Canterbury
District Health Board
Te Poari Hauora ō Waitaha

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# WAVE – Final report of impact and process evaluations 2007-2011

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This document has been approved for release by Dr Daniel Williams, South Canterbury Medical Officer of Health.

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## Summary

WAVE is a health promotion initiative that works collaboratively between education, health and Sport South Canterbury. WAVE works across all levels of education to help create and support healthy environments for the children and young people of South Canterbury. The aim of WAVE is for long-term gain in health and education outcomes.

Nutrition and physical activity are the two major issues being addressed by this project. Currently, 94% of education settings in the South Canterbury DHB region are participating in WAVE. This includes 100% of tertiary education providers, 86% of ECE's, 95% of primary schools and 100% of secondary schools.

The WAVE evaluation plan was comprehensively designed at the formative stage of WAVE. There is valuable baseline information that allows progress of WAVE to be documented and enables an understanding of what has worked in WAVE and what challenges have been encountered in the project. Having detailed baseline impact data allows statistically significant changes to be measured.

The wide range of health promotion activities that have occurred in settings over the past 5 years under WAVE, in particular the increase in Māori Health activities and more recently mental health promotion, is noteworthy. The enthusiasm of student-led health promotion initiatives has been documented, as has the support they are receiving from their local communities.

Overall, education settings in South Canterbury value WAVE and see WAVE as an effective partnership of health and education. WAVE is seen as a "one stop shop" for health, coordinating all health related issues for schools. The provision of professional development by WAVE has been shown to be of particular value to settings.

Statistically significant improvements include: ECEs showed improvements between baseline and follow-up in the area of professional development for physical activity and Sunsmart and in working with external providers when promoting physical activity. Primary schools showed statistically significant improvements between baseline and follow-up in the area of nutrition (for example, students being able to identify healthy food choices) and in the area of professional development for Sunsmart. There were also statistically significant improvements over time for the place of Hauora in the learning experience (at ECE level) and the place of whānau (at primary level). In addition to the statistically significant improvements some encouraging trends have been identified.

The extent to which ECEs, primary and secondary schools believe the WAVE process has assisted them in the promotion of health and wellbeing has increased steadily over the past five years. There is also an improvement in how well ECEs and primary schools think their work with WAVE has been addressing the health and wellbeing of Māori students.

Facilitators were considered by settings as an essential element of WAVE. The facilitators consulted with education settings about their priorities, provided relevant

information and resources, and worked alongside settings. The WAVE Resource Centre was considered a valuable asset. Settings valued having access both to people with expert or specialist knowledge and the financial support of the WAVE and Nutrition funds, which allowed health promoting environments to be established for students. Policies and guidelines to protect and promote the health and wellbeing of students were developed in education settings. Teachers across the sector had become role models for health messages.

Settings promoted WAVE through a wide range of internal and external media. Families of students were indirectly influenced by health messages taken home by students, as well as through their conversations about WAVE. Families of children and students were more directly influenced when they responded to requests to become involved in WAVE projects or activities. Settings were keen to know about what others were doing. The WAVE initiative has been inclusive of all levels of education.

South Canterbury education settings are engaging with WAVE, with almost all education settings in South Canterbury signed up with WAVE. WAVE has supported the forming of student-led health promotion groups, which in turn have led to greater community participation in promoting health in schools.

# 1 Background

WAVE[1] is a joint initiative between education, health and the regional sports trust, working across all levels of education from early childhood through to tertiary, to help create and support healthy environments for the children and young people of South Canterbury. Using a whole-setting approach, WAVE focuses on the health needs of individual education settings. The aim of WAVE is for long-term gain in health and education outcomes. A comprehensive evaluation plan was developed for the WAVE initiative and this report documents the results of the process and impact evaluation sections of that plan.

WAVE was initiated by South Canterbury DHB (SCDHB) and Community & Public Health (C&PH) which is the public health unit providing public health services for the Canterbury, South Canterbury and West Coast DHBs. The SCDHB is providing funding to support this project. This has involved extra resources for its own staffing, plus extra resources contracted to C&PH and Sport South Canterbury.

SCDHB, Sport SC, local iwi, Ministry of Education, University of Canterbury Education Plus (School Support Services) and C&PH comprise the WAVE Steering Group. The WAVE Working Group has responsibility for the operational project according to a plan approved by the Steering Group. The Working Group is coordinated by the Project Leader who is employed by C&PH and leads the C&PH-based team.

The relationships between parties and responsibilities for the project are identified in the Terms of Reference for the Steering Group and in the Project Plan.

The vision of the project is to support healthy values, skills and practices in the children and young people of South Canterbury. The vertical structure of the project enables Health Promotion across all four 'levels' of education in the province (ECE, Primary, Secondary and Tertiary). The objectives of the project as stated in the Strategic Plan are:

1. Completion and regular updating of a needs analysis for Child and Youth health promotion (including literature review, gap analysis and review of best practice).
2. Development of a local model for health promotion delivery in child and youth settings.
3. Co-ordination of the work of all participating agencies delivering health promotion to child and youth settings.
4. Provision of health promotion support to ECEs, schools and other child and youth settings.
5. Robust evaluation of project initiatives.
6. Clear accountability for project resources.

Nutrition and physical activity are the two major issues being addressed by this project. The project is needs driven and aims to develop health promotion capacity

[1]Well-being and Vitality in Education

and environments, and these issues were identified as key areas during the formative evaluation.

The evaluation plan for the WAVE initiative required the impact evaluation questionnaire to be completed by participating settings at baseline, and then repeated every 12 months. This was later extended to two years in response to feedback from settings. The process evaluation questionnaire was to be completed every 12 months.

Currently, 94% of education settings in the South Canterbury DHB region are participating in WAVE. This includes 100% of tertiary education providers, 86% of ECE's (four not signed), 95% of primary schools (one not signed and one withdrew), and 100% of secondary schools. Annual contact is made with those settings that are not signed with WAVE, to gauge interest.

# 2 Evaluation Methodology

## 2.1 Impact questionnaire methodology

As part of the evaluation of WAVE, a quantitative questionnaire was developed for each type of education setting. This questionnaire was administered at baseline and then at follow-up (approximately 24 months later) by that setting's WAVE facilitator. The impact evaluation questionnaire served two main purposes: data collection for the WAVE evaluation and an opportunity for settings and WAVE facilitators to identify health issues to explore together. To ensure validity and reliability the questions were administered in a standard way. This was achieved by the interviewer/facilitator reading questions and answer options "word-for-word" and minimising the use of extra prompts, examples and explanations. The whole questionnaire was completed as an interactive interview, which took place over one or two sessions.

Baseline questionnaire results were provided to settings in the form of a report which presented their results in comparison to aggregated results for all similar settings. This report provided valuable information for individual settings to consider how their approaches compared to those of other centres. This questionnaire was then repeated 24 months after the baseline questionnaire, allowing comparison of aggregate results across settings over time. The questionnaire data were entered by February 2011. All the data were analysed using SPSS version 17.0.

## 2.2 Process questionnaire methodology

Process evaluation questionnaires were administered according to an agreed questionnaire protocol. WAVE facilitators could prompt the respondent, or clarify questions to ensure they were answered as fully as possible. Originally it was intended that the WAVE facilitator for the centre, or school, would meet with the person in charge or the person taking the lead role for the WAVE initiative within their centre, or school, to support them with the questionnaire. This did not always happen and some schools and centres completed questionnaires unassisted. It was then decided that an instruction sheet would be written to assist staff to answer the process questionnaire if it was not being administered by the WAVE facilitator. The majority of initial process evaluation questionnaires were completed in 2008 and repeated in 2009 ('follow-up 1') and 2010/11 ('follow-up 2'). Analysis of the data for these is included in this report.

A case study format was also developed as part of the process evaluation, with the intention that brief overviews of the case studies be included in WAVE evaluation reports, as examples of best practice. The format consisted of a set of questions to guide an open-ended interview with key staff from the relevant setting. The interview questions included: initiatives undertaken under WAVE, staff involved, resourcing, success factors and barriers, strategies to reach Māori students, and any unintended consequences of initiatives undertaken.

Two sets of case studies were completed, the first set in 2009 (two ECEs, two primary schools and two secondary schools) and the second in 2010 (two ECEs, two primary schools, one secondary school and one tertiary centre). Some of these case studies are presented in this report. Consent has been obtained from settings to present this identifying material.

**Case study: BEACONSFIELD PRIMARY SCHOOL**

Beaconsfield school is a rural, state full co-educational primary school that caters for students from new entrants to year eight. Approximately 120 students attend Beaconsfield school. Beaconsfield school signed up with WAVE in July 2008. Since registering, Beaconsfield has had two changes of WAVE facilitator as well as several changes of school principal. However, these changes have not deterred the school from progressing with WAVE related activities.

The WAVE team: Two parents and one teacher support the students to hold regular 20 to 30 minute meetings. Any student in years three to eight can choose to participate in the WAVE team. The teacher reported that one of the most positive aspects of being the WAVE Coordinator is seeing the enthusiasm of the students and how they thrive on the responsibility of being a WAVE team member. With minimal prompting the students run the meetings using correct meeting procedures and take control efficiently. The WAVE Coordinator and the parents acknowledged the mental health benefits of these opportunities for students, as they had observed an increase in self-esteem and the development of leadership skills among WAVE team members.

Establishment of edible gardens

As some of the teachers at the school are keen gardeners, all of the teachers at the school supported the WAVE Coordinator with the establishment of edible gardens. WAVE provided some funding; the senior students helped design and build the gardens; a parent donated a trailer load of compost; one donated pea straw and another donated manure and strawberry plants. A parent suggested that if the school asked the wider community for anything for the gardens, somebody would provide it. Articles on progress with the edible gardens have been written and included in school newsletters and in the WAVE newsletter. At the time of the case study interview, work was underway on writing an article for the New Zealand Gardener magazine.

Sunshade

At one point, the WAVE committee members consulted their classroom peers on what else they would like at their school. When students suggested shade over the swimming pool, WAVE team committee members wrote to the Parent and Teachers' Association and asked for funds to purchase this. Consequently a large umbrella was erected and children who were not swimming could be in the shade.

Professional Development

Some good experiences of professional development and education opportunities in Timaru were reported. One of these, which had separate sessions for the children and the adults present, was around bullying at school. WAVE Youth Forums and a Māori Culture Day were also noted as successful professional development opportunities.

Māori Culture Day

Very positive comments were made about an opportunity through WAVE for staff, some parents, and a few students to be on a marae and attend a Māori culture Day. This was reported as being a fantastic and enriching experience.

# 3 Impact Evaluation

## 3.1 Background

The WAVE evaluation plan (November 2007) has as one of its objectives, "Summary of impact evaluation of first five years of project".

This chapter summarises the results of the impact evaluation, with the exception of Māori Health and "vertical clusters", which are reported in separate chapters.

A baseline questionnaire was completed by all education settings after they registered with WAVE. The data were analysed and a report written for each level of education: early childhood educators, primary schools, secondary schools and tertiary/alternative education centres. Two years after the baseline questionnaire, a follow-up questionnaire was completed. Originally it was planned that this follow-up would occur after one year, however in response to feedback from settings this was changed to two years.

## 3.2 Methodology

As part of the evaluation of WAVE, a questionnaire was developed for each type of education setting and administered at baseline and then at follow-up (approximately 24 months later) by that setting's WAVE facilitator.

As stated above, the impact evaluation questionnaire served two main purposes: data collection for the WAVE evaluation and an opportunity for settings and WAVE facilitators to identify health issues to explore together. The methodology is described further in section 2.1, above.

## 3.3 Results

The WAVE project has worked collaboratively with settings to obtain baseline and follow-up information on their approaches to supporting health and well-being. Some key results from the baseline and follow-up impact evaluation questionnaires follow.

**ECEs**

- ECEs showed statistically significant improvements between baseline and follow-up in the area of professional development for physical activity and Sunsmart.
- ECEs showed statistically significant improvements between baseline and follow-up in working with external providers when promoting physical activity.
- ECEs showed improvements in nutrition at follow-up.
- Most ECEs had comprehensive guidelines in place for addressing health issues at both time points.
- Most ECEs were able to satisfactorily meet staff needs for professional development/continuing education, in most issue areas.

**Primary schools**

- Primary schools showed statistically significant improvements between baseline and follow-up in the area of nutrition.
- Primary schools showed statistically significant improvements between baseline and follow-up in the area of professional development for Sunsmart.
- At follow-up, most primary schools had comprehensive guidelines for addressing health issues in place.
- Almost all primary schools reported doing 'OK' or 'Very well' at actively enforcing these guidelines.
- Written guidelines were available in most primary schools in the areas of physical activity, nutrition, Smokefree, alcohol and mental health.

**Secondary schools**

- In secondary schools, more staff had participated in professional development on physical activity, nutrition and sexuality education at follow up, than at baseline.

**Tertiary centres**

- Tertiary settings did not always maintain their legal Smokefree status as a workplace.
- Most tertiary settings did not have guidelines on physical activity, nutrition and Sunsmart at either timepoint.
- Tertiary setting staff members were reported as usually role modelling appropriate healthy behaviours, at both baseline and follow-up.
- Written guidelines were present at follow-up for all tertiary centres for alcohol and other drugs and Smokefree.
- These guidelines were reported as being effectively promoted and communicated to staff and students.

There are some limitations for these data: the results are subjective as they are based on self assessment and although the participation rates in WAVE and in the evaluation were high, the relatively small total number of settings in South Canterbury has limited the ability to detect statistically significant differences. The results should be interpreted carefully, taking these factors into account.

### 3.3.1 Early childhood education centres results

At baseline 31 questionnaires were completed and 29 at follow-up.

**Summary**

Significant improvements in areas of physical activity and Sunsmart could be found between the baseline and follow-up questionnaires. ECEs also performed better in nutrition at follow-up, although this change was not statistically significant. Most ECEs had comprehensive guidelines in place, and they were able to satisfactorily meet staff needs for professional development/continuing education.

**Financial and social barriers**

- Some improvement could be seen for ECEs addressing financial and social barriers between baseline and follow-up. For example, at follow-up, 83% reported that they did 'Very well' at identifying hungry children (77% at baseline).

**Physical activity**

- Almost all ECEs reported having the space available for the extent and type of physical activity that the centre considers appropriate (93% at baseline; 97% at follow-up).
- Almost all ECEs, at both timepoints, reported that children with special health needs were always encouraged to participate in physical activity (at baseline 10% reported 'Mostly' and 90% 'Always', at follow-up 100% reported 'Always').
- There was a statistically significant increase in the number of ECEs working with external agencies to promote physical activity (65% at baseline versus 93% at follow-up, p value for overall difference =0.01).
- There was a statistically significant increase in the number of ECEs that were able to better meet staff needs for professional development at follow-up (74% at baseline reporting doing 'OK' or 'Very well', compared to 96% at follow-up, p value for overall difference =0.04).

**Nutrition**

- Although not statistically significant, the number of ECEs that had written policies relating to promoting and supporting nutrition and healthy eating at the centre had increased from 61% at baseline to 82% at follow-up.
- No ECEs at follow-up reported using "fast food vouchers" or "fizzy drinks" as rewards for children (compared with 4%, or one ECE, at baseline).
- There was an increase in the number of ECEs reporting doing 'OK' or 'Very well' at meeting the professional development needs of staff in nutrition/healthy eating, from 73% at baseline to 89% at follow-up.

**Smokefree**

- All but one ECE had written policies relating to promoting and supporting Smokefree at both baseline and follow-up.
- All ECEs reported always maintaining their legal smoke-free status at follow-up (compared with 96% at baseline).

**Emotional Well-being**

- Eighty-six percent of ECEs had written policies for promoting emotional well-being at follow-up, compared to 84% at baseline.

**Sunsmart**

- Nearly all ECEs had written Sunsmart policies at both timepoints (94% at baseline; 97% at follow-up). All centres had "wearing of sunhats" in their policies at follow-up (compared to 93% at baseline).
- There were statistically significant improvements in the proportion of staff participating in professional development on Sunsmart in the past two years,

with, for example, 79% of ECEs reporting at baseline that no staff had participated in the last 2 years, compared to 55% at follow-up (p value for overall difference =0.03).

### 3.3.2 Primary school results

At baseline there were 39 questionnaires completed. At follow-up there were 37 questionnaires completed.

Most schools reported having comprehensive guidelines in place at follow-up. Almost all schools reported doing 'OK' or 'Very well' at actively enforcing the guidelines (with the exception of the area of alcohol and other drugs). There were statistically significant improvements in the area of nutrition and Sunsmart, from baseline.

**Physical activity**.

- Students with special health needs were almost always encouraged to participate in physical activity (91% reported 'Always' at both baseline and follow-up).

**Nutrition**

- There were statistically significant improvements in the area of nutrition in primary schools.
- For example, there was a statistically significant increase, from baseline, in the number of schools with students able to identify healthy food options 'Very well' from what they had learned in the classroom (44% 'OK' and 56% 'Very well' at baseline, compared to 11% 'OK' and 89% 'Very well' at follow-up, p value for overall difference <0.01).
- The number of primary schools that worked with external agencies to promote healthy eating had increased significantly from 69% at baseline to 95% at follow-up (p<0.01).

**Smokefree**

- Almost all schools (97%) reported now maintaining their legal Smokefree status, compared with 89% at baseline.

**Alcohol and other drugs**

- At follow-up, schools reported that all school staff always role modelled appropriate alcohol and other drugs use behaviour, compared with 92% at baseline.

**Sexuality education**

- Sexuality education topics were covered well at both timepoints by schools at each level of primary school education. For example, at both baseline and follow-up 85% or more of schools reported that sexuality education topics were addressed 'OK' or 'Very well'. This applied to all age ranges listed in the question: New Entrant to Year 2, Years 3-4, Years 5-6, and Years 7-8 (if relevant).

**Mental health**

- Schools reported at both baseline and follow-up that mental health topics were covered well in classroom teaching. For example, at both timepoints, 96% or more of schools reported that mental health topics were addressed 'OK' or 'Very well'. This applied to all age ranges listed in the question: New Entrant to Year 2, Years 3-4, Years 5-6, and Years 7-8 (if relevant).
- At follow-up, almost all schools had strategies in place for identifying and dealing with conflict resolution in schools (84% at baseline, 95% at follow-up).
- Classroom lessons were reported at follow-up as giving students more opportunities to practice skills rather than learn only facts, compared with baseline (86% reporting 'Mostly' or 'Always' at baseline, compared to 100% at follow-up).

**Sunsmart**

- There was a statistically significant improvement in the proportion of staff participating in professional development on Sunsmart between baseline and follow-up, with just 5% of schools at baseline reporting that 50% or more of staff had participated in the last two years, compared to 38% at follow-up (p value for overall difference =0.01).

### 3.3.3 Secondary school results

A factor to note in interpreting the results is that the number of participating secondary schools is small (10 at baseline and 7 at follow-up). This sample size does not have enough power to detect statistical significance in the results for secondary schools, even though positive changes were reported.

**Financial and social barriers**

- Financial and social barriers to making healthy choices were common among secondary school students at baseline (for example, 40% of schools reporting that 21-40% of children faced significant financial barriers). But more than half (4 out of 7) of secondary schools reported that they had less than 10% of students facing significant financial barriers at follow-up.
- Improvement in addressing financial and social barriers could be seen at follow-up. For example, at baseline 50% of schools reported doing 'OK' and 50% 'Very well' in the area of making school activities accessible to all students. At follow-up, 100% reported doing 'Very well.' Similarly, at baseline 67% of schools reported doing 'OK' or 'Very well' at working with families to ensure children have breakfast and lunch, compared to 100% at follow-up.

**Physical activity**

- Most schools reported doing 'Very well' at both timepoints in encouraging teaching practices that allow equal participation in physical activity from all students (90% at baseline, 71% at follow-up). Students with special health needs were also encouraged to participate in physical activity, at both baseline

and follow-up (at baseline 10% reported 'Mostly' and 90% 'Always', at follow-up 14% reported 'Mostly' and 86% 'Always').

- All but one secondary school had written guidelines for promoting and supporting physical activity at both timepoints. These guidelines were reported as being better enforced at follow-up (40% reporting 'Very well' at baseline, 67% at follow-up).
- Schools reported doing better at meeting staff professional development needs in physical activity at follow-up (80% reporting doing 'OK' or 'Very well' at baseline, compared to 100% at follow-up).

**Nutrition**

- At two thirds of the schools, students were able to identify healthy food options 'Very well' from what they had learned in the classroom, at both baseline and follow-up.
- Eighty percent of the schools at baseline and all schools at follow-up had written guidelines for the promotion of nutrition and healthy eating, but these guidelines were not well promoted and communicated to staff and students (45% of schools reporting guidelines were 'Not very well' communicated and promoted to staff at baseline and 43% at follow-up; 33% reporting that guidelines were communicated and promoted 'Not very well' to students at baseline and 14% at follow-up).
- For schools with external food and drink providers for school lunches, at follow-up schools reported reviewing the food and drink options with suppliers more often (50% reporting 1-2 times per year at baseline, 100% at follow-up).
- All schools reported having written guidelines for food and drink sold at school at follow-up, compared with 70% at baseline. Most schools reported enforcing these guidelines well (85% of schools reporting doing 'OK' or 'Very well' at enforcing at both timepoints).
- The proportion of staff participating in professional development on nutrition had increased between baseline and follow-up (6 out of 10 schools reporting 76-100% staff had participated at baseline compared to 6 out of 7 schools at follow-up).

**Smokefree**

- Great improvement could be seen in the extent of tobacco/Smokefree-related topics covered by classroom teaching, with all schools covering these topics 'OK' or 'Very well' at follow-up. At baseline, between 20% and 30% of schools reported doing 'Not very well' at covering these topics.
- All secondary schools reported at follow-up that they 'Always' maintained their legal Smokefree status (compared to nine out of ten schools at baseline).
- All schools reported at follow-up that they had written guidelines relating to Smokefree at school (89% at baseline), and these guidelines were promoted and communicated to students 'Very well'.
- Staff from all schools at both baseline and follow-up reported 'Mostly' or 'Always' role modelling Smokefree behaviour.

**Alcohol and other drugs**

- Alcohol and other drugs topics were covered well by classroom teaching at both timepoints.
- For example, classroom lessons were reported at follow-up as giving students more opportunities to practice skills rather than learn only facts, with 71% of schools at follow-up reporting 'Always' giving students opportunities, compared with 40% at baseline.
- All schools had written guidelines relating to alcohol and other drugs at both baseline and follow-up. These guidelines were reported as being effectively promoted and communicated to staff (40% doing 'Very well' at baseline and 100% at follow-up) and students (90% doing 'Very well' at baseline and 86% at follow-up).
- All schools' staff at follow-up 'Always' role modelled appropriate behaviours regarding alcohol and other drugs use, compared with 80% at baseline.

**Sexuality education**

- Most schools reported covering sexuality education 'Very well' by classroom teaching, with little change from baseline (70-80% reporting doing 'Very well' across the three topic areas at baseline and 86% of schools, or 6 out of 7, reporting doing 'Very well' for all three topic areas at follow-up)..
- All schools reported providing referral to support services for students' sexual health issues, at both timepoints.
- There was an increase over time in the number of schools with a high proportion of staff participating in professional development on sexuality education (2 out of 7 schools reported 50-100% of staff participating at follow-up, compared to 1 out of 10 schools at baseline).

**Mental health**

- Schools reported that mental health topics were covered well in classroom teaching at both baseline and follow-up. For example, bullying was reported as being covered 'Very well' by 78% of schools at baseline and 100% at follow-up and for discrimination 44% of schools reported doing 'Very well' at baseline and 86% at follow-up.
- At follow-up, classroom lessons were reported as now giving students more opportunities to practice skills rather than learn only facts (78% of schools reporting 'Mostly' or 'Always' at baseline, 100% at follow-up).
- All schools had written guidelines relating to mental health at both timepoints. These guidelines were well promoted and communicated to staff (100% of schools reporting 'Very well' at both timepoints) and students (89% reporting 'Very well' at baseline and 72% at follow-up).

**Sunsmart**

- Half of secondary schools had written Sunsmart guidelines at follow-up, up from 22% at baseline.
- All or most schools reported that staff usually role modelled appropriate Sunsmart behaviour at both timepoints (8 out of 9 schools reporting 'Mostly' or 'Always' at baseline, compared to 6 out of 6 at follow-up).

- There were more schools at follow up with 'All' students able to eat their lunch outside in the shade (67% at follow-up, up from 33% at baseline).

### 3.3.4 Tertiary centre results

The following section includes results of selected questions from the baseline questionnaires (7) and the follow-up questionnaires (6) completed in tertiary centres.

As with the secondary school results, a factor to note in interpreting the results is that the number of participating centres is small. This sample size does not have enough power to detect statistical significance. The lack of any statistically significant differences between baseline and follow-up is due, at least in part, to the small sample sizes.

In South Canterbury, most tertiary settings are described as "alternative education" settings. Alternative education settings cater to specific subsets of students, and operate quite differently from schools. The impact evaluation questionnaire that was used for tertiary centres was adapted from the one developed for secondary schools (this mainly involved changing language such as 'setting' in place of 'school' and 'training room' in place of 'classroom', rather than changing the main content of the questionnaire) and may not capture the full picture and any improvements that have been made at tertiary centre.

Some key results for tertiary centres are as follows:

- Availability of outdoor and indoor facilities for physical activity was limited.
- Food sold in tertiary centres did not reflect healthy food and nutrition messages.
- Tertiary settings did not always maintain their legal Smokefree status as a workplace.
- Most settings did not have guidelines on physical activity, nutrition and Sunsmart.
- None of these factors improved over the evaluation period.

Comparisons between the baseline and follow-up have shown some positive changes in tertiary centres:

- Almost all centres at follow-up reported using effective strategies to address social and financial barriers faced by students.
- Various health-related topics were covered better at follow-up by training room teaching, and students were also given more opportunities to practice skills rather than learn only facts at follow-up.
- Staff members were also reported at follow-up as usually role modelling appropriate healthy behaviours.
- Written guidelines were presented at follow-up by all centres in regards to alcohol and Smokefree. These guidelines were reported as being effectively promoted and communicated to staff and students.

**Physical activity**

- Most centres reported doing 'Very well' in encouraging teaching practices that allowed equal participation in physical activity from all students, at both

baseline and follow-up (67% reporting 'Very well' at baseline, compared to 83% at follow-up).
- At least two thirds of the centres did not have written guidelines for promoting and supporting physical activity at either timepoint.

**Nutrition**
- No centres at either baseline or follow-up had written guidelines for the promotion of nutrition and healthy eating.
- For most centres, food provided at various centre events was reported as reflecting healthy food and nutrition messages (80% reporting 'Mostly' or 'Always' at baseline, compared to 83% at follow-up).
- The proportion of staff participating in professional development on nutrition had increased (no centres reporting that 50% or more of staff had undertaken professional development in the last two years, compared to 2 out of 6 centres at follow-up).

**Smokefree**
- Fewer centres at follow-up reported 'Always' maintaining their legal Smokefree status (100% at baseline, compared to 67% at follow-up).
- All centres had written guidelines relating to Smokefree at follow-up, compared to 80% at baseline. These guidelines were promoted and communicated to staff and students 'Very well' at both timepoints (for staff 100% reporting 'Very well' at both timepoints, and for students 100% reporting 'Very well' at baseline and 83% at follow-up).
- No staff had participated in any professional development on Smokefree at either baseline or follow up.

**Alcohol and other drugs**
- Topics of alcohol and other drugs were covered well in tertiary centres at both timepoints.
- All centres had written guidelines relating to alcohol and other drugs at both baseline and follow-up. These guidelines were effectively promoted and communicated to staff and students (the majority of tertiary centres reporting 'OK' or 'Very well' for all topic areas at both timepoints).
- All centres reported that staff 'Always' role modelled appropriate use of alcohol and other drugs at follow-up, compared to 86% at baseline.

**Sexuality education**
- All centres provided referral to support services for students' sexual health issues at both timepoints.

**Mental health**
- Most centres (80% to100% of centres across the various mental health topics) reported covering mental health topics 'Very well' at follow-up, compared to 43% to 71% at baseline.
- More centres reported having specific programs to deal with conflict resolution at follow-up (an increase from 50% to 83%).

**Sunsmart**

- Most centres did not have written Sunsmart guidelines at either timepoint (86% of centres at baseline, 83% at follow-up).
- Few staff had participated in professional development on Sunsmart at either timepoint (all centres at baseline and 5 and out of 6 centres at follow-up reporting that no staff had completed professional development in the last two years).

## *3.4 Discussion*

### 3.4.1 Strengths and weaknesses of impact evaluation methodology

The WAVE evaluation takes its strength from having a strong evaluation plan from the outset of the programme. Having detailed baseline impact data is of great value in documenting the progress of WAVE. The questionnaires were designed effectively to collect the data for efficient data analysis. The questionnaires have allowed for some statistical significance to be determined in ECE centres and primary schools, where sample sizes were larger than for the other setting types, when comparing baseline with follow up data.

### 3.4.2 What works well

- It is a challenge for health promotion programmes to measure change from their programmes. Advice from the International Union for Health Promotion and Education (2009)[2] is that three to four years need to be allowed to achieve specific goals. It is a real strength of the WAVE evaluation that in part due to a detailed evaluation plan from the outset, some statistically significant changes are able to be documented. Examples of statistically significant improvements include: ECEs showed statistically significant improvements between baseline and follow-up in the area of professional development for physical activity and Sunsmart and in working with external providers when promoting physical activity; and Primary schools showed statistically significant improvements between baseline and follow-up in the area of nutrition (for example, students being able to identify healthy food choices) and in the area of professional development for Sunsmart.
- In addition to the statistically significant improvements some promising trends have been identified.
- The robust impact evaluation methodology allows WAVE to accurately identify room for improvement. In response to interim impact evaluation reports, for example in 2010 when it was identified that Māori Health promotion could be improved, WAVE showed its ability to respond to the challenge. The impact of the subsequent changes to WAVE is reflected in the

[2] International Union for Health Promotion and Education. 2009. Achieving health promoting schools: guidelines for promoting health in schools. Version 2. St Denis Cedex, IUHPE. Available from: http://www.iuhpe.org/uploaded/Publications/Books_Reports/HPS_GuidelinesII_2009_English.pdf Accessed 8.6.11.

latest impact evaluation data, which shows improvement in Māori Health (see chapter 5).

### 3.4.3 Challenges for the future

The impact evaluation questionnaires were comprehensive and took 30 minutes to two hours to complete. Although completion rates were high, many settings felt that the evaluation process was too time consuming. While the questionnaire was adapted for each setting type, it was minimally adapted for the tertiary setting and so may have failed to capture the full picture and extent of any change at this setting level. In future evaluations it will also be important to take into account the small total numbers of high schools and tertiary centres in South Canterbury when determining their evaluation methodology.

**Case study: Community College South Canterbury**

Community College South Canterbury is a division of Community College NZ. Community College South Canterbury provides training at NZQA (New Zealand Qualifications Authority) Levels 1, 2 and 3.

Examples of WAVE Activities
Resources: The WAVE Resource Centre, which staff and students had all visited at one point, was said to be a potential asset to the College. Despite the positive comments that the catalogue contained a comprehensive range of resources, and that it was kept updated, the limited opening hours and the distance to travel to it had meant the College under utilised the resource centre.

Professional Development:.Youth tutors had acquired additional skills through professional development opportunities offered through the WAVE facilitator. This had had a domino effect, as the tutors' training had ultimately enhanced the lives of the students. WAVE had also provided opportunities for the College, the manager in particular, to network with other education providers. This broadened the network of the College and alongside some of the WAVE-related activities raised the profile of the College.

Sunsmart: Tutors consulted the students about plans for the Sunsmart initiative and informed them that money in the region of $20,000 was required. The WAVE fund made a contribution as did Rotary. Students enthusiastically engaged in a range of fund raising options including wood cutting for a trailer of firewood to raffle; a gold coin donation for a hat day; collecting pine cones; making truffles and cheese rolls; car washes; a garage sale and a sausage sizzle outside a local business. Requests for donations were made through local radio stations and applications were made to charities. Not only was the money required for physical changes to the College, but the College also needed to change, or modify some of its practices. Part of the action plan for the Sunsmart programme included reviewing the Community College's Quality Manual and risk management practices. Examples were that the checklist for outings needed to have sunscreen added and the rules about no hats inside had to be modified to encourage the students to wear them outside. These reviews stimulated thoughts on other wider health and safety practices, such as where First Aid kits were located. During this review process it was realised that Sunsmart did not just come under Health and Safety in the Quality Manual but also under the environment section. This information was filtered through the rest of the country and contributed to the revision of national policies and procedures. A person who had survived melanoma was invited to speak to students and this was reported to have a significant impact on them.

# 4 Process Evaluation

## 4.1 Background

The WAVE evaluation plan (November 2007 version) has as one of its objectives, "Annual process evaluation according to developed format (12 months after Memorandum of Agreement signed*) including Mäori Health and vertical clusters"*.

This chapter will summarise the results of the process evaluations, with the exception of Māori Health and vertical clusters, which are reported in separate chapters.

The process evaluation questionnaires were to be repeated every twelve months. The questionnaire was a mix of qualitative and quantitative questions. Questions in the process questionnaires were similar for the different levels of education, with terminology altered depending on the level. The majority of initial process evaluation questionnaires was completed in 2008 (baseline) and the same questionnaire was repeated in 2009 (follow-up 1) and in 2010 (follow-up 2). Analysis of these data is included in this report.

## 4.2 Methodology

Questionnaires were administered according to an agreed questionnaire protocol. WAVE facilitators could prompt the respondent, or clarify questions to ensure they were answered as fully as possible. Originally it was intended that the WAVE facilitator for the centre, or school, would meet with the person in charge or the person taking the lead role for the WAVE initiative within their centre, or school, to support them with the questionnaire. This did not always happen and some schools and centres completed these unassisted. It was then decided that an instruction sheet would be written to assist staff to answer the process questionnaire if it was not being administered by the WAVE facilitator.

This report contains the results, discussion and recommendations emerging from the analysis of a range of qualitative and quantitative data obtained from the process evaluation questionnaires undertaken by the majority of WAVE settings up to February 2011.

In addition, the evaluation coordinator interviewed WAVE facilitators in early 2011 to gain further feedback. Feedback from stakeholders is an important part of process evaluation and will be included in the results, discussion and recommendations of this chapter.

## 4.3 Results

At baseline the response rate for completing the process evaluation questionnaire were: ECEs 91%, primary schools 100%, secondary schools 100%, tertiary centres 100%.

At follow-up 1 the response rates for completing the process evaluation questionnaire were: ECEs 84%, primary schools 86%, secondary schools 80%, tertiary centres 60%.

At follow-up 2 the response rates for completing the process evaluation questionnaire were: ECEs 59%, primary schools 63%, secondary schools 30%, tertiary centres 40%.

As some settings joined WAVE later, they have not yet completed follow-up 2.

This section includes:

- Key points from analysis of results to 2009 (reported August 2010)
- A summary of actions taken in response to those recommendations
- Key points from analysis of all results to February 2011
- More in-depth results from each type of setting.

### 4.3.1 First Report: Responses from 2008 and 2009 questionnaires (August 2010)

Key points from the 2010 analysis of WAVE process evaluation questionnaire responses have been summarised below, including the strengths and weaknesses that emerged in the evaluation.

- A diverse range of WAVE-related health and well-being activities and projects were undertaken in different education settings[3], which indicated the flexibility of the WAVE process in addressing the requirements of different settings.
- These projects and activities supported the promotion of health and wellbeing, and healthy lifestyle messages, to students.
- Nutrition and physical activity were the issues most commonly addressed through WAVE in early childhood education centres and primary schools, while alcohol and other drugs were most commonly addressed in tertiary settings.
- Action Plans provided settings with direction, especially for the larger WAVE projects.
- Facilitators were considered the most essential element of WAVE. The facilitators consulted with education settings about their priorities, provided relevant information and resources and worked alongside settings.
- The WAVE Resource Centre was considered a valuable asset.
- Settings valued having access to people with expert or specialist knowledge.
- Settings also valued the financial support of the WAVE and Nutrition funds, which allowed health promoting environments to be established for the children and students.
- Education settings were supportive of the concept of integrating health messages, or WAVE-related activities, into curricula.
- Policies and guidelines to protect and promote the health and wellbeing of students were developed in education settings.

[3] The terms "education settings" and "settings" used in this report refer to the categories of educational institution participating in WAVE. These categories are Early Childhood Education centres (ECE), primary schools, secondary schools, and tertiary or alternative educational institutions.

- Teachers across the sector had become role models for health messages.
- Some students took on leadership roles as members of student health teams.
- The wider community was involved in WAVE, including parent committees, Boards of Trustees, teaching and non-teaching staff, parents, local iwi, contractors, and service organisations such as Rotary.
- There was evidence of awareness about sustainability in some WAVE activities.
- Settings promoted WAVE through a wide range of internal and external media.
- Families of students were indirectly influenced by health messages taken home by students, as well as through their conversations about WAVE.
- Families of children and students were more directly influenced when they responded to requests to become involved in WAVE projects or activities.
- Settings were keen to know about what others were doing. The education sector is a community of its own. WAVE activity in one setting influenced others.
- Most settings reported they had been moderately or very active with WAVE activities, despite expressing concerns about the time and paperwork involved.
- The WAVE initiative has been inclusive of all levels of education. There has been comparatively less progress for those in the alternative/tertiary sector.
- Many of the projects and activities addressed more than one health issue.
- Mental health and wellbeing was often not identified, or further developed, despite a project(s) providing students with opportunities for leadership, raising self-esteem or operating as part of a team.

The August 2010 report's recommendations included:

**Recommendations**

- That the WAVE processes be simplified as much as possible without compromising efficacy.
- That the WAVE team continue to work on supporting education settings to meet the needs of Māori children and students.
- That the delivery of WAVE within alternative/tertiary settings be reviewed to ensure these students are getting similar opportunities to those in other settings
- That the education sector be further supported to identify and use more holistic approaches. For example issues such as mental health can be addressed alongside many other activities, rather than necessarily being separated off.
- That there is continued promotion of the WAVE initiative, and the achievements by settings of WAVE projects and activities, within the wider South Canterbury community.
- That a wider range of media, outside of internal systems, is accessed and used to promote WAVE.
- That additional funding continues to be available to schools for WAVE initiatives.
- That the tertiary sector is supported to access funding for WAVE initiatives.
- That consideration is given to combining all regional education sector health initiatives under the WAVE initiative. This would reduce administration and funding costs and help reduce some of the disruption to education settings.

**Response to August 2010 Recommendations**

- The WAVE team manual has been rewritten to reflect clearer processes which will improve efficacy and effectiveness of the team.
- Workshops have been held for ECE staff to ensure they are supported in understanding and meeting the needs of Māori students.
- Primary and secondary school youth forums had student health teams taking the lead in ensuring these events had an appropriate cultural component.
- The challenge in providing health issues expertise in all areas to the alternative/tertiary sector has been due to both the limited capacity of the WAVE health issues health promoters and some health issue areas not having the mandate within their contracts to support this sector, eg The Cancer Society and Sunsmart. In response to this concern, WAVE has developed health assessment/analysis tools that assist the facilitators to provide more support in these areas.
- Professional development in mental wellbeing has been held for .the WAVE team.
- Settings' WAVE plans have been adapted to support both mental wellbeing and Māori Health, to underpin a greater number of initiatives than was the case previously.
- Membership of the WAVE Working Group has been extended to incorporate a number of community agencies.
- WAVE staff have attended settings' open days/events such as polytechnic orientation, Well Child events and school open days.
- Website upgrades have taken place and there have been regular articles in local newspapers from the WAVE team raising awareness and as well from settings talking about their WAVE initiatives.
- WAVE is working in partnership with Sports South Canterbury (active schools and Kiwi Sport Programmes), the Cancer society (Sunsmart accreditation programme), Timaru District Council (school travel planning), and dental services (oral health) to deliver health promotion in education settings, these initiatives all come under the WAVE programme.
- WAVE has other key stakeholders, for example, Timaru District Council (Zero waste and edible gardens), Environment Canterbury (sustainable transport), the Heart Foundation, and Māori education advisors on the Working Group. WAVE works collaboratively with these organisations.

### 4.3.2 Updated analysis (May 2011): responses from 2008 (baseline), 2009 (follow-up 1) and 2010/11 (follow up 2) questionnaires

The analysis of process evaluation responses was updated in May 2011 to include all responses to February 2011. Key points extracted from the 2011 analysis of WAVE process evaluation questionnaire responses have been summarised below, including the strengths and weaknesses that emerged in the evaluation.

- There continues to be a diverse range of WAVE related health and wellbeing activities and projects throughout all settings, a number of them led by the student health teams.

- The extent to which ECEs, primary and secondary schools believe the WAVE process has assisted them in the promotion of health and wellbeing has increased steadily over the past 5 years.
- There is an improvement in how well ECEs and primary schools think their work with WAVE has been addressing the health and wellbeing of Māori students. There has also been an increase in secondary schools, however there is still room for improvement.
- A positive development since the previous process evaluation report is the widespread emergence of WAVE student health teams across settings. In addition, the student health teams are involving parents in their health related activities.
- Following identification of mental wellbeing as a weakness in the previous analysis, there was an increase in the promotion of mental wellbeing in both primary and secondary schools.
- The wider community continues to be involved in WAVE.
- In the education setting there has been increased involvement of teachers, students and external advisors in WAVE activities.
- Involvement of the whole school community is actively encouraged and supported.
- WAVE activities have continued to be promoted through a wide range of internal and external media.
- Barriers to getting people to participate in health promotion activities include: lack of time for both parents and teachers, transport barriers in rural communities, parents' belief that health promotion is the role of teachers, some parents lacking the confidence to participate.
- The extent to which the WAVE process has assisted settings in health promotion activities has increased from baseline.
- There is specialist health promotion input on particular health topics.
- Professional development is provided for education staff.

### 4.3.3 Early childhood summary (for all timepoints: baseline, follow-up 1 and follow-up 2)

Over 96% of ECEs believed that the WAVE process had assisted their school in the promotion of health and wellbeing in the last 12 months (up from 83% at baseline and 93% at follow-up 1).

Table 1 shows which issues ECEs had focused on. Of note is an increase in promoting cultural inclusiveness.

**Table 1. Summary of responses from ECEs, for Questionnaire 1, 2 and 3 of the health issues the ECE had worked on under the WAVE umbrella.**
What are the issues that WAVE, in your centre, has focused on?

| Health Topic/issue | Baseline WAVE Focus | (%) | Follow-up 1 WAVE Focus | (%) | Follow-up 2 WAVE Focus | (%) |
|---|---|---|---|---|---|---|
| Number of participating ECE Services | **29** | | **26** | | **20** | |
| Cultural Inclusiveness | 6 | 21 | 10 | 38 | 11 | 55 |
| Physical Activity | 14 | 48 | 20 | 77 | 9 | 45 |
| Nutrition | 22 | 76 | 23 | 88 | 13 | 65 |
| Tobacco/ Smokefree | 1 | 3 | 2 | 8 | 0 | 0 |
| Emotional Wellbeing | 10 | 34 | 13 | 50 | 2 | 10 |
| Sunsmart | 10 | 34 | 8 | 31 | 1 | 5 |
| Other | 8 | 28 | 5 | 19 | 2 | 10 |
| Total number topics specified by ECE Services | **71** | | **81** | | **38** | |

### 4.3.4 Primary schools summary (for all timepoints: baseline, follow-up 1 and follow-up 2)

Over 90% of primary schools believed that the WAVE process had assisted their school in the promotion of health and wellbeing in the last 12 months (up from 85% at baseline and 70% at follow-up 1).

Table 2 shows which issues primary schools had focused on.

**Table 2. Summary of responses from primary schools, for Questionnaire 1, 2 and 3 of the health issues the school had worked on under the WAVE umbrella.**
What are the issues that have been worked on under the WAVE umbrella?

| Health Topic/issue | Baseline WAVE Focus | (%) | Follow-up 1 WAVE Focus | (%) | Follow-up 2 WAVE Focus | (%) |
|---|---|---|---|---|---|---|
| Number of participating Primary Schools | **37** | | **31** | | **22** | |
| Māori Health/ Hauora | 6 | 16 | 7 | 23 | 5 | 23 |
| Cultural Inclusiveness | 8 | 22 | 5 | 16 | 4 | 18 |
| Physical Activity | 25 | 68 | 22 | 71 | 14 | 64 |
| Nutrition | 28 | 76 | 25 | 81 | 19 | 86 |
| Tobacco/ Smokefree | 3 | 8 | 1 | 3 | 3 | 14 |
| Alcohol and Other Drugs | 1 | 3 | 1 | 3 | 1 | 5 |
| Sexuality Education | 2 | 5 | 1 | 3 | 2 | 9 |
| Mental Wellbeing | 14 | 38 | 20 | 65 | 6 | 27 |
| Sunsmart | 15 | 41 | 14 | 45 | 13 | 59 |
| Other | 8 | 22 | 3 | 10 | 4 | 18 |
| Total number topics specified by Primary Schools | **110** | | **99** | | **71** | |

### 4.3.5 Secondary schools summary (for all timepoints: baseline, follow-up 1 and follow-up 2)

All secondary school respondents believed that the WAVE process had assisted their school in the promotion of health and wellbeing in the last 12 months (up from 60% at baseline and 75% at follow-up 1).

Table 3 shows which issues secondary schools had focused on. Due to the low response rate for follow-up 2, data are skewed. Comparison between baseline and follow-up 1 shows an increase in promotion of mental wellbeing.

**Table 3. Summary of responses from secondary schools, for Questionnaire 1, 2 and 3 of the health issues the school had worked on under the WAVE umbrella.** What are the issues that have been worked on under the WAVE umbrella?

| Health Topic/issue | Baseline WAVE Focus | (%) | Follow-up 1 WAVE Focus | (%) | Follow-up 2 WAVE Focus | (%) |
|---|---|---|---|---|---|---|
| Number of participating Secondary Schools | **10** | | **8** | | **3** | |
| Māori Health/ Hauora | 2 | 20 | 1 | 13 | 0 | 0 |
| Cultural Inclusiveness | 1 | 10 | 1 | 13 | 0 | 0 |
| Physical Activity | 3 | 30 | 3 | 38 | 2 | 67 |
| Nutrition | 8 | 80 | 7 | 88 | 2 | 67 |
| Tobacco/ Smokefree | 1 | 10 | 0 | 0 | 0 | 0 |
| Alcohol and Other Drugs | 1 | 10 | 2 | 25 | 1 | 34 |
| Sexuality Education | 1 | 10 | 0 | 0 | 0 | 0 |
| Mental Wellbeing | 6 | 60 | 7 | 88 | 1 | 34 |
| Sunsmart | 2 | 20 | 2 | 25 | 0 | 0 |
| Other | 1 | 10 | 3 | 38 | 1 | 34 |
| Total number topics specified by Secondary Schools | **26** | | **26** | | **7** | |

### 4.3.6 Tertiary Centres – summary (for all timepoints: baseline, follow-up 1 and follow-up 2)

Table 4 shows which issues tertiary centres had focused on.

The number of tertiary centres participating in WAVE, ranging from 5 at baseline to 2 at follow-up 2, is too low to determine any meaningful patterns in data.

**Table 4. Summary of responses from tertiary centres, for Questionnaire 1, 2 and 3 of the health issues the centre had worked on under the WAVE umbrella.**
What are the issues that have been worked on under the WAVE umbrella?

| Health Topic/issue | Baseline WAVE Focus | (%) | Follow-up 1 WAVE Focus | (%) | Follow-up 2 WAVE Focus | (%) |
|---|---|---|---|---|---|---|
| Number of participating Tertiary Centres | **5** | | **3** | | **2** | |
| Cultural Inclusiveness | 2 | 40 | 1 | 33 | 2 | 100 |
| Physical Activity | 5 | 100 | 2 | 67 | 2 | 100 |
| Nutrition | 5 | 100 | 3 | 100 | 2 | 100 |
| Tobacco/ Smokefree | 4 | 80 | 1 | 33 | | 0 |
| Alcohol and Other Drugs | 5 | 100 | 1 | 33 | 1 | 50 |
| Sexuality Education | 4 | 80 | 1 | 33 | 2 | 100 |
| Mental Wellbeing | 3 | 60 | 0 | 0 | 1 | 50 |
| Sunsmart | 4 | 80 | 0 | 0 | 1 | 50 |
| Total number topics specified by Tertiary Centres | **32** | | **9** | | **11** | |

* Data skewed because of low numbers

### 4.3.7 All settings

Table 5 provides examples of the health promotion activities that have taken place under the WAVE umbrella over the past five years in ECEs, primary schools and secondary schools. The health promotion activities have been grouped under the headings; nutrition, physical activity, Sunsmart, Mental health and wellbeing, Cultural Inclusiveness/Hauora/Māori Health, and WAVE student health teams.

Of note is the increasing role for student-led health promotion activities.

**Table 5. Examples of activities undertaken, under WAVE (baseline and follow-up 1 and follow-up 2 data combined)**

**Nutrition**

- Developing food and nutrition policies and guidelines
- Establishing and running Breakfast and Lunch clubs
- Staff professional development
- Parents/student surveys on (a) preferred healthy lunch options (b) junk food consumption
- Holding a nutrition hui (Waimate Cluster initiative)
- Role modelling (by school staff, parents and or student health team students)
- Involvement of nutritionist in heath promotion
- Building and development of edible gardens
- Monitoring of lunch boxes
- Developing a healthy food recipe book and recipe folder; recipes in newsletters
- Cooking and baking healthy items
- Removal of sweets as an option for classroom rewards
- Including healthy foods on school camp menus
- Holding a healthy sandwich day
- Student health teams have led healthy eating projects and continue to present information and progress and consult with school staff, Boards of Trustees, other students and community members
- Implementing changes to lunch options in canteens to ensure they provide nutritionally healthy lunches

**Physical Activity**

- Whole centre/school consultations including students, teachers, Committees, Boards of Trustees
- Playground redevelopments
- Physical activity within class programmes
- Accessing WAVE funding e.g. for new goal posts, playground equipment, sport sheds
- Participating in Active Schools, including development of associated Action Plans
- Involvement in Run, Jump, Throw; Jump Jam; Jump Rope for Heart; Feet First (Walk to School); Active Transport; whole school mini Olympics; Footpath Frenzy; Wheels Day; South Canterbury cricket cluster

- Playground safety; water safety; bus safety
- Voluntary coaching and driving by parents/community – to encourage student participation in sports; honouring coaches, parent helpers and drivers
- Funds assigned to support school bus to be available for sports activities
- Student surveys regarding preferences for physical activities
- Student initiated physical activity preferences
- Self defence courses
- Promoting active lunchtimes

**Sunsmart**

- Compulsory wearing of sunhats for terms 1 and 4
- Development, monitoring and communication of Sunsmart policies
- Assessing shade availability and identifying areas requiring action
- Installation of shade covers, e.g. sails, over sandpits, swimming pools, seating areas
- Sunscreen available for students and staff
- Involvement of Cancer Society advisor
- Attendance at Sunsmart workshops
- Gaining Sunsmart accreditation
- Displays of Ultra-violet index boards
- Planting of trees – some had involvement from Enviro-schools, others WAVE funding
- Utilisation of portable shade/gazebos for school events – some purchased via WAVE funding
- Organisation of Sunsmart theme days with prizes; celebration of promotions during Sunsmart week; Sunsmart technology challenges
- Sunsmart units in curriculum based teaching
- Class surveys
- Sunsmart Hui
- Purchase of hats – WAVE funding
- Development of Sunsmart pamphlet by students, available to community

**Mental Health and Emotional Wellbeing**

- Developing relationships; parent meetings
- Minding Minds programme for mental wellbeing for teachers
- 'All about Me' course – personal safety programme for ECEs
- Peer mediation – training of peers
- Restorative Justice practices
- Establishing new 'values' for the school – in consultation with students
- Options for active student leadership; building of sustainable leadership opportunities
- WAVE Youth Forum

**Cultural Inclusiveness/Hauora/Māori Health**

- Detailed in 'Addressing the needs of Māori students' section, below

**Students' WAVE teams**

- Health related survey implementation by Student Health Team

- Modelling of Sunsmart by Student Health Team members
- Membership of Student Health Teams; organising events, involvement in communication and consultation processes; presentations to peers in assemblies, parents and Boards of Trustees
- School canteen policy (from surveys/research led by Student Health Team)
- Modifications of school canteen menus (led by Student Health Teams)

## *4.4 Discussion*

### *4.4.1 Strengths and weaknesses of process evaluation methodology*

The WAVE evaluation takes its strength from having a strong evaluation plan from the outset of the programme. There is a wealth of baseline information that allows progress of WAVE to be documented and enables an understanding of what has worked in WAVE and what challenges have been encountered in the project.

There are a number of challenges in designing and implementing this type of evaluation. Firstly, the questionnaire utilised a mixture of qualitative and quantitative methodology. Secondly, an impact evaluation was occurring parallel to this questionnaire and there was frustration from some settings over the perceived large amount of paperwork and a feeling of "over evaluation". The WAVE evaluation team was aware of the impact on settings of the evaluation and tried to mitigate any frustration by sitting with teachers while they were completing questionnaires and paying teachers for their time.

It is encouraging to see the wide range of health promotion activities that have occurred in settings over the past 5 years under WAVE, in particular the increase in Māori Health activities and more recently mental health promotion. The enthusiasm of student-led health promotion initiatives is very positive, as is the support they are receiving from their local communities.

### 4.4.2 What works well

- WAVE had a strong project plan from the beginning, including an evaluation plan
- WAVE is health promotion in the education setting, across all levels of education
- Within the education setting, WAVE is flexible, it can evolve to meet the needs of the settings
- WAVE is region-wide, across South Canterbury
- WAVE has financial resources available
- WAVE is an effective partnership of health and education
- Settings see WAVE as a "one stop shop" for health, coordinating all health related issues for schools
- The WAVE facilitator can call on other expertise as needed
- WAVE works in the rural setting because the rural communities back the schools and in particular the WAVE Student Health Teams
- WAVE has a whole school approach which expands into the community

- WAVE provides professional development.

### 4.4.3 Possible challenges for the future

- The balance between the need for thorough evaluation and the busy education settings will continue to evolve. For example, as stated above, concerns have been raised by settings about the length and number of evaluation questionnaires, and associated time cost. The evaluation team has managed this tension by including education input into questionnaire design and by providing funding and one-on-one assistance to complete questionnaires.
- The tertiary questionnaires could be developed separately from the ECE and school questionnaires as currently they are only partly capturing the progress that is being made in these settings.
- The process evaluation results suggest that it has been challenging to always ensure a common understanding of the overall philosophy of the WAVE project.

**Glenview Kindergarten**

A total of around forty children attend Glenview Kindergarten. Glenview Kindergarten registered with WAVE in 2007 and has been actively involved in a range of WAVE initiatives.

**Examples of WAVE activities at the kindergarten**

Nutrition

The WAVE facilitator introduced a nutrition health promoter to the kindergarten. Involvement of families and the community was appreciated and thought to be a key to the progress made. The health promoter provided parents with tips on healthy lunches and meals as well as healthy eating routines. Visible changes were reported to have occurred with fruit and sandwiches now being brought in for morning tea.

Bicultural work

The Māori health promoter for WAVE formed a relationship with the staff, parents and children at the kindergarten and helped drive bi-cultural work forward at the kindergarten. Families and their children responded pro-actively and became involved in Te Reo and Tikanga education as well as a trip to a local marae for a hangi. This latter activity was especially well received, and families asked for it to be repeated. The teacher reported that the professional development session was "fantastic" and had contributed greatly to their understanding of issues for the education sector.

Glenview kindergarten had benefitted from WAVE in a number of ways and feedback about the WAVE processes was positive.

- The teacher stated she was excited that WAVE looks at the holistic well-being of the whole community. Work under the WAVE umbrella had "hugely" complemented the kindergarten teaching model, Te Whariki.
- The particular needs of the community were met through the relationships that developed and the personal approaches used by the WAVE team including the health promoters for nutrition and for Māori culture. Support from the WAVE team was considered "invaluable".
- The ongoing contact with, and access to, the WAVE facilitator and issues health promoters was useful. The kindergarten knew who to talk to and would be redirected to a more appropriate source when necessary.
- The bicultural spinoffs through WAVE were described as "huge" and were considered to be the biggest gains. It was felt that even the adults got the concept of inclusion. Success was attributed to taking the process slowly.
- The teacher felt the journey WAVE had taken the kindergarten on, with its holistic approach to health, was "unique".
- WAVE activities at Glenview kindergarten had featured in the local Timaru newspaper as well as in the High Country Herald. They were included in kindergarten reports to the Board and all WAVE work was included in annual plans.

# 5 Overview of WAVE working with Māori

## 5.1 Background

One of two additions to the existing evaluation plan as part of the November 2007 application to the HEHA fund was to specifically evaluate how well the WAVE project had addressed health outcomes for Māori.

This addition was identified as an opportunity to identify "appropriate methods and measures for enabling mainstream education settings to identify how they are impacting on the health of their Māori students and whānau".[4]

The following steps were proposed as additions to the existing evaluation plan:

- formation of a sub-group to oversee this part of the evaluation
- writing of a background paper based on a literature search and other available information (drawing on Whakatataka Tuarua, the Whānau Ora health impact assessment tool, and other projects similar to WAVE)
- identifying effective and practical methods and measures for identifying impacts on Māori Health within education settings, and
- using these methods and measures as part of the case studies, process and impact evaluations, and final report.

It is important to note that Māori made up 5.9% of the South Canterbury population at the 2006 Census, compared with 14% of the national population. The South Canterbury Māori population is younger overall than the non-Māori population, which is in keeping with the national picture. Māori are, therefore, relatively over-represented in the younger age groups in South Canterbury (11.1% or 1,164 out of a total of 10,500 aged 0-14 and 10.3% or 597 out of a total of 5,802 aged 15-24 years at the 2006 Census).[5]

## 5.2 Subsequent additions to the WAVE evaluation

**WAVE evaluation Māori Health outcomes group**

The WAVE evaluation Māori Health outcomes group formed in July 2008. This group was made up of four public health professionals who identify as Māori: Ted Te Hae (Cultural Advisor), Suzy Waaka (Health Promoter), Trevor Simpson (Health Promoter) and Ramon Pink (Medical Officer of Health). The group's purpose was to guide the wider WAVE evaluation team on how best to discover the level at which the needs of Māori were being met, and advise on what might need to change for tamariki/rangatahi to obtain the best advantage from WAVE.

**Literature review on Māori Health outcomes**

An external researcher, Megan Tunks, was contracted to undertake the literature review of the Māori Health outcomes for the South Canterbury WAVE project. This

[4] Application to HEHA Fund, November 2007

[5] Eyre, R. 2011. Hauoraka Whakaaturaka O Kā Māori O Waitaha Ki Te Toka 1Health Profile of Māori living in South Canterbury. Christchurch: Community and Public Health.

document was accepted as final on 15 August 2008 following a consultation process between the contractor, the WAVE evaluation team, and the Māori Health Outcomes Group.

This report[6] made the following recommendations for the WAVE initiative:

- "Māori Stakeholders need to participate in all stages of the WAVE project, including the process of defining the outcomes for the WAVE project
- That the material in this review be use as a tool to help Māori stakeholders, WAVE programme coordinators and evaluators to agree on Māori Health outcomes for the project
- Focus Groups should be used to engage whānau and rangatahi to determine health priorities and ways of delivery
- The WAVE programme should contribute to the reduction in health and educational disparities not further creation. As such, the checklists and frameworks discussed in the review, along with Whānau Ora Health Impact Assessments should be utilised in planning and review.
- Ongoing workforce development is important to ensure the cultural safety of non-Māori working with tamariki and rangatahi, especially those in the education, and sport and recreation sector."

The following recommendations were made for the WAVE evaluation:

- "A commitment to Māori participation in both the WAVE programme and in the evaluation be made by Community and Public Health
- The Māori frameworks included in this review are utilised to provide a selection of questions to inform the evaluation such as Māori participation in the process
- Qualitative methods such as focus groups and interviews are utilised with Māori stakeholders
- That Māori be included in the evaluation sample in order to determine what differences may be experienced by rangatahi
- Rangatahi be selected and trained to be part of the research team."

**Additions to process evaluation questionnaires**

A key purpose of the Māori Health outcomes literature review was to inform the development of new Māori-Health oriented questions for the existing process evaluation questionnaires.

The Māori Health outcomes framework, consisting of process evaluation questionnaires and a case study format, was subsequently finalised in September 2008.

The questions added to the process evaluation questionnaire related to:

- how effective settings thought their work with WAVE had been in addressing the health and wellbeing of Māori students
- to what extent settings had involved or consulted with whānau and the wider Māori community as part of their work with WAVE, and

[6] Tunks, M. (2008) Māori Health Outcomes Literature Review for the South Canterbury WAVE Project: Report to Community and Public Health.

- whether work with WAVE included any specific strategies to reach Māori students.

The question added to the case study format related to whether settings' work had included any specific strategies to reach Māori students, and, if yes, the details of these strategies.

**Role of Māori Health promoter**
In addition, a Māori Health promoter assisted by accessing Māori stakeholders and the wider Māori community in an attempt to find out what WAVE was achieving from the perspectives of rangatahi and whānau. There was an initial delay with this work due to a change of personnel in the Māori Health promoter role.

The Māori Health promoter role was reconfigured at the time of this personnel changeover. The WAVE facilitation component of the role was removed, in favour of providing full-time cultural expertise, in response to a need for greater support identified by the settings.

**Further additions in response to interim process evaluation results**
Interim results from the process evaluation questionnaires highlighted some areas of concern in relation to education settings addressing the needs of Māori (see process evaluation results below for detail).

In response, a **two-day professional development workshop** aimed at principals, head teachers, lead WAVE contacts and WAVE facilitators was held in April 2010, with 86 registrations. This workshop titled 'Raising Māori Potential' was facilitated by Dr Angus Macfarlane, Professor of Māori Research at Canterbury University and Sonja Macfarlane National Practice Leader, Ministry of Education. Objectives for the professional development were around supporting settings to understand what reducing inequalities for Māori means and how WAVE can support them in doing this. The first day of the workshop was aimed at education settings and the second day at WAVE staff and how they work with settings.

In addition, a **primary school youth forum,** "Kia Matauraka Hauora", held by WAVE in May 2010 was focused on increasing the knowledge and understanding of health promotion through a cultural (Māori) context. The objective of this forum was to increase the knowledge and understanding of health promotion through a cultural (Māori) context. Students, teachers and parents had the opportunity to network and to learn new skills which they were then able to share with students back in their schools.

Nineteen primary schools attended the forum, and for teachers this was a continuation of the Raising Māori Potential professional development. The activities on the day of the forum were lead mainly by the local Māori artists and crafts people who were also consulted on all aspects of the event.

## *5.3 Results*

### 5.3.1 Process evaluation

**Results from 2008 (baseline), 2009 (follow-up 1 and follow-up 2) questionnaires, (May 2011)**

A number of activities undertaken as part of the WAVE initiative may have particularly impacted upon Māori Health outcomes, including:

- promotion and support for bi-cultural practice and developing bi-cultural aspects to the programme
- involvement of the South Canterbury Māori Health promoters, and
- provision of professional development opportunities.

**Addressing Māori Health under WAVE**

Settings were asked what issue(s) they were addressing under the WAVE umbrella and the data in relation to Māori Health are presented in Table 6. Note that total numbers of settings are small for secondary and tertiary settings.

The total number of settings was higher for ECEs, and there was an increase in the proportion of ECEs identifying cultural inclusiveness as an issue they had pursued under WAVE., from 21% (6/29) at baseline to 38% (10/26) at follow-up 1 and 55% (11/20) at follow-up 2.

There was a small increase over time in the proportion of primary schools addressing Hauora and cultural inclusiveness as an issue under WAVE, from 16% (6/37) at baseline, to 23% (7/31) at follow-up 1 and 23% (5/22) at follow-up 2.

The total number of secondary schools was very small (10 at baseline, dropping to 3 at follow-up 2). A maximum of 2 schools reported addressing Hauora and/or cultural inclusiveness at baseline.

There were no Hauora or cultural inclusiveness WAVE initiatives within the tertiary sector.

**Table 6. Settings addressing Hauora and/or Cultural Inclusiveness as part of WAVE**

| Health Topic/issue | Baseline WAVE Focus | (%) | Follow-up 1 WAVE Focus | (%) | Follow-up 2 WAVE Focus | (%) |
|---|---|---|---|---|---|---|
| **ECEs** | | | | | | |
| Number of participating ECE Services | **29** | | **26** | | **20** | |
| Cultural Inclusiveness | 6 | 21 | 10 | 38 | 11 | 55 |
| **Primary Schools** | | | | | | |
| Number of participating Primary Schools | **37** | | **31** | | **22** | |
| Māori health/ Hauora | 6 | 16 | 7 | 23 | 5 | 23 |
| Cultural Inclusiveness | 8 | 22 | 5 | 16 | 4 | 18 |
| **Secondary Schools** | | | | | | |
| Number of participating Secondary Schools | **10** | | **8** | | **3** | |
| Māori health/ Hauora | 2 | 20 | 1 | 13 | 0 | 0 |
| Cultural Inclusiveness | 1 | 10 | 1 | 13 | 0 | 0 |
| **Tertiary Centres** | | | | | | |
| Number of participating Tertiary Centres | **5** | | **3** | | **2** | |
| Cultural inclusiveness | 2 | 40 | 1 | 33 | 2 | 100 |

### Effectiveness, involving whānau and local Māori, and specific strategies

As described above, settings were asked how effective they thought their work with WAVE had been in addressing the health and wellbeing of Māori students, to what extent they had involved or consulted with whānau and/or the wider Māori community, and whether their work included any specific strategies to reach Māori students. Response rates for these questions were low[7] for all settings.

### Effectiveness

The results for effectiveness are as follows:

Over 80 percent (up from 69% at baseline and 66% at follow-up 1) of ECE respondents in follow-up 2 believed that their work with WAVE had been moderately or very effective in addressing the health and wellbeing of Māori students.

[7] This may have been due, at least in part, to variation in the administration of the questionnaires – ranging from self administration to in-depth interviews.

Over 90 percent (up from 61% at baseline and 65% at follow-up 1) of primary school respondents in follow-up 2 believed that their work with WAVE had been moderately or very effective in addressing the health and wellbeing of Māori students.

Over 66 percent (up from 33% at baseline and 62% at follow-up 1) of secondary school respondents in follow-up 2 believed that their work with WAVE had been moderately or very effective in addressing the health and wellbeing of Māori students.

Tertiary setting numbers were too low to determine any meaningful patterns in the data.

**Involving whānau and local Māori, and specific strategies**
Settings were asked "To what extent have you involved or consulted with whānau and the wider Māori community as part of your work with WAVE?".

There was an overall improvement over time in this area for ECEs, with 33% responding 'Not at all' at questionnaire 1 and 22% at questionnaire 3. Similarly, the proportion of ECEs responding 'To a great extent' had increased from 6% to 17% over the same timeframe.

For primary schools, the proportion reporting 'Not at all' dropped from 38% (questionnaire 1) to 10% (questionnaire 3) and the proportion reporting 'To a great extent' increased from 10% to 25% over this timeframe.

Secondary school results were more mixed, with for example 50% reporting 'Not at all' at questionnaire 1 and the questionnaire 3 responses being split entirely between 'To a small extent' (67%) and 'To a moderate extent' (33%).

Examples of specific strategies to reach Māori students are as follows:

- Encouraged use of Te Reo throughout whole school
- Consulted with parents around needs of Māori students
- Consulted BOT regarding Māori Students
- Survey of parents that identified as Māori
- Staff professional learning
- Attendance at WAVE workshop & youth forum
- Formed a cultural group
- Marae visits
- Utilised holistic model (Te Tapa Wha)
- Te Aitarakihi visit
- Gardening has incorporated Māori language with display of Te Reo posters in every classroom, relating to gardening and the seasons
- Advisor assisted the school to help address the needs of Māori students
- Kapa Haka – FLAVA (value parent leader by providing reimbursement).

**Types of activities**
Some examples of the types of activities undertaken, across the range of settings, under WAVE are presented in Table 7.

**Table 7. Examples of cultural inclusiveness/Hauora/Māori Health activities undertaken (all settings), under WAVE (baseline and follow-up 1 and follow-up 2 data combined).**

- Use of Te Reo, teaching Te Reo
- Working with local iwi
- Use of Waiata
- Encouragement of whānau participation
- Promoting culturally valuable activities e.g. Taiaha; waka ama
- Participation in FLAVA festival; involvement in cultural festivals
- Purposeful attempt to gain greater student voice, views and opinions of those who identify as Māori
- Discussed and planned blessing of edible garden
- Accessed Māori providers for advice and support
- Māori role models
- Developing behaviour management; gifted and talented and achievement plans based on Kaupapa Māori principles
- Kapahaka, strengthening opportunities

**Process evaluation: Overall summary and conclusions**
Strengths and weaknesses of the process evaluation methodology are discussed in detail in the process evaluation chapter. Of particular relevance here is variation in the administration of the questionnaire. The low response rates for the Māori Health questions may be in part due to this.

Encouragingly, there was an increase over time in the number and proportion of ECEs addressing cultural inclusiveness, with a smaller increase also evident for primary schools.

Small total numbers of secondary schools and tertiary centres are also a limitation for the process evaluation, and for WAVE overall. As a result, few meaningful patterns can be determined in the data from these settings.

Importantly, ECEs, primary schools and secondary schools all showed an increase in the proportion of respondents reporting that their work with WAVE had been moderately or very effective in addressing the health and wellbeing of Māori students. These increases were greater for ECEs and primary schools.

A broad range of activities addressing Māori Health and cultural inclusiveness was described by process evaluation respondents.

Overall, these results are encouraging for WAVE with a greater focus and sense of effectiveness over time in the area of addressing the needs of Māori students, for ECEs and primary schools in particular. Small numbers do not allow changes to be discerned in the other settings.

The responses to questions regarding involving whānau and local Māori, and specific strategies suggest a focus on the part of at least some settings on process (treating all students the same) rather than outcome (ensuring all students are equally advantaged). Concern about this observation triggered the organisation of the two-day professional development workshop on Raising Māori Potential in April 2010 and the primary school youth forum in May 2010. The timing of the process evaluation questionnaires means that it has not been possible to measure any possible impact from these training initiatives.

### 5.3.2 Impact Evaluation

**Comparison of baseline and follow-up questionnaires**

**Early Childhood Educators (ECEs)**
Thirty-one ECEs completed the baseline questionnaire and 29 completed the follow-up questionnaire (approximately 12-24 months later).

Key results for the questions concerning addressing the needs of Māori students were as follows:

- Even though there have not been any statistically significant improvements in addressing the needs of Māori children, most ECEs reported that they were doing 'OK' or 'Very well' at meeting the needs of Māori students by acknowledging the place of tikanga Māori, use of Te Reo and recognition of the place of whānau in centre events. For example, at most 19% of ECEs responded 'Not very well' to any of these questions at either timepoint (range 3% to 19%).
- At follow-up ECEs continued to report doing less well at meeting the needs of Māori students in the areas of links with local iwi and undertaking joint programmes with local iwi. For example, 'Not very well' was the most common response at both timepoints for both questions (the proportion of respondents making this response ranging from 53% to 71%).
- Similar proportions of ECEs reported doing 'Not very well' and 'OK' at providing access to cultural support for Māori students at baseline (45% and 38%, respectively). At follow-up there was an overall improvement with the proportion reporting 'Not very well' having dropped to 24%.
- Professional development for staff fared better, with more than 75% of ECEs reporting doing 'Very well' or 'OK' at each timepoint.
- ECEs reported working better at follow-up in the areas of ensuring that the concept of Hauora is reflected in children's learning experiences (for example, 28% reporting 'Not very well' at baseline, compared to 7% at follow-up). This overall improvement was statistically significant ($p<0.01$).
- Over 80% of ECEs reported doing 'OK' or 'Very well' at both timepoints in the areas of promoting tikanga Māori and use of Te Reo (affirming their value for children from all cultural backgrounds) and providing opportunities for a Māori contribution to the centre programme.

**Primary Schools**
Thirty-nine primary schools completed the baseline questionnaire and 37 completed the follow-up questionnaire (approximately 12-24 months later).

Key results for the questions concerning addressing the needs of Māori students were as follows:

- The majority of primary schools reported doing at least 'OK' at both timepoints at acknowledging the place of tikanga Māori and the use of Te Reo (67% reporting 'OK' and 30% 'Very well' at baseline, compared to 54% 'OK' and 41% 'Very well' at follow-up).
- There was a significant improvement between baseline and follow-up in addressing the needs of Māori children by recognizing the place of whānau in school events, with 42% reporting doing 'Very well' at baseline and 70% at follow-up (p value for overall difference =0.03).
- Links with local iwi and undertaking joint programmes with local iwi appear to be more challenging, with 'Not very well' the most common response for the former at both timepoints (with 49% and 38% of schools reporting doing 'Not very well' at baseline and follow-up, respectively). There was a small improvement in undertaking joint programmes with local iwi, with the proportion reporting 'Not very well' dropping from 30% at baseline to 19% at follow-up.
- Although not statistically significant, some comparative results for addressing the needs of Māori students are encouraging. For example, 84% of schools reported doing 'Very well' at follow-up at ensuring that the teaching practices, language, and resource materials used in the school were non-racist and culturally inclusive (up from 70% at baseline). Similarly, 30% of primary schools reported doing 'Not very well' at professional development for staff at baseline, compared to 19% at follow-up.

**Secondary Schools**

Ten secondary schools completed the baseline questionnaire and seven completed the follow-up questionnaire (approximately 12-24 months later). No statistically significant differences were detected between baseline and follow-up, which is likely to be due in part to the small sample sizes.

Key results for the questions concerning addressing the needs of Māori students were as follows:

- Most schools reported they were doing 'OK' or 'Very well' at both timepoints at acknowledging the place of tikanga Māori (70% at baseline and 72% at follow-up), recognition of the place of whānau in school events (90% baseline, 86% follow-up), access to cultural support for Māori students (70% baseline, 100% follow-up), links with local iwi (100% baseline, 100% follow-up), and joint programmes with local iwi (60% baseline, 71% follow-up). While there were improvements over time in many of these areas, these changes are difficult to interpret due to the small sample sizes.
- Schools were evenly split between 'Not very well' and 'OK' at baseline for use of Te Reo (50% each). This had improved at follow-up, with 57% reporting 'OK' and 14% reporting 'Very well'.
- Most schools reported a lack of professional development for staff to address the needs of Māori students at baseline (70% reporting doing 'Not very well') although this had improved at follow-up (28% reporting 'Not very well'). Similarly, a large proportion (40%) at baseline reported doing 'Not very well' at undertaking joint programmes with local iwi, although this had improved to 29% at follow-up.

- At follow-up, all the schools reported doing 'Very well' at ensuring that the concept of Hauora was reflected in students' learning experiences, compared with 70% at baseline.

**Tertiary Centres**
Seven tertiary education centres completed the baseline questionnaire and six completed the follow-up questionnaire (approximately 12-24 months later). The small sample sizes mean that there is not enough power to detect statistical significance. Hence the analysis is not able to detect any significant differences between baseline and follow-up.

Key results for the questions concerning addressing the needs of Māori students were as follows:

- The majority of centres reported doing "OK' or 'Very well' at both timepoints at acknowledging the place of tikanga and the place of whānau in events (86% reporting either 'OK' or 'Very well' at baseline, 100% at follow-up for tikanga; 71% reporting either 'OK' or 'Very well' at baseline, 100% at follow-up for the place of whānau).
- The majority reported doing 'Not very well' at both timepoints at the use of Te Reo (71% at baseline, 67% at follow-up).
- There are some encouraging results about links with local iwi (57% of centres reporting doing 'Very well' at baseline, 67% at follow-up), but the majority of tertiary centres reported at both timepoints doing not very well at undertaking joint programmes with local iwi (80% of centres reporting 'Not very well' at baseline, 75% at follow-up).
- A high proportion of centres reported doing not very well at professional development for staff (43% at baseline, 83% at follow-up).

**Impact evaluation: Overall summary and conclusion**
As discussed in the impact evaluation section, when interpreting the impact evaluation results, it is important to take into account the limitation of small numbers, which applies to the secondary and tertiary settings in particular. Small sample size reduces the power to detect statistical significance.

Similarly, the impact evaluation questionnaires rely on self assessment and report. This potential limitation is especially important when considering changes over time, as the questionnaire interview may have been completed with different staff at each timepoint. In addition, even for the same interviewees, their opinions at follow-up might have been affected by their knowledge obtained in the process of their involvement in the WAVE project.

**ECEs**
There are sustained encouraging results for some indicators at the ECE level (such as, acknowledging the place of tikanga Māori, use of Te Reo, and recognition of the place of whānau in centre events). The areas of linking and working with local iwi show less positive results, with limited improvement over time. There are sustained positive results in the area of professional development for staff and a statistically significant improvement in ensuring that Hauora is reflected in learning experiences.

**Primary Schools**
Primary schools show sustained encouraging results for acknowledging the place of tikanga Māori and the use of Te Reo. There was a statistically significant improvement over time in recognising the place of whānau in school events. Forming links with local iwi and undertaking joint programmes with local iwi appear to be challenging for primary schools, with little or no improvement over time. There was some improvement over time in meeting staff professional development needs in this area.

**Secondary Schools**
Secondary schools show similar results to ECEs and primary schools, in that acknowledging the place of tikanga Māori and use of Te Reo are areas of strength. The use of Te Reo appears to have been more challenging at this setting level, but showed some improvement over time. Secondary schools show sustained encouraging results in the area of links with local iwi. Undertaking joint programmes with local iwi appears to have been more challenging, but does show some improvement over time. There was an improvement over time in the area of professional development. It is important to note the limitations of small numbers and to interpret these results with caution.

**Tertiary Centres**
As seen in the other settings, tertiary centres showed sustained encouraging results for acknowledging the place of tikanga Māori and the place of whānau in centre events. Similar to secondary schools, both the use of Te Reo and undertaking joint programmes with local iwi appear challenging at this setting level. Professional development for staff is a concern, especially at follow-up. Again, it is important to note the limitations of small numbers and to interpret these results with caution.

### 5.3.3 Waimate Cluster Evaluation

One component of the WAVE evaluation was to identify critical success factors and challenges for health promotion initiatives in vertical clusters within educational settings. The only cluster available for evaluation in the South Canterbury area was at Waimate, where the Ministry of Education had previously funded a transition programme between educational levels. Accordingly, in July 2008, a framework for the evaluation was outlined. This initiative is discussed in detail in section 6, below.

**Evaluation of the Waimate Vertical Cluster**
Two evaluations of the Waimate vertical cluster were carried out: the first in November 2008 and the second in November 2009. The evaluations used a qualitative methodology based on group and individual interviews of teaching staff from the schools and early childhood centres involved in the programme[8]. Participants were asked about their experience with the transition programme, both positive and otherwise, and specifically asked to comment on how the needs of Māori students were being addressed. The second round of interviews covered the same

[8] The programme undertaken by the schools in the Waimate Vertical Cluster was a 'health transition programme' that was evolved with the intention that consistent healthy lifestyle messages be conveyed at each level of the education sector, particularly in the priority areas of nutrition and physical activity. This is described further in section 6.

areas as the previous year as well as asking participants about any changes that had occurred in the interim.

**Responses relating to Māori students**
In the first evaluation (interviews November 2008, report June 2009) all educational levels consistently reported that Māori students were not treated any differently from other students and that needs were addressed for all students as they arose. Settings also reported that Māori parents did not want their children singled out. This was felt to be a concern by the evaluator, who reported that the schools were interpreting the needs of Māori students as requiring equal input and opportunity rather than considering any additional needs Māori students might need to ensure outcomes would equal those of non-Māori. Plans for additional involvement of the Māori Health promoter were made after this first evaluation.

The second evaluation (November 2009, report March 2010) reported that during the previous year the Māori Health promoter had become more involved in order to address the needs of Māori students and assist the understanding of teachers that these students may need additional resources to achieve equal outcomes to those of non-Māori. Responses to the interviews, however, in relation to meeting the needs of Māori students were similar to the 2008 interviews, with all schools believing that current approach of treating all students the same were relevant and appropriate for their population. A number of schools stated that they had no or very few Māori students. It was not known how many Māori students were being identified by the schools.

Recommendations from the second round of evaluation were that:

- teachers should be given information and support to enable them to understand the difference between inequities and inequality especially in relation to Māori students
- the Māori Health promoter should continue to be involved to assist teachers with ways in which inequities might be addressed, therefore increasing the likelihood of health equity for Māori children/students.

## *5.4 Working with Māori - Overall summary and conclusions*

### Impact of the contracted literature review

In response to the recommendations for the wider WAVE initiative from the contractor report[9], the following has occurred:

- Māori stakeholders have participated in all stages of the WAVE project, including the process of defining the outcomes for the WAVE project. There is an iwi representative on the WAVE Steering Group and Working Group and WAVE has a formal arrangement with the SCDHB regarding Kaumatua services.

[9] Tunks, M. (2008) Māori Health Outcomes Literature Review for the South Canterbury WAVE Project: Report to Community and Public Health.

- The material in the literature review has been used as a tool to help Māori stakeholders, WAVE programme coordinators and evaluators to agree on Māori Health outcomes for the project.
- The checklists and frameworks discussed in the review, along with Whānau Ora Health Impact Assessment, have been utilised in planning to ensure that the WAVE project should contribute to the reduction in health and educational disparities, not further creation. A Māori Health lens has been applied to all WAVE planning.
- Workforce development has been provided to settings' staff, for example the 'Raising Māori Potential' workshop provided for all settings. Seven WAVE staff are also currently being supported to complete the Mauri Ora course[10], with one staff member already finished. The C&PH Māori Health Promoter has supported staff to increase their understanding of tikanga through Powhiri training. A C&PH Māori Staff working group, Kakano o Rangiatea, has been established the purpose of which is to support the development of staff around cultural knowledge. A series of Cultural Review workshops is also currently underway in ECEs.[11]
- The recommendation that 'Focus Groups should be used to engage whānau and rangatahi to determine health priorities and ways of delivery' has not been implemented in all areas, however a focus group was held at Arowhenua marae around alcohol issues in the community.

In terms of the recommendations for the evaluation made in the literature review: there has been a commitment to Māori participation in both the WAVE programme and in the evaluation, and the review document has been used to inform the development of questions to assess the impact of the WAVE project on Māori Health. Qualitative methods such as focus groups and interviews with Māori stakeholders have not been undertaken as part of the evaluation and there has been no specific sampling of Māori participants, over and above the questionnaires completed by all settings. In addition the recommendation that Rangatahi be selected and trained to be part of the research team has not been followed.

## What works well

- Process evaluation results indicate a greater focus and sense of effectiveness over time in the area of addressing the needs of Māori students, for ECEs and primary schools in particular.
- Impact evaluation results are also encouraging overall, with either sustained performance or improvement in most areas across all settings.
- Overall, all setting levels show relative confidence in the areas of the use of Te Reo and acknowledging the place of tikanga Māori and the place of whānau in setting events. This may reflect a relative familiarity and level of comfort with addressing these aspects of Māori Health.

[10] Mauri Ora is a 12-month, home-based distance learning programme that aims to create a foundation for cultural awareness and identity and broaden knowledge of New Zealand history. This is part of the National Certificate in Māori, Level 2.

[11] The first workshop focused on setting up a cultural review process to look at a holistic approach to improving communication and relationships, the second workshop focused on Matariki and how to celebrate in the ECE settings, the third focused on Te Reo and tying into the curriculum and the fourth will be a review of how the year has gone.

- There are statistically significant improvements over time for the place of Hauora in the learning experience (at ECE level) and the place of whānau (at primary level).

## Possible challenges for the future

- A challenge for this aspect of the WAVE project is the low proportion of Māori in the South Canterbury District, and clustering of Māori in some parts of the District. These demographic characteristics mean that many education settings have very low numbers of Māori students.
- Process evaluation results suggest a focus on the part of at least some settings on process (treating all students the same) rather than outcome (ensuring all students are equally advantaged). This distinction is important, as focusing on process may have the inadvertent effect of perpetuating or possibly worsening any existing health inequalities between Māori and non-Māori students. This finding is also seen in the Waimate vertical cluster results.
- Linking with local iwi and undertaking joint programmes with local iwi appear to have been challenging across all setting levels, although the former measure shows better results overall. These findings may reflect the relative complexity of these tasks.
- Professional development for settings' staff has also proven to be a challenging area. It is hoped that this has been addressed to some extent by the events organised by WAVE ('Raising Māori Potential' workshop and primary school forum), although the timing of these events means that their impact cannot be discerned from the current data.

# 6 Evaluation of the vertical cluster within WAVE

A component of the WAVE evaluation was to identify critical success factors and challenges for health promotion initiatives in vertical clusters within educational settings.[12] The only vertical cluster available for evaluation in the South Canterbury area was at Waimate, where the Ministry of Education had previously funded a transition programme between educational levels. Accordingly, in July 2008, a framework for the evaluation was developed. Nutrition and physical activity were identified as the key areas to focus on during the formative evaluation.

When WAVE took over this support, the 'health transition programme' evolved with the intention that consistent healthy lifestyle messages be conveyed at each level of the education sector, particularly in the priority areas of nutrition and physical activity. To support the concept of the vertical cluster, a part-time coordinator based in the secondary school was employed under WAVE to assist with the transition of students from one educational setting to another.

In addition to the resources and activities provided by WAVE, the transition programme included transition days and other coordinated activities that were organised between early childhood and primary schools, and primary schools and the secondary school. Transition meetings were also held between the teachers from the various education levels. WAVE facilitators and health promoters, including the Māori Health promoter, conducted additional professional education for teachers around the health curriculum. Financial assistance was also provided subject to an approval process within the project.

Two evaluations of the Waimate vertical cluster were carried out: the first in November 2008 and the second in November 2009.

## *6.1 Evaluation methodology*

Both evaluations used a qualitative methodology based primarily on group interviews. Principals and teachers from the same level of education were grouped together, and the transition programme coordinator, (who was also a teacher at the secondary school) was a participant in the secondary group.

The interviews covered perceptions and understanding of WAVE as well as of the concept of the vertical cluster. Participants were also asked about their experience with the transition programme, both positive and otherwise, and how the needs of Māori students were being addressed. In addition, they were asked for feedback on the resources available.

The second evaluation included participants from all the schools that had participated initially, as well as one additional school. Questions covered the same areas as the previous year but participants were also asked about any changes that had occurred in

[12] The concept of the vertical cluster is that a group of early childhood, primary and secondary schools in the same area would work together to implement a coordinated initiative.

the interim. The transition programme coordinator was also asked to comment on specific questions relating to that role.

## 6.2 Results

### 6.2.1 Results from the first evaluation

In June 2009 the following findings were reported based on the synthesis of data gathered during the November 2008 interviews:

- Overall, WAVE was regarded very positively. Teachers reported behaviour changes such as increasing awareness of Sunsmart and increased levels of physical activity. There was evidence that teachers had been supported by the health promoters and WAVE facilitators to deliver the health curriculum more effectively. The WAVE facilitators and specialist health promoters were well liked, and were described with words such as dedicated, professional, patient, and supportive. Workshops had given the teachers new ideas and provided ways to reinforce healthy lifestyle messages.
- Teachers were conversant with the concept of the vertical cluster, though each level differed slightly in their perception of how it applied to them. Early childhood teachers tended to have more of a focus on getting messages out to the wider community, whereas the schools primarily regarded the vertical cluster as valuable in supporting children's adjustment and readiness to learn when they moved into different school environments.
- It appeared that the mental health and wellbeing component was emphasised with the healthy lifestyle messages being largely overlooked.
- Primary/secondary transition appeared to be working well for teachers and students, with student buddy/peer support and teacher liaison meetings, combined activities, and visiting between schools for teachers and students.
- Early childhood/primary transition was working less well. Possible reasons were i) that the transition programme coordinator was a secondary school teacher and ii) that early childhood centres fed into more than one primary school and it was more difficult to build relationships with several schools than just one.
- WAVE resources were not being used by most because they were not held in the Waimate area and there were logistical problems collecting and returning them.
- There was limited awareness of WAVE in the wider community in spite of it initially being promoted by the local newspaper.
- All levels consistently reported that Māori students were not treated any differently from other students and that needs were addressed for all students as they arose. They also reported that Māori parents did not want their children singled out.

***Suggestions and recommendations made by teachers***

The report also noted recommendations for the future that had been made in the interviews or were suggested by the evaluator.

- Teachers wished for more release funding so they could participate in the professional development opportunities offered, and also have time to do the significant paperwork. They also wished to have more negotiation with the WAVE facilitator around the timing and number of visits made to the schools. The early childhood teachers requested better management of meeting times and places to accommodate their needs. Some teachers felt that a review of how WAVE resources were distributed was needed. Further funding was made available from the nutrition fund.
- Schools believed that an overall strategic plan rather than multiple action plans would be an improvement. This was implemented for ECEs and nutrition.
- It was recommended that more emphasis should be placed on the transition from early childhood to primary school through increased visiting and networking. Greater focus from the WAVE ECE facilitator has consequently been placed on this transition and work in this area is progressing.
- Some settings felt WAVE and the vertical cluster initiative should be more widely promoted across all teachers (including those not currently involved) as well as to the wider community.

### 6.2.2 Results from the second evaluation

In March 2010 the following findings were reported from the data gathered in the November 2009 interviews:

- Early childhood centres continued to find informal contact with other early childhood centres and with primary schools worked better than the vertical cluster initiative. They noted that they organised their own, unstructured contact with primary schools, visiting pet days etc. There appeared to be a lack of urgency to develop contact within the transition programme and they believed that the schools had limited understanding of their sector's needs, particularly as the programme coordinator was located in a secondary setting. Other factors mentioned were that children from early childhood left at different times during the year, and moved to a range of different schools, instead of moving all at once to one school as they did from primary to secondary. Additionally, there were logistical difficulties finding suitable times to meet with the transition programme coordinator.
- A lack of communication between the early childhood and primary sector was apparent, with each of them voicing disappointment with the other. Early childhood teachers said that healthy nutrition messages that they worked hard to instil were not carried through into primary, whereas primary schools said the children were not arriving from early childhood centres with healthy food. Both early childhood and primary schools stated that a planned healthy eating pamphlet had not eventuated.
- The transition programme was working more successfully between primary and secondary schools, and was especially useful for small primary schools. Regular transition days for students were being held and there was good

liaison between the sectors about the needs of students moving from primary to secondary.

- There had been no transition meetings for some time.
- Mental health and wellbeing continued to be the most important aspects of the health transition programme and the addition of healthy eating to this process was considered a burden and difficult to implement, although efforts were made to do so.
- There was repeated evidence that schools were individually providing healthy eating and healthy lifestyle messages, and emphasising the importance of eating a good breakfast. However, the nutrition messages were not forming a planned part of the transition programme and opportunities for disseminating consistent messages and developing them further were being missed.
- Responses in relation to meeting the needs of Māori students were similar to the 2008 interviews, with all schools believing that their current approach of treating all students the same was appropriate for their population.
- All schools continued to report positive experiences with WAVE including noticing positive impact in the classroom. They appreciated the significant support they received from the WAVE facilitators, who were familiar with the needs of the different levels of the education system. There had been considerable improvements in accessing resources over the past year.
- WAVE had also become much more widely known in the community. There had been local and even national media coverage of WAVE activities and the student health teams from the secondary school had also helped to promote WAVE in the community.
- The amount of paperwork was again reported as a difficulty. Comments were made about the number of questionnaires and evaluations and the lack of feedback to the participants.

## 6.3 Discussion

The vertical cluster concept in Waimate as set out in the objectives (consistent, healthy, lifestyle messages), does not appear to have eventuated as planned. However, a transition programme is working effectively to promote the emotional wellbeing of students moving from primary to secondary level. The integration of healthy lifestyle messages has been less successful.

An informal transition process occurs for some children in early childhood centres, but there have been difficulties (described above) in developing a structured programme such as operates at the higher levels.

Most education settings are delivering healthy eating messages, but there was little evidence that these are consistent or coordinated between the levels of education.

Although the transition programme has the potential to deliver a positive impact on the health and wellbeing of the local communities, it is likely that the WAVE initiative will achieve more towards that goal. WAVE was reported as proving beneficial to all levels of education and in all settings in supporting them to convey healthy lifestyle messages.

WAVE and the transition programme appear to have had positive impacts on those education settings. Although it was expected that WAVE and the transition programme would have overlap and would be of mutual benefit, for various reasons the transition programme and WAVE did not become closely aligned across all education levels, and so the "vertical cluster" did not become a strong feature of WAVE in Waimate. Under these circumstances it is difficult to draw conclusions about critical success factors and challenges for health promotion initiatives in vertical clusters. The "vertical cluster" is conceptually appealing, but requires significant effort to implement.

# 7 Discussion and Conclusion

It is often challenging for health promotion programmes to measure change occurring as a result of their programmes. Advice from the International Union for Health Promotion and Education (2009)[13] is that three to four years need to be allowed to achieve specific goals. It is a strength of the WAVE evaluation that in part due to a detailed evaluation plan from the outset, some statistically significant changes have been documented.

The WAVE evaluation plan was comprehensively designed at the formative stage of WAVE. There is valuable baseline information that allows progress of WAVE to be documented and enables an understanding of what has worked in WAVE and what challenges have been encountered in the project. Having detailed baseline impact data allows statistically significant changes to be measured.

There are a number of challenges in designing and implementing this type of evaluation. Process and impact evaluations were happening concurrently. There was frustration from some settings over the perceived large amount of paperwork. The WAVE evaluation team was aware of the impact on settings of the evaluation and designed ways to encourage and support data collection.

The wide range of health promotion activities that have occurred in settings over the past 5 years under WAVE, in particular the increase in Māori Health activities and more recently mental health promotion, is noteworthy. The enthusiasm of student-led health promotion initiatives has been documented, as has the support they are receiving from their local communities.

Overall, education settings in South Canterbury value WAVE and see WAVE as an effective partnership of health and education. WAVE is seen as a "one stop shop" for health, coordinating all health related issues for schools. The provision of professional development by WAVE has been shown to be of particular value to settings.

Examples of statistically significant improvements include: ECEs showed improvements between baseline and follow-up in the area of professional development for physical activity and Sunsmart and in working with external providers when promoting physical activity. Primary schools showed statistically significant improvements between baseline and follow-up in the area of nutrition (for example, students being able to identify healthy food choices) and in the area of professional development for Sunsmart. There were also statistically significant improvements over time for the place of Hauora in the learning experience (at ECE level) and the place of whānau (at primary level).

[13] International Union for Health Promotion and Education. 2009. Achieving health promoting schools: guidelines for promoting health in schools. Version 2. St Denis Cedex, IUHPE. Available from: http://www.iuhpe.org/uploaded/Publications/Books_Reports/HPS_GuidelinesII_2009_English.pdf Accessed 8.6.11.

In addition to the statistically significant improvements some encouraging trends have been identified.

The extent to which ECEs, primary and secondary schools believe the WAVE process has assisted them in the promotion of health and wellbeing has increased steadily over the past five years. There is also an improvement in how well ECEs and primary schools think their work with WAVE has been addressing the health and wellbeing of Māori students.

Facilitators were considered by settings as an essential element of WAVE. The facilitators consulted with education settings about their priorities, provided relevant information and resources, and worked alongside settings. The WAVE Resource Centre was considered a valuable asset. Settings valued having access both to people with expert or specialist knowledge and the financial support of the WAVE and Nutrition funds, which allowed health promoting environments to be established for the children and students. Policies and guidelines to protect and promote the health and wellbeing of students were developed in education settings. Teachers across the sector had become role models for health messages.

Settings promoted WAVE through a wide range of internal and external media. Families of students were indirectly influenced by health messages taken home by students, as well as through their conversations about WAVE. Families of children and students were more directly influenced when they responded to requests to become involved in WAVE projects or activities. Settings were keen to know about what others were doing. The WAVE initiative has been inclusive of all levels of education.

The balance between the need for thorough evaluation and the busy education settings will continue to evolve. For example, concerns have been raised by settings about the length and number of evaluation questionnaires, and associated time cost. The evaluation team has managed this tension by including education input into questionnaire design and by providing funding and one-on-one assistance to complete questionnaires. In future, the tertiary questionnaires could be developed separately from the ECE and school questionnaires as currently they are not capturing the progress that is being made in these settings. The process evaluation results suggest that it has been challenging to always ensure a common understanding of the overall philosophy of the WAVE project.

The impact evaluation questionnaires were comprehensive and took 30 minutes to two hours to complete. Although completion rates were high, many settings felt that the evaluation process was too time consuming. While the questionnaire was adapted for each setting type, it was minimally adapted for the tertiary setting and so may have failed to capture the full picture and extent of any change at this setting level. In future evaluations it will also be important to take in to account the small total numbers of high schools and tertiary centres in South Canterbury when determining their evaluation methodology.

A challenge for this aspect of the WAVE project is the low proportion of Māori in the South Canterbury District, and clustering of Māori in some parts of the District.

These demographic characteristics mean that many education settings have very low numbers of Māori students.

The vertical cluster concept in Waimate as set out in the objectives (consistent, healthy, lifestyle messages), did not eventuate as planned. However, a transition programme is working effectively to promote the emotional wellbeing of students moving from primary to secondary level. The integration of healthy lifestyle messages has been less successful. Although the transition programme has the potential to deliver a positive impact on the health and wellbeing of the local communities, it is likely that the WAVE initiative will achieve more towards that goal. WAVE was reported as proving beneficial to all levels of education and in all settings in supporting them to convey healthy lifestyle messages. Although it was expected that WAVE and the transition programme would have overlap and would be of mutual benefit, for various reasons the transition programme and WAVE did not become closely aligned across all education levels, and so the "vertical cluster" did not become a strong feature of WAVE in Waimate. The "vertical cluster" is conceptually appealing, but requires significant effort to implement.

# 8 Recommendations

**Overall recommendations**

- That the WAVE team continues to support health promotion in the education settings.
- That WAVE continues to be funded.
- That the WAVE team continues to encourage and support the development of student-led health teams.
- That, in addition to the existing literature review on child and youth Health Promotion completed as part of the formative evaluation for WAVE, a current literature review takes place on best practice to support child and youth Health Promotion specifically in rural education settings.
- That a simple one page outline of what WAVE is and the philosophy of WAVE be developed and distributed.
- That future evaluations have one simple questionnaire with a small number of key quantitative and qualitative questions.
- That a specific separate questionnaire be developed for the tertiary setting, to better capture information from that setting level.

**Addressing the needs of Māori students**

- That WAVE continues to work with settings on addressing the needs of Māori students.
- That this work continues to be carried out with an equity focus.[14]
- That challenges around linking with and undertaking joint programmes with iwi be further explored and addressed.
- That particular emphasis is put into addressing the health and wellbeing of Māori students in high schools.
- That WAVE continues to monitor and address professional development needs in the area of addressing the needs of Māori students.

**Other health issue areas**

- That WAVE consider new ways to support high schools to develop a written Sunsmart policy.
- That WAVE carry out a literature search to determine best practice to encourage tertiary centres to become Smokefree and to follow up on any recommendations.

**Waimate vertical cluster**

- That the Waimate community continue to access the resources and information provided by WAVE, and the WAVE facilitators continue their input into early childhood and schools in relation to nutrition and physical activity.

[14] The Health Equity Assessment Tool (known as the HEAT Tool), for example, is a set of 12 questions designed to assist consideration of the impact on equity of an intervention. The HEAT Tool can be found at http://www.moh.govt.nz/moh.nsf/pagesmh/3968.

- That the health transition programme focus on mental health and wellbeing rather than attempt to integrate healthy eating and physical activity as an additional objective.
- That the WAVE programme and the school transition programme be considered separate entities including their funding and that WAVE resources continue to be available to both programmes.
- That early childhood have a skilled facilitator familiar with this level of child development so that children transferring from early childhood to primary level have the benefit of a planned and coordinated transition programme such as is available for children transferring from primary to secondary level.
- That teachers are given information and support to address the needs of Māori students and that the increased involvement of the Māori Health promoter in this assistance should continue.
- That any future attempts at implementing and evaluating vertical clusters include careful exploration of opportunities and barriers for vertical integration in their planning phase.

# Appendix One: WAVE Overview

In April 2006 the SCDHB and Community and Public Health initiated a collaborative project to work in the education setting, addressing child and adolescent health. WAVE (Wellbeing and Vitality in Education) was the outcome and is a framework for developing and supporting healthier environments for children and young people in South Canterbury. The aim of WAVE is to have long-term gains in health and education outcomes.

WAVE was launched in 2007 and provides a collaborative and comprehensive health promotion relationship with all educational settings from Early Childhood, Primary and Secondary through to Alternative and Tertiary settings. Sport South Canterbury, local Iwi, Cancer Society, U.C. Education Plus and the Ministry of Education are also key partners in WAVE.

As childhood is a time when many lifestyle patterns are established and with over 96% of school-aged children attending schools, education settings provide the ideal location to promote health and wellbeing. Working within education settings also provides extensive links into the wider community and improves the ability to capture people from a diverse range of backgrounds.

WAVE's aim is to support settings to develop sustainable approaches to promoting health and well-being and to support children, young people and their families in developing healthy behaviours. We work in collaboration with key partners and community groups to meet the health needs of the setting's wider community and work to reduce health inequalities.

The **WAVE Team** is led by the WAVE Programme Leader and is made up of health promoters (including Sports South Canterbury and Cancer Society), who facilitate support across the target areas of Māori health, physical activity, nutrition, Smokefree, Sunsmart, alcohol and other drugs, sexual health, mental wellbeing and oral health.

***Who oversees WAVE***

A Steering Group and Working Group were formed in July 2006.

The **Steering Group** is the governance body for the WAVE programme. It is responsible for the direction, oversight and monitoring of the programme with representatives from local Iwi, SCDHB, CPH, Ministry of Education and Sport South Canterbury.

The **Working Group** is made up of representatives from SCDHB, CPH, Sports South Canterbury, Cancer Society, National Heart Foundation, Secondary and Primary principals' associations, Playcentre and Kindergarten associations, Community Dental Service, Timaru District Council, Environment Canterbury and Māori advisors working in education. The role of this group is to share information and review progress.