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Massey launches new College of Health

Containing cancer

At the heart of the alcohol debate

**Longitudinal studies keep tabs on the lifestyles of
older people and Māori**



Defining the College of Health



PROFESSOR PAUL MCDONALD
Pro Vice-Chancellor
College of Health

At Massey's new College of Health we're embarking on an innovative approach for advancing health, wellness and wellbeing.

We've assembled a formidable range of world-leading researchers and teachers. They include specialists in public health, food science and technology, nutrition and physiology, sport and exercise, rehabilitation, nursing, Māori and Pasifika health, occupational health and safety, social work and social policy, and medical laboratory science. This is just the beginning.

Working together, our talented, dedicated staff will drive a stronger health focus for Massey students and research, one where we understand the complex interactions between the biological, social, economic, cultural and environmental factors that underpin health and wellbeing.

But it's not enough to understand these complexities; we need to take action. Like other 21st century nations, New Zealand is facing major and complex health challenges, ranging from growing inequalities to climate change, poor housing, global connectivity and the needs of an ageing population.

Each of these challenges has huge, emerging implications for health. The need for innovation, a skilled workforce and leadership to tackle them has never been greater.

Within 25 years the proportion of people in this country aged 65 and over will have increased by half. The number of those 80 and over will have doubled. This not only puts pressure on healthcare; it demands a change in the way we design our houses and products, our cities and our workforce.

Other nations face the same dilemma. China, for example, has 160 million (and

growing) people age 60 or older and is desperate for help and innovation. So why not establish Massey as the go-to place for research and education around health and ageing? Why not work with businesses to develop more healthy foods and products for use in domestic and international markets? Why not work with public and private sector partners to create age-friendly cities and residences?

The college will keep a sharp focus on innovative, leading-edge research and human resource development to prevent disease and promote wellbeing.

Nearly a century ago, Sir Truby King, the great New Zealand health reformer and founder of Plunket, famously summed up this concept when speaking of preventing infant deaths. He said: "It is better to put a fence at the top of a cliff than to station an ambulance at the bottom".

As an institution, we need to be unapologetically unique, bold, diversified and adaptive.

Let me share with you my vision for the new College of Health.

I envision a college with coherent values, a clear mission, goals, objectives and a standard of excellence. I see a workforce that respectfully and collegially holds each other accountable to meet the standards we jointly set.

I see a college with a national and international reputation as a consistent source of innovation and leadership. I see a college whose efforts, ideas and graduates transform society for the better.

I see opportunities to build on Massey's current strengths and develop new research institutes and training programmes in areas such as housing and health, food safety and security, water safety and security, rural and indigenous health, ageing and health, to name a few.

Improving the health of Māori and Pasifika must be a priority.

A new school of indigenous health could become a world leader by developing solutions to help indigenous people within New Zealand and around the world who experience significant health inequities.

I see a college that places a greater premium on doctoral-level training, one that sets ambitious goals for student success and is dedicated to problem-based, experiential learning.

I expect the college to be a catalyst for cooperation and partnerships across the public, private, academic and non-profit sectors.

Now we need, collectively, to take the first steps towards making this vision a reality.

Our first step will be to develop a strategic and operational plan, which will be bold, make the most of our strengths, look forward, and identify big problems and how we might contribute to solving them.

My expectations are high, but I make no apology. The opportunity to achieve something special is there, if we want it and if we earn it.

Given the demonstrated excellence, leadership and dedication of the staff and students within the College of Health and right across Massey University, and our desire to work with thoughtful partners who share our values and vision, I know we will.

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For many people the College of Health is the legacy that the now retired Sir Mason Durie has left Massey University.

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From the Vice-Chancellor



HON STEVE MAHAREY
Vice-Chancellor
Massey University

A good university is a living organism, constantly in the business of remaking itself to meet the challenges of its time.

Since being founded by Act of Parliament in 1964, Massey has scarcely paused to take breath. We have seen new campuses, new colleges and a constant stream of fresh initiatives. Now Massey takes another bold leap forward with the formation of a College of Health.

The new college represents a major stage in our evolution. True, Massey has had a nursing studies programme since the early 1970s, and we were the first university in Australasia to award a PhD in nursing back in 1989. But only in comparatively recent times have we assembled the firepower to contemplate forming a new college of this uniqueness and ambition.

A vital step was the establishment of the Wellington-based Sleep/Wake Research Centre in 1998, followed in 2000 by the formation of the Centre for Public Health Research, also in Wellington. In 2002 came the creation of the Auckland-based SHORE Centre and the Whariki Research Group.

In a brief period, Massey gained and consolidated expertise in a variety of health-related realms. Think of the relationship between sleep and occupational risk; of the understanding of such things as the survival rates for cervical cancer and the mechanisms governing the development of asthma. Or take the vexed relationship between Kiwis and alcohol and drugs; of how urban design promotes or dissuades us from exercising; and of how ethnic and social inequality influences health and longevity.

Alongside the key area of nursing, these centres and groups will form core components of the new college. But so too will a less expected entity, the Institute of Food, Nutrition and Human Health. Massey's extraordinary expertise in food, you might think, has far more to do with adding value to New Zealand's key export sector or with laboratory science and engineering than with health.

Yet, looking forward, the grouping makes perfect sense. Diet has always been known to be key to health. You are what you eat. Up until recent times, the drive was to ensure that the food we ate was free of diseases, pesticide residues and adulterants. It was about preventing illness. Now a transformational shift is taking place, from preventing illness to promoting wellness.

This publication celebrates the College of Health in all its entities.

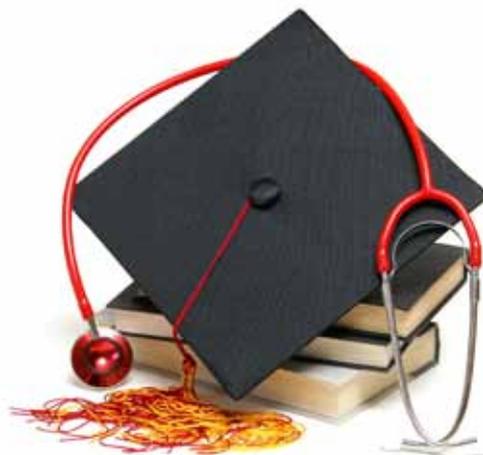
All programmes at the new college will keep their focus on the prevention of illness and disease rather than cure. College staff will be working together to create a world where most of the illnesses we have today no longer exist. Where illnesses like asthma, obesity and diabetes are as foreign to us as polio is today.

Bold and innovative leadership is the key to getting a college like this off to a strong start. We are therefore lucky to have an internationally acclaimed public health specialist as inaugural Pro Vice-Chancellor. Canadian Professor Paul McDonald brings solid research expertise in population health planning and intervention, particularly in tobacco control.

Bold and innovative leadership is the key to getting a college like this off to a strong start

Nurses and epidemiologists. Food scientists and sleep experts. Urban designers and exercise physiologists. The new college will offer a multidisciplinary approach to a multidisciplinary set of challenges. It will reach out to the wider health community – to Centres of Research Excellence such as the Riddet Centre sited on Massey's Manawatū campus; to medical schools and other universities; to district health boards; to local government; and to international organisations such as the World Health Organization, the World Bank and UNESCO.

For anyone who has looked at the numbers – the rising costs of medical care, the incidence of obesity and obesity-related conditions such as type 2 diabetes, and the projections for the greying profile of our population – the need for this new approach will be obvious. I am confident that the new College of Health will more than rise to the challenge.





Putting Others First

Hand in hand with the College of Health launch is the establishment of the School of Nursing, bringing Massey into alignment with similar institutions here and overseas, writes Paul Mulrooney.

Head of School, Associate Professor Annette Huntington, says this latest development continues a proud tradition of nursing education at Massey stretching back to 1973. In 1999, programmes provided by Wellington Polytechnic were merged with those of the university.

“We have continuously been in nursing education for 40 years. I believe we need to celebrate that history and the many people who have helped to write it,” she says.

“We have built a formidable reputation over decades, with our staff active out in the profession. The quality of our graduates is widely recognised, as is our rigorous selection process for undergraduates.”

Last year the undergraduate programme expanded, with the Bachelor of Nursing offered for the first time at the Albany campus. The Bachelor programme, the Master of Nursing and the PhD in nursing are now available at all three campuses.

The undergraduate programme includes a large clinical component prescribed by the Nursing Council of New Zealand. A long-term goal (with council agreement) is to offer programmes internationally.

At postgraduate level Massey offers a Clinical Master in Nursing, as preparation for nurse practitioner. Dr Huntington describes this as the most advanced clinical role for nurses in New Zealand.

“Nurse practitioners have prescribing rights and can provide advanced care in a wide range of clinical settings, from primary healthcare services to acute hospital services,” she says.

To help with tuition, especially for undergraduates, Massey employs clinical teachers who are registered nurses from a range of clinical settings.

“It means we have staff who really understand the practice environment. Our faculty staff can focus on their research while remaining current in the profession. This allows them to contribute to other aspects of the programme and to the wider profession.”

Research undertaken by Masters and PhD candidates and staff embraces a wide range of health-related topics. Current projects include investigations into mental health within the Tongan community and studies of aspects of the nursing workforce and primary health care practice. A number of research projects are undertaken in conjunction with international partners.

Enrolment levels for all nursing programmes remain healthy, Huntington notes, a trend that appears to be maintained regardless of the economic environment.

“Nursing tends to do well in tight economic situations. People see it as a profession where you will get employment,” she says.



ABOVE: Head of School, Associate Professor Annette Huntington

"It sometimes takes a little longer for students to get work in New Zealand. In our experience by the middle of the year [2011, the most recent intake data available] they all had jobs. A small number had chosen to go to Australia but some also came back. But we have to accept that because of the quality of our graduates we really are in an international market."

Many of the teaching staff at the School of Nursing have distinguished international reputations.

Huntington, for example, is New Zealand's representative on the executive committee of the Council of Deans of Nursing and Midwifery, Australia and New Zealand – providing strong links with the education scene of Australia.

Professor Jenny Carryer is the Executive Director of the College of Nurses Aotearoa New Zealand.

Senior lecturer Dr Jean Gilmour is a member of the Health Research Council of New Zealand's College of Experts. Recently returned from Canada, she served as a member of an international committee distributing funds for a programme grant round by the Canadian Institute of Health.

Huntington says all staff share a commitment to, and in-depth understanding of, the nursing discipline.

"If you're interested in people and their health, nursing is an incredible profession. You are in the very privileged position of being with

people at some of the most exciting and some of the most traumatic and challenging times in their lives," she says.

"There's enormous variety and you have an incredible range of clinical, management and education areas you can move into. For a beginner practitioner it's reasonably well paid, you can work all over the world and you can have a rich and rewarding professional life.

"However, it is a challenging and demanding profession, so you have to be resilient and strong in yourself and be prepared to put others first."



A Patient Approach

When registered nurse Vanessa Climo (overleaf) graduates with her Master of Nursing this coming May, it will mark the high point of nearly eight years of continual study.

Climo's individual commitment to gaining her qualification, with its strong emphasis on encouraging good health and wellness, is a good example of what the new College of Health is aspiring to.

After completing her undergraduate Bachelor of Nursing degree and a postgraduate nursing paper at Wintec, Hamilton, the 25-year-old enjoyed a year off from study before enrolling for further postgraduate study at Massey. She credits this option to the flexibility of its Masters programme.

"It has a supportive learning environment, with quality tutors, a good online forum for contact with others students, and tutors too, which is really important when you're doing a block course," she says.

Throughout her postgraduate studies, Climo kept working as a registered nurse at Tawa Medical Centre.

"One of the many benefits of the programme was the ability to apply newly attained course knowledge to my daily clinical practice," she says.

Working alongside GPs at the clinic, her duties included immunising children, taking cervical smears, health screening for women and cardiovascular risk assessments.

"The main aims in primary healthcare are to provide services to individuals, families and communities that encourage good health and wellness," she says.

Her own aspirations include eventually qualifying as a nurse practitioner, enabling her to take her calling a step further within the public health sector.



A Global Perspective on Preventive Health

Pro Vice-Chancellor Professor Paul McDonald expects Massey's new College of Health will be a leader. He talks to Kelly Burns.

What started life as a creative, yet crazy, idea by Paul McDonald and a group of Canadian-based researchers to warn smokers of the health risks has become standard-issue policy in more than 60 countries, including New Zealand.

It was the late 1980s. The notion of using graphic warning labels on cigarette packs to illustrate the damaging effects of smoking was under serious discussion for the first time.

"I was fascinated by tobacco control," recalls Professor McDonald, an internationally acclaimed public health specialist who, from March, becomes the inaugural Pro Vice-Chancellor of Massey's new College of Health.

"I wondered if putting graphic pictures on tobacco packages would influence smokers and help educate and inform them of the consequences of tobacco use.

Convinced it was worth a shot, the Canadians set out to persuade health officials. McDonald co-authored a report reviewing the empirical and theoretical foundations for using graphic images. He then served as a consultant to Health Canada, the equivalent of New Zealand's Ministry of Health, as it selected and released the first generation of labels in 1999.

Canada became the first country in the world to adopt graphic images as part of tobacco package warnings. Now 63 countries, representing 40 percent of the world's population, have adopted pictorial tobacco warning requirements, a recent Canadian Cancer Society report found.

It's an example that sums up the McDonald philosophy on health research – that bold and creative ideas can lead to improved health outcomes, and have global impacts.

Fresh from running the School of Public Health and Health Systems at the University of Waterloo in Ontario, Canada, the 55-year-old is now recognised globally for his research expertise in population health planning and intervention.

In 15 years at Waterloo, he's served as a director of a large research group, chair of the Department of Health Studies, and founding director of a new School of Public Health and Health Systems.

"Public health has responsibility for whole populations and thinks about how human, biological and ecological systems produce or inhibit health," McDonald says.

"Its principal means of intervention is by changing contexts and environments, using instruments such as public policy in broad areas related to social services, housing, education, transportation, the environment and others, as well as more traditional healthcare, to touch and change large numbers of lives."

He impresses upon students that, "it's unfortunate most people don't really know what public health is, what healthy public policy is, and how important they are".

"And as a consequence we all too often over-estimate the power of pills, and under-appreciate some of the things that occur in our daily lives through our social context, culture, environment and education."

Under McDonald's leadership the school has added four new degree programmes in the past four years and submitted proposals to add a new doctoral programme. Its graduate programmes were recently rated the best in Canada.

But when the Massey role arose, he was immediately drawn to it.

"Being at the right stage of your career and having that happen is a rare and precious thing," says McDonald, who with wife Linda is looking forward to calling New Zealand home. He will be based at the Albany campus.

"Our new college – of 300 full-time equivalent staff and 2000 students will build New Zealand's capacity and international legacy as a global leader and incubator for creative-health-enhancing people and solutions."

He plans to start by "listening and learning"; then build relationships with strategic partners, learn what the big problems are and establish how Massey might contribute to solutions through a strategic plan.

"I believe my role as Pro Vice-Chancellor is to inspire, set parameters, establish expectations and create an environment that produces a collective vision of common set values and a strategic plan, and has resources to take us far beyond what's been done so far," he says.

High Quality Teaching and Research Programmes

A multi-disciplinary range of programmes is at the heart of the College of Health.

Food, Science and Technology

Food technology is all about using science to add value to commodity foods, such as dairy products, meat, fruit, vegetables and grains. A four-year Bachelor of Food Technology degree with honours can be studied and the division also offers teaching into undergraduate degree programmes, including Diploma in Dairy Technology, Diploma in Meat Technology and Bachelor of Science (Human Nutrition). Postgraduate training is offered via course work and/or research towards a Graduate Certificate in Science and Technology (Food Tech), Postgraduate Diploma Technology (Food) as well as Masters and PhD level.

Health Disability and Rehabilitation

Offers a broad knowledge of the purpose, practice and philosophy of rehabilitation. Bachelors degrees in Health Science, including a major in rehabilitation, can be studied for with the latter providing specific knowledge of the needs of people with physical, sensory, aged health related, psychiatric, intellectual and social disabilities. Doctoral programmes are also available.

Health and Life Sciences

Research in health and life science focuses on detection, examination and determination of the risk environmental factors such as water quality; noise control and hazardous substances play on human health also. Papers can be taken as part of undergraduate Bachelor of Sciences and Bachelor of Health Sciences degrees. A Graduate Diploma in Environmental Health and advanced postgraduate study available.

Human Nutrition

Study of biological, social and environmental aspects of nutrition equips graduates for careers in public health areas, private practice, industry, research and international organisations. Postgraduate study offers students the chance to explore in depth the importance of nutrition for optimal health and disease prevention.

Human Physiology

At undergraduate level the physiology major within the Bachelor of Science degree shows how the cells, tissues and organs of living organisms function and interact to ensure the survival and wellbeing as a whole, with early papers giving students an overall understanding of body function. Postgraduate study offers further research opportunities.

Medical Laboratory Science

A degree in Bachelor of Medical Laboratory Science enables graduates to provide the test results essential for use by clinical medical staff in the detection, monitoring or prevention of disease. It gives a thorough grounding in biological sciences. Its fourth and final year of study offers students the opportunity to demonstrate their skills to potential employers and contributes to the very high employment rate of graduates. For those seeking further advancement Massey offers a Master of Science in Medical Laboratory Science.

Nursing

Nursing programmes are taught across all three campuses and prepare students to become registered nurses. At undergraduate level the School offers the Bachelor of Nursing, while the expanding postgraduate programme includes a Master of Arts (Nursing) and a clinically focused Master of Nursing. Masters students who achieve first class honours or second class (division 1) honours are eligible to apply for entry into the PhD programme.

Occupational Health and Safety

The Graduate Diploma in Occupational Safety and Health is designed to provide advanced education in the fields of safety management, occupational health, environmental control, loss control and occupational hygiene. Further expertise can be gained through study of the Master of Management (Occupational Safety and Health) and PhDs in Ergonomics, Management and Human Resource Management.

Public Health

The School of Public Health brings together the combined efforts of many public health and Māori health research centres. It leads work in areas such as sleep carried out at the Sleep/Wake Research Centre, while the Centre for Public Health Research, which offers Masters in Public Health, undertakes research on numerous subjects related to environmental and occupational health. The SHORE and Whāriki Research Centre is a collaborating centre with the World Health Organisation, while the Research Centre for Māori Health and Development runs a successful PhD programme with more than 20 graduates.

Social Work and Social Policy

Offering Papers at undergraduate and postgraduate level offer skills based on a thorough knowledge of human development, detailed study of social institutions and policies. The Bachelor of Social Work concentrates on the professional skills required for the job of social work. The Master of Applied Social Work, Master of Social Work and Postgraduate Diploma in Arts (Social Work) provide opportunities for practitioners with a professional qualification to advance their knowledge and skills in social and community work practice.

Sport and Exercise

Specialises in sports management and coaching, physical education, sociology of sport and high performance sport. Its undergraduate study options include a Bachelor of Sport and Exercise, Bachelor of Health Science (Sport and Exercise) and Bachelor of Science (Exercise and Sport Science). At postgraduate level diplomas in Health Science, Science and Sport Management are offered, with Masters available in Health Science and Science (Exercise and Sport Science).

Visit our website for a full list of qualifications go to

http://www.massey.ac.nz/massey/learning/colleges/college-of-health/study-at-massey/study-at-massey_home.cfm



Food Tech Students Serve up a Treat

ABOVE: Vivek Gargi, Tracey Jaques, Elyse Purcell and Thomas Halliday with their Pro-Bites snack.

Their academic year may have ended but the taste lingers on for food technology students who have capped off a year of planning, market research and development by presenting their innovative food products to staff for sampling.

The student groups were tasked with developing a food product at the beginning of the 2012 and worked together to produce something suitable for a certain market or consumer.

A lot of the products are technologically challenging

Senior lecturer in dairy technology Rod Bennett says the projects cover the full range of product development over the course of an academic year.

“In the first semester they go through finding out what consumers want and the characteristics of a particular product,” he says. “At the end of that semester they have a concept of what they want to take

forward and they will have done some market research on that.”

In the second semester, they need to make the product to a commercial standard. “They actually have to convert those ideas into a real product that can be made on both a small production scale and could also be scaled up to a commercial operation.

“A lot of the products are technologically challenging – the product briefs they are given are set up deliberately to provide some challenges in terms of preserving products, different moisture contents, and storage. But I think they’ve all done exceptionally well.”

Simon Cushing’s group was tasked with making a high-quality beef snack for the Middle Eastern market that would last six months at room temperature. “We had to find a way to keep the meat from going off, so we went for a product somewhere in between salami and jerky, which we thought was appropriate for that market.

Vivek Gargi and his team developed a healthy, single-serve dairy snack. “We had three ideas to start with and we took them to a focus group and they helped us narrow it down to the product that we called Pro-Bites. There were a number of challenges, especially getting the chocolate coating

right. We also developed the packaging from scratch so that was fairly difficult too.”

Elena Norris helped produce a gluten-free spring roll. The frozen product can be baked or deep fried, she says. “We went through a number of concepts, including experimenting with a number of batters and coatings before settling on the rice wrap. It’s great to now see the end product.”

This approach to food manufacture epitomises the broader goals of the multi-disciplinary Institute of Food Nutrition and Human Health.

Led by Professor Richard Archer, it involves researchers in food innovation with world-leading physiologists, nutritionists, dieticians and other researchers. Staff from the Institute, including Chair in Human Nutrition Professor Bernhard Breier and Vitamin D Research Centre co-directors Associate Professor Jane Coad at Manawatu and Dr Pamela von Hurst at Albany, work in partnership with food manufacturers, and other health-industry based organisations providing first class science research and practical hands on study opportunities.



Measuring Māori Development

Massey has long had a focus on Māori health led by Professor Chris Cunningham (Ngāti Toa, Ngāti Raukawa) who is director of the Research Centre for Māori Health and Development.

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Since 2000, the centre has run a successful doctoral training programme with more than 20 PhD graduates. The centre has three main research programmes - Te Pūmanawa Hauora (Māori health), the Centre for Whānau Research and Best Outcomes for Māori: Te Hoe Nuku Roa.

The director of Te Mata o te Tau, Dr Te Kani Kingi, is part of the research team working on the longitudinal study Te Hoe Nuku Roa.

Started in 1994, and using existing data with additional analysis, it is the only study profiling Māori and their living environments through a sample of geographic, economic, cultural and social indicators. It involves an analysis of 700 Māori households and interviews with more than 1600 individuals.

The work is part of a project that has recently received \$1.1 million over two years from Ngā Pae o te Māramatanga, an external Centre of Research Excellence, which conducts research of relevance to

Māori communities.

“The study incorporates a range of demographic indices but is unique in that it has a focus on Māori and includes measures of cultural identity, cultural knowledge and cultural affiliation that are specific to Māori,” Kingi says.

Kingi, who has a background in mental health, psychometrics and Treaty of Waitangi work, says the Massey-led project with another study, Occupational Exposures and Occupational Health in Māori, will provide a comprehensive impression of contemporary Māori whānau.

Information is collected under four key headings of human relationships, Māori identity, socio-economic circumstances and change over time, with the latest results due for reporting in the middle of next year.

In addition to these indicators the project addresses the concept of flourishing, which looks at the positive side of Māori family



Professor Chris Cunningham (Ngāti Toa, Ngāti Raukawa)

relationships and society. While it emphasises the positive it does not turn a blind eye to social issues affecting Māori.

“As described, this approach to flourishing does not ignore the various and often significant challenges faced by whānau,” Kingi says. “It looks at what is going right as opposed to what is going wrong.”

Such a research approach continues a tradition of accomplishment at the Research Centre for Māori Health and Development, which in the past six years has received more than \$10 million in external funding for Māori health and social research, including work on diabetes, cancer, school-based interventions in physical activity and nutrition, mental health, respiratory health and smoking cessation.

One of its most recent grant allocations was \$787,000, awarded to Cunningham to study injury hazards in Māori homes.

Mental Health Initiative

Mental health workers and patients look set to benefit from a joint venture between Health Workforce New Zealand and Massey University.

The joint venture, signed just before Christmas for three years from 2013 to 2015, aims to provide bursaries and mentoring support for students looking to start or complete university qualifications with a focus on Māori mental health.

Students who are awarded bursaries under the Te Rau Puawai programme will be able to enter or continue in Massey programmes, which include undergraduate and postgraduate studies in the following areas: psychology, nursing, rehabilitation, social work, social policy, Māori health, Māori studies and health Science.

Te Rau Puawai board chair, Dr Selwyn Katene, says that in return, there is an expectation that, once they have graduated, students will continue in or contribute to Māori mental health by opting for employment in relevant Māori mental health services.

Students intending to work in Māori communities, for example, are able to major in Māori studies in the Bachelor of Arts degrees and can also major in health-related subjects to complete double majors. Postgraduate and doctoral degrees are also available.

Katene, who is also Massey University's Assistant Vice-Chancellor Māori and Pasifika, says between 1999 and 2012 there were 288 graduates from the programme.

Based on past performance it is expected that at least 70 students will have completed health-related qualifications by the end of 2015.



Te Rau Puawai chairman and Massey University Assistant Vice-Chancellor Dr Selwyn Katene with Ruth Anderson from Health Workforce New Zealand.



Dr Ridivan Firestone (centre) with fellow project researchers Dr Sunia Foliaki and Dr Te Kani Kingi. Other contributors from the School of Public Health include Associate Professor Barry Borman, Dr Lis Ellison-Loschmann and Professor Chris Cunningham.

The Pasifika Way

Big may still be beautiful in the Pacific Islands, but Dr Ridivan Firestone from the Centre for Public Health Research is investigating why obesity rates among young and old populations remain so high.

According to 2012 Ministry of Health statistics, rates among Pacific peoples are as high as 57.9 percent, compared with 27.8 percent in the general population aged over 15 years.

Firestone's project, studying obesity among young and old Pacific peoples, is part of a Health Research Council and Ministry of Health grant of \$315,728 over two years. Previous work has focused on older Pacific people, especially those with established medical conditions such as cardiovascular disease and type 2 diabetes.

As part of her work, Firestone, of Samoan descent, is enlisting the help of 30 Pacific youth, aged 16 to 24, to quiz their elders. Her question list includes their views on the value of food, its role in how people socialise, the importance attached to these occasions and their social-cultural meanings, including weekly food spending patterns.

The active participation of younger Pacific peoples will be an important aspect of the study, Firestone says.

"This age group has the capacity to understand their own and family social-health realities. They have the capability to make a unique contribution

in addressing the social-health issues relating to the prevention of obesity."

Initially, the young people will be surveyed on their impressions of the cultural-social realities of obesity. They will then be trained to interview their parents and grandparents, and to explore family and cross-generational ideas about the historical-cultural contexts of food.

"The idea is to let the community own the process by getting involved, not just collecting but interpreting the data," she says.

"It takes the onus away from researchers who may not speak the language well and lack an established rapport with the family and/or Pacific community. You also have to develop a fair amount of trust to allow the elders to open up and talk."

Other study questions will explore what food Pacific elders ate as children and the dietary changes they've experienced since being in New Zealand.

Firestone says she also plans to examine photographs from as far back as the 1800s, to chart changes in body size and food practices.

There is a saying in the islands that "Being big is good as it's a sign of health

and wealth not just for the family but for the community," Firestone says.

Last year, Firestone met a community of Irish travellers, previously known as gypsies or tinkers, who had been involved in similar studies of their own people. She engaged with the questions being asked as part of these studies, with a view to applying them in a Pacific Island context.

After training in speech language therapy at the University of Canterbury, Firestone completed a Master in Public Health at the University of Otago. She then obtained a PhD on obstructive sleep apnoea syndrome from Massey.

Two Pacific Island researchers, and a Masters and a PhD candidate will help her to collate and analyse the information, enabling the development of research capacity among emerging Pacific researchers.

"This study will yield new insights into the cultural, social and historical meanings of food and diet. We hope these can be further developed in creative and innovative ways to promote health and wellbeing not only in Pacific peoples, but in other population groups as well," Firestone says.

Good Sports

The School of Sport and Exercise may sound like an institution for elite athletes, but its dedicated staff have aspirations for the good health of everyday New Zealanders at its heart.

Exercising a focus on preventive care at the new College of Health

Dr Isaac Warbrick is changing attitudes towards exercise as he investigates what exercise works for Māori men.

The health researcher is leading a three-year study involving 45 Māori men to identify what form of exercise has the best impact on their health and wellbeing.

Warbrick, from Massey's School of Sport and Exercise, hopes to empower Māori men to maintain active lifestyles and combat the group's high obesity and type-2 diabetes rates.

For the study the men, who are deemed at risk according to public health standards, are split into three groups: weight training, cardio and a mix of both. The groups have exercise sessions with a trainer for 30 minutes, three times a week for 12 weeks.

Researchers then assess the impacts on individuals' metabolic health and their risk of diabetes, insulin sensitivity and glucose tolerance, and do interviews to gauge attitudes and exercise preferences. Results will be compared across the exercise types.

"The study will identify from a physiological standpoint if there is one exercise superior to another, while assessing the impacts of exercise participation on overall wellbeing and attitudes towards exercise," Warbrick says.

"One of the main aims is to identify not only a type of training, but also a way that is going to be meaningful for Māori men. It's all about coming up with an exercise that will work, and works for peoples lives."

Head of School, Associate Professor Steve Stannard, says the study reflects a primary focus of the college on promoting good health among the everyday population – without overlooking the study of elite athletes too.

"There are some obvious links between the school and the (health) agenda of the new college through the benefits of exercise in promoting optimal wellbeing in both the healthy and not so healthy populations; that is, the primary prevention and treatment of various, often lifestyle-related, diseases."

Warbrick says that his weight-training group finished their programme in December and the cardio group starts in February, with the first 15 men making "major strides".

"All these guys lost a significant amount of body fat, and most of the group also put on muscle mass in those 12 weeks," Warbrick says, adding that not one dropped out, unusual for a study of this kind.

"Thirty minutes a day, three days a week isn't a heck of a lot but what it shows is for someone who's doing nothing, it's more than enough to get significant results and to be a stepping stone if they want to do more."

Leland Ruwhiu, 29, signed up for the study at his wife's persuasion. In the gym, trainers showed participants how to use the machines

and training techniques, and supported them during the 12-week period.

Ruwhiu says he learnt a lot, and inspired, he bought a bike and took part in an IronMāori quarter ironman triathlon, cycling the 45 kilometre bike leg; his mum did the swim, his dad the run, and his wife cycled for another team.

"It was a kickstart. I didn't have huge weight loss changes, but I learnt a lot," he says. "I think it gave me the ability to finish my 45 kilometre bike ride. It was tough. I had a goal of two and a half hours and I cracked it."



Dr Isaac Warbrick (left) keeps a watchful eye on Leland Ruwhiu for his study of what exercise best benefits Māori men.

"So this year, instead of doing one leg in the quarter I'm going to do all three. And if someone wants to call me up for 90km bike ride I'd consider it."

Exercising in groups provides opportunities for social interaction and they develop relationships and knowledge to maintain the lifestyle change. The men's perception of exercise has changed and in focus groups they spoke of the influence it's had on their own families.

"A lot of kids will be like 'hey dad, you can't have that sausage roll', or want to go and exercise with them now. It's had a big impact on the whole family," Warbrick says.

For the exercise physiologist who says he's always been interested in preventive health, that's what it's all about.

Eventually he plans to broaden his study to Māori women and other cultures within New Zealand and overseas, to ensure that everyone has the best quality of life without unnecessary health problems caused by unhealthy attitudes toward exercise.

Global Health Paper Offers Study Abroad

In June, 15 Massey students will join 15 counterparts from the University of Georgia, travelling across Australia for studies that are part of a new global health short-course study abroad paper being offered at all campuses.

Applications for places on the course close on 1 April, 2013.

Instructor Dr Lee Stoner, from the School of Sport and Exercise, says the course will examine the relationship between global health and sustainable natural and man-made environments at the same time as fostering a partnership with a leading United States university.

Academic content will be provided through assigned readings, active participation, critical reflection, presentations, seminars and the educational travel across Australia, including Northern Territory, Kakadu National Park, Sydney and the Great Barrier Reef.

This novel offering demonstrates Massey's commitment to fulfilling its internationalisation strategy and emulating many universities internationally that have recognised the importance of students gaining some form of overseas experience before completing their undergraduate degrees, Stoner says.

While the paper is offered by the College of Health, the multidisciplinary nature of the course means the paper is suitable for many degrees, he says.

The course will include a digital story-telling mode of assessment currently being drawn up in collaboration with Dr Max Schleser from the College of Creative Arts.

Stoner says the University of Georgia will provide credit this year with the intention that the paper is available for study as part of Massey's Bachelor of Health Science in 2014. Study awards worth NZ\$3000 are available for six students enrolling for the paper. The deadline for study award applications is 1 March, 2013. For further details visit www.MasseyOnTheMove.org.



On yer bike: Associate Professor Steve Stannard, who not only heads the School of Sport and Exercise but is a serious cyclist too. Between his undergraduate degree in agriculture and his postgraduate studies in exercise physiology, he raced competitively in Europe for several years.

Hearty Fare

Heart surgery patients and students studying the health sciences programme both benefit from a cardiac clinic held on the Wellington campus.

Led by Dr Sally Lark and Dr James Faulkner from the School of Sport and Exercise, the monitored 12-week programme involves health science students working with cardiac patients referred via Wellington and Wakefield Hospitals, to regain fitness, strength and confidence in exercising following their medical treatment.

Each patient is screened with an exercise cardiogram, blood tests and questionnaires before embarking upon early-morning classes three times a week lasting just over an hour each.

Each class comprises 30 minutes of monitored continuous cycling, followed by 30 minutes of light resistance and core work suitable for cardiac patients.

Lark says the workout regime is clearly effective judging by the feedback that patients have given the clinic.

One patient described the clinic as "central" to their progress.

"I am pretty sure my general fitness has not been better since I was in my 20s; my weight is the lowest for 15 years; and the discipline provided by the clinic has indirectly contributed to other aspects of my progress such as diet. The positive influences on my confidence in tackling physical challenges are also a major benefit."

LEFT: Dr Sally Lark from the School of Sport and Exercise puts cardiac clinic members including Chris Coker (centre) and Utam Pannu through a thrice-weekly workout.





Sunset Boulevard

Older adults are opening up about their health, wealth and lifestyles in a New Zealand-first longitudinal study.

The Massey-led research tracks 3000 baby boomers as they grow older, to discover factors that lead to happy and independent retirement.

Dr Andy Towers, part of Massey's health and ageing research team, says this preventive research, now in its seventh year, identifies aspects that create successful ageing. It will be also used to develop social policy to improve the lives of the next generation of retirees.

The older adults, then aged 55-70, were first surveyed in 2006, on their physical and mental wellbeing, finances, attitudes to work and retirement and community ties.

They responded to the postal survey again in 2008, 2010 and 2012; researchers also conducted 1000 face-to-face interviews in the last wave. The fifth survey is now taking shape.

New topics have been added to the questionnaire, such as retirement planning and alcohol consumption, and the next will canvass social media use and aspirations of independent living – reflecting the broad scope of the research.

"It's more than economics and health; we're investigating topics from living standards to social integration or isolation, to understand aspects that create successful ageing," Towers explains, adding that successful living spans medical and economics to social sciences.

He describes successful living as older adults having good health, being financially secure, transitioning well from work to retirement and feeling part of the community – which is different from just living in a community.

By 2040 one in four Kiwis will be aged over 65, and with an ageing population come new health pressures and problems.

"We have rapid population ageing like we have never seen before," Towers says. "This means we will face growing healthcare issues. How do you provide for older adults who are living longer and still have chronic diseases? How are we going to pay for it? What about the major issue of social isolation?"

"It's an interesting time we're living in, and population ageing is one of the fundamental issues we have to face in the 21st century."

The collaborative research aims to develop a knowledge base to identify and target problems and intervene early.

By following the cohort of baby boomers, who are representative of New Zealand's older adult population, researchers can track changes over the years, and see who is surviving to old age and why.

Independence in ageing is a key factor

"As they move into new areas of their lives some retire, some flourish, some don't," Towers explains. "The study becomes a longitudinal assessment of how to age successfully, how to go from work to retirement and remain in good health, and be financially secure and independent."

"All of these factors are tied to each other; if you are physically independent and financially independent, you're most likely to be in a positive frame of mind, have good mental and physical health and be active in the community."

The research's findings and feedback will be shared with government ministries, district health boards, city and district councils and community and social service providers, and used to develop policies to support the active engagement of older people in society.

Massey's health and research team was set up in 2005 by Dr Fiona Alpass and Dr Christine Stephens from the School of Psychology to identify the primary social, health and economic factors that determine the successful ageing of New Zealanders.



Paving a High-tech Path for the **Blind and partially sighted**

Rehabilitation for the blind specialist Professor Steve La Grow is using Accessible Global Positioning Systems (AGPS) software as part of a Massey study to help blind users get about their homes and communities.

Professor of Rehabilitation and Head of the School of Health and Social Services, La Grow says the new software appears to take almost all the anxiety out of travel for people who are blind or have low vision.

"While the traveller still has to have good decision-making and route-planning abilities, AGPS can quickly verify if the decisions made or the routes planned are correct," he says.

"The most valued aspect is the 'where am I?' button. This allows the traveller to update their position in the environment at will. Pressing this button provides the traveller with their relative location on a street using house numbers, the direction in which they are travelling and the next intersecting street they will come to."

La Grow retains a keen interest in all programmes at the School of Health and Social Services, including its diplomas and degrees in social work and rehabilitation and disability studies. His particular interest, however, is in the rehabilitation of the visually impaired, especially among older people.

Nearly half of all those who are 80 years of age or older become visually impaired, most of whom experience some loss in mobility. La Grow says that such a statistic places an imperative on finding ways to

accommodate this challenge in our rapidly ageing society.

"We need to find ways to ensure that people who stay at home and age in place do so successfully without being at risk of injury or social isolation" La Grow says.

"To do so, we need to identify environmental factors [social and physical] that help people to continue to live healthy, happy and safe lives as they experience the onset of disabilities associated with ageing."

In 2012 the school jointly hosted the 14th International Mobility Conference with the Royal New Zealand Foundation of the Blind, Vision Australia and Lions International. Leading researchers and educators from more than 20 countries came to New Zealand for the event.

Many of the presentations given at the conference addressed issues of environmental accessibility, especially as it related to developments in software designed to help those who are blind or have low vision to get about their homes and communities. Massey is showing the way here with La Grow leading the study of the value of AGPS software for blind users.

La Grow also ventures to developing countries to train people as mobility instructors. Last year he visited Mongolia.

There he instructed local staff how to teach blind people to use white canes and adaptive skills to orient themselves and move safely within communities and cities.

"Just from those three weeks of training I'll have a bigger impact on blind people in Mongolia than I've probably had anywhere else in 35 years working in the field, because they will now have gone from having no mobility instruction available to them to having the basics."

Massey, which La Grow joined as a senior lecturer in the Department of Psychology in the late 1980s, teaches around 90 full-time students in various programmes addressing health, disability and rehabilitation. Only a few, however, go on to specialise in the rehabilitation of the visually impaired.

In 2006 the Association for the Education of the Blind and Visually Impaired, the largest professional organisation addressing issues for the blind, awarded La Grow the Lawrence E Blaha Award. It is the highest honour bestowed in the field of orientation and mobility.

It followed his induction into Western Michigan University's Outstanding Alumni Academy for Blindness and Low Vision Studies.

Glass Half Full



In matters to do with understanding alcohol and public health, Professor Sally Casswell has a formidable reputation.

During a long and illustrious career, social scientist Sally Casswell, who is currently head of the School of Public Health, has been party to some colourful research – not least her academic interest in alcohol – as Sonia Yoshioka Braid discovers.

As part of this work, Professor Casswell managed to acquire the first local 'licence' to legally administer 'weed', ending up with a freezer chock full of it – and a long line of willing volunteers.

Although the cannabis research was important, Casswell could already tell that alcohol was a bigger public health issue. "Alcohol remains a fascinating topic – a good illustration of the way in which pharmacology, history, economics, politics, commercial interests and,

increasingly, media and technology affect health," she says.

In that time – the mid-1970s – little was known about how Kiwis used alcohol. Over subsequent decades, Casswell has undertaken a prodigious amount of research, including collaborations with other public health

researchers. Over time she has become our pre-eminent authority on the effects of alcohol.

Her decision to focus on public health was based on an interest in the broader influences affecting people's health and wellbeing. "It seemed clear to me that

trying to help individuals lead healthy lives demanded an understanding of the bigger picture; how they live, work and connect (or not) with each other."

In 2002 she helped set up the Centre for Social and Health Outcomes Research and Evaluation (SHORE), now renamed SHORE and Whariki Research Centre, of which she is co-director, working in partnership with Māori research group Te Rōpu Whāriki. The SHORE and Whariki teams undertake policy and community research on a variety of health and social topics for different community groups. These range from alcohol and illicit drugs to sustainable cities, gender and sexuality topics to Māori health and service research.

SHORE is also a World Health Organization (WHO) Collaborating Centre in alcohol and drug use, with Casswell a member of the WHO Expert Advisory Panel on Alcohol and Drug Dependence. The centre assists WHO in alcohol and drug policy development, collaborating on research in the Western Pacific region representing 37 member states, from China in the north-west to French Polynesia in the east, and as far south as New Zealand.

Casswell says that scientists living and working in New Zealand are able to

We are living in environments that encourage overuse of unhealthy food and beverages

Originally from the United Kingdom, Professor Caswell was lured here in 1971 to pursue postgraduate studies in psychology.

In best 1970s 'counter-cultural' style, her doctoral thesis involved researching the effects of cannabis on human behaviour.

Not enough attention is paid to the powerful influences that shape individual decisions

work broadly within a particular area. "I have been able to investigate the impacts of community education on alcohol policy, carry out surveys of alcohol consumption and harm, research the impacts of alcohol marketing and take part in major collaborative projects evaluating the impacts of alcohol policy," she says.

Casswell has been able to use her formidable knowledge in the field to help other countries in the Western Pacific region to develop their own resources and alcohol policy strategies. Her skills have been recognised closer to home: in 2004 she was awarded an ONZM for services to health research.

She remains optimistic that public health in New Zealand will improve, as long as wellbeing continues to be championed as an alternative, or complement, to GDP. She sees her role not simply as a researcher, but also in engaging with the public and policy-makers to create change.

"I pay attention to the current backlash against uncritical acceptance of economic growth as our only goal, with scant attention paid to the drivers of health and wellbeing," she says. "We may be about to enter a more positive stage of public health and see some real change."

As modern life becomes increasingly hectic, staying healthy can be a challenge. Casswell says that for a healthier community to thrive, structural changes are necessary.

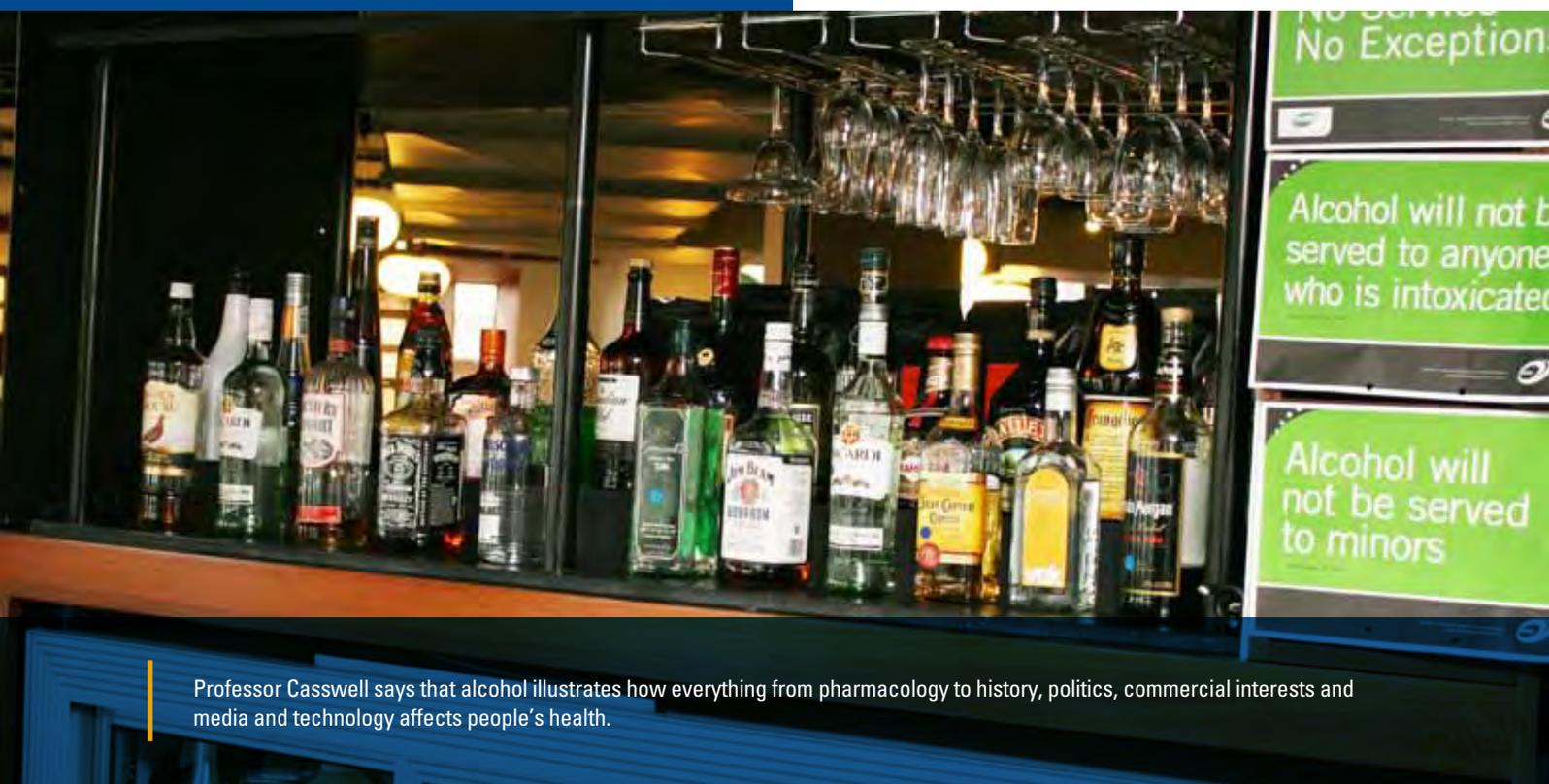
"We are living in environments that encourage overuse of unhealthy food and beverages, make reliance on cars easier

We may be about to enter a more positive stage of public health and see some real change

than walking or cycling, confine many to cold and damp homes, expose many to dangerous chemicals, and reduce the time spent in social connection and providing social support.

"These are areas in which public health works to expose and measure the risks, but also to help design and evaluate ways to make structural changes to improve health and wellbeing," she says.

"Not enough attention is paid to the powerful influences that shape individual decisions. Only governments, local and national, can address issues like the distribution and marketing of tobacco or sugary soft drinks that require regulations of corporations, or regulations/incentives for healthy homes and cities."



Professor Casswell says that alcohol illustrates how everything from pharmacology to history, politics, commercial interests and media and technology affects people's health.



Investigating the Big 'C' and Other Diseases

The College of Health is starting life with a diverse range of health investigations already underway.

Various streams of work, with a combined budget of \$4.2 million, range from whether mobile phones raise the risk of brain cancer in children to the possibility that unpasteurised milk provides protection from asthma and allergies.

The Centre for Public Health Research, an important component of the new college, will continue to lead these important Health Research Council and other government-funded investigations. Opened in 2000, the centre's research programmes cover all aspects of public health with a focus on non-communicable diseases and occupational and environmental health and Māori and Pacific health.

A group led by centre Director Professor Jeroen Douwes received \$1.2 million to investigate the links between unpasteurised milk and asthma. They are assessing whether raw milk is associated with a lower prevalence of allergies and asthma and improved lung function.

It's always good to get big grants but I really see this as a triumph for occupational health

Director of the Centre for Public Health Research, Professor Jeroen Douwes

Studies in farmers' children have indicated that raw milk may protect against allergies and asthma, but the reasons are unclear. The three-year study started in October last year and involves a survey of 300 non-farming families who regularly drink raw milk, and 150 families who have never consumed unpasteurised milk.

Douwes says that the "natural experiment" will assess if raw milk is associated with a lower risk of allergies and asthma in a general population. It will also help to identify the anti-allergic components within raw milk, and has potential to lead to effective interventions for allergies and asthma.

Fellow centre researcher, Dr Andrea 't Manneltje, is leading a

group investigating risk factors for brain cancer in children and adolescents. The group received \$466,148 for New Zealand-based research as part of a multinational study of mobile phone use and the risk of brain cancer. The study will interview 63 New Zealand children and adolescents aged 10-24 diagnosed with brain cancer, and 126 others in the same age group without it. Local results will be collated with research from 14 other countries.

It will allow us to look at case studies and data not just in New Zealand but overseas also, and overall give us greater statistical power

As part of separate work, the centre is undertaking New Zealand's first-ever comprehensive survey investigating links between the workplace and motor neurone disease.

With Health Research Council funding of \$2.8 million awarded in 2011, researchers led by Douwes are investigating whether people in occupations such as printing are at greater risk of developing the disease. The Motor Neurone Disease Association of New Zealand supports the study.

Motor neurone disease attacks the nerve cells that control muscle movement. Degeneration of the motor neurones leads to weakness and wasting of muscles, causing increasing loss of mobility in the limbs, and difficulties with speech, swallowing and breathing.

The study, which will link in with existing international studies, will recruit people with the disease and a comparable group without it, Douwes says.

"It will allow us to look at case studies and data not just in New Zealand but overseas also, and overall give us greater statistical power."

A concurrent study at the centre, investigating occupational exposure to the fumigant methyl bromide, will draw on the same research methodology.

Although extremely toxic to humans, methyl bromide is used to fumigate soil and imported goods being held in quarantine, as well as export products such as logs and fruit.

Douwes says this puts workers who open fumigated containers and workers undertaking the fumigation at risk of neurological and breathing disorders.

The study will seek to determine the number of workers exposed to methyl bromide and compare them with non-exposed workers. Neurotoxic effects will be assessed using a combination of questionnaires and computer-assisted tests to measure

cognitive function, reaction time, memory, attention and other neuropsychological outcomes.

The centre is meanwhile continuing work on separate occupational health research projects with \$2.8 million of research grants awarded in previous funding rounds.

They include studies of occupational asthma in sawmill workers and cleaners, causal exposures of occupational cancer in meat workers and an intervention study in joinery workers and furniture makers to reduce exposure to asthma-causing wood dust.

"It's always good to get big grants but I really see this as a triumph for occupational health," Douwes says.

"Others compare us to the United Kingdom but we're more comparable to Denmark, Norway, Sweden and the Netherlands, though they have better research capacity.

"In New Zealand we invest a lot less into occupational health funding despite the fact that we have between 17,000 and 20,000 people develop occupational diseases per year. If we are to reduce this we need to invest in research, and research that will result in effective interventions."



Other researchers at the Centre for Public Health Research include Associate Professor Barry Borman and research fellow Andrea 't Manne'tje.



Eyes Wide Shut

Dr Sarah-Jane Paine's research has included investigating the sleep patterns of women both during and after pregnancy as well as sleep timing problems experienced by Māori and non-Māori.

Humans are set up to sleep for a third of our lives. But the world we have created operates around the clock.

Professor Philippa Gander and her team at the Massey Sleep/Wake Research Centre are working to address how we balance this physiological conundrum to improve health and save lives.

Gander is an acknowledged world leader in the science of chronobiology – the study of biological timing mechanisms (such as the sleep/wake cycle). She's won multiple international awards for her work on the health and safety of those working against their natural rhythms, especially in the aviation industry.

I think we've lost the plot a little bit on how important sleep is

She and her team, including Dr Sarah-Jane Paine and Dr Leigh Signal, are in international demand for their expertise in the fascinating relationship between being asleep and awake, and how that affects every part of our lives.

There are many more serious consequences to lack of sleep than getting clumsy and dropping your cup of tea. International research shows that you are putting yourself at risk of cardiovascular disease, type 2 diabetes and obesity, and you're more likely to be involved in motor vehicle accidents.

"I think we've lost the plot a little bit on how important sleep is," Gander says. "I don't think you can understand health and disease without looking at the interaction between sleep and waking functions and vice versa. Western medicine is like the 'waking snapshot': there is very little education on sleep's impact on health, which is a third of your life."

Gander started her academic career as a zoology student at the University of Auckland, where she was introduced to chronobiology.

After a prestigious 15-year career overseas, including as Senior Fulbright Fellow at Harvard Medical School in Boston and in the Fatigue and Jet-Lag Program at NASA, she returned to establish the Sleep/Wake Research Centre.

Sleep occupies a third of the daily cycle of the circadian biological clock, and during her time at Harvard and NASA Gander developed an abiding fascination with sleep research. Over the years, much of her work has focused on the effects of the 24/7 society on sleep and the circadian clock, and the consequences for health and safety.

In the past 10 years, in collaboration with Te Rōpū Rangahau Hauora a Eru Pomare and the Wellsleep Clinic at the Wellington School of Medicine and Health Sciences, Gander has also worked on research investigating the sleep health of Māori and non-Māori adults, looking at how many people in New Zealand have sleep disorders, and which groups are most at risk. The main aim of this work is to provide a strong evidence base to reduce disparities

in sleep health and to improve health services for New Zealanders suffering from sleep disorders.

New Zealand, and the world, have taken notice, with Gander becoming a Fellow of the Royal Society of New Zealand in 2009, and winning multiple awards, the most recent being the international Flight Safety Foundation-Airbus Human Factors in Aviation Safety Award. This award recognises “outstanding achievement in human factors contributions to aviation safety”.

In presenting the award, Flight Safety Foundation Chief Operating Officer Kevin Hiatt highlighted Gander’s world leadership:

“Dr Gander has been leading the charge on addressing fatigue in aviation in a logically science-based way. This issue is a hot topic in aviation safety circles and she was one of the first people to recognise the importance”.

Dr Signal’s research interests also include the aviation industry, in particular sleep, sleep inertia, sleep and respiration at moderate altitudes and fatigue and performance issues.

Since joining Massey, Signal has received more than \$3 million in research funding, including for an international collaborative project with the Boeing Company. This examined the effects of commercial aircraft pressure altitudes on sleep, respiratory physiology and performance.



ABOVE: Director of the Sleep/Wake research Centre, Professor Philippa Gander, whose expertise on the science of sleep extends to how it affects those in the aviation industry.

Weighty Issue

A study investigating how poor sleep affects weight in Māori and Pasifika teenagers could help tackle obesity.

Forty Wellington teenagers aged 13-16 and 40 adults, one family member for each teenager, are taking part in the world-first project led by Massey researcher Dr Geoff Kira.

He will examine sleep patterns and weight management in adolescents. “There’s a highly publicised relationship between poor sleep and obesity, so the less sleep you get the more weight you gain – that’s the association,” Kira explains.

“Adolescents have the worst sleep patterns of all the age groups and are therefore particularly at risk of being overweight or obese. This study will focus on whether improving teenagers’ sleep helps weight loss.”

Participants will outline their sleep patterns, diets and physical activities, technology habits and home environments and undergo fitness tests when the research starts in February.

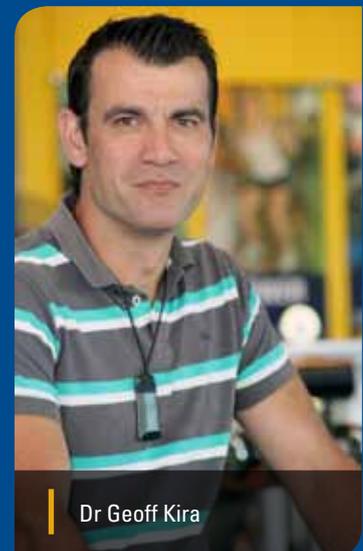
The teens and family members will then have their weights and fitness monitored for a year, and take part in nutrition and exercise workshops. An intervention group will also focus on improving sleep duration and quality.

Kira, from Massey’s School of Sport and Exercise, says the sessions will equip teenagers and whānau with knowledge and behavioural change

strategies, and assessments will be followed up six and 12 months later.

“The adults are in charge of sleep at home – not the adolescents, so I’m hoping they will change the home environments to improve sleep for everyone,” he says, explaining why they are an integral part of the programme. “I’m hoping that will have flow-on effects for managing weight, and in other aspects of life, such as school and sport.”

Kira predicts that teenagers in the intervention group will lose the most weight. He hopes the results will prove the sleep-weight link.



Dr Geoff Kira



Contributors to the College

A number of schools and institutes within other Massey colleges stand alongside the new College of Health. Their programmes and research will actively contribute to the College's aim of preventing disease and promoting wellbeing.

PSYCHOLOGY

The School of Psychology – Te Kura Hinengaro Tangata – is part of the College of Humanities and Social Sciences. With a presence on all three campuses, the school offers a variety of undergraduate and graduate programmes covering a broad range of topics. A degree in psychology can lead to a range of jobs, including community development and support, public health, and social and human resources. Many of the academic staff and researchers within the College of Health got their start in psychology.

The school also offers psychology services directly to the public to facilitate postgraduate student training and for the purposes of research. It also includes the Joint Centre for Disaster Research, which undertakes teaching and research in a range of disciplines to understand the impacts of disasters on communities. It also addresses efforts to improve risk management, enhancing community preparedness for, response to, and recovery from various hazard events.

SPEECH LANGUAGE THERAPY

Based at the Albany campus, the Institute of Education's speech language therapy programme is also part of the College of Humanities and Social Sciences. The programme offers undergraduate and graduate programmes in speech and language therapy, and students gain clinical experience during their studies, working with clients under the supervision of qualified therapists. The Speech Language Therapy Clinic at Albany also provides services for a variety of communication and swallowing disorders in children and adults.

In 2013, the newly established Paediatric Infant Feeding and Nutrition Centre, using expertise from the Institute of Food, Nutrition and Human Health and speech language therapy, will launch a pilot programme for extremely fussy eaters. The programme aims to help formerly tube-fed infants and children with eating issues to gain the skills to eat food without additional intervention.

FOOD TECHNOLOGY

The College of Sciences is home to the food technology programme, which is part of the School of Engineering and Advanced Technology. Students can opt to study food technology at Albany, Manawatū or Singapore. For the past 40 years, graduates from this programme have become leaders in food processing and manufacturing industries in New Zealand and around the world.

At Massey, food technologists work alongside nutrition experts and commercial enterprises to create the foods of the future, developing healthy new snacks and added-value food products. This expertise in health and wellbeing is relevant to the development of foods that meet the nutritional and sensory demands of the world's changing population.

ARRANGEMENTS WITH THE WORLD BANK

The World Bank has chosen Massey University to help lead a plan to improve international food safety.

The Global Food Safety Partnership is a public-private arrangement aimed at building a food safety system ultimately suitable for supporting the delivery of safe, affordable food for all populations all of the time.

The university will facilitate the working groups that will provide technical input and expertise into the design of the partnership and associated programmes. School of Engineering and Advanced Technology senior lecturer, Ross Davies, from the College of Sciences, will act as project manager for Massey's part of the initiative while Professor of Agribusiness, Hamish Gow, will take up a leadership role within the multi-agency structure.

It follows a successful contract between the World Bank and Massey signed in 2010 to offer a bank-funded programme for South Asia-based vets and public health officials. Staff at the Institute of Veterinary, Animal and Biomedical Sciences in the College of Sciences and the School of Public Health deliver the programme.

The World Bank awarded Massey the initial contract after stating a desire for a professional organisation like the university to provide epidemiological training and a flexible programme of study to a wide variety of cultures that encompassed the realities of working in developed countries.

The result is a joint European and World Bank funded, Massey-run, multi-million-dollar epidemiological programme, which has so far attracted nearly 70 health professionals from across Asia to study.



Acknowledgement to Professor Emeritus Sir Mason Durie

For many people at Massey, the College of Health is the legacy left to the university by its former Deputy Vice-Chancellor and Assistant Vice-Chancellor (Māori and Pasifika), Professor Emeritus Sir Mason Durie.

Before his retirement last year, Sir Mason was the main instigator of the initiative that brought the College of Health to fruition, an initiative fuelled by his commitment to improving public health – specifically Māori health.

“The college will create exciting new opportunities to study how whānau and families can maintain good health and avoid unnecessary illness,” he says.

“The potential for preventing illness has never been greater, but as a nation New Zealand has not taken full advantage of what we already know about prevention. We need to transform our thinking.

“We have the potential to learn much more about prevention through innovative research.”

Vice-Chancellor Steve Maharey says Sir Mason (Rangitāne, Ngāti Kauwhata, Ngāti Raukawa) provides superb leadership and has made numerous valuable contributions to the health and education sectors.

Even before launching the campaign for the creation of the college, Sir Mason’s legacy at Massey was assured.

A vital step was the establishment of Te Pūmanawa Hauora, the Māori Health Research Centre in 1993 followed by the Wellington-based Sleep/Wake Research Centre in 1998, and then in 2000 by the formation of the Centre of public health research also based in Wellington. Two years later the SHORE Centre and Whāriki Research Centre was established in Auckland.

The college will create exciting new opportunities to study how Whānau and families can maintain good health and avoid unnecessary illness

He helped establish the School of Māori Studies, Te Pūtahi-ā-Toi. He was head of the school for 14 years before being appointed as Massey’s first Assistant Vice-Chancellor (Māori). In late 2002 that role expanded to include Pasifika and then new migrants in 2009.

Among his many successes in fostering Māori-focused health education, research and training, also negotiated the Māori mental health programme, Te Rau Puawai, which as mentioned elsewhere in these pages provides up to 100 scholarships a year for students studying health-related subjects.

ISAAC WARBRICK CREATING LONGER, HEALTHIER LIVES

Thirty per cent of New Zealand adults do not do any exercise or do less than two hours a week. One in three New Zealanders is overweight and one in four is obese.

Researcher Dr Isaac Warbrick is working to help save lives and prevent unnecessary health risks for many New Zealanders through changing the attitude towards exercise and nutrition, especially in the Māori community.

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