

Submission to McKeon Review

Introduction:

In this submission we will focus on the importance of sustaining adequate research support particularly related to children.

We recognize that Australia has an aging population, and that a large proportion of the current and future health care spend relates to people in the latter years of their life. In this context, it is easy to set priorities for health related research towards aging and the care of the elderly. However, we remind the review that the future of our nation lies in our children, and developing strong, healthy generations of the future must remain a priority for our country. We suggest that there are important reasons for ensuring that a significant proportion of Australia's health related research is focused on children both now and in the future.

In summary:

1. Children with major physical, psychological or developmental problems, that are potentially left with lifelong physical, mental or intellectual disability, have a long time to live and hence generate enormous ongoing costs to the healthcare system. Maximising the potential of children to participate as independent, active adults in our society makes good sense on every level (eg. financial, social).
2. The majority of diseases in adult life which are the greatest cost to our health care system (eg cardiovascular disease, mental health disease, diabetes, addictions) are being increasingly shown to have their origins during childhood, and so a focus on prevention by understanding their origins and causative factors will be more cost effective than the rescue approach during later adult life.
3. Social determinants of health, which again are a huge issue for our society, clearly have their greatest impact on children, and the only chance to break the cycle for these determinants is to approach the child/family unit as the primary unit that needs action.

The remainder of this submission will address the specific questions asked by the review, with a focus on the above mentioned rationale.

1) Why is it in Australia's interest to have a viable, internationally competitive health and medical research sector?

It is clearly in Australia's interest to be globally competitive in health and medical research for health, social and financial reasons.^{1,2,3}

Australia is in a unique position to remain competitive with respect specifically to research related to children for several reasons including:

- the concentration of tertiary level paediatric medicine to a relatively small number of centres across the country who have a demonstrated ability to collaborate on major projects and establish research networks within their respective subspecialities that include rural health care centres.
- the strong development of adolescent medical care within Australia as a bridge between classical paediatrics and adult medicine and as such the ability to research early origins of many adult based disease profiles.
- The already existent neonatal networks and long term newborn follow up programs, including maternal and child health care systems, that enable tracking of health status of children longitudinally.
- State and Federal Government health and welfare databases and the enormous potential for linkage of health information

2) How might health and medical research be best managed and funded in Australia?

Medical Research funding should predominantly remain tied to the Health portfolio and must be increased as the current plateau of funding for NHMRC fails to recognise the ever increasing costs of research.

However opportunities for collaboration with the educational and early childhood development portfolios in enabling high quality research into the future health and well being of our nation should be explored. This could be in the form of mixed funding models from multiple portfolios with shared agendas being promoted in specific research applications. Expansion of programs such as AEDI to identify disadvantaged areas, and then social, environmental and health related research to reduce the impact of those problems, will be fundamental to our children's future⁴.

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

A critical focus for funding of health and medical research in Australia should be early intervention and disease prevention and translation of research into clinical and public health practice. As stated, there is a particular need to focus on research related to children, despite the data around the overall aging population. The reasons for this are as follows:

1. Children with major physical, psychological or developmental problems that are potentially left with lifelong physical, mental or intellectual disability, have a long time to live and hence generate enormous ongoing costs to the healthcare system. For example, the expected lifetime costs associated with a diagnosis of asthma in the birth cohort of the year 2000, or childhood injury in children aged 0-4 years during the year 2000 in the USA is over 23 billion dollars⁵. Maximising the potential of children to participate as independent, active adults in our society makes good sense on every level (eg. financial, social).
2. The majority of diseases in adult life which are the greatest cost to our health care system (eg cardiovascular disease, mental health disease, diabetes, addictions) are being increasingly shown to have their origins during childhood, and so a focus on prevention by

understanding their origins and causative factors will be more cost effective than the rescue approach during later adult life.

3. Social determinants of health, which again are a huge issue for our society, clearly have their greatest impact on children, and the only chance to break the cycle for these determinants is to approach the child/family unit as the primary unit that needs action⁷.

4) How can we optimise translation of health and medical research into better health and wellbeing?

The key aspect of this related to children is the development of pathways of translation to not just traditional health care workers, but also groups who are in the position to positively impact on the health and well being of children such as maternal and child health care nurses, kindergarten and school teachers, and community workers involved in the care of children.

This submission is made on behalf of the paediatric professors group. This group comprises of the Heads of all academic (University) paediatric departments within Australia and New Zealand. All members of the group were given the opportunity to have input into this submission:

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¹ Extrapolated returns on investment in NHMRC medical research, Report from Deloitte Access Economics commissioned by Australian Society for Medical Research 2011

² The Economic Value of Australia's Investment in Health and Medical Research: Reinforcing the Evidence for Exceptional Returns. A report from Access Economics, commissioned by Research Australia, 2010

³ Exceptional Returns, the Value of Investing in Health R&D in Australia prepared for the Australian Society for Medical Research by Access Economics, 2008

⁴ AEDI website. http://www.rch.org.au/aedi/index.cfm?doc_id=13051

⁵ http://www.readynation.org/uploads/20090708_asthmafinalformatted.pdf

⁶ Mathers CD, Loncar D (2006) Projections of global mortality and burden of disease from 2002 to 2030. PLoS Med 3(11): e442. doi:10.1371/journal.pmed.0030442

⁷ AMA position statement: Developmental Health and Wellbeing of Australia's Children and Young People - revised 2010. <http://ama.com.au/node/5488>