

## **Professor Nigel G Laing- Submission to the McKeown Review of Health and Medical Research**

I am an NH&MRC Principal Research Fellow and elected staff Member of Senate of the University of Western Australia. I have been doing medical research in Australia since 1981.

### **Summary**

- *Why is it in Australia's interest to have a viable, internationally competitive health and medical research sector? (Terms of Reference 1 and 6)*

If you do not have a viable, internationally competitive health and medical research sector, you are volunteering to be an intellectual backwater.

If Australia wants to be a 1<sup>st</sup> world country it has to have internationally competitive medical research.

- *How might health and medical research be best managed and funded in Australia? (Terms of Reference 2, 3 and 7)*

Improving Australia's position on the league table of OECD nation funding of research to the position that Australia should be taking in the league table would solve most of the funding problems for health and medical research in Australia.

NH&MRC Personnel Support Package system has to be abandoned and institution salary scales used to calculate grant funding as the Australian Research Council does

Higher Degree by Research student payments to host institutions must be made during the period the student is at the institution, not 3-5 years after they have finished.

There must be full-funding of research infrastructure at host institutions.

- *What are the health and medical research strategic directions and priorities and how might we meet them?*

We have to combat the major health threats facing Australians, we have to harness new technologies, new solutions to improve the overall health of Australians.

We need to overcome the perennial problem of State vs Federal funding of health services and research.

We need more emphasis on health services research.

- *How can we optimise translation of health and medical research into better health and wellbeing? (Terms of Reference 4, 8, 9, 10 and 11)*

We need more emphasis on prevention than treatment.

## Submission.

- *Why is it in Australia's interest to have a viable, internationally competitive health and medical research sector? (Terms of Reference 1 and 6)*

If you do not have a viable, internationally competitive health and medical research sector, you are volunteering to be an intellectual backwater. For a supposedly relatively rich country like Australia, that would be pathetic. Australia prides itself on being the best in the world in other areas, mostly involving sport of course. Australia should pride itself on leading the world in health and medical research more than it does. We have medical researchers who would consistently have won the Olympic gold medal in their chosen field, over decades in some cases, if medical research were an Olympic sport. This should be supported, lauded, revealed in.

If Australia wants to be a 1<sup>st</sup> world country it has to have internationally competitive medical research.

- *How might health and medical research be best managed and funded in Australia? (Terms of Reference 2, 3 and 7)*

The NH&MRC is the peak Federal Government funding body for medical research in Australia. Between 1981 and the present I have seen the gradual, inexorable and inevitably accelerating devaluing of NH&MRC grant funding. In 1981, if you were awarded an NH&MRC grant, you received sufficient funding to complete the project, both in salaries and consumables. Now you do not. The gap between the NH&MRC Personnel Support Package scales and real salaries is ever-widening and the pace of increase in the gap will simply get faster and faster. The PSPs increase by the Federal Government's farcically calculated approximately 2% pa, real salaries increase by much more than that. If nothing is done to alter how NH&MRC PSPs are calculated then, reductio ad absurdum, eventually if you are successful in your application and are awarded an NH&MRC grant you will only receive 10% or eventually only 1% of the funding you need to pay the salaries of the staff on your grant. This situation would be untenable. Actually, I think the situation is already untenable. My calculations are that the gap is now 50% for some positions that are easy to cross-compare. This means that if you are awarded a grant from the peak funding body for medical research in Australia, you only receive enough funding to pay your staff from Monday morning to Wednesday lunchtime. The other half of the week you have to find the funding for from another source. The upshot of that is that each researcher ends up then applying for other grants, perhaps even other NH&MRC grants (needlessly increasing the number of applications to the NH&MRC) to obtain the other half of the salary. This has to change. The NH&MRC has to adopt the same system as that used by the Australian Research Council (ARC) in setting budgets for grants, of allowing the applicant to use host institution salary scales to calculate grant budgets.

There also needs to be full funding and indexation of infrastructure for Commonwealth Competitive Grants. Currently there is not and income from teaching at tertiary institutions has to be used to subsidise research.

The fact that most of the funding for PhD students comes to the host institution in the form of the completion payments 3-5 years after the student has completed their PhD, is, frankly, utterly ludicrous. In how many other commercial transactions in

Australia are you paid 3-5 years after you have finished doing the work? To put it simply, for a PhD student that finishes in my laboratory, this year (2012) after 3.5 years with me in other words, after starting with me in 2009, the University of Western Australia will receive the bulk of the funding for that student in the years 2015 to 2017. This is ridiculous. There needs to be a swing back in funding to a situation where more of the funding for post-graduate students comes to the host institution during the time the student is at the institution.

The central problem is that there is still simply not enough funding of health and medical research in Australia. Australian health and medical research funding still has us languishing in the league table of research funding by OECD countries. If the Federal Government increased funding for health and medical research so that we moved up the OECD league table to where we should be, most of the funding problems in the health and medical research sector in Australia would be solved.

Nevertheless, Australia has to look seriously at how much health and medical research it can afford. If it decides to put a ceiling on funding at the current levels, then it has to stop training so many young people to do health and medical research, it has to be up front and tell young researchers that there will in fact be no jobs for them in the future.

- *What are the health and medical research strategic directions and priorities and how might we meet them?*

(Terms of Reference 5, 12 and 13)

We have to combat the major health threats facing Australians, we have to harness new technologies, new solutions to improve the overall health of Australians.

Each researcher would push his, or her, own area of research. In my case, I think Australia has barely scratched the surface of what harnessing the new genetic technologies and knowledge could do to improve the health of Australians. There is now talk of working towards a nationally integrated genetic diagnostic service. For goodness sake, other countries, most notably Scotland, instituted a fabulous national diagnostic network in the 1980s:

<http://www.scotgen.org.uk/healthcare/content.asp?ID=81>.

One problem remains the perennial problem of State vs Federal funding of health services, cost shifting between the two levels of government and services falling between the cracks.

I do think we need much more emphasis on health services research, to improve, implement new technologies, streamline and make more efficient the delivery of health care.

- *How can we optimise translation of health and medical research into better health and wellbeing?*

(Terms of Reference 4, 8, 9, 10 and 11)

I think we need to fund prevention much more than we do. I think a great deal of lip service is paid to prevention rather than treatment. Prevention does not actually fit with the medical model of treating patients once they are sick. I think many clinicians fail to grasp the importance of prevention. It is also of course notoriously

very hard to persuade the ordinary man in the street to do things to improve his or her health long term. I work next to the oncology day ward here at QEII Medical Centre in Western Australia. How often do I see family members sitting smoking outside the oncology day ward?

Nevertheless, probably the greatest improvement in the health of Australians has come from the reduction in the proportion of the population that is smoking. The greatest benefit to the health of Australians would come from further reduction in the percentage of the population smoking. Certainly all hospitals and other health facilities should live up to their websites and when they say they are smoke free, they actually should be smoke free.

The obesity epidemic is entirely preventable. It should be treated by prevention, not by research to come up with a magic pill that will allow people to continuously over eat, but not to become obese. Obesity is a simple equation  $\Delta \text{wt (obesity)} = \text{calories in} - \text{calories out}$  as proved by the glut of weight loss programs on the television.

In genetic diseases, my area of expertise, it should be possible to use next generation DNA sequencing to determine carriers of severe recessive disorders before they have affected children, in what is termed preconception carrier screening, for the entire population. This is the equivalent of targeted carrier screening for certain diseases in selected populations (for example carrier screening for Tay-Sachs disease in the Ashkenazi) writ large, to prevent devastating recessive genetic diseases. Prevention programs for genetic diseases could provide enormous benefits in health for society.