

Robyn Williams: Our next keynote is a deeply serious one to do with economics and financial systems. It comes from a very distinguished person in politics—he was in politics—and when he was a Minister for Primary Industry, they simply said, “He walks on water and glows in the dark.” And when he was one of our most important Treasurers, his greatest innovation, as far as I was concerned, was free beer for all the workers. I don’t know how it didn’t get up, but—I think Hawkie was a teetotaler at that time, and—we have, however, an official description which I will now read, or at least I’ll try to read.

John Kerin: a plaque on the wall of the office of the Health Alliance reads: “This office was opened by Australia’s longest, tallest and best Minister for the Bush on 20 January 1994. As Minister, John’s most notable trick was putting chooks to sleep and placing them, immobilised, on the desk in front of him, a skill he honed as a chicken farmer at Yerrinbool on the Southern Tablelands of New South Wales.” Here is the man, still tall, despite surgery on his feet—hopefully, they didn’t take your left leg off—no, that’s still there; you’ve got two—and, as far as we know, he’s chookless today. John Kerin, would you please come and join us.

Ageing, science, the CSIRO and health

John Kerin¹
¹scientist and humourist

Well, Robyn, ladies and gentleman, first of all, I acknowledge that I’m on Aboriginal land, and I’d like to pay my respects to elders and custodians, past and present. I’d better apologise for the tie, but I come from Canberra and someone has to introduce some decent dress standards to people in the boondocks.

How did I get here? Well, being the cohort of those in their dotage, I was recently enjoying some anguished contemplation of the new lawn that we’d valiantly and optimistically installed in our desertified back yard in Canberra, but I heard a scraping noise. Into view came Gordon Gregory, on his knees with two bottles of wine clutched in his imploring hands. At first, I thought he might have joined some weird religious sect but, having been involved in politics, I immediately churlishly asked, “Whaddayawant?” After snatching the wine from his hands, I learnt that your organisation had extended an invitation to the wondrous Premier, Anna Bligh, to your conference, but to no avail. And Gordon desperately asked could I be back-up, only if all else failed.

Suffering from LDS—that’s Limelight Deficiency Syndrome—I accepted with alacrity. At my age, I regard it as a signal honour to be asked to speak on anything, or to any audience, but I’ve now learnt, for some unfathomable reason, that no one wants to listen to me, but you’re a captive audience.

Now, having passed the phase of believing that old age is 15 years older than I am, I now look on the brighter side of my longevity. I’ve left it too long to grow old gracefully, and if I’d known I was going to live this long I would have actually looked after myself better.

The brighter side: anything I buy now won’t wear out. We can have a party, and the neighbours won’t notice. My secrets are safe with my friends, because they won’t remember them. When I hit a golf ball, I can always see, and often hear, where it drops. But I want you people to remember one thing: after 70, a dollar saved is a dollar wasted. My financial adviser has been working on that for the past year. But I’m still nice to the kids, because they’ll pick the nursing home.

Now, a friend who lost his wife some years back recently googled dating files, but was informed that it was essential to have one’s own teeth and hair. He’s still trying to work out how he could have used someone else’s. So enough of matters maybe mirthful.

The first thing I want to tell you is that you couldn't have picked a better CEO than Gordon Gregory. Gordon worked with me. He was my senior adviser for quite some time, from the mid-1980s until my fall from fame in 1993. It was his idea to establish a Rural and Provincial Affairs branch in the Department of Primary Industries and Energy, as well as Farmsafe, the Rural Book and the Rural Counselling Service, though this latter service was also the brainchild of a Fran Rowe. She was a wheat grower from Tottenham in north-western New South Wales. But, as you know, Ministers get the credit for everything done in their name. The truth is always a lot more complex, but the deluded voters demand someone to blame when things go wrong. Gordon's an ace networker. I think he must have coined the word. Leanne also worked with both of us, and is now in your Canberra office. Even though she's getting married tomorrow, I won't give her a plug because she always used to give me a hard time. She was the only one, really, a wake up to me in the office.

But I must say I've been so pleased to see your organisation go from strength to strength over the years. I've lived in Canberra since 1971 and it's become very evident to me, as a less than innocent bystander, that the Alliance has earned itself a permanent and respected position in the minds of health ministers and politicians and health officials alike. I thought you had some real successes in last week's budget. As a former Treasurer, I'll tell you there's no way you can get everything you want in one go. It's a case of constant dripping, and apparently you drip well. I last attended your Alice Springs conference, and was greatly impressed; impressed by the range of issues being dealt with, and the dedication in addressing your more specific issues such as distance, scant resources, remote Aboriginal health, the working situation of health professionals—the list goes on.

The portfolios I had during the decade as Minister were either masochistic or economic rather than socially directed. I really hadn't much to do with health education or welfare policy per se. I believed, and believe, that the best farm and rural policy is education, closely followed by research and development and infrastructure. Infrastructure is now a lot more than roads and bridges, and particularly relevant to people living in rural and remote places. Electronic communications are now crucially important, hence the debate at present about broadband—and there's little need for me to emphasise your concerns about the need for broadband to be available in remote areas.

Governments need to facilitate change, impose change, and sometimes actually engage in reform. However, one cannot bring about economic social environmental change or reform without considering the impact on people. As a very ex-politician, I'd love to give you some idea of my absolute frustration with the way government is conducted in this country, and the public presentation of complexity. The politics of perception, the totally predictable set piece plays in an adversarial parliamentary system, and failure by the public to join the dots is both my current and ongoing source of frustration. Then there's spin: the best definition which I've heard is simplify, then exaggerate, leading to cartoon-type arguments. But the fact is most people are disinterested in the political process and the realities of complexity; therefore, the charade continues. It doesn't matter which side is in politics—in government. But complexity often means priorities have to be established, but we all don't share the same priorities. The "We Generations" have long been taken over by the "Me Generations" and the short term seems to rule.

Now, I don't expect the average voter to be an expert in the multiplicity of fields that now come into policy decisions. However, I do expect that the voter should think about most matters more deeply than they evidently do, if we're to believe the media, the polls and the focus groups. Now, I'd love to go on about this, but I'll try to say a few things about rural health, and spare you my diatribe—and I must say, I'm a bit nervous to say what I think as a lay person among so many health professionals.

But, folks, my thoughts on health are hardly original. It would be marvellous if we had a health care system rather than a series of disconnected programs funded by different governments. Ministers for Health are not specifically Minister for each and every grouping in the health field. They try to be Ministers for Health,

not just medicine. The commonwealth government—the current commonwealth government—started off with the right words to my mind, but then the global financial crisis got in the way, just when there was some chance, I thought, of developing an integrated health care system. Despite the nonsense that passes for political debate, the current financial crisis is the most severe we've faced since the Great Depression.

With respect to health, and in so many other areas, the basic problem we face in Australia is the nature of Federal/State relations, and particularly financial relations. This is a classic case of where the dots should be joined. The fact is that, with an ageing population and advancing technology, health is going to proportionately cost more, and the taxes may need to rise, but who will say that? Because we don't face what I see as reality is why we increasingly rely on a two-tiered system of health care and, of course, political ideology also comes very strongly into many policy decisions—the ongoing to-ing and fro-ing with Medicare since the early-1970s, on-again/off-again assistance with dental health, and the rise of the private hospital and health insurance systems.

Now, to my lay mind, health and rural health issues can be roughly categorised into three, but the overlaps are significant. Firstly, is what we traditionally associate with health: doctors and nurses; medicine; the clinic or hospitals; and a range of professional specialities at all levels. Secondly, there's the issue of public health which goes beyond the treatment and care of the individual—preventative health. Finally, again with some overlap, there is what I regard as matters occupational or perhaps the lifestyle and problems of workplace trauma, stress, dealing with disaster, depression, or hopefully helping people to cope.

Now, a wise politician once said that everything is connected to everything else. A study has just been published entitled, "The Spirit Level: Why More Equal Societies Always Do Better." Wilkinson and Pickett are the authors. In terms of income distribution, we are now one of the most unequal countries in the world. What the book's authors show, both of whom are epidemiologists, is that the more equal societies out-perform the less equal on almost every indicator, such as mental disease, obesity, cardio-vascular disease, unwillingness to engage in education, misuse of illegal and prescription drugs, teenage pregnancy, lack of social mobility, neglect of child welfare, and violence ranging from school bullying to murder—not that we could possibly believe this in our rich society. To my mind, this is a case, perhaps, of a crucial public health issue and where again, we as a nation, are not connecting the dots.

I have an intense love of science and research, and was privileged to recently become a member of CSIRO. CSIRO does not carry out specialist medical research as does, for example, the Walter and Eliza Hall Institute, the Garvan Institute or the universities. CSIRO is involved in research in two categories of public health and occupational health, but often drifts into areas in support of more purely medical research. CSIRO now has a health and wellbeing portfolio of research co-ordinated by the Agribusiness Group or divisions and I'd like to tell you about some of the things the organisation is engaged in.

Firstly, at an earlier time and really relevant today, from the early-1960s into the early 1980s, CSIRO researchers at North Ryde and Parkville were involved in the international research effort directed to understanding how new strains of influenza virus emerged. This research culminated in the 1990s with the development of drugs that work against all known strains of influenza virus. These drugs, called neuraminidase inhibitors, represent a new class of anti-viral agents and have worldwide annual sales in excess of US\$3 billion. The outbreak and possible pandemic of Swine flu, H1N109, and the emphasis being placed on Tamiflu as a treatment, remind me that it was the scientists in the CSIRO who found and developed Relenza, the precursor to Tamiflu, during the period of research I referred to, particularly in the period '83-'87. The Relenza molecule is not available, so it has to be taken from a nasal spray. Tamiflu is orally available Relenza. CSIRO partnered with GlaxoSmithKline and Biota Holdings to deliver Relenza and Tamiflu was developed in Australia by Biota Holdings, which floated as a company in 1985.

Now, I relate this story to you not only because it's relevant, because the understanding of the time element in research, and the fact that so much basic research underlies many so-called breakthroughs, is not sufficiently comprehended, and I've become even more aware of this since being in the CSIRO board. To the current health and wellbeing portfolio, the first thing, the first fundamental point, to make is that the farm and rural sector plays a fundamental role in human health through the production of food and in fulfilling our dietary requirements. It needs to be emphasised that still a large part of CSIRO's budget is directed to food production and food security.

Working with food producers in the food industry on nutritional research has led to the development of new food products and opportunities for the food industry, and thereby farmers, in some cases. Research into cholesterol-lowering margarines has assisted the canola industry, and studies continue into the beneficial effects of dietary fibre. With the research into edible oil, CSIRO conducted pioneering research, quite some years back, into the health benefits of polyunsaturated fats. Building on this research, CSIRO has more recently shown the benefit incorporating plant sterols into spreads. Sterols are natural ingredients in many everyday foods, including vegetables, nuts and seeds. A study compared the effects of blood cholesterol of a plant sterol-enriched spread with a standard polyunsaturated spread, and the research highlighted that a 10 per cent reduction in cholesterol over time can reduce the risk of heart disease by up to 20 per cent, while the beneficial HDL cholesterol levels were unaffected.

A lot of research is going into how the brain works. The CSIRO scientists are working in developing new imaging technologies and the annual e-Health Colloquium, held in Brisbane in March this year, was told that the detection of Alzheimer's Disease can be brought forward by about 18 months. 50 to 70 per cent of the 200,000 people suffering with dementia in Australia results from Alzheimer's Disease. The total figure of people suffering from dementia is expected to rise to 750,000 by 2050. CSIRO's preventative health flagship—flagships work across CSIRO divisions—has allocated \$10 million to an Australian imaging biomarker and a lifestyle collaboration cluster study of ageing. Work within Melbourne and Edith Cowan Universities, Neurosciences Australia and the Mental Health Research Institute of Victoria, research is concentrating on neuro-imaging, biomarkers, psychometrics and lifestyle interventions. Digital computer capacity continues to grow, and the day of the petabyte is coming—peta being 10 to the 15th power. The computing and analytic power to be applied to understanding brain functions may enable new treatments to come forward.

Now, I've been given a taste of some of the work being carried out, and I'm very excited, but then again, I'm a sucker for science. The application of smart technologies in tele-medicine are of particular relevance to rural and remote areas. CSIRO's Information and Technology Centre has developed the award-winning health care technology, Virtual Critical Care. This is the development of a real-time telepresence link enabling specialists to treat critically ill patients at remote locations. The system currently links three hospitals in New South Wales, but is being deployed by commercial partners in this and other states. CSIRO has also developed Echonet, an echocardiographic health care online networking system in Tasmania, which permits a specialist in a distant hospital to interact with a team in the hospital.

With the coming digitisation of more hospitals, we're going to see a lot more development of these means to overcome some aspects of remoteness. In conjunction with the Queensland government, CSIRO is also investigating home-based rehabilitation of cardiac patients using advanced sensor technologies. The core element is a mobile phone—and I don't know whether it's a very special mobile phone—which patients use to collect and send health-related information and measurement data to an internet-connected central computer. Clinicians and patients view and analyse the information over the web. If necessary, counselling and treatment services can be provided based on the information, either by phone or visiting the patient. While research in technologies in these areas is in their early stage, I trust that these sort of things are of special interest to your organisation.

Australia has the second highest incidence of bowel cancer after Japan, costing some \$2 billion per annum. Again, we're investigating many areas of bowel cancer detection, prevention and treatment. More than 12,000 Australians are diagnosed with bowel cancer each year, and there are currently 60,000 Australians living with the debilitating effects of inflammatory bowel disease. I'm told by my GP that one form of this disease leads to bowel cancer. Between 50 and 75 per cent of bowel cancer cases are thought to be caused by our diet and lifestyle habits, so early detection is essential. The preventative health flagship has been working on enhancing the uptake of bowel screening as performed under the National Bowel Cancer Screening Program. Currently, only about 40 per cent of people who receive a fecal occult blood test in the mail actually use the test, so work is ongoing in the CSIRO's preventative health flagship by way of studying protective foods, but also to try and increase the uptake.

Now, one of the studies is the role of resistance starch, an indigestible dietary starch found in grains which has the potential to promote bowel health. Food policy is a very contentious subject. Not everyone is agreed what are the best foods, and whether or not, for example, organic foods are better for you, or whether GM can be harmful. Women's magazines abound with diets of every description: low-carb, high-protein, etcetera, and every fad. We spend tens of millions of dollars on buying bottled water when tap water is generally just as good, but I don't advise air and water diets.

While there is some public debate about the degree of incidents, the most recent studies estimated 3.24 million Australians were obese. One estimate I recently read was that obesity costs us \$58 billion per annum. More than 1 million copies of CSIRO's Total Wellbeing Diet have been sold. Adherence to the diet has been surveyed, and it's estimated that about 500,000 people have lost an average of 5.7 kilograms, with 25 per cent reporting improvements in blood pressure; 23 per cent better glucose levels; and 29 per cent improved cholesterol levels. Now, I concede these figures could be a bit misleading, as one would need to know more about the size of the sample and the starting weight and conditions of those surveyed, but what can't be denied is that the clear benefits of a healthier diet have been proven. CSIRO's Healthy Heart Program book has been released. It was released in 2008, designed to look after the health of the whole cardiovascular system, and work is ongoing with the Commonwealth Department of Health and Ageing to develop diet and lifestyle programs for kids. The Total Wellbeing Diet Book 2 contains over 80 new recipes, and a comprehensive 12-week strength and fitness plan. I might even try it myself, if I can persuade someone that it's okay to drink as much red wine as I do.

My experience as Minister for Primary Industries taught me a lot about zoonosis, that is, diseases that can be transmitted from birds and animal to man. The incidence and spread of human and animal diseases are major focus areas for health authorities around the world. This is particularly so because, as many of you know, viruses mutate and develop. As you're also well aware, flu comes from birds. Flu affects 500 million people in the world each year. In the typical Australian winter, about 1500 deaths in Australia are attributed to flu. Now, there was quite a bit of discussion in the early Hawke government's years about the Australian Animal Health Laboratory situated near Geelong, which is run by CSIRO. Its establishment has been of fundamental importance to both animal and human health, particularly in the area of zoonotic diseases, which I believe are going to become a lot more frequent due to the rapidly rising human population and mass air transport.

What has been shown is that it is absolutely crucial to have a group of scientists on tap, researching every aspect of these, as well as diseases specific to both animals and man, where a maximum security facility is essential for safety reasons. CSIRO has already played an important role in identification as bats as hosts for viruses, including Hendra, Nipah and Ebola, and a virus closely related to the SARS virus, and the organisation has world-class expertise in determining protein structure and therapeutic design.

Now, I can go on: there's a lot of things I could tell you, but I used to argue with Canberra econocrats who used to parrot the line that, "We needn't carry out research in Australia because it's a small country. We're

better advised by research from overseas." There are so many areas where we can capture research results, due to the specific nature of our environment, and it's essential to retain a body of expertise so we can engage with the developed world in areas of sophisticated research.

What I've tried to leave you is two strong messages: that's there a lot of potential coming for remote areas with sensor technology, and I think we are quite right to concentrate on preventative health, because the savings can be enormous in releasing more money for clinical medicine.

So I've probably said too much, but I hope I've just given you some idea of prospects in public and occupational health that the CSIRO is involved in. Having been a farmer and then an agricultural economist, I got stuck with the Primary Industries portfolio in the Hawke years. When I spent a lot of time wandering around non-metropolitan Australia, I saw many advantages in living in the bush. For example, houses are cheaper. Three hours a day aren't spent travelling to and from work. Food can be cheaper in some areas, but I concede a lot dearer in others. Larger towns provide accessible services, and some villages still offer desirable lifestyles. No generalisation holds in any absolute sense, and I have some idea and some understanding of the challenges you face in so many areas.

I've chaired the Co-operative Research Centre for Tropical Savannas since 1995 and have some feeling for the issues in Aboriginal health. Tess Lee from Charles Darwin University published a book last year, which I think is probably worth a read.

Most of the jobs I've had in my fourth working life have been associated with agriculture and grazing and natural resource management. Much of this work has centred on the technical and the economic. However, there are always new issues to deal with—issues, in your case, associated with medical training. Many universities are getting medical faculties. There's going to be a lack of agricultural science graduates that we'll face in the years ahead. And this simply illustrates the key element in non-metropolitan Australia is the people. You are dedicated to the health of people in our rural and remote areas, and I can only wish you ongoing success and my personal admiration for all that you do, despite the odds.

Now, I started off with a few jokes, and I'd like to finish with a true story on one of the ways we can solve the global financial crisis, so I'll paint the picture for you. It's August, and there's a little village on the south coast of France. The trouble is, it's raining and even though the holiday season is in real big swing, there's not much happening in this little village. And everyone in the village is basically in debt. Luckily, a very rich tourist comes along to the local hotel—in France, 'otel—and plonks 100 euro on the counter and says to the owner of the hotel, "I'd like to look at your rooms." And he says, "Yes, sir. Up those four flights of stairs. The best rooms are at the top of our premises." So off he goes. The hotel owner grabs the 100 euro note and races next door to the butcher, because he owes him money. The butcher races off to the wholesaler, because he owes him money. The wholesaler immediately races off to the local pig farmer, because he owes him money. The pig farmer immediately runs across the road to the local prostitute—it is France, after all—and gives it to her, because he owes her money. This woman races then back to the hotel, because she's been using the premises of the hotel for her services. Just at that time, the rich tourist comes down, says, "Look, the premises aren't suitable," picks up his 100 euro note, and departs. So there's been no income; there's been no profit; everyone's out of debt; and the village looks forward to happier times.

Presenter

John Kerin is Australia's longest serving Minister for Primary Industries. He was a chook farmer who turned to economics, working at the Bureau of Agricultural Economics before becoming a politician in 1972. He also served as, among other things, Minister for Trade and Overseas Development and as Treasurer in the Hawke Government. After politics John has held a number of senior positions with research and commercial entities, including a number relating to cooperative research centres and to various agricultural industries. He is currently Chair, Interim Advisory Committee to the Australian Weed Research Centre, a member of the Board for Southern Rivers Catchment Management Authority. He is currently a Fellow of the Academy of Technological Sciences and Engineering, and a Fellow of the Australian Institute of Agricultural Science and Technology.



John Kerin was appointed to the Board of the CSIRO in October 2008.