NSW Government Response to the NSW Health & Medical Research Strategic Review
NSW researchers have tested a new drug to treat deadly melanoma in the body and have shown, for the first time that it shrinks secondary tumours (metastases) in the brains of patients suffering from advanced melanoma. Early clinical trial results show that this new drug may add months to the lives of patients whose melanoma has spread to the brain. The drug will need to be tested in much larger numbers of patients to confirm these results, but it is hoped that this therapy will help patients with this devastating disease worldwide.

The term ‘Bench to Bedside’ is the process of taking basic scientific research, such as lab experiments and animal studies, and translating the outcomes into human studies. Successful translational research involves collaboration between researchers and clinicians and reduces the time taken from scientific breakthrough to community benefit. An example of this is a leukaemia relapse prediction tool developed by NSW scientists. The tool has enabled clinicians to more accurately predict when a patient may relapse and devise the most appropriate treatment strategy, thereby improving the chance of surviving the disease.
Researchers in NSW are conducting groundbreaking research to extend the time a donor heart remains viable outside the body. By using existing drugs in different combinations, researchers have seen promising results in animal models. It is hoped that this can be translated into humans and this will mean that donor organs can be transported greater distances and potentially open up a pool of donor organs for people waiting for life-saving transplant surgery.
Foreword

The O’Farrell Government was elected with a strong commitment to “make New South Wales Number One again” and to restore our position of leadership in Australia.

The release of the NSW Health and Medical Research Strategic Review 2012 and the enthusiastic endorsement of its recommendations by the Government starts this process of regaining pre-eminence in the field of medical research and the translation of that research into practical health outcomes for the people of this State.

This review was initiated by the O’Farrell Government and I was given specific responsibility as Minister for Medical Research, because we recognise the importance of quality medical research and the development of an outstanding medical research workforce as a vital and integral part of our commitment to improving the health of the people of New South Wales and focussing our attention on the centrality of patient care within the system.

The translation of high quality research into practical developments and outcomes requires positive leadership and commitment on the part of government. Our provision of an additional $70 million over the next four years, to fund key research and development initiatives, in times of budgetary and economic restraint is clear evidence of our commitment in that regard. This is on top of the $200 million the Government already spends annually on health and medical research.

The recommendations of this Review provide a blueprint and a practical guide to addressing the key issues of fostering translation and innovation from research and building world class research capacity in this State.

I offer most sincere thanks to Mr. Peter Wills AC, the members of his Advisory Committee, the support staff in my Ministry and the hundreds of individuals and organisations who made constructive submissions to the review for their outstanding efforts.

Jillian Skinner
Hon Jillian Skinner MP
Minister for Health
Minister for Medical Research
10 Year Health and Medical Research Plan

A Health and Medical Research Strategic Taskforce chaired by Mr Peter Wills AC worked with the research community to develop a 10 year Health and Medical Research Strategic Plan for NSW. The Plan identified that NSW has many strengths and advantages that support our health and medical research effort; a large and diverse population, a high quality health system, excellent researchers and clinicians, and outstanding medical research organisations with international reputations.

Many of the recommendations in the report focus on improving the way we manage our current research resources – supporting greater collaboration between research organisations, having a priority-driven approach to research and innovation, and focussing on translation of research evidence into better patient care and health outcomes. The Review involved extensive consultation with stakeholders with input from over 500 individuals or organisations.

First steps in implementing a 10 year plan

The NSW Government will provide over $70 million in extra funding to key initiatives highlighted in the report over the next four years.

Changes to the Medical Research Support Program (MRSP) to drive collaboration and promote scale and sustainability

- Providing an extra $5 million to the base funding, in addition to the $5 million boost provided in 2011-12, to bring the total commitment to $37.3 million per year. This program provides infrastructure funding to independent medical research institutes, based on merit and research excellence.
- 4 year funding cycle and tiered funding structure.

Establishment of the Medical Devices Seeding Fund

- $5 million per annum.
- This seeding fund will support researchers and encourage further investment in new medical devices that can contribute to the discovery and application of new treatments and diagnostic techniques to improve patient outcomes.

Establishment of the Research Capacity Building Program

- The research capacity building program will receive $1 million annually from the Ministry of Health to retain and attract new leading researchers to NSW. It will be developed in consultation with stakeholders.

Support for Research Hubs

- The Research Hubs will receive collectively $800,000 annually to provide administrative support and assist in coordination of hub activities to enhance collaboration and facilitate the efficient sharing of expensive equipment, accommodation and support services.

Establishment of Office for Health and Medical Research

- Responsible for ensuring the implementation of the NSW Health and Medical Research Strategic Review and ensuring a high level of engagement with all parts of the health and medical research sector.
- Will develop a biobanking framework that will improve and enhance investment in this important research infrastructure.
- $800,000 to support clinical research networks.
- Establishment of a clinical trials support team within the Office.
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A robust health and medical research sector is integral to a well performing health system which delivers high quality patient care and health outcomes. Strong integration between medical research and the health system is a key component of the O’Farrell Government’s strategy to improve health care in NSW. A key election commitment was the development of a 10-year Health and Medical Research Strategic Plan for NSW that enables the state to develop new treatments, techniques, devices, models of care and programs that will improve the health of individuals and the community.

A Health and Medical Research Strategic Taskforce, chaired by Mr Peter Wills AC, worked with the research community to develop the plan. There was extensive consultation with over 500 stakeholders from universities, medical research institutes, hospitals, disease specific groups and foundations, industry, international jurisdictions, and relevant NSW and Australian Government departments.

Mr Peter Wills AC and the Advisory Committee are to be congratulated on a comprehensive and visionary plan that will assist in driving health and medical research reform now and into the future.

The NSW Government endorses the vision contained in the Review.

NSW will have a global reputation as a resilient, innovative Centre of Excellence for health and medical research. This government strongly supports a high-quality health system that is responsive to scientific advances and generates health, social and economic benefits for the people of our state.

The recommendations are consistent with the Government’s health policy principles in particular:

- **Patient focused** – access to better quality timely health care
- **Efficient and appropriate allocation of resources**
- **Openness of governance and accountability of performance**

The Review recognises that implementation of the recommendations will be complex and will require ‘political commitment, strategic leadership, collaboration, greater accountability and good governance’. Collaboration, sharing, trust and team effort are key values espoused in the report and are essential characteristics of a research culture that will underpin a priority-driven approach to research. These values are in keeping with the four CORE values that the Minister for Health and Minister for Medical Research declares will shape the NSW health system;

- **Collaboration** – Improving and sustaining performance depends on everyone in the system working as a team.
- **Openness** – Transparent performance improvement processes are essential to make sure the facts are known and acknowledged, even if at times this may be uncomfortable.
- **Respect** – The role of everyone engaged in improving performance is valued.
- **Empowerment** – There must be trust on all sides and at all levels with responsible delegation of authority and accountability.

Many of the recommendations in the Review focus on improving the way we manage our current research resources – supporting greater collaboration between research organisations, having a priority-driven approach to research and innovation, and focussing on translation of research evidence into better patient care and health outcomes. This will require not only leadership at all levels of the health and medical research community and services, but also an enhancement of resources to the Office for Health and Medical Research in the Ministry of Health to facilitate engagement of stakeholders; assist with the
development of state-wide strategic research priorities; provide a supportive policy framework; administer the new funding programs that support research infrastructure and innovation; support clinical trials and work with the Agency for Clinical Innovation, Cancer Institute NSW, NSW Kids and Families, the Local Health Districts, primary care providers and the non-government sector in the translation of research into clinical practice, healthy lifestyles and illness prevention.

Increasingly research will need to engage across the health continuum from both basic and population health research through to primary care, hospital and aged care settings. Translating medical research into better health care and clinical practice will require collaboration between research organisations, research hubs, research networks and Local Health Districts and Medicare Locals together with involvement of key Pillars; the Agency for Clinical Innovation, Clinical Excellence Commission, Cancer Institute NSW and NSW Kids and Families.

To achieve the Review’s vision, all health and medical research stakeholders will need to work together, so that NSW can be recognised as a leader in health and medical research, nationally and internationally. The NSW Government’s response to each of the Review’s recommendations is outlined below and through the Office for Health and Medical Research; NSW Ministry of Health, will progressively implement them.
NSW researchers have embarked on a clinical trial that involves the use of gene therapy to protect the bone marrow of children undergoing chemotherapy for brain tumours. The study involves the use of vectors to introduce a gene into bone marrow cells to protect them against the effects of the chemotherapy which can then be used at much higher and therefore more effective doses. It is the first time in the world that this type of treatment has been made available to paediatric patients. In addition to the potential benefit to the children in this trial, the experience obtained by clinicians and researchers will facilitate the use of gene therapy for many other clinical applications in the future.
THEME 1: Encourage research and innovation in health services

Recommendations

1.1 Build a dynamic and supportive research culture in LHDs through strategic leadership and governance

1.2 Establish a research grant program to support practitioners to generate new evidence through collaboration between practitioners, policy makers, health services managers, scientists and academics

1.3 Attract and retain high-quality practitioner researchers in LHDs

1.4 Provide training for practitioner researchers and facilitate access to research support

1.5 Ensure business, human resources, information technology and financial service processes that are able to properly support research activities

RESPONSE

These recommendations are supported.

The Office for Health and Medical Research will work with stakeholders, including Local Health Districts (LHDs), Agency for Clinical Innovation (ACI), Cancer Institute NSW (CINSW) and universities, to develop an implementation plan. This will include analysis of the current investment, commitment, achievements and aspirations of health and medical research within LHDs.

NSW will also develop SAPHaRI (Secure Analytics for Population Health Research and Intelligence) a secure remote access population health data warehouse that enables health system researchers to discover information through exploration of data.

THEME 2: Leadership in clinical trials

Recommendations

2.1 Establish a clinical trial support team within the Office for Medical Research

2.2 Develop phase I clinical trial capability in NSW

2.3 Reduce barriers to clinical trials by faster start-up times and greater opportunities to recruit trial participants and engage clinical staff

RESPONSE

These recommendations are supported.

NSW will build on its competitive advantage in clinical trials and develop phase I clinical trials (‘first in human’) capability.

$800,000 will be provided annually for ongoing support of research networks. A clinical trials support team will be established within the Office for Health and Medical Research to complement the existing research ethics and governance team. It will report publicly on performance of our research ethics assessment processes in terms of timeliness and outcomes.

THEME 3: Maximise the use of research in policy and practice and health service delivery

Recommendations

3.1 Ensure capacity within NSW Health to use existing research evidence in policy and the implementation of programs

3.2 Commission or undertake high-quality research, including intervention research, to inform major policy and programs where there are evidence gaps
3.3 Fund rigorous evaluation of policies and programs to ensure effective implementation of research evidence and ongoing adherence to best practice

**RESPONSE**

These recommendations are supported.

The Office for Health and Medical Research will strategically support translational research by working with Local Health Districts, Agency for Clinical Innovation, Clinical Excellence Commission, Health Education and Training Institute and NSW Kids and Families. In particular the focus will be to facilitate the interaction between research and clinical networks, supporting state-wide initiatives related to translation, and monitoring and evaluating the translation of research into clinical practice.

NSW Health will contribute $2.5 million in cash and $750,000 in-kind over 5 years towards a partnership with the National Health and Research Council (NHMRC) to establish a Partnership Centre in ‘Systems Perspectives on the Prevention of Lifestyle-Related Chronic Health Problems’. The aims of the Partnership Centre are directly linked to current priority prevention programs of NSW Health related to childhood and adult overweight and obesity.

**THEME 4: Focus intellectual property expertise**

**Recommendations**

4.1 Develop and implement an intellectual property framework for multiparty publicly funded research

4.2 Enhance researcher’s knowledge and understanding of commercialisation resources

4.3 Promote greater capability in commercialisation offices for use by multiple institutes, universities and LHDs

4.4 Improve opportunities for researchers to acquire business and commerce skills

**RESPONSE**

These recommendations are supported.

The Office for Health and Medical Research will work with stakeholders to develop and implement an intellectual property framework. The Office will work closely with NSW Department of Trade and Investment and the Medical Research Commercialisation Fund to develop and implement strategies to support commercialisation of research innovations.
THEME 5: Support early-stage venture capital

Recommendations

5.1 Establish a pilot medical device seeding program

5.2 Align NSW research with Commercialisation Australia processes to increase the ‘pipeline of ideas’

RESPONSE

These recommendations are supported.

Up to $5 million will be made available on an annual basis to a Medical Devices Seeding Fund. NSW has world class research institutions, high quality research assets and cutting-edge science capability that have led to the successful commercialisation of research, including medical devices. This seeding fund will support researchers and encourage further investment in new medical devices that can contribute to the discovery and application of new treatments and diagnostic techniques to improve patient outcomes.
THEME 6: Enhance health and medical research hubs and collaboration

Recommendations

6.1 Require research hubs to develop strategic plans that foster translation and innovation and build research capacity

6.2 Hubs should report annually to the Office for Medical Research on an agreed set of performance indicators

6.3 Review and align existing health and medical research networks with this Strategy

RESPONSE

These recommendations are supported.

$800,000 will be provided annually to support the eight research hubs in NSW. This will assist hubs to develop strategic plans, network, encourage effective use of resources, and strengthen links between centres of research excellence and centres of teaching and health care practice. The Office for Health and Medical Research will work closely with the hubs to achieve these goals.

THEME 7: Strengthen the research workforce

Recommendations

7.1 Establish an elite researcher scheme to attract leading Australian and international researchers to NSW

7.2 Establish a Research Fellowship Program targeted to early to mid-career researchers

7.3 Provide additional incentives through a Scholarship ‘Top-Up’ Program to attract high quality PhD students

7.4 Grow successful research training programs in areas of need

RESPONSE

These recommendations are supported in principle.

A Research Capacity Building Program will be established to support the research workforce across the continuum from early career to elite researchers. Funding of $1 million annually will be available for the Program. The initial area of focus will be bioinformatics.

The elements of the Program will require further stakeholder (Universities, medical research institutes, Local Health Districts) engagement to ascertain how best to develop the research workforce. It will be the ongoing role of the Office for Health and Medical Research to develop further initiatives with stakeholders.

A professorial chair will also be created in Cancer Prevention.

The Chair of Cancer Prevention will lead research efforts in the prevention and early detection of cancer. This is part of a unique partnership between a government agency and a NSW university. It will further enhance the substantial investment that has been made in NSW’s capacity for cancer research and ensure research outcomes are translated into better practice. Funding for the Chair is for a period of up to five years. The Chair is to be jointly funded by the Cancer Institute NSW and the academic institution that is selected as the partner agency through a tender process. The Cancer Institute NSW will make a contribution of up to $500,000 per annum for a period of five years and it would be expected that the academic institution will make cash and in-kind contribution of similar value.
THEME 8: Improve research infrastructure support

Recommendations

8.1 Align NSW Health funding programs to two principles: rewarding excellence and scale or developing capacity in key priority areas.

8.2 Restructure the MRSP to reward excellence, promote critical mass and support other strategic goals.

8.3 Enhance the Capacity Building Infrastructure Grants program.

8.4 Work with the Australian Government to coordinate and streamline an open, fair and transparent infrastructure funding program for health and medical research.

RESPONSE

These recommendations are supported.

An additional $10 million will be annualised to the base funding of the Medical Research Support Program to bring the total commitment to $37.3 million per year. This program will provide infrastructure funding to independent medical research institutes, based on merit and research excellence. Funding will be tiered with larger organisations receiving up to 40 cents/grant dollar. Linking funding to critical mass will encourage collaboration between medical research institutes leading to optimal use of research infrastructure.

THEME 9: Build research assets and maximise their use

Recommendations

9.1 Develop a register of major research assets in NSW.

9.2 Identify research asset gaps and develop a 10-year strategic plan to address them.

9.3 Scale up and fund to ensure sustainability for existing research assets with a particular focus on: biobanking, bioinformatics, population-based cohort studies and record linkage.

9.4 Require organisations that hold NSW Government-funded major assets to develop plans and protocols to promote sharing and access and to regularly report asset utilisation.

RESPONSE

These recommendations are supported.

The Office for Health and Medical Research will work with the research stakeholders (LHDs, CINSW, medical research institutes, Universities), Pillars, and relevant divisions within the NSW Ministry of Health to address and implement these recommendations.

The Office for Health and Medical Research is working closely with the Cancer Institute NSW to develop a state-wide biobanking framework.
THEME 10: Leverage all investment sources

Recommendations

10.1 Provide assistance to hubs, research organisations, research networks, LHDs and consortia for competitive grant applications

10.2 Co-invest in large (>$10million) philanthropic donations that have state-wide significance and align with the Review priorities

10.3 Develop, refine and implement programs to attract individual, corporate and not-for-profit investment in health and medical research

10.4 Expand industry-partnered collaborative research programs

RESPONSE

These recommendations are supported in principle.

The Office for Health and Medical Research will further consult with relevant organisations to explore the opportunities to increase investment in health and medical research. The Office for Health and Medical Research will market itself as the first port of call for potential investors so as to maximise opportunities for co-investment and help focus investment into the state’s strategic priorities for health and medical research.

THEME 11: Improve NSW Health research administration

Recommendations

11.1 Reform site specific authorisation (research governance) processes

11.2 Improve research ethics and governance data collection management and analysis capabilities

11.3 Include research ethics and governance metrics as a monitoring measure in the LHD Performance Management Framework

11.4 Appropriately resource LHD research offices to undertake research ethics and governance functions

RESPONSE

These recommendations are supported.

The Office for Health and Medical Research will work closely with research governance offices to further improve research ethics and governance processes, supporting training and education for research governance staff.

The current information systems will be enhanced to facilitate and expedite ethics applications and assist in monitoring performance.
Osteoarthritis is a chronic condition that causes pain, disability, loss of function and poor quality of life. In NSW, a model of care based on the best available evidence has been developed to manage this condition and involves relatively conservative interventions such as weight loss, improved muscle strength and control, and better management of medication for the condition. This model involves a multi-disciplinary team of health care providers and the patients themselves to improve pain, function and quality of life. Early reports of the effectiveness of the model show that there has been a decreased risk of falls in 37% of patients, and 5% of patients have been removed from the joint replacement surgery waiting list as they no longer require surgery at this time.
Delivering on the strategy
Adopt a strategic investment approach

Recommendations

12.1 Increase transparency and accountability of state-level health and medical research funding programs

12.2 Establish criteria for setting priorities in health and medical research

12.3 Provide ongoing analysis of NSW current areas of research excellence and competitive advantage to drive strategic investment decisions

12.4 Identify gaps and enhance research collaborations and programs in important areas through single-purpose capacity building grants

RESPONSE

These recommendations are supported.

The Office for Health and Medical Research will ensure that there is transparency in the processes and decision making of funding programs. The Office for Health and Medical Research will work with research stakeholders to develop a comprehensive understanding of the research being undertaken in NSW including identifying current areas of research strength and opportunity.

Adopt a robust implementation approach

Recommendations

13.1 Provide additional resources to commence the implementation process

13.2 Rename the Office for Medical Research the Office for Health and Medical Research

13.3 Establish the Office for Medical Research Leadership Advisory Board, resources and processes to achieve the aims of the NSW health and medical research strategy, including communication and advocacy

13.4 Agree on a comprehensive set of result areas and key performance indicators to measure progress against strategic objectives

RESPONSE

The Office for Medical Research will be renamed the “Office for Health and Medical Research” and resourced to support the implementation of the Review recommendations. A comprehensive set of key performance indicators will be developed with stakeholder input. These indicators will be monitored and reported by the Office for Health and Medical Research.

In regard to recommendation 13.3 the new Ministry of Health governance structure will be utilised.

An implementation plan will be developed to ensure that the research community, NSW Government and the public of NSW are informed of the progress against the plan.
Severe infection and septic shock have significant impact on the patient and the healthcare system. Based on international experience, a pilot study was undertaken to improve the diagnosis and management of severe infection and sepsis, and as such reduce preventable harm to patients. The study showed a 50% reduction in time for patients to receive life-saving intravenous antibiotics, heightened staff awareness of sepsis and recognition of the need for prompt treatment, resulting in better outcomes for patients. This has formed the basis of a state-wide roll-out of the initiative which has already seen the reduction in median time to commencement of antibiotics from 4 hours to 65 minutes. The mortality rate for patients with septic shock increases with the increasing delay in commencing antibiotic therapy.
The advances in medical research in the last 30 years have led to remarkable increases in survival from cancer. It is critical that we continue to invest in world-leading research to build on this momentum which will translate into improved cancer survival.

[Professor David Currow, Chief Executive, Cancer Institute NSW]

There are two essentials for continuing the battle against the scourge of cardiovascular disease. One is the discovery of new treatments and the other is the translation of existing knowledge into policy and practice. New resources are needed to conduct large scale, collaborative research which is essential to address the burden of death and disability from chronic disease, including coronary heart disease, stroke and diabetes.

[Emeritus Professor John Chalmers AC, Medicine, University of Sydney]

Large-scale, long-term research such as the NSW 45 and Up Study provide answers to critical questions about how to keep people healthy as they age and address the challenge of preventing chronic disease. NSW research is leading the way in linking routinely collected information about how people use health services – this will lead to better care and improved health outcomes.

[Professor Sally Redman, Chief Executive, Sax Institute]

If NSW is to fully realise its potential, then the State Government must lead the investment in research both directly and through partnerships with others. Further, it seems logical that future investment must be targeted to focus and emphasise research excellence in identifiable areas. We all want to allocate scarce resources toward initiatives that will generate the best outcomes and this logic works for government, the private sector and philanthropists.

[Mr Steven Rubic, Chief Executive St Vincents and Mater Health Sydney – on behalf of the St Vincent’s Research Precinct Community]

Research hubs that bring together skills and resources help achieve a critical mass that have the ability to drive further investment and create even more jobs.

[Deborah Monk, Medicines Australia]

Biobanks, especially those with biospecimens linked to epidemiological information, are vital for the investigation of the risk factors for chronic disease and biomarkers, for improved disease understanding and aid the evolution of more personalised treatment approaches.

[Dr Andrew Penman, Chief Executive, Cancer Council NSW]

Cardiovascular disease kills more people in New South Wales than any other disease. Cardiovascular disease claims a life every 11 minutes which is why ongoing research has never been more important. New discoveries to match those of implantable defibrillators, bypass surgery procedures, and pacemakers will only come with significant support from all governments.

[Tony Thirlwell OAM Chief Executive Officer – NSW, Heart Foundation]