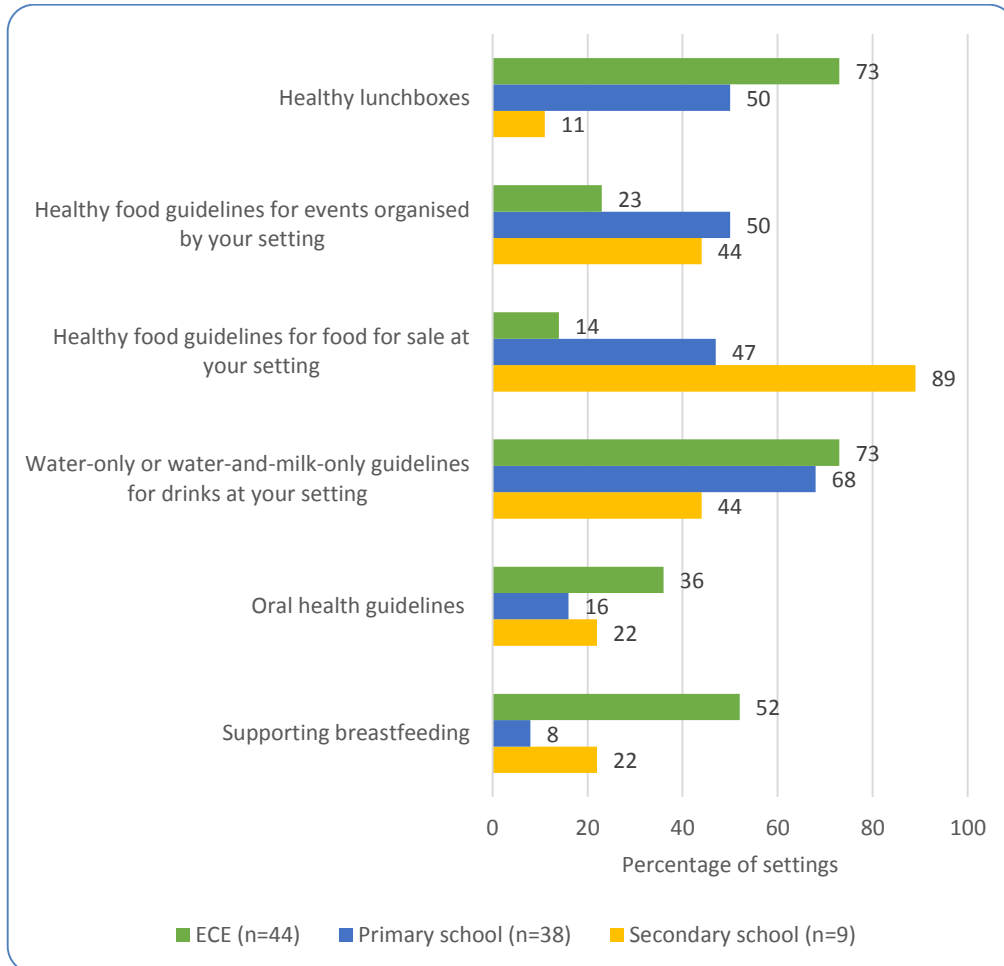
² Ministry of Education. Promoting healthy lifestyles? Reviewed 2016, March 31. Retrieved from: <https://education.govt.nz/school/student-support/student-wellbeing/health-and-wellbeing-programmes/why-promote-healthy-lifestyles/>

³ Moss, M., et al. 2011. South Island District Health Boards Evaluation of Edible Gardens in Education Settings. Final Report. Accessed 11 April 2016. Retrieved from: <http://www.rph.org.nz/content/5bb9d9c7-4dc8-4ee4-9c9c-a067c436a5c0.cmr>

- WAVE has partnered with students, parents/communities and settings to support nutrition-related initiatives in South Canterbury.

4.3.2 Physical and social environment

Figure 1. Proportion of settings that had policies or guidelines addressing nutrition-related topics, by setting type, 2016

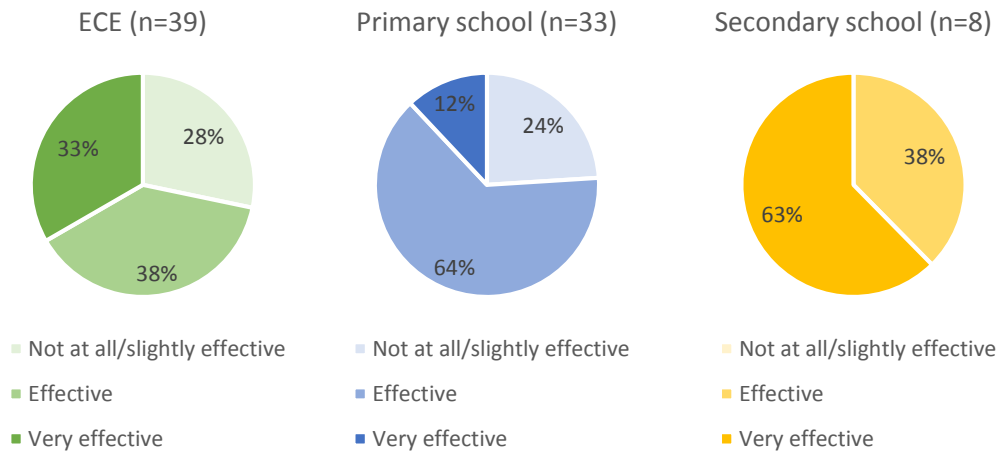


Between 2012 and 2016 there was an increase in the proportion of settings that had healthy food guidelines for food for sale at their setting across all settings. For example:

- Almost half of primary schools (47%) had this guideline in 2016 (35% in 2012).
- Over four fifths of secondary schools (89%) had this guideline in 2016 (50% in 2012).

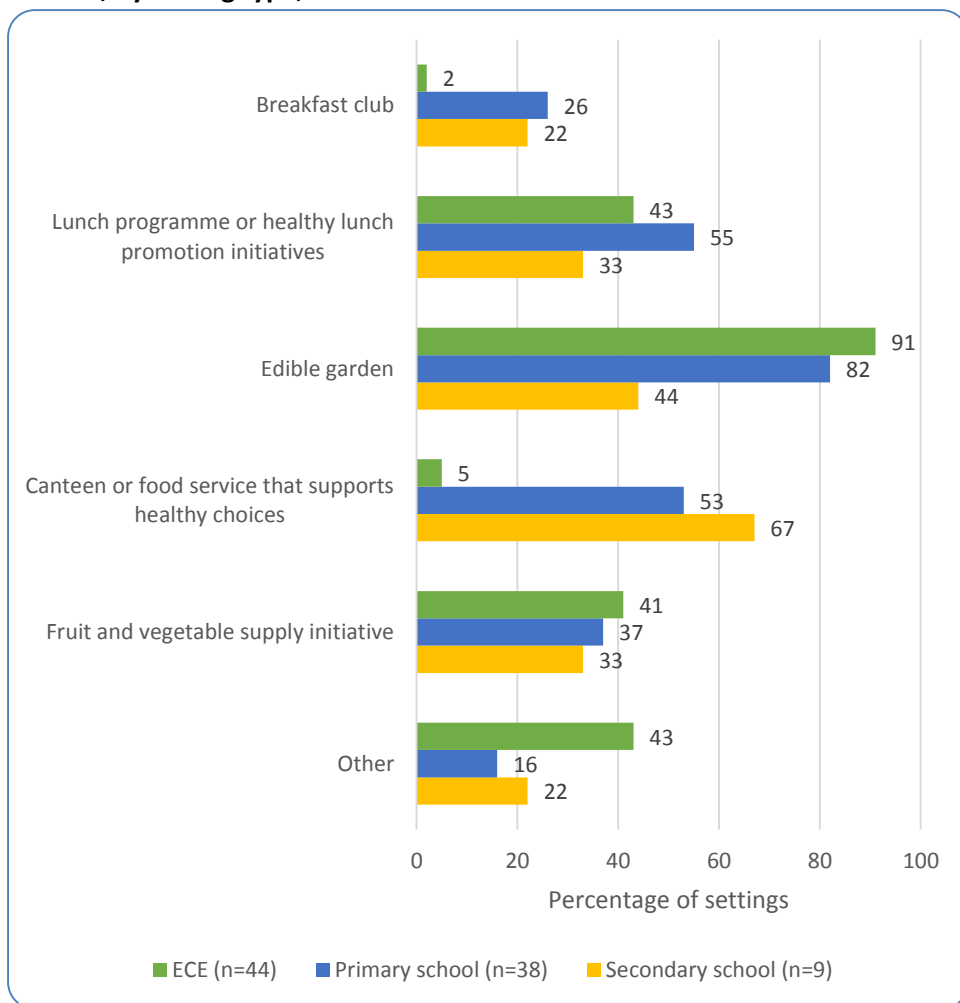
Between 2012 and 2016 there was a decrease in the proportion of primary schools that had healthy food guidelines for events organised by their setting (62% in 2012 compared with 50% in 2016).

Figure 2. Effectiveness of nutrition-related policies or guidelines at influencing settings' physical and social environment, by setting type, 2016 *



*percentages may not add up to 100 due to rounding

Figure 3. Proportion of settings that had initiatives supporting healthy choices in the last 12 months, by setting type, 2016



Almost all ECEs and primary schools in South Canterbury had nutrition-related initiatives that support healthy choices (98% of ECEs, 97% of primary schools) in the last 12 months. Almost four-fifths of secondary schools (79%) had nutrition-related initiatives in this timeframe. There were increases between 2012 and 2016 in the proportion of settings with nutrition initiatives. For example:

- 26% of primary schools had **breakfast clubs** in 2016, compared to 19% in 2012.
- 67% of secondary schools had a **canteen that supports healthy choices** in 2016, compared to 50% in 2012.
- Across all setting types, the proportion of settings that have a **fruit and vegetable supply initiative** has increased between 2012 and 2016.
- Over four fifths of ECEs and primary schools had **edible gardens** in 2016 (91% of ECEs, 82% of primary schools).

4.3.3 Curriculum, teaching and learning

Figure 4. Proportion of settings where any staff had completed professional development on nutrition in the last 12 months, by setting type, 2016

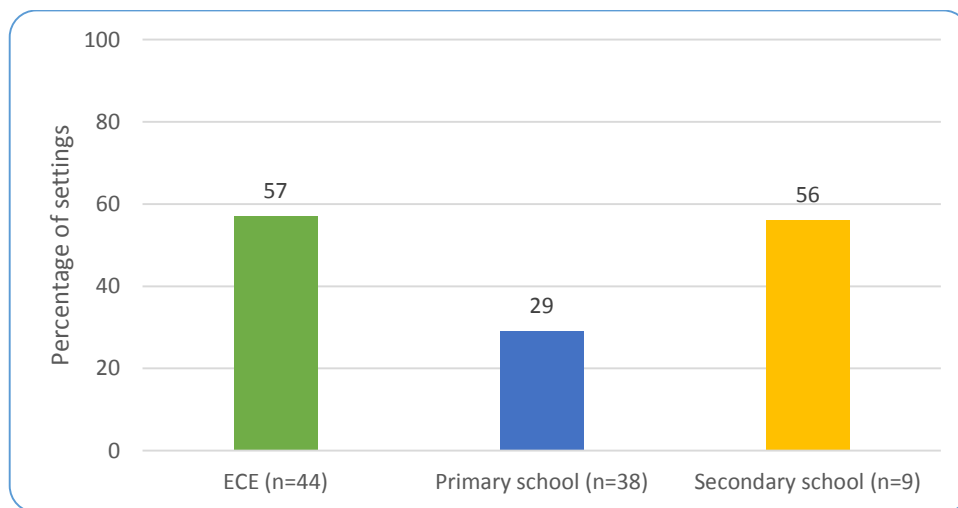
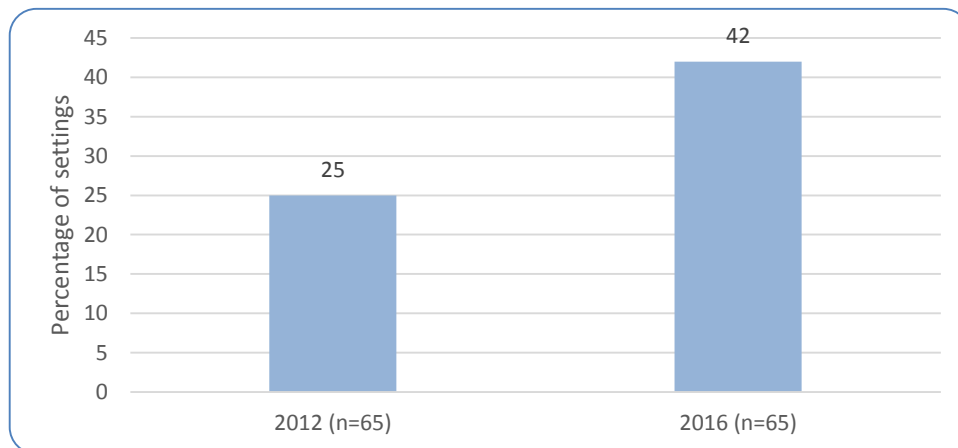


Figure 5. Proportion of settings (ECE, primary and secondary schools combined) where any staff had completed professional development on nutrition in the last 12 months, 2012 and 2016



When all setting types are considered together, there was a statistically significant increase between 2012 and 2016 in the proportion of settings with any staff that had completed professional development on nutrition in the previous 12 months ($p=0.04$).

4.3.4 Partnerships and services

Over the previous 12 months WAVE has worked in partnership with settings to improve nutrition in South Canterbury by, for example, settings having '*constant access to WAVE facilitator to call with the expertise and knowledge*'. In addition WAVE has provided resources that support healthy food initiatives. Evaluation findings indicate that WAVE, parents/communities and settings have worked in partnership to support nutrition-related initiatives, for example, edible gardens and other nutrition-related health promotion.

4.3.5 Interviews

Qualitative findings from interviews add depth to the picture of how WAVE contributes to improved nutrition in South Canterbury. Some examples of this include:

Adapting nutrition initiatives to the local environment

Interviewees believed that WAVE was tailored to the characteristics of the South Canterbury region, for example that edible gardens were a good fit with the rural nature of many of the South Canterbury schools.

Many of our rural schools, the connections with growing gardens and cooking is so much part of the community, the focus and what our parents want for our children and their families, it's an absolutely perfect match. What you would be doing in inner city Christchurch where families don't have the ability perhaps to have a garden that they can dig up and put plants in, it would look different.

A number of interviewees commented on the difference they believed WAVE makes to students, including in the area of nutrition. In addition some interviewees reported that they could see the link between WAVE and health competencies and increased learning for students.

..the kids now know about brain food and treat food, and particularly now with all the stuff that's out there you can see the difference. We have brain food in the morning play lunch and they're allowed to choose treats for afterwards, and you can see the difference. I can see the difference.

I trust WAVE, I trust that it works really well. And to be perfectly honest, I've actually noticed in the school the healthy choices that the children make are much better as opposed to in the past, they seem to have improved.

Student-led nutrition initiatives

The 2016 evaluation identified a number of nutrition-related initiatives that were student led. The students gave a number of examples of what the group had achieved over the previous 12 months, which included providing a shared breakfast which aimed to promote healthy eating, planning a school garden and advocating for healthy changes to the options available at the school café.

Reasons that students were motivated to be involved in the team included that they got to follow their interest in healthy eating and to have a positive effect on the students at their school. The students had received positive feedback about the changes they had made at the school, with the shared breakfast being a particular success.

We had a shared breakfast one morning.. just for anybody who wanted to come. It was a real success... 50 or 60 students I think, we weren't expecting that many.

The student WAVE team was supported by WAVE facilitators. For example, where the WAVE facilitator identified who the students needed to talk to at the school café, to advocate for changes to increase the amount of healthy food available, *'they knew who we need to talk to, so they can set meetings up, step us through the process we need to go through.'*

Partnerships with education, community/parents

As with previous evaluations of WAVE, the partnerships of WAVE with education, community and students have been identified as fundamental to the success of WAVE.

...we've worked with WAVE.. we looked at the lunchboxes and what was in the lunchboxes... there was a lot of not-so-healthy options... we were teaching parents how to prepare healthy food, not only for lunchboxes but at home, that were nutritional. So that has now developed to gardening, the next lot we were cooking from our vegetable garden. The children and I and [WAVE facilitator], over the years we've developed, three community gardens... so we've got a school vegetable garden but we also had a community garden.

4.4 Smokefree

Smoking is the leading cause of preventable death and disease in New Zealand. Being Smokefree and having Smokefree environments help support the health and wellbeing of our families and whānau.

The New Zealand Government has set a goal that by 2025 fewer than 5% of New Zealanders will smoke (currently 15%).

Smokefree can be used as a topic to engage students through a range of curriculum areas and we encourage education settings to take a whole school approach.

Under the Smoke-free Environments Act 1990, smoking is prohibited at schools and early childhood education centres both indoors and outside 24/7. The legislation also requires the education settings to have Smokefree signage at every entrance to the premises and every outer entrance to every building.

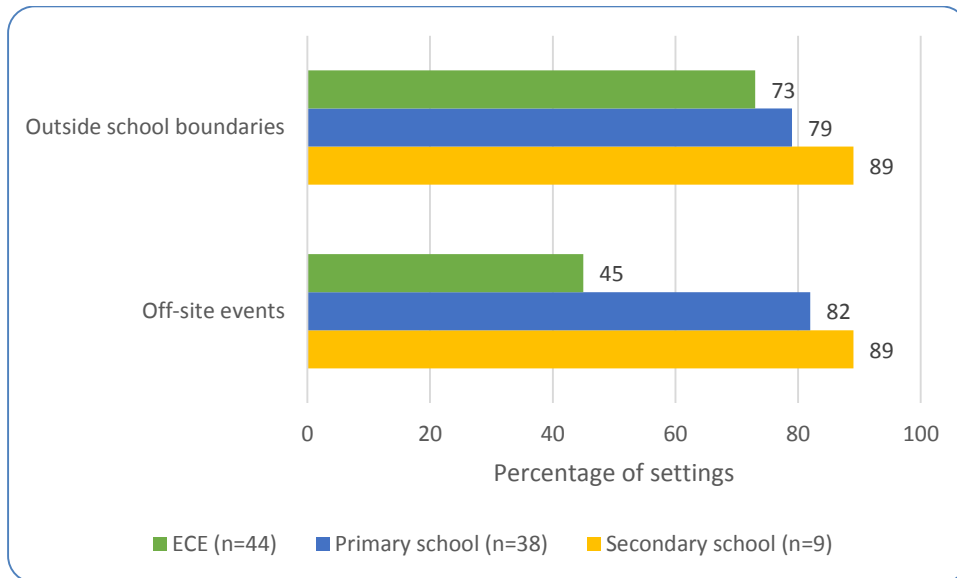
The success of these legal requirements may have contributed to a reduced involvement in Smokefree professional development by staff. However, WAVE has also supported education settings with Smokefree policies, access to stop smoking support, and in advocating for Smokefree playgrounds with their local councils. Over the past year WAVE has introduced 'Little Lungs' to ECEs; this programme was designed specifically for early childhood educators to increase their knowledge of the Smokefree 2025 goal and provide practical strategies for disseminating Smokefree homes and cars messages to parents and whānau.

4.4.1 Key findings

- **There was a statistically significant increase between 2012 and 2016 in the proportion of settings that had a Smokefree policy that covered outside boundaries.**
- **There was an increase between 2012 and 2016 in the proportion of settings that had a Smokefree policy that covered off-site events.**
- **All primary schools and secondary schools reported that their Smokefree policies were effective or very effective at influencing their physical and social environment. Almost all ECEs reported that their Smokefree policies were effective or very effective.**
- **Between 2012 and 2016 there was a decrease in the proportion of settings that reported that any of their staff had professional development on Smokefree in the last 12 months.**
- **Interview findings indicate that WAVE provides trusted advice and resources to enable settings to promote Smokefree, 'WAVE gives us ideas of how you can support people and just make Smokefree the norm.'**
- **Student WAVE teams have led a number of Smokefree-related initiatives. Examples from the previous 12 months included promoting Smokefree week and a Smokefree cupcake design competition.**
- **WAVE has partnered with students, parents/communities and settings to support Smokefree-related initiatives in South Canterbury.**

4.4.2 Physical and social environment

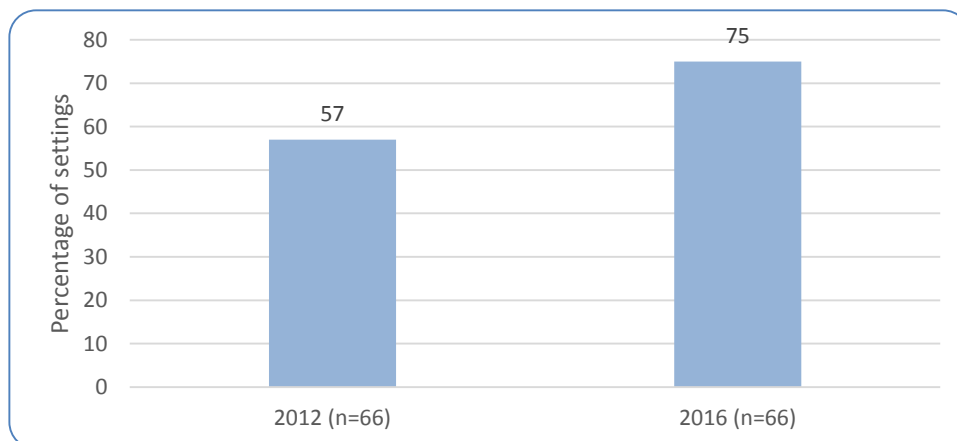
Figure 6. Proportion of settings that had a Smokefree policy for outside ECE/school boundaries and/or off-site events, by setting type, 2016



Between 2012 and 2016 there was an increase in the proportion of settings that had a Smokefree policy for outside school boundaries and/or off-site events, including:

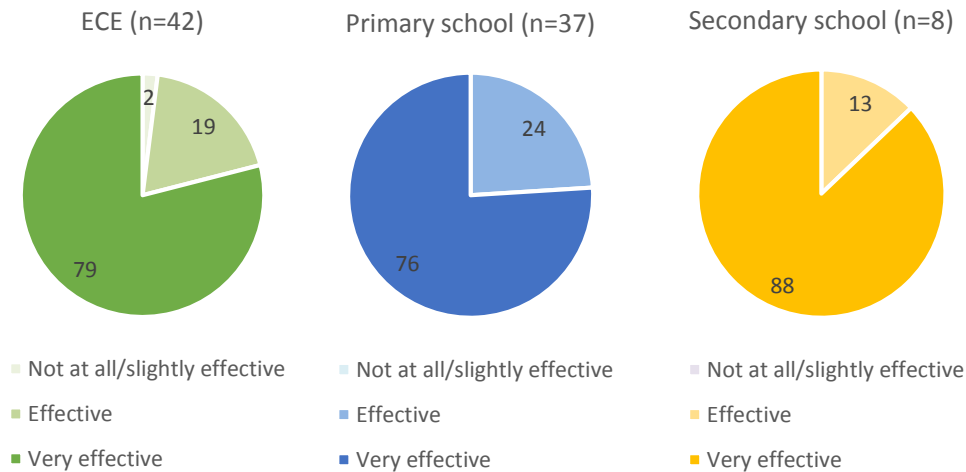
- Almost three quarters of ECEs (73%) had a Smokefree policy for outside ECE boundaries in 2016 (50% in 2012).
- Almost four fifths of primary schools (79%) had a Smokefree policy for outside school boundaries in 2016 (55% in 2012).
- Over four fifths of secondary schools (89%) had a Smokefree policy for outside school boundaries in 2016 (71% in 2012).
- Almost half of ECEs (45%) had a Smokefree policy for off-site events in 2016 (21% in 2012).
- Over three quarters of secondary schools (89%) had a Smokefree policy for off-site events in 2016 (71% in 2012).

Figure 7. Proportion of settings (ECE, primary and secondary schools combined) that had a Smokefree policy for outside ECE/school boundaries, 2012 and 2016



There was a statistically significant increase between 2012 and 2016 in the proportion of settings that had a Smokefree policy that covered outside ECE/school boundaries (57% of settings in 2012 compared to 75% in 2016, $p=0.02$).

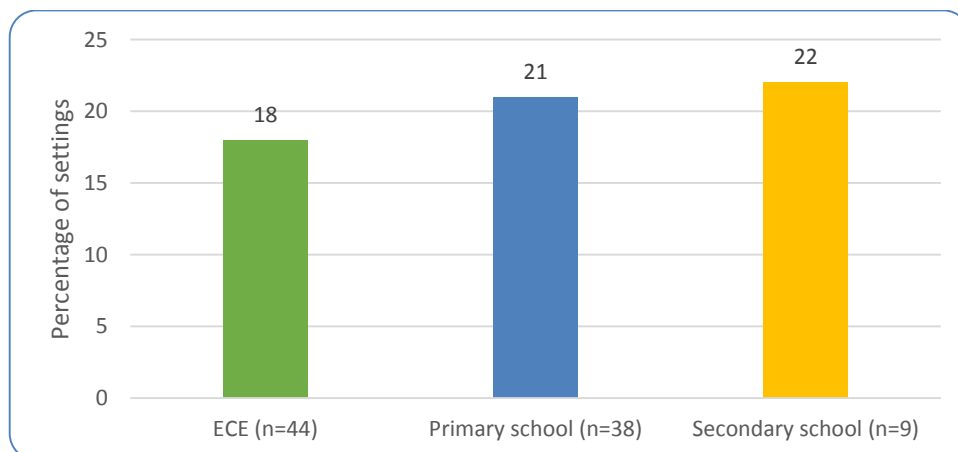
Figure 8. Effectiveness of Smokefree policies at influencing settings' physical and social environment, by setting type, 2016*



*percentages may not add up to 100 due to rounding

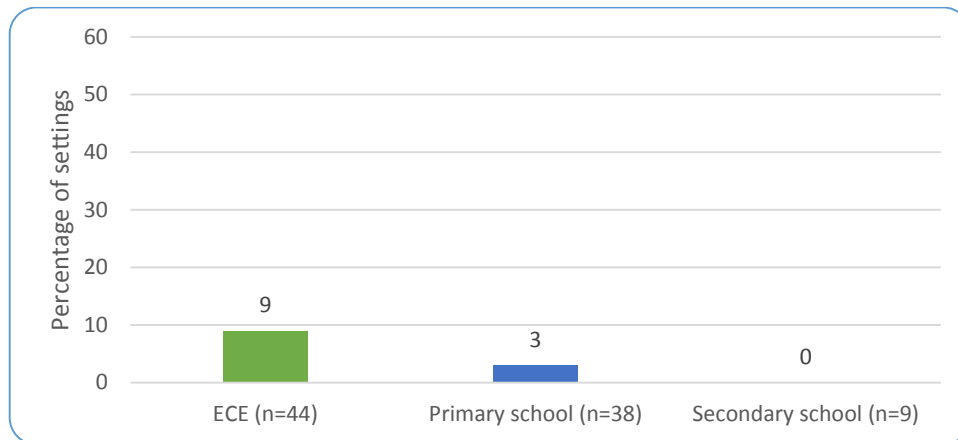
Almost all ECEs reported that their Smokefree policies were ‘effective’ or ‘very effective’ at influencing their physical and social environment (98%). All primary schools and secondary schools reported that their Smokefree policies were ‘effective’ or ‘very effective’ at influencing their physical and social environment (100%).

Figure 9. Proportion of settings that had Smokefree promotions (for example World Smokefree Day) in the last 12 months



4.4.3 Curriculum, teaching and learning

Figure 10. Proportion of settings where any staff had completed professional development on Smokefree in the last 12 months



Between 2012 and 2016 there was a decrease in the proportion of settings that reported that any of their staff had professional development on Smokefree in the last 12 months.

- One primary school (3%) reported that any of their staff had professional development on Smokefree in the last 12 months in 2016 (19% in 2012).
- No secondary schools reported that any of their staff had professional development on Smokefree in the last 12 months in 2016 (29% in 2012).

4.4.4 Partnerships and services

Over the previous 12 months WAVE has worked in partnership with settings to reduce smoking in South Canterbury by, for example, settings having '*constant access to a WAVE facilitator to call with the expertise and knowledge.*' In addition WAVE has provided resources that support Smokefree initiatives. Evaluation results indicate that WAVE, parents/communities, NGOs and settings have worked in partnership to support Smokefree-related initiatives, for example, Smokefree week and other Smokefree-related health promotion.

4.4.5 Interviews

Qualitative findings from interviews provide examples of how WAVE contributes to improved Smokefree environments in South Canterbury, including:

WAVE provides access

A number of interviewees observed that having access to the knowledge, links, resources and the assistance of WAVE enhances the programmes at the education settings, saves time and reduces barriers to providing health-related education.

...one thing that's on my radar is about Smokefree, and I think that's probably had quite an impact on me and the teachers here... it's made us think about things a bit deeper. And at the centre we do have teachers that are smokers and so it has been quite real for us.. WAVE give us information that we can put out to parents as well. I think if you can get buy-in from the teachers, then they are there as the agents to share that information... WAVE gives us ideas of how can you support people and just make Smokefree the norm.

Interviewees commented that if WAVE did not exist they were not sure who would provide this assistance, advice or resources.

I was talking to someone... that's not from this region, [about WAVE supporting] Smokefree, your healthy eating, your physical activity, promoting the gardening and your healthy living. As an early childhood teacher, I don't know who else would provide that information for you. And WAVE bring things up that you probably wouldn't have thought of.

Student-led Smokefree initiatives

Student WAVE teams organise health promotion events at the school, such as Smokefree week.

...the Smokefree week may be posters 'round the building, whatever is happening on the Smokefree website, their latest slogan. [the student WAVE team] will download those they'll have those 'round the school. This year we did a Smokefree cupcake design and so people made a cupcake with some sort of motto or design on it about anti-smoking.

4.5 SunSmart

“Students are at school when ultraviolet (UV) radiation levels are at their peak. Schools are uniquely placed to provide a sunsafe environment, educate students about sun protection behaviour and reduce the risk of skin cancer by becoming SunSmart.”

(accessed from <http://www.sunsmartschools.org.nz/>)

The Cancer Society provides the SunSmart programme to schools in New Zealand, which includes an accreditation programme for schools that have developed and implemented a sun protection policy for Terms 1 and 4. The policy must meet CSNZ's minimum criteria which ensures students and teachers are in a sunsafe environment. <http://www.sunsmartschools.org.nz/>

In South Canterbury, almost all primary schools are accredited SunSmart schools. Work has begun with ECEs to support their Sunsmart practices.

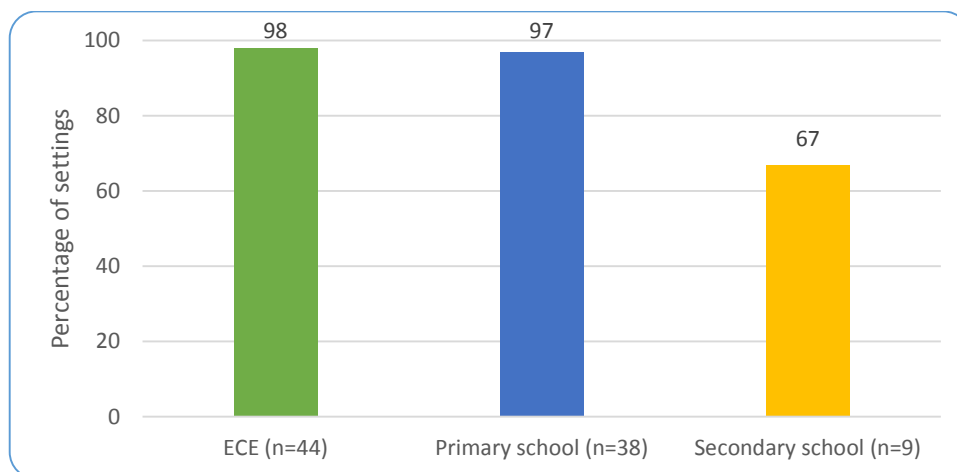
The Cancer Society works in partnership with WAVE to support education settings in South Canterbury with the development and implementation of their SunSmart programme.

4.5.1 Key findings

- In both 2016 and 2012, almost all ECE and primary schools reported that they had written policies or guidelines on SunSmart.
- There was an increase between 2012 and 2016 in the proportion of secondary schools that had a SunSmart policy or guideline.
- Almost all ECEs and primary schools reported that their SunSmart policies were effective at influencing their physical and social environment.
- There has been an increase between 2012 and 2016 in the proportion of settings with SunSmart initiatives.
- Between 2012 and 2016 there was an increase in the proportion of settings that reported that any of their staff had professional development on SunSmart in the last 12 months.
- Interview findings indicate that WAVE provides access to knowledge, links, resources and assistance that enhances the SunSmart programmes at the education settings, saves time and reduces barriers to providing health-related education, *‘...we have become SunSmart accredited and WAVE’s been very helpful in that process. They’ve helped us access resources and pointed us in the right direction with some expert advice around one or two issues.’*
- Student WAVE teams organise health promotion events at the school. Examples from the previous 12 months of student WAVE teams’ activities to promote SunSmart included role modelling (such as wearing hats) and SunSmart week.

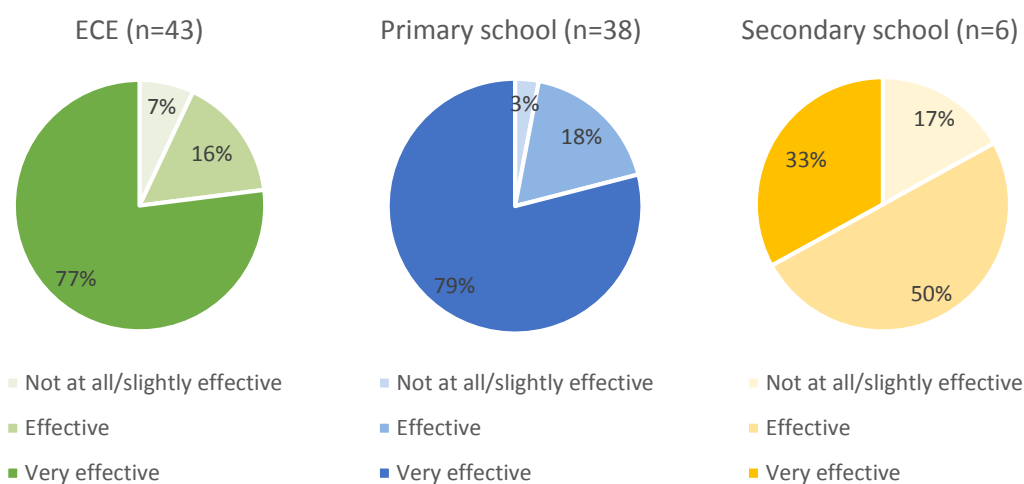
4.5.2 Physical and social environment

Figure 11. Proportion of settings that had written policies or guidelines on SunSmart, by setting type, 2016



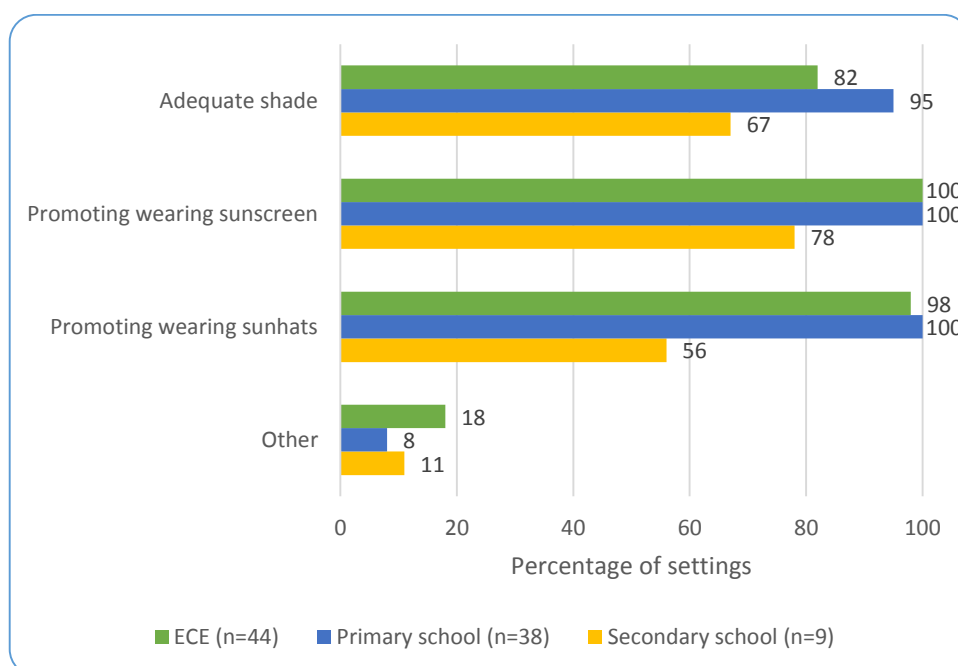
In both 2016 and 2012, almost all ECE and primary schools reported that they had written policies or guidelines on SunSmart. Over two thirds of secondary schools (67%) had a SunSmart policy or guideline in 2016 (25% in 2012).

Figure 12. Effectiveness of SunSmart policies/guidelines influencing settings' physical and social environment, by setting type, 2016



Almost all ECEs and primary schools reported that their Sunsmart policies were 'effective' or 'very effective' at influencing their physical and social environment (93% of ECEs, 97% of primary schools). Over four fifths of secondary schools reported that their Sunsmart policies were 'effective' or 'very effective' at influencing their physical and social environment (83%).

Figure 13. Proportion of settings that had initiatives supporting healthy choices in the last 12 months, by setting type, 2016

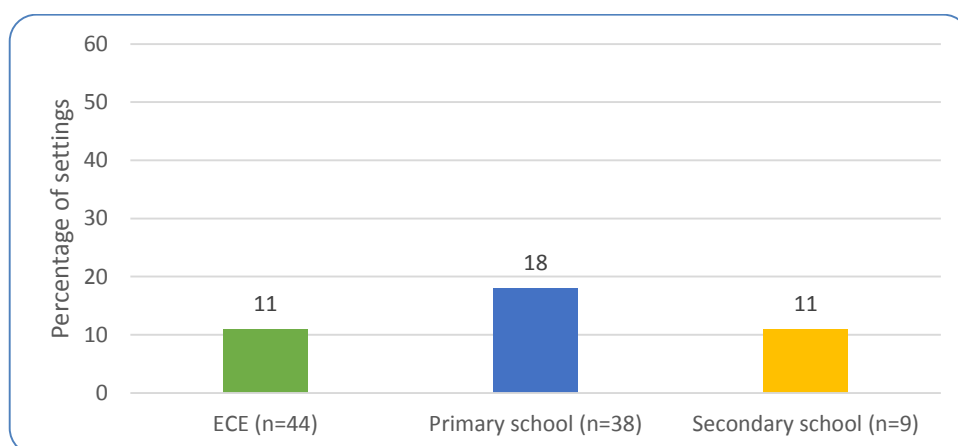


There has been an increase between 2012 and 2016 in the proportion of settings with SunSmart initiatives. For example:

- Over half (56%) of secondary schools had an **initiative to promote wearing sunhats** in 2016, compared to 13% in 2012.

4.5.3 Curriculum, teaching and learning

Figure 14. Proportion of settings where any staff had completed professional development on SunSmart in the last 12 months, by setting type, 2016



Between 2012 and 2016 there was an increase in the proportion of settings that reported that any of their staff had professional development on SunSmart in the last 12 months:

- One secondary school reported that any of their staff had professional development on SunSmart in the last 12 months in 2016 (0% in 2012).

4.5.4 Partnerships and services

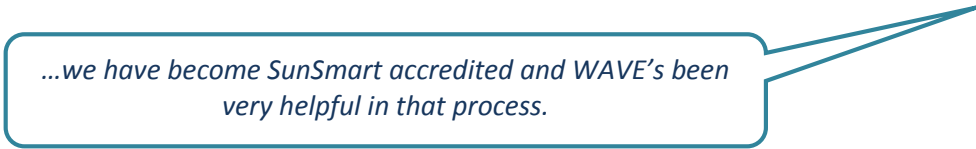
Evaluation results indicate that WAVE, parents/communities, NGOs and settings have worked in partnership to support SunSmart-related initiatives, for example, gaining SunSmart accreditation, promoting SunSmart week and other SunSmart-related health promotion.

SunSmart interview findings

Qualitative findings from interviews provide examples of how WAVE contributes to improved SunSmart in South Canterbury including:

WAVE provides access

A number of interviewees observed that having access to the knowledge, links, resources and the assistance of WAVE enhances the programmes at the education settings, saves time and reduces barriers to providing health-related education.



...we have become SunSmart accredited and WAVE's been very helpful in that process.

Student-led SunSmart initiatives

Student WAVE teams organise health promotion events at the school. Examples of student WAVE teams' activities to promote SunSmart included role modelling (such as wearing hats) and organising health promotion events at the school such as SunSmart week including, 'The student WAVE team go down to the junior school and do the SunSmart song.'

4.6 Physical Activity

“Physical activity has been linked with improved educational outcomes for students. Students that are more physically active and have higher fitness levels tend to spend more time on-task and have higher levels of achievement”. (Education Review Office. *Food, nutrition and physical activity in New Zealand schools and early learning services: Effective practice*. 2017)

Physical activity is included in the Health & PE curriculum and is also incorporated into subject areas such as maths e.g. students collate the results of an Active Transport initiative.

Factors that impact on active travel include engineering considerations e.g. safe crossing points, along with distance from home and school, and other commitments before or after school. The availability of resources to support physical activity in education settings is also a factor e.g. progressing a school travel plan, providing lunchtime physical activities, along with opportunities for students to access facilities such as the gym before or after school.

Other stakeholders include Sport Canterbury, Timaru District Council (which contracts the School Travel Planner role) and the Police who support school travel initiatives.

In South Canterbury, professional development, e.g. Ki O Rahi and ECE physical activity workshops have been provided to teaching staff, and physical activity resources are one of the most frequently booked resources from the WAVE Resource Centre. Key factors for school travel plans have been congestion or safety concerns.

4.6.1 Key findings

- **Over four fifths of primary schools had a written policy on increasing physical activity.**
- **There was a statistically significant increase between 2012 and 2016 in the proportion of settings that had a policy on increasing physical activity.**
- **Over four fifths of primary schools promote physical activity outside the classroom.**
- **Interview findings indicate a link between WAVE and health competencies and increased learning for students, including in the area of increasing physical activity.**
- **Having access to the knowledge, links, resources and the assistance of WAVE enhances the programmes at the education settings, saves time and reduces barriers to providing health-related education.**
- **Interviewees reported having pride in WAVE, including the Walking Bus, which promotes increased physical activity.**

4.6.2 Physical and social environment

Figure 15. Proportion of settings that had written policies or guidelines on increasing physical activity, by setting type, 2016

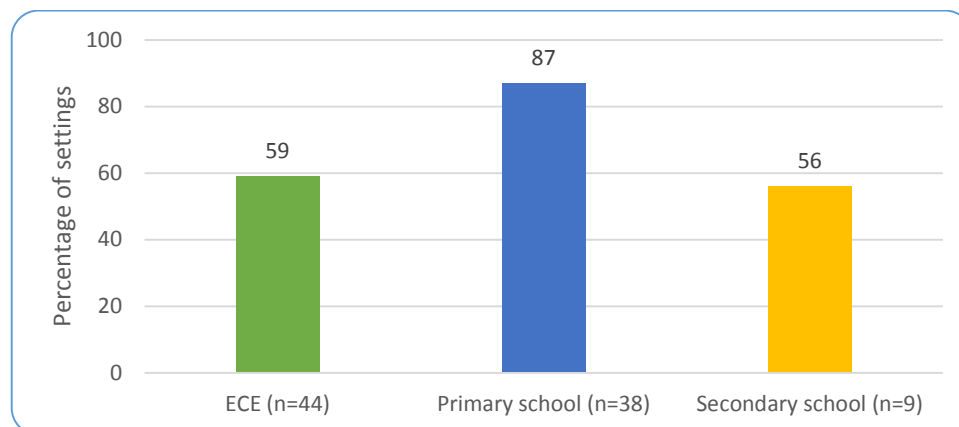
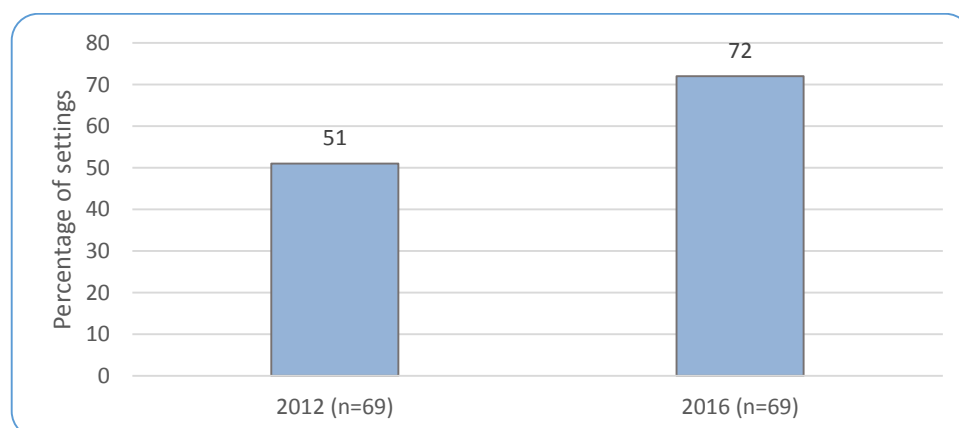


Figure 16. Proportion of settings (ECE, primary and secondary schools combined) that had policies/guidelines on increasing physical activity, 2012 and 2016



There was a statistically significant increase in the proportion of settings that had a policy on increasing physical activity between 2012 and 2016 (51% of settings in 2012 compared to 72% in 2016, $p=0.004$).

Figure 17. Effectiveness of physical activity policies/guidelines influencing settings' physical and social environment, by setting type, 2016

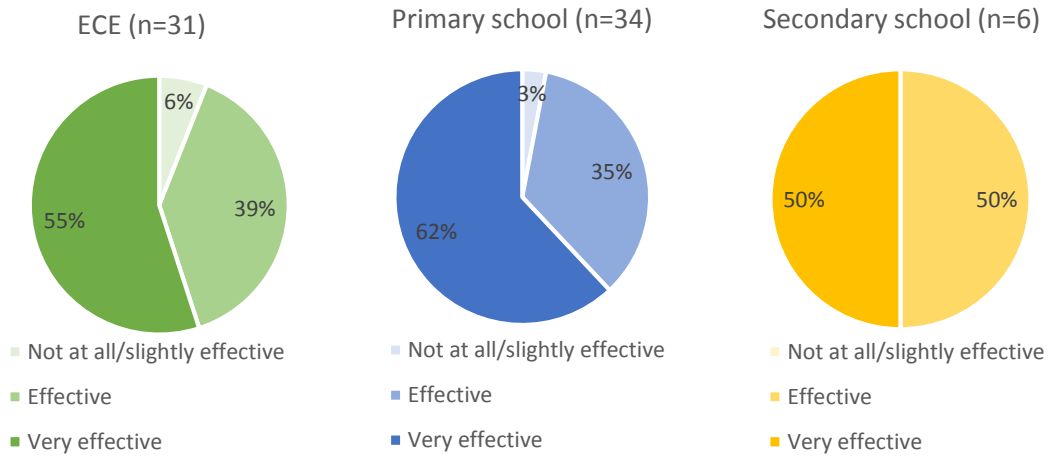
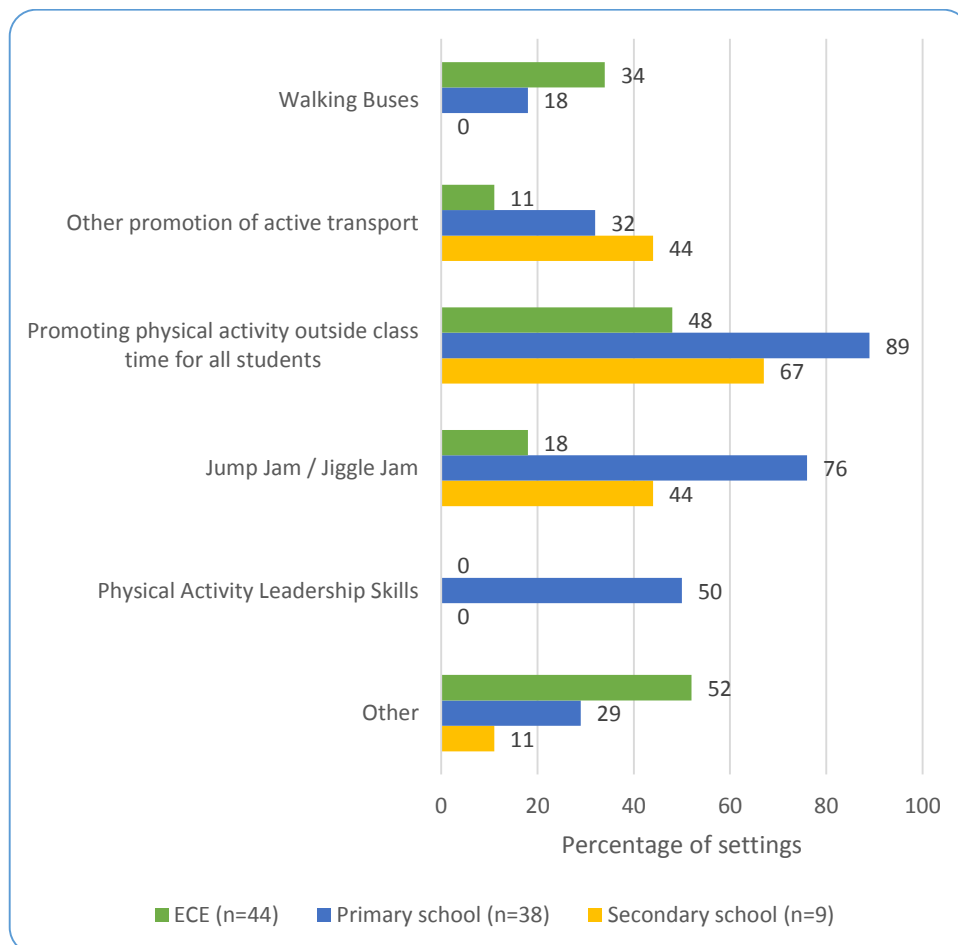


Figure 18. Proportion of settings that had initiatives supporting healthy choices in the last 12 months, by setting type, 2016



There has been an increase between 2012 and 2016 in the proportion of settings with physical activity initiatives. For example:

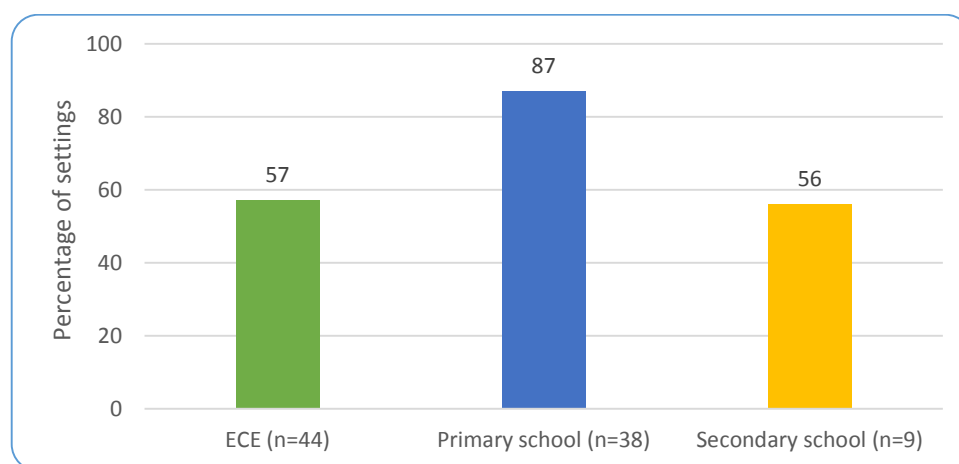
- Over one third (34%) of ECEs had a **walking bus** in 2016, compared to 11% in 2012.
- Almost half (44%) of secondary schools had **Jump Jam** in 2016, compared to 13% in 2012.

There has been a decrease between 2012 and 2016 in the proportion of settings promoting physical activity outside of class time. For example:

- Almost half (48%) of ECEs were **promoting physical activity outside class time** in 2016, compared to 82% in 2012.
- Two thirds (67%) of secondary schools were **promoting physical activity outside class time** in 2016, compared to 87% in 2012.

4.6.3 Curriculum, teaching and learning

Figure 19. Proportion of settings where any staff had completed professional development on physical activity in the last 12 months, by setting type, 2016



4.6.4 Partnerships and services

Evaluation results indicate that WAVE, parents/communities, NGOs and settings have worked in partnership to increase physical activity, for example, Jump Jam, active transport and other health promotion aimed at increasing physical activity.

5 Interviews

A number of key themes emerge from the interviews for the 2016 evaluation of WAVE. Overall there was appreciation of WAVE and its perceived ability to improve wellbeing in South Canterbury, as well as an understanding of WAVE beyond individual health promotion projects. WAVE has become the 'trusted voice of all things health' in education settings in South Canterbury.

...once I gained more knowledge about WAVE I thought it had an even stronger ability to improve wellbeing in South Canterbury at a deeper level. I thought it was Smokefree and nice activities and growing gardens, but to understand their real modelling and demonstrating, not just to the children in schools but the connection with our Māori community, the connection with our whanau and families, and the education that was happening that was something that I hadn't realised was even part of WAVE.

A pride in WAVE was apparent across staff and students; including both a pride that South Canterbury had a programme which was specifically tailored to the region's needs and also a pride in the individual health promotion projects that settings were involved in.

WAVE certainly was an area of pride. You go into schools and you see the Smokefree, you see the Walking Bus... you see in the newsletter, the hangis, I think they must be proud and appreciative, otherwise the small schools would say that's very nice but actually this is our focus, this is what we want to do. The fact that they continue to be really excited about what WAVE is offering, they appreciate it.

All interviewees reported that they believed that WAVE was a successful programme. The reasons included: that WAVE is perceived as improving student wellbeing; that WAVE listened to their school community; that evaluation is built into the WAVE programme; and that WAVE continually evolves to meet the communities' needs.

I think WAVE has been a success because they have listened to their school community, but more than that they've had professionalism, nothing's been reactive, it's been planned, thought through, developed, built on, but very much listen to the community, know the community.

Success factors for WAVE included:**WAVE has been tailored to South Canterbury needs**

Interviewees believed that WAVE was tailored to the unique aspects of the South Canterbury region,

'... I think WAVE is uniquely developed in response to this community's needs.'

Many of our rural school, the connections with growing gardens and cooking is so much part of the community, the focus and what our parents want for our children and their families, it's an absolutely perfect match.

WAVE makes a difference to students' wellbeing

WAVE was viewed as making a difference to students in all areas of health including physical and mental health. In addition some interviewees reported that they could see the link between WAVE and health competencies and increased learning for students.

I saw the [WAVE] programmes and I thought it married very, very well with our health and phys-ed curriculum, and also our key competencies around belonging and connection and contributing... I could see the young people and families learning and that the WAVE activities that were happening were fantastic and married well with education.

WAVE's been really successful with [name of school] and when I say that I mean it's made a difference to the children.

Evaluation is built into the WAVE programme

Interviewees valued that WAVE is evidence-based and that evaluation is built into the programme.

The evaluation of WAVE was seen as informing the future direction of WAVE to keep the programme tailored to the local needs.

..I was quite impressed how rigorous the delivery and the set-up and the processes were. I thought the evaluation they did was fantastic, because it wasn't a matter of just keeping on doing what you're doing 'cos it looks good and everyone's happy, it was a matter of evaluating it to make decisions about how it was going and what areas of the community needed further strengthening to meet the goals.

WAVE partnerships with education settings and the wider community

It was frequently acknowledged by interviewees that WAVE has worked in partnership with the education settings in South Canterbury.

..I thought that WAVE using education as a vehicle, 'cos you already had the kids there, you already had families attending – was a very smart thing to do... in actual fact they worked together.

A number of interviewees from education settings commented on the high level of understanding that WAVE has of the education environment and the ability of WAVE facilitators to work collaboratively with education.

Sometimes, in schools we are full on.. If it's too hard I just can't do it. I haven't got the hours in the day. [WAVE facilitator] just comes in here, knows what you need, has a quick conversation and next thing we're onto it. And I really appreciate that in her.

[WAVE facilitator] is our immediate point of contact and she's really really good to deal with, not only in terms of her knowledge but she does recognise the busy times for us in the year and works around that to accommodate us.

Community organisations also talked about the ways that they had worked in partnership with WAVE. Partnerships with WAVE had evolved and strengthened over time.

I first worked with WAVE during my role within Plunket. It would have been quite some time ago, we've done a lot of partnership work together over the years.

The partnership between WAVE and students

Student WAVE teams were identified as a success factor for WAVE. The schools that had student WAVE teams described them as extra-curricular groups that students elected to be involved in. Student WAVE teams were particularly good for students who wanted to be involved in community activity. They were viewed as a good extra-curricular option because they were open to all students regardless of athletic or academic ability and the teams were viewed as making a difference for the student population at the education setting and also for the wider community, *'I think sometimes the students think that they don't make a difference but actually I think they do.'*

Student WAVE teams are student-led, *'It's up to them what they want to do that particular year.'* Examples of activities that student WAVE teams have undertaken included advocating for the school to become a 'water/milk only school', role modelling (such as wearing hats) and having a presence in the school (for example regularly reporting on WAVE team activities in the school newsletter and students from the WAVE team talking in school assemblies). Student WAVE teams also organised health promotion events at the school, such as Smokefree week and Sunsmart week.

The student WAVE teams were enhanced by the WAVE facilitator motivating the students. Several interviewees reported that if WAVE did not exist then there would be no guarantee that the student groups would continue, due to the time demands on schools. The role of the WAVE facilitator in the student WAVE teams included facilitating the student meetings and supporting planned activities.

As part of this evaluation, a focus group was run with a group of students from the student WAVE team at Timaru Girls High School. The student WAVE team described their group as a *'student run group, students taking the initiative.'* The students first became aware of WAVE when they were involved with the student WAVE team at their respective primary schools, *'I knew about WAVE before starting high school because I was in the WAVE team in year 7, 8 at primary school... back then we were making vege gardens at primary school.'*

The students reported positive experiences with WAVE at primary school.

Well it was very positive, 'cos I went to such a small school so it was good, bringing us together in one classroom to come and talk to the WAVE team... it was really cool being part of that.

The students discussed how being involved with the student WAVE team at high school was different from their experiences at primary school. The main difference was that they felt that at high school they had the ability to make change, rather than just influence healthy behaviour. The students gave a number of examples of what the group had achieved over the previous twelve months, which included providing a shared breakfast which aimed to promote healthy eating, planning a school garden, advocating for healthy changes to the options available at the school café and advocating for the provision of a bus shelter, *'We had a shared breakfast one morning.. just for anybody who wanted to come. It was a real success... 50 or 60 students I think, we weren't expecting that many.'*

Reasons that students were motivated to be involved in the team included that they got to make positive changes, and that it enabled them to meet new people, to follow their interest in healthy eating and to have a positive effect on the students at their school. There appeared to be a sense of pride amongst the students regarding their involvement in the student WAVE team, including some of the students wearing WAVE badges on their school blazers.

The students discussed the skills that they believed they had gained from their involvement with the student WAVE team. The skills identified included greater initiative, improved communication and increased *'knowledge about making healthy choices for yourself and those around you.'* The students had received positive feedback about the changes they had made at the school, with the shared breakfast being a particular success.

The student WAVE team was supported by WAVE facilitators. For example, where the WAVE facilitator identified who the students needed to talk to at the school café, to advocate for changes to increase the amount of healthy food available, *'they knew who we need to talk to, so they can set meetings up, step us through the process we need to go through.'*

WAVE aims to reduce inequalities in health, with a focus on improving Māori health

A number of interviewees noted that WAVE aimed to reduce inequalities in health, with a focus on improving Māori health. The ways that WAVE worked to reduce inequalities included: providing appropriate professional development to staff; providing advice and resources; developing professional networks; and targeting resources.

I think WAVE are much clearer in targeting what the key work is... Māori health is one example. They've worked with one of our kindergartens to start up a plan. That involved the community. They provide very good professional development so they've brought in key researchers from Canterbury University.. so providing information, professional support and development and resources and being available. The area that has the biggest impact on me has been the area of Māori health.

WAVE is the trusted voice in "all things health" in South Canterbury

Many interviewees reported that WAVE was the trusted voice of health 'all things health' in South Canterbury.

..if there's anything we need, there's somewhere to go.. and it's the encouragement that WAVE provide.

Examples given included advocacy for influencing policy and being stakeholders on community groups. If assistance, advice or resources were needed, settings would go to WAVE. WAVE facilitators were seen as having the knowledge and networks that education settings could access for anything related to health in education, 'A one-stop-shop to go to. That's the critical thing. It's a one-stop-shop to go to for information, for resources, for support, for funding.'

A number of interviewees observed that having access to the knowledge, links, resources and assistance of WAVE enhances the programmes at the education settings, saves time and reduces barriers to providing health-related education, 'WAVE definitely enhances our programmes here, there's no question about that... in having a place that we can go to when we have an idea and

'WAVE put ideas to us... it's like having an intermediary really, which is a huge timesaver for us as a school.'

I think WAVE are a huge resource in the way of health promotion in our area and often they're the 'go-to' people because they have got such a knowledge.. with all the early childhood settings and the databases and networks and contacts that WAVE has.

So first of all [if WAVE didn't exist] that would mean that I've got to do quite a bit of running around trying to find people and organisations and resources that [WAVE facilitator] is very good not just linking us with other people but she has a lot of good ideas herself... our jobs would be a lot more difficult if we didn't have WAVE, for sure.

Interviewees identified the value of the professional development that WAVE provided.

..supporting, providing information, providing professional development in key areas that needed to be updated in, keeping people up with current research...

..the girls just went to a workshop that WAVE run on Māori culture.. I had three of my teachers go and they absolutely loved it... WAVE is always very supportive of Te Reo and Tikanga and how that is important to Māori people. And the more the teachers can learn about that, then the more we can support our Māori children.

Asked if this type of professional development would be available in South Canterbury without WAVE, there was a general agreement from interviewees that there is insufficient funding in education to support this, *'In education, the funding has been cut so centres have to trim their budget everywhere. One of the first things that you see in general is the professional development gets cut.'*

WAVE has enabled health promotion programmes to be embedded in education settings

Ten years of WAVE in education settings in South Canterbury have enabled health promotion programmes to be embedded in education settings. Interviewees reported that WAVE has remained visible over time because *'..WAVE have retained that high level of relationships with the education setting.'* WAVE was perceived as an enabler to schools providing health promotion programmes, *"I do think that WAVE are a motivator and enabler for a whole range of things that, without them there, would become less of a focus.'*

WAVE is valued by both health and education sectors in South Canterbury

A number of interviewees commented that they would not like to lose WAVE. The reasons given for this included that teachers' ability to support children and families in health would be significantly reduced.

I think our teachers' ability to focus on health and to support children and families in health would be diminished quite significantly, having come from another area [outside of South Canterbury] where that didn't happen.

Interviewees expressed an appreciation that South

Canterbury education settings had a health promotion programme available to them that they believed others outside of the region did not have, *'I'd absolutely hate to lose WAVE. It's quite interesting when you talk to people from other areas that haven't got WAVE. And you think everyone has got WAVE.'*

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