The Australian Society for Medical Research

MEDIA RELEASE
EMBARGOED UNTIL 1:15pm, JUNE 4, 2008

EXCEPTIONAL RETURNS - HEALTH R&D BEATS MARKET, MANUFACTURING AND AGRICULTURAL SECTORS !!

The Australian Society for Medical Research Launches new Access Economics Report

"Exceptional Returns – The Value of Investing in Health R&D in Australia II"

In launching the report today, Dr Mark Hulett, President of The Australian Society for Medical Research (ASMR) said,

"This updated study confirms and expands on the findings of the 2003 report. Comparing returns on investment with other sectors, health R&D outperforms the market, manufacturing and agricultural sectors, less only than mining and retail/wholesale trade sectors. The health R&D return on investment is also higher than the average gross rate of return presented within the productivity Commission (2007) review".

Australia is becoming a healthier nation with one of the highest life expectancies in the world!

Professor Gustav Nossal, AC CBE, at the launch today said, "Increased wellbeing through lower mortality rates and associated morbidity is the major return on health R&D investment. Importantly, global gains in wellbeing attributed to Australia's own R&D are estimated to be 3.04%, while our health R&D investment is 1.1% of global expenditure. This is punching well above our weight! In addition, just one case study in the report puts the value of a Group A Streptococci (GAS) vaccine in provision of health benefits at $319.7 million per year of which $78.4 million would be realized by indigenous Australians".

The analysis of the economic benefits of health R&D was conducted by leading economists Access Economics and released today in Canberra. The report reveals that Australia's investment in health R&D was $2.8 billion in 2004-05 (0.38% of GDP) ranking in the middle of comparable countries in the OECD. New Zealand, the Czech Republic and Japan spend less relative to GDP while the United Kingdom, United States, Germany, France, Denmark and Canada spend more, of the ten countries studied.

Earlier today Lynne Pezzullo, Director, Access Economics commented “to provide real world examples of the value of health R&D in Australia we looked at specific examples of cancer, diabetes, dementia and indigenous health. For example, decreasing incidence of Alzheimer’s disease by 5% through Australian R&D will result in savings of $10.3 billion by 2050. Over half of these savings would be in the residential care sector".

While health R&D provides significant benefit to the health sector, the commercial benefit to firms and the economy through the translation of basic research to preventative and therapeutic interventions is invaluable and a *momentum that must be maintained*. An excellent example is that of Gardasil®, the cervical cancer vaccine largely developed and produced in Australia and exported worldwide.

Dr Mark Hulett, said “Australian Health R&D can be seen as an investment in wellness with exceptional returns. Currently, the mortality associated with cancer and cardiovascular diseases poses the greatest burden to Australian Society. However, in the future non-fatal diseases are predicted to play a more significant role in disease burden and the loss of a healthy lifestyle due to disability. An empahasis for the future should therefore include reducing this disability within the population.

“With dependency ratios (those over 65 years relative to the whole population) set to rise from 12% to 25% and Australian Government health spending set to rise from 3.8% to 7.3% of GDP over the next 40 years (Australian Government, 2007), the projected cost and impact of chronic illness is forecast to present a challenging burden whose greatest hope is new R&D breakthroughs.”

“The past 40 years have witnessed an amazing epidemiological transition, riding on the technological wave. Our generation has benefited from standards of living never before experienced. In this country we now face a future full of promise and challenge for preventing and treating disease for ourselves and our children, by virtue of applying recent dramatic advances in genetics, bioengineering, neuroscience and molecular and structural biology. The challenge is to ethically translate the promise into the reality of new understanding, communication, collaboration and improved clinical outcomes.”

News Editors/Chiefs of Staff, please note:

WHAT: National Press Club – Launch of Access Economics Report – "Exceptional Returns: The Value of Investing In health R&D in Australia II"

WHEN: 1.30 pm, Wednesday 4 June 2008

WHERE: 16 National Court, Barton, Canberra.

WHO: ASMR Medallist Sir Gustav Nossal, AC CBE, Emeritus Professor, Department of Pathology, University of Melbourne and Dr Mark Hulett, ASMR President.

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HEALTH R&D IN AUSTRALIA – THE FACTS

SOURCE*: "EXCEPTIONAL RETURNS: THE VALUE OF INVESTING IN HEALTH R&D IN AUSTRALIA II"*

PREPARED BY: ACCESS ECONOMICS

PREPARED FOR: THE AUSTRALIAN SOCIETY FOR MEDICAL RESEARCH

Economic benefit of health research and development (R&D)

- Australian health R&D expenditure between 1992-93 and 2004-05 is estimated to return a net benefit of approximately $29.5 billion. For the average dollar invested in Australian health R&D, $2.17 in health benefits is returned, with a minimum of $0.57 and maximum of $6.01.
- The annual value of gains in wellbeing (from all sources, not just R&D) are over $100 billion for females and over $270 billion for males by 2045.
- Australian health R&D expenditure is estimated to be 1.1% of the global expenditure on health R&D. The proportion of world health returns attributable to Australian R&D is approximately 3.04%.
- Health R&D provides returns to Australia of 117%, exceeded only by mining (159%) and wholesale/retail (438%) of sectors considered.

Gains in wellbeing

- Australia is becoming a healthier nation with life expectancy the second highest in the world (behind Japan).
- For Australia, approximately 1.34 million Disability Adjusted Life Years (DALYs are a measure of a year of healthy life lost) will be averted in 2023 relative to 1993 levels, 839,000 by males and 497,286 by females.

Expenditure on health R&D

- Australia spent $2.8bn on health R&D in 2004-05 (0.38% of gross domestic product – GDP). Australia ranks in the middle of comparable countries in the Organization for Economic Cooperation and Development (OECD). New Zealand (NZ), Switzerland and Japan spend less relative to GDP while the United Kingdom (UK), United States (US), Germany, France, Denmark and Canada spend more, of the ten countries studied.
- Cancer was the leading area of non-business clinical research ($233m), followed by cardiovascular and neurological disorders. The highest average annual growth rate of this R&D between 1992-93 and 2004-2005 was in arthritis, bone and joint disorders (17%) and infectious diseases (13%).
- Universities performed 44% of health R&D, businesses 26%, private non-profit (PNP) organisations 16% and government institutions 14%. The public sector thus performed 58% and the private sector 42%.
- The majority of health R&D since 1992-93 has been undertaken in clinical R&D, which increased from $413m to $1.43bn (an average growth rate of 12% annually).

Potential impacts (case study examples)

- The development of Gardasil to vaccinate against 70% of cervical cancer has potential returns in terms of wellbeing of around 2.5:1.
- Prevention or delay of vision loss associated with diabetes, or vision gain through intensive hyperglycaemic control means 4,111 fewer people with visual impairment by 2025 representing savings of $7.6bn (in 2008 prices).

- Decreasing incidence of Alzheimer's disease by 5% through Australian R&D will result in savings of $10.3bn by 2050. Over half of these savings would be in the residential care sector.
- The value of a Group A Streptococci (GAS) vaccine could provide health benefits valued at $319.7 million per year, of which $78.4 million would be realised by indigenous Australians.

Focus

- The greatest burden of disease currently is from cancer (19% of Australia's total), followed by cardiovascular disease (18%). The major burden is from mortality associated with these two diseases. Non-fatal diseases also play a significant and increasing role in the burden of disease and the years of healthy life lost due to disability. An emphasis for the future should be reducing disability within the population.
- Composition of burden of disease changes across age with greatest burden up to age 40 years from mental disorders and injuries; after age 40, cancer is the leading cause until age 75 where cardiovascular disease takes over.
- Australia has a comparative advantage in health R&D given levels of discovery, publications and citations. In addition to the 'good international citizen' arguments, there are therefore weighty economic reasons for sustaining and enhancing health R&D investment.

IMPLICATIONS AND RECOMMENDATIONS

This report has confirmed that the ROI in health R&D, measured in terms of the value of life and wellness gained, continue to be exceptional. What does this imply for Australian policy responses?

Federal government initiatives following the Wills Review stepped up Commonwealth investment in health R&D, with a view to reversing its previous decline. Many initiatives have been put in place that aim to make more sizeable and smarter health R&D investments primarily through collaboration and workforce improvements.

Ongoing issues are as follows.

- Australia appears to have some comparative advantage in health R&D given our levels of discovery, publications, citations and other evaluative criteria relative to our size in the global market.
- Economic theory suggests we should specialise in areas of comparative advantage. Yet Australia has a deficit in the balance of trade in pharmaceuticals, medical equipment and other health and medical industries that, given our ageing population and increasing demand for medical treatments, is not likely to improve on its own.
- There is potentially more that can still be done in relation to translating health R&D into Australian-owned products. Even for Gardasil, only 13% of royalties are to Australian entities.
- The commercial benefits are not included in the benefits measured in this report, which just measures wellbeing benefits. Although commercial benefits are likely to be small relative to the value of wellbeing benefits, there is scope for them to become more substantial.
- As the investment in health R&D increases, the law of diminishing marginal returns suggests that average returns may decline a little, but they are currently still outstanding relative to many alternative investments.
- There remains a key role for the public sector in basic science and applied research, in reducing the social and economic burden of disease.
- Collaborative partnerships with the private sector should be carefully and strategically nurtured, particularly with a view to attracting ongoing high levels of funding growth from overseas sources.
- The benefits of collaborative efforts should continue to be monitored by monitoring health R&D expenditure by source of funds.
- Priorities need to be balanced with risk in the R&D portfolio, so that promising lines of attack against minor sources of mortality and morbidity are included as well as higher risk investigations against major ones. It is vital that, due to 'critical mass' and serendipity, a broad coverage of research areas is maintained.

- Without 'picking winners', there is a need to invest in R&D areas where burden of disease is likely to grow in the future, to curb that growth – in particular in areas with high disability burden, such as mental health, neurodegenerative diseases and musculoskeletal conditions.
- In relation to indigenous health, the Rudd Federal Government's commitment to eradicating the mortality gap between indigenous and non-indigenous Australians is a worthy commitment. It will be important to deliver appropriate services and interventions to that end and this requires an evidence basis of what works best in a resource constrained world. Health R&D is required to supply that evidence.

Health R&D can be seen as an investment in wellness with exceptional returns. The corollary is that public finance should be strategically targeted to cost-effective high priority R&D areas. The ageing of the baby boomer population, who started turning 60 from 2005, will place unprecedented demands on the Australian health system in particular in relation to chronic conditions of ageing such as Alzheimer's disease, arthritis, cardiovascular disease and cancer. With dependency ratios (those over 65 years relative to the whole population) set to rise from 12% to 25% and Australian Government health spending set to rise from 3.8% to 7.3% of GDP over the next 40 years (Australian Government, 2007), the projected cost and impact of chronic illness is forecast to present a challenging burden whose greatest hope is new R&D breakthroughs.

'The new view of health economics should shape the way we think about health policy… Over the last half century, economic welfare from health care expenditures appears to have contributed as much to economic welfare as the rest of consumption expenditures. It is an intriguing thought to contemplate that the social productivity of health-care spending might be many times that of other spending.' (Nordhaus, 2002:42).

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