



**The National Nursing and
Nursing Education Taskforce**
N³ET

**Priorities for
Nursing and Midwifery Research
in Australia**

A report on Recommendation 8b of the
National Review of Nursing Education (2002)
Our Duty of Care Report

*Prepared by
Emeritus Professor Margaret Bennett*



Australian Health Ministers' Advisory Council

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The National Nursing and Nursing Education Taskforce (N³ET)

In November 2003, State/Territory and Australian Government Ministers for Education and Health announced the establishment of the National Nursing and Nursing Education Taskforce (N³ET/the Taskforce).

N³ET was established to implement and monitor 22 of the 36 recommendations of the National Review of Nursing Education 2002: *Our Duty of Care Report* (2002), along with work from three recent Australian Health Workforce Advisory Committee (AHWAC) nursing workforce reports: [The Critical Care Workforce in Australia 2001-2011](#) (2002), [The Midwifery Workforce in Australia 2002-2012](#) (2002), and [Australian Mental Health Nurse Supply, Recruitment and Retention](#) (2003), in addition to further work regarding nurse specialisation (see www.nnnet.gov.au).

N³ET brings together some of Australia's leading nursing and nursing education and training specialists who have been nominated for their leadership qualities and collective expertise. Members of the Taskforce are supported by a secretariat located within, and supported by, the Department of Human Services, Victoria.

The Taskforce is "committed to an enhanced and sustainable healthcare system through the promotion of professional visibility and pride, quality education, regulation to nationally-consistent standards, and capacity building in practice, education and research for nurses and midwives across Australia" (National Nursing and Nursing Education Taskforce, 2003).

The Taskforce has the following terms of reference:

- To consider and develop proposals for implementation of the recommendations of the National Review of Nursing Education referred to the Taskforce by the Australian Health Ministers' Conference (AHMC);
- To report to the AHMC, the Ministerial Council for Education Employment Training and Youth Affairs (MCEETYA) and the Australian National Training Authority Ministerial Council (ANTA MINCO) on implementation of the National Review of Nursing Education recommendations referred to the Taskforce;
- To consider and provide recommendations on any other nursing workforce or nursing education and training issues referred by the AHMC, such as AHWAC reports;
- To progress and report on implementation of recommendations on any other nursing workforce and nursing education and training issues approved by AHMC that are consistent with the Taskforce's priorities;
- To progress implementation of the above recommendations, including the development and execution of individual projects, under a work plan approved by AHMAC;
- To operate for two years, with continuation being subject to review by Health and Education and Training Ministers.

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List of Acronyms

AHMAC	Australian Health Ministers' Advisory Committee
AHMC	Australian Health Ministers' Conference
AHWAC	Australian Health Workforce Advisory Committee
AHWC	Australian Health Workforce Committee
AHWOC	Australian Health Workforce Officials Committee
AIHW	Australian Institute of Health and Welfare
ANF	Australian Nursing Federation
ANMC	Australian Nursing and Midwifery Council
APA	Australian Postgraduate Award
ARC	Australian Research Council
CDNM-ANZ	Council of Deans of Nursing and Midwifery – Australia and New Zealand
DEM	Direct entry midwives
DEST	Department of Education Science and Training (Commonwealth)
EBP	Evidence-based practice
HDR	Higher-degree research
HES	Higher-education sector
N ³ ET/the Taskforce	National Nursing and Nursing Education Taskforce
NHMRC	National Health and Medical Research Council
NHPAC	National Health Priority Action Council
NHPA	National Health Priority Areas
NICS	National Institute of Clinical Studies
NRP	National Research Priorities
RA	Regulatory authority (nursing and midwifery)
RAG	Research Advisory Group
RCNA	Royal College of Nursing Australia
RCT	Randomised Control Trial
RQF	Research Quality Framework
RTS	Research Training Scheme

Contents

Executive summary - N³ET	7
Priorities for nursing and midwifery research in Australia:	16
A report on the national consultation - by Emeritus Professor Margaret Bennett	16
1. Introduction	16
Purpose of the report	16
Background – <i>Our Duty of Care</i>	17
The N ³ ET approach to developing national research priorities	18
The broader context - Australian Government directions for research	20
2. The research capacity/capability/priority nexus	22
2.1 Priority 1 - Research in National Health Priority Areas	22
2.2 Priority 2 - Building critical mass	26
2.3 Priority 3 -	37
Growing generations of researchers	37
2.4 Priority 4 - Translating research into practice	44
3. Strategies for a national approach to nursing and midwifery research	51
3.1 Research centres	51
3.2 A group to drive the national research agenda	51
The way forward – N³ET	54
A broader strategy of building research capacity in the disciplines	54
References	57

Executive summary - N³ET

To ensure that the Australian public receives the best possible health care, practice-based disciplines like nursing and midwifery have a responsibility to generate sound research to demonstrate the efficacy of contemporary practice and to support changes in policy and practice. Resources for such research are limited and each discipline needs to ensure that it not only understands the national context of research, but also has established its own priorities to ensure a strong and viable longer-term research capacity.

Nationally-agreed research priorities provide high-level strategic direction to the disciplines, focusing research interest, effort and investment in areas that will have significant impact and positive outcomes for the Australian community.

Background

In 2005, the National Nursing and Nursing Education Taskforce embarked on a process to establish national research priorities for nursing and midwifery in Australia, as requested by Ministers. This was part of broader work by the Taskforce to implement Recommendation 8 of the National Review of Nursing Education (2002) *Our Duty of Care Report*. In approaching this task, the Taskforce has been mindful of a number of changes and developments in the health, education and research landscape since the *Our Duty of Care Report*, and particularly the increased focus on accountability for the quality and outcomes of publicly-funded research in Australia.

This work initially sought to set national priorities for nursing and midwifery research to provide a cohesive and agreed focus for developing nursing and midwifery research capacity and a guide to future investment in nursing and midwifery research activity. Through a process of national consultation, and given the changes to the landscape identified above, however, a different outcome was achieved.

Firstly, a clear picture emerged that nurses and midwives recognised that national research priorities within nursing and midwifery should be consistent with the national priorities for the health and well being of the Australian community. It has been ten years since the National Health Priority Areas initiative was agreed by Health Ministers, providing a significant focus for public attention and health policy. That nursing and midwifery recognise and endorse the importance of such policy, suggests a maturation of the disciplines that is noteworthy.

Secondly, four priorities for enhancing and building research capacity within nursing and midwifery were articulated and endorsed. Based on the experience of established disciplines and evident from the national consultation, there are two factors essential to the development of longer-term research capacity. Firstly, critical mass needs to be established and secondly, there needs to be integration of research findings into practice in all practice-based disciplines. These two factors are interdependent and therefore must both be achieved to ensure successful research in the priority areas.

This report represents the views of nurses, midwives, expert researchers in the field and other key stakeholders across Australia who have contributed to a national dialogue on research priorities for the future and identified the *Priorities for Nursing and Midwifery Research in Australia*. These priorities will provide many opportunities for nurses and midwives to build and contribute to the collective research expertise and therefore will influence future directions in health care and service delivery.

Method for developing National Research Priorities

A number of different approaches were used to explore research priorities for nurses and midwives, and issues related to the longer-term capacity of nursing and midwifery research. Stakeholders included nurses and midwives, nursing and midwifery researchers and academics, representatives from industrial and professional organisations and consumer representatives.

These approaches included:

- A literature search focused on topics relating to research priorities, culture of research, research utilisation, building research capacity, and other related areas.

- A series of forums was conducted nationally to gather input on national nursing and midwifery research priorities, building longer-term research capacity and the dissemination and utilisation of research findings.
- The forums were augmented by a focus group conducted with research leaders from eight universities, which focused on clarifying and developing a more-detailed understanding of issues raised in the consultation forums and the literature.
- The websites of all public universities that have a nursing and midwifery presence were accessed to build a comprehensive picture of current nursing and midwifery research. Various government sites were accessed for information about directions of research, research funding and other relevant information about priorities. In addition, professional nursing organisations were accessed for information, such as priorities established, scholarships and funding offered for nursing and midwifery research.
- Further work was undertaken concurrently by N³ET to profile the nursing and midwifery research training capacity of Australian universities.

Priorities of Nursing and Midwifery Research in Australia

Four *Priorities of Nursing and Midwifery Research in Australia* were identified and endorsed through a process of national consultation and debate with stakeholders during 2005.

Priority 1	Contributing to research in National Health Priority Areas
Priority 2	Developing a research critical mass
Priority 3	Growing generations of researchers
Priority 4	Translating research into practice

These principles, and some of the key points arising from the national dialogue that support the principles, are discussed in the following sections.

Priority 1 – Contributing to research in National Health Priority Areas

For the past decade, the National Health Priority Areas (NHPA) initiative has provided a significant focus for national efforts to reduce the burden on illness in the community. The process engages the collective efforts of the Commonwealth, State and Territory Governments. At present, the national health priorities focus on health issues such as cancer control, injury prevention and control, cardiovascular health, diabetes mellitus, mental health, asthma, and arthritis and musculoskeletal conditions.

The NHPA approach is further strengthened by the National Research Priorities (NRP), announced by the Prime Minister in 2003. One of the four NRPs, *Promoting and Maintaining Good Health*, encompasses four goals for research - ***A healthy start to life; Ageing well, ageing productively; Preventive healthcare*** and ***Strengthening Australia's social and economic fabric***, that overlap and interweave with the NHPA. The aims of the NRP include promoting health and preventing disease through a more-focused, collaborative effort and drawing on multidisciplinary approaches that include research contributions from the social sciences and humanities.

As research activity does not occur in a vacuum, there was clear agreement from the stakeholders in this project that the national priorities for nursing and midwifery research need to align with the current national directions of research in health, and more broadly.

Available resources for publicly-funded research in Australia are limited and the allocation of, and accountability for, such funding has been a matter of recent consideration. There is a growing community expectation that publicly-funded research activity benefits the Australian public and that there is value from the funds provided. Government research and health priorities provide clear direction about the interests of the Australian community, which applies across the board to all health disciplines.

Nursing and midwifery research targeted at these national priorities can have an important impact on the health and wellbeing of the broader Australian population. This does not mean that research cannot or should not continue across the spectrum of health care where nurses and midwives practice, or that they should not pursue many and varied research interests and priorities. It is appropriate that research continues in all these dimensions, so that the body of knowledge about health issues and how best to manage them, is continually expanding and remains contemporary and relevant.

Priority 2 - Developing a research critical mass

Building critical mass

Building critical mass is crucial to the development of longer-term research capacity in nursing and midwifery. Critical mass is more likely to emerge from a positive research culture, not only in the clinical area, but also in the academy. A critical mass is achieved where there are a number of researchers – experts, newer researchers and trainees, whose attention is focused on a particular area of research. Expert researchers are gathered together and newer and trainee researchers can be “grown” for the future.

Critical mass enhances continuity, coherence and methodological development in particular areas of research. The research undertaken is more likely to be substantive, relevant, of high quality and have impact on practice and policy. This will contribute to a health system that meets not only the needs of all Australians in terms of health and well-being, but also is at the cutting edge internationally.

Research is further enhanced when researchers with established track records within nursing and midwifery and from different disciplines, work together through networks, partnerships and collaborations, locally, nationally and internationally. This enables researchers to incrementally build a body of knowledge by looking at issues at different sites, with different methods and different foci.

Critical mass and research productivity are more likely to be built up when the research is consistent with government directions (as governments are key sources of funding), when it is within a positive culture in the clinical area and the academy, where expertise is built up and recognised, and where there are strong programs or clusters of research activity.

Getting smart with research funding

Funding for research is a critical link in building research activity. In Australia, unlike the USA, Canada and the UK, dedicated funding from government to build critical mass and therefore longer-term research capacity has not been allocated to nursing and midwifery through dedicated funding. Instead, nurses and midwives seek funding through competitive funding sources.

From the funding data collected for this report, it is clear that nursing and midwifery researchers have successfully accessed many and varied funding sources, but that the amount of funding, although substantial, is confined to a minority of nursing and midwifery researchers and is still relatively small compared to other disciplines.

Not only do individual researchers need to access funding, but the nursing and midwifery disciplines also need to become more attractive to the key funding bodies. More funding to the disciplines depends on well-established researchers, nursing and midwifery leaders and professional organisations working together on a national research agenda. In a competitive research funding environment, success with funding is more likely when the researcher has a successful track record, not only in the technical aspects of research, but in communicating the results and impacting on policy and practice.

There are a number of strategies for building funding success for both the novice and the expert researcher:

- Have current knowledge of the various funding sources open for nursing and midwifery researchers;
- Match research to the priorities of the funding source. Either choose an area or issue for research that matches the funding source, or choose a funding source that matches the area or issue chosen;

- Become familiar with the purpose and processes of funding for each source, so that grants may be written that are relevant to that source of funding;
- Develop skills in writing successful grant applications;
- Sell the value of the research to the funding source and convince the funding source of the importance of nursing and midwifery research. Too often, nursing and midwifery research misses out on funding, because others are not made aware of the importance and significance of the research;
- Partner with researchers or join research teams with an established track record. When linked with an expert researcher, or as part of a strong research team, trainee or early-career researchers have more success in attracting funding by association;
- Build partnerships and links with the clinical area, or other industry bodies or governments, as this enhances the scope of funding options that are available.

Programmed research

The building of critical mass is dependent on having strong research programs headed by those who are “experts” and leaders in their field. Critical mass can more easily be established from within a clear-cut program or cluster of research. Successful research programs take years to become established and to be sustainable. There are promising indications that nursing and midwifery research units are developing such programs, but compared to more-established disciplines, they would seem to be at a stage of evolution, rather than full development.

Factors which contribute to the success of programs of research:

- Research activities centre on a major theme that is broad enough to attract sufficient funding and research students, but specific enough to allow researchers to develop track records and provide evidence of research productivity and impact.
- The research team includes experienced researchers, early-career researchers and students. This provides many benefits for members of the research team, such as a pooling of knowledge, skills and resources, mentoring, especially in the skills of publication and grant writing, and an enhanced working environment. As a result, research trainees and newer researchers are able to develop their skills in a supporting and guiding environment.
- Many programs commence with partnerships with industry or other research centres. Successful programs are those that establish networks, partnerships and undertake collaborative ventures, not only within the profession, but with other disciplines as well.
- Collaborative agreements are made in relation to funding distribution to ensure equity of research quantum and case-mix funding, as far as possible. Agreements between researchers are in place as to the order of authorship for published work, to ensure that newer researchers can successfully establish a track record.
- Funding from a range of sources, including small and large grants, and student scholarships, contributes directly to the success of programs of research.
- Programs are developed to support and foster skills in funding applications, research reports and publications.

Priority 3 - Growing generations of researchers

Research, practice and teaching are inextricably intertwined, as much in the academic setting as they are in the clinical area, not only at undergraduate, but also at postgraduate and postdoctoral levels. Critical mass depends on having expert researchers to attract others to the area and to grow the next generation of researchers.

Research expertise does not occur without considerable effort and resources and needs to be grown within the disciplines. There are many factors that facilitate the development of expertise. Within a strongly-positive research culture in nursing and midwifery, expertise can be grown in three phases – research training, establishing a track record and being recognised as an expert in the field. Being recognised as an expert by colleagues, other disciplines, government and other organisations is essential if nursing and midwifery researchers are to build a longer-term capacity through the development of critical mass. Experts ensure that nursing and midwifery research will make a significant impact on the future health of Australian citizens.

Research training

Where there is a strong research culture in the academic and associated clinical areas, those involved in research at all levels make a positive contribution to the teaching of research. This not only enhances the building of track records, but also shows that value is placed on nursing and midwifery research in practice and policy through the application of evidence. This influences the culture in both clinical and academic areas.

There are risks involved for practice-based disciplines such as nursing and midwifery, in pursuing a path of teaching without research. There is no doubt about the importance of nursing and midwifery services to the health and well-being of the Australian community. However, practice needs to be based on the best available evidence and such evidence can neither be acquired nor applied, unless there is a strong focus on the triad of teaching, research and practice.

Research Training Pathway

Following initial registration, limited opportunities appear to be offered by health service providers to new graduate nurses and midwives for flexible or part-time employment to complete an honours program. The honours student may need to consider other options, such as seeking employment in an area outside the clinical field, not completing a graduate transition program, or deferring the research career and undertaking full-time employment in the clinical area. If the latter path is chosen, the decision to return to a research career path tends to be made only if there is some guarantee of financial security. One solution is for governments and employers to extend support to honours programs that are combined with graduate transition programs.

Financial support

Funding for nursing and midwifery research may come from a variety of sources, both public and private. However, universities, and professional colleges and organisations, are two groups that figure prominently.

Where the actual or potential for quality nursing and midwifery research is strong, universities may make a commitment to grow researchers by:

- providing funds for scholarships;
- furnishing the necessary infrastructure for research trainees;
- facilitating successful access to prestigious scholarships; or
- facilitating employment, either in the academic area or in partnership with industry.

Currently, a number of scholarships are offered through professional colleges and organisations. Some of these are substantial, but may not provide the prestige necessary to build track record in a broader competitive market place. There is a case for professional organisations to strategically examine their scholarships and study grants and to award nationally-competitive prestigious scholarships to talented researchers. Such awards would not only facilitate financial security, but would also enhance the growth towards expert status and contribution to the research capacity of the university. Whilst this approach needs to be balanced against the desire to support novice researchers, it is worthy of further attention.

Supervision

Access to research training places is dependent in part, on the university's capacity to provide supervision and support to higher-degree research students. Ideally, there should be expert researchers available as supervisors for nursing and midwifery research trainees in their area of choice. If this is not the case, then such expertise must be either bought or sought.

There are difficulties in establishing the conditions of co-supervision, especially where each university is competing for the funding associated with doctoral candidates. However, such arrangements can be and have been made for the benefit of both the candidate and the university.

Universities produce significant numbers of their own high-quality supervisors through viable research-training programs and quality management processes. Nursing and midwifery leaders in academia have to put forward strong cases for being included as an integral part of training and development solutions.

Development of a track record

Research training marks the beginning of the long road to establishing a track record, whereby the researcher successfully undertakes funded research projects and publishes the results effectively. With a good track record, the researcher is closer to expert status and can attract and nurture both trainee and new researchers. The researcher can also then acquire funding from a wide variety of sources and engender interest in partnerships with other nursing and midwifery researchers, and researchers from other disciplines, locally, nationally and internationally.

Although many of the current research experts have had a long hard battle to achieve a track record, there is no doubt that being part of a critical mass hastens this process. There are a number of factors which influence the building of a track record, such as a commitment by the researcher to become an expert in a chosen area, and the selection of research topics which have the potential to attract funding, in particular those in line with current government directions for research priorities.

Mentoring

Mentoring tends to be available when the research trainee is part of a strong team, involved in programmatic research. Such mentoring is of importance, not only during the doctoral, but also the postdoctoral phase of research training. Currently, there are few opportunities for true postdoctoral work within nursing and midwifery, unless it is as part of a research centre or a very strong research program or cluster. The amount of expertise and therefore available mentors is limited. Trainees have been required to work in areas that are not necessarily related to their area of interest and at times in another discipline. This is an area that nursing and midwifery need to address at a national level.

Recognising research expertise

Moving from the establishment of a good track record to being recognised as an expert also takes considerable effort, personal investment and commitment.

There are nurses and midwives in Australia who have reached expert status as researchers. For all of them, it has taken significant time, energy and the ability to seize opportunities, especially when unsuccessful with a particular funding source. It has required a focus on a particular area and team building, including the “growing” of new and beginning researchers within and outside the discipline. It has also meant reaching out to others, nationally and internationally, to further develop research interest areas with different groups and cultures and, where necessary, it has involved moving to other settings where the research can best be developed.

Priority 4 - Translating research into practice

To optimise the efficacy of health services, it is imperative that there is integration of research findings into practice in all practice-based disciplines. To enhance practice and policy and to be consistent with government directions, translation of research findings into practice is a matter of priority for nursing and midwifery research.

Research has its most profound impact when it informs changes to policy and practice, which in turn impacts on health outcomes for individuals and communities. Within nursing and midwifery, the importance of translation of research findings into practice has been the focus of ongoing national and international debate, and it is widely recognised within nursing and midwifery as an area that requires strengthening.

This report draws on both the literature and the national consultations to map out a number of factors and strategies that have been successful in increasing research translation into practice.

The research user

Research findings are utilised at all levels of health service: by practitioners (not only nurses and midwives) at the clinical interface; by managers and executives involved in managing clinical risk and developing organisational policies and procedures; by academics in professional education and training; and in developing and informing local or national government health policy and strategies.

A major group of consumers of nursing and midwifery research are located in clinical services and include nurses and midwives themselves. At this level, positive attitudes and skills as research users are essential for successful translation of research findings into practice. A number of factors influence the development and cultivation of attitudes and skills of nursing and midwifery research users. These include:

- Individual and organisational commitment to evidence-based practice (EBP), evidenced by informed research users who use research to evaluate and inform practice change;
- A positive research culture, both at the service delivery and organisational levels, where research is represented as an integral part of the role of nurses and midwives;
- An on-going commitment to and support by individuals and organisations to the translation of research findings through such measures as clinical supervision, resources and access to research and EBP databases;
- Pre and post-registration programs for nurses and midwives that reflect and harness the value of research.

The research culture

Central to the effective translation of research findings into practice lies the research culture of the organisation. The value of research and research activity needs to be embraced both by health service providers and universities. Where research is valued and seen as an integral part of the role of the research user, and where the necessary skills and attitudes are developed in the undergraduate phase of learning, research findings are more likely to be applied to practice.

Health services have a responsibility for focusing the direction of research activity and providing the necessary resources for its implementation. A positive research culture should filter through all levels of the organisation from management, where executive sponsorship and commitment are the building blocks of the culture, right through to the grassroots of the organisation.

Links between researchers and research users are crucial. Researchers with academic links, such as students, clinical chairs, research centres and teams, and academics, undertake a large proportion, but not all, research by nurses and midwives. Therefore, the research culture within universities is critical to fostering research activity and translation of research into practice, requiring dedication of resources and organisational support for researchers and research programs.

Environment, organisational structure, management and research leadership enable individuals to grow and develop, to support each other and to reach out to other areas and the wider community as they translate research findings into practice to provide the best available service to the Australian community.

Credibility of the research

In order to apply evidence to practice, the research itself must be credible and accessible to research users. For the results of research to be translated to practice, there needs to be confidence in the research findings. Nursing and midwifery have challenges to meet in relation to the evidence used to change practice. In particular, the type of research methods used to address research concerns and access to systematic reviews of research literature require attention.

The Way Forward

Nurses and midwives comprise the bulk of the health care service, and their potential contribution to the health of the Australian community is great. The current success in nursing and midwifery research has been achieved in the absence of separate government funding, which other developed countries have enjoyed. The absence of a national agenda for the longer-term capacity of quality nursing and midwifery research has similarly affected the development of nursing and midwifery research.

For nursing and midwifery research to respond to government direction and ensure that it receives the necessary support from competitive funding bodies, four priorities for enhancing and building research capacity within nursing and midwifery, namely, contributing to research in National Priority Areas, developing critical mass, smarter access to funding and effective translation of research findings into practice and policy, have been endorsed as a result of the national consultation process.

Importantly, these priorities would form the foundation of a broader national strategy aimed at building viable longer-term research capacity in the nursing and midwifery disciplines.

A national strategic direction

At a policy level, a number of initiatives need to be set in place to support the disciplines of nursing and midwifery in developing a national research capacity to address issues of importance to Australian health care. In order to best achieve the goal of increasing research capacity, a national strategy that is multifaceted, draws on collaboration and creates a synergy between the disciplines, key researchers, the university sector, the health sector and governments is required.

Leadership

Strong and focused leadership is needed to drive a national strategy for nursing and midwifery research and to provide high-level coordination and evaluation of arms of activity targeted at enhancing research capacity in the nursing and midwifery disciplines.

The recently-established Research Advisory Group, whose membership consists of leading nursing and midwifery researchers from across Australia and New Zealand, will assume responsibility for research leadership in response to the Australian Government's Research Quality Framework and New Zealand's Performance-Based Research Fund. This group is well positioned to take carriage of the broader national agenda for nursing and midwifery research, to consult with the research community within and beyond the university sector, and to speak on behalf of the disciplines on matters related to research priorities, research training and measures to support research capacity building in the future.

Collaboration, consultation and communication

A strategic direction would necessarily include consulting and communicating with nurses and midwives, the university sector and their professional organisations, the health sector/employers and governments in the development of a long-term strategic plan aimed at building research capacity targeting nurses and midwives. This would include working collaboratively to develop, recognise and reward roles for clinical research nurses and midwives, and to develop national leadership programs with the capacity to support a national network of researchers.

A program for building research capacity through research training

Sustainable growth in critical mass is inextricably linked to growth in research training (National Nursing and Nursing Education Taskforce, 2006) and requires a methodology for establishing and evaluating progress towards the target proportion of all nurses and midwives who require higher-degrees by research, to ensure the disciplines' capacity to support the clinical research needs of nurses and midwives.

A coordinated approach is also required to monitor and evaluate the outcomes and impact of the RQF on research training for the nursing and midwifery disciplines, and for engaging with the ongoing evaluation and development processes for the RQF at a national level. A pool of higher-degree research training candidates needs to be cultivated, support must be harnessed for higher-degree research training and research supervision capacity developed.

Support for nursing and midwifery research

Employers and health service providers stand to benefit from the findings of nursing and midwifery research, especially where research targets identified clinical issues and results in improved outcomes for patients and organisations. There is an opportunity for health service providers to strengthen commitment to research by providing grants and scholarships to employees for higher-degree research training, by providing training opportunities linked to larger service-based programs of research, by developing linkages with universities and other industry partners where research is across multiple sites, and by providing resources to support research activities and EBP.

An agreed focus

The priorities identified in this document have been based on wide and inclusive consultation of the nursing and midwifery community. They will provide a foundation for the Research Advisory Group and other groups to respond to the current imperative to improve the health of Australians by aligning with national research efforts and through building a stronger research capability within the nursing and midwifery disciplines.

It is only through building research capacity that the nursing and midwifery disciplines will be able to respond to national directions in health and research and thereby contribute to improving management of health conditions and service delivery in the Australian and international context.

Priorities for nursing and midwifery research in Australia:

A report on the national consultation - by Emeritus Professor Margaret Bennett

1. Introduction

To ensure that the Australian public receives the best possible health care, practice-based disciplines like nursing and midwifery have a responsibility to generate strong evidence by sound research to demonstrate the efficacy of contemporary practice and to support changes to policy and practice. Resources for such research are limited, and each discipline needs to ensure that it not only understands the national context of research, but also has established its own priorities to ensure a strong and viable longer-term research capacity in a changing milieu.

In 2005, the National Nursing and Nursing Education Taskforce (N³ET/the Taskforce) embarked on a process to establish national research priorities for nurses and midwives in Australia. This was part of the work by the Taskforce to implement recommendations referred by Health Ministers from the National Review of Nursing Education (2002), *Our Duty of Care Report*ⁱ and additional work referred by the Australian Health Minister's Advisory Committee (AHMAC) relating to two Australian Health Workforce Committee (AHWC) reports about the critical care nursing and midwifery workforce.ⁱⁱ

This work initially sought to develop nationally-agreed research priorities to provide high-level strategic direction to the nursing and midwifery disciplines, focusing research interest, effort and investment in areas that will have significant impact and positive outcomes for the health of the Australian community.

Through a process of national consultation and inquiry, a different outcome was achieved. Firstly, a clear picture emerged that nurses and midwives recognised that national research priorities for nursing and midwifery should be consistent with the national priorities for the health and well being of the Australian community. Nurses and midwives voiced their commitment to contributing to the national research effort under the rubric of national research and health priorities, and envisaged many opportunities for nurses and midwives to contribute to growing the collective research acumen and to influencing future directions in health care and service delivery.

Secondly, nurses and midwives highlighted the critical link between research capacity in the disciplines and their ability to contribute to the national health and research agenda. Rather than identifying areas of research priority unique to nursing and midwifery, four priorities for enhancing and building research capacity within nursing and midwifery were articulated and endorsed.

As with many aspects of the Taskforce's work, the stakeholders did not always agree on the way forward or where to commit resources for maximum benefit. Therefore, it is important from the start to acknowledge this report is *not* proposing that by adopting National Priorities for Nursing and Midwifery Research, research cannot or should not continue across the spectrum of health care where nurses and midwives practice. To the contrary, it *is* appropriate that many and varied research interests and priorities are pursued, so that the body of knowledge about health issues and how best to manage them is continually expanding and remains contemporary and relevant.

Purpose of the report

Broad consultation and extensive research was undertaken to inform the research priorities presented in this report, and there was a great deal of interest and engagement with the process from the nursing and midwifery community¹. This report is necessarily a summation of the process and findings.

The following section provides an overview of the process that was used to develop national priorities for nursing and midwifery research. Section 2 provides a synthesis of the findings of the consultation and background research to underpin the four high-level national *Priorities for Nursing and Midwifery Research in Australia* to guide investment in research and building research capacity,

¹ More detailed explanation to underpin the sections of this paper can be found in a series of background papers on Building critical mass; Translating research into practice; Where does success lie with funding?; and Getting smart about funding. These papers are available from the N³ET website at www.nnet.gov.au

in and by the disciplines in the future. Attention has been given throughout the sections of the report to representing the views of nurses, midwives and other key stakeholders across Australia who have contributed to the national dialogue on research priorities and building research capacity.

It would not be unreasonable to conclude that the research priorities identified in this report echo a mantra in nursing and midwifery that has resounded for more than 30 years. It is a point to ponder; why when research is so important to the life and development of a profession, has it been so challenging to build research capacity in the disciplines? Section 3 of the report addresses these concerns by proposing a strategic approach at a national level to move this agenda forward, and proposes where the responsibility might rest for leading and coordinating such a national effort.

Background – Our Duty of Care

It is acknowledged globally, that research effort begins to expand when a discipline is transferred to the higher-education sector (HES) (Simmons & Henderson, 1964;ⁱⁱⁱ Borbasi et. al. 2002).^{iv} In Australia, the move for nursing began in the 1970s, the decision to transfer all pre-registration nursing programs was made in 1984 and the process was completed in the 1990s. Post-registration education has followed a similar path so that now most post-registration specialty and further education programs are carried out in the HES. Over the relatively short time that nursing and midwifery have been in the HES, an impressive research culture has been building.

Despite this, literature reviews undertaken in the preliminary stages of the National Review of Nursing Education (2002) indicated that research productivity by nurses (and midwives) in Australia was considered to be disproportionate to the size of the nursing workforce and the effect of nursing interventions on the quality and effectiveness of health services. It was also considered that nursing research fares poorly across funding sources and that this is a contributing factor to the lack of published research by Australian nurses and midwives².

Our Duty of Care posed a number of measures to build research capacity in nursing and midwifery, and recommended:

1. *Particular priority should be given to building longer-term capacity and integration of research findings into practice.*
2. *Priority areas might include evidence-based practice, aged care, work organisation, mental health nursing and nursing in rural and remote areas.*

Recommendation 8b Our Duty of Care

The Health Ministers support this direction in principle and referred the work to the Taskforce to progress, taking into account the outcomes of the Australian Government's Higher Education Review, which was in progress during the same timeframe.

In addition, in the context of this work, N³ET was directed by the AHMAC to consider recommendations made by two Australian Health Workforce Advisory Committee (AHWAC) reports (below) including:

The Midwifery Workforce in Australia 2002-2012 (2002)

Recommendation 4

In order to benefit future workforce planning, the AHMAC should consider the establishment of a national longitudinal research study that tracks a series of cohorts of midwives over a period of time to examine their workforce participation and organisational behaviours. The cohorts should include midwives from a range of educational backgrounds, such as those completing midwifery courses, having already obtained their nursing degrees and those completing Bachelor of Midwifery courses.

² *The National Review of Nursing Education (2002) Our Duty of Care Report uses the terms nurse and nursing to refer to enrolled nurses (ENs or Registered Nurses Division 2 in Victoria), registered nurses and midwives "in whatever capacity they are employed within health, eg. clinical practice, education, management and administration, research, quality, risk management, change management and projects, and government and policy" (p.47).*

The Taskforce has been cautious in its response to the recommendations from Our Duty of Care, to acknowledge that midwifery is recognised as a distinct professional group within the regulatory frameworks of several jurisdictions.

The Critical Care Workforce in Australia 2001-2011 (2002)

Recommendation 3

The AHMAC coordinates improvements to critical care nurse data collection and overall nurse data collections, noting that reliable, timely data is essential to workforce planning, noting that the following measures are required (only one of which is relevant to research directly)...

- *Research to measure the relationship between critical care nurse staffing levels (and skill mix) and patient outcomes.*

The N³ET approach to developing national research priorities

In approaching the challenge of developing national research priorities, the Taskforce was aware of the time elapsed between the Ministers' response to the *Our Duty of Care Report* and establishing of the Taskforce to carry the recommendations forward. Research by its very nature is innovative and pro-active, therefore it was determined that the work be complemented by a contemporary understanding of research capacity and capability within the disciplines and the broader impact of nursing and midwifery research on professional practice, health outcomes and policy.

This involved consultation with key researchers (above) and funding organisations, as well as a review of information in the public domain. While the original intention of this activity was to build a comprehensive profile of current nursing and midwifery research and capability, this has proved too challenging and beyond the scope and resources of the project. This is largely as a result of the lack of information regarding research by independent researchers and service providers in the public domain.³

It is recognised that at present, academic and career researchers with university affiliations generate the bulk of nursing and midwifery research, particularly with respect to publicly-funded research. Hence, for the purpose of this project, the profile of nursing and midwifery research has been limited to research (and particularly funded research) generated by academic researchers, university research institutes and programs, and researchers with university affiliations. At the time of this project there were 32 public universities providing educational programs for nurses and midwives across Australia (although not all provided postgraduate research training programs) that were invited to contribute to the research profile.

It should however be acknowledged that independent researchers or those with professional organisations and health services also generate significant and important research and are successful in gaining funding through various public and private sources. Their contribution to the collective research acumen is invaluable, even though it is not featured in this report. At best, the nursing and midwifery profile is indicative, providing a snapshot at one point in time of research achievements, interests, capacity and capability. What is remarkable is the amount of growth in research activity in the disciplines and growing successes in funding, which indicate a sturdy foundation on which to build.

National consultation

National research priorities for nurses (and midwives) have been developed in several other countries, and these have been used to guide investment in research activity over a period of time. The development process in each case has involved consultation with the profession and particularly with key researcher leaders in the discipline, and has drawn on identified health priorities as a framework for developing more focused priorities for the disciplines.

The Taskforce resolved that a national consultation in Australia should engage nursing and midwifery leaders, and should also provide opportunities for a range of interested stakeholders to participate in the process and contribute to the national debate.

To achieve this level of involvement (within the limited budget identified for this work), a broad and inclusive consultation process was used which involved a national forums series, a focus group and consultations with key organisations, researcher leaders and universities.

³ *The research profile is discussed in greater detail in the background document "Where does success lie with funding?" available from the N³ET website at www.nnnet.gov.au*

The national forums series⁴ was conducted and hosted by the State and Territory Chief Nurses (Principal Nurse Advisers), who worked with the Taskforce to organise and promote the consultation process. The forums were part of the State and Territory Health and Education Forums established under Recommendation 3 from the *Our Duty of Care Report*.

Attendees at the forums included nurses and midwives from across the spectrum of health services and settings where nurses work, nursing and midwifery researchers and academics, consumer representatives, representatives from government and policy areas, industrial and professional organisations and consumer representatives.

The purpose of the forums was to bring the broad range of stakeholders together to discuss and share their views on:

- National nursing and midwifery research priorities;
- Building longer-term research capacity; and
- Dissemination and utilisation of research findings.

Information from the forums was augmented by a focus group conducted with research leaders from eight universities, which focused on clarifying and developing a more-detailed understanding of issues raised in the State/Territory forums and the literature.

Further, the views of a number of key people and groups were sought to broaden and deepen the information gained from the forums. Such consultation occurred in person, by telephone or by e-mail and included interviews with individuals from professional organisations, including specialist and professional colleges, and a variety of individuals holding key positions in research, not only in Australia, but also the UK and Scotland. Interviews were also conducted with nurses and midwives holding positions on committees of the key funding organisations. A variety of topics were pursued with these individuals, including the issue of national nursing and midwifery research priorities (NNMRP), how longer-term capacity was being built up and a national research agenda.

In its early stages, the consultation and investigation focused on identifying priorities or areas for further development of nursing and midwifery research capability in the future. However, the consultations quickly established that the primary concern for the disciplines linked *what* to research with *how* to develop the capacity and capability to effectively and successfully undertake research in identified priority areas. Hence the consultation process has shaped the high priorities for nursing and midwifery research that are the product of this process.

Literature review

The volumes and final report of The National Review of Nursing Education provided the foundational literature review on this topic. However, in recognition of the time elapsed between the publication of the Review and the project to develop national priorities, the Taskforce undertook a “gap” analysis of the literature and web-based information focusing on topics relating to development methodologies, research priorities, culture of research, research utilisation, building research capacity and other related areas.

The websites of Australian universities that have a nursing and midwifery presence were accessed for information related to:

- Identified research strengths/programs/clusters of research;
- Information about funded research for 2004 – 2005; namely who was undertaking it, the title of the project, the source and amount of the funding, and if it was single or multidisciplinary.

Various government web sites were also accessed for information about research directions and priorities, research funding and other relevant information about priorities. In addition, professional nursing organisations’ web sites were audited for information regarding research priorities, scholarships and funding offered to support nursing and midwifery research activity.

⁴ Forums were held in all jurisdictions except Victoria, where a discussion group was conducted as part of a collaborative research forum hosted jointly by Monash University, the Australian Catholic University and Victoria University.

A note on the process

The work to develop national priorities for nursing and midwifery research proceeded in tandem with a complementary project examining research training for nurses and midwives in Australia. Recommendation 8(a) of the National Review of Nursing Education (2002) *Our Duty of Care Report* focuses on building research capacity in the nursing and midwifery disciplines through Commonwealth support for higher-degree research training. The National Review of Nursing Education recommended that immediate steps be taken to ensure that the level of postgraduate research scholarships and research training places for nurses are at least maintained, with the longer-term target of doubling Research Training Scheme (RTS) commencement load by 2008.

The Taskforce's activity in this matter involved a national audit of universities to establish current levels of RTS places and Australian Postgraduate Award (APA) scholarships, and to determine whether the goal of doubling the number of nurses and midwives in RTS-supported places by 2008 was on target to be achieved.

The results and analysis of the audit are presented in the report ***Research Training for Nurses and Midwives: a report on commonwealth funded Research Training Scheme Places and Australian Postgraduate Awards for nurses and midwives in Australia (2006)***. A key finding of the analysis is that a national strategy to increase nursing and midwifery research capacity is needed. Such a strategy would include measures to build research training as research training capacity is integrally linked to building research capacity within the disciplines.

The semantics of nursing and midwifery research

The consultation process for this report has been complicated by the various nuanced meanings of nursing and midwifery research. For some, the inference is research by nurses and/or midwives into nursing/midwifery issues and focusing on nursing and midwifery practice.

However, it may also infer research by nurses and/or midwives; research led by nurses and/or midwives; research to promote nursing and midwifery interests or research into nursing and midwifery issues and practice and its impact on health outcomes; or it may infer some or all of the above. In noting this, research by nurses/midwives may be research initiated, led by various members of the health team and focusing on matters unrelated to nursing and midwifery practice. Similarly, research led by nurses/midwives might be large multidisciplinary or team-based research approaching certain health issues from various perspectives, with a nurse or midwife as the principal researcher or team leader. Research into nursing practice or nursing issues might on the other hand be undertaken by a researcher who is not also a nurse (eg. an ethnographer or medical anthropologist).

Indeed it could be argued that from this perspective, identifying research that is by nurses and/or midwives into nursing/midwifery issues and focusing on nursing and midwifery practice is a difficult and probably counterproductive task.

On the other hand, if taken as referring to all the variants of nursing and midwifery research, the argument for separate nursing and midwifery research priorities is undermined and most likely redundant.

The broader context - Australian Government directions for research

In embarking on this activity, the Taskforce has been mindful of a number of changes and developments in the health and education contexts, which together form the broader context of nursing and midwifery research and health research in general. As research activity does not occur in a vacuum, the development of national priorities for nursing and midwifery research needs to be located within this broader context and reflect the current directions for research and health within Australia.

Available resources for publicly-funded research in Australia are limited and the allocation of and accountability for such funding has been a matter of recent consideration. There is an expectation that publicly-funded research activity benefits the Australian public and that there is value from the funds provided. This is not dissimilar to other activities funded via the public purse.

Recent major reforms to research funding and research training arise from the policy document ***Knowledge and Innovation*** (Kemp, 1999⁶). In essence, the vision is to support and reward

research excellence, build critical mass in areas of opportunity, capitalise on returns of research investment, and promote the role of universities in regional economic, social and cultural development. Further, governments expected to see greater diversity, ranging from links with local regions to international excellence. Reforms were to be introduced to support individuals, teams and centres with the highest potential to achieve the research vision.

To promote a higher level of public accountability for research, the Australian Government is establishing the Australian **Research Quality Framework** (RQF). This is aimed at measuring the quality of the research it funds and accessing information on research and researchers. Currently, issues relating to the *who* and *why* of assessment of quality, eg. what will be the constitution of assessment panels, who should be assessed, and the relationship between the RQF and the performance-based funding model, are being explored and have ramifications for nursing and midwifery research.

The measurement of impact on practice and policy is a crucial plank in the RQF. The Department of Education, Science and Training (DEST) recently commissioned a group to focus on such measurement (The Allen Consulting Group, 2006^{vi}). The work has identified a number of gaps in understanding the relationship between outputs and impacts, including the need for changes in the output data collections system, and advises a one to two year period to consult further with stakeholders across each discipline of research to determine appropriate output measures for both quality and diffusion for research. The outcomes of such a venture are likely to have a significant impact on the way the RQF operates. It is therefore essential that the nursing and midwifery disciplines engage with and have input into this process.

To facilitate the implementation of the *Knowledge and Innovation* vision, government-based research funding has been focused on those areas that would contribute to Australia's future prosperity and well being, nationally and internationally, and National Research Priorities (NRP)^{vii} have been established, one of which is directed at health⁵. The purpose of NRPs is to focus the national research effort so that outcomes enhance the health and well being of the Australian population. They also facilitate the development of broader policy outcomes to shape, not only policy, but also practice across the priority areas. Further, they provide the opportunity to build critical mass "especially in underdeveloped research domains"^{viii}.

In addition, the National Health Priority Action Council (NHPAC), a sub-committee of the AHMAC, established **National Health Priority Areas** (NHPA)^{ix} in 1996. These focus on chronic diseases that pose a significant burden and that have the potential for health gains and improved outcomes for consumers. NHPAs provide focus for publicly-funded research into major health issues. The initiative requires cooperation between governments and other organisations.

The bulk of public funding for health research in Australia comes through two government-funded bodies – the Australian Research Council (ARC)^x and the National Health and Medical Research Council (NHMRC)^{xi}. Both these bodies strongly support NRPs and fund on a nationally-competitive basis. Both target the building of research capacity by building critical mass through networks, partnerships and collaborative ventures, not only between obvious partners, but also between those that transcend traditional disciplines. Research that is multi-site, multi-focus, multi-method and multidisciplinary, locally, nationally and internationally, is being rewarded as a vehicle for achieving the government's directions in research.

In addition, in March 2006, the Commonwealth Government announced a boost of \$9.8 million for health research into chronic diseases, indigenous health and the recovery process of older Australians who have been hospitalised. Four substantial projects have been funded, with grants ranging from \$600,000 to \$3.5 million. The grants have been awarded under the NHMRC Health Services Research Program. The aim of the program is to support research projects which will improve health outcomes in national priority areas.

Government research and health priorities provide clear direction about the interests of the Australian community and apply across the board to all health disciplines.

⁵ *Promoting and maintaining good health with goals relating to a healthy start in life, ageing well, ageing productively, preventive healthcare and strengthening Australia's social and economic fabric.*

2. The research capacity/capability/priority nexus

Drawing on the experience of established disciplines, the consultations identified that there are a number of interrelated factors essential to the development of longer-term research capacity. Firstly, critical mass needs to be established. Critical mass occurs most readily with programmatic research, which is substantive and at the cutting edge, being undertaken by strong teams of researchers consisting of experts, newer researchers and trainees. Building critical mass is dependent on many factors, including the attraction of nationally-competitive research funding and developing the research expertise or capability and capacity to cultivate generations of researchers. While there is growing expertise in areas of nursing and midwifery research and pockets of excellence, this is an area that requires focused attention by the disciplines.

To ensure and build longer-term research capacity and capability, nursing and midwifery researchers need to be more successful in accessing funding. Newer researchers build their track record through a variety of funding sources, culminating in nationally-competitive funding. The expert researcher maintains a consistent flow of nationally-competitive funding to themselves and the research project and team. Success with funding from a range of source builds as track record (with funding) grows, and when research targets the priorities of the funding bodies.

Secondly, to optimise the efficacy of health services and to realise a return on research investment, it is imperative that there is integration of research findings into practice in all practice-based disciplines. To enhance practice and policy and to be consistent with government directions, translation of research findings into practice is a matter of priority for nursing and midwifery research. *Our Duty of Care* identified that this was an area where nurses and midwives needed to improve. The consultations reinforced this as a priority, but noted that there were significant barriers to overcome.

There was agreement through the consultations that if nursing and midwifery research is to respond to government direction and ensure that it receives the support necessary from the competitive funding bodies, there needs to be a focus on building longer-term research capacity through critical mass including through programmatic research and smarter access to funding, growing generations of researchers and the translation of research findings into practice and policy. These issues will be explored further in the following sections.

2.1 Priority 1 - Research in National Health Priority Areas

Identifying the focus of research activity, and where further capacity should be developed began as a core platform and the genesis of this project. Where similar priority-identifying exercises have been undertaken overseas, a range of priorities has resulted.

In Australia, where nurses work with diverse clients across the full spectrum of health services and settings and in a range of roles and specialist functions, the views regarding priorities for focusing nursing and midwifery research are many and varied. As a starting point, *The Our Duty of Care Report (2002)*, and the AHWAC nursing workforce reports indicate areas where research efforts might be directed at a national level. *Our Duty of Care (2002)*, identified a number of priority research areas, eg. evidence-based practice (EBP), aged care, work organisation, mental health nursing and nursing in rural and remote areas. These were used as triggers for discussion and debate in the consultation process.

While the breadth and value of diverse research interests in nursing and midwifery was acknowledged, those consulted for this report largely rejected the notion of discrete nursing and midwifery research agendas. There was concern that such a path would separate nursing and midwifery from mainstream research and research funding in health in Australia. Instead there was significant support for adopting and endorsing priority research areas that align with government research and health priorities.

Such agreement marks a growth in maturity in the nursing and midwifery disciplines, and demonstrates that the nursing and midwifery research community is positioning strategically to taking on greater leadership and direction of the health research agenda.

2.1.1 National Health Priority Areas

The NHPA initiative was introduced in 1996 by the Prime Minister in recognition of the significant burden that certain health conditions place on the Australian community in terms of health, social, economic and emotional costs. The NHPAs currently focus on **cancer control, injury prevention and control, cardiovascular health, diabetes mellitus, mental health, asthma, and arthritis and musculoskeletal conditions.**

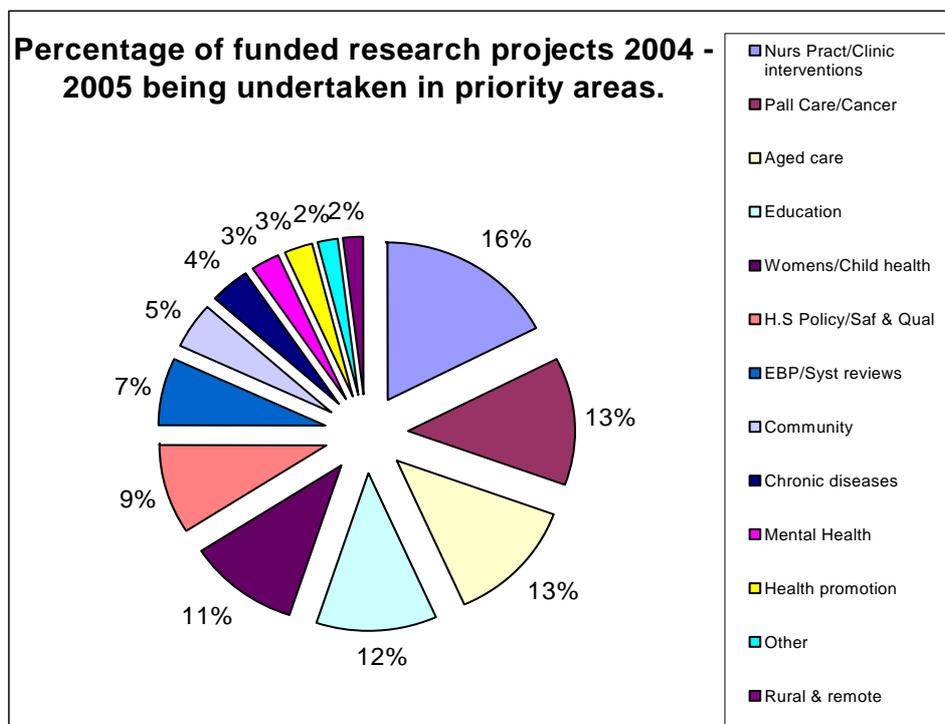
Since 2005, NHPAs have been linked to the National Chronic Disease Strategy, which provides an overarching framework of national direction for improving chronic disease prevention and care across Australia. It is a nationally-agreed agenda to encourage coordinated action in response to the growing impact of chronic disease on the health of Australians and the health care system. Supporting National Service Improvement Frameworks have been developed in five of the NHPAs to guide investment in health and to reduce the impact of these conditions.

NHPAs have been further strengthened by the Australian Government's National Research Priorities (NRP). One of the four NRPs, *Promoting and Maintaining Good Health*, encompasses four goals for research - **A healthy start to life; Ageing well, ageing productively; Preventive healthcare and Strengthening Australia's social and economic fabric**, that overlap and interweave with the NHPA. The aims of the NRP include promoting health and preventing disease through a more-focused, collaborative effort and drawing on multidisciplinary approaches that include research contributions from the social sciences and humanities.

Both the NRPs and NHPAs are used to guide publicly-funded investment in health research.

Many nursing and midwifery researchers reported they were already undertaking research aligned with the government NRPs and NHPAs and the bulk of funded research by nurses and midwives was in these priority areas. It was considered that current national health and research priorities were broad enough to accommodate almost all nursing and midwifery research interests and expertise. This is certainly supported by the profile of nursing and midwifery research developed as part of this project. Figure 1 (below) depicts the proportion of current funded research projects by nurses and midwives (from the academic sector) in each of the priority areas identified within NRP, NHPA, and the *Our Duty of Care Report (2002)*⁶.

Figure 1 – Percentage of funded research projects 2004-2005 being undertaken in priority areas



⁶ Further discussion and information is in the background document "Where does success lie with funding?"

It is notable that the focus of these projects is widespread across the priority areas, with most being in nursing and midwifery practice/clinical interventions, palliative care/cancer, aged care, education and women/children health. Health services/work organisation, chronic diseases and EBP have also been directly targeted. Rural/remote and indigenous areas may appear under-represented as some of the research was being undertaken outside the university sector. Other areas, such as population health/health promotion, may also appear to be underrepresented as some of these were being undertaken in other areas, such as palliative and aged care. For this particular period (2004–2005), mental health appears to be underrepresented⁷.

Given that there is already widespread recognition of the NHPAs and NRPs by nursing and midwifery researchers, it was considered that separate research priorities for the disciplines might indeed prove to be counterproductive in the longer term by separating nursing and midwifery from mainstream health objectives and public funding sources.

NHPAs would provide a focus for developing expertise and capability in identified areas and would enable in depth examination of these issues, encouraging collaboration between skilled researchers on different sites, using different methods and with different foci, locally, nationally and internationally. Concentrating research efforts in collaborative ventures/partnerships/networks would facilitate the development of a critical mass of nurse and midwife researchers, increase funding opportunities and enable teams to be recognised for their excellence. This would enhance the standing and impact of the nursing and midwifery research and practice in the broader health and research communities.

In adopting and endorsing NHPAs for nursing and midwifery research, there was a view that nurses and midwives should focus their research efforts and develop greater capability and capacity in those areas where **nursing and midwifery practice** could make a significant impact on health outcomes and service delivery.

Nurses and midwives endorse the National Health Priority Areas as the national priorities for nursing and midwifery research in the future.

2.1.2 Workforce/workplace issues

In addressing the issue of research priorities, the Taskforce has been mindful of the AHMAC direction to consider the research components of Recommendation 4 of the [Midwifery Workforce in Australia 2002-2012 \(2002\)](#) report and Recommendation 3 of the [Critical Care Workforce in Australia 2001-2011 \(2002\)](#)⁸. Shortages of critical care nurses and midwives are currently experienced and expected to continue. The Taskforce has been asked to consider the merit and feasibility of two areas of research; namely, a national longitudinal research study of workforce participation and organisational behaviour of midwives, and measurement of the relationship between critical care nurse staffing levels (and skill mix) and patient outcomes. The recommendations referred to the Taskforce are outlined in full in the introduction to this paper where links to the original documents are also provided.

Measuring the relationship between critical care nurse staffing levels (and skill mix) and patient outcomes

While the Taskforce considers that there may be benefit in research to measure the relationship between critical care nurse staffing levels and patient outcomes, this activity could be further enhanced.

Information from the proposed study would certainly provide direction for workforce planning, eg. with respect to training numbers, and could be used to inform policy decisions around funding for education and scholarship support. However, the type of study proposed rests on assumptions about existing skill mixes and staffing models. In a context of increasing technological sophistication and pending whole of workforce shortages, there may be a greater benefit from expanding the study to include exploring the full spectrum of skill sets or competencies required to provide critical care services; developing and trialling innovative staffing models that might also include roles for a range of health workers, eg. enrolled nurses, nurse practitioners and technicians; and interprofessional approaches to education and practice.

⁷ Although there has been a National Mental Health Strategy since 1992, mental health was only added to the list of National Health Priority Areas in 2005.

⁸ The data components of these Recommendations were referred to AHMAC for high-level coordination.

For such a study to be effective, it would need to be undertaken on a collaborative basis nationwide. There is considerable expertise among nurse researchers in the critical care area, especially in relation to patient outcomes. N³ET would support a collaborative approach, which might include critical care researchers from a number of disciplines and national health workforce groups (eg. the Australian Institute of Health and Welfare (AIHW) or the National Health Workforce Secretariat). A study of this nature would necessarily challenge traditional professional boundaries and might be viewed as threatening professional integrity. Therefore, leadership, sponsorship and accountability for the project might best be managed through the AHMAC Principal Workforce Committee.

The Taskforce notes that the Health Ministers advised that the Australian Health Workforce Officials Committee (AHWOC) should propose the issue for consideration in relation to the Priority Driven Research program, and considers that this funding stream would be appropriate. Alternatively, as research to develop the critical care workforce would benefit national workforce planning, the Principal Workforce Committee might consider sponsoring this work. Other suitable and viable funding sources to support various arms of such a program of research include the NHMRC (eg. through the NHMRC Strategic Awards: *Centres of Clinical Research Excellence Awards*) or ARC (eg. Linkage - Projects), who support collaborative studies, which are multi-site, multi-method, multi-focus and multidisciplinary.

A national longitudinal research study of workforce participation and organisational behaviour of midwives

N³ET notes that the Australian Health Ministers gave in-principle support to a longitudinal study relating to midwives and considers that such a study would provide valuable data to assist with workforce planning and development. Understanding workforce participation by midwives is particularly pertinent since the introduction in Australia of Bachelor of Midwifery programs leading to registration as a midwife. The registration of midwives who are not also nurses (often referred to as direct entry midwives or DEM) is not new to Australia; the regulatory authorities (RAs) have utilised various provisions in their respective Acts (such as restrictions to practice or areas of specialised practice) for licensing these midwives from overseas. While they currently comprise an insignificant proportion of the midwifery workforce, it is anticipated that there will be greater numbers graduating from Australian programs and entering the workforce as programs expand in response to demand. In a context of midwifery shortage, the workforce impact of DEM is as yet unknown.

The information gathered about workforce and organisational behaviour from a national longitudinal cohort study would add considerable weight in matters relating to education and planning for the midwifery workforce, particularly with respect to evaluating the impact of different educational models on service delivery, client outcomes and workforce participation.

N³ET would support a collaborative approach between expert midwife researchers nationally, service providers, governments and national workforce data experts/groups, and would support funding through the AHMAC Principle Workforce Committee and applications to NHMRC, ARC or other government departments for funding to support this activity.

Nursing and midwifery workforce data and research

The Taskforce recognises that the issues with respect to midwives and the critical care nurse workforce are only the tip of the iceberg in relation to nursing and midwifery workforce matters. Research into health workforce numbers (including recruitment and retention), skill mix and service models is urgently needed, although this is not unique to nursing and midwifery and should not be viewed in isolation from the whole of the health workforce. This is particularly pertinent where the health workforce needs to be prepared with skills and capability in the areas of national health priority.

A need for research into workforce issues was often mentioned in the consultations for this report and was highlighted as one of the major planks of research interest in the clinical area. Developing greater capability in workforce-related issue was seen as an area of concern.

The profile of current nursing and midwifery research developed for this project indicates there is some nurse-led research in workforce matters and a level of expertise in this area. For example, the NSW Nurse Skill Mix study, (led by UTS Centre for Health Services Management and funded by NSW Health) aims to establish the relationship between nursing skill mix and models of nursing care on patient outcomes (case-mix adjusted).

The Taskforce is also informed that funding has been secured for five years through the ARC Linkage Grants Scheme to establish the **nurses and midwives e-cohort** and the e-research strategic initiatives program. *The nurses and midwives e-cohort* is a longitudinal population-based study examining factors associated with both workforce and health outcomes in a cohort of nurses and midwives within Australia and New Zealand. A number of projects are already under way, including *Work/Life Balance; New graduates' transition to practice; Retention of nurses and midwives; Staying Healthy - Incidence of work-based injuries and E-cohort methodology*. The *Retention of nurses and midwives project* will describe and quantify the factors associated with the retention of the registered and enrolled nursing workforce and the midwifery workforce in Australia and New Zealand across metropolitan, rural and remote areas. It is anticipated that the study will provide important information to inform education and workforce policy for the nursing and midwifery professions⁹.

While it was considered that such expertise in workforce issues should be further developed in the disciplines, it was also acknowledged that groups with a wider mandate, such as the AIHW, the AHMAC through its committee structure, and the National Health Workforce Secretariat, generate the bulk of workforce research and data at a national level. It is of note that funding for national research and data collections on workforce matters tends to come largely from sources outside the nationally-competitive grant schemes and relies heavily on the AHMAC budget.

There are distinct advantages in having groups with a dedicated workforce focus and data expertise undertake research in this area, particularly with respect to developing consistent methodologies that facilitate analysis of series data over time and comparative analysis of data for health workforce groups. Despite this, there was a strong view that in matters related to aspects of the nursing and midwifery workforce, research experts from within the disciplines should be engaged to act as consultants in reference groups for discipline-specific projects.

2.2 Priority 2 - Building critical mass

Building critical mass was viewed by those consulted as crucial to the development of longer-term research capacity in nursing and midwifery. A critical mass consists of a number of researchers – experts, newer researchers and trainees, whose attention is focused on a particular area of research. Expert researchers are gathered together and newer and trainee researchers can be “grown” for the future. Critical mass provides continuity, coherence and methodological development in particular areas of research. The research undertaken is more likely to be substantive, relevant, of high quality and have impact on practice and policy to better ensure a health system that meets not only the needs of all Australians in terms of health and well being, but also is at the cutting edge internationally.

Critical mass is developed when researchers with established track records, within nursing and midwifery and from different disciplines, work together through networks, partnerships and collaborations, locally, nationally and internationally, enabling them to look at issues on different sites, with different methods and different foci. It is also facilitated where there is a strong program or cluster of research. Critical mass is more likely to be built up when the research is consistent with government directions, is within a positive culture in the clinical area and the academy, where expertise is built up and recognised, and where there are strong programs of research.

The consultations supported the experience of other disciplines and the literature in that critical mass is more likely to emerge from a positive research culture, not only in the clinical area but also in the academy. Participants explored their experience of research culture and identified a number of elements or determinants of a positive and supportive research culture, firstly in the academy and secondly within health service areas. Those in relation to schools/departments of nursing and midwifery, the wider university and individuals are shown in Table 1. The determinants of a positive research culture in the service setting, particularly with respect to implementing research findings and evidence-based practice (EBP) are discussed in section 2.4.

⁹ *It is likely that this project will capture data on midwives and provide a mechanism for tracking workforce participation over time.*

Table 1. Indicators and elements of positive research culture in academic setting*.

Institutional level
<ul style="list-style-type: none"> • Strong research leadership in the school/department gains support from the wider university • Nursing and midwifery researchers are accepted in the university research community • The university has a strong research culture and is committed to the growing of talented nursing and midwifery researchers through its support for doctoral and postdoctoral programs • The university supports talented new researchers in building track records and expert status • The university supports nursing and midwifery researchers in recognition of their expertise • Nursing and midwifery researchers play key roles in the university to advance research profiles and research quantum locally, nationally and internationally
Faculty or department/school level
<ul style="list-style-type: none"> • The dean/head of school/department and research leaders have vision, commitment, flexibility and the ability to work closely with others in the achievement of shared research goals • The dean/head encourages the development of research potential in all academic staff and grows expert researchers within own school/department • The dean/head attracts established researchers from within nursing and midwifery disciplines, or from other disciplines to enhance the research profile • The dean/head develops research leadership positions in the school/department • The dean/head encourages the expectation that all academic staff will establish achievable goals in research and work towards building the strongest research profile they are capable of • Strategic, operational and business plans are developed to establish the research foci of the school/department • Partnerships, networks and collaborative ventures within the clinical area, including clinical units, professorial units, and research centres are developed • Partnerships, networks and collaborative ventures are set up with other nursing and midwifery researchers and those in other disciplines, locally, nationally and internationally • A comprehensive approach is undertaken to develop strategic directions in research, and workloads are balanced in terms of research and other academic pursuits. Arrangements are made to “buy out” activities, such as marking and some teaching, to allow researchers time to undertake research activities
Academic/individual level
<ul style="list-style-type: none"> • Acceptance that research is an integral part of nursing and midwifery in practice-based disciplines • Value of EBP is recognised • A willingness for free, frank and open discussion about the need for a strong research profile, where all members of the unit are involved in its achievement • Individual performance plans and key performance indicators specify goals for research • Talented nursing and midwifery researchers negotiate for time to devote to research

**Indicators and elements identified by consultation participants*

Getting smart about research funding

There was agreement that increasing success with research funding is critical to building strong research programs and integrally linked to critical mass and research capacity. In Australia, unlike the USA and the UK, targeted funding from government for nursing and midwifery research has not been identified. Instead, nurses and midwives compete on the basis of merit for funding from both public-funding sources such as the NHMRC and ARC, and from private sources.

The *Our Duty of Care Report* put the position that research capacity in the disciplines would be strengthened through an identified funding pool to support nursing and midwifery research activity, and that such research activity should be focused in areas of identified priority. While there was clearly some support through the consultation for this notion, and clear evidence that in some cases quite substantial funding has been ear-marked for nursing research, there was a strong position taken by the majority of those consulted that discrete funding for nursing and midwifery research was not in line with current national policy directions, which apply to all health professions and the health sector in general.

Nursing and midwifery researchers reported that in the current research context, sequestering funding for nursing and midwifery research was counterproductive in the longer term and that the disciplines should be, and were, expected to compete for national research funding on the basis of merit, in the same way as other disciplines. Success with funding in a competitive environment is considered more prestigious within the broader health and research communities and lends weight to outcomes and impact of funded research projects.

It was considered that a more appropriate path to take was to become a stronger player in the current research climate by being successful in achieving the directions set by government for research. Indeed, there are universities that have reached a position comparable with some other longer-established disciplines in terms of funding success, and there are a number that are moving towards a reasonable status.

From the funding data collected for this project, it is clear that nursing and midwifery researchers have successfully accessed many and varied public and organisational funding sources to support their research activities. However, the amount of NHMRC and ARC funding, although substantial for individual projects, is confined to a minority of nursing and midwifery researchers and is still relatively small compared to other disciplines. Overall, nursing and midwifery compare poorly with other well-established disciplines.

There is a direct link between research funding and growth in capacity, in that each feeds off the other, and over time there is incremental and interrelated growth. The consultations identified that to build longer-term research capacity, it is a priority for the disciplines to improve their success in the competitive funding environment. The view was that nurses and midwives generally need to “get smarter” in their approach to funding for both individual research projects and in developing a strategic approach to funding for larger programs of research. Not only do individual early career and expert researchers need to access funding, but the disciplines also need to become more attractive to funding bodies. More funding to the disciplines depends not only on well-established researchers, but also on nursing and midwifery leaders and professional organisations.

A profile of current funding success

As part of the profile of existing research capability and expertise developed to support this work, information was collected about funding sources, including the number of NHMRC and ARC-funded projects. Due to limitations in the data collection, this information predominantly reflects funding for research conducted by or in partnership with universities.

From the data collected for this report, there is no doubt that there are a significant number of nursing and midwifery researchers who have been successful in accessing funding for their research. One outstanding feature has been the ability of nursing and midwifery researchers to access a wide range of funding sources.

Table 2 below presents the funding sources for the funded research reported to the Taskforce. It can be seen that around one third of all funding for nursing and midwifery funded research comes from nationally-competitive funding. Although only 14% came from the NHMRC and ARC, it represented a wide sampling of the areas. There were not only ordinary NHMRC grants, but also research fellowships and equipment grants.

Most of the ARC grants were linkage grants, but there were also some discovery and Strategic Partnerships and Industry Research and Training (SPIRT) grants. Other national grants came from the Department of Health and Aging, DEST, the Department of Veterans' Affairs, and areas related to government, such as the Australian Commission on Safety and Quality in Healthcare, Rural Health Support, Education and Training, the National Institute of Clinical Studies (NICS) and Beyond Blue. The National Heart Foundation and other disease-related groups were all contributors, as were other groups such as Telstra and the Channel 7 Children's Foundation.

Of particular interest were the contributions from the universities and university/industry grants. Almost one third of all grants came from this source. As well as various jurisdictional and professional organisation bodies, there was also international funding, demonstrating that the range of sources tapped for nursing and midwifery research is extensive.

Table 2. Sources of funding for nursing and midwifery research 2004 - 2005

Nationally-Competitive Grants	Number of separate grants	% of total grant pool
NHMRC	21	6.64
ARC	23	7.28
DOHA	27	8.54
Other Government	7	2.21
Other	20	6.33
	98	31.00
Jurisdiction		
Health Dept	26	8.23
Other Govt	7	2.21
Other state	11	3.48
	44	13.92
Uni/Industry		
Industry	44	13.92
university	80	25.32
Uni/Industry	13	4.12
	137	43.36
Prof Orgs		
Prof Org	5	1.59
Reg Board	25	7.92
	30	9.51
International	7	2.21
Total	316	100

Patterns of funding

The research profile grouped Australian universities according to their research funding patterns and provides insights into the strengths of particular universities and research groups and the links between funding sources, funding patterns, funding track record and research program development. A more-detailed analysis and discussion of this profile is presented in the background document *“Where does success lie with funding?”*¹⁰.

The profile indicates that at the time of reporting there were four identifiable clusters of universities distinguished by their funding profiles or patterns (shown in figures 2 and 3):

Cluster 1

Cluster 1 comprised four well-established universities with high research performance. All had relatively strong HDR programs as well as undergraduate offerings, although only one was considered to be a traditional *research-intensive university*¹¹. Universities in this cluster had well-established research teams that were focusing on particular areas of research, and had built up a critical mass of expert researchers. These universities appeared to be strategically placed to ensure that they were well funded for future research and to grow new researchers. The strength of these universities lies in the partnerships and collaborations that they had established, within and outside nursing, locally, nationally and internationally, and their ability to work within the directions set by government for Australian research.

There were 128 projects generated from these four universities, with income of over \$16 million. These “high flyers” had set standards and implemented strategies that ensured their current longer-term capacity and auger well for the future. Their base of trainee researchers was strong. Universities within this group had 51 NHMRC and ARC grants (an average of seven per university)

¹⁰ Available from the N³ET website at www.nnnet.gov.au.

¹¹ ¹¹ Australia has a recognised group of 8 institutions traditionally known as research-intensive universities: http://en.wikipedia.org/wiki/Group_of_Eight_%28Australian_universities%29. Five of the group are known also as Sandstone Universities (founding universities) and all of their primary campuses are within Australian capital cities. The group is seen to be influential regarding research priorities. There are now other universities becoming more well known for their research innovation.

yielding an average of \$1.15 million per university. Many of these grants were substantive, reflecting the expertise of the research team. The other nationally-competitive grants were also substantive, with 21 grants yielding an average of \$1.14 million per university. As would be expected, the state grants tended to be smaller, with 20.5 grants yielding an average of \$546,000 per university). However, the research momentum was continuing to grow through the attraction of jurisdictional and professional organisation funding, which was smaller in amount (\$546,000 and \$159,000 respectively) on average for each university. Some of these grants had been commissioned, reflecting the level of expertise of this group, other grants were smaller but were essential in helping to build track record in newer researchers.

Without doubt, funding from the university and industry is essential not only for showing a commitment to nursing and midwifery research, but also in building track record. These grants tend to be smaller and on average, the four universities returned only \$159,000 from this source of funding. In addition, the five international funds provided an average of \$598,000 for the four universities.

Cluster 2

Cluster 2 includes eight universities with performance just outside the performance of universities in cluster 1. All except one were well-established universities. This last university has "grown" a reasonable research profile in a relatively short time, with both experts and newer researchers attracting funding.

Although members of this group did not have as many successful NHMRC/ARC grants (23, with an average of three per university), the return was also less - an average of \$524,000. These universities had expert researchers who could attract reasonable amounts of funding from NHMRC/ARC sources. On average, slightly more grants were received from other nationally-competitive sources and the return was reasonable - average of \$315,000 per university. Jurisdictional funding was also accessed with not unreasonable returns. However, the highest number of grants was from the university/industry source and although relatively small (\$162,000) these provided the necessary funding for the building of track record and also clearly demonstrated the commitment of the university to nursing and midwifery research, thus facilitating the building of critical mass and longer-term research capacity.

Although these universities do not have as many "runs on the board" as cluster 1 universities, they too were well established in research, had experts, were growing new researchers and were well supported by their universities. Their longer-term capacity also seems highly positive.

Cluster 3

Four universities comprised this grouping. One was a well-established, research-intensive university, one was a regional university, one had recently attracted an expert researcher to a newer school of nursing and one was an established university. Three had substantial higher-degree programs, as well as undergraduate courses. What characterises this group is the presence of at least one expert with a strong track record who had attracted at least one substantial NHMRC or ARC grant, while the rest of the research profile was minimal. It will be noted that, overall, there were few projects and the amount of research funding was small. Of particular concern was funding from the university/industry source. Two of the universities within this group received no university/industry funds and the other two were receiving small amounts only. There is no doubt that each of these universities has at least one high-profile researcher, but there was little evidence of the support necessary for the rest of the researchers to develop their track records and build a critical mass of researchers. Without this support, it is unlikely that three of these universities will provide a strong growing research contribution. It could be said that strong research leadership is required in this group, not only to raise the profile, but also to convince the university of the importance of a nursing and midwifery perspective in health service area research.

Cluster 4

Universities in this grouping consisted of two relatively newer schools of nursing and midwifery and one more-established university. One was a regional university. This group has a research profile that was being carefully built. Although they had not yet attracted NHMRC/ARC funding, they appear to be poised to do so. They were successful with other nationally-competitive funding of average amounts, in excess of those obtained by clusters 2 & 3. Their major research activity was being funded by university/industry sources and although the amount was small, it was enabling the growth of the necessary track record to access more prestigious funds. Those within this group were extremely well placed to build their research profile if their present leadership remained strong and

they continued to be supported, particularly at national and university level. The expertise necessary to attract NHMRC/ARC funding was being built and the track records of newer researchers are growing. Strong teams can thus be established. One university in this group has established very strong partnerships, not only with the clinical areas, but also with researchers in other universities.

There are a number of universities not included in the profile, whose funded-research output was either minimal or non-existent. For example, there are several universities which at the time were changing their research leadership and focus with a view to developing a more-strategic approach to research activity by the disciplines. There are also a small number of universities that appeared to lack strong research leadership and university support. For the most part, this occurs where nursing and midwifery are newly-established schools within the university and the focus is on building academic programs and intakes as a foundation for building the faculty and its research capacity. These universities have some way to go to reach a level where they can make a substantial and sustained contribution to nursing and midwifery research.

Figure 2

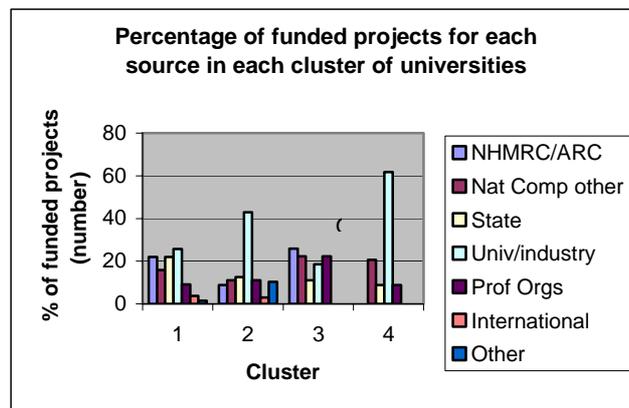
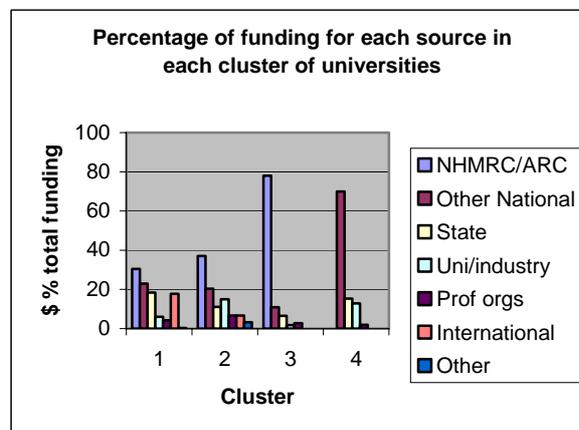


Figure 3



An analysis of the funding data provides an understanding of the characteristics of research projects that have been successful in attracting NHMRC and ARC funding:

NHMRC grants

The criteria that characterised successful grant applications were that:

- Researchers had established track records in research, although there was some encouragement for new researchers in the form of scholarships and research and clinical research fellowships;
- Research areas were largely within the various government research priorities;
- Collaborative ventures were characterised by multi-sites, locally, nationally and sometimes internationally, with some multidisciplinary collaboration;

- Programmatic research was present, with strong teams of researchers - experts, newer researchers and trainees. Newer and trainee researchers were assisted by an association with experts.

ARC Grants

The majority of these grants were rewarding linkages and most showed;

- Partnerships or collaborations with different groups – consumers, clinicians, other disciplines and industry, locally, nationally and internationally;
- Researchers had well-established track records or were on the way to having these recognised;
- Consistency with the government priorities for health and research.

Nursing and midwifery researchers have shown ingenuity in accessing a wide range of funding sources. Of importance is the number of NHMRC and ARC grants to expert and “growing” researchers. The support shown by universities and industry is equally important. The latter is essential if critical mass is to be built up and new researchers grown. Although nursing and midwifery researchers have been successful in acquiring nationally-competitive funding, the number and amount is small compared to other more-established disciplines.

It must be said that a few nursing and midwifery researchers are on a par with those in other disciplines, despite a lack of dedicated funding for nursing and midwifery research. Nursing and midwifery researchers have taken up the challenge and some have been highly successful. However, the number is small compared with the number of nursing and midwifery researchers in Australia and there is still much to be done to increase the success in acquiring NHMRC and ARC funding.

Strategies for becoming smarter about accessing research funding

Participants identified that a strategic approach is needed build success in research funding not just for individual researchers, but for nursing and midwifery research programs and centres, and the disciplines in general. It is clear that success leads to greater subsequent success so there is a responsibility to mentor and support early career researchers to develop grant application skills and track record. A number of strategies were proposed to augment success with funding for the training and early career researchers, experienced researchers and research leaders in academia and research centres:

Strategies for early career researchers include:

- Maintaining up-to-date **knowledge of the various funding sources** available to nursing and midwifery researchers. Such knowledge is gained from accessing the Internet and by forming extensive networks in the research area of interest.
- **Matching research to the funding source.** Either choose an area or issue for research that matches the funding source, or choose a funding source that matches the area or issue chosen. The closer the match, the greater the likelihood of success in funding.
- Being familiar with **the purpose and processes of funding** for each source so that grants may be written that are relevant to that source of funding.
- Developing skills to write **successful grant applications**, ie. applications that **convince the funding source** of the importance of nursing and midwifery research. (Too often, nursing and midwifery research misses out on funding because others are unaware of the importance and significance of the research and the proposal for funding does not make such values clear.)
- **Partnering with researchers (within and from outside the disciplines) with established track records.** When linked with an expert researcher, or as part of a strong research team, trainee or newer researchers have greater success attracting funding by association.
- **Building partnerships** with the service providers, other industry bodies or governments, as this enhances the scope of funding options that are available.

For expert and experienced researchers, there is a responsibility, not only to continue to attract funding for their own research, but also to use their expertise to increase funding to the disciplines by:

- **Building strong teams around programs of research.** This has two effects:
 - It attracts other experts, thus enhancing the likelihood of successful grant applications for substantial funding for substantive, leading edge and high impact research; and
 - It provides fertile ground for mentoring trainee and newer researchers to increase their success in gaining funding by association and by drawing on the “know how” of experts with established track records.
- **Partnering with other experts** locally, nationally and internationally to further increase the breadth and depth of the program of research being undertaken.
- **Joining committees** that are strategically placed to influence and educate funding bodies. This not only raises the profile of nursing and midwifery research, but also provides opportunities for other quality nursing and midwifery research to be funded and experts recognised.
- **Sharing expertise in funding success** with the profession by:
 - Providing research leadership and direction, eg. by heading research centres for nursing and midwifery and cross-discipline research. Experience and expertise in research enable experts to build critical mass and to be effective in mentoring and assisting early career researchers to successfully access funding. There is a tension, however, with the benefits of building critical mass weighed against the time available for continuing personal high-level input into the research area. The profession needs both its “high flyers” in research and its research “builders”;
 - Publishing both nationally and internationally to share not just the research outcomes but the “how to” of successful funding applications. Again, there is a tension, as such articles must be balanced against articles relating to the outcomes of research. The latter tends to be considered more important, especially in terms of communicating research results and their impact on practice and policy, while also adding to the university’s research quantum. However, there remains a need for the “how to” articles to help others get smarter about funding;
 - Teaching others how to be successful in grant writing and publication increases funding access. Such teaching may be through guest lecturing, conferences, workshops etc., locally, nationally and internationally. This feeding back to the profession is an essential part of its growth in gaining the skills to be smarter about successful applications for funding.

The participants identified successful strategies for early career researchers to increase grants and funding application skills, including:

- Attending relevant **workshops** on grant application writing. The university and/or professional organisations may conduct these;
- Seeking out researchers who have **a successful track record in writing submissions**, either from their own or another discipline, and collaborating with them in making applications. This has been a successful strategy by many of the current experts in nursing and midwifery research. It may require a truly-collaborative approach with a joint proposal, or at the other extreme, it may merely require the other person giving some advice and lending their name as principal researcher until the newer researcher has built up the necessary track record to apply in their own right;
- Being familiar with **the process required by the particular granting body**. This necessitates more than just knowledge of the funding source, but an understanding of all the processes that will be required by that body. Unless the proposal covers all the criteria required, then it is unlikely to succeed. This may require seeking assistance from others and approaching the funding source itself to ensure that all processes are understood;
- Paying attention to **the form and detail within the proposal**. Although axiomatic, it is essential to ensure that the research question, method, and analysis of information are consistent, congruous, well explained and clearly within the framework selected for the research project, irrespective of the processes involved. Further, there must be sufficient detail to ensure that the reviewer can determine if the research will adequately answer the research question posed. Additionally, the proposal must be written in a language

consistent with the research method, but understandable to the reviewers, especially when these may come from different backgrounds;

- Working on **feedback from unsuccessful applications** and seeking assistance in improving applications. Few proposals had been successful without a number of “rejections”. It was considered par for the course not to be successful on initial applications to some funding sources until all the i’s were dotted and the t’s crossed. Further, success with one funding source does not guarantee success with another body;
- Engaging **with peer review** processes before submission to funding bodies. For example, some researcher organisations and universities internally replicate the NHMRC process of peer review prior to submitting the application to ensure rigour, research priority and criteria matching. Although this may be a painful step, nonetheless, it promotes learning and maximises success in a competitive environment;
- The **sharing of expertise** within the profession through collaboration, supervision, mentorship and conducting workshops in grant writing is seen as essential in improving this skill for the newer researcher.

Leaders of research in schools/departments/research centres of nursing and midwifery

It was acknowledged that even with the finest research proposal and an expert team of researchers, leadership, vision and infrastructure need to be in place to ensure strategic success in funding acquisition. Where successful funding track records were building in schools/departments/centres of nursing and midwifery research there was clear organisational support for the research agenda, an established research culture and a strategic approach to building research activity and research capability. This was evident where:

- The research agenda was set to maximize **strengths** within the school/department that were pursued through programs or clusters of research. In this way, the flagship research attracted NHMRC and ARC funding and was contributing in a positive way to the university’s research quantum, and where appropriate, to the health service area’s research funding;
- Inclusive strategic **plans** have been developed, and these have been successfully put into operation through sound business and operational plans. Targets have been set and performance against the targets has been measured;
- School/department/research centre plans were consistent with those of the university, and the dean/head was successful in ensuring that the university provided infrastructure funding, scholarships and funding for the establishment of track records;
- Each staff member had an **annual performance plan** on which research performance was an important KPI and which fed into the strategic plans;
- Suitable leaders were appointed to **head the research**, from within the school/department, any associated research centres, clinical and professorial units and any other partnerships. This may have required building up in-house talent, or recruiting as necessary from within and outside the disciplines. Such positions were adequately supported in terms of infrastructure, administrative staff and other resources;
- Strong **partnerships** were built through clinical and professorial research units, centres and collaborations where partners were treated as equal and strategic, operational and business plans were drawn up jointly, using an all-of-staff approach;
- **Networks** that facilitated the pursuit of all sources of funding, and avenues of collaboration and partnerships, locally, nationally and internationally, were in place;
- **Inter- and multidisciplinary** opportunities were taken to get researchers established, enhance the research quantum of the school/department or increase the depth and breadth of existing programs of research.

With strong leadership from within the academic sector, the necessary infrastructure and directions for research can be firmly established, critical mass can be built up and all levels of researchers will increase their success with attracting funding.

Professional organisations

There was a strong view that the disciplines of nursing and midwifery, through their professional organisations, have a key role in promoting research and in building research success, particularly for early career researchers. Even though funds through these sources are often small prepared to

public funding sources, small successes lay the foundations of a successful track record. Some of the activities of professional organisations that enhance funding and funding success are shown below:

- **Funding for research through grants and scholarships.** Currently, grants (more often at the smaller end of the range) are provided by registration bodies, the various professional colleges and other professional organisations. The Royal College of Nursing Australia (RCNA) has grants and bequests that it manages for the advancement of research. Federal and jurisdictional branches of the Australian Nursing Federation take responsibility for some research funding. In addition, the various specialist groups also offer funding in various forms, eg. www.nno.org.au. Comment was made earlier for the need for a balance between the important smaller-beginning grants and those that would be nationally competitive for talented researchers.
- **Active promotion and communication of research outcomes** through conferences, seminars, workshops, etc. Australia has a long history of bringing together experts from Australia and overseas to enhance communication about research in nursing and midwifery. This also facilitates the building of networks to ensure better access to available funding for research. In addition, some professional organisations and colleges have their own journals.
- **Influencing research and education bodies** through ex-officio and requested membership of strategic committees. For example, RCNA has membership of the International Council of Nurses, and professional organisations and colleges are frequently requested to provide members for committees and advisory panels for various Commonwealth and jurisdictional governments, and other organisations that have a research agenda. It is essential that professional organisations select the most appropriate expert for such activities (the *right* people; not necessarily the *same* people), and that there are established networks and communication channels to maximise nursing and midwifery contributions to direction setting.
- Specialist professional organisations and colleges providing **leadership** in nursing and midwifery research. The various professional colleges have accepted this role in part, but there would appear to be opportunities to become more active in directing and sponsoring research within these specialised areas, harnessing the considerable talent in each speciality.
- Forming professional ad hoc **alliances** as necessary, to advance the research image and its share of research funding nationally¹². This may involve working with individual researchers, groups of researchers, or other organisations, both within and outside nursing and midwifery, as particular issues or needs arise. For example, RCNA has also just signed a memorandum of understanding with NICS. Various peak nursing organisations have come together for particular needs.

Getting smart about funding requires a number of strategies for newer researchers to build up track record and develop expertise, for experts to increase personal funding and to contribute to the improvement of funding to the disciplines, and for professional organisations as they assist the researchers with funding and in making nursing and midwifery more attractive to funding bodies.

Programmed research

There was overwhelming agreement through the consultations that critical mass can more easily be established from within a clear-cut program or cluster of research with its resultant partnerships, networks and collaborative ventures.

The research profile shows that there are a number of research programs sponsored predominantly by universities focusing on nursing and midwifery or led by nurses and midwives. Compared to more-established disciplines, they would seem to be at a stage of evolution, rather than full development. Despite a focus on NHPAs in funded research, strong national nursing or midwifery-led research programs in these areas tend to be the exception rather than the rule.

It is evident that research program success and funding success go hand in hand and build reciprocally, so many of the features for success in both areas are linked and interdependent. Based on the success of programs across a range of other disciplines, several factors emerge as key to building strong programs of research:

¹² This issue will be further developed in the next section.

- Research activities centre on a **major theme or area of research** that is broad enough to attract sufficient funding and research students, but specific enough to allow the researchers to develop track records (Borbasi et. al 2005)^{xii}.
- The research should be substantive, approached from different perspectives with different foci and different methods and be at the cutting edge. There are benefits for those who comprise the research team, such as:
 - a pooling of knowledge, skill and resources by expert and novice alike;
 - research trainees and newer researchers able to develop their skills in a supporting and guiding environment;
 - mentoring, especially in the skills of publication and grant writing;
 - increased output by all involved to hasten the establishment of a track record;
 - support and critical peer review of work;
 - an enhanced working environment and positive interpersonal relationships between all members of the team.
- Many programs commence and gain momentum through **partnerships with industry**. The academic clinical partnership allows attention to be paid to pressing clinical issues, and enables practice and policy to be changed for the benefit of the community (Borbasi et al 2005^{xiii}; Hawes and Emden, 1999^{xiv}). "Productive supportive relationships are the crux of programmatic research," (Borbasi et. al 2005, p 8) and these require a number of attributes to ensure success, such as persistence, commitment, trust, shared values and collegiality. All partners contribute resources, time and research expertise (Borbasi et. al 2005).
- In line with the Government's directions for priority-driven **collaborative research**, programs that succeed are those that establish networks, partnerships and undertake collaborative ventures, not only within the profession, but with other disciplines as well. Nursing and midwifery are well placed to lead multidisciplinary teams in areas relating to the health of Australian citizens and on a global scale.
- Collaborative **agreements** are made between partners in relation to funding distribution, to ensure equity of research quantum and case-mix funding, as far as possible.
- Agreements between researchers are in place as to the order of authorship for published work to ensure that newer researchers can successfully establish a track record.

With this noted, there is considerable debate about the ongoing value of programs of discipline-specific research (eg. research focused on nursing rather than research focused on health issues) and how to strategically position research programs to maximise funding opportunities and to harness research capital and expertise across the disciplines. For example, a number of universities have developed overarching strategic directions for research for the whole of the university, which build on existing strengths, expertise and track record and are usually focused in areas of national research priority or identified areas of industry need. Guided by high-level directions, cross-discipline research programs are fostered and supported. In such a climate, nursing and midwifery researchers need to link into, or add benefit to these programs to thrive and receive support from the university. Indeed, funding applications may be internally ranked and culled according to their "fit" with the strategic direction. Cross discipline programs may also provide greater opportunities for early career researchers to link with established researchers and build their track record in funding. Alternatively, nursing and midwifery researchers can seize the opportunity to lead collaborative, cross-discipline research programs in areas linked to the high-level priorities.

The counter view to this argument is that without a strong research profile to bring to collaborative research programs, the nursing and midwifery presence will be dissipated, making it difficult to identify the unique contribution of nursing and midwifery researchers to research outputs.

Summary

Building a critical mass is essential if the longer-term capacity of nursing and midwifery research is to be sustained. In essence, the consultations highlighted that there are a number of areas which require immediate attention by the disciplines. Firstly, the enhancement of a positive research culture in the academic and service areas and attention to the triad of teaching research and practice is essential. Secondly, a movement towards a sufficient cadre of expert nursing and

midwifery researchers nationally is also essential. Developing expertise requires three phases; research training, developing a track record and being recognised as an expert. Finally, establishment of programs or clusters of research and the resultant partnerships, networks and collaborative ventures all work towards establishing the critical mass.

2.3 Priority 3 - Growing generations of researchers

Critical mass depends on having expert researchers and research leaders to attract others to the area and to grow the next generation of researchers. Expertise does not occur without considerable effort and needs to be grown within the disciplines. In essence, three stages in this growth can be identified - research training, development of a track record, and recognition as an expert by peers in nursing and midwifery, other disciplines and research granting bodies.

Through the consultations there was recognition that teaching without research is not a path for practice-based disciplines to pursue. There is no doubt about the importance of nursing and midwifery services to the health and well-being of the Australian community. The Australian community demands and expects quality, both in terms of safe and competent practice and value for expenditure, so practice needs to be based on the best-available evidence and such evidence can neither be acquired nor applied, unless there is a strong focus on the triad of research, teaching and practice.

Research, teaching and practice triad

Research, teaching and practice are inextricably intertwined and this triad needs to be as clear in the academic setting as it is in the clinical area, not only at undergraduate, but also at postgraduate and postdoctoral levels. The attitudes, values and philosophy conveyed in teaching do not only influence students, but also reflect the ethos of the academic institution and the nursing or midwifery department.

Emphasis on the teaching/practice/research triad enriches and adds depth to the culture in both the academic and clinical practice areas. Where there is a strong research culture in these areas, those involved in research at all levels make a positive contribution to teaching. This not only enhances students' learning of research methodologies, it exposes them to active researchers and enhances their understanding of the applications of research in clinical practice as various subject areas are taught. Experienced researchers are more likely to inspire students with aptitude to pursue a research career as they espouse the value of research in enhancing practice and policy through the application of evidence.

The research profile highlights that nursing and midwifery disciplines have been placing emphasis on integrating research into teaching at all levels. This is most evident in universities with established departments, a strong research presence and active research programs. There are however a number of smaller, newer departments across Australia where the focus is clearly on building undergraduate programs as a prelude and foundation to incrementally building post-graduate programs and research activities. In this way, critical mass in teaching is also important to building critical mass in research.

In this context, the introduction of the RQF poses a risk to nursing and midwifery departments. One possible outcome of the RQF is the concentration of research funding in research-intensive universities (ie. universities that already have established research track record, established programs and ongoing productivity with high levels of impact). Concentration of research funding in this way may lead to more productive programs, greater growth and diversity in capacity within those institutions, although establishing departments and universities may be disadvantaged. One postulated sequela is the emergence of teaching-only institutions, which focus on teaching excellence.

This issue was raised as a point of serious concern during the consultations. With a shrinking dollar, should research funding be confined to those universities demonstrating strong research profiles? What are the implications of teaching-only institutions for the disciplines? There was broad agreement that there is risk for nursing and midwifery (as for all practice based disciplines) in teaching-only universities. Teaching, practice and research are inextricably intertwined in practice-based disciplines, and given that practice and policy change on the basis of evidence generated through research, the disciplines themselves can only grow as a result of emphasis on this triad. Health services need nurses and midwives who are "research savvy", who understand the value of research, who can access and make sense of research findings and who can participate in research

activities in the health service sector. The risk in teaching-only institutions is that over time, research expertise will be leached as those with expertise gravitate to research-intensive institutions and this will impact on teaching expertise. Teaching excellence cannot exist without research capability.

While the general principle is axiomatic, the current situation of nursing and midwifery research is variable. Nursing and midwifery research has a challenge to meet government expectations about research and to show the quality of research as articulated in the RQF. There is no doubt that universities and departments are moving proactively in anticipation of the RQF and there is significant movement of academics in the sector as universities jostle to position their research profiles and potential.

Data collected for this report shows that in some universities, the nursing and midwifery research profile is strong and a number are poised to reach their potential, supported by their universities. However, there are some schools/departments of nursing and midwifery that appear to be underachieving in the research area and have some way to go in building critical mass. They could be under serious challenge in light of the RQF, especially if it is tightly tied to funding. At this stage, a number of schools/departments of nursing and midwifery need strong research leadership, time and effort and university assistance to reach the level of an adequate critical mass for long-term sustainability in research.

The challenge lies with nursing and midwifery research and academic leaders to harness research potential and to strategically position nursing and midwifery research for further growth and success. This might mean greater emphasis on strategic partnerships with other disciplines within the institution, with industry and also strategic partnerships between institutions nationally and overseas to foster research capability in establishing departments.

Further, nursing and midwifery research leaders need to be active in monitoring the RQF requirements and implications, and contributing to shaping this so that nursing and midwifery research can continue to grow.

The Council of Deans of Nursing and Midwifery (Australian & New Zealand) has recently established its Research Advisory Group (RAG). RAG membership consists of leading nursing and midwifery researchers from across Australia and New Zealand.

This group is well positioned to take responsibility for research leadership in response to the Australian Government's RQF and New Zealand's Performance-Based Research Fund, to take carriage of the broader national agenda for nursing and midwifery research and to speak on behalf of the disciplines on matters related to research priorities, research training and measures to support research capacity building in the future. This will necessarily involve consulting with the research community within and beyond the university sector.

Research training for nursing and midwifery

While there was recognition that there are opportunities to develop research skills through exposure to research and various job roles, and that valuable research is undertaken by nurses and midwives without formal research training, there was also a strong view that higher degree research (HDR) training is the preferred and recognised pathway to a research career. Developing generations of researchers through HDR training is therefore critical to building research capacity and capability within the disciplines. Attracting sufficient and suitable candidates to research training to build and sustain research capacity in the nursing and midwifery disciplines presents a number of challenges.

The N³ET report "Research training for nurses and midwives" specifically addresses **Recommendation 8a: Research Training** of the *Our Duty of Care Report* (2002). The report profiles Commonwealth assistance for research training for nurses and midwives through the Research Training Scheme (RTS) and Australian Postgraduate Awards (APA) and concludes that, given the length of time to create a generation of researchers, there are clear indications that the goal set by the *Our Duty of Care Report* of doubling the intake of HDR students in nursing and midwifery by 2008 is unlikely to be achieved.

The report also outlines the pathway for nursing and midwifery trainee researchers and highlights barriers to building research capacity through research training, drawing attention to the low uptake of APA for nursing and midwifery higher-degree students. It also highlights that access to funding support for HDR projects through NHMRC, ARC and other public funding sources is more likely where

the nursing and midwifery disciplines in the university are successfully building critical mass and strong research programs¹³.

A number of key points in this report were reinforced through the consultation process.

Higher-degree research training pathway

The motivation to undertake a HDR program begins with a desire to undertake nursing research and, for most nurses and midwives, this links, at least in part, to a desire for a research career. Undertaking the HDR program is a major life commitment with average completion times for full-time doctorate candidates being 4-5 years. In nursing and midwifery there is an increased likelihood that the candidate will enrol part-time, leading to an even longer period of candidature. These researchers then go on to become early-career researchers, in that they need further support to establish a track record and to become successful grant holders. Understanding HDR training in this context is critical to understanding why nursing and midwifery currently struggle in terms of building research capacity.

HDR training is traditionally understood as occurring through a Doctor of Philosophy and masters by research degrees. Currently, research doctorate degrees comprising up to one-third course work (eg. Some professional doctorate programs) also provide research training. In established research disciplines such as science, the entry pathway to a PhD is the honours degree. Direct entry to a doctoral program is used to determine the distribution of scholarships.

In nursing and midwifery, the common pathway to HDR training is less traditional and often more protracted. The reasons for this include:

- Fewer opportunities for honours programs, as their availability depends on Commonwealth funding support;
- Graduate preference to move into practice, rather than study for an additional year on completion of their undergraduate degree;
- Difficulties in combining honours study with full-time graduate or transition programs. In some cases, government funding is contingent on full-time employment in the service sector, thereby precluding honours study;
- The drive to undertake specialist education means that preference is given to undertaking graduate certificates/diplomas and coursework masters with a specialist focus, rather than research training.

Thus, most nurses and midwives enter HDR training via either a masters degree by coursework with a minor thesis, or through a masters by research. This means that in nursing and midwifery, the path to HDR is often longer than for other disciplines as it follows on from specialisation rather than being a career pathway from completion of undergraduate studies. The timelines are compounded by many nurses undertaking their research degrees part-time over 5-8 years, as they are often older at commencement with more family and work commitments than exist for those taking the more traditional honours pathway.

Across the country, many universities and health service providers have overcome the employment issue via different forms of partnership, involving strong joint strategic planning and resource allocation. Such employment removes the tension in gaining the necessary clinical experience, whilst learning the skills of research. However, a review of government policy regarding support for graduate transition is also warranted.

Financial support

Arrival at the doctoral program from alternative routes means that the likelihood of an APA is remote. Therefore, other sources of scholarships need to be available. Funding may come from a variety of sources, both public and private. Universities, and professional colleges and organisations, are two groups that figure prominently.

Where the actual, or potential for, quality nursing and midwifery research is strong, universities may make a commitment to grow researchers by:

- providing funds for scholarships;
- furnishing the necessary infrastructure for research trainees;

¹³ *This Research Training for Nurses and Midwives report has been prepared for consideration by Health and Education Ministers.*

- facilitating successful access to prestigious scholarships, such as NHMRC and ARC;
- facilitating employment either in the academic area or in partnership with industry.

Currently, a number of scholarships are offered in the various jurisdictions, and nationally through professional colleges and organisations. Some of these are substantial, but few provide the prestige necessary to contribute to research quantum. A case is made for professional organisations to strategically examine their scholarships and study grants and award nationally-competitive prestigious scholarships to talented researchers. Such awards would not only facilitate financial security, but also enhance the growth towards expert status and contribution to the research quantum of the university. This may create a tension for the professional organisations as they balance their smaller “starting” research grants, important in establishing beginning track records, against the growth of sustainable longer-term capacity by “growing” more researchers for the future.

Supervision

Currently in Australia, nursing and midwifery research supervision capacity is simply linked to the presence of an academic with a research higher degree, who may or may not have supervision training. Many of the academics undertaking supervision are not active researchers and are not part of a strong program of research with a depth of expertise to support the student’s research training.

Universities “grow” sufficient numbers of their own high-quality supervisors through viable research-training programs and quality management processes. Nursing and midwifery leaders have been required to put forward strong cases for being included as an integral part of such training schemes. Success has further been aided by longer-term strategic plans with measurable, achievable targets and outcomes within the school/department of nursing and midwifery to ensure that adequate supervisors are trained to meet student demand.

Ideally, there should be expert researchers available as supervisors for the nursing and midwifery research trainees in their area of choice. If this is not the case, then such expertise must be either bought or sought. A university may decide to buy in expert researchers – either Australian or overseas nursing and midwifery researchers, or experts from other disciplines. The university may also decide to seek co-supervision with another university, locally, nationally or internationally, where the expert was located. There are difficulties in establishing the conditions of co-supervision, especially where each university is competing for funding associated with doctoral candidates. However, such arrangements can be and have been made for the benefit of both the candidate and the university. This has required time, effort and good will on behalf of both universities. It is an on-going issue, for not only the nursing and midwifery disciplines, but also many others, and it needs to be explored with DEST.

Linking research training to research programs

A further vital consideration is that of quality versus quantity of research training. Consultation raised issues supported in the literature alerting to the need to develop strategies to build depth and competitiveness for funding support – both scholarships and project support, in order to build the capacity in the disciplines to support an expansion in research training. The goal of increasing research capacity will only be achieved by training highly-productive and competitive researchers.

A strategic approach to capacity building

The consultations supported and confirmed the findings of the “*Research Training for Nurses and Midwives Report*” that, in order to best achieve the goal of increasing research training capacity and research training in the disciplines, consideration should be given by the disciplines to developing national strategic directions for research training.

A national strategic direction would need to include a number of interrelated approaches that draw on collaboration and harness the strengths and experience of the disciplines. The key features of a national strategy might address such issues as:

- Identifying and endorsing a vehicle for effective leadership;
- Engaging, collaborating and harnessing the stakeholders collectively and individually;
- Developing sustainable targets for research training, coupled with monitoring progress;
- Developing and cultivating the pool of HDR candidates; and
- Enhancing current support for research training.

Finally, integrating strategies to build research training within a broader strategy that will build research capacity in the disciplines nationally is of vital importance, as research training capacity is integrally linked to research capacity within the disciplines.

Establishing track record

In comparison to other disciplines fewer opportunities exist for nurses and midwives to undertake postdoctoral training, either as self-funded researchers or within a strong program of research. This lack of opportunity limits the extent of research training in the disciplines and as a consequence, reduces opportunities for undertaking a career in research. Where strong research programs exist, nursing and midwifery HDR outcomes begin to approach those of other disciplines, after several years of consistent grant success and a dedicated focus on building researchers of the future.

Once research training is complete, the long road to establishing track record begins, ie. successfully undertaking funded research projects and publishing the results effectively. With a good track record, the researcher is seen as being on the way to expert status and can attract both trainee and new researchers. They will be more successful in acquiring funding from a wide variety of sources, and engender interest from other nursing and midwifery researchers and those from other disciplines, locally, nationally and internationally. Although many of the current experts have had a long hard battle to achieve track record, there is no doubt that being part of a critical mass hastens this process.

The research profile developed for this project indicates that there are a number of key factors that influence the building of a track record and these are shown in figure 4.

Figure 4 - Factors influencing the building of a track record
Commitment by the researcher to become an expert in a chosen area. Considerable effort and sacrifice is required on the part of the individual.
Selection of research topics that have the potential to attract funding from a variety of funding bodies, in particular those in line with current government directions for research and research priorities.
Selection of research projects that have the potential to make a difference to practice and policy, to work towards a better health care system and better health outcomes for Australian citizens.
Selection of research methods that answer the question being posed and show rigour and scientific credibility.
Successful research proposals and grant submissions for a variety of funding sources.
Completion of projects , successfully on time and within budget.
Communication of research findings in an appropriate manner, so that they reach the audience required, eg. clinicians, other researchers within and outside the discipline of nursing and midwifery locally, nationally and internationally. Publication is a skill that needs to be developed during the research-training phase, and the choice of publications require skilful mentoring in order to gain maximal impact for the profession, as well as recognition of the beginning or established expertise of the researcher.
Establishment of networks, partnerships and collaborative ventures. The ability to work collaboratively and as an equal partner with clinicians, recognising their important contribution to research outcomes and the utilisation of research findings into practice, establishes a track record. In addition, a demonstrated ability to work in strong teams of researchers and to develop networks, partnerships and collaborative ventures, locally, nationally and internationally, is important.
Mentorship by experts as part of a program of research, or on a one-on-one basis. Many of those who are now experts did not have the advantages of nursing and midwifery mentors, but the situation is now changing and such mentorship facilitates progress in research.

Mentoring

Experienced researchers report that they have pursued different paths to establish track record and all report a long and difficult journey requiring ongoing commitment. For some researchers in the disciplines (particularly the foundational researchers) there has been little or no mentorship. Instead they have had to “pull themselves up by the bootstraps”. Others report being supported in their

early career by nursing and midwifery mentors, while others still have looked beyond their discipline for mentoring.

Mentoring tends to be available when the researcher is part of a strong team engaged in programmatic research. Such mentoring is of vital importance during the early stages of a postdoctoral research career as it provides opportunities for early career researchers to link to larger projects, to partner with experienced researchers and to draw on their expertise and wealth of experience. Currently, there are few opportunities for true postdoctoral work within nursing and midwifery, unless it is part of a research centre, or a very strong research program or cluster. The amount of expertise and therefore available mentors is limited.

Although publications and other avenues such as conference attendance and web-based material can identify experts, they are not always recognised by potential research trainees and early career researchers, or indeed by the profession at large. There is, therefore, a case to be made for the development of strategies at a national level to collect data on recognised experts in nursing and midwifery research, and to make best use of the expertise that is available within the nursing and midwifery profession. There was agreement that this is an area that nursing and midwifery needs to address at a national level.

2.3.4 Recognising research expertise

Moving from the establishment of a good track record to being recognised as an expert or leader in a field of research also takes considerable commitment and is strongly linked to funding and program success evidenced by sustained research productivity and impact. Again, the experience of other disciplines and the research profile point to a number of indicators that mark expert status:

- The **calibre of the research** is recognised when funding is received from various bodies, including the NHMRC and ARC. In addition, granting bodies may encourage experts to apply for funding or expand their interests in a wider multidisciplinary field.
- **Communication of research findings** is through a variety of media. Presentation at conferences tends to move through the stages of having papers accepted for presentation, being invited to give a paper and then to being the keynote speaker. Such conferences may be local, national or international, and within the nursing and midwifery profession or interdisciplinary, depending on the nature of the research. Publications are a key measure of research **impact**; that is the prestige and standing of the journal chosen for publication impacts on reach, readership and ultimately policy and practice. Publication in *peer-reviewed* journals lends weight and credibility to the research findings (as the research methods and findings have been reviewed by a panel of peers). Writing for publication is a research skill in itself and one that develops over time with mentoring and attention to review comments – mentoring and partnerships assist the process.

Experts tend to publish in the high-citation journals, both within the profession of nursing and midwifery and other appropriate disciplines, nationally or internationally. Such publication enhances the research profile of the researcher within their organisation and the wider research community and adds to the research quantum that attracts government funding.

While this may establish expert status, it is also important that the research that will impact on practice and policy is published in those journals to which there is ease of access by those charged with the transference of such knowledge into practice and policy. Other media, such as books, film, television, radio, press and popular magazines may also be used to establish expertise.

- **Invitations to join strategic or prestigious committees**, both nationally and internationally indicate expert status and ensure that the nursing and midwifery voice is heard on government, jurisdictional, national and international committees. In some instances, governments and other organisations seek input and advice from experts in a particular field of research.
- **Service on various research funding bodies**, both within and outside the disciplines. The research profile indicates that there are a number of nursing and midwifery experts who serve on NHMRC committees, although this is an area where there needs to be further promotion of the discipline's experts. It will be particularly challenging in the context of establishing expert assessment panels under the RQF. The preferred RQF model proposes that nursing and midwifery research will be considered by the RQF Public Health and Health

Services Assessment Panel (which will review nursing, public health and health services; complementary/alternative medicine, Human movement and sports science, and other medical and health sciences¹⁴). It has been recommended by the Expert Advisory Group that panel membership should comprise:

- At least 50 per cent international experts, consisting of some who are resident overseas, as well as some international experts resident in Australia; and
- At least **two experts**, as deemed appropriate to the panel structure (discipline experts), who could represent the views of users of the research under assessment.

While no formal sub-panels are to be created, panels may call on external assessors for advice and/or ratings. Each assessment panel will establish a group of "expert" members to provide expert assessment if required. In addition, a certain proportion of work will be sent to external assessors for validation of scoring by the Panel¹⁵. In this context, experts in nursing and midwifery will have a particularly portentous role and choosing or putting forward the best experts for these roles will require careful consideration and strategic planning.

There was a view in the consultations that nursing and midwifery experts may be less than generous in their recognition of other emerging experts, especially in their own field. Further, nurses reviewing the work of fellow nursing and midwifery researchers may be harsher on their colleagues than those of other disciplines. Other disciplines seem more encouraging of their lesser-known colleagues than nurses and midwives. Perhaps this will diminish as the profession becomes more mature in its approach to research.

- **Networking, partnerships and collaborative ventures** tend to occur as expertise is recognised. Other researchers, both within and outside the profession seek to join with the expert. In this way, strong programs of research can be built up and movements towards critical mass, "growth" of researchers, and research of considerable substance can be achieved.
- **Prestigious awards for research excellence** are presented by various sources, such as the university, government, the profession and professional organisations, both within and outside nursing, locally, nationally and internationally.
- **Contribution to the research quantum and funding base of the university** is not only through funded research, but also through publications in high-citation journals and successful supervision of research trainees.

There are many factors that facilitate the development of expertise. There are nurses and midwives in Australia who have reached expert status. They have travelled different paths. For all, it has taken considerable time, energy and the ability to seize opportunities. It has required a focus on a particular research interest or area, and team building, including the "growing" of new and beginning researchers within and outside the discipline. It has also meant reaching out to others, nationally and internationally, to further develop the research interest area with different groups and cultures and, where necessary, it has involved moving to other settings where the research agenda can best be developed.

Summary

Within a strongly-positive research culture in nursing and midwifery, expertise can be grown in three phases – research training, establishing track record and being recognised as an expert in the field. Being recognised as an expert by colleagues, other disciplines, government and other organisations is essential if nursing and midwifery researchers are to build a longer-term capacity through the development of critical mass.

Experts have a particular responsibility to provide leadership, mentorship, strategic direction and momentum to ensure that nursing and midwifery research makes a significant impact on the health of Australian citizens.

¹⁴Medical, pharmacology, dentistry, mental health and optometry applications will be reviewed by the Clinical Sciences and Clinical Physiology Panel.

¹⁵From the Outcomes of the RAG RQF working group 2/Assessment panels; November 14 2005 meeting: <http://www.dest.gov.au/NR/rdonlyres/EB593B36-9D96-4676-AECA-C1A03C61295F/8632/assessment.rtf>

2.4 Priority 4 - Translating research into practice

“Benefits of research are only delivered when research moves out of the academy and finds application in the wider society”

(The Allen consulting Group, 2005, p. 2^{xv})

There was broad agreement that research has its most profound impact when it informs changes to policy and practice, which in turn impact on health outcomes for individuals and communities.

Within nursing and midwifery, the importance of translating research findings into practice has been the focus of ongoing national and international debate. Indeed it was recognised by the participants as the same debate the disciplines have been engaged in for more than thirty years. It was widely recognised by those consulted as an area requiring further strengthening. Why, when there is now a substantive body of research from countries such as Canada, UK, USA and Australia pertaining to strategies to augment research translation, does this continue to be such a vexing challenge for the nursing and midwifery disciplines?

There have been a number of studies highlighting the barriers to successful translation and some show how to overcome these barriers. For example, in Canada, Estabrooks leads a multidisciplinary (albeit nurse-led) team and substantial research program that has developed and tested theory relating to research knowledge utilisation^{xvi}. There was much debate in the consultation as to the barriers in the current Australian context to research implementation. There was also identification and discussion of both innovative and demonstrated measures shown to be successful in augmenting research uptake in the practice setting across the spectrum of health disciplines.

This section draws on both the literature and the national consultations to map out a number of factors and strategies that have been successful in increasing research translation into practice. These will be considered in relation to four major areas:

- Research users;
- Organisational research culture;
- Research credibility; and
- Communicating research to end-users (Funk et al, 1991)^{xvii}.

Research users

Research findings are utilised at all levels of health service: by practitioners (not only nurses and midwives) at the clinical interface; managers and executives involved in managing clinical risk and developing organisation policies and procedures; academics in professional education and training; and in forming local or national health policy and strategies.

A major group of users of nursing and midwifery research are located in health services and include the nurses and midwives at the clinical interface. At this level, positive attitudes and skills of research users are essential for the successful translation of research findings into practice. A number of factors influence the development and cultivation of attitudes and skills in the nursing and midwifery research user, including:

- Pre- and post-registration educational programs for nurses and midwives that reflect and harness the value of research; eg. where research and EBP are integrated and/or embedded into the program and taught by those with knowledge and expertise in a way that is interesting, relevant and exciting;
- A positive research culture, both at the service delivery and organisational levels, and organisational commitment to EBP;
- Research is represented as an integral part of the role of nurses and midwives:
 - Competency standards related to the research “user” and “doer” are incorporated into the performance management framework;
 - There are opportunities to develop research skills and to pursue a research career through incorporation of research in the roles of all nurses and midwives (and especially in Clinical Nurse Consultant and Clinical Nurse Specialist positions);
 - Nursing or midwifery research positions are identifiable in the organisation and particularly in the clinical practice areas (this is more readily facilitated when the nursing and midwifery career structures, either through industrial award or workplace agreement, provide for research positions);
- On-going commitment to and support by individuals and organisations to translation of research findings through such measures as clinical supervision, resources and access to research and EBP databases.

Where research is valued and seen as an integral part of the role of the research user, and where the necessary skills and attitudes are developed in the undergraduate phase of learning, research findings are more likely to be applied to practice.

Research in pre-registration programs

Currently, there are different approaches to incorporating research in undergraduate programs for nurses and midwives, and this is resulting in a range of outcomes in terms of research attitudes, skills and capability. There is ongoing debate about whether pre-registration programs should produce competent research users (able to access, understand and make informed judgments about the value and application of research methods and findings to change or evidence-base practice), or whether undergraduate programs should produce graduates with the skills to participate in research projects.

Table 3 (below) outlines the research-related aspects of the Australian Nursing and Midwifery Council (ANMC) competency standards for registered nurses and midwives, and shows that competence in using research to inform practice is part of the core competency requirements for practice as a registered nurse or midwife. As these competencies are the requirements for licensing in Australia, they are also the benchmark for assessing students' practice for this purpose, and hence provide guidance to curriculum designers as the research component of programs leading to registration.

Table 3. ANMC National competency standards - research

National Competency Standards for the Midwife	National Competency Standards for the Registered Nurse
<p>The graduate midwife uses research to inform midwifery practice. This includes interpreting evidence as a basis to inform practice, policy, guidelines and decision-making. This implies an understanding about the way that knowledge and evidence are continuously created, applied and recreated.</p> <p>COMPETENCY 14 Uses research to inform midwifery practice</p> <p>Element 14.1</p> <p>Ensures research evidence is incorporated into practice.</p> <ul style="list-style-type: none"> ➤ Values and acknowledges the importance of research and evidence. ➤ Maintains current knowledge about relevant research. ➤ Demonstrates skills in retrieving and understanding research evidence, including levels of enquiry and forms of evidence. ➤ Discusses the implications of evidence with the woman and colleagues. ➤ Participates in reviews of practice and policies. ➤ Supports research in midwifery and maternity care. <p>Element 14.2</p> <p>Interprets evidence as a basis to inform practice and decision making.</p> <ul style="list-style-type: none"> ➤ Underpins midwifery practice with current knowledge and best evidence. ➤ Accesses evidence, shares and utilises to inform policy and practice. ➤ Explains options while recognising the woman's right to choose. 	<p>The registered nurse contributes to quality health care through lifelong learning and professional development of herself/himself and others, research data generation, clinical supervision and development of policy and clinical practice guidelines.</p> <p>3. Practices within an evidence-based framework</p> <p>3.1 Identifies the relevance of research to improving individual/group health outcomes</p> <ul style="list-style-type: none"> ➤ identifies problems/issues in nursing practice which may be investigated through research. ➤ considers potential for improvement in reviewing the outcomes of nursing activities and individual/group care. ➤ discusses implications of research with colleagues. ➤ participates in research. ➤ demonstrates awareness of current research in own field of practice. <p>3.2 Uses best-available evidence, nursing expertise and respect for the values and beliefs of individuals/groups in the provision of nursing care.</p> <ul style="list-style-type: none"> ➤ uses relevant literature and research findings to improve current practice. ➤ participates in review of policies, procedures and guidelines based on relevant research. ➤ identifies and disseminates relevant changes in practice or new information to colleagues. ➤ recognises that judgements and decisions are aspects of nursing care. ➤ recognises that nursing expertise varies with education, experience and context of practice. <p>3.3 Demonstrates analytical skills in accessing and evaluating health information and research evidence.</p> <ul style="list-style-type: none"> ➤ demonstrates understanding of the registered

	<p>nurse role in contributing to nursing research.</p> <ul style="list-style-type: none"> ➤ undertakes critical analysis of research findings in considering their application to practice. ➤ maintains accurate documentation of information which could be used in nursing research. ➤ clarifies when resources are not understood or their application is questionable. <p>3.4 Supports and contributes to nursing and health care research.</p> <ul style="list-style-type: none"> ➤ participates in research. ➤ identifies problems suitable for research.
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Consultation participants mooted whether a set of guidelines (developed and agreed by the Council of Deans of Nursing and Midwifery – Australia and New Zealand (CDNM-ANZ) and adopted by the registration authorities during the program accreditation process would bring a more-consistent approach to research teaching at the undergraduate level.

It is noted that the ANMC is currently working with key stakeholders to develop a national framework for the accreditation of courses leading to registration (licensing) in Australia with a view to implementing the framework nationally by 2007¹⁶. As the framework will provide criteria for programs (and program providers) including minimum requirements, it is likely that program and provider requirements with respect to research will be clarified. With acceptance of the accreditation framework by the ANMC members (the eight RAs), a more uniform expectation with respect to research capability of the new graduate would be uniformly applied. It is also acknowledged that with the introduction of the Australian RQF, research infrastructure funding may be concentrated in research-intensive universities, resulting in “teaching only” higher-education providers. This will present challenges for health disciplines, such as nursing and midwifery where research culture and practice is a precursor for introducing research to students in a meaningful way.

It was further suggested that performance indicators (and tools for assessing performance) for individuals and organisations regarding research and EBP, particularly at the clinical interface, would facilitate the development of the necessary behaviours and attitudes for translation of research findings into practice. Confidence will build in clinical areas where research skills and attitudes are reinforced, especially through clinical supervision processes that focus on translation of research findings into practice.

2.4.2 Organisational research culture

Research culture in the academic setting is discussed briefly, earlier in this report in section 2.2, and is shown to be essential to building research critical mass, strong programs of research and for growing generations of researchers. Central to the effective translation of research findings into practice lies the research culture of health service organisations.

The consultations identified that organisations with a strong research culture also strive to implement EBP and have a focus on the dynamic of changing practice and policy to provide the best possible health care service. This is a force driving research practice and the uptake of sound research findings.

What exactly constitutes a positive research culture is somewhat difficult to describe, as are the steps to inculcate a culture to promote research and EBP. It is perhaps easier to identify the markers or features of an organisation with a positive research culture, and in doing so to identify the individual features that collectively constitute the cultural milieu. Table xxx, for example is a distillation of features that those consulted identified as contributing in their experience, to the uptake of research and EBP.

¹⁶ *It is also noted that the July 14 COAG communiqué supports the implementation of a national accreditation scheme for the nine regulated professions to be implemented by 2008 – and notes that such a scheme may have implications for standards developed for nursing and midwifery programs leading to registration in the same way as other regulated health professions.*

Table 4. Organisational Research culture

Practice areas
<p>Learning environment:</p> <ul style="list-style-type: none"> • Nurses and midwives at all levels of the organisation question practice and encourage ideas relating to research and practice; • Opportunities for discussion about research translation, including grand rounds, journal clubs, and tea room discussion, clinical supervision and mentoring through individual key performance indicators, identifying goals for translation of research into practice; • Focus on research evidence that is relevant to the unit, outcome specific, clinician identified, applied immediately and systematically, and able to be evaluated; • Sharing of expertise between clinicians, clinicians and academics, other disciplines and other areas within organisations and the community. <p>Organisational structure:</p> <ul style="list-style-type: none"> • Research positions in the practice area may consist of - <ul style="list-style-type: none"> ○ a dedicated research position ○ an expansion of current positions, eg. clinical development nurse, CNC or CNS ○ a chair in clinical nursing ○ dedicated research position; • Partnerships and collaboration with research units, eg. clinical or professorial research unit/clinical school/clinical research centres - with appropriate research leadership positions.
Management
<ul style="list-style-type: none"> • “Research-aware” managers setting tone for research and practice, providing management structure and adequate resources for translating research into practice; • Strategic, operational and business plans drawn up by unit and with partners to ensure an all-of-staff approach to research translation; • Research leadership – clinicians/academics driving research translation through brokering skills^{xviii}, advocating for and sponsoring of nursing and midwifery research, within unit, organisation, broader profession, with other disciplines and the community, locally, nationally and internationally.
Individuals
<ul style="list-style-type: none"> • Negotiate for time and resources to enhance EBP in unit; • Recognise own expertise to enhance the practice of nursing and midwifery; • Identify areas for change of practice through evidence; • Initiate gathering of evidence relevant to practice through systematic reviews; • Work in teams of clinicians, academics and others to advance the ethos of EBP, collecting, evaluating and applying research evidence; • Offer own expertise and accept expertise of others as appropriate, to advance changes in practice and policy within the clinical area; • Share research translation both within the nursing and midwifery disciplines and with other health professionals, including the medical profession.

In effect, the research culture must permeate the matrix of the organisation. The organisation as an entity is responsible for focusing the direction of research and EBP for all health professionals in the organisation, and for providing the necessary resources for its implementation. This depends not only on leaderships through the nursing/midwifery structure, but also on support emanating at the board and executive levels. Within individual work units (clinical service areas, wards and business units), the environment, organisational structure, management and research leadership enable individuals to grow and develop, to support each other and to form partnerships and collaborations with other areas and the wider health service community as they translate research findings into practice.

The establishment of a positive research culture relies heavily on common values, resources, effective management and commitment on the part of the organisation, the units and the staff comprising the organisation. All need to focus strongly on translation of evidence into practice and policy to ensure that the organisation is providing care at the best available level.

2.4.3 Credibility of the research

Changing established patterns of professional practice is always challenging for organisations and health professionals. Sound research provides the evidence to mount the case for change, but in order for this to happen, the research itself must be firstly acknowledged as credible so that there is confidence in the evidence at hand. Nursing and midwifery researchers face particular challenges in relation to establishing the credibility of their research, particularly in relation to the research methods commonly used and the *levels* of evidence generated. Secondly, end-users must have access to credible research in a form that is useful and comprehensible to them.

Types of research methods and levels of evidence

There is no doubt that nurses and midwives use a wide range of research methodologies to address their research interests. Inextricably intertwined with the issue of research methodology, however, is the issue of levels of evidence generated through the research.

Within the research community (and particularly the medical, health and biosciences research community), research is traditionally judged on its *scientific* merit. The dominance of the Randomised Control Trial (RCT) at the top of the research evidence hierarchy is, however, sometimes at odds with the issues and research interests of nurses and midwives (and indeed other disciplines) (Kirby, 2004)^{xxiii}. Clinical practice questions cannot always be framed in terms of cause and effect, rather they require different research approaches, which produce findings or evidence that is classified at lower levels in the research evidence hierarchy. For example, the disciplines have embraced qualitative and post-positivist research methodologies in order to answer all or part of the questions that are being posed.

The research profile indicates that within the nursing and midwifery research community there are now strong researchers who produce research that has the same scientific merit as the quantitative studies and have received nationally-competitive funding through NHMRC and ARC to determine best-available evidence. The days of a dichotomy between quantitative and qualitative research methods have passed. Indeed, many current funded research projects employ mixed methods from both paradigms.

The use of such information generated through a range of research methods, allows nursing and midwifery, like other disciplines, to focus on the best-available evidence to address an issue of concern (Pearson, 2004)^{xxiv}. The ongoing challenge that nursing and midwifery must face is to develop credible processes to enable evidence generated through nursing and midwifery research to be used to maximum effect (Leap et.al. 2000)^{xxv}, and to persuade parent institutions, other disciplines, funding bodies and the proposed RQF Assessment Panel of the value and utility of such information.

Research language – writing for the research user

Findings of research communicated to the users of research in a way that has meaning for them, enhances translation of findings into practice. The consultations identified that the language in which research articles are written is a critical factor. Clinicians expect research to be written in language that the end user can understand and in journals to which they have easy access. Contrarily, academics need to publish in high-citation journals to ensure that they contribute to the research quantum of their university. At times, such journals have expectations about the language used. Clinicians consider that academics should write in “plain language” and academics consider that clinicians should learn the language of research.

The question becomes how to make research reports easy to read, without “dumbing down” the article. There is no easy solution to this dilemma, except for both groups to be fluent in the language of the other. The question of where to publish is a complex one. The CDNM-ANZ is currently looking at the issue of high-citation journals, in preparation for the RQF introduction, and it is anticipated that this exercise will balance the need to measure the impact on the new RQF (the need to have research article accepted by journals -research quantum), against the need to ensure that clinicians can easily access and understand the research findings, so that the impact potential is realised through translation of research to policy and practice.

Access to research and systematic reviews

A key to implementing policy and health care practice that is based on sound evidence within health service organisations is providing the resources that enable nurses and midwives to access research and systematic reviews of research by others.

Systematic reviews are robust systematic literature reviews that appraise and synthesise evidence from primary research/studies. They provide empirical answers to focused questions about health care and related issues. They are particularly important as they summarise the research on a particular issue and guide research users as to the value and application of research findings. Systematic reviews also reveal where there are gaps in research on a particular issue or where there is a lack of contemporary evidence to support aspects of clinical practice. Systematic reviews differ from traditional reviews and commentaries produced by ‘content experts’ in that they adhere to a

scientific methodology which seeks to minimise bias and errors. Hence, rather than reflecting the views of “experts”, they generate balanced inferences based on the collation of the best available evidence (NHS Centre for Reviews and Dissemination University of York, 2001 #1120). Consequently, they allow research users to make judgements to drive policy and clinical practice efficacy or the need for change based on the best available evidence.

There are a number of sources of systematic reviews related to health care practice that provide electronic or on-line access to materials. For example, the (UK) National Health Service Centre for Reviews and Dissemination undertakes reviews of research and interventions used in health care and social care¹⁷ and provide a number of on-line databases. The Cochrane Collaboration¹⁸, perhaps the most widely known and utilised, also produces and disseminates systematic reviews of healthcare interventions and promotes the search for evidence in the form of clinical trials and other studies of interventions. Reviews published by Cochrane have a strong emphasis on medical research and a focus on RCT studies. The US Agency for Healthcare Research and Quality supports twelve evidence-based practice centers which develop and produce evidence reports and technology assessments on topics relevant to clinical, social science/behavioral, economic, and other health care organisation and delivery issues¹⁹.

Similarly, the Joanna Briggs Institute²⁰ (based in Australia) provides a database focusing on research related to nursing, midwifery and other allied health professions. The NICS²¹, whose focus is on the identification of evidence – practice gaps, also has a focus on identifying methods that work in turning evidence into practice within Australia’s health professions.

Through the consultations it is evident that nurses and midwives require facilitated access to these sources if they are to be informed users of research and participate fully in the development and implementation of evidence-based policy and practice. However, the consultations indicated that facilitated access depends on a number of factors and seems to vary across jurisdictions.

The Victorian Department of Human Services, for example, provides access to a range of databases and electronic journals through the Clinician’s Health Channel. Full access is provided by password to employees of public health services. The ACT Health Library provides a similar service for employees of ACT Health. In addition, most large public health services house or have links to established medical and health library services, which provide access to electronic journals and other information sources.

In contrast, nurses and midwives, particularly in the private sector, identified increasing barriers to accessing electronic information sources. In part this is due to a tightening of access to electronic journals and databases by university libraries, to comply with licensing arrangements.

While proficiency as an informed research user is an ANMC competency, health services cannot rely on the professional good will of committed individuals to drive practice change, especially where significant costs are involved. Individual practitioners may subscribe to a number of professional journals, however they are unlikely to hold subscriptions to the range of journals required to fully evaluate the research on a particular issue. Similarly, systematic review sites may require paid membership for full access.

Health service organisations stand to benefit from improved, evidence-based policy and practice. Hence there is an obligation, or at least a compelling argument for investment in the infrastructure to support it. Access and licensing costs pose a significant challenge particularly for private health services. Facilitating access may require more creative solutions and might include exploring a range of partnerships with higher education providers, collaborations between health services and cost-sharing arrangements with benchmarking partners.

Summary

The impact of research evidence on practice is essential if the Australian health care system is to grow and improve. Such impact is important, not only to the growth of the disciplines of nursing and midwifery, but also to the health of the Australian public. Nursing and midwifery are an integral part

¹⁷ <http://www.york.ac.uk/inst/crd/>

¹⁸ <http://www.cochrane.org/>

¹⁹ <http://www.ahrp.gov/Clinic/epc/#Devf>

²⁰ <http://www.joannabriggs.edu.au/about/home.php>

²¹ <http://www.nicsl.com.au/>

of the health care system, and their growth is crucial to the health care system as a whole. Translation of research findings into practice has been an issue in nursing and midwifery for many years, as it has in other disciplines. Not only is the impact of research evidence on practice important in the clinical area, it is also of importance to academics.

Within the RQF, a focus on the measurement of the impact of research in practice and the relationship of this to funding for research will provide a challenge for all disciplines in the future, including nursing and midwifery. With a strong positive culture on EBP in the clinical area, nursing and midwifery should be well placed to grow in this area and increase its longer-term research capacity.

3. Strategies for a national approach to nursing and midwifery research

3.1 Research centres

Our Duty of Care (2002) suggests that funding be allocated to establish new cooperative research centres in nursing (including midwifery). While those consulted acknowledged that this is a target area of the ARC, there was limited support for this notion. It was noted that already there are many centres and research programs looking at health issues from a nursing and midwifery perspective (or nursing and midwifery issues within a broader perspective), both within the nursing and midwifery disciplines and as interdisciplinary or multidisciplinary collaborations. Where these are working well, they *are* generating research funding through the nationally-competitive funding structures and successfully building critical mass.

The view was put strongly by some that *research centres* are, in themselves, not an effective use of funding and certainly not a guarantee of research productivity or success (It is the program of research that matters). Establishing a new research centre would be expensive in terms of infrastructure. Further, based on past experience, such centres have a tendency to be more exclusive than inclusive, hence limiting their chances of multi-site, multi-method, multi-focus, and multidisciplinary research.

Although reference was made to the national centres in the USA and the UK, there was little support for such a venture in Australia. Reference was also made to the more-recent attempt to set up such a centre, and although supported by those who were involved in its establishment, it was not widely supported and was seen as exclusive, rather than inclusive by those outside the inner group.

Establishment of cooperative centres is a strong direction for ARC. It seems that when nursing and midwifery research leaders see a need for a cooperative centre, they will pursue this, either within the disciplines of nursing and midwifery or with other disciplines. This will continue as networks, partnerships and collaborations continue to grow in strength. Such centres enhance the chances of building critical mass and attracting research funding.

3.2 A group to drive the national research agenda

There was considerable discussion through the consultations flagging the need for a recognisable and authoritative **group** to represent nursing and midwifery research interests at a national level, and to drive a national research agenda. Even though the research community is growing, it was highlighted that currently there is no one group recognised within nursing and midwifery charged with this responsibility. Governments and various funding bodies have no identified group with whom to consult on matters of health research and EBP from the nursing and midwifery perspective. Furthermore, nursing and midwifery has no single powerful group that can promote the value of nursing and midwifery research in the current climate and lobby for change in the health care system and in allocation of public monies for research²².

Experts consulted from the nursing and midwifery research community posed a number of options for consideration that would draw together the necessary expertise.

3.2.1 National alliances or networks in established research programs or clusters

National alliances or networks of established research programs could make public the research strengths (scope of research, capacity and expertise) in the disciplines related to a particular area of research interest (especially in the NHPAs). Such alliances might also provide a focal point for engaging independent, HDR candidates and trainees and early career researchers sharing the interest. Through such alliances, a national agenda could be set for research in the specialty field, with maximum use made of partnerships, networks and collaborative ventures, both within and outside nursing and midwifery, locally, nationally and internationally.

There are many areas of research interest that would be strengthened by a national perspective and national collaborative effort. A national network of nursing researchers in the palliative care field has already been forming. Similarly, some of the specialist nursing and midwifery specialist colleges and

²² In reporting this consensus view, it is noted that since the consultation, and as a result of ongoing national dialogue on the matter, the CDN-M-ANZ has established a RAG (see *The way forward*).

professional groups have developed research advisory groups and national research agendas specific to the interest/specialty area.

However, while national groups or coalitions with a specialist or narrow research interest may develop a high research profile, they would certainly be limited in their ability (and may even be biased) in driving a broader national research agenda focused on building overall research capacity and in representing the broader research interests of the disciplines.

3.2.2 National ad hoc groups for national agenda purposes

There is merit in different groups combining for specific issues and making optimal use of nursing and midwifery expert researchers. For example three pressing concerns requiring further urgent discussion and action at the national level by a national leaderships group were identified:

- (a) **RQF:** Aspects that need attention include the measures that are to be used for RQF, the composition of the panels and committees that will be undertaking assessment and the criteria for assessment, especially for the non-traditional disciplines, such as nursing and midwifery. Dialogue needs to take place about the performance measures for research quantum, such as success with doctoral candidates and publications, especially the so-called high-citation indexes.

N³ET supports the work being undertaken by the CDNM-ANZ with respect to the RQF. It also recognised that the CDNM-ANZ both has, and has access to considerable expertise in the nursing and midwifery research community.

There could also be merit in considering collaborative approaches with other disciplines experiencing similar issues to those of the nursing and midwifery disciplines. N³ET also supports the CDNM-ANZ proposed research project to address the issue of high-citation indexes, especially in the context of balancing measures of research impact (research quantum) and research user needs for intelligent but intelligible research information.

- (b) **NHMRC:** Given the imminent change in leadership in this body, it would be timely to have dialogue to make known some of the issues that beset nursing and midwifery in its quest for such funding. Among the detailed issues that need discussion are:
- The number of nursing and midwifery members of council. Currently, it is one, with the health area being over-represented by the medical profession;
 - The need for some affirmative action for nursing and midwifery, especially in the building of critical mass, eg. discrimination in favour of quality proposals for nursing and midwifery in capacity-building research grants. The criteria applied to research into indigenous areas could be applied in nursing and midwifery, ie. where all things are equal, giving an extra weighting to nursing and midwifery proposals;
 - Increase the number of nursing and midwifery researchers on assessment panels. Establish a qualitative-research advisory panel to the assessment panels to provide a similar level of advice as is provided for the RCTs;
 - The distribution of research funding for collaborative ventures and for supervision of research trainees at other universities.
- (c) **NRP:** Lobbying for additional NRP to be added to the government list. Currently there is some urgency in adding quality/risk management as an area. There are a number of experts who could well serve the disciplines of nursing and midwifery in this capacity.

There was a strong view that to arrive at a national way forward on these issues, an ad hoc leadership group would need to be comprised of nursing and midwifery leaders with authoritative voice and connections, including:

- CDNM-ANZ representatives;
- key nursing and midwifery expert researchers from the academic sector;
- research experts who have been and are currently councillors for the NHMRC;
- key research experts from professional organisations, such as the Royal College of Nursing Australia and other specialist colleges;
- co-opted expertise as required.

3.2.3 A national group of experts in nursing and midwifery research

Overall, throughout the consultations, there was strong agreement that the nursing and midwifery disciplines in Australia needed to work on building up a research community both in capacity and capability, and develop tentacles and networks where researchers could connect and share their expertise. To drive such a national agenda and to strategically coordinate activity, the consultation suggested that a strong leadership group needed to be established that would:

- Consist of experts in nursing and midwifery research from both the academic and clinical setting;
- Provide leadership in setting and implementing a strategic national research agenda to build longer-term research capacity through wide consultation, especially with other nursing and midwifery researchers in academia and the clinical areas, and with other disciplines and government;
- Be accepted by the profession to speak on their behalf on nursing and midwifery research in Australia;
- Be seen as a credible group with whom various government departments, research-focused organisations and other disciplines would consult on matters of nursing and midwifery research;
- Be a powerful lobby group with governments and other funding bodies, in relation to all aspects of nursing and midwifery research; and
- Be an effective communicator about nursing and midwifery research to all levels of nursing and midwifery, and to government, funding organisations, other disciplines and the research community at large.

The question of whether such a strategic driving group already existed within the nursing and midwifery profession was explored and a number of options considered, including the RCNA, the Peak Nursing Organisation, the National Nursing Organisations, the Australian and New Zealand Council of Chief Nurses, professional colleges or nursing and midwifery RAs. There was only limited support for each of these options and it was agreed that none of the existing groups or alliances in nursing and midwifery were truly representative of the nursing and midwifery research community.

There was however, qualified support for the CDN-M-ANZ. It was acknowledged that this group provides leadership in the academic setting and has the potential to second experts to form an expert group with connections and influence. Despite the council's obvious credentials and position, there was some concern from clinicians that all researchers, not just those with academic or university affiliations, be engaged in national dialogue and included in and consulted by such a group.

There was also a suggestion that the disciplines form a group modelled on the medical profession's "Presidents of Colleges", although it was noted that in pursuing this direction, learning from previous ventures to establish such a group within nursing and midwifery would need to be observed.

One jurisdiction suggested that the Chief Nurses with state funding and collaboration from DEST and the CDN-M-ANZ might comprise the appropriate body to engage stakeholders in forming future strategic directions for nursing and midwifery research.

While there was some qualified support for a group of scholars, as currently suggested by a working party of the CDN-M-ANZ, not all were in favour of this approach and some advocated strongly for the inclusion of clinicians on such a group. The issue is one for the profession at large to debate in detail.

The way forward – N³ET

A broader strategy of building research capacity in the disciplines

This project initially sought to set national priorities for nursing and midwifery research to provide a cohesive and agreed focus for developing nursing and midwifery research capacity and a guide to future investment in nursing and midwifery research activity. Through a process of national consultation and given the changes to the health and research landscape, a different outcome was achieved.

Through the consultation process, a clear picture emerged that nurses and midwives recognised that national research priorities within nursing and midwifery should be consistent with the national priorities for the health and well being of the Australian community. It has been ten years since the National Health Priority Areas initiative was agreed by Health Ministers, providing a significant focus for public attention and health policy. That nursing and midwifery recognise and endorse the importance of such policy suggests a maturation of the disciplines that is noteworthy.

Based on the experience of established disciplines and evident from the national consultation, there are a number of interrelated factors essential to the development of longer-term research capacity. Foremost, research critical mass needs to be established in the disciplines. Successful research groups in all disciplines are those with a strong programmatic focus and that feature consistent success in competitive funding, the ability to attract and support post-doctoral researchers and a commitment to research training of the next generation of researchers. In other words, research capacity is built through a professional and organisational strategic commitment to provide the context within which researchers can build successful research programs that then become the training grounds for the next generation of researchers. There is, therefore, an important link between research success generally and the goal of building research capacity.

Secondly, to optimise the efficacy of health services, it is imperative that there is integration of research findings into practice in all practice-based disciplines. To enhance practice and policy and to be consistent with government directions, translation of research findings into practice is a matter of priority for nursing and midwifery research.

As a result of the national consultation process, four high-level priorities for enhancing and building research capacity within nursing and midwifery have been endorsed.

Priority 1	Contributing to research in National Health Priority Areas
Priority 2	Developing a research critical mass
Priority 3	Growing generations of researchers
Priority 4	Translating research into practice

Importantly, these national priorities for building nursing and midwifery research capacity would form the foundation of a broader national strategy aimed at building viable longer-term research capacity in the nursing and midwifery disciplines.

A national strategic direction

At a policy level, a number of initiatives need to be set in place to support the disciplines of nursing and midwifery to develop the national research capacity to address issues of importance to Australian health care. In order to best achieve the goal of increasing research capacity, a **national strategy** that is multifaceted and draws on collaboration and create synergy between the disciplines, key researchers, the university sector, the health sector and governments is required. A national strategy should give consideration to the following directions.

Leadership

Strong and focused leadership is needed to drive a national strategy for nursing and midwifery research and to provide high-level coordination and evaluation of arms of activity targeted at enhancing research capacity in the nursing and midwifery disciplines. This includes evaluation of the outcomes and impact of the ROF on research and research capacity for the nursing and midwifery

disciplines, and engaging with the ongoing evaluation and development processes for the RQF at a national level.

The Taskforce notes that the CDN-M-ANZ has recently established its RAG. RAG membership consists of leading nursing and midwifery researchers from across Australia and New Zealand, who will assume responsibility for research leadership in response to the Australian Government's RQF and New Zealand's Performance-Based Research Fund.

This group is well positioned to take carriage of the broader national agenda for nursing and midwifery research, to consult with the research community within and beyond the university sector, and to speak on behalf of the disciplines on matters related to research priorities, research training and measures to support research capacity building in the future.

Collaboration, consultation and communication

A strategic direction would necessarily include engaging nurses and midwives, the university sector and their professional organisations, the health sector/employers and governments in the development of a long-term (eg. 10-year) strategic plan (including priority actions and an implementation plan), aimed at building research capacity targeting nurses and midwives. Elements of the plan should include:

- Strategies to engage the disciplines in the steering of this initiative, and for working in partnerships with key stakeholders to achieve successful growth in research capacity;
- Identifying and harnessing the human capital of successful groups of researchers that currently achieve excellent research outcomes;
- Strategies to engage industry, government, professional and philanthropic organisations in partnership, to support research by nurses and midwives through various forms of support for research activity and training, eg. scholarships and research grants. This may include providing strategic direction to guide awarding scholarships and research grants;
- A longer-term plan for working collaboratively with health services and employers, unions and State Governments to develop, recognise and reward roles for clinical research nurses and midwives;
- National leadership programs, building on areas of current and proven research strength and with the capacity to support a national network of researchers (such as palliative care, critical care, and midwifery), thereby promoting coalitions, collaborations and partnership projects and providing fertile ground for research training.

A program for building research capacity through research training

Sustainable growth in critical mass is inextricably linked to growth in research training (National Nursing and Nursing Education Taskforce, 2006) requiring:

- A methodology for establishing and evaluating progress towards the target proportion of all nurses and midwives who require higher-degrees by research, in order to ensure the disciplines' capacity to support the clinical research needs of nurses and midwives;
- A coordinated approach to monitoring and evaluating the outcomes and impact of the RQF on research training for the nursing and midwifery disciplines, and for engaging with the ongoing evaluation and development processes for the RQF at a national level;
- Cultivating a pool of higher-degree research training candidates;
- Harnessing support for higher-degree research training;
- Developing research supervision capacity.

Support for nursing and midwifery research

Employers and health service providers stand to benefit from the findings of nursing and midwifery research, especially where research targets identified clinical issues and results in improved outcomes for patients and organisations. There is opportunity for health service providers to strengthen commitment to research by:

- Providing grants and scholarships to employees for higher-degree research training, where the research interest targets local research priorities;
- Providing training opportunities linked to larger service-based programs of research;
- Developing linkages with universities and other industry partners where research is across multiple sites;
- Providing resources to support research activities and EBP.

An agreed focus

The National Priorities for Nursing and Midwifery Research provide a cohesive and agreed focus for developing nursing and midwifery research capacity and a guide to future investment in nursing and midwifery research activity²³. It is only through building research capacity that the nursing and midwifery disciplines will be able to respond to national directions in health and research, and thereby contribute to improving management of health conditions and service delivery in the Australian and international context.

This does not mean that research cannot or should not continue across the spectrum of health care where nurses and midwives practice, or that nurses and midwives should not pursue many and varied research interests and priorities. It is appropriate that research continues in all these dimensions, so that the body of knowledge about health issues and how best to manage them is continually expanding and remains contemporary and relevant.

²³ *The Priorities for Nursing and Midwifery Research in Australia report is available from the N³ET website www.nnnet.gov.au*

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