

Developing a strategy to promote the generation and effective use of population health research for NSW Health: 2011–2015

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Abstract: The Population Health Division of the NSW Department of Health has developed a 5-year strategy to improve the effectiveness of its resource investment in population health research. This paper describes the development of the strategy, *Promoting the generation and effective use of population health research in NSW: a Strategy for NSW Health 2011–2015*. A review of Australian and international strategic research documents and stakeholder interviews was conducted to support the development of the strategy. The findings from these two processes influenced the structure of the document and supported the inclusion of strategies and actions to assist with identifying research priorities, improving communication, enhancing networks and partnerships, supporting workforce development initiatives, providing research infrastructure, enhancing research and the use of research evidence and streamlining research governance and ethics processes. Small group discussions and a detailed review of literature were conducted to refine the thinking around four of the more complex aspects of the strategy. Finally, a broad consultation process was used to test the face validity of the proposed strategy content.

The value of using evidence to inform health policy and practice is widely acknowledged.^{1,2} A number of models have been developed; these processes are complex and evaluations of strategies to increase the use of evidence in policies and programs are rare.^{3,4}

NSW Health invests in population health research through both the Population Health Division of the New South Wales (NSW) Department of Health and local population health services. The Population Health Division has recently developed a strategy which outlines how it will facilitate the conduct of high-quality, relevant, population health research and the use of research evidence in policy and practice in NSW Health. This paper describes how this strategy, *Promoting the generation and effective use of population health research in NSW: a Strategy for NSW Health 2011–2015* (the Strategy), was developed.

Methods

An Advisory Committee, comprising senior population health managers from the NSW Department of Health and local health services, academics in population health from NSW universities and senior managers from relevant non-government organisations, was established to provide guidance on the development and content of the Strategy.

To inform development three projects were undertaken: (1) a review of strategic documents that support decision-making for health research; (2) a series of stakeholder interviews; and (3) a rapid review of the literature that examined strategies to increase the use of evidence from research in population health policy and programs. The first two projects, the review of strategic documents and the stakeholder interviews, form the basis of this paper.^{5,6} The findings from the rapid literature review have been reported elsewhere.⁴ Three small-group discussions were held to refine complex aspects of the Strategy and, as a final step, the draft Strategy was circulated for broad consultation.

Review of strategic documents

A review of strategic health research documents was conducted by searching the websites of health departments of Australian states and territories and of other countries that have similar health care structures to Australia. Web searches were conducted using the search terms ‘strategic directions’, ‘framework’, ‘plan’, ‘public health research’, ‘population health research’ and ‘health care research’. Documents were considered eligible for inclusion if they: were from comparable countries; related to public health, population health or health research; and were recent

enough to be relevant to the NSW Strategy. Policy officers from the health departments of other jurisdictions were contacted to confirm whether they had a research plan and to ensure that current documents, including those from the grey literature, were included in the review.

Based on a preliminary analysis of the documents, an outline for the Strategy was prepared which covered advocacy for, the planning of, conducting, building capacity for, and using, population health research. The outline also proposed the inclusion of guidelines for researchers and users of research.

A detailed analysis of all the documents gathered was then conducted: their structure, content and terminology was summarised and systematically coded using the proposed headings in the Strategy outline. Additional themes not included in the outline were identified. The findings from this review, and input from the Advisory Committee, informed the second version of the Strategy outline that was used in the stakeholder interviews. This second Strategy outline also contained a draft vision, aim, objectives and key strategies.

Stakeholder interviews

A purposive selection process was used to include stakeholder groups in the interview process.⁷ Twelve people were selected for individual interviews based upon their role (policy maker, health service manager or researcher, at state or local level). Three group interviews were held, two with NSW Department of Health managers and one with senior population health representatives from NSW universities. Ethical approval for all interviews was obtained through the University of New South Wales and all participants signed a consent form prior to interview.

Each interview took between 30 and 60 minutes. Information was collected using a combination of non-directive and standardised open-ended questions. Questions focused on participants' experience of conducting and using research, structures and strategies to support research and its use in population health, and gathering feedback on the Strategy outline.

Themes from the interviews were coded by two investigators based on the propositions in the Strategy outline.⁷ Emerging themes and recurring patterns of interest were also identified and coded.⁸ Iterative analysis was used; that is, the data were examined, coded and compared until saturation was reached. In consultation with the Advisory Committee, the results of the stakeholder interviews and the rapid review of strategies to increase the use of evidence from research in population health policy and programs⁴ were used to develop a draft Strategy document, including a modified vision, aim, objectives and strategies, and with the inclusion of detailed actions to achieve the objectives.

Further group discussions were held to refine the sections on research priority setting, workforce development and fostering supportive organisational cultures.

Final consultation on the draft Strategy

The draft Strategy was circulated widely among a broad range of population health stakeholders in NSW (including those from the NSW Department of Health, local population health services, universities and non-government organisations) to confirm the face validity of the content of the Strategy. Limited modifications were made as a result of this final consultation.

Results

Review of strategic documents

The fifteen documents identified in the review had different formats: over half were strategies, five were plans, two were frameworks and one was a policy statement.^{9–23} Although the terminology used differed, the strategies and plans shared similar structures and included specific actions to achieve identified goals and objectives. The strategies were longer-term (e.g. 5 years), higher-level and had substantial implementation budgets. The plans were more operational and covered shorter time periods. The frameworks were promotional in nature and the policy statement identified issues and methods of implementing solutions. Only one document included guidelines (for research funders).

Most of the actions within the documents reflected the proposed content of the NSW Strategy. Similar themes included: identifying research priorities to focus research planning; workforce development and research infrastructure to build research capacity; and enhancing the use of research evidence in policy and practice through networks and partnerships. The approach to identifying research priorities varied from linking to state health priorities or prescribing priority research questions, to assessing priorities against set criteria and providing principles of effective priority setting. Additional themes included research leadership (not well elucidated in the documents), and research governance and ethics. None of the documents contained specific advocacy strategies.

Stakeholder interviews

Four major themes emerged from the analysis of the stakeholder interviews.

Theme 1 – Improving communication and sharing of information

A common issue was the need for improved communication about: research developments; funding opportunities; infrastructure assets and training opportunities. Communication across four dimensions was identified as

important: (1) from the NSW Department of Health to local health services, universities and external organisations; (2) between researchers; (3) between researchers and policy makers and practitioners; and (4) across the Centres in the Population Health Division.

Many participants referred to the value of formal networks for formulating and conducting research, seeking advice, offering encouragement, sharing and disseminating information, fostering collaborations, and identifying gaps in research.

Decision makers noted that time constraints precluded conducting comprehensive literature searches to inform policy or practice decisions. A facility that summarises and stores research findings in an easy-to-digest format was suggested. Reviews conducted by NSW Health-funded research centres were valued, but thought not to be widely known.

Increasing access to, and utilisation of, existing data sets was recommended to enhance a coordinated, cohesive approach to research within NSW.

Those external to the Department often heard about Departmental funding through informal networks. There was a general consensus that funding processes could be more consistent and transparent and that potential synergies between Centres in the Population Health Division regarding funding procedures should be explored.

Theme 2 – Developing partnerships

Strengthening partnerships was seen as an important element of the NSW Strategy, underpinning many of the other strategies in the document. Long-term programmatic engagement between researchers and policy makers and practitioners was seen as essential to enhance the quality and relevance of population health research in NSW and for effective use of evidence in policy and practice. Partnerships supporting joint research projects between NSW Health and local universities were highlighted as beneficial and desirable, however, challenges to development of these partnerships were also raised.

Research partnerships were seen as a way for local health services to conduct larger research projects, thus ensuring sufficient size, power and effect, and to provide support for less experienced researchers. Partnerships were also perceived to foster common understanding between NSW Health, affiliated organisations and local universities.

Theme 3 – Workforce development

Support and encouragement for conducting population health research varied considerably across NSW Health. Practitioners said they often had to conduct research alongside their full-time ‘day-to-day activities’ and felt

that research should be legitimised as part of the work of the Population Health Division and local population health services. The need for supportive policy and practice environments that value and use research evidence was emphasised.

Capacity building for several key groups in NSW was identified as important to improve population health research and its use, for example: NSW Health researchers at the state and local level require technical skills such as in mixed and complex research methods, biostatistics and epidemiology; policy makers and the population health workforce require broad research literacy to be able to use research evidence and consider appropriate evaluation techniques; and university researchers require support to undertake policy relevant research. Building collaborations with local universities and promoting opportunities to be involved in larger projects were identified as strategies for developing research skills.

Fellowships and scholarships were identified as valuable, cost-effective ways to: increase researcher capacity; strengthen links between NSW Health and universities; foster relevant research; and build the capacity of organisations to secure research funds. Mentorship for skills development and confidence building was not raised explicitly, but was implied through comments such as needing ‘support from other staff’ and ‘someone to go to’.

Theme 4 – Enhancing research and the use of research evidence

Population health research priorities were seen as an essential component of the Strategy to enhance the relevance of research and the use of research evidence. As research priorities will change over time, participants recommended the establishment of processes for identifying, updating and communicating priorities for NSW Health, rather than specifying priorities in the document.

Simplifying ethics procedures, particularly for low and negligible risk projects, was cited as a way to streamline research processes. Guidance on research governance was also sought, particularly in relation to accessing datasets and developing research partnerships.

Using knowledge brokers and establishing long-term, project-based relationships were acknowledged as approaches for bringing researchers, policy makers and practitioners together and assisting with processes of exchange and knowledge co-creation to support the use of research evidence in practice.

Comments from the final consultation and small group discussions of complex issues informed the final version of the Strategy document, summarised in Figure 1 and Table 1.

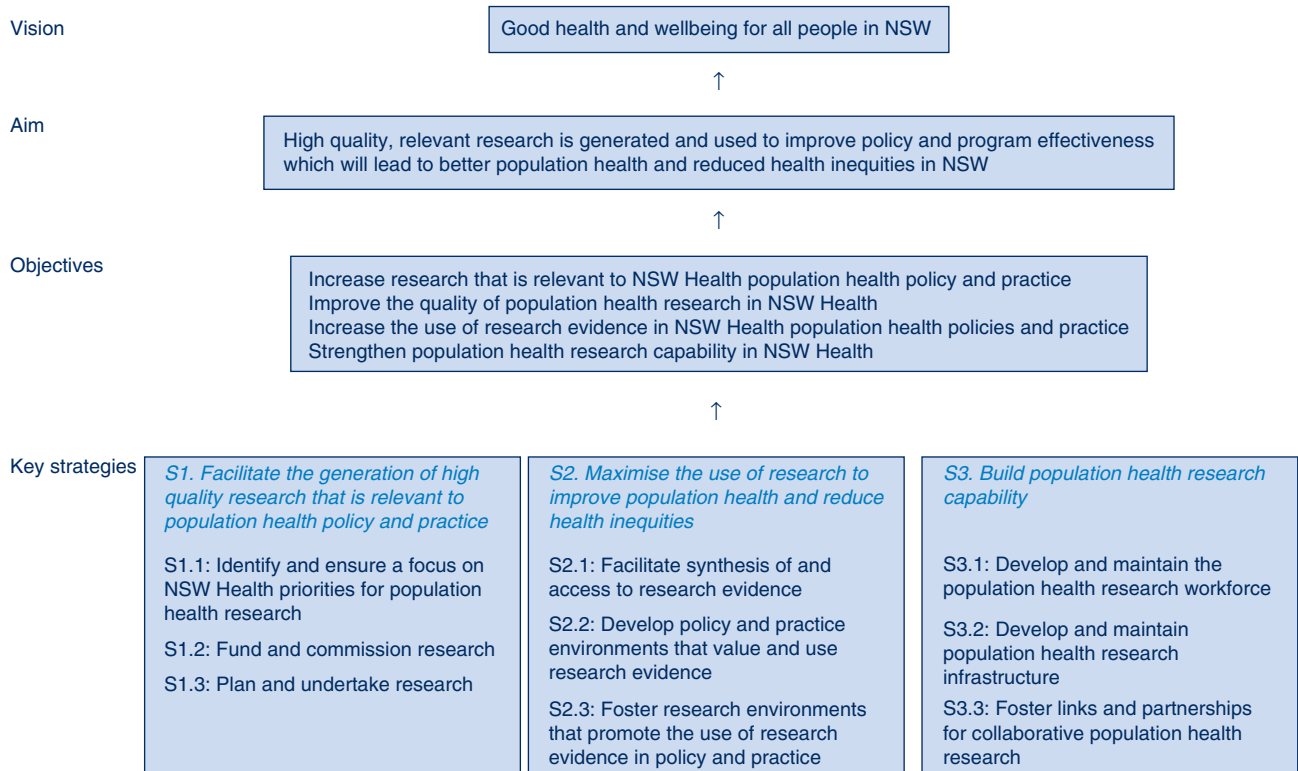


Figure 1. The Population Health Research Strategy framework.

Discussion

The review of strategic documents and stakeholder interviews contributed to shaping the structure and content of the NSW Strategy. The review confirmed that structuring the document as a longer-term strategy with specific actions was appropriate.

Encouragingly, the review endorsed the suggested content and focus of the Strategy, however some modifications were indicated. In the reviewed documents guidelines for research were rare, so for brevity a decision was made to remove guidelines from the NSW Strategy. Research governance and ethics, a common inclusion in the documents, was added to the Strategy while advocacy was removed as a separate action. Further, the review elucidated the multiple approaches used in other jurisdictions for identifying population health research priorities.

The stakeholder interviews were used to test the proposed content of the Strategy, a process recommended by Bridgeman and Davis (2004).²⁴ In particular, the importance of improved communication and information sharing was highlighted and is supported in the literature.^{4,25,26} Actions have been included in the Strategy to keep researchers, policy makers and practitioners informed of: population health research priorities; research funding opportunities; funded research and its use in policy and practice; research syntheses; networks and training

opportunities; data sets; infrastructure assets; and emerging research developments from within the Population Health Division.

Stakeholders frequently referred to the benefits of partnerships for research and the use of research evidence, a common theme in reviews of health research.^{27–29} Partnerships were seen to reduce the tendency for services to work in silos, particularly important during a period of health service reform.³⁰ Essential to many other strategies, partnerships were seen to have the strongest connection with building research capability. The Strategy therefore places partnerships within the capability-building frame and focuses on improving researcher–practitioner links, particularly with universities. Effective partnerships are also key inputs and outcomes of many of the other actions in the document.

Underpinning capability for research was an expressed need to legitimise research as a core function of state and local population health services, initially described as a deficit in *NSW Research: Prescription for Health*.²⁹ The Strategy itself will be an initial driver for raising the profile and importance of research in population health services and specific actions have been included to foster environments that support the generation and use of research.

In relation to setting research priorities for population health, the Strategy adopted the approach favoured by

Table 1. Strategies and actions at a glance ⁺⁺

<p>S1. Facilitate the generation of high quality research that is relevant to population health policy and practice</p>	<p>S2. Maximise the use of research to improve population health and reduce health inequities</p>	<p>S3. Build population health research capability</p>
<p>S1.1: Identify and ensure a focus on NSW Health priorities for population health research Establish and facilitate a process for identifying and updating population health research priorities for NSW Health Ensure that research funded and conducted by the PHD is aligned to identified NSW Health population health research priorities Ensure that identified population health research priorities are communicated to senior levels within the NSW Government Publish current NSW Health population health research priorities on the NSW DoH Research website</p>	<p>S2.1: Facilitate synthesis of and access to research evidence Develop a statement on publication of population health research funded or conducted by the PHD Consider mechanisms for the provision of editorial and publications assistance for PHD Centres Ensure that the use of existing NSW Health population health datasets promotes equity Establish mechanisms to ensure ready access to research findings and research syntheses</p>	<p>S3.1: Develop and maintain the population health research workforce Continue to administer current NSW Health training programs: the Biostatistical and Public Health Officer Training Programs* Establish the Aboriginal Population Health Training Initiative Establish a NSW Health population health research fellowship program Facilitate access for NSW Health staff to research training opportunities offered through external organisations Include local research personnel in research and evaluations relating to NSW Health statewide population health programs Support workforce development opportunities* Improve communication among NSW Health population health networks regarding research training opportunities Improve the use of technologies to ensure equity of access to research training opportunities</p>
<p>S1.2: Fund and commission research Ensure the use of evidence, evaluation and monitoring in relevant NSW DoH population health policies and programs Maintain the NSW DoH Population Health Research Group* Publish an outline of research funding opportunities available through the PHD on the NSW DoH Research website</p>	<p>S2.2: Develop policy and practice environments that value and use research evidence Encourage an organisational culture that supports the use of research evidence in policy and practice Develop a module on using research evidence in policy and practice for NSW DoH staff training programs Encourage and assist PHD Centres to establish knowledge broker functions within funded research centres Investigate the establishment of research indicators in the performance agreements of PHD Centre Directors and Directors of Population Health at the local level Strengthen researcher-practitioner engagement*</p>	<p>S3.2: Develop and maintain population health research infrastructure Continue to fund and periodically review current infrastructure programs and initiatives* Publish an outline of the major datasets held by the DoH on the NSW DoH Research website Publish an outline of the major infrastructure assets supported by the PHD on the NSW DoH Research website Publish a description of the work focus of PHD-funded organisations on the NSW DoH Research website</p>
<p>S1.3: Plan and undertake research Undertake priority research projects across the PHD and local population health services Support the implementation of the Research Governance Framework for NSW Health* Support the implementation of policies and procedures for ethical review and site authorisation of low and negligible risk research* Develop and implement a surveillance strategy Publish a list of population health research projects funded or conducted through the PHD on the NSW DoH Research website</p>	<p>S2.3: Foster research environments that promote the use of research evidence in policy and practice Ensure that all research funded and conducted through the PHD includes strategies for use of the research in policy and practice Encourage PHD-funded research centres to engage with policy makers and practitioners Include instances of use of research in policy and practice in the listing of PHD research projects on the NSW DoH Research website</p>	<p>S3.3: Foster links and partnerships for collaborative population health research Conduct negotiations with relevant universities regarding issues around population health research funding and partnerships Encourage collaboration with external organisations on NHMRC Partnership Grants, ARC Linkage Grants and other grant opportunities Strengthen collaboration and partnerships with those who are likely to be affected by research Continue to work with the Mental Health and Drug and Alcohol Office on preventive population health research initiatives* Hold a biennial research showcase Publish an organisational chart for the PHD and roles of PHD Centres and Branches on the NSW DoH Research website Publish a list of official networks supported by the PHD on the NSW DoH Research website Promote the NSW DoH Research website and relevant NSW population health research initiatives</p>
<p>⁺⁺ Actions to improve communication regarding population health research within NSW Health and with relevant agencies external to NSW Health form a large part of the program of work described in this Strategy. These actions are shaded in blue. *Indicates actions which are currently underway. PHD: Population Health Division of the NSW Department of Health. DoH: Department of Health. NHMRC: National Health and Medical Research Council. ARC: Australian Research Council.</p>		

stakeholders, that is, the establishment of a process for identification and dissemination of priorities.

Most of the other actions raised in the interviews have been incorporated into the Strategy and many of these are supported in the literature. For example, the value of knowledge brokerage services,³¹ success of fellowship programs in other jurisdictions,⁵ enhancing the capacity of the existing research workforce through networks and improved access to training opportunities^{26,32} and simplifying ethics procedures.³³

The actions in the Strategy are designed to be implemented within existing NSW Health funds, with a focus on managing current investment more strategically and working better with internal and external partners.

Conclusion

Review and stakeholder consultation processes used to formulate NSW Health's *Promoting the generation and effective use of population health research in NSW: a Strategy for NSW Health 2011–2015* refined ideas for actions to improve the generation and use of population health research within current budget allocations. These processes strengthened the relevance and comprehensiveness of the Strategy. The Population Health Division will facilitate implementation of the Strategy and report on progress and outcomes.

Promoting the generation and effective use of population health research in NSW: a strategy for NSW Health 2011–2015 is available from: <http://www.health.nsw.gov.au/resources>

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References

1. Banks G. Challenges of Evidence-Based Policy-Making. Australian Government Productivity Commission. Canberra: Commonwealth of Australia; 2009. Available from: <http://www.apsc.gov.au/publications09/evidencebasedpolicy.pdf> (Cited 4 March 2011.)
2. Productivity Commission. Strengthening Evidence-based Policy in the Australian Federation, Volume 2: Background Paper. Canberra: Productivity Commission; 2010.
3. Kitson A, Rycroft-Malone J, Harvey G, McCormack B, Seers K, Titchen A. Evaluating the successful implementation of evidence into practice using the PARIHS framework: theoretical and practical challenges. *Implement Sci* 2008; 3: 1. doi:10.1186/1748-5908-3-1
4. Moore G, Todd A, Redman S. Strategies to increase the use of evidence from research in population health policy and programs: a rapid review. November 2009. Available from the Centre for Epidemiology and Research, NSW Department of Health.
5. Biggs J. A review of strategic documents that support decision-making for population health research. February 2010. Available on request from the Centre for Epidemiology and Research, NSW Department of Health.
6. Biggs J. The results of stakeholder consultations to inform the development of the Strategic Directions for Population Health Research. March 2010. Available on request from the Centre for Epidemiology and Research, NSW Department of Health.
7. Patton MQ. Qualitative research and evaluation methods. 3rd ed. Thousand Oaks, CA: Sage Publications; 2002.
8. Burnard P. A method of analysing interview transcripts in qualitative research. *Nurse Educ Today* 1991; 11(6): 461–6. doi:10.1016/0260-6917(91)90009-Y
9. Canadian Institutes of Health Research. Health Research Roadmap: Creating innovative research for better health and health care: 2009/10–2013/14; 2009.
10. Government of South Australia, Department of Human Services. Research and Evaluation Framework: 2002–2005.
11. Government of South Australia, Department of Health. Strategic health research program. Research priorities: general health topics; 2007–2008.
12. Government of South Australia, Department of Health. Strategic health research program. Research priorities: health systems research; 2007–2008.
13. Health Protection Agency. Providing the Evidence Base for Public Health: The Health Protection Agency's Research Strategy 2005–10; 2005.
14. Health Research Council of New Zealand. HRC Strategic Plan 2008–2013; 2008.
15. NHS Department of Health, Research and Development Directorate. Best Research for Best Health: A new national health research strategy – the NHS contribution to health research in England; 2006.
16. NHS Department of Health. A Research and Development Strategy for Public Health; 2001.
17. Queensland Health. Queensland Health's Research and Development Plan; 2007–2010.
18. Queensland Health. Research for a healthier future: 2020. Health and Medical Research and Development Strategy; 2009.
19. Saskatchewan Health. Healthy People. A Healthy Province; 2004.
20. Scottish Executive. Prevention/Wellness: Research strategy for Health and Healthcare; 2003.
21. Victorian Government, Department of Human Services. Public Health Research Policy Statement: New knowledge for improved health; 2005.
22. Victorian Health Promotion Foundation. Lead, empower, support, connect. Victorian Health Promotion Foundation: Strategic Priorities; 2006–2009.
23. Welsh Assembly Government, Wales Office of Research and Development for Health and Social Care. A Health and Social Care Research and Development Strategic Framework for Wales: a consultation document; 2002.

24. Bridgeman P, Davis G. *The Australian Policy Handbook*. 3rd ed. Sydney: Allen and Unwin; 2004.
25. Straus S, Haynes RB. Managing evidence-based knowledge: the need for reliable, relevant and readable resources. *CMAJ* 2009; 180(9): 942–5. doi:10.1503/cmaj.081697
26. Van Wavé TW, Scrutchfield FD, Honoré PA. Recent Advances in Public Health Systems Research in the United States. *Annu Rev Public Health* 2010; 31: 283–95. doi:10.1146/annurev.publhealth.012809.103550
27. National Health and Medical Research Council. *Report of the Review of Public Health Research Funding in Australia*, December 2008. Canberra: Commonwealth of Australia; 2009.
28. National Health and Hospitals Reform Commission. *Beyond the Blame Game: Accountability and performance benchmarks for the next Australian Health Care Agreements*. Canberra: NHHRC; 2008.
29. NSW Government. *NSW Research: a Prescription for Health*. Report of a review commissioned by the Minister for Science and Medical Research, the Hon Frank Sartor MP. Sydney: NSW Government; 2004.
30. Australian Government. *A National Health and Hospitals Network for Australia's Future*. Australian Government; 2010.
31. Redman S, Jorm L, Haines M. Increasing the use of research in health policy: the Sax Institute model. *Australasian Epidemiologist* 2008; 15(3): 15–8.
32. Madden L, Salmon A. Public health workforce: results of a NSW statewide consultation on the development of the national public health workforce. *NSW Public Health Bull* 1999; 10(3): 19–21. doi:10.1071/NB99009
33. NSW Department of Health. *Improving ethical review and site authorisation processes in NSW: Action Plan*. Sydney: NSW Department of Health; 2009.