PAPER TO ACCOMPANY BUSINESS BUDGET SUMMIT ADDRESS

DR JAN WHITE, ACC CHIEF EXECUTIVE

There are few subjects as relevant to all New Zealanders as the performance of our health system. Whether we use them daily or only occasionally, our need for effective health services is best described as ideally minimal, but probably inevitable. When you consider the full spectrum of human medical needs, from the trivial to the acute, it's clear that the quality of our healthcare is closely tied to our quality of life.

ACC plays an instrumental role in helping to manage New Zealand's health and well-being. In the 2006/07 year we:

- Processed 1.8 million claims for injury and illness;
- We paid for 3.1 million visits to physiotherapists, 2.5 million visits to GPs and other treatment providers;
- We provided 200,000 sessions of vocational rehabilitation; and
- We provided social rehabilitation support on 1.7 million occasions.

Our total expenditure on rehabilitation, compensation and administration costs amounted to over $2.8 billion.

ACC has a significant relationship with the private sector in the delivery of those services. This relationship needs to be considered in the context of the big picture for the health sector.

The big picture

New Zealand's health sector is under mounting pressure on several fronts.

One of the biggest pressure points is our ageing population. New Zealand's population of over 65 year olds is forecast to increase 2.5 times between 2006 and 2051 as the baby boomer generation retires. The good news is that we're entering retirement in better physical shape than ever before. But even so, as people get older, their healthcare needs increase. This and other pressures are expected to potentially cause health spending to rise from 7% of GDP in 2006/07 to 12% of GDP by 2050.

At the same time as people need more, they're coming to expect more. Our society is increasingly knowledgeable when it comes to health, which is something of a mixed blessing. Based on varying levels of knowledge, consumers are becoming more demanding of health services and health practitioners.

A related pressure is the impact of new technologies. New technologies hold incredible promise for our ability to treat every type of injury and disease imaginable. And as these new types of treatment and medical services become available, our increasingly knowledgeable consumers demand them. The problem is that medical technologies compete primarily on benefit, rather

than cost. As a result, these new treatments often come with a high price tag, and may only offer marginal additional benefits.

A different pressure associated with the ageing population is that as more people retire, the funding base will contract. So as healthcare needs increase, as people come to expect more, and are given more *to* expect through the promise of new technologies, the health sector will be drawing funding from an increasingly smaller working population to deliver on those needs and expectations.

And finally, as the workforce ages, many healthcare professionals can be expected to retire with their peers. Already the health sector is experiencing significant skills shortages in many fields, and this pressure is not going to go away. Just to maintain current health service levels to 2021 we will need 40-69 percent more registered health professionals.

Underpinning these pressures is the continuing need in the existing health system to address inequalities in health outcomes. While our society is healthier in absolute terms, relative inequalities between different groups are increasing. Ethics, access and equity are significant issues.

So in summary, it's hardly a rosy picture. In fact, if you were to look at these symptoms alone, you'd have to say the prognosis for our health sector is decidedly bleak. While dealing with the same issues we face today, we are facing the prospect of a greater number of increasingly demanding customers, to serve on a pressured budget, with fewer staff.

But although we will experience these pressures at a new magnitude, it's fair to say that they are not new. A number of the factors described are unique to the health sector, but basically we face the time-old economic problem of scarcity and demand. The challenge remains, as it always has, to achieve greater levels of efficiency and value.

ACC's relationship with the private sector

Which brings us back to the subject of ACC's procurement practices, and our relationship with the private sector.

ACC is a major purchaser of private sector health services. In the area of primary care alone, we spend about [$235] million annually on treatments from a wide range of providers and organisations. That includes PHOs, general practice, accident and medical clinics, nursing, dentists, pharmacy, physiotherapy and a raft of other specialist services.

This is obviously a significant investment, although it's important to remember that the relationship between public funders and private service providers in primary care is much bigger than this. Each year a total of [$6] billion in public funding is spent on GPs and other primary care providers – all of which are privately owned and operated businesses.

Another area that ACC purchases from the private sector is elective surgery, which we also purchase from DHBs. Last year we spent $175 million on operations across the two sectors, ranging from knee repairs to total hip replacements.

The only service area that ACC is not closely involved with the private sector is in what we call Public Health Acute Services. This is the provision of emergency services and treatment of severe injuries, which we purchase from the Ministry of Health. The agreement that we have with the Ministry to purchase these services recognises that there is in fact little incentive for private sector participation in this area. Of course, we would never rule out private sector involvement, but the high cost of providing these intensive services represents a significant barrier to entry.

Overall, ACC's experience of purchasing services from the private sector has been both positive and beneficial. From a cost management point of view, our ability to purchase elective surgery from private hospitals as well as DHBs has enabled us to achieve savings in the order of hundreds of millions of dollars each year. These savings have been achieved through huge reductions in the amount of time people spend receiving compensation as they wait for operations, and the ability to begin rehabilitation processes sooner.

Another indicator of the quality of our relationship with the private sector is our provider satisfaction survey. This is an area where we've been making big gains. Naturally there are fluctuations, but on the whole, improvements have been consistent and we've now successfully lifted provider satisfaction across the board by almost 50 percent over the last four years.

Going forward, one of our goals is to make further gains both in cost-effectiveness and the quality of our relationships with the private sector through strategic partnerships.

In practice, one example of this is in the area of gradual process hearing loss. Over the last few years the number of claims in this area has been climbing steadily. The cost of claims has also been climbing, to a point where hearing loss services currently present the highest risk and highest cost to ACC of any single service.

This issue was compounded by the capital cost of the hearing aids being prescribed by audiologists. That particular cost was escalating at a much faster rate than the cost of treatment, as audiologists responded to incentives from manufacturers to recommend high-end hearing-aids to their patients.

One approach to this situation would have been for ACC to introduce restrictions, such as limitations on the types of hearing aid that could be recommended, or price caps. Another approach would have been to enforce a split between audiologists and manufacturers. But although that might have achieved the desired cost-savings for ACC, it would also damage our relationship with an industry we're working with more and more.

To address the situation we formed a strategic partnership with the New Zealand Audiological Society and the national association for hearing instrument manufacturers and distributors. Under this partnership, all parties have agreed to a formal accord where everyone agrees to certain compromises that balance the need for effective services with cost savings.

The result is that ACC has achieved substantial cost reductions, audiologists have maintained their professional autonomy, and manufacturers still have an incentive to introduce new technologies and teach audiologists how to apply them best. A great indicator of the success of the accord is that the audiologists have taken the lead in announcing the accord and promoting its benefits.

ACC is continuing to actively look for more opportunities to work with other private sector groups to deal with the challenges facing the health sector. For example, we are planning to form a strategic alliance with the Royal New Zealand College of GPs to look at different approaches to funding services.

But although it's important for us to continue to build on the relationships that we have with the private sector, New Zealand's health system as a whole will need to make changes to successfully respond to the pressures discussed above.. Recognising that our operating environment is changing, we need to create a system that is flexible and responsive. As an organisation that aims to make New Zealand fit for the future, this is a subject of strong interest for ACC.

The areas of change for the health sector as a whole can be broadly defined under six challenges.

Challenge 1: We need to define our goals clearly

The first challenge is to define our goals clearly.

ACC has a clear objective. Our goal is to help people to return to work or maximum levels of independence. But we're only one part of the health sector, which has much less clearly defined objectives. Everybody agrees that we need to generate greater value from the healthcare dollar. But as a society we need to agree on the purpose of the health system, so that we can define value in specific terms, and measure our success effectively. This will mean asking a number of questions, such as: what is the aim of treatment? How do we measure recovery from an injury or illness? And in the normal course of life, what does good health look like – how do we define healthiness?

Our answers to these questions, and the goals that we set, will need to take into account a number of issues.

One is the current inequalities in our health system. The main inequality experienced today is that two people with similar incapacities, one from an accident event and one from a medical or health issue, can receive very different levels of treatment and support. One person may be eligible for ACC,

meaning that they will receive treatment very promptly, and may be eligible for income protection during the time needed to recover from their injury. They may also receive comprehensive vocational and social rehabilitation if it is needed. On the other hand, another person with a similar incapacity may not be eligible for ACC because of the cause of their injury, meaning that they have to go on a waiting list, and do not receive income protection and equal levels of ancillary support.

ACC was founded on the premise of New Zealand having a strong and equal health system. Without doubt this is still an important goal, and so we need to consider how these inequalities can be resolved.

Our health system will also need to address the fact that people will be living longer in our society with more complex health needs. In particular, this includes people living with chronic disease. While chronic disease is normally treated by the wider health system, people with these conditions are more susceptible to injury, which may mean that they're eligible for treatment under ACC. While the different systems may provide adequate treatment for the various needs of the patient, this raises the issue of who is responsible for the person as a whole.

We will also need to address uncomfortable questions around cost-effectiveness. This is especially apparent when you consider the huge proportion of health funding spent in the latter stages of a person's life. On average, it is estimated that about 70 percent of the total health expenditure that will be spent on you in your lifetime will be in your last two years of life. The proportion increases even more for the last six months.
This expenditure will successfully prolong your life – but your overall quality of life will not be significantly improved. This brings into sharp relief the deeply uncomfortable question of how we quantify the value of life.
And finally, in setting our goals we will need to consider whether we need different medium and long-term strategies to deal with the retiring baby-boomers. In the area of superannuation, the New Zealand Superannuation Fund has responded by making provision over the medium term for the additional cost that this demographic bump will bring. It has been suggested that we consider a similar approach for health.

Regardless of whether you think this is a good idea, the point is that we need to think carefully about how our goals and our responses in the medium term may be different from our long-term objectives. While medium-term population developments are quite foreseeable, who knows what the future will bring? Around the world population growth trends are changing. In New Zealand there are few givens. Statistics New Zealand has produced nine different population growth scenarios out to 2051 – four of which actually predict negative growth. So we need to think carefully about the course we commit ourselves to.

Right across the health sector we have a complex set of issues to manage, and the answers may not be simple. But if we're going to work together

towards a health system that meets the needs of all New Zealanders, it's obvious that we will have to define our goals clearly.

Challenge 2: We need to get the incentives right within the sector

The second challenge that we need to address is to get the incentives right within the health sector.

Incentives are powerful, and crucial to the effective performance of any market. With demand on health services set to increase, and continuing pressure on the health workforce, the focus for the health sector must be on providing health professionals with incentives to monitor populations.

This approach is a departure from the traditional focus on individuals. Of course, people will still receive treatment one-on-one with health professionals – although there's scope for change there too – but the aim must be to help our health workers to maintain in effect a 'watching brief' over groups of people.

The introduction of the Ministry of Health's Primary Care Strategy and the establishment of Public Health Organisations or PHOs has already helped to promote this focus. Whereas traditional fees-for-services funding models encourage health professionals to see as many people as possible, the PHO model encourages innovation and more efficient use of health resources by providing a set level of funding linked to the community the PHO serves.
By bringing different types of health professionals together under the PHO structure, this model also promotes greater collaboration in the treatment of patients, which is ultimately more cost-effective.

The challenge now is for us to make the most of this new approach, and already ACC is investigating flexible funding approaches designed to incentivise innovation. For example, we want to provide incentives for different combinations of health professionals to work more closely in the care of ACC patients. This might include a GP, nurse and a pharmacist working together with older people who have been injured in falls, who are on multiple medications. We're also looking at ways to encourage new methods of engaging with patients – such as making payments for consultations delivered over the phone, rather than face-to-face.

Looking at these kinds of new approaches is a major workstream for ACC, and it's also another area where we're looking to collaborate with providers. We've already had a very positive response – in May this year we received 43 registrations of interest from providers interested in working with ACC to trial new and innovative ways of working in primary health care.

In working to get the incentives right in the structure we may have to wrestle with some complex market dynamics.

For instance, there are different views on whether private health insurance decreases or increases the use and cost of public healthcare. The insurance

industry argues that private health insurance relieves pressure on the public system and offsets public health spending. This makes the introduction of the Primary Health Care Strategy problematic, as people may stop purchasing private health insurance as a result of the reduced out-of-pocket cost to consumers associated with public healthcare. It is argued that this would in turn increase pressure on the public health system.

On the other hand, overseas studies have found that people holding private health insurance may actually be higher users of public health services. The reason is that their insurance policies lower the cost of using the public system, resulting in higher levels of use by policy holders. This in turn introduces equity issues, as holders of private insurance contribute to a higher cost of public services that are paid for by all taxpayers.

These are complex questions, and ACC's role is not to weigh in on the debate. The point is that getting the incentives right in the health system will require us to pay careful attention to the affects of different approaches, and to be ready to respond.

Challenge 3: We need to make smart use of technology

Challenge number three is to make smart use of technology.

This is an exciting area. Technology has the potential to dramatically change how we approach health care. It's a huge field, but to give you an idea of how technology could change the face of health, we can look at just three fields of innovation.

The first is telemedicine. At its most basic level, this could involve a doctor conducting a consultation over the phone, as mentioned above. More broadly, telemedicine encompasses video-conferencing, transmission of still images, remote monitoring of vital signs, continuing education and nursing call centres.

From a clinical point of view, telemedicine is enabling faster, more effective consultation between health professionals. This was demonstrated in a PXT trial conducted earlier this year at Waikato Hospital, where 24 percent of images had a major influence on the treatment of patients in the trauma and emergency care departments. Using mobile phones, doctors were able to send PXT images of x-rays and CT scans to consultants. The trial is credited with potentially saving the lives of four people.

The cost-effectiveness of telemedicine is still being proven – one of the issues is the need to develop effective payment models for services. But there are some positive anecdotal results. A trial in Tennessee resulted in savings of close to $50,000 as a result of not needing to reimburse consumers for mileage or paying nurses for travel time.

Another technology regarded as having immediate promise for today is information technology.

Key workstreams in this area around the world are aimed at connecting everyone involved in healthcare more effectively. By improving access to information, these initiatives will help to foster greater collaboration and more effective, efficient treatment of injury and disease.

As well as helping health professionals to work together more effectively, information technology is also enabling efficiencies through automation. For example, the newest generation of infusion pumps are automated, digital, and wireless. They will infuse only the appropriate dose of the right drug for the right patient at the right time. As well as delivering efficiencies, organisations that have automated their labs, pharmacies, fusion pumps and other critical links in the chain of care are often finding that mistakes in these areas all but disappear.

A third, more visionary field of technology is nanotechnology. Nanotechnology broadly refers to the control of matter on the molecular level. A nanometre is a billionth of a metre, or the size of about three to five atoms. Nanotechnology is concerned with deliberately fabricating structures at that level.

While this is a less proven field, it has the potential to revolutionise medicine:

- 10-15 years from now nanotechnology offers the potential for diagnostic tools. Already a diagnostic kit using gold nanoparticles is being tested as a way of detecting prostate cancer early.

- 20 years from now nanotechnology has the potential to help us to grow artificial tissues, such as hearts, lungs and livers.

- 50 years from now nanotechnology could allow us to create interfaces between the nervous system and electronic devices. For example, this may mean that we can create prosthetic limbs that truly function like your own.

In brief, nanotechnology has the potential to allow us to more effectively predict and pre-empt disease, to personalise treatment on an unparalleled level, and to even to regenerate parts of the body.

Technology offers us tremendous potential today, and tremendous potential tomorrow. We just need to be smart about getting on board at the right time. As touched on above, one of the issues with medical technology is that it often competes primarily on the basis of benefit, rather than on cost, which brings us back to that uncomfortable question about how we define value in the health sector. Technological benefits may sometimes only be marginal, but at the end of the day you can’t put a cost on a human life.

ACC has a philosophy of being a fast follower, rather than an early adopter of new technologies, an approach that respects both human life and the need to make sure that health expenditure is cost-effective.

One of the key concepts that we talk about in the sector is evidence based healthcare. That means doing everything on the basis of best practice – but with the imperative that whatever we do is proven, rather than a popular trend. Being a fast-follower is compatible with that approach.

At the same time, we need to make sure that we're making great use of the proven technologies that are already available to us. Of course information systems and automation processes aren't as exciting as nanotechnology or other hot areas like biotechnology, pharmacogenomics and robotics. But the lift in clinical and financial value that can be achieved through them is just as real, and if we can get those systems right, we will be in a much better position to reap the benefits of later breakthroughs.

Challenge 4: We need to empower consumers

The fourth challenge to the health sector is the need to empower consumers.

The logic is simple: if people take greater responsibility for their own healthcare, the burden on the system is relieved. What's less simple is the fact that different generations have very different attitudes to life and healthcare for that matter.

- Baby Boomers have a significant degree of trust in their physicians and are well informed, thanks to websites, their friends, and direct-to-consumer advertising.
- Generation X – those born between 1965 and 1981 – are less trusting of authority. They are informed and demanding consumers.
- Generation Y are the so-called 'millenials', born between 1982 and 2001. They're extremely independent, technology savvy, and even more demanding than Gen X. They're also a generation already showing the effects of overindulgence in the form of childhood obesity.

In seeking to empower consumers, health professionals will need to account for these generational differences. Because they are all increasingly informed about healthcare, it will be important to engage with the preconceptions that consumers from every generation have about health and medical treatments. But while a Baby Boomer may only require acknowledgement of their views, and may readily rely on a professional opinion, a Generation Y consumer may be better served by providing them with access to new resources and information about a condition well before they get near a doctor's surgery.

Of course, people can't be expected to conform perfectly to generational stereotypes, and we can't take a 'cookie-cutter' approach to dealing with people from different groups. But there is something of a unifying thread running through the generations in the form of a growing willingness to access health information through the Internet.

The Internet has a huge capacity to empower consumers by providing people with information that they can access at their leisure. The health sector has responded positively to this opportunity by providing a host of online resources, and the next step in this area is to make full use of the web's rapidly evolving capabilities.

As people come to expect more of the Internet, it will be important to take existing online health resources to the next level. This will be particularly important for the emerging digital generations, who have shorter attention spans and will be intolerant of online resources that don't offer the richly interactive experiences provided by the other websites that they use every day. Providing video and virtual, interactive environments will be an important part of this.

As well as making sure that existing resources are up with the play, another area that the health sector can dramatically empower consumers through the Internet is by using it to provide people with access to personal health information.

Providing people with online access to electronic health records has become a priority in the United States. Although there are teething problems, this initiative has a key role to play in helping people to take a more active role in managing their own health. New systems being introduced allow people to view lab results, immunisations and allergies, a record of past visits to the doctor, list personal health problems and provide healthcare reminders. The systems also have the potential to help reduce unnecessary visits to the doctor, as people can communicate with their physicians by email.

Aside from the Internet, other consumer-focused self-care resources can help people to manage their own health. For example, 50 percent of health consumers using a Healthwise Handbook introduced by private healthcare provider Kaiser Permanente in the United States report saving a call or a visit to the doctor. One of the keys to the handbook's success is that it offers clear instructions for home treatment for a range of health problems and injuries, as well as details of when to call a professional.

Naturally, providing people with the information they need isn't a cure-all for unnecessary use of health services. But the principle of encouraging people to take greater responsibility for their own well being, and providing them with the means to do so, offers obvious benefits to a health system under pressure.

Challenge 5: We need to make best use of the health workforce

The fifth challenge faced by the health sector is to make best use of the health workforce.

As demand for health services increases in New Zealand, we need to make the most of the skills and potential of people working in the health sector. This will involve striking the right balance of customised and standardised services.

In some situations, services that are customised to the individual are more effective at promoting recovery. At ACC we have responded to this fact by moving more towards a case management model for complex or intensive claimants.

At the same time, there is a need to consider where services can be standardised and where different health professionals can operate most effectively. For example, with appropriate protocols, some routine tasks normally carried out by doctors may be able to be performed by other healthcare professionals.

While the cost-effectiveness of different arrangements still needs to be tested, there's good reason to believe that this approach is possible without compromising quality of treatment. A review of the evidence on skill mix changes between physicians and nurses in primary care and hospital settings in the United States and the United Kingdom suggests that nurses performing certain extended roles on pre-diagnosed patients can provide care equivalent to that provided by doctors. In fact, the review found that patients appeared to prefer such care.

Findings like this raise the provocative question that perhaps we should consider a step backwards in the way we approach treatment at the highest level. For some time we have been asking doctors to take a holistic approach to care, looking at a patient's lifestyle as well as their immediate health concerns. But while it's critical for doctors to have an awareness of these factors, perhaps they should be focusing their expertise more purely on the specific concerns that a patient presents with. Naturally this introduces a tension with applying an approach that considers a person's whole needs, but again this is an approach worth thinking about.

The walk-in clinics being introduced at Wal-Mart stores in the United States fit with this philosophy. The idea is that you can receive basic health services from a medic at the same time as you do your shopping. As well as improving access to healthcare, reducing expensive visits to hospital emergency rooms, and helping to catch some illnesses before they become serious and costly, it is hoped that the clinics will give physicians more time for complex cases that truly warrant higher levels of training and expertise.

Potentially, another benefit of this approach is that by providing higher levels of convenience to consumers these models may also be able to help overcome reluctance among some groups to try different approaches.

Of course, appropriate regulatory measures need to be in place to ensure quality is maintained. But assuming this is the case, a key goal must be to create a culture where treatment by health professionals who are not doctors is respected and valued. We need to make different approaches equally trusted and acceptable to consumers.

This goal in turn goes hand in hand with making sure that healthcare is seen as a desirable profession, and that health professionals *feel* valued. Part of this will be to remove real or perceived inequities in how different health workers are remunerated, which may to some degree be facilitated by new levels of customisation and standardisation of health services. In the United Kingdom a new pay system called 'Agenda for Change' has been introduced to ensure fair pay and a clearer system for career progression. Staff are paid on the basis of the jobs they are doing and the skills and knowledge they apply in these jobs. This reform is underpinned by a job evaluation scheme specifically designed for the National Health Service.

In brief, to make best use of our health workforce we need to make sure that we match people's training to their roles by creating service models that are valued by consumers and health professionals alike.

Challenge 6: We need to predict, and take measures to prevent, injury and disease

The sixth challenge we face is the challenge to predict, and take measures to prevent, injury and disease.

Common sense has always told us that prevention is better than a cure, and now that the accountants have agreed, it's official. International research indicates that for every dollar we spend on prevention, we can save anywhere between $1.20 and $62.50 on treatment.

Recognising these benefits, ACC spent $33 million on injury prevention programmes in the 2006/07 year, and achieved reductions that were mostly on target. This included an outstanding 8.3 percent reduction workplace entitlement claims across the six priority industry sectors of agriculture, construction, health, forestry, meat and road freight.

The wider health industry in New Zealand is also making a positive move to focus more on injury and disease prevention, by promoting health programmes through PHOs aimed at preventing chronic disease in particular.

Overall, these initiatives are intended to help promote a national safety and wellness culture. While that will of necessity require individuals and organisations to be responsible and accountable, there are also some exciting developments taking place internationally that show there's room for the health sector to innovate in this area too.

One of those initiatives is the introduction of more sophisticated risk profiling. Using techniques borrowed from the criminal field, researchers are developing more detailed accident risk profiles for different social groups. In anticipation of an ageing population, much of this work is focused on the elderly in particular. IT-based risk profiling is also being used to profile drivers of all ages, while 'youth at risk' research has identified a range of longer-term risk profiles from birth through to the age of 25. One significant finding is that we

can’t start instilling safety into our children too early. Ideally prevention measures need to start before age six.

Another development in injury prevention is the concept of virtual prevention. Computer simulations have been used for some time as a health and safety training tool. But simulations have reached a new level of sophistication with the introduction of avatars – virtual people controlled by real human beings. In the United States this approach was trialled by Ford, who used it to design a pilot vehicle plant. The result was an 80 percent reduction in potential disability cases. This approach is also being adopted within the medical sector – an Italian project is developing a virtual hospital to identify potential occupational hazards.

But not all of the best new solutions are high tech. Overseas, simple fitness programmes for the elderly have been reported to reduce susceptibility to falls by over 30 percent. Programmes targeted at sports injury prevention are also achieving great results. These are both areas that ACC is also working on in New Zealand, through Tai Chi and other fitness programmes for the elderly, and initiatives in major sports like rugby, soccer and netball.

Conclusion

In conclusion, you might say that New Zealand’s health sector faces a number of challenges not unlike those presented by climate change. The long-term outlook for the sector presents us with a very different environment to the one we’re living in today, and everyone has an opinion on how we need to respond.

The pressures facing the health sector are significant, and they will require us to make significant changes in how we think about health. But they are by no means insurmountable.

To begin with, we need to define our goals clearly, so that we can work together more effectively and get the foundations right for everything else we do. As well as establishing shared long-term goals, and dealing with the medium-term bump in the demographics brought by the Baby-Boomers, this will mean looking to address the inequalities in the current system.

We then need to take up a number of challenges to make us fit for the future. This includes:

- Getting the incentives right
- Making smart use of technology
- Empowering consumers
- Making best use of the health workforce; and
- Continuing to take steps to predict and prevent injury and disease.