

October 2009 Newsletter

ELIZABETH BLACKBURN, CONFLICTS OF INTEREST, RESEARCH AND HEALTH REFORM.

Elizabeth Blackburn's Nobel Prize for Physiology or Medicine reminds us of the central importance of fundamental research. Her discoveries have greatly extended our understanding of that central unit of life, the cell, but they have also opened up whole new perspectives into human health. It seems likely that mechanisms that lead to damage of the telomere underlie many disease processes. Dr Blackburn's own recent research on stress and telomere damage may provide us with a firmer biological basis for preventative health approaches and research on telomere maintenance in cancer is also highly promising.

The previous three Nobel Prizes in Physiology or Medicine won by Australians (Burnett, Doherty, Warren and Marshall) were for work performed here. Though Dr Blackburn has maintained her contacts with Australia (including an appointment currently at Monash University), she has pursued her research career overseas.

We must work hard to ensure that we provide our future research stars with every opportunity to pursue their research careers here. Health and medical research is *par excellence* an international, global activity. Scientists of all nations are highly mobile and this is a substantial plus for the world. But successful countries of the 21st century will build their success on science. Health and public policy will rely even more on evidence, its creation and translations into policy and practice. The environment for research in Australia must provide our future stars with the stimulation, mentoring, facilities and drive that enabled Elizabeth Blackburn at Cambridge, Yale and UCSF to contribute so much to human understanding and future health.

Conflicts of interest

Many will have heard of the furore in the US around undeclared financial links between researchers and pharmaceutical companies. US researchers need to abide by NIH guidelines in their relationships with industry, including the requirement to declare to their institutions any support that exceeds \$US10 000. Congressional enquiries have revealed that this has not been honoured by some researchers.

NHMRC Council recently agreed that NHMRC needs to have guidelines to help guide Australian clinicians and researchers in their interactions with industry.

It is expected that a draft set of principles will be released for consultation in early 2010.

Like NIH, we encourage collaboration between researchers and the private sector to ensure that the discoveries funded by the public purse can benefit patients in the future through commercialisation and thereby help build national growth. That said, we need to ensure that such relationships do not improperly influence health practitioners in both their clinical and research endeavours.

Research – an essential ingredient for future health improvement

NHMRC urges you all to contribute to the current consultations about the future of Australia's health, at the www.yourhealth.com.au website.

Three Reports¹ on the future of our health system have been released. The Prime Minister and the Minister for Health and Ageing have been holding a large number of consultations at hospitals and community venues around Australia, indicating the importance of this for the government. Australia

¹ reports of the Health and Hospitals Reform Commission (NHRC), the Preventative Health Taskforce, and the report of the Primary Care Strategic steering committee

is presented with a unique opportunity to consider how research is essential to the health system and improved outcomes for patients.

NHMRC is a major player in health reform. We are much more than just a research funding body. Unlike some of our sister organisations around the world, we are also charged by our Act to raise the standard of individual and public health thorough-out Australia, foster consistent health standards, and foster ethical consideration in health. So we are actively involved in considering how research and evidence can be a major contributor to the improvement of our health system.

Though we have a very good health system, there are major challenges looming. Too often, a lack of knowledge means that patients suffer from a lack of effective treatments and disease become chronic rather than treatable. We cannot be satisfied with the current state of knowledge about cancer – how to treat it, or how to prevent it. In mental health, we are still a long way from having a useful understanding of the causes of most forms of mental illness and how to treat them effectively. Infectious diseases continue to loom up without warning, requiring urgent means of evidence based prevention. There are many more examples – multiple sclerosis, cystic fibrosis, type 1 diabetes, heart failure, arthritis and many more – where we still have little to offer patients.

People here and around the world rest their hopes in health and medical research to rid humankind of these burdens. Health and medical research has many benefits. It increases our understanding of ourselves, it develops new and improved means of treatment, of diagnosis of illness, of ways to improve the delivery of health services; new products are invented that improve prevention and patient outcomes.

This goes for prevention too. We can certainly not be satisfied with our current knowledge of what works for many illnesses². As an obvious example, we know why obesity is on the rise, but we have been singularly unsuccessful in providing certain ways and means – that is based on research evidence – in how to prevent it.

Research changes prevention, diagnosis and treatment, and it also profoundly affects the health system itself.

In making submissions through the www.yourhealth.gov.au website, researchers may wish to provide information on how their own research might improve prevention or patient outcomes.

What is needed to ensure that research findings benefit patients?

- 1. People**, to conduct research, to ensure its translation into improving practices, and to train and mentor future generations of health professionals. We need enough health professionals and others actively involved in research here in Australia. This is essential for every part of evidence-based policy and practice, of keeping up with improvements internationally, for a smart system capable of self-improvement, and for professional education for doctors and nurses, in allied health and in health and life science. Without researchers in the system itself, we will be simply importers of knowledge, rarely a successful strategy for any “industry”.
- 2. Institutions**, to ensure that patients benefit from research and its translation, and future generations of health professionals and researchers are educated and trained.

Australia has a healthy plurality of research institutions, but also a fragmented sector. Research, education and patient care should be intertwined but are increasingly being separated. One important component of a vibrant health research sector is that research should be pursued in settings where doctors, other health professionals, and biomedical scientists are educated. This is necessary to inspire future health professionals to be able to ask questions and be self-questioning

² For example, we know that obesity increases risk of type 2 diabetes, but successful public policy on obesity reduction eludes us.

in their work, to excite them into leadership clinical roles, to facilitate the uptake and exchange of findings from research, and to support the multidisciplinary needs to modern health research.

In 2009, patient care, research and education activities are not as strongly integrated in Australia as they should be. It is true that we still have a number of major tertiary hospitals in each State, staffed by outstanding clinicians. But these hospitals have been focussed increasingly on service delivery, as pressures on funding have intensified. If research and translation is not funded specifically as part of funding formulae for hospitals, it is difficult for administrators to support research activities, no matter how much they may wish to.

Most of Australia's medical research occurs within Universities and academic departments. University clinical departments are usually co-located with tertiary hospitals, but are functionally separate. Much outstanding medical research also occurs in Medical Research Institutes and these are likewise located mainly on hospital grounds. But again, these are functionally separate, and with separate governance structures. Furthermore, there may be several such institutes, independent from each other and of the hospital and university, all on the one hospital campus. This can lead to competition rather than cooperation and integration. There are currently no financial incentives to bring all this together in an integrated way.

As Australia considers health reform, it will therefore be important for there to be incentives for hospitals, Universities and medical research institutes to integrate their efforts more. If we remember that it will be patients and the future of Australia health that will benefit, we should be able to put aside some of the history that had led us to this currently fragmented situation.

3. Evidence based clinical guidelines to guide clinical practice.

There are many crucial steps in ensuring that research findings make their way into patient care, and preventative measures. The evidence from research must be assembled into guidance for clinicians, made available to practicing clinicians, implemented effectively, and monitored. The latter is important so that we understand what needs to be adjusted to ensure a better, safer and more evidence based health care for patients.

4. Research of a cost-effective health system.

NHMRC proposes that research should also be used as a targeted tool to help provide more cost-effective health care.

This is one other service that research could provide to the health system. It is R&D for the health system that would require a very small amount of the health care budget to be devoted to this. It seems certain that the return on this investment in cost-effectiveness would be large. NHMRC is discussing ways in which research could be undertaken where there is a lack of evidence around currently used procedures and technologies.³ This idea has been suggested too by the new Director of NIH, Dr Francis Collins, and has been called "comparative effectiveness" research.

NHMRC urges everyone to contribute to the current discussions. These consultations are likely to determine the direction of our health system and health research for many years to come. We urge you to send your ideas on how to achieve a more equitable and self-improving health system based on evidence from research, to the www.yourhealth.gov.au website

**Professor Warwick Anderson
Chief Executive Officer**

³ The Prime Minister mentioned this idea in a speech at the St Vincent's Institute for Medical Research, (14 August 2009)(see <http://www.pm.gov.au/node/6121>).