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EXPLORING THE TEACHING NURSING HOME MODEL: LITERATURE REVIEW TO INFORM THE NATIONAL EVALUATION OF THE TRACS PROGRAM

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The Australian Workplace Innovation and Social Research Centre (WISeR) *focuses on work and socio-economic change. WISeR is particularly interested in how organisational structure and practices, technology and economic systems, policy and institutions, environment and culture interact to influence the performance of workplaces and the wellbeing of individuals, households and communities.*

WISeR also specialises in socio-economic impact assessment including the distributional impacts and human dimensions of change on different population groups and localities. Our research plays a key role in informing policy and strategy development at a national, local and international level.

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1 Context for the Literature Review

1.1 The TRACS Program

Teaching and Research Aged Care Services (TRACS) were defined by the former Department of Health and Ageing as:

> ***'… aged care services that combine teaching, research, clinical care and service delivery in one location to operate as a learning environment to support clinical placements and professional development activities in various disciplines.'*** [1]

The Department described the purpose of the program as providing funding to help establish a variety of TRACS models, and to share the lessons learned in the process with the wider industry, providing an evidence base for future development.

Three year funding agreements were executed in 2011-12 for 16 TRACS projects to a total value of $7.5million (excluding GST). There are four projects in South Australia, three each in Victoria and Queensland, five in New South Wales, and one project spanning three states – Tasmania (project lead), Victoria and Western Australia.

1.2 Purpose of the Literature Review

This Literature Review forms one component of the national evaluation of the TRACS Program which was commissioned in late 2012 by the then Department of Health and Ageing, now the Department of Social Services.

The review builds on earlier work undertaken for the Department by WISeR (then known as the Australian Institute for Social Research)[2] to provide research and analysis to inform the implementation of what was termed at that time the *Teaching Nursing Homes Initiative.* The Scoping Study Project began in early January 2011 and was completed at the end of March 2011 and it involved a focused review of the national and international literature on the 'teaching nursing home' model.[3]

This Literature Review has a different emphasis. Where the Scoping Study Discussion Paper focused on the Teaching Nursing Home model, internationally and across Australia, identifying its enablers and challenges, this Literature Review is designed to support the national evaluation of the TRACS program. It is intended to be a resource for TRACS Projects in particular, and for those involved in or intending to establish, a teaching and research aged care initiative.

The Review pays particular attention to the history of this model and the lessons learned from earlier iterations, and reviews more recent literature as well. Rather than a list of references, it provides a bibliography detailing all of the sources identified which explore the model, its application and lessons arising from experience in Australia and internationally. It is hoped that this will also be a resource in itself.

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[1] http://www.health.gov.au/internet/main/publishing.nsf/Content/ageing-aged-care-dynamic-sector.htm

[2] The AISR is now known as the Australian Workplace Innovation and Social Research Centre – WISeR

[3] The Scoping Study was led by Dr Kate Barnett from WISeR, in collaboration with Prof Jennifer Abbey and Jonquil Eyre Consulting. Its reports are available at http://www.health.gov.au/internet/publications/publishing.nsf/Content/ageing-teaching-nursing-homes-discussion-paper-toc and http://www.health.gov.au/internet/main/publishing.nsf/Content/ageing-publicat-teach-nursing-homes.htm

2 EXPLORING THE TNH MODEL

2.1 DEFINING THE 'TEACHING NURSING HOME'

While clear definitions of what is meant by a 'teaching nursing home' (TNH)[4] are difficult to find in the research literature, most writers agree on the fundamental concept of the model as linking and creating synergy between the separate spheres of research, clinical care and education and training (Chilvers & Jones 1997: 463) and pursuing these outcomes:

- ⇨ Research designed to improve care
- ⇨ Enhanced knowledge of health professionals and aged care workers regarding the care of older people
- ⇨ Quality education and clinical experience for students
- ⇨ Enhanced quality of care (Chilvers & Jones 1997: 463-464 citing Mezey *et al* 1984, Wallace 1984, Ciferri & Baker 1985, Huey 1985, Rubenstein *et al* 1990 and Kaeser *et al* 1989; Katz *et al* 1995).

> ***In the teaching nursing home as in the teaching hospital, the goals of patient care, teaching, and research need to be mutually supportive and synergistic so that all parties to the affiliation can benefit …. (Weiler 1987: 6).***

The National Institute on Aging Teaching Nursing Home Program (see *Section 3.1*) also envisaged TNHs as the foundation for a *community of interest* working together to improve the care and management of chronic illness in aged care facilities (Aronson 1984: 451 citing Butler 1981 and Schneider 1983).

For many of the earlier US programs, the TNH had the additional purpose of improving the interface between the aged care and acute care sectors. By increasing the capacity of the aged care workforce, for example, by employing physicians and nurse practitioners, admission to hospital would be reduced as would length of stay following admission (Aiken *et al* 1985). Enhancing this interface has been a central feature of the TNH model pursued by the USA Veterans Administration (VA) system which located its aged care and acute care facilities in close proximity – see *Section 3.3.*

The synergy between research, education and clinical care can be seen as building aged care workforce capacity and aged care 'learning organisations'. This feature is reflected in many of the projects funded by Australia's TRACS Program.

There is strong agreement evident when reviewing the large number of studies that a TNH must be structured formally by an affiliation or partnership between an aged care provider and a university school of health sciences (particularly in nursing or medicine) – although the *method* of affiliation appeared to be influenced by financial resources (Chilvers & Jones 1997: 464 citing Cifferi & Baker 1985 and Kaeser *et al* 1989). It is only recently in Australia that vocational education and training (VET) providers are part of the affiliation, no doubt in response to the increasing numbers and proportion of the direct care workforce who are VET trained. This was also a feature of the USA's Beverly Enterprises TNH program – see *Section 3.4.*

[4] 'TNH' will be used throughout this literature review, unless specifically referring to the TRACS Program in Australia, or Norway's Centre for Development of Institutional & Home Care Services, or the CLRIs in Canada, as most of the literature uses the term 'teaching nursing home' when referring to this model

Most of the TNH models in the USA have involved partnerships between university schools of nursing and residential aged care facilities, but some also include acute care hospitals (which has been the model of veteran-specific TNHs since the 1960s (Rubinstein *et al:* 1990) – as described in *Section 3.3.* (See also *Section 4.3* which overviews the Netherlands application of the TNH, which also appoints physicians as part of the residential aged care workforce - rather than as visiting specialists).

Although there are certain 'core' features of the TNH model, it is important to remember that its application can be expected to vary with local conditions, the expertise brought by its partnering organisations, and the needs of students and residents. For this reason, a 'one size fits all' approach is not appropriate to the implementation of the model.

2.2 Replicating the TNH model: Selectively or Universally?

Although most aged care services pursue some of the TNH model's features, and those regarded as TNHs are seen as role models encouraging the take-up of those features, the question arises: *Should and could **all** aged care services become 'teaching nursing homes' or teaching and research aged care services?* In other words – *Is the TNH model one with selective or universal application?*

While TNH affiliations can demonstrate the best of care, education and research, and can motivate partners to improve their efforts across these three areas of focus, there is strong agreement in the literature that not all education and aged care providers can, or should, pursue this model in its entirety.

Rather, they are regarded as centres for research and learning, and as occurs in the 'hub' application of the model (see *Sections 2.6* and *4.1*), provide leadership in their respective sectors. The same would be said of teaching hospitals – not all acute care facilities can or should be centres of teaching excellence. Furthermore, the additional resourcing they require is seen by many researchers as an argument in itself for them not becoming the norm (ACWC 2000: 3; Chilvers & Jones 1997: 467 citing Fretwell & Katz 1985).

The National Institute on Aging's TNH Program was also clear that the model was a selective rather than universal concept.

> ***… it is not anticipated that every nursing home will be a teaching nursing home. Rather, NIA envisions a small number of model teaching nursing homes that should contribute to our understanding of significant biomedical, social and policy questions about the health and health care of a rapidly aging population (List et al 1985: 96).***

Leadership is another theme in the literature when discussing the model, with TNHs providing a benchmark in quality of care.

> ***It seems reasonable that just as teaching hospitals are the standards against which community hospitals can compare themselves, the development of their counterpart, the TNHs, could become the standard for all homes for the aging and the measure against which evaluation can occur (Butler 1985: 100).***

Key stakeholders from the USA's Robert Wood Johnson Foundation TNH Program, Mathy Mezey and Joan Lynaugh, addressed this question, asking whether TNHs should act as acknowledged centres of education and research that provide leadership in their sector, or whether the model should be applied across the aged care sector. They opted for a mixed model, recommending that a limited number of 'centers of excellence' TNHs be

established while applying key features of the model to large numbers of aged care services (Mezey & Lynaugh 1989: 777).

A more recent study involving these pioneers attempted to identify the features which differentiate 'teaching nursing homes' from other aged care services, the findings of which highlighted the importance of quality in education and in care provision (Mezey, Mitty & Burger 2009). Informed by a review of the literature, the methodology involved convening an Expert Panel from the Hartford Institute for Geriatric Nursing to re-evaluate the role of TNHs in the education of geriatric health care professionals (from the disciplines of nursing, medicine, dentistry, social work and pharmacy), with a view to enhancing quality of nursing home care. One possible outcome sought was the development of criteria to underpin a 'certification' of aged care services that achieved criteria to distinguish them as 'teaching and learning leaders' (Mezey, Mitty & Burger 2009: 196, 202).

Among the criteria identified by the Expert Panel were the following:

- ✓ a robust quality assurance program
- ✓ sufficient trained registered nurses
- ✓ sufficient preceptors or mentors to train and support students (also identified as often missing in nursing homes)
- ✓ staff being generally receptive to student participation in care planning and delivery
- ✓ interdisciplinary collaboration and teamwork
- ✓ a service that has a good reputation with regulatory and accrediting bodies and with the wider community
- ✓ a busy clinical service
- ✓ stable administrative and nursing leadership (Mezey, Mitty & Burger 2009: 199-200).

To this list, the authors added the criterion of 'evidence-based structures and processes of care, information and communication' (Mezey, Mitty & Burger 2009: 202).

CHARACTERISTICS OF A TNH OR TRACS AGED CARE PARTNER

Analysis of the literature yields a number of features that characterise an aged care service which is also a teaching, learning and research centre. These can be categorised in relation to:

- ✓ human resources (eg preceptors) to support teaching and learning,
- ✓ adherence to recognised industry quality and regulatory standards,
- ✓ established ethics processes (protecting consumer rights in research studies),
- ✓ organisational culture (committed to learning),
- ✓ having a generally good reputation (which will evolve from the preceding groups of factors),
- ✓ size and critical mass, and
- ✓ physical infrastructure (to support teaching and learning).

Table 1 below provides indicators for each category and the sources identifying each cluster of factors.

TABLE 1: FEATURES OF A TRACS OR TNH AGED CARE PARTNER

FEATURE	INDICATORS	SOURCES
HUMAN RESOURCES	☑ Sufficient preceptors who can provide clinical training, support and guidance to students, and more widely, staff who are receptive to student participation in care planning and delivery. ☑ Sufficient trained registered nurses. ☑ Staff who are receptive to student participation in care planning and delivery. ☑ An interdisciplinary team willing to teach and collaborate with an education provider	Mezey *et al* 2009: 199-200 Chen *et al* 2007: 911
QUALITY	☑ A robust quality assurance program. ☑ Meeting industry accreditation and regulation standards	Mezey *et al* 2009: 199-200
RESEARCH ETHICS	☑ Having in place, or being willing to establish, an ethics committee to protect the rights of residents and their families in relation to research	ACWC 2000: 2
LEARNING CULTURE	☑ Some indicators of this include a commitment to providing ongoing learning and training opportunities for staff, and a willingness to collaborate on research studies that support continuous improvement of clinical care ☑ Willingness to, or application of, evidence-based clinical care ☑ Related to this is a willingness to disseminate to other aged care providers the learnings of the TNH collaboration	Robinson *et al* 2008: 94 Mezey *et al* 2009: 199-200 Mezey *et al* 2008: 8
REPUTATION	☑ A facility with a good reputation ☑ Combination of the above factors	Mezey *et al* 2009: 199-200
CRITICAL MASS AND DIVERSITY OF SERVICE	☑ A TNH aged care provider needs to be of a certain size and offering diversity of services in order to provide students with experience in a range of care services designed for older people. ☑ The residential care facilities participating in the USA TNH Programs were large in **size** as were those in the veterans aged care sector as was the private network of Beverly Enterprises TNHs. Those that were found to be most successful in the early USA initiatives were providing for between 250 and 300 residents. ☑ Critical mass was also found in the evaluation of the Robert Wood Johnson Foundation TNH Program to be relevant in relation to human capacity, specifically, having sufficient numbers of experienced academic clinicians, researchers and nursing home staff, with minimal turnover to establish and sustain a TNH.	Liebig 1986: 205- 206 (citing the work of several researchers) Mezey & Lynaugh 1989: 777 Berdes & Lipson 1989: 19
APPROPRIATE PHYSICAL INFRASTRUCTURE	☑ To be effective, TNHs require physical infrastructure that supports teaching and learning, for example, lecture and tutorial rooms and computers and internet access. It is essential that there is sufficient space for teaching and research activities. ☑ Purpose-built or modified teaching and learning facilities on aged care sites are a feature of many of the Australian TRACS projects, and of the Canadian Centres for Learning Research and Innovation.	ACWC 2000: 4 Stok-Koch et al 2007: 4-5 Liebig 1986: 206)

2.3 Drivers for the model

A key driver for the application of the 'Teaching Nursing Home' model has always been population ageing and the need to develop effective service responses to this (Aronson 1984, Butler 1981). Recognising that the management of chronic conditions is a feature of supporting frail older people, and that the training of the health and aged care workforce needs to acknowledge this, the TNH model promotes the aged care setting as an important location for workforce education. Aronson (1984) was one of several early researchers who identified these issues and the need to develop a more seamless relationship between ageing related research and practice, and between the acute care and aged care systems.

> ***The chronic illnesses that are so much a part of the everyday lives of the elderly are likely to increase as a result of the inexorable demographic patterns that are now emerging. The TNH concept is a commendable first step toward beginning to systematically address these problems and, it is hoped, represents a thrust towards bridging the gap between the acute and long-term care systems as well as developing a needed interface between research and practice (Aronson 1984: 454).***

During the 1970s there was a growing recognition in the USA of the need to enhance the capacity of aged care providers in order to reduce unnecessary hospitalisation and to reduce length of stay through earlier discharge to nursing homes, and to enhance the capacity of hospitals to provide care in the community. This focus on the interface between different sectors of care, together with growing recognition of the need to address chronic care as well as acute care needs, also supported the drive to increase the role of nurses in the aged care system. Changes in 1981 to Medicare and Medicaid also enabled aged care providers to demonstrate their capacity to admit patients to their nursing homes without prior hospital stay (Lynaugh, Mezey, Aiken & Buck 1984: 26-27).

At the time of the National Institute on Aging and the Robert Wood Johnson Foundation TNH Programs, there was a range of impediments to growing the role of nurses in aged care but which also served to shape the design of the Program. These included:

- Only 8 per cent of the registered nurse workforce was employed in aged care.
- The average salary of aged care employed Registered Nurses was significantly less than in acute care.
- The ratio of Registered Nurses to patients was significantly different - 1: 49 in aged care compared with 1: 4-5 in acute care.
- Registered Nurses in aged care received few employee benefits compared to nurses in general – about 7 per cent had paid sick or holiday leave, about 11 per cent had retirement (superannuation) programs and very few were reimbursed for study expenses.
- Less than 5 per cent of nursing students identified a commitment to work with older people (Lynaugh, Mezey, Aiken & Buck 1984: 26).

The need to train future health and aged care workforces has also driven the development of the model, with a growing recognition that the aged care sector can also be a source of clinical education in the same way as the teaching hospital model in the health sector. More recently in Australia this purpose is linked to the driver of attracting health or aged care trained students into the aged care workforce by demonstrating the range of benefits associated with working in the sector and the range of skills that can be developed in doing so.

Traditionally, residential aged care facilities had not played a central role in clinical development, and had not been closely or formally linked with the education and training providers responsible for the certification and development of their workforce. During the early life of the TNH model, geriatric care in the USA had been criticised for being taught in a fragmented way with the consequent need for a place where the elements of geriatric theory and practice could be integrated. The acute-care hospital was considered to be a poor setting for such integration while the nursing home was considered to be far more appropriate (Liebig 1986: 199) – and this view remains today in contemporary applications of the model. Older people stay for shorter periods in acute care than they do in community or residential aged care services. For the student undertaking a clinical placement, the aged care service offers an opportunity to work with older people over an extended period of time and in a setting designed with their needs in mind. If that aged care service offers a diversity of programs the student can experience a range of service provision modes and a wider spectrum of aged care needs (Katz 2010).

Robert Butler, who was Director of the National Institute on Aging when it provided its Teaching Nursing Home Program, offered an analysis of the role of the TNH in student training which remains relevant today, and is reflected in the goals of Australia's TRACS Program. Noting that the majority of older people will receive health care services outside of the aged care system, Butler points to the importance of health workforce training that provides effective preparation for working with an ageing population in a holistic and interdisciplinary manner and with the skills needed to manage ageing-related health issues. Some 35 years' later, the vision he described is echoed in contemporary inter-professional learning and practice in the care of older people.

> ***…the teaching nursing home goes beyond its own walls. Conceived as a hub of services to the independent as well as institutionalized elderly, the teaching nursing home would show the student a spectrum of patient needs and services. It would bring the medical student into contact with peers in other professions. Because the geriatric patient often has multiple medical and psychosocial problems, interdisciplinary training patterns would be encouraged. Student physicians, nurses, pharmacists, physical therapists, social workers, and other professionals would participate in clinical teams. They would learn about health promotion as well as disease treatment (Butler 1981: 1436).***

Another driver for the evolution of the model in the USA was the need to lift quality of care in residential aged care facilities (Bronner 2004, Kaeser *et al* 1989), and related to this, to develop a well-trained and appropriately skilled aged care workforce. During the 1980s in the USA, several major studies, legislative initiatives and collective demand from 59 national organisations, such as the American Health Care Association, called for improved quality of care and for workforce education which would ensure this outcome (Kaeser *et al* 1989: 38). The Teaching Nursing Home was seen as a model which enhanced quality of care by supporting and fostering workforce capacity building.

2.4 Benefits associated with the model

In reviewing the literature, it is apparent that the model can also be understood in terms of its four key stakeholders and the intended benefits for each. These are summarised in *Table 2.*

TABLE 2: TNH STAKEHOLDERS AND THE BENEFITS OFFERED TO EACH

Stakeholder	Intended Benefits
Education/ training providers	Increased involvement in ageing research that is based on clinical experience in a RACF, and greater opportunity to provide high quality student education and training.
Aged care providers	Increased involvement in research and exposure to clinical practices that enhance quality of care. Increased professional development due to affiliation with an education provider.
Students	Enhanced learning opportunities based on clinical experience with an education and aged care provider affiliation committed to ach.ieving greater quality of care, research and greater quality of education/training
Residents (and their Families)	Improved quality of care. Improved satisfaction with the care provided.

There is an interactive effect between these sets of benefits as the TNH model is comprised of mutually influencing inputs. Benefits in one domain will enhance those in another - for example, a commitment to evidence-based clinical care supports and is supported by research that relates to the aged care environment which in turn, supports improved quality of care. Affiliated aged care services that achieve these outcomes will be more attractive to students and potential and current workforce members than will those without this profile.

Linda Kaeser and her colleagues, based on their key roles in the Robert Wood Johnson Foundation TNH Program, identified a number of benefits which continue to be of relevance - including enhanced profile as a leader in aged care, increased access to a range of professionals and services, enhanced capacity to expand services and improved relationships with a diversity of stakeholders.

> ***Experience indicates that nursing homes affiliating with an academic health sciences center benefit from an enhanced professional and public image as a state-of-the-art nursing home. Nursing homes also benefit from access to highly qualified health professionals, a broader range of specialized health care services, expansion of the nursing home's market through the addition of new services, … and improved relationships with regulatory agencies, advocacy groups, and the media (Kaeser et al 1989: 39).***

The research literature identifies a range of potential benefits and positive outcomes associated with Teaching Nursing Homes.

- The TNH model, with its focus on collaborative education and cooperation between clinicians, teachers, researchers, students and managers, can be designed to support interdisciplinary training for and delivery of aged care (Chilvers & Jones: 1997).
- It can also play a role in addressing issues relating to the provision of quality clinical education opportunities, as this is one of its key purposes.
- Furthermore, the model supports effective working relationships between aged care and education providers and such relationships are critical to the design and delivery of clinical education (NHWT 2009: 4; Robinson *et al*: 2008).

- The TNH enables faculty members to identify practice issues, to research these and to feedback new knowledge into the education system (Chilvers & Jones 1997: 466). By working within a residential aged care facility the faculty member has the opportunity to enhance the quality of teaching, to identify research opportunities (including motivating aged care staff to undertake small scale research studies) and to improve client care (Layng Millonig: 1986). Students benefit from being taught by faculty members with direct and recent clinical experience.

- The profile of research into chronic illness and the specific needs of frail older people may increase. Having access to high care need clients enables researchers to undertake controlled clinical trials. In turn, this contributes to increasing the education partner's standing in the academic community as a centre of excellence (Mezey & Lynaugh: 1989).

- The TNH enables the generation of positive attitudes to older people and to working in aged care when it provides positive clinical placement opportunities (that is, characterised by appropriate training and support in an environment focused on quality care) (Wallace *et al* 2007: 5; Neville *et al* 2006: 3-4).

- Attitudinal changes have also been identified within university schools participating in Teaching Nursing Home projects, noting a move towards greater course content specialising in ageing and aged care, and increased clinical research and publications relating to care of older people – all of which has a positive impact on students' attitudes to older people and to pursuing careers in aged care (Gamroth 1990: 151; Lindemann 1995: 79).

Evaluation findings across the research literature confirm the achievements of these potential benefits. These are discussed in detail in *Section 5.*

2.5 Potential challenges associated with the model

The literature identifies more positive than negative outcomes arising from the TNH model. Evaluation of the major TNH Programs in the USA makes it clear that implementing the model brought with it a set of challenges. However, there are important lessons that can be identified from the experience of others with these issues, and there is a need to address these in both the planning and implementation phases.

The Robert Wood Johnson Foundation TNH Program faced a number of significant difficulties which have been documented in detail by Bronner's retrospective analysis (2004) and include the following:

- A significant culture gap between the academic nursing schools and the nursing homes. Nursing home staff often resented the intrusion of the outsiders and their academic rather than practical knowledge of care and the extra work which they expected to be created from their involvement. Many faculty members were unfamiliar with the regulatory restrictions affecting nursing homes and the small profit margin on which they operated. Bronner reports that relationships improved after the first year or two in most cases. (See also *Section 2.8.5* for findings about managing the outcomes of cultural differences.)

- A second problem was frequent aged care staff turnover. One teaching nursing home had six different administrators over three years, while another had four. Many others had at least one change at senior executive level. This continues to be a challenge for contemporary applications of the TNH model and has been

identified in each iteration of the Australian National Census of the Aged Care Workforce (King *et al* 2012).

- Joint appointments also proved complicated as many nursing home staff members lacked the necessary academic credentials to be appointed to universities.
- Maintaining relationships between nursing schools and nursing homes turned out to be more difficult than expected. Jointly appointed nursing professors found that their heavy clinical responsibilities at the nursing homes conflicted with their professional obligations relating to teaching and research (and required for tenure). In addition, many of the faculty members had nine-month appointments at the school, whereas their nursing home responsibilities were structured around a twelve-month year of employment.
- Negative attitudes to working in aged care inhibited involvement with many newly graduated nurses not regarding geriatrics as an attractive career choice (Bronner 2004).

Not long after the National Institute on Aging implemented its Teaching Nursing Home Program, Aronson (1984: 452-453) identified four major challenges arising from differences between 'regular' aged care facilities and the TNHs its Program funded *(but noted that despite these challenges there was little conflict across the NIA funded projects):*

- Contradictory levels of expectation. Although the TNHs funded expected vigorous assessment, diagnosis and treatment and the development of a strong evidence base to underpin care, they also had long established routines in care practice which were seen by them as being 'disrupted' by the addition of a research based provision of care and unsettling the expectations of both staff and residents.
- The goals of a traditional aged care facility differed from those of the TNH. The usual facility was defined by the purpose of providing care, and research was not necessarily a key part of the tradition of care delivery. The TNH focus on research and more rigorous care was often regarded as 'overly demanding' for overworked and time-poor aged care staff.
- The organisation of the TNH was distinctly different from that of the usual nursing home. The NIA's program was focused on the medical school with additional cross-disciplinary input while the key department in aged care facilities was usually nursing.
- TNHs require an investment of resources in research and teaching infrastructure and staff time from both partners. This was not readily achieved.

In an earlier survey of the original eleven TNHP sites, Mezey *et al* (1997: 137) identified 13 barriers to TNH affiliations, which in order of frequency, are presented in *Table 3.* This shows that the major barriers were insufficient resourcing and insufficient commitment by partners.

TABLE 3: BARRIERS TO TNH AFFILIATION

Barrier identified	% of survey respondents
Insufficient funding	**53.0**
Lack of aged care partner commitment	**39.0**
Lack of education partner commitment	**36.0**
Aged care partner's lack of readiness for affiliation and innovation	**18.0**
Time constraints for education partner and aged care partner	**13.0**
Insufficient RACF located preceptors to mentor students	**11.0**
Inadequate physical infrastructure (not conducive to education and training)	**9.0**
School of nursing lack of readiness for affiliation and innovation	**9.0**
Imbalance of power between affiliation partners	**7.0**
Poor proximity between school of nursing and RACF locations	**7.0**
High RACF staff turnover	**7.0**
Unclear allocation of responsibility between partners for student supervision	**4.0**
Lack of mutual understanding of each partner's purposes and operations	**4.0**

SOURCE: MEZEY ET AL 1997

However, there were fewer barriers than benefits identified in the survey and almost all of the factors identified were able to be addressed to varying degrees (Mezey, Mitty & Bottrell 1997: 137-138).

Recent Australian research has identified the aged care sector's professional isolation as limiting capacity for staff and student training, including a lack of training in the skills of preceptorship (that is, providing individualised training and support to students). In addition, teaching and supervision are not usually defined as falling within the scope of 'normal' duties and aged care staff have identified a lack of adequate preparation for the experience and consequent anxiety about the ability to fulfil this role. Associated with this is concern about adding to workload and stress levels, and the tension created by responding to the dual demands of students on placement and the needs of residents in their care (Robinson *et al*: 2008). Training roles and responsibilities in residential aged care services for registered nurses and other staff are often not formalised, a situation that compares unfavourably with teaching hospitals used for other nursing specialities (Robinson *et al* 2008: 95).

2.6 THE TNH AS A HUB

Although many of the affiliations identified in the research literature involve a single, albeit large sized aged care facility, there are a number of examples that highlight the potential to extend impact when TNHs are part of a network. Even in its earliest configuration, the TNH model was conceptualised as supporting a service hub. This was evident in the National Institute on Aging and Robert Wood Johnson Foundation TNH Programs and the TNH initiative of Beverly Enterprises.

The TNH hubs were conceptualised as supporting a network of outreach services including home care, nutritional and family counselling, and information and referral to a

wide range of services. They were also intended to become centres for education for students and workforce members – ***[an] …educational crossroads for health and social service disciplines*** (Butler 1981: 1436-1437).

There is much to be learned from the Norwegian hub-based application of the TNH model, which locates one TNH in each county and builds into their role the dissemination of learnings arising from a network of centres of excellence. Funded by government but addressing the goals of the aged care sector, individual TNHs support locally driven practice oriented projects – balancing national and local reform. The research which they have carried out is fed back into the policy process. The application of the model in Norway thus takes the network approach one step further by designing the participating TNHs as centres of excellence who must disseminate their research findings and clinical expertise, in the process, having a positive impact on the wider aged care sector. Further details are provided in *Section 4.1.*

Another contemporary example of the Hub-focused application of the model exists in Canada with the Ontario government's funding of three Centres for Learning Research and Innovation, described in *Section 4.2.* An early application of this variant of the model follows in the case study of the University of Texas Health Science Centers Network.

CASE STUDY: THE TNH AS A HUB

During the 1980s the Texas Health Care Association and the Medical Affairs Office of The University of Texas worked together to establish a network of TNHs in selected areas across Texas with a view to improving the care of older people. The Texas model focused on education, research and practice as well as policy and management issues and involved affiliations between a number of nursing homes and The University of Texas Health Science Centers (Kaeser *et al* 1989: 39).

The development of this network occurred in parallel to other work by The University of Texas in applying the TNH model. The University's Center on Aging was an interdisciplinary unit which actively sought TNH affiliations that included a commitment to work together and contribute resources to implementing a TNH model with or without obtaining external funding (such as from the TNHP). It also insisted on a multidisciplinary approach to education, research and clinical care. Nursing home partners were selected against these criteria:

- Opportunities offered in the provision of services, education and research;
- Opportunities offered to develop model services, products, programs and policies;
- The potential for students, faculty and staff to increase their expertise in aged care;
- Willingness to share in decision making that would involve input from students, faculty, residents and staff of the facility;
- Qualifications and commitment of staff;
- Capacity to support with finances, staff and clients; and
- A willingness to participate in a system of joint appointments.

In 2014 this collaboration continues with Inter Professional Education involving the Schools of Medicine, Nursing, Pharmacy, Allied Health, and the Graduate School of Bio-Medical Sciences[5]. The Texas Tech University Health Sciences Center campus in Lubbock also hosts the Garrison Geriatric Education and Care Center, the first on-site teaching nursing home of any medical school in the USA. [6]

SOURCE: KAESER *ET AL* 1989

[5] See https://www.ttuhsc.edu/sop/academicinfo/

[6] See https://www.ttuhsc.edu/som/fammed/geriatric/geriatric_fellowship.aspx and http://www.sears-methodist.org/garrisn-center-texas-memory-care.aspx

2.7 Goals and Guiding Principles of a TNH

The underpinning Principles of the TNH model are not identified specifically in the research literature, but are implicit in the descriptions offered in this literature. However, this gap was addressed by pioneers of the major TNH Programs in the USA some 20 years following the end of their funding. In March 2005 a TNH Summit was convened to discuss the value of the TNH model and its potential ongoing development in the USA. Bringing together 32 experts in geriatric education and practice, the Summit outcomes were documented (Mezey, Mitty & Burger 2008) and ten years after the evaluation, reinforce its earlier findings regarding the positive potential of the model, and clarify the essential Principles of the TNH model.

Summit participants differentiated TNHs from standard affiliations between aged care and education providers to deliver student clinical education, with the main source of that differentiation being in the 'learning organisation' characteristic of both partners and guiding a relationship based on reciprocal benefits They identified 9 underpinning Principles and evidence of their application (see below, *Table 4*) and the following 8 Goals as defining a TNH:

1. Exemplify best practice as a nursing home professional learning environment.
2. Aspire to create an environment that models a culture of learning.
3. Seek to transform perceptions and images in academia and the community regarding the potential of nursing homes to provide exemplary care and foster quality of life.
4. Educate tomorrow's leaders and workforce in residential care.
5. Promote interdisciplinary education and practice.
6. Test and disseminate evidence-based practices.
7. Promote culture change that focuses on consumer-directed care.
8. Leverage existing resources to improve competencies of direct providers, nursing home leadership and (academic) faculty (Mezey, Mitty & Burger 2008: 10).

These eight goals are also reflected in the guiding principles and accompanying activities defined by the Summit as denoting a TNH.

Important to the TNH model and its successful implementation, is a clear set of guiding principles that are accepted by both partners. Those identified by Summit participants follow in the table below.

TABLE 4: PRINCIPLES AND EVIDENCE OF A TNH PARTNERSHIP

Principle	Evidence of Commitment to this Principle
Articulates a vision and mission for mutual accountability for quality care and quality of life in nursing homes and the optimal preparation of health care professionals and other direct care workers.	• Establishes a formal partnership and a relationship with meaningful roles for academic staff in the nursing home and for nursing home staff in the academic setting. • Documents buy-in of the Board, administrator, key clinical staff, residents and families in the nursing home, and of academic leaders, faculty and students in the School involved.
Commits to a collaborative 'learning environment' that serves as a resource for developing and disseminating best practices in nursing home care and the optimal, inter-disciplinary preparation of health care professionals.	• Facilitates the testing of new models for interdisciplinary, reciprocal learning on the part of nursing home staff, faculty and students. • Stable (ie minimal turnover) administrative and professional leadership. • Continuous quality improvement as ethos that drives programs and philosophy of care. • Within the academic setting, geriatric programs that foster balancing research, teaching and service and opportunities for faculty to directly experience long-term care.
Evidences a structure for a reciprocal relationship between nursing home(s) and academia.	• Establishes a formal agreement identifying organisational structure of the TNH, standards, and clear roles for faculty in the nursing home and for nursing home staff in the academic School involved. • Promotes joint decision making and conflict resolution. • Shares resources eg library access, IT, parking, access to courses and conferences. • Facilitates joint grant applications, publications and presentations.
Values best practices that are innovative, evidence based, and replicable.	• Initiates new best practices and/or replicates existing evidence-based best practice, and establishes models of care. • Evaluates and disseminates strategies that support consumer-directed care. • Translates research into practice and practice into research. • Supports interdisciplinary teaching and learning.
Allocates resources needed to achieve the TNH vision, mission, and sustainability.	• Ensures availability of information and communication technology need to promote flow of information within the nursing home and between nursing home and academic partners. • Designates specific TNH project personnel at the nursing home and the academic School. • Ensures resources needed to build a framework for success.

Principle	Evidence of Commitment to this Principle
Maintains a quality improvement environment that supports evaluation of TNH initiatives.	• Addresses evaluation of care in the nursing home, and in the academic setting. • Creates a mechanism for ongoing dissemination of evaluation findings and information on TNH programs in ways that are meaningful to multiple audiences (including aged care workforce, students, faculty and the community).
Advocates for local, state and national policies that promote quality care and quality life in nursing homes.	• Articulates and disseminates the benefits of a TNH. • Promotes funding options for TNHs (eg proposing reimbursement for education and training provided)
Influences educational institutions and accrediting bodies to ensure optimal preparation of health care professionals for long-term care.	• Promotes the transfer of geriatric knowledge across the continuum of long-term care, community care and acute care.
Partners with community and academic institutions in support of quality care and quality of life in nursing homes and optimal preparation of health care professionals.	• Acquires and maintains resources that support the maintenance of quality care in the nursing home, and quality education and research in the academic setting. • Identifies clinical and educational outcomes for which the academic and nursing home partners are jointly accountable. • Commits to joint presentations and dissemination of clinical and educational learnings at public forums and before regulatory, monitoring and policy making bodies.

SOURCE: MEZEY, MITTY & BURGER 2008: TABLE 2 PP 11-12

(Note not all examples of Evidence of Commitment to each Principle are given in this Table.)

2.8 PARTNERSHIP: A KEY FEATURE OF THE TNH MODEL

Collaboration is central to the TNH model and was described by Kaeser et al (1989: 39) as the 'essential ingredient' to its success. Yet education providers and aged care providers operate in very different organisations, with different career goals and expectations, creating the potential for a number of challenges in their collaboration. The TNH becomes a hybrid identity drawing from the characteristics of its parent organisations but is also different from each (Kaeser *et al* 1989: 40).

The literature yields a significant amount of information about lessons learned in designing, supporting and sustaining TNH partnerships and these follow.

2.8.1 INFORMED PARTICIPATION AND MUTUAL UNDERSTANDING

Essential to a TNH affiliation is mutual understanding by partners of each other's goals, methods of operating and so on, and that each understands their respective differences as well as similarities (Mezey *et al* 1997: 139; Kaeser *et al* 1989: 39; Ciferri & Baker 1985: 28). At the same time, it is also important that partners share similar values and philosophical approaches, in particular, a commitment to improving quality care for older people (Ciferri & Baker 1985: 29).

Having support and leadership at senior levels is essential (Kaeser *et al* 1989: 39), but the model also requires commitment at other levels of partner organisation.

> ***'[It is]… really acted out by people doing their daily work. It is at the level of the individual nursing home staff member and the individual faculty member that the merger or joint venture takes place' (Mezey et al 1984: 148).***

Although they retained separate organisational structures, as the Robert Wood Johnson Foundation Teaching Nursing Home Program (TNHP) projects in the USA progressed it was found that nursing schools had to assume some degree of accountability for clinical practice in the residential aged care facilities, while the nursing homes had to accept some accountability for the clinical training of students. This also meant that both partners needed to be conversant with each other's personnel and programs (Mezey & Lynaugh 1989: 773). **This is not surprising because over time, the TNH partnership will change the participating organisations.**

> ***On the one hand, substantial changes occur in the relationships between the two partners …. equally important, and less often stressed, is the readjustment of relationships within each participating organization….***
>
> ***While the original mission and the values of each partner are important and must be retained, the effect of the affiliation on the inner workings of each organization must be acknowledged. There will be an ongoing need to separate issues growing out of relationships between the organizations from issues growing out of change within either institution (Mezey et al 1984: 149, 150).***

Some of the specific changes involved have been identified by TNHP directors and include:

- Aged care staff can expect to need to work differently, to accept new leadership, to change methods or take on new responsibilities, including working with students, and with researchers. They may need to collect different data, and may feel vulnerable in the face of change.
- Education providers may need to assume ongoing clinical responsibilities, and in the process balance this with requirements relating to promotion and tenure. They will need to work with changed curriculum requirements and need to learn how to work effectively with aged care partner staff.
- For both partners, there will be changes in policies, processes, and structures (such as, committees).
- Ultimately affected will be aged care residents and their families who need to be informed about what the TNH will mean for them.
- The successful TNH will raise the profile of its partners in their respective professional communities and with other professional networks that will arise when new services are added to the existing provision. For example, most of the TNHP sites in the USA initiated clinical affiliations with hospitals and community nursing services, and several developed model teaching units within hospital settings. Those that became regional centres for gerontological education and research, while raising their profiles, had to meet the expectations that this can bring (Mezey *et al* 1984: 149-150).

2.8.2 Shared commitment by TNH partners and strong leadership

Shared responsibility and collaboration was envisaged by the designers of the Robert Wood Johnson Foundation TNH Program as being enshrined at the organisational or institutional level, through such mechanisms as steering committees, shared budgets and interaction between senior executives from partner organisations, but in reality, being acted out by people in their daily work roles, particularly through the mechanism of a *joint appointment* (Mezey *et al* 1984: 148). This understanding reflects the need for multiple levels of partner involvement, and can be seen as a key success factor in the sustainability of a partnership.

> ***Certain persons thus become agents of shared responsibility – those who actually plan and give care also do the teaching and guiding, analyse problems, collect data and institute change. In the Teaching Nursing Home Program, the most intensive activities over the first year have, in fact, been the exchange of personnel between the school and the nursing home.***

Effective participation in a TNH collaboration requires shared commitment by its partners to the goals and principles of the model, and to its implementation for which the resource of time is critical (Mezey *et al* 1997: 139). Education staff need to provide time to train aged care staff and to visit the facility regularly while the aged care service needs to backfill when their staff are providing training and support to students, or participating in meetings with their education partner.

Those in management and leadership roles in participating organisations also need to commit time and a willingness to make the initiative a success. Consequently, clarifying expectations about time and other resource inputs that reflect commitment is important, and needs to occur in the **planning** phase of the initiative (Ciferri & Baker 1985: 30). **Navigating these demands requires stable and strong leadership of the TNH underpinned by a commitment to the principles and goals of a TNH** (Mezey *et al* 2008: 13; Berdes & Lipson 1989: 20).

> ***The TNH requires … a new type of leadership and a commitment to the chemistry of team development (Berdes & Lipson 1989: 20).***

> ***When the nursing school and the healthcare provider see both their roles and their interests as inextricably intertwined and accord a high priority to grounding the relationship firmly within their operating arrangements and organisational culture, collaboration becomes more embracing and more fruitful for, it seems, all parties. (Abbey et al 2006: 34).***

2.8.3 Joint Appointments

An important indicator of a TNH model being based on a shared commitment is the funding of joint appointments, that is, people who are based partly in the partnering education organisation and partly in the partnering aged care organisation. Joint appointments have been described as -

> ***'… the human bolts or linchpins that tie the joint venture together' (Mezey et al 1984: 149).***

Such appointments were a key feature of the Robert Wood Johnson Foundation (RWJF) TNH Program and several examples exist in Australia. Within the TRACS Program joint appointments are a feature of Projects involving these partnerships:

- RSL LifeCare and the Australian Catholic University, Sydney (pre-dating TRACS)
- Hammondcare and the University of New South Wales, Sydney (pre-dating TRACS)
- RSL Care and Griffith University, Brisbane (pre-dating TRACS)
- Deakin University and Monash Health (Yarraman and Allambee, and Cabrini (Cabrini Ashwood) and Alfred (pre-dating TRACS)
- Helping Hand Aged Care and the University of South Australia and the University of Adelaide (pre-dating TRACS)
- ACH Group and Flinders University of South Australia, Adelaide (in the planning stage at the time of writing).

Outside of the TRACS program, a conjoint appointment of a Professor of Aged Care was in place in 2001 involving the University of Newcastle and Baptist Community Services (Armitage & Stein 2001).

The conjoint appointment model in the USA encompassed two approaches – one with funding to support *joint appointments* between the aged care and education provider and the other without such resourcing and adopting an *exchange* approach. These two approaches were found to predominate in the Robert Wood Johnson Foundation TNH Program but with variations to each (Chilvers & Jones 1997: 465). For example, within the joint appointment model, the 'collaboration' approach involved faculty members holding appointments in both the university and the aged care facility – an approach supported because of its facilitation of communication and implementation (Kaeser *et al* 1989; Mezey *et al* 1984). Another variant saw the 'integration' of faculty and students into the aged care workforce as direct providers of care in the participating facility (Chilvers & Jones 1997: 465).

Exchange models have tended to operate informally and with limited funding support (Chilvers & Jones 1997: 466; citing Ciferri & Baker 1985). For a period of time, faculty members may work exclusively in the aged care service and a member of the aged care staff works exclusively within the faculty. Roles are clearly defined with the faculty member having clinical responsibilities, and generating research opportunities from a case load. The faculty member may provide a role model and catalyst for research, but the sustainability of this role is likely to be limited once the faculty member has left the aged care facility (Chilvers & Jones 1997: 466; citing Wykle & Kaufmann 1988). The main benefit of this approach is that it enables faculty members to identify practice issues, to research these and feedback new knowledge into the education system (Chilvers & Jones 1997: 466).

While the conjoint appointment has a range of potential benefits, including increased opportunities and motivation for clinical research in the aged care setting, facilitated communication and information exchange, enhanced opportunities for student and aged care staff learning, and for faculty members to retain clinical skills, it is not without challenges for the individuals involved. There is a small number of studies that have identified overload and burnout of the appointee, and the tension of working in two different organisations with different cultures and expectations (Chilvers & Jones 1997: 465).

Key stakeholders from the Robert Wood Johnson Foundation TNH Program (Mezey *et al* 1984) recommended that those challenges be addressed through the following strategies for jointly appointed personnel:

- Ensuring that they understood the mission and purpose of the TNH affiliation.
- Designing their responsibilities so that their workload remained reasonable.

- Designing their role so that their responsibilities were commensurate with their level in the organisation.
- Selecting individuals who were sufficiently experienced and prepared to withstand the pressures of a dual role.
- Not asking them to personally protect the autonomy of either or both partner organisations.

All of these strategies should be embedded in the formal role and responsibility statement designed for conjoint appointees (Mezey *et al* 1984: 149).

2.8.4 Formalisation of affiliations between providers

The administrative structure to support the projects funded by the Robert Wood Johnson Foundation TNH Program in the USA was defined in formal affiliation contracts. These saw financial and operational authority retained by the participating nursing home and special costs attributable to the project being shared with participating nursing schools. This included recruitment (noting that this also included the addition of nurse practitioners to the nursing homes), and the salaries of nurses jointly appointed (Aiken *et al* 1985: 198-199).

Early literature (Lynaugh *et al* 1984: 28; Berdes & Lipson 1989: 19; Mezey *et al* 1984: 149) points to the importance of a written agreement specifying a mechanism for joint decision making, clinical staff recruitment and allocation of clinical resources. Recent Australian research has also identified a formalised agreement as constituting an **essential** component of the TNH model (Robinson *et al*: 2008). Australia's TRACS Program requires a written Memorandum of Understanding or Agreement as a condition of funding.

A formal agreement should also clarify and document clearly defined roles and expectations, as well as responsibilities (Kaeser *et al* 1989). The formalisation documentation should also include agreement on which discipline will lead the TNH program, and how leadership will be selected from the participants (Berdes & Lipson 1989: 19). This is an important strategy when multidisciplinary participation is involved.

Mezey and others who were directors of the Robert Wood Johnson Foundation's TNH Program identified the following enabler for effective partnership in a TNH, namely, separating *institutional* from *individual* levels of responsibility (1984: 148-149). At the institutional level, responsibility should be shared through budgets, joint policy making bodies and personal collaboration between leaders such as Deans of faculty and aged care CEOs. Risk of loss of autonomy was found to be reduced by providing parity for each partner, for example, by shared membership of key committees, mutual sign-off on budgets relating to the TNH, and communication processes that are designed to be inclusive (Mezey *et al* 1984: 149).

Other insights from leaders of the RWJF Program were the need for the formal agreement to be structured and balanced in such a way as to retain the separate identities of partners, which can be under threat in an affiliation due to the tendency for identities to become merged under the TNH umbrella (Mezey *et al* 1984).

2.8.5 Managing different cultures, capacity and expectations

Aged care providers and education and training providers operate in different environments, with different cultures and a different set of skills and experience. Combining these differences can bring significant benefits arising from the diversity of

capacity involved, and as discussed in *Section 2.5*, the literature has also identified that those differences can cause difficulties if not addressed.

Without a process to address gaps in this knowledge, difficulties will be faced as partners attempt to reconcile divergent roles (Berdes & Lipson 1989). In a retrospective analysis of the outcomes of the TNHP in the USA, Bronner made this observation -

> ***Nursing home staff often seemed to resent the outsiders, viewing them as intruders who thought they knew better and who were going to create unnecessary work. Meanwhile many faculty members were typically unfamiliar with the regulatory difficulties in nursing homes and the small profit margin on which they operated. Relations eased after the first year or two in most cases and were even harmonious in some cases (Bronner 2004: 4).***

Commenting on the TNHP funded project at the Oregon Health Science University School of Nursing, Lindemann noted –

> ***The university schools of nursing and the nursing homes often had difficulties in appreciating the external and internal pressures faced by the other. Finance, values, beliefs and goals were among the major areas of misunderstanding. Developing the school/home relationship required extensive time and energy…. The schools and the homes found that establishing mutual trust and lines of communication was difficult and time-consuming (Lindemann 1995: 82).***

Berdes and Lipson (1989: 20) made these observations of the TNHP funded project at the Health Care Institute in Washington DC -

> ***There was little understanding of the respective competencies of university-based and nursing home-based staff. University-based staff had little hands-on experience in care provision in the nursing home setting and little management expertise. The university did not reward experiential expertise of the nursing home staff with university roles or titles. People who bridged the gap between university and nursing home… were hard to find, expensive, and likely to experience stress through the attempt to reconcile their divergent roles.***

As discussed in *Section 2.8.3,* the conjoint appointments that were a feature of the TNHP brought a specific set of challenges that arose from being accountable to two different organisations with different values, goals and operational processes (Mezey *et al* 1984: 149).

For both aged care and education partners the involvement in a TNH involves a significant workload (that can lead to burnout without appropriate resourcing and support) and requires experience to meet the demands involved (Chilvers & Jones 1997: 465; citing Joel 1985; Kaeser *et al* 1989).

The issue of communication becomes extremely important in ensuring that different organisations with differing cultures, modes of operating and experience can work effectively together. This in turn is most difficult in the early stages when partners have not had the benefit of learning about each other, and this presents significant risks in the delicate negotiation of the affiliation agreement. Quoting from one of the TNHP project stakeholders –

> ***Contract negotiation was beset by a series of misunderstandings and deficiencies in the art of compromise on the part of both institutions. The***

> ***academic interests of faculty members predominated over any responsibility for clinical care, and administrators in the home were hesitant to give authority to individuals who were external to their own system. Only mutual respect and trust between nursing leaders in both arenas allowed the basic philosophy of the project to prevail and to find permanent protection in the resulting affiliation agreement (Bronner 2004: 6).***

Identity is another issue as partnerships involve a combination of entities and the resulting initiative will be a blend of those individual identities – as is the case in any relationship. Joy Smith, a Director of Nursing for an early TNH, the Benedictine Nursing Center in Oregon, observed that it is important to recognise this outcome.

> ***… the concern is to lay a solid foundation for a trusting, cooperative working relationship between the facilities involved. Each entity is concerned with retaining its own individuality, while creating a new, broader cooperative effort with the other (Smith 1984: 37).***

2.8.6 The importance of continuity of personnel

A key finding of the evaluation of the Robert Wood Johnson Foundation TNH Program was the importance of retaining as many as possible of those involved in the development of an affiliation. The reversal of positive clinical outcomes in a particular project identified by the evaluation was linked to the county administration's decision to address budget deficits by changing management to an investor-owned corporation. This saw the replacement of registered nurses with non-professionals and the exclusion of the academic partner from its role in the operation of the aged care facility concerned. Other key personnel were also reduced to achieve economic efficiencies, leading to the university partner withdrawing from the affiliation (Bronner 2004: 10-11).

The need for organisational stability and continuity of personnel has been identified by several other studies reviewed (Bronner 2004: 4-5; Berdes & Lipson 1989: 19-20). Apart from the time involved in orienting new arrivals to the TNH program, there is also the risk that they may be replaced by individuals lacking the same commitment to the model (Bronner 2004: 5). **Loss of champions can be fatal for a TNH.**

> ***In order to survive and grow, a TNH requires a high level of organizational stability in both parent organizations, the nursing home and the university. High turnover in nursing home management positions meant that the individuals who made the affiliation agreements were not always there to implement them. The four administrators who guided the Health Care Institute TNH in its first four years had widely varying levels of commitment to the concept of TNH, yet they may have had more influence than any other group in its success or failure (Berdes & Lipson 1989: 20).***

2.9 Education: A Key Feature of the TNH Model

High quality education of students and the aged care workforce is a defining feature of the TNH model, with student education receiving greater attention by most TNH affiliations. In particular, the education of student nurses and doctors has been dominant but over time this is broadening to other disciplines and work groups.

2.9.1 WORKFORCE EDUCATION

The relevance of the TNH model is apparent in the broader agenda of aged care workforce reform, and the challenges it addresses are well known. Workforce ageing and the recruitment and retention of qualified staff is a key issue for the sector which is characterised by low status (largely driven by ageist attitudes), relatively low pay rates, and high rates of turnover (Productivity Commission 2011: 270-271; O'Connell *et al* 2008: 412; DEST 2004: 26, 33, 34).

The TNH model, through its partnering of aged care and education providers, can address this issue for those involved in such an affiliation, and may provide leadership for wider industry opportunities. This is exemplified in the work of the TRACS funded projects in Australia, many of which are providing a range of workforce education and training initiatives, not only for the workforces of their aged care partners but also for the wider health and aged care workforces. The projects are also building an evidence base about good practice in the delivery of workforce education, including through the use of videoconferencing.

However, outside of structured programs like TRACS, there are insufficient incentives and opportunities for aged care staff to participate in continuing education and professional development, exacerbating recruitment and retention challenges (DEST 2004: 44-45).

2.9.2 CLINICAL EDUCATION

There is a substantial literature on clinical education for health and aged care students, too wide to review here, where the focus is on the clinical education in the TNH setting.

The TNH model supports effective working relationships between service and education providers and such relationships are critical to the design and delivery of clinical education (NHWT 2009: 4). However, there are a number of system-based challenges associated with clinical placement of health and aged care students in Australia, particularly the fact that different systems exist for clinical placement between schools, disciplines and jurisdictions, and that these are neither linked, nor supportive of coordinated planning and resource management for clinical education. There is also a lack of consistency in the education systems, standards and organisational practices which support health and aged care clinical education (NHWT 2009: 4-7).

A number of more specific challenges exist at the delivery level for both education providers and aged care providers, and these need to be faced in implementing the TNH model. Given the shared responsibility for clinical education across the health and education and training sectors, mechanisms for effective engagement between the sectors are critical (NHWT 2009: 5).

> ***Effective clinical education for undergraduate students is not a task for any one agency: it takes two, bound by a well nurtured and constantly developing commitment to a partnership that is seen as delivering tangible benefits to all parties (Abbey et al 2006: 34).***

Ageism (particularly when expressed as negative attitudes to older people and to working in aged care) constitutes a significant barrier to clinical placement in aged care services. Equally this is a significant inhibitor for the development of a TNH – but not necessarily a lasting inhibitor once a TNH has achieved positive results.

A number of researchers have identified the barrier of ageist drivers of a negative view of aged care as a career – Xiao *et al* (2011) Abbey *et al* (2006); Fagerberg *et al* (2000); Pursey & Luker (1995). University staff have been identified as believing that aged care staff tend

to hold negative attitudes towards students, seeing them as a burden or challenge, and sometimes as a threat to their less trained staff members (Neville *et al* 2006: 20-21). Conversely, university staff can give the impression to their students that learning and working in aged care is less important and meaningful than working in the health sector.

> ***Some students reported having gained the impression during their university studies that aged care nursing was not a demanding or attractive career option, not 'real nursing' but more a resting place on the path towards retirement …. Given the well-known bias in media representations of nursing towards critical and acute care, negative images of aged care held by role models within the university can only raise existing hurdles (Abbey et al 2006: 36).***

However, recent studies have found that a positive clinical placement characterised by appropriate training and support in an environment focused on quality care, can produce positive attitudes to older people and aged care (Wallace *et al* 2007: 5). Robinson *et al* demonstrated a significant positive change in students' attitude following such clinical education, indicating a possible interest in working in aged care following graduation (Robinson *et al* 2008: 101). The Australian TRACS Program is testing this relationship in a number of its projects.

The literature indicates that much depends on the quality of the placement and how much positive encouragement for aged care is modelled from their university educators. Fagerberg *et al's* research (2000) identified certain aspects of a placement as being likely to discourage students from seeking out a career in aged care, and this included working alone with no support or working in a setting with poor staffing and resource levels. Conversely, a positive clinical experience that addressed these factors and provided the opportunity to work with a range of residents with different needs and conditions was likely to encourage working in aged care (Neville *et al* 2006: 3-4).

Research findings from a series of recent Australian studies – *Making Connections* (Robinson *et al:* 2002), *Building Connections* (Robinson *et al:* 2005), and *Modelling Connections* (Robinson *et al:* 2008) strongly support the TNH model as a means of providing best practice clinical placement in aged care settings and thereby enhancing the training capacity of the aged care sector as a whole.

> ***… the opportunity now exists to raise the training capability of the aged care sector by: instituting or renewing, enlarging and enhancing partnerships between the industry and the education bodies; moving the clinical placement experience … into the realm of structured, planned, resourced, education delivered through a collaborative quasi-contractual arrangement underpinned by an evidence-based model backed by careful planning and preparation, accountability mechanisms, appropriate staff selection and recurrent training regimes.***
>
> ***….The establishment of teaching nursing homes is central to supporting the implementation of the model and the development of an associated evidence base (Robinson et al 2008: 2, 4).***

Essential to an effective TNH is provision for structured supervision in the aged care service. The literature is clear about the need for resourcing that frees supervising aged care staff (by providing backfill for their usual position) to mentor and supervise students, that provides training in supervision, and opportunities for supervisors to debrief and meet with education and training staff involved in the TNH.

It is often the case that aged care staff feel a lack of confidence in their ability to supervise, in part because of a lack of training to do so (Xiao *et al* 2011:18; HWA 2010: 10; Abbey *et al* 2006: 40) and in part, because of the relatively few opportunities for ongoing skill and professional development in most aged care services. **Supervisor training and resourcing have emerged from this literature review as critical enablers of best practice clinical placement, and therefore, is crucial to an effective TNH.** Again, TRACS funded projects with a focus on clinical education are collecting important information on this issue.

It is also important to review the aged care site from time to time to determine its continuing suitability (the same can be said for education and training partners).

> ***Acceptance of a site as a training location must be periodically reviewed in the light of evidence … of how standards and culture may vary over time as a result of unforeseeable events exhausting the slim buffer that protects most aged care residential facilities from adverse changes (Abbey et al 2006: 35).***

The Productivity Commission has identified the limited number of specialist 'teaching aged care facilities' and that student clinical placements in aged care facilities had scope for improvement (2011: 369). The Commission identified the potential offered by the TNH model in providing positive placement experiences which significantly affect students' attitudes towards older people and the aged care sector as a potential graduate destination as well as supporting a 'much needed program of research' (citing Abbey *et al* 2005; Robinson and See, Submission #231).

> ***The Australian Government recently announced it will support the establishment of teaching nursing homes over four years[7]. The Commission supports the direction of this commitment but considers the non-ongoing nature and the relatively small level of funding to be inadequate to address current and future workforce shortages in the sector (2011: 370).***

Noting the existence of a number of TNH models in Australia, the Commission further commented:

> ***Although these programs are only relatively new, submissions indicate that they have increased the recruitment of graduate nurses into the aged care sector and improved the variety of options available to registered nurses upon graduation (2011: 370).***

Multi-Disciplinary Education and Inter-Professional Learning

The TNH model, with its focus on collaborative education and cooperation between clinicians, teachers, researchers, students and managers, can be designed to support multidisciplinary and interprofessional training and delivery of aged care. Not surprisingly, most of the TRACS Program projects are pursuing either multidisciplinary or interprofessional models of student education and sometimes, of workforce development.

In their review of the literature, Chilvers and Jones (1997) concluded that such a focus of a TNH should be re-emphasised in developing the model in Australia. Liebig's analysis of

[7] Australian Government Budget 2010-2011, Budget Paper # 2

the TNH programs in the USA supports this view (1986: 213) as does that of Mezey *et al* (2008: 12).

> ***TNHs are uniquely positioned to promote models of interdisciplinary education, practice and research critical to preparing the future long-term care workforce.***

Although the early USA pioneers funded by the NIA and Robert Wood Johnson Foundation TNH Programs identified the importance of multidisciplinary training and care, in reality, the NIA program remained focused on medical professionals and the RWJF Program on nursing professionals (Mezey & Lynaugh 1989, 1988: 773: Kaeser *et al* 1989: 38; Liebig 1986: 213; Berdes & Lipson 1989: 19).

Although there are no specific studies evaluating this aspect of the TNH model, it would appear the absence of outcomes identified in relation to achieving multidisciplinary training and clinical care meant that this had been difficult to achieve. Reporting on findings from research with TNHP participants, Mezey *et al* (1988: 288) identified a range of difficulties experienced in achieving interdisciplinary goals of the program – including scheduling problems, different student educational levels, and competing purposes and goals.

Ten years later, in a follow up evaluation, Mezey, Mitty & Bottrell (1997: 135) again identified that the interdisciplinary focus had not featured in practice, being ranked least important in a list of strengths of the TNHP. The same conclusion was reached in an Australian review of the literature in the same year (Chilvers & Jones 1997: 464).

An inadequate interdisciplinary focus can also reflect program design and funding criteria. For example, the NIA initiative designated the involvement of disciplines other than medicine and nursing as 'desirable' only (Liebig 1986: 213). It may also be a consequence of affiliations involving only one school (eg nursing) rather than a number of schools linked to different professions.

However, at least one of the TNHP projects appears to have achieved a multidisciplinary focus, no doubt due to the fact that this had been a central part of one of the partner's existing structure and practice. The University of Texas Health Science Center (see Case Study in *Section 2.6*) attributed success to its Project's requirement that interdisciplinary approaches be adopted in goal setting, led by the nurse practitioner (Chilvers & Jones 1997: 464 citing Kaeser *et al* 1989).

2.9.3 The clinical education of nurses

An unpublished report to Australia's Aged Care Workforce Committee (ACWC: 2000) identified a number of strategies to improve residential aged care in Australia and facilitate the recruitment and retention of nurses in aged care, including the development of 'teaching nursing homes' affiliated with a university. This approach was seen as attracting more qualified nurses via a pathway of student clinical placements, enhancing the professional standards of aged care services, and increasing opportunities for aged care staff in continuing education and professional development (DEST 2004: 16).

This finding from the ACWC was reflected in the report of the review commissioned by the Commonwealth Department of Education Science and Training (DEST). This review focused on nursing training in the Australian aged care industry and identified a range of issues inhibiting this training, including difficulties faced by aged care providers in acting as clinical instructors for nursing students on placement with them. It was suggested that one way of addressing this challenge was to develop 'teaching' nursing homes as a model of practice (DEST: 2004). Apart from supporting greater collaboration between education

and aged care providers, it was also recognised that incentives were needed to attract nurses to postgraduate courses, as was the need for employment of more aged care nurse specialists in universities and an increased emphasis on aged care in the undergraduate curriculum (Nay & Garratt: 2005; Neville *et al*: 2006: 3).

Among the strategies identified in the literature to improve the education and training of nurses in aged care, the further development of collaboration between educational institutions and aged care facilities was highlighted as a key issue. In doing so, and encouraging the development of teaching nursing homes, a number of benefits were considered to be possible. These include further professional input for nursing curricula (Joy, Carter & Smith, 2000), improved opportunities for quality clinical experiences for nursing students and potential for greater recruitment (ACWC, 2000), opportunities for nursing homes to establish best practice based upon advancements in research and knowledge in the universities, and improvements in the status of aged care (DEST 2004: 15).

The Robert Wood Johnson Foundation TNH Program was implemented with two key features –

1) Every project placed one or more clinical specialists from the nursing faculty in the nursing home to work with staff and care for patients – in this case, because of the Program's focus on nursing, nurse practitioners (including geriatric nurse specialists, gerontological nurse specialists and psychogeriatric nurse specialists)

2) Every participating nursing home restructured its approach to clinical decision making and delivering nursing care – with the clinical practitioners providing leadership for this.

The clinical practitioners had a variety of titles (such as, director of nursing, nurse practitioner/clinician, or director of quality assurance) and their appointment was a condition of funding. The model depended on them becoming integrated into the nursing home, and it was assumed that this would lead to the nursing home becoming a more acceptable site for clinical practice, research and interdisciplinary education that would attract nursing students to clinical placements (Mezey *et al* 1988: 285).

Evaluation of the program found that these two strategies were essential to improving care outcomes and quality of care, and this was found to be due in part to the fact that students and staff benefited from the role modelling provided by these practitioners.

The Case Study which follows describes the impact of Robert Wood Johnson Foundation TNH funding on research capacity development and nursing training and education within a rural aged care organisation in Oregon.

CASE STUDY: NURSING EDUCATION AND THE TNH: THE BENEDICTINE NURSING CENTER AND THE OREGON HEALTH SCIENCES UNIVERSITY

Benedictine Nursing Center is in the rural town of Mt Angel in Oregon is a not for profit aged care facility that was built in the 1960s and from inception had a strong focus on workforce education and established clinical education based relationships with local nursing schools (Gamroth & Colling 1987: 23; Smith 1984: 33). The Nursing Center was founded by a teaching order – the Benedictine nuns – and always saw its teaching nursing home model as a vehicle for enhanced quality of care and workforce attraction, retention and development (Smith 1984: 33-35). An established relationship with educators from the **Oregon Health Sciences University** in Portland was based on both student education and aged care focused research.

Funding from the Robert Wood Johnson Foundation Teaching Nursing Home Program built on this firm foundation. The School of Nursing at **Oregon Health Sciences University** had a strong tradition of practice-centred research and an expectation for its faculty to maintain links with clinical practice, while the **Benedictine Nursing Center** had a well established reputation as a centre for holistic and innovative aged care. Its nursing home had already employed a clinical nursing specialist and Robert Wood Johnson Foundation TNH Program funding supported the conjoint appointment of two additional clinical specialists working as faculty at the University and as clinicians at the Center. One of these clinicians was a mental health nurse and the other was a gerontological nurse.

Funding also supported a range of clinical research studies designed to improve the delivery of care and provide a range of staff education opportunities. It led to an increase in the number of university students on placement, growing from a handful to a total of 90 undergraduate, 10 graduates, and 2 doctoral nursing students and 32 dental hygiene students over a three year period.

The nursing schools have shared textbooks, movies, ideas, and resources … as a result our relationship with them …. We provide students and faculty with a practical view of what long-term care is like, which is valuable when it becomes time to marry theory to practice and put their education to test in a work setting…. Having students gives patients and families assurance that the care we deliver is reasonably up to date and of sufficient quality to demonstrate to others (Smith 1984: 36).

The TNHP funding produced a number of positive outcomes that were attributed to the combined expertise of the two partner organisations, which neither was deemed able to achieve separately. These included dissemination of learnings with the wider aged care and nursing sectors, increased workforce educational opportunities and a feasibility study into the establishment of a home care service leading to the implementation of that service which provided a much needed link in the Benedictine Nursing Center's continuum of care. It also enabled the undertaking of a series of research projects designed to develop solutions to significant clinical problems in long-term care (Gamroth & Colling 1987; 24).

In summary, the Teaching Nursing Home Project has provided the stimulus to combine the expertise of two quality institutions to achieve objectives which neither could have reach independently. Further, it has served to decrease the barriers between academia and service settings and helped to find answers to the many clinical problems which nursing faces (Gamroth & Colling 1987: 24).

SOURCES: GAMROTH & COLLING 1987; SMITH 1984

2.9.4 THE CLINICAL EDUCATION OF DOCTORS

In the USA there have been three major influences on the development of the TNH model with medical schools as the university partner – the National Institute on Aging TNH program (see *Section 3.1*), the Robert Wood Johnson Foundation TNH program (see *Section 3.2*) and the Veterans Administration which funded multiple teaching and research initiatives in nursing homes (see *Section 3.3*). The TNH model in the Netherlands also was designed to enhance the capacity of medical practitioners to work with older people and in the aged care setting (see *Section 4.3*).

The two major TNH Programs, and that of the Veterans Administration system, had a clear impact on increasing affiliations between schools of medicine and nursing homes. In mid 1986, a telephone survey was undertaken with 121 American medical schools to quantify the number of TNH affiliations between medical schools and residential aged care facilities, and the extent to which research and student clinical education were features of those affiliations (Schneider *et al* 1987). The survey found that the majority (90%) of these medical schools were involved in a TNH affiliation, with most of these having developed since the early 1980s (coinciding with the implementation of the National Institute on Aging and Robert Wood Johnson Foundation TNH Programs). In addition, 83% (101) had teaching programs in their partner facilities and 55% (66) were involved in research programs that involved their aged care partner and were focused on chronic conditions associated with ageing (Schneider *et al* 1987: 2772-2774).

Medical school undergraduate programs involving nursing homes were largely elective or selective, and the majority of programs occurred in students' senior years. Funding to support these educational programs came from the medical school, the nursing home or patient care reimbursement, and from the Veterans Administration (VA) system (Schneider *et al* 1987: 2773). The authors commented that while senior students were typically involved in education in affiliated nursing homes, ideally medical students should be involved over a four year period to enable students to follow a small number of residents through the course of their chronic condition – thereby giving them a better understanding of complex or chronic conditions, such as dementia (Schneider *et al* 1987: 2774).

As with the TNH Programs as a group, the profile of aged care partners was atypical – the majority were large (ie 120 beds or more) while 75% of US nursing homes at the time had less than 100 beds; and 65% were non-profit or VA facilities compared with only 18% of all US facilities (Schneider *et al* 1987: 2774). The survey identified five key barriers facing affiliations between medical schools and nursing homes:

- The need for continuing and dependable funding support from government or private funding bodies for teaching and research programs.
- Persistent negative attitudes toward ageing on the part of students and faculty which made them reluctant to be involved in a TNH program.
- The competing priorities between partners - with nursing home staff being focused on care provision and medical schools being focused on research and teaching.
- Difficulties in finding time in a crowded medical curriculum for participation by staff and students in aged care education.
- A lack of trained academic geriatricians (Schneider *et al* 1987: 2774).

The Case Study which follows illustrates the application of the TNH model with a focus on the clinical education of medical students.

CASE STUDY: MEDICAL EDUCATION: JEWISH HOME AND HOSPITAL FOR AGED (JHHA) AND MT SINAI SCHOOL OF MEDICINE, NEW YORK

A teaching nursing home partnership between the **Jewish Home and Hospital for the Aged (JHHA)** in New York and the **Mount Sinai School of Medicine** began in 1982, and had the overarching goals of training all of the School's medical students in geriatrics while improving the care of frail older people.

The Mount Sinai School of Medicine, working with the JHHA, provided the USA's first Department of Geriatrics and Adult Development and had formed an affiliation designed to integrate acute care and aged care and undertake geriatric focused research, which pre-dated the National Institute on Aging TNH Program. Under the guidance of its Director of Medical Services, Dr Leslie Libow, all fourth year Mount Sinai medical students were required to take a four week full time rotation in the TNH at JHHA. Students were supervised by Department faculty members and their education program included lectures, home visits, weekly sub-speciality rounds, weekly teaching rounds, scheduled rounds focused on ethics, and monthly patient staff conferences at JHHA. The rotation was shaped by the goals of sensitising students to the needs of older people, building their knowledge about geriatrics, and familiarising them with the many sites on which care for older people can be delivered (Butler 1985: 101 - 102).

Over a period of 10 years some 1,000 students completed a two week and a four week rotation with curriculum structured around these areas:

- Functional assessment
- Ethical dilemmas
- Rehabilitation
- Home care
- Long term care issues eg pneumonia, epidemics, patterns of medication use
- Mentors for research projects
- Screening and prevention
- Daily rounds in a variety of disciplines.

Most students were found to have had new learning experiences, including their first house call and home care team experiences, their first opportunity to learn rehabilitation medicine skills and first major educational experience outside of an acute care setting.

Libow identified initial negativity expressed by students about being placed in an aged care facility, with a delegation formally protesting to the faculty, and these complaints were expected but found to recede over time as the TNH developed a positive profile (Libow 1993: 552-553). The JHHA rotation became popular with students and pre and post rotation surveys identified improvements in students' attitudes towards clinical education and working in the field of geriatrics.

There now is the reward of discovering major changes in attitude and a new recognition of the validity and importance of geriatrics by many of these students on completion of their rotation (Butler 1985: 102).

Although primarily an education focused TNH, there was a range of research outcomes produced to address the second goal and these included research on rehabilitation, falls, restraints, urinary incontinence, infection and immunology and dementia. The two partners also established an endowed professorship in long term care.

SOURCES: LIBOW 1993; BUTLER 1985

The next Case Study exemplifies a TNH with a focus on the education of medical students, supported by funding outside of the major US teaching nursing home programs. Like the JHHA initiative, it too achieved a turnaround in medical students' attitudes and also demonstrated the role of inter-professional education and care.

CASE STUDY: MEDICAL EDUCATION: VANDERBILT TEACHING NURSING HOME, TENNESSEE

Responding to the absence of a formal program in geriatric medicine at **Vanderbilt University Medical School** in Tennessee, and to improve students' understanding of the needs of older people, an affiliation was established by the faculty with a nearby privately owned 210 bed nursing home. With funding from the **Tennessee Foundation for Geriatric Education**, a teaching nursing home program was implemented and there was also a working relationship with the local Vanderbilt University Hospital to facilitate transfers between acute care and long term (aged) care.

Although driven by and focused on medical education, the teaching nursing home quickly expanded its focus to include nursing education. A key learning from the initiative was the importance of inter-professional care, particularly between nursing and medical staff and as the TNH developed it began to interest other health professions and research opportunities began to unfold

The [teaching] nursing home taught us something new about teamwork and brought us into contact with other health professionals in the coordinated care of our patients (Powers *et al* 1986: 270).

A survey of the 25 house officers and students involved in rotations for the first 18 months[8] of the initiative achieved a 64% response rate (16 individuals) and its findings were extremely positive. In particular, the development of practical clinical skills was a significant outcome as was the finding that 87% would consider the use of a nursing home as part of their future care of older people. Specific skills and knowledge identified included the development of understanding generally about ageing, of technical and ethical issues of care and of rehabilitation.

Many students reported learning new concepts in atypical disease presentation as well as the paradoxic reactions to treatment that often occur in the elderly (Powers *et al* 1986: 269).

Attitudes toward geriatric medicine, nursing homes and nursing home staff improved during clinical education as did attitudes towards undertaking placements in nursing homes. The researchers also found that these impacts extended to include faculty members.

We have drastically changed and improved our attitudes towards geriatric medicine, and we are making every effort to pass along this change in attitude to our colleagues, students and other health professionals. Indeed, we ourselves have been enlightened in trying to enlighten others. Attitudes toward geriatric medicine, nursing homes and nursing home staff improved during clinical education as did attitudes towards undertaking placements in nursing homes. The researchers also found that these impacts extended to include faculty members (Powers *et al* 1986: 270).

SOURCE: POWERS ET AL 1986

[8] October 1982 to March 1984

2.10 Research: A Key Feature of the TNH Model

The TNH model offers the opportunity for academic staff to undertake clinical research in the aged care setting, for aged care staff to build their research skills and for research to be designed to create or strengthen the evidence base for care. Having a research program lifts the profile of the aged care provider and contributes to increasing the education provider's standing in the academic community (Mezey & Lynaugh 1989). The model also seeks to increase the evidence base about the ageing process and how best to manage ageing-related conditions (Kaeser et al 1989). As discussed in *Section 3.1,* research was the focus of the National Institute on Aging's TNH Program, in response to a traditionally low level of research in the aged care sector (Butler 1981).

The aged care sector, compared with the acute care sector, has the advantage of enabling researchers to design longitudinal studies and for conducting clinical trials (Chilvers & Jones 1997: 465). The Robert Wood Johnson Foundation TNH Program identified a **five-fold** increase in research at its project sites over its five year life (Aiken 1988). However, once funding ceased and faculty members were no longer located in partner RACFs, there was a trend to revert to the former *status quo* (Wykle & Kaufmann 1988). This is not surprising from both a resourcing as well as a capacity perspective.

The Australian TRACS Program, in its first eighteen months, has generated multiple research studies that are designed to increase the evidence base for improved care of older people, with some of these projects being undertaken by aged care staff in collaboration with university partners. The extent of this research effort will be quantified in the final report of the national evaluators in late 2014.

However, TNH based research must also consider the implications for aged care residents as the subjects of such research, and some of the literature focuses on this issue.

Ethical and Legal issues

A key challenge for TNHs is balancing the rights of aged care consumers with the research and publishing requirements associated with teaching and education (ACWC 2000: 2). There are a number of ethical issues (primarily involving informed consent and confidentiality) associated with undertaking research with these consumers, particularly those with high level care needs and/or those not able to provide informed consent (Katz *et al* 1995; Liebig 1986: 199). Traditional approaches to ethical research can be difficult to apply to many aged care residents, particularly those with dementia, and ethics procedures for the research component of TNHs thus require careful and sensitive consideration.

> ***…. The challenge for academic communities is to explore ways of linking in a more proactive way, the agendas of researchers with the agendas of practitioners (McCormack 2003: 187).***

Earlier work by the National Institute on Aging funded TNH Program identified as a barrier to undertaking research in a TNH the lack of experience of aged care providers in conducting research programs in the long term care setting (Rowe 1985: 288). In addition, the duty of care requirements of aged care providers and their legal liabilities mean that relatively untrained students can present a risk to fulfilling those requirements without specific supervision, orientation and other measures.

> ***There is a widespread concern … that elderly impaired individuals will be experimented on unnecessarily with little gain. Long term care facilities as well as patients and their families often voice this concern as their major objection to the development of TNH programs (Rowe 1985: 288).***

The work of McCormack is useful here in its discussion of the issues and the provision of a framework of guiding principles for undertaking research in an aged care setting *(*McCormack 2003: 185-187). Such issues require clarification in developing a teaching nursing home and underscore the importance of a formalised agreement between affiliation partners that includes a focus on ethical issues and implications (ACWC 2000: 3; Liebig 1986: 204-205).

However, the National Institute on Aging experience identified a number of **enablers** for the research component of the TNH model, including the following:

- Designing non-invasive, efficient screening procedures for all potential research subjects.
- Making effective provision for the resourcing needed (in terms of time and personnel) to undertake clinical research, noting that this will be much greater than that needed for younger research subjects.
- Taking into account prior research experience by the aged care service, shaping attitudes to research with older people including their own clients and expertise as research partners.
- Enabling collaboration between researchers, primary care physicians and aged care staff in obtaining informed consent from potential research subjects in the aged care setting, and addressing this aspect of the research early in the study.
- Using a collaborative approach to planning and implementing the research, and keeping all stakeholders, including residents and their families, informed of the research process.
- Researchers taking into account the impact of their research on aged care staff's time and care roles – for example, expecting nursing staff to monitor and collect data without negotiating the time involved.
- Developing education programs that enhance the capacity of aged care staff to participate in a research study (Lowe 1985: 290 – 292).

The Robert Wood Johnson Foundation TNH Program funded **Carroll Manor and the Catholic University of America School of Nursing** affiliation in Ohio addressed these issues by establishing a Research and Education Committee comprising nursing home staff, residents and school of nursing faculty which had the dual role of approving proposals for student placement and requests to conduct clinical research at the facility.

3 ORIGINS OF THE TNH MODEL

There is much to be learned about applying the TNH model from its rich history, with lessons from this past having continued relevance today. The bulk of the research literature has occurred in the 1980s with a significant reduction in publications after that decade (Chilvers & Jones 1997: 468). Therefore, this Section of the Literature Review devotes considerable attention to that history and its learnings.

The origin of TNHs is usually traced to the early 1960s - particularly in relation to veterans' nursing homes (see *Section 3.3*) and affiliated veterans' hospitals (Rubenstein *et al* 1990: 74) - being associated with efforts in the United States to improve knowledge about long term care of older people and to increase the number of qualified aged care providers. In addition, the Kellogg Foundation funded several teaching nursing home projects with community college nursing programs. The Beverly Foundation[9] also resourced at least ten teaching nursing home affiliations in the early to mid 1980s (Pipes 1985; Huey 1985) and the Veterans Administration played a critical role in the development of the model, funding multiple teaching and research activities in nursing homes (Schneider *et al* 1987: 2773).

However, it was the provision of funding through two major and comprehensive programs in the USA during the 1980s that led to recognition and focus for this model and interest in pursuing teaching and research partnerships (Chilvers & Jones 1997: 464). The programs were the National Institute on Aging (NIA) Teaching Nursing Home Program and the Robert Wood Johnson Teaching (RWJT) Nursing Home Program. Each program focused on different features of the TNH model – the NIA program funded multidisciplinary research designed to inform geriatric care while the RWJT program supported student and workforce education (Rubenstein *et al* 1990: 74; Mezey & Lynaugh 1989: 773).

There were two other key differences:

A. Where the NIA model focused on physicians and linked with medical schools, the TNHP focused on nursing and linked with nursing schools.

B. Where the NIA initiative had a strong focus on research, the TNHP's primary focus was on restructuring and enhancing clinical care (Bronner 2004: 1; Mezey & Lynaugh 1989: 773; Kaeser *et al* 1989: 38; Liebig 1986: 199, 213).

Furthermore, the RWJT Program model, by extending the involvement of qualified nurses in nursing homes, was seen as a way of increasing the 'professional component' of the aged care workforce, and at less cost than a 'more traditional medical approach' and bringing cost efficiencies by reducing hospital admissions by nursing homes (Aiken *et al* 1985: 199).

The table below summarises key features of each Program.

[9] A national chain of private nursing homes headquartered in California and operating in most US states

TABLE 5: COMPARING THE NATIONAL INSTITUTE ON AGING AND ROBERT WOOD JOHNSON FOUNDATION TNH PROGRAMS

NATIONAL INSTITUTE FOR AGING TNHP	ROBERT WOOD JOHNSON FOUNDATION TNHP
Focus on research designed to inform the care of older people and on stimulating research in aged care facilities	Focus on student and health workforce education regarding the care of older people
Focus on physicians and medical care	Focus on nursing and nursing care
Sought to improve understanding of the ageing process and disease prevention	Sought to improve knowledge about organising and providing care and improving client well being
Sought to enhance and improve the care of older people	Sought to enhance and improve the care of older people and to improve the interface between acute care and residential aged care
Acknowledged the importance of interdisciplinary care	Acknowledged importance of interdisciplinary care and interdisciplinary education
Funded affiliations between university schools of medicine, nursing and social services, and aged care services – both residential and community	Funded affiliations between university schools of nursing and residential aged care services
Sought an enhanced focus on geriatrics in medical education	Sought an enhanced focus on geriatrics in nursing education
The research focus was seen as the point of differentiation to distinguish TNHs from other NHs	Involved nurse clinicians and faculty with clinical care expertise in research and care in NHs, and sought to increase their presence in the aged care workforce
The TNH conceived as a 'hub' for a range of in-house and outreach services, rather than an exclusive focus on residential care services	The TNH conceived as part of a teaching and research network in the aged care sector, that would parallel the teaching hospital network

SOURCES: RUBENSTEIN *ET AL* 1990: 74; MEZEY & LYNAUGH 1989: 773; KAESER MUSSER & ANDREOLI 1989: 38; MEZEY LYNAUGH & CARTIER 1988: 285; AIKEN MEZEY LYNAUGH & BUCK 1985: 199; LIST *ET AL* 1985: 89-90

3.1 THE NATIONAL INSTITUTE ON AGING TEACHING NURSING HOME PROGRAM

The first director of the National Institute on Aging (NIA), Robert Butler, established a teaching nursing home program that was research based and designed to increase knowledge about the ageing process and disease prevention, through multidisciplinary collaboration. The Program was driven by the combined needs arising from United States' projected population ageing, the need for a workforce trained in working effectively with older people and the limited capacity of the health care system to address these two areas of demand.

> ***In the area of long-term care, our society has lacked an institutional resource as powerful as the university-affiliated teaching hospital. Thus, an organizational focus for geriatric research and training should be developed: the academic or teaching-research nursing home (Butler 1981: 1435).***

The vision was for teaching and research aged care services to be affiliated with universities, particularly with medical, nursing and social services faculties, and was originally intended to span both residential and community aged care services. If successful, TNHs …

> ***… would bring geriatrics into the mainstream of American medicine…. (Butler 1981: 1436).***

Butler described the TNH model as a powerful ***"institutional resource"*** providing an ***"organisational focus for geriatric research and training" (***1981: 1435). These four goals were articulated for the NIA program, and all remain relevant in the current care system:

I. Foster systematic clinical investigation of disease processes in older people and develop diagnostic techniques and methods of treatment specific to their needs.

II. Train different professions in geriatric care.

III. Establish a research base for improving care in nursing homes, designing community and clinical services that defer or prevent institutionalisation, and rehabilitating and rapidly returning patients to their own homes.

IV. Devise and demonstrate cost-containment strategies (Butler 1981: 1436).

Originally oriented to medical training, the program was broadened to affiliate with nursing schools and was designed to provide clinical placements for undergraduate students, foster collaborative research, and encourage continuing education among nursing home staff (Chilvers & Jones 1997). By 1984, the NIA Program had funded **six** TNH initiatives, although applications far exceeded supply with more than 45 applications having been received (List *et al* 1985: 93). **Furthermore, the process of calling for funding proposals was found to have stimulated the involvement of universities in nursing home affiliations even without NIA support** (Schneider *et al* 1987: 2773). In 1984 the NIA had funded TNHs involving these six affiliations:

- **Albert Einstein College of Medicine** and **Montefiore Medical Center** and its network of 'chronic care facilities'.
- **Philadelphia Geriatric Centre,** the **Medical College of Pennsylvania** and the **University of Pennsylvania.**
- **Case Western Reserve University School of Medicine and School of Nursing** in collaboration with **affiliated teaching hospitals and nursing homes**.
- The **Hebrew Rehabilitation Center for Aged** in collaboration with the **Beth Israel Hospital, Massachusetts General Hospital,** the **Harvard Medical School** and the **Boston University School of Nursing.**
- The **Johns Hopkins Medical Institution** in affiliation with **Baltimore City Hospitals** and the **Mason F. Lord Chronic Care Hospital**.
- The **University of California San Diego School of Medicine**, the **San Diego State School of Nursing** and **affiliated nursing homes and geriatric service programs**. (List *et al* 1985: 93-94).

Each project was able to request up to $500,000 for direct costs in its first year of operation with annual increments thereafter. The initial funding round ran for **five years** and each project could attract up to **$3 million** to support their direct costs. It was envisaged that projects could be extended for up to a maximum of **ten years** (List et al 1985: 92-93).

Although it sought to improve aged care training, the NIA Program's primary purpose was to stimulate clinical research in nursing homes (Mezey & Lynaugh 1989: 773; List *et al* 1985: 89) and in the process, to build an interface between the aged care system and university schools in the training of aged care professionals. **It is this research focus which was seen to distinguish a TNH from other nursing homes** (Aronson 1984: 451-452).

> ***The National Institute on Aging (NIA) initiated its Teaching Nursing Home (TNH) Program in 1982 to stimulate high-quality research on the development, course, and treatment of diseases and disabilities prevalent in old age that have often been neglected in the past (List et al 1985: 89).***

Butler's articulation of the TNH model called for research directly related to the clinical care of older people in order to inform that care and support ongoing improvements in its quality. One of the areas of high priority research identified by him was dementia while another was the development of comprehensive assessment tools and processes which would support multidisciplinary care planning. The NIA Program required each funded TNH project to have at least three research projects coordinated and supervised by an experienced researcher.

The NIA Program also had a specific **training** component which Butler envisaged as having these features:

- An established division of geriatrics that would bring health services faculty members into the facility on a regular basis.
- Required rotation of health services students through the TNH.
- Pre-service and in-service training for nurses' aides.
- Shared use of laboratories by nursing home and teaching hospital staff based on formal affiliation.
- Shared involvement in community based geriatric wellness clinics (Butler 1981: 1436-1437).

The other feature of the NIA program was its emphasis on **multidisciplinary** research and care, in recognition of the complex and interacting biological, social and psychological processes occurring over the life course (List *et al* 1985: 90).

Interestingly, although focused on nursing homes, Butler was clear that the majority of care for older people actually occurs outside of this setting, and he expected the program to provide learning opportunities that covered a range of needs and services, including preventive health care and health promotion. As discussed in *Section 2.6,* the TNH was thus conceived as a 'hub' for a range of in-house and outreach services, rather than an exclusive focus on residential care services.

3.2 The Robert Wood Johnson Foundation Teaching Nursing Home Program

In the five years from 1982 to 1987, the Robert Wood Johnson Foundation (a private organisation in the USA) also funded a similar initiative - the *Teaching Nursing Home Program* (TNHP). Taking its inspiration from the teaching hospital model, the Program was designed to improve the quality of residential aged care **and** the clinical training of nurses by linking nursing schools with nursing homes (Bronner 2004). Furthermore, the TNHP was also regarded by its designers as developing a **network** of teaching and research centres in the aged care sector that would parallel the teaching hospital and benefit accordingly.

> ***In essence, this program seeks to extend to nursing homes benefits that have been shown to accrue to hospitals as a result of educational and service linkages with schools of medicine and nursing (Mezey et al 1984: 146).***

The RWJF Program had 3 educational goals:

- To involve nurse clinicians and/or faculty with expertise in clinical care and research in nursing home care.
- To increase the numbers of nursing students committed to careers in long-term care.
- To provide opportunities for interdisciplinary professional education in nursing homes (Mezey, Lynaugh & Cartier 1988: 285).

Furthermore, the TNHP model, by extending the involvement of nurse practitioners in nursing homes, was seen as a way of increasing the 'professional component' of the aged care workforce, at less cost than a 'more traditional medical approach' and bringing cost efficiencies by reducing hospital admissions by nursing homes (Aiken *et al* 1985: 199). Reflecting on the US aged care workforce at the time, Aiken and her colleagues made this observation -

> ***Nursing homes have so few professional nurses that the addition of one or two complemented by nurse faculty could radically alter patterns of care without dramatically increasing costs. Moreover, the additional costs of strengthening professional nursing in nursing homes could be offset by savings in the overall use of health services by nursing home patients (Aiken et al 1985: 199).***

These nurses were described as *'masters-prepared specialists, including geriatric nurse practitioners, gerontological nurse specialists, and geropsychiatric nurse specialists'* whose focus and role was described as –

> ***...recognizing illness or dysfunction early; initiating diagnostic and therapeutic interventions promptly; providing accurate and comprehensive information on patient conditions to physicians; teaching other nurses and nurses aides strategies for preventing health care problems such as decubiti, dehydration, urinary track [sic] infections, or inappropriate medication use; and personally managing care for more complicated patients. Most of these new nurses work both as direct care providers and as consultants to other nursing personnel (Lynaugh & Mezey 1995: 31).***

The idea for the Program is attributed to Linda Aiken, a nurse who had returned to study and obtained a doctorate, and who became a program officer at the Robert Wood Johnson Foundation in 1974. She had seen the success of affiliation arrangements between medical schools and veterans' hospitals during the 1960s and she and her colleagues believed that nursing education would be significantly improved through similar associations with nursing homes, while the latter would benefit from the linkage of academic nursing with actual care (Aiken *et al* 1985: 198-199).

> ***"Back in the 1960s, there was an acknowledgment that public hospitals and those of the Veterans Administration (now the Department of Veterans Affairs) were substandard," Aiken recalled. "They couldn't get good doctors and nurses, and they were filled with scandals. The solution that was found was to affiliate those hospitals with medical schools and teaching hospitals. It was a highly successful plan. Today many VA and public hospitals are as good as any in the country." (Interview with Linda Aiken: Bronner 2004).***

Prior to the Robert Wood Johnson Foundation TNH Program there were few examples of affiliations between university nursing schools and nursing homes. Isolated instances had occurred during the 1960s at the Case Western Reserve University in Cleveland Ohio (which was also one of the Projects funded by the Program) and the University of Florida, and at the University of Rochester and Rush University School in Chicago (Lynaugh, Mezey, Aiken & Buck 1984: 25).

These, and other nursing faculty training initiatives, including the Robert Wood Johnson Foundation Primary Care Fellows Program and Clinical Nurse Scholars Program, had generated a critical mass of appropriately skilled nurse clinicians with a collective focus on enhancing nursing practice, education and research. This provided the necessary foundation to address the under-developed potential of nursing school and nursing home TNH affiliations. During the 1970s, this foundation was extended as nursing practice expanded in scope.

> ***It has been shown that nurses can and do effectively manage a broad spectrum of medical-nursing-social problems when certain organizational-financial-professional barriers are lowered.***
>
> ***While initially quite slow in meeting their responsibility to the elderly, nursing has, during the last decade, begun to correct this deficiency (Lynaugh, Mezey, Aiken & Buck 1984: 25-26).***

3.2.1 PROGRAM DESIGN

Each funded project was required to design its application of the TNH model in a way that met the general objectives of the Program and was encouraged to be **innovative**–

1) Find more effective ways to implement nurse and physician services in nursing homes.

2) Produce more nurses educated in gerontology.

3) Improve the general standard of care in nursing homes.

4) Identify more effective ways to connect nursing home residents with other health care services in their local communities.

The goals of increasing interest in geriatrics at participating schools of nursing and improving staff development were to be met by recruiting faculty members trained in gerontology, by increasing research in the field, and by growing the number of students interested in working in geriatric care (Bronner 2004).

The projects forming the TNHP were expected to become leaders in aged care and gerontological education, and experimental centres for innovation that would influence national policy decisions while bringing about positive change in the care of older people (Mezey *et al* 1984: 148).

Formal partnership agreements were a condition of funding and included these provisions:

- ⇨ Financial and operational authority was vested in the aged care partner.
- ⇨ Special costs attributable to the TNHP were shared between partners.
- ⇨ Joint appointments gave nursing faculty practice privileges in the nursing homes and extended faculty privileges to the director of nursing and other registered nurses employed by the nursing home.
- ⇨ The salaries of nurses jointly appointed were shared by both partners.

- ⇨ Recruitment (eg of nurse practitioners) was a joint responsibility.
- ⇨ The nursing homes formally committed to participating in and facilitating teaching and research.
- ⇨ The universities formally committed to participating in and facilitating education opportunities for nursing home staff (Aiken *et al* 1985: 199).

Prior to the Teaching Nursing Home Program, all but two of the nursing schools had some formal or informal agreement with their affiliated nursing homes for clinical placement of students – indicating a pre-existing working relationship. All projects were given the first year of funding to focus on planning and formalising the affiliation agreement, and a key finding from the evaluation of the Program was the importance of planning as a critical success factor – a lesson which remains relevant today (Bronner 2004; Lynaugh, Mezey, Aiken & Buck 1984: 27).

In reviewing the approaches taken by projects two dominant strategies were evident – the second being dependent on the first:

1. **Every project placed one or more nurse practitioners specialising in geriatric care in the nursing home to advise and support staff and provide care to residents.** As a condition of each TNHP grant, clinical positions for nursing faculty in participating nursing homes were to be negotiated, with faculty assuming roles such as director or assistant director of nursing, nurse practitioner/clinician, or director of quality assurance. This was the primary strategy of the Program and included individuals with these areas of specialist expertise:

   - ⇨ Nurse practitioner – applied to 10 of the TNHP sites;
   - ⇨ Geriatric mental health nurses – 5 TNHP sites;
   - ⇨ Adult health and rehabilitation clinical specialists – 5 TNHP sites;
   - ⇨ Quality assurance and in-service education specialists – 4 TNHP sites;
   - ⇨ Long term care administration – 6 TNHP sites.

   Roles focused on early recognition of illness or dysfunction with a view to initiating early diagnosis and appropriate therapeutic interventions; liaison with physicians regarding care and its management; educating nurses and nurses' aides in health prevention strategies, and directly managing the care of significantly ill clients (Lynaugh & Mezey 1995: 31; Mezey & Lynaugh 1989: 775; Mezey, Lynaugh & Cartier 1988: 285).

   These roles addressed a significant gap in the aged care workforce at the time, when direct care in nursing homes was almost exclusively provided by nurses' aides and assistants, with workforce data showing a 100 per cent annual turnover in their employment. At the time, only 5.6 per cent of nursing homes nationally were required to have a registered nurse on all shifts and 43 per cent had full-time but not 24 hour registered nurse coverage. Typically, there were no other professional staff on nursing home sites so that the absence of a registered nurse meant total reliance on non-professionally trained staff (Mezey & Lynaugh 1989: 772, 776).

   The TNHP sites undertook major recruitment, training and retraining programs for those staff as well as management training for professional nursing staff, revised job descriptions for all nursing staff and in-service education for non-professional workforce members. Six sites developed intensive nurses- aide training programs with accompanying learning resources (Mezey & Lynaugh 1989: 776).

2. **Every nursing home restructured its approach to delivering care.** At the time of the Program, nursing homes were characterised by a lack of mechanisms to make timely and organised clinical decisions. This was largely the outcome of an absence of professionally trained staff, leaving nurses' aides and assistants to report changes in a client's needs without being skilled in either diagnosis or communication of care needs. Time gaps occurred between their reports and the intervention of a physician, and the model of physician care did not support individual doctor-client relationships as most worked across multiple aged care facilities. In turn, this produced high rates of transfer to the acute care system. (Compare this with the TNH model in the Netherlands and its integration of physicians into the nursing home workforce - see *Section 4.3*.)

Availability of on-site nurse practitioners enabled TNHs to review and reorganise their care delivery systems. Decisions that had previously been made by directors of nursing were able to be made at the unit level, under the supervision of clinical care nurses who had 24 hour responsibility for client care. These nurses educated nurse assistants and aides in practical assessment and communication skills and staff were encouraged to collect client data, organise this information and communicate it with physicians. Nurse clinicians directly managed client care, simplified and expedited decision making and communication and enhanced the quality of information passed on to physicians (Lynaugh & Mezey 1995: 31-33; Mezey & Lynaugh 1989: 776-777).

These two strategies were found to be critical and became markers for the improvement of care across the Program as a whole (Lynaugh & Mezey 1995: 31). Although not quantified, observed changes were identified in the positive effect of these nurse leaders on the behaviour of other staff and students who were found to imitate the actions and attitudes of the clinical nurse specialist (Lynaugh & Mezey 1995: 35).

QUALITY OF CARE

The TNHP was designed as a feasibility study to determine whether the quality of residential aged care could be improved through affiliations between nursing homes and university schools of nursing (Bronner 2004). Quality of care was explored through specific areas of focus - including the prevention of falls, management of incontinence, and interventions to enhance mobility, self care and social interaction – with differences across funded projects in the choice of area of focus. Improving patient outcomes was emphasised as central to the Program, and was seen to involve prevention of the complications of chronic illness, early diagnosis and treatment of commonly occurring medical problems, and rehabilitation wherever possible (Lynaugh, Mezey, Aiken & Buck 1984: 28).

The required appointment of clinical nurse positions in partner nursing homes tested an assumption that their integration into facilities' daily care would lift the quality of care and make the nursing home more acceptable for research, clinical practice, and interdisciplinary education, attracting nursing students in the process and leading to changes in nursing curriculum (Mezey, Lynaugh & Cartier 1988: 285-286).

The reduction of admission rates to hospital and enhanced hospital discharge rates were two outcomes that were pursued by all projects while nurses' aides and licensed nursing home staff received specific clinical training, in particular in client assessment and care planning (Shaughnessy & Kramer 1995).

Details about the essentially positive findings from the evaluation of the Program regarding quality of care are discussed in *Section 5.3.5.*

3.2.2 PROGRAM PARTICIPANTS

The Robert Wood Johnson Foundation's Teaching Nursing Home Program was co-sponsored by the **American Academy of Nursing** and administered by the **University of Pennsylvania's School of Nursing**. As with the National Institute on Aging's TNH Program, demand for funding far exceeded supply. Fifty-three schools (out of a possible 130 eligible universities) applied to participate in the program, and eleven were accepted. They were:

- **Georgetown University and Catholic University in Washington DC;**
- **the State University of New York at Binghamton;**
- **Rutgers University in Newark, New Jersey;**
- **the University of Wisconsin in Madison;**
- **Case Western Reserve in Cleveland, Ohio;**
- **the University of Cincinnati;**
- **Rush-Presbyterian–St. Luke's Medical Center in Chicago;**
- **Creighton University in Omaha, Nebraska;**
- **the University of Utah in Salt Lake City;** and
- **Oregon Health & Science University in Portland**.

Each nursing school chose one nursing home affiliate except Creighton, which chose two. The projects had varying start-up dates in 1982. Each school had a slightly different history and status: five were privately endowed, and six were publicly funded but all offered a graduate program in nursing (Bronner 2004). There were 12 nursing homes participating as partners in the Program, 8 of which were not-for-profit organisations and one was a Veterans Administration facility (Lynaugh, Mezey, Aiken & Buck 1984: 27).

An analysis of participating TNHP nursing schools and nursing homes was undertaken at the beginning of the Program, comparing them against national profiles (Mezey, Lynaugh & Cherry 1984). As can be seen from *Table 6,* TNHP Nursing Schools, compared with nursing schools nationally, were:

- *larger* in terms of the number of faculty and the number of students; and
- more likely to have faculty *publishing in the field of gerontology* - 75% of TNHP funded nursing schools had 10 or more gerontology publications compared with 41% of non-funded nursing schools.

As can be seen from *Table 7*, TNHP Nursing Homes, compared with nursing homes nationally were:

- *larger* in terms of the number of beds;
- had a *higher level of 24 hour registered nurse coverage;* and
- had a *lower ratio of beds to nursing staff* (both registered and certificate) .

TABLE 6: TNHP NURSING SCHOOLS COMPARED WITH NURSING SCHOOLS ACROSS THE USA

TNHP NURSING SCHOOLS	USA NURSING SCHOOLS
Average faculty size = **53** FTE	Average faculty size = **24** FTE
50% had 400+ nursing students	**20%** had 400+ nursing students
Average of **429** FTE undergraduate students	Average of **91** FTE undergraduate students

SOURCE: Mezey, Lynaugh & Cherry 1984: 148, Table 1

TABLE 7: TNHP NURSING HOMES COMPARED WITH NURSING HOMES ACROSS THE USA

TNHP NURSING HOMES	USA NURSING HOMES
None had less than 100 beds (the range was from 154 to 591 beds)	**73%** had less than 100 beds
All had 24 hour RN coverage	**27%** had 24 hour RN coverage
Ratio of Beds to Nursing Staff = between **3.5 – 8.2**	Ratio of Beds to Nursing Staff = averaged between **7.5 – 13.4**

SOURCE: Mezey, Lynaugh & Cherry 1984: 149, Tables 2 & 3; Aiken *et al* 1985: 199

Other researchers support these findings and also noted that the 12 nursing homes were providing a higher than average level of care (Bronner 2004: 5-6; Aiken *et al* 1985: 199; Mezey *et al* 1997: 134).

3.2.3 REASONS FOR TERMINATING FUNDING OF THE PROGRAM

Ultimately, the Robert Wood Johnson Foundation did not renew the five-year grant, for reasons that had less to do with the worth of the Program and more to do with its external environment. There were a number of intersecting factors identified as affecting the decision to terminate the Program, all but the first of which related to the external context in which the Program operated:

- ⇨ loss of Program 'Champions' within the Robert Wood Johnson Foundation that involved the departure of key supporters of the TNHP – including the president and vice presidents Linda Aiken and Robert Blendon;
- ⇨ a decision in the late 1980s by the Foundation to provide more support to the community based (as opposed to residential) aged care service model;
- ⇨ economic restraints experienced in the late 1980s as the USA entered a period of economic recession and severe cost cutting was being applied in the health industry;
- ⇨ sources of support for faculty members at nursing schools also began to shift, making them more grant dependent; and
- ⇨ while geriatric nurse practitioners began to be reimbursed through Medicare for their work in skilled nursing facilities at a rate of 85 percent of that of physicians, Medicaid remained the main source of funds for most nursing homes. Teaching nursing homes did not offer Medicaid ways to cut its costs (Bronner 2004: 9).

Despite showing signs of success, the costs involved in maintaining the TNHP were seen as making it an unlikely national model without specific resourcing. In retrospect many of those involved in the Teaching Nursing Home Program interviewed by Bronner felt that –

> ***… it had been reasonably successful for both home and college and had opened vistas onto new areas and methods in the expanding field of gerontology. But since the program had not been renewed, it was unable to fulfill its potential (Bronner 2004: 12).***

The Robert Wood Johnson Foundation regarded the TNHP as a *pilot* or *demonstration* project (Shaughnessy *et al* 1995: 55), which it hoped would be adopted by other foundations or the federal government, or both. However, when funding ceased this did not eventuate. Mathy Mezey, the TNHP's former Director, commented that at the time of its implementation, the Robert Wood Johnson Foundation had hoped that positive evaluation findings would lead to the spread of the program.

> ***"We all hoped, certainly, that the model of the teaching nursing home would be a sustaining one and be encouraged in a number of ways; and that the states would designate certain teaching nursing homes, the federal government would grant some waivers for teaching nursing homes, and the industry itself would see the advantages," she said. "None of that was really accomplished within the five years of the project."* (Bronner 2004: 14).**

Key stakeholders[10] involved in the TNHP and interviewed by Bronner (2004) considered that the termination of funding had been premature and that **at least another five years** of resourcing was needed to stabilise nursing school-nursing home partnerships and to demonstrate program impact. Reinforcing the finding that significant attention needs to be devoted to planning and establishing a TNH, most of the partners involved in the Program had taken up to three years to develop strong collaborative relationships (Kaeser *et al* 1989: 39). A similar time frame had been set by the NIA for its Program.

3.3 The TNH in the US Veterans Administration system

The Veterans Administration (VA) has played a key role in the development of the TNH model in the USA. With a national network of hospitals and nursing homes that began in the early 1960s, the VA initiated teaching nursing homes in some of its long term care facilities, all of which were located adjacent to its acute care hospitals. These were designed to attract high quality staff, provide student education and improve the quality of nursing home care through research and the application of new approaches to care (Wieland *et al* 1986: 2622; Schneider *et al* 1987: 2773). There was also a strong focus on strengthening the interface between aged care and acute care.

In 1985 the VA convened a task force to examine the structure, scope and impact of its TNH network, part of which involved a survey of its 116 nursing homes that was completed by 113 facilities (97.4%). This found that, compared with 'standard' veteran aged care facilities, the TNHs had the following features:

- They were significantly *larger in size* with an average size of 100 beds (as was the case with the Robert Woods Johnson Foundation Program).

[10] Including Mathy Mezey, Director of the TNHP at the University of Pennsylvania and a Professor of Nursing

- They were more likely to have been *purpose-built* rather than converted from hospital wards.
- There was a trend for TNHs to have *higher staff to patient ratios* in a number of staff categories including nurses, nurse practitioners, clinical specialists, physician residents and social workers.
- They were more likely to have clients with *higher levels of care need.*
- *Learning and research* activities of all kinds were more common in TNHs than non TNHs. This included having in-service education programs, formal staff lectures, staff who publish in the professional literature and present at scientific conferences, and research activities of various kinds.
- There was a *seamless relationship between acute and long term aged care* for TNH clients. VA nursing home clients could be transferred to acute care in their adjacent VA hospital for up to 30 days before they were considered to be 'discharged' from the nursing home. Annually the TNHs had 28.1 discharges per 100 occupied beds compared with 86.9 discharges per 100 occupied beds in non TNHs in the VA sector. TNHs were significantly more likely to be receiving coverage from medical and surgical staff at the adjoining veterans' hospital
- Altogether 81% of VA nursing homes provided *student clinical training* in at least one health profession, with nursing and medicine being the most common (Rubinstein *et al* 1990: 74-75).

Evaluations of veterans' aged care TNHs have been positive, including that associated with the Sepulveda Case Study below.

CASE STUDY: THE SEPULVEDA VETERANS ADMINISTRATION TNH, CALIFORNIA

This TNH involved a partnership between the **University of California at Los Angeles'** School of Medicine and the **Sepulveda Veterans Administration Centre** in California's San Fernando Valley. Established in 1984, it sought to improve the care of its nursing home residents by appointing faculty geriatrics physicians to groups of residents, employing geriatric nurse practitioners to provide day to day care, providing interdisciplinary training for medical and allied health students and house staff and stimulating research. The affiliation continues today.[11]

The then 160 bed nursing home was located adjacent to the acute care unit of the medical centre and had been established in 1976 to provide veterans with skilled medical and rehabilitation services not normally found in US nursing homes. Although well resourced, its quality of care needed improvement and achieving this became the key goal of the TNH. The two central mechanisms for this were:

a. Replacing two full time non-academic staff physicians (who were not specialists in geriatric care) with one FTE faculty geriatrics physician and a system of primary care coverage by internal medicine house staff equivalent to one FTE medical resident.

[11] http://www.semel.ucla.edu/site/sepulveda-va

b. Appointing geriatrics nurse practitioners and placing them in care management roles while holding appointments in either the University's School of Medicine or School of Nursing. Each had direct care responsibility for 30 residents each week.

All medical and nursing staff were part of an interdisciplinary team which included a range of allied health professionals. Internal medicine residents were involved in their second and third years of residency, and at the beginning of their second year were assigned as primary physician to five residents from the same unit of the TNH, enabling long term relationships to form with residents and with other staff. The TNH was implemented in stages, one nursing home ward at a time and research design was structured to enable comparison between residents in TNH and non-TNH wards in the nursing home. Although residents could not be assigned randomly to experimental or control groups, they were matched on a number of characteristics including age, gender, levels of cognitive functioning and capacity to manage daily activities.

Assessments of residents for morale, care satisfaction, and mental and functional status were undertaken using validated instruments at the inception of the TNH intervention and four months' later. Residents' charts were analysed as were rates of deaths and discharges. Evaluation findings were positive, showing statistically significant improvements between TNH and non TNH residents over a four month period in a range of clinical care areas.

Evaluation findings supported other research findings[12] about the positive effect on nursing home care of geriatrics nurse practitioner and physician teams and the reconfiguring of the workforce that resulted from their addition, enabling nursing staff to concentrate for the first time on the care of residents including coordination across different disciplines. Prior to the TNH they had spent significant amounts of time trying to secure medical care for ill residents. The evaluators also concluded that the TNH had been a cost-effective initiative.

SOURCE: WIELAND *ET AL* 1986

3.4 THE BEVERLY ENTERPRISES TEACHING NURSING HOME PROGRAM

Defying the trend for TNHs to be associated with public or not-for-profit aged care providers, a teaching nursing home program was initiated by US private provider **Beverly Enterprises** in 1982 with a policy directive to its national chain of some 900 nursing homes and retirement centres to generate affiliations with university schools of nursing and medicine, and with community colleges who provided the training of nurses aides (equivalent to vocational training in other countries like Australia). The policy was seen as supporting a number of goals, particularly in relation to increasing opportunities for the training of health professionals, for ageing and aged care research, and for developing innovations and improvements in the quality of Beverley's care. The TNH model was seen as providing a -

> ***'… role model for addressing issues of critical importance in long term care' (Pipes 1985: 71).***

In the Beverly application of the model, certain company nursing homes, but not all, became focal points in a 'hub' or 'management point' for a wide range of services

[12] Citing Kane R, Jorgensen L & Pepper G (1974) Can nursing home care be cost-effective? *Jl American Geriatr Soc,* 22, 265-272 and Kane R, Jorgensen L & Teteberg B (1976) Is good nursing home care feasible? *Jl American Medical Assoc,* 235, 516-519

including home care, day care, rehabilitation, social services and family and bereavement counselling and acting as 'role models' for other nursing homes (Pipes 1985: 72, 74). The TNH policy specified that affiliations be based on a formalised agreement which included provision for review and evaluation and vested control of nursing home operations and client care in Beverly Enterprises. Interestingly, the policy acknowledged that the TNH model could, and should, vary with local differences, supporting a trend in the research literature to avoid a 'one-size-fits-all' application of this model.

> ***… Beverly's approach allows the TNH model to evolve dynamically through developing and testing of alternative affiliations and evaluation of results (Pipes 1985: 73).***

By the end of 1983, TNH affiliations had been established between Beverly Enterprises and a number of education providers including the following:

- **Duke University's Geriatric Division of the Duke Center for the Study of Aging and Human Development**: Beverly sponsored a postdoctoral Geriatric Fellowship Program.
- **East Carolina University's Schools of Medicine and Nursing**: this affiliation implemented an interdisciplinary approach to physician and nurse training in geriatrics that included conjoint appointments at Beverly's Greenville Villa Nursing Home.
- **Medical College of Virginia:** this involved the Department of Health Administration and Beverly's Eastern Division developing a three-part training and research program in administrative internships and residency training for students majoring in aged care administration, continuing education and training for executives, managers and administrators in aged care, and graduate student and faculty research in aged care administration.
- **University of Arkansas for Medical Sciences:** the University's Department of Medicine and Division of Geriatrics affiliated with Beverly's Central Division, providing a program of patient care, staff education and research at Beverly's Little Rock Nursing Center. The Division of Geriatrics led a multidisciplinary care team and the University's College of Pharmacy developed a student clinical education program.
- **University of California, Los Angeles:** a research project designed to improve the assessment and management of urinary incontinence in nursing homes was developed with the University's School of Medicine.
- **University of Maryland:** a research project was developed with the School of Nursing to determine the impact of a 'short stay training program' at Beverly's Sligo Gardens Nursing Home in Takoma Park.
- **University of Southern California:** projects involving alternative long term aged care delivery methods were developed with the University's Department of Nursing, and a Family Practice Residency program was developed with the School of Medicine.
- **Florida University, Pensacola site:** In the early 1980s, Beverly Enterprises built a nursing home next to the campus of Florida University at Pensacola which included physical features supporting a teaching nursing home, such as, classrooms for students and office space for faculty members' use (Pipes 1985: 75-77).

4 Contemporary international applications of the Model

4.1 The TNH in Norway – the Network approach

The TNH concept was developed in Norway from 1996 onwards, piloted nationally with five TNHs over the five year period 1999-2003, and established as a permanent feature of the aged care system in 2004.

The Norwegian TNH program (NTNH) was implemented to address a similar set of issues that had been identified in the US aged care system and was inspired by both the US TNH Programs and by the Norwegian teaching hospital model. The concerns it sought to address involved the quality of care in RACFs, difficulties in recruiting qualified staff and high turnover of staff, the poor image of careers in geriatric care and under-developed collaboration between education and aged care providers (Kirkevold 2008: 282-283).

As in Western countries like the USA and Australia, strong links existed between medical schools in universities and the hospital sector to facilitate medical research and education, with this being represented in teaching hospitals. However, there was little collaboration between education and aged care providers to strengthen research, clinical practice and education for the care of older people. The NTNH was thus developed to:

- improve the competence of aged care staff;
- enhance the prestige of working in aged care, thereby increasing recruitment and retention of staff;
- create a culture in nursing homes conducive to developing services informed by research; and
- develop good learning environments for students (Kirkevold 2008: 283; Kirkevold 2006).

The implementation of the model differed from the major TNH Program in the USA, with the government department responsible for health and aged care administering the program and establishing one TNH per region or county in Norway and one in the northern most part of the country to support the indigenous Sami people. In this way a national network of TNHs was established. The Program was developed through four phases *(noting the time allocated to its planning and establishment):*

1) **Phase 1: Planning (1996-1998)**
2) **Phase 2: Experimenting (1999-2002)**
3) **Phase 3: Evaluating (2002-2003)**
4) **Phase 4: Implementing (2004 onwards).**

In designing the Program, a key driver was the goal of developing strong and lasting inter-sectoral alliances involving the university research sector, the aged care sector, and the tertiary education sector. To this end, representatives from these three sectors were brought together to explore the TNH model as it existed in the USA and was paralleled in Norway's teaching hospitals and to determine how it could be applied in Norway.

Phase 2 saw the Program established in these four counties:

- Oslo (Tåsen Nursing Home),
- Bergen (Fyllingsdalen Nursing Home),
- Trondheim (Søbstad Nursing Home) and
- Tromsø (Kroken Nursing Home).

- Karasjok was defined as an individual project focusing on the indigenous Sami population.

Evaluation was an inbuilt feature of the Norwegian TNH program and findings (Kirkevold 2008) led in 2004 to the Norwegian government establishing TNHs as a **permanent** part of the education and aged care sectors, under the leadership of the Directorate for Health and Social Affairs and supported with an allocation from the national budget. The overarching goal and outcome sought was quality improvement in the care of older people, with TNHs undertaking practice development work in support of this outcome, and with a responsibility to disseminate their learnings to the wider aged care sector.

The continued success of the NTNH is attributed to this government support and its fostering of a network of TNHs which in turn provide leadership for the aged care sector (Kirkevold 2008: 284-285 and citing Hagen *et al:* 2002). In recent years some TNHs have been assigned specialist roles, including as 'Lighthouses' focusing on dementia care and palliative care, and this also means that they have become mechanisms for implementing national aged care policy in Norway (Kirkevold 2008: 285).

The TNH program has recently evolved to become a national initiative known as the Centre for Development of Institutional and Home Care Services, extending the largely residential care focus of the original model to encompass home and community care.[13]

4.1.1 Centre for Development of Institutional and Home Care Services

The Centre for Development of Institutional and Home Care Services (USHT) is a national initiative to ensure the provision of good quality nursing and care services throughout Norway. It is funded by the Norwegian Directorate of Health and expands the original Teaching Nursing Home initiative to encompass home and community based care.

Each county now has two development centres; one for residential care and one for home care services. Apart from the primary goal of increased quality in aged care, four secondary goals shape the program:

- Supporting professional and service development within locally and nationally defined target areas.
- Enabling the further development of work experience for students.
- Encouraging the development of staff expertise.
- Organising research and development in health and care services.

The initiative was secured in parliamentary *White paper no.25 (2005-2006)"Long Term Care - Future Challenges", Care Plan 2015* and in the secondary plan the 'Promise of Expertise'. By 2009, ***Teaching Home Care Services*** were established in every county throughout the country.

During the period 2011-2015, the Teaching Nursing Homes and the Home Care Services were given a new name and logo**.** From January 1st 2011 the initiative became known as the **Centre for Development of Institutional and Home Services.**

Evaluation findings for the NTNH are presented in *Section 5.3.1.*

[13] See http://www.utviklingssenter.no/english.180221.no.html

4.2 The TNH in Canada: The Ontario Centres for Learning Research and Innovation

The Canadian Ministry of Health and Long-Term Care recently created three **Centres of Excellence for Learning, Research and Innovation in Long Term Care** in the Province of Ontario. The Centres are a response to government recognition of the need of the long term care system to respond to the ageing of the Baby Boomer generation in the same way as the education system had done when this generation were students. It further recognises that the challenges involved require significant innovation and transformation. These Centres are located within the Schlegel, Baycrest and Bruyère organisations.

1. Schlegel Centre for Learning Research & Innovation - Schlegel-University of Waterloo Research Institute for Aging[14]
2. Bruyère Centre for Learning Research & Innovation in Long Term Care[15].
3. Baycrest Centre for Learning Research & Innovation[16].

As with the Australian TRACS program, the goal is to develop local Communities of Practice designed to support innovation and best practice in long term care. The 3 Centres, like the Australian TRACS model, link research, learning and practice and promote aged care organisations as learning organisations where students and staff have the opportunity to develop a range of skills and knowledge.

Details of the three Centres for Learning Research and Innovation appear below but the TNH model has not always been a feature of the Canadian aged care system. In 1983, Mohide *et al* wrote about the existence of a teaching hospital network and the absence of an analogous model in long-term care.

4.2.1 The Schlegel CLRI

The **Schlegel Centre for Learning, Research and Innovation (CLRI) in Long Term Care** is a Program of the **Schlegel-UW Research Institute for Aging**, and thus leverages on and benefits from a large infrastructure that has been intentionally designed over the last 15+ years. [17] The Schlegel CLRI aims to enhance long term care through research-informed practice change and innovative workforce education and is Ontario's first purpose-built Teaching Long-Term Care Home housing a 192 bed residential care facility within the University of Waterloo campus and adjacent to a research and training building (the Research Institute for Aging building). All nett profit is returned to research activities.

These buildings are designed with learning, research and social spaces that encourage interaction between seniors, students, educators and researchers. They house University of Waterloo and Conestoga College programs for learning and applied research related to seniors care and living. Construction began in 2013, with completion due in 2015. A retirement village will complete the development.

The CLRI is a partnership between Schlegel Villages, the University of Waterloo, Conestoga College (a vocational education and training provider training the care worker workforce, which represents about 80% of the total aged care workforce) and the

[14] http://www.the-ria.ca/lri/index.php

[15] http://www.bruyere.org/en/centre-for-learning-research-and-innovation-in-long-term-care2

[16] www.baycrest.org/lri

[17] See http://www.the-ria.ca/lri/index.php

Ministry of Health and Long Term Care. Schlegel Villages funds four Research Chairs (in Geriatric Medicine, Geriatric Pharmacotherapy, Vascular Aging and Brain Health and Nutrition and Aging) as well as an Industrial Research Chair in Seniors Care for Colleges located at Conestoga College.

4.2.2 The Bruyère CLRI

The **Bruyère CLRI** has two interlinked components – one focusing on care services (Bruyère Continuing Care) and the other focusing on research (Bruyère Research Institute). The Bruyère Research Institute[18] is itself a partnership between Bruyère Continuing Care and the University of Ottawa, and was established in 2002 to support research designed to enhance the quality of aged care and to foster quality of life for older people. Its research program focuses on primary care, aged care and palliative care.

The CLRI undertakes activities focused on Learning (interdisciplinary and inter-professional education and practice for students and the workforce), Research (linking researchers and aged care providers and focused on care delivery and workforce development), and Innovation.

4.2.3 Baycrest CLRI

Baycrest CLRI is based on a partnership between aged care provider Baycrest and the University of Toronto and is located on a 22-acre campus in Ontario. Baycrest is a multiple service provider that has a large residential facility and a specialist Centre for Stroke and Cognition, and an Acute Care and Transition Unit. Baycrest Health Sciences is an academic healthcare delivery system affiliated with the University of Toronto, supporting 2,500 older people per day with a continuum of healthcare, wellness and prevention programs and services. These include a hospital, long-term care home, residential and community-based programs and outpatient medical clinics. Baycrest is also a leading research institute in cognitive neuroscience, with dedicated centres focused on mitigating the impact of age-related illness and impairment. [19]

As part of its designation as a CLRI, Baycrest is developing interprofessional [20]teaching units in its residential facility to train aged care and health professionals and students from Baycrest and other facilities in evidence-based approaches to care. This includes interprofessional distance education on a wide range of topics, including dementia, depression, aphasia, clinical ethics and post-stroke management. These are delivered within Canada and internationally.[21]

4.3 The TNH in the Netherlands – Physician focused approach

The Netherlands has been identified as the only country with a separate discipline of nursing home medicine as a medical speciality with its own training program. This tradition has had a clear influence on the application of the TNH model in this country, with trained nursing home physicians employed in aged care facilities to provide medical

[18] See http://www.bruyere.org/en/bruyere-research-institute
[19] See http://www.baycrest.org/about/our-story/#sthash.pwdBrV8a.dpuf

[20] A Toolkit for IPL which they have developed can be found at http://www.baycrest.org/educate/students-and-trainees/interprofessional-education/

[21] See http://www.baycrest.org/educate/tele-education-at-baycrest/#sthash.tYSXXgGc.dpuf and http://www.baycrest.org/research/about-research-and-innovation/

care for residents, and sometimes to act as medical directors (Hoek *et al* 2003: 244). Therefore, this model also applies the strategy of integrating health professionals into the core aged care workforce, rather than having them consult to an aged care service.

Until the 1960s, medical care in nursing homes was provided through general practitioners. The increasing complexity of patients' health issues and general awareness of the limited usefulness of medical training in acute care facilities, combined with the need for training in the skills relevant to the care needs of older people, led to the introduction in 1989 of a new medical speciality with a two year training program in nursing home medicine, the majority of which was delivered in aged care facilities. This was followed by the establishment of three Chairs in Nursing Home Medicine in the Netherlands and by nursing homes employing physicians trained under this program as **core** (rather than visiting) staff (Hoek *et al* 2003: 244-245).

> ***… it became evident that the earlier physicians lacked the proper skills and competencies to adequately meet the medical care needs of nursing home patients….. [there was] increased awareness … [of] a need for specially trained physicians … readily available and easily approachable for any type of medical problem but … [also] specialists in the field of psycho-geriatric diseases and a manager of a multidisciplinary team….The overall argument … was to improve the quality of medical care in nursing homes (Hoek et al 2003: 245).***

The training program combines practical experience in a TNH and theoretical training at the university with participating TNHs selected and authorised by the Royal Dutch Medical Association. The nursing home physicians-in-training are evaluated for the quality of their medical care using an instrument that was designed and validated for this purpose (Hoek *et al* 2003: 247).

In the two decades since its implementation, this model has proliferated as increasing numbers of nursing homes employ these physicians and undertake research as part of their TNH affiliation. In turn, this is seen as enhancing quality of care of nursing home residents, providing an ongoing patient-doctor relationship of the kind associated with general practitioners, improved decision making and care planning, and enhancing medical care in residential aged care facilities.

Although employment of these specialists by nursing homes results in higher care costs, it is considered to be offset by the prevention of hospitalisation and reduced length of stay in hospitals due to the increased capacity of TNHs to provide medical care and hospital avoidance services (Hoek *et al* 2003: 246-248 citing Frijters *et al* 1998[22]). (It needs to be noted that, in the Australian health and aged care systems, cost savings are not transferred from the acute care to the aged care system, and instead, the costs of a hospital avoidance model would be borne by aged care providers.)

A number of advantages are cited for the integration or embedding of physicians in the aged care workforce. These all have relevance for the Australian aged care context and include:

- ✓ Enhanced resident: physician relationships;
- ✓ Better continuity of communication between physicians and other aged care team members;

[22] Frijters D, Albers M, Jaarboek V (1998) Yearly Report of Statistical Data on Dutch Nursing Homes, 1997

- ✓ Improved decision making and care planning arising from continuity of communication and continuity of physician care;
- ✓ Enhanced capacity of physicians to monitor their patients' health due to regular and consistent contact, supporting early intervention and prevention in care; and
- ✓ Improved capacity to tailor medical staff services to individual aged care services.

> ***The continuous presence of one's own physician facilitates a better quality of patient-doctor relation, which will grow over time and result in better knowledge of the patient's situation and preferences. Also, team members have to deal with only one doctor and can count on continuity of communication and care. In such a context, regular consultation and discussion contributes to improved decision-making and care planning, and most often also in better advanced care planning. Visiting patients frequently allows the nursing home physician to monitor diseases and health problems more accurately, increasing the likelihood of early detection of slow and sometimes hidden deteriorations.***
>
> ***Also, collegial consultation … is much easier, and policies for medication regimes, pressure ulcer treatments, prevention schemes for infections, falls etc can be formulated by the medical staff and adapted to the homes' situations and means (Hoek et al 2003: 248).***

To this long list of advantages can be added the ready supply of appropriately trained physicians to support the education of medical students – an important ingredient in their preparation for working effectively with older people. The absence of this supply creates a 'chicken and egg' situation where students are limited in their ability to be trained as aged care specialists, in turn reducing the supply of psycho-geriatricians and the attraction for students of working in this field. This is an issue for all professions not employed by aged care organisations as part of their 'core' staff, key examples being clinical psychologists and speech pathologists. A small number of TRACS funded projects are exploring this issue and the advantages of integration of particular professions into the workforce.

5 LESSONS FROM THE EVALUATION OF THE TNH IN PRACTICE

The literature has a significant amount of information emerging from evaluations of the TNH model, most of which is associated with evaluations of the large programs in the USA during the 1980s – of continuing relevance today and to Australia – and from the evaluation of the Norwegian model in practice. These findings can be grouped in relation to the following:

- Establishing and designing a teaching and research aged care service
- Designing clinical education to achieve positive learning outcomes and positive attitudes to working with older people
- The different impacts of the TNH model
- The role of the TNH in promoting improved quality of care.

5.1 ESTABLISHING A TEACHING AND RESEARCH AGED CARE SERVICE

Planning the TNH affiliation been found to be 'of paramount importance', ensuring that respective roles and expectations are clearly defined and able to meet the needs of both partners (Mezey *et al* 1997: 139). The establishment phase has been found to be complex and challenging, and those involved need to have a clear vision, a reasonable workload (to avoid the burnout identified by several researchers) and sufficient experience to meet the demands involved (Chilvers & Jones 1997: 465; citing Joel 1985; Kaeser *et al* 1989).

Sufficient time and attention needs to be given in planning and establishing TNH initiatives (Abbey *et al* 2006). The Norwegian TNH Program, described in *Section 4.1*, allocated the first two years of its original five year funding initiative, to planning each affiliation.

The establishment phase also needs to be structured to increase partners' mutual understanding of each other's goals, operational issues and approach to aged care. Without a process to address gaps in this knowledge, difficulties will be faced as partners attempt to reconcile divergent roles (Berdes & Lipson 1989).

A finding of the evaluation of the US *Teaching Nursing Homes* program was the importance of setting manageable clinical outcomes in the planning phase (Bronner 2004: 5-10).

5.2 DESIGNING CLINICAL EDUCATION TO ACHIEVE POSITIVE LEARNING OUTCOMES AND POSITIVE ATTITUDES TO WORKING WITH OLDER PEOPLE

Literature searches have identified a scarcity of research on clinical experiences in aged care (Neville *et al* 2006: 2). However, recent Australian research yields valuable findings that have implications for the TNH model.

The research goal of the *Modelling Connections* project was to produce for consideration a comprehensive evidence-based, best practice model stipulating all the ingredients needed for the introduction, maintenance and ongoing evaluation of quality clinical placements for undergraduate nursing students in aged care settings (Robinson *et al* 2008: 87). This project and related research by Abbey *et al* (2006a) identified a number of criteria of good practice in clinical placement, that are focused on nursing, but are transferable across professions and therefore of relevance to the clinical education component of the TNH model. These also emphasise the importance of the planning and preparatory phase and a summary follows.

Critical inputs at the preparation and planning phase

- ✓ adequate preparation of students prior to entry into the residential aged care clinical placements was a frequently recurring factor in the evidence obtained;
- ✓ a clear and realistic statement about the desired learning objectives together with information about assessment arrangements and the allocation of responsibilities and a briefing that explores expectations of their role in the residential aged care setting;
- ✓ information relevant to the logistical organisation of the placement including (for example, transport and parking availability, site orientation, an introduction to site staff, details of the clinical teaching roles and responsibilities, arrangements for accessing clinical teacher/academic advisor, schedules for debriefing);
- ✓ Documentation of roles and responsibilities;
- ✓ Ensuring that adequate resources, including free time, are available for the supervisory/ teaching/ preceptor role.

Critical inputs at the implementation and evaluative phases

- ✓ timely and objective feedback on performance;
- ✓ structured and regular opportunities to debrief and reflect during and after the placement;
- ✓ structured mentoring arrangements;
- ✓ the *'cultivation of an understanding of what constitutes a stimulating and supportive learning environment'*
- ✓ Promoting an understanding of the benefits for site staff from their involvement with the students and the training organisation (Robinson *et al* 2008: 94-99; (Abbey *et al* 2006: 35-40).
- ✓ Providing a variety of clinical experiences with older people and grading those experiences, starting with the 'well elderly' and finishing with the care of the sick and critically ill, seems to promote interest in working with frail older people (Abbey *et al* 2006a: 15).

In a Netherlands study of factors enhancing training for physicians in teaching nursing homes, Stok-Koch *et al* (2007) interviewed 56 trainee physicians and 62 supervisors and identified a number of factors that influence the quality of student education. Among the factors identified by more than three-quarters of the trainee physicians were the following, the first two and the last of which are also indicative of a learning organisation (and therefore, of what is sought in the TNH model):

- ✓ Social integration – that is, effective orientation and induction to the aged care workplace (90% of the sample)
- ✓ Having a good work space (87% of the sample)
- ✓ Access to the Internet and to the Library (77% of the sample)
- ✓ Workload and work pace (77% of the sample)
- ✓ Interdisciplinary meetings (77% of the sample)
- ✓ A good educational climate in the nursing home (73% of the sample).

The only two factors identified by more than half of the sample as impeding training outcomes were a high workload and being located in an 'unstable' organisation eg where restructuring or mergers are occurring (Stok-Koch *et al* 2007: 5-6)

5.3 The different impacts of the TNH model

5.3.1 Impact of Norway's Program

A critical feature of the Program was that **evaluation** was built in from the beginning as a mandatory feature of each TNH and program level support was provided through a dedicated TNH unit with staff experienced in leading practice development. Individual TNHs were linked in a single national network meeting several times a year to discuss common issues and challenges, to provide mutual support, share experiences and disseminate findings to other aged care providers (Kirkevold 2008: 284).

Evaluation occurred within each TNH and a program level external evaluation was undertaken at the end of the fourth year (from 2002-2003). The external evaluation gathered data on project activities and outcomes, but also examined the program's capacity to impact on the broader aged care sector.

The findings of both the internal and external evaluations were positive, and included the following:

- Participating aged care staff competencies increased, and these staff shared their learning with other non-TNH aged care services.
- Quality of care increased as a direct result of a number of practice development projects in selected problem areas,
- Models of care developed were disseminated outside of the TNH network thus extending their impact,
- The education of students improved.
- There was increased enthusiasm by participating staff to continuing working in the facilities involved, reducing turnover rates and increasing retention in the process (Kirkevold 2008: 284 citing Hagen *et al* 2002: Kirkevold 2006).

Evaluation of the Norwegian TNH Program further concluded that the 'Hub and Spokes' design had seen learning achieved at the hub sites disseminated to other aged care services, with the TNHs playing an important mentoring role to the wider sector. This was paralleled with the increased prestige of TNH sites.

> ***In this way, the TNHs have become vehicles for implementing national policies for improved care of the elderly. At the same time, the TNHs continue to support locally driven practice development projects that the staff and leadership of the participating institutions deem necessary…. The TNHs have gradually become institutions that other institutions turn to for support. They are also increasingly being seen as competent institutions by researchers interested in doing research in collaboration with nursing homes….***
>
> ***The program has created substantial enthusiasm within the nursing home sector and has increased the prestige of these institutions (Kirkevold 2008: 285).***

5.3.2 Impact of the Netherlands Program

Evaluation of the outcomes of the TNH model in the Netherlands identified four key outcomes– the first two being directly associated with the design of the Netherlands

model and the second two outcomes being associated with changes in the care of aged care residents:

- ⇨ provision of an ongoing patient-doctor relationship of the kind associated with general practitioners (this model was focused on physicians and located them in nursing homes);
- ⇨ prevention of hospitalisation and reduced length of stay in hospitals due to the increased capacity of RACFs to provide medical care and health prevention services;
- ⇨ improved decision making and care planning; and
- ⇨ enhanced quality of care in residential aged care services (Hoek *et al* 2003: 248).

5.3.3 Impact of the Veterans Administration Program

Wieland and his colleagues (1986), whose work is presented in the Case Study in *Section 3.3*, critically analysed available evaluation findings pertaining to the application of the TNH model in the Veterans Administration system. Their analysis focused on two studies whose methodology included assessments (using validated instruments) of residents for morale, care satisfaction, and mental and functional status at the inception of the TNH intervention and four months' later, together with analysis of residents' charts and rates of deaths and discharges. While neither evaluation had a strict experimental-control group design, the magnitude and direction of their findings indicated that the TNH programs had improved quality of care and client outcomes.

Evaluation findings showed statistically significant improvements between TNH and non TNH residents over a four month period in the following areas:

- ⇨ Rates of transfer to acute care hospitals were lower for TNH residents ($p<.05$)
- ⇨ Fewer deaths for TNH residents (3% as opposed to 11% prior to the TNH – but not statistically significant)
- ⇨ Improved functional independence in the TNH group - 23.5% of TNH residents improved compared with 6.4% of non TNH residents ($p<.005$).
- ⇨ Improved satisfaction with care – 75.6% of TNH residents had improved satisfaction compared with 37.7% of non TNH residents ($p<.001$).
- ⇨ Improved morale – 48.8% of TNH residents had improved morale compared with 31.6% of non TNH residents ($p<.05$).
- ⇨ Increased appropriateness of referrals between the TNH and acute care hospital.

The evaluators' observation and analysis of all findings led them to conclude that these measured improvements could be attributed to five factors:

- ✓ The improved capacity of nursing home staff to manage medical and complex care issues due the addition of nurse practitioners and faculty geriatricians.
- ✓ Better continuity of medical care between the TNH and the acute-care facility, again because of the workforce changes.
- ✓ Improved adherence to Veterans Administration nursing home goals encouraging rehabilitation and discharge of residents where appropriate.

- ✓ Improved continuity of medical care between the TNH and acute care hospital due to the role played by medical residents.
- ✓ Ongoing improved clinical management and the focus on rehabilitation within an interdisciplinary team.

The evaluators also concluded that the TNH had been a cost-effective initiative, with the additional personnel costs of some $240,000 per year (a 2.8% increase in the nursing home's budget of $7 million) offset by the 48% reduction in hospital transfers (which translated into savings of some $200,000 per year due to bed day reductions) and by the enhanced rehabilitation outcomes achieved for residents. The TNH was also found to have had the effect of reducing unplanned leave and overtime among nursing staff (Wieland *et al* 1986).

5.3.4 The National Institute on Aging Program

Evaluation of the NIA's Teaching Nursing Home Program identified the following positive outcomes:

- ⇨ The Program had provided a mechanism for the funding of geriatric research which might not have been undertaken without this 'umbrella'. In its first two years, the Program attracted researchers, overcoming initial scepticism and supporting an expanding community of interest.

  New protocols emerged for research and practice, including feedback triggers alerting nursing home physicians to areas needing review.

  Standard procedures and assessment tools were modified due to the attention focused on them by participation in the Program.
- ⇨ The Program captured student interest and won the enthusiasm of direct care staff in participating nursing homes.
- ⇨ Closer links were developed with the acute care system because the Program was designed to track clients across this system and the aged care system.

Aronson concluded that the NIA Teaching Nursing Home Program had had a positive impact that exceeded initial expectations and indicated that the TNH model was of value for a limited number of partnerships. These required both the involvement of university faculty and dedicated resources for research (Aronson 1984: 454).

5.3.5 The Robert Wood Johnson Foundation Program

Longer term impact of the TNHP: Reflections of key stakeholders

Two studies were undertaken by the Foundation's TNHP stakeholders, one in 1988 (Mezey, Lynaugh & Cartier 1988) and one in 1997 (Mezey, Mitty & Bottrell 1997). These identified a set of positive outcomes that were present in both evaluations. Of particular interest is that by the time of the 1997 study, when **longer term impact** could be assessed, TNHP participants identified three extremely important outcomes resulting from their involvement in the Program:

1) Positive changes in quality of care was identified by almost two-thirds of survey respondents *(but not evident in 1988)* with these significant improvements:

- ✓ Decreased use of restraints and psychoactive medications
- ✓ Reduced use of hospital emergency rooms and readmissions to hospital

- ✓ Improved behaviour management and
- ✓ Improved incontinence management.

2) Positive impacts on School of Nursing faculty professional development and career growth. Examples included the obtaining of major research grants funded by the National Institute of Health, becoming Directors of Nursing Research at major universities, increased publications in peer-reviewed journals, and expanded and positive network development.

3) Positive impacts on nursing home workforce recruitment and retention. The participating nursing homes reported that by 1997 they were attracting better prepared registered nursing staff as a direct consequence of the recognition they had gained as leaders in the care of older people (Mezey Mitty & Bottrell 1997: 138).

The 1997 survey by Mezey and colleagues of nursing school and nursing home participants in the Robert Wood Johnson Foundation TNH Program identified six major strengths of the model as applied with funding from this Program. These are summarised in *Table 8* below. It can be seen that benefits affect all key stakeholders – nursing home residents, aged care partners, education partners, and students.

TABLE 8: KEY STRENGTHS OF THE TNH

STRENGTH	TYPE OF RESPONDENT			
	SCHOOL OF NURSING (N = 19) %	NURSING HOME (N = 16) %	JOINT APPOINTMENT (N = 26) %	TOTAL (N = 61) %
IMPROVED QUALITY OF CARE FOR NURSING HOME RESIDENTS	79.0	44.0	65.0	**64.0**
FLOW OF ACADEMIC PERSPECTIVES TO NURSING HOME	26.0	50.0	62.0	**48.0**
COLLABORATION BETWEEN NURSING SCHOOLS AND NURSING HOMES	42.0	50.0	42.0	**44.0**
LEARNING OPPORTUNITIES PROVIDED FOR STUDENTS	26.0	50.0	54.0	**44.0**
FLOW OF AGED CARE CLINICAL PERSPECTIVES TO NURSING SCHOOLS	16.0	19.0	31.0	**23.0**
ROLE MODELS PROVIDED FOR STUDENTS	21.0	6.0	35.0	**23.0**

SOURCE: MEZEY, MITTY & BOTTRELL 1997, TABLE 1, PAGE 135

Seven years after the 1997 study, Ethan Bronner's retrospective analysis of the TNHP (Bronner 2004) involved interviews with individuals who had played a key role in the Program's design, implementation and evaluation. **Taken together, their observations from the 1980s and since then of the aged care sector and of university health services faculties, identify a positive and lasting impact of the Program despite its limitations**.

Joan Lynaugh, Associate Director of the program at the University of Pennsylvania School of Nursing (the administrators of the Robert Wood Johnson Foundation's TNHP) and now a retired professor of nursing, expressed the belief that the Program had been highly

ambitious and optimistic in its expectations of engaging universities and policy makers to ensure its sustainability.

> ***"We tried to convince policymakers that this would make care cheaper, but that was hard to demonstrate," she said.***
>
> ***"On the other side, we were trying to drag schools of nursing into this … [but] … faculty were uninterested and unmotivated. It was hard to get them to redirect their interests and carve out space in the curriculum. Gerontology has never been as sexy as critical care or oncology nursing."*** **(Bronner 2004: 14).**

However, the Foundation's retrospective analysis of the Program's impact found that in the field of geriatric nursing the long term and cumulative outcomes were positive.

> … ***the Teaching Nursing Home Program is honoured as a pioneer. While it is viewed as a program that suffered from unfulfilled promise, it is also viewed as a program that made a difference in a number of areas (Bronner 2004).***

The model of linking research and nurse education with aged care facilities was found to be in evidence with several new teaching nursing home programs on university campuses (for example Lubbock in Texas, Lexington in Kentucky and Emory in Atlanta) that were not part of the TNHP but who drew inspiration from the Program (Bronner 2004). Although Emory University in Atlanta was not a participant in the TNHP, it had emulated the Program model in its nursing education, requiring all its nursing students to undertake clinical placements in one of two nursing homes on campus. Marla Salmon, Dean of the Nell Hodgson Woodruff School of Nursing at Emory and a Trustee of the Robert Wood Johnson Foundation, made this observation when interviewed by Ethan Bronner –

> ***The Teaching Nursing Home Program was fundamental …a paradigm shift. It sought to operationalize care for the elderly, and it provided a model for improving health care in nursing homes that is still widely discussed (cited in Bronner 2004).***

Another TNHP stakeholder, May Wykle, Dean of the Frances Payne Bolton School of Nursing at Case Western Reserve University in Cleveland, Ohio, and site Project Director when the School was a TNHP participant, also identified an enduring impact of the Program. In the course of her interview with Bronner, Wykle observed that nursing students continued to train at the partner nursing home—something they did not do before the Program. She found that the TNHP had had a positive impact on the nursing home in terms of its quality of care and profile -

> ***"The end result of the Teaching Nursing Home Program was that we improved the quality of care there, and it is now considered one of the best nursing homes in the Cleveland area," she said (Bronner 2004: 15).***

Bronner suggests that a more subtle, system-wide effect has occurred as the original stakeholders moved into other services in the health, education and aged care sectors. A core group of geriatric nursing specialists who launched the Teaching Nursing Home Program subsequently moved on to hospitals, nursing schools, and nursing associations, and continued to apply the underpinning model of the TNHP. Many of its alumnae have attained significant stature in the nursing profession (Bronner 2004: 16).

The original evaluation of the TNHP (described below) was also found to have made its own impact with its quantitative measures of care quality being adopted in subsequent aged care evaluations. The methods developed by lead evaluator Peter Shaughnessy and his team to gather data on such factors as pressure sores and incontinence were found to

be in use by nurse practitioners[23] across the USA. In 1999, the Centers for Medicare and Medicaid Services adopted a data set for all of the USA's certified home health care agencies and from 2003, required it to be used as the basis for reporting the performance by them. In his interview with Bronner, Peter Shaughnessy noted that its origins lay in the outcome measure research undertaken for the Teaching Nursing Home Program evaluation (Bronner 2004: 17).

Peter Shaughnessy also observed that with the wisdom of hindsight, more attention should have been drawn by the evaluators to the TNHP's successes so that Congress and the federal government would assume funding responsibility for the program from the Robert Wood Johnson Foundation.

> ***"We didn't see it as our job. Now that I look back on it, I can kick myself—even though we didn't have funding to do any more—for not trying to squeak out more at the margin in order to better communicate the message, 'OK, health care society, this is important, don't overlook it' and in a constructive way beat people over the head with the fact that you can't overlook this."***

THE ORIGINAL EVALUATION METHODOLOGY

Peter Shaughnessy and Andrew Kramer from the University of Colorado Health Sciences Center were chosen to be the Program's evaluators, and were engaged in late 1983 after the Teaching Nursing Home Program had been in place for a year. Their evaluation has a number of lessons of direct relevance to the TRACS program in Australia, including their observations about methodology and the challenges of establishing a causal relationship between TNH interventions and changes in client health and well-being.

The federal government's Health Care Financing Administration co-funded the evaluation, and was keen to gather data about the TNHP's capacity to reduce hospitalisation rates and increase client rehabilitation. The latter requirement particularly worried the evaluators who noted the difficulty of separating program impact from the range of co-existing factors which affect the rehabilitation of frail older people. They argued for including data on factors that affect capacity for rehabilitation such as, rates of urinary tract infection as measures of quality of care and changes in this over time (Bronner 2004: 8).

The evaluation compared 11 of the affiliated nursing homes affiliated with the TNHP with six matched homes with no nursing school affiliations, gathering data from over 3,300 nursing home residents' records for the years 1981–1988. With the Program's focus on enhanced quality of care, the national evaluation concentrated on the outcomes achieved in nursing home care (based on measured changes in individual clients) and not on those achieved in schools of nursing (Hutchins 2006; Shaughnessy & Kramer 1995).

Because of variations in the characteristics of participating aged care facilities – staff training, team composition, types of services provided, the design of student placements, the involvement of university faculty, the number of residents and so on – the evaluators observed that the TNHP could not be regarded as 'a single uniform treatment' with differences between and within its sites being substantial.

The evaluators felt that their methodology was somewhat compromised by not having been engaged at the beginning of the TNHP which would have enabled them to collect

[23] registered nurses with advanced degrees

baseline data about program and control group clients. Instead, this information was collected retrospectively from nursing home records and often incompletely, and the use of control group nursing homes, against which the results of changes that had taken place within the program sites could be compared, was partial (Bronner 2004: 13).

Alan Cohen, who joined the Robert Wood Johnson Foundation in late 1984, observed:

> ***"When they brought the evaluators in well after the beginning of the implementation of the program, they put them in a really tough position. … Because the evaluation budget was constrained, they couldn't go out and collect primary data to get at some of those outcome questions that the Foundation staff wanted answered." (Bronner 2004: 13).***

Shaughnessy and Kramer also faced challenges associated with the membership of their advisory committee which included other evaluators who had been unsuccessful in receiving grants from the Foundation. Not surprisingly, Bronner (2004) observed that this had 'made for some unusual tensions'.

IMPACT ON QUALITY OF CARE

> ***The complexity of the TNHPs is no more apparent than when considering how best to evaluate their success (Mezey & Lynaugh 1989: 774).***

Evaluating the impact of a TNH on quality of client care is both complex and fraught because of the number of factors which can affect outcomes of care. Evaluators cannot control for changes in client status being attributable to a particular intervention because a range of factors will affect that status. It is impossible to compare the outcomes of one aged care service with another, and an aged care organisation's characteristics (eg size, ownership, staffing stability and patterns) can all affect client outcomes. Some outcomes may be stable over time and can be captured using cross sectional data collection while others will vary and require longitudinal measurement (Mezey & Lynaugh 1989: 774).

> ***When measuring quality of care there is a difficulty in controlling all variables that may have an affect [sic] upon the outcome and, as such, have compromised the validity of the results (Chilvers & Jones 1997: 467).***

Although enhancing the quality of care of older people is seen as an outcome sought by the TNH model – through improved training of students and of the aged care workforce and through research which is designed to be utilised in the aged care setting – establishing a **causal** relationship between the model and this outcome is tenuous.

Not surprisingly given the challenges, there is a scarcity of research literature on this issue and where studies exist they are more likely to focus on **interventions undertaken with a view to improving quality of care** than on demonstrated evidence of this having been achieved (Chilvers & Jones 1997: 467).

Assuming that the range of intervening variables is beyond control in research design, this means that the evaluation of the effectiveness of TNH interventions can most usefully focus on changes in client care which are developed following research and audit studies. **Measuring changes in staff behaviours and care practices is a positive area for research, but one which deserves greater scrutiny and conversations between researchers about how best to do this in the aged care setting.**

A number of USA and Australian research studies have found TNH programs have resulted in implementation of evidence-based practice and participation in research in the areas of continence management, falls prevention and wound management (Kethley 1995: 99;

Lindemann 1995: 79; Wallace *et al* 2007: 7 - citing Quinn *et al* 2004; Trossman 2003; Popejoy *et al* 2000; Mezey & Fulmer 1999).

Although the Robert Wood Johnson Foundation TNHP evaluators consistently criticised their own methodology, they nevertheless produced compelling data in terms of the outcomes achieved by participating nursing homes compared with nursing homes in the control group. Primary data were collected longitudinally on more than 5,000 clients and key findings were:

- In particular, a (statistically significant) 7 per cent decrease was found in hospitalisation rates within three months of admission at participating teaching nursing homes, resulting in reduced per-patient cost of care. Over the same period there was a (non significant) increase of 4.9 per cent in the control group – yielding a mean difference of 11.9 per cent. That pattern continued throughout the first year (repeated at 6 months then 12 months), although it was more pronounced for short-stay and Medicare patients than for long-stay and Medicaid patients.

  The evaluators also noted that the trend for TNHs to reduce hospitalisation rates occurred **despite** them having higher proportions of clients at risk of hospitalisation than the control group (Shaughnessy & Kramer 1995).

  Decreased hospitalisation rates were directly attributed to TNH programs focused on enhancing or stabilising activities of daily living or functional independence and on the involvement of nurse clinicians and nurses' aides in care planning (Hutchins 2006).

- The findings regarding admission to hospital were paralleled in rates of length of stay in hospital. There was a significant drop in the number of days spent in hospital by the Teaching Nursing Home Program residents, down from 3 days to 1 day over six months and from 3.4 days to 1.3 days over twelve months. Rates of admission declined in five of the six TNHs and remained unchanged in the sixth while those in the control group of facilities increased for five and reduced in the sixth (Shaughnessy & Kramer 1995).

- There were positive gains associated with changes in clinical care that would have enhanced quality of life for the residents. These involved:

  - ✓ 20 per cent fewer bedsores in the Teaching Nursing Homes than in the control homes.
  - ✓ A 22 per cent reduction in bowel incontinence
  - ✓ Clearly observed improvements in stabilisation of bathing and ambulation.
  - ✓ Physical restraint was down, as was the use of psychotropic medication

  (Bronner 2004: 9 citing the original evaluation findings).

The evaluators concluded that the TNHP achieved improved clinical outcomes in patient care in nursing homes affiliated with university schools of nursing. This outcome was attributed to the TNHs' attention to enhancing capacity for activities of daily living or functional independence, and the role they established for nurse clinicians and nurse's aides in care planning. They also concluded that their findings were sufficiently sound to warrant consideration of applying the TNHP model on a more widespread basis.

> ***…nursing home quality improvement through affiliation with schools of nursing is possible and warrants consideration on a more widespread basis*** (Bronner 2004: 10).

A follow-up survey of nursing school and nursing home staff was undertaken by the Health Sciences Center at the University of Colorado (who undertook the original evaluation) in 1995, seven years after the close of the national program. This involved a survey with all of the TNHP sites and sought information about the durability of the TNHP partnerships, the strengths and weaknesses of the Program, the most important educational outcomes achieved and not achieved, factors in long term viability of the TNH model and potential barriers to its replication, and research and education activities continuing since the Program's closure.

Responses were achieved from all 11 funded sites. Key findings from the survey included that **positive changes in the quality of patient care had occurred** (the view of 64% of survey respondents), **and endured as a direct result of the nursing school-nursing home affiliations.** However, nursing schools were much more likely (79% of respondents) to have drawn this conclusion than nursing homes (44% of respondents). The factors seen to have had the greatest influence on improving client care were identified as involving:

- ✓ Combining the resources and expertise of the school of nursing and nursing home.
- ✓ The presence of advanced practice nurses and Faculty practice in the nursing homes.
- ✓ The increased education of nursing home staff (more likely to be cited by nursing home respondents than school of nursing respondents) and the increased education of faculty members (less likely to be cited by nursing home respondents than school of nursing respondents).
- ✓ The clinical research conducted (less likely to be cited by nursing home respondents than school of nursing respondents).
- ✓ Special units created – such as, dementia care units.
- ✓ The teaching of assessment and communication skills to nursing staff was seen to have led to improved clinical decision making and the management of residents with complex needs (Mezey, Mitty & Bottrell 1997: 134-135).

IMPACT ON PARTICIPATING SCHOOLS OF NURSING

After the completion of five years of funding, a study was made of the TNHP's impact on partner nursing schools and their staff and how it had influenced student learning, curriculum and faculty members' careers (Mezey, Lynaugh & Cartier 1988). Using Delphi methodology[24] the researchers sought feedback from 70 people (55%) for two or more stages and additional interviews were conducted with faculty and students from the 11 TNHP sites.

All 11 TNHP sites were found to have developed new gerontology graduate courses during the Program, but the area of least success involved the creation of *interdisciplinary* education programs. A number of barriers were identified, including scheduling and time allocation problems, differing student educational levels, and competing expectations and goals. In particular, the assumption that the presence of nurse clinicians would encourage

[24] The study had 3 staged surveys - the design of the 2nd being shaped by the 1st, and the design of the 3rd being shaped by the findings of the 1st and the 2nd surveys. Stage 1 involved open-end questions and the responses to these informed the Stage 2 which involved a series of rating scales. Stage 3 presented mean scores for Stage 2 and asked respondents to again rate the relative importance of each survey item and to add explanatory sentences if their responses were not in agreement with the Stage 2 means.

medical school participation was not fulfilled, although in the final year of the TNHP, 3 out of a possible 10 medical schools had begun clinical rotations in the TNHs. Faculty concerns about work overload (due to the addition of clinical practice being added to teaching and research responsibilities) that had been expressed early in the Program were found to have decreased in importance by the later part of the TNHP (Mezey, Lynaugh & Cartier 1988: 288).

As can be seen from *Table 9*, the greatest impact was considered to have been on improving student attitudes (especially graduate students) to older people. This may be due to the maturity of graduate students, relevant to undergraduates, although to date, there are no research studies specifically identifying age or maturity as factors affecting students' attitudes to older people and to working in aged care.

Other positive impacts involved enhanced understanding of the care needs of residents in aged care facilities and clinical care learning opportunities. Impact extended to increasing opportunities for research and enhancing curriculum content, and finally encouraging innovative practices.

TABLE 9: IMPACT OF THE TNHP ON SCHOOLS OF NURSING – TOP 15% RESPONSES

RANKING	AGREEMENT WITH STATEMENT "THE TNHP …"
1	…improves *graduate* student attitudes towards the elderly and aging
2	… promotes use of a nursing home as clinical site for *graduate* students
3	…creates additional access to patients for research
4	… increases the awareness of *graduate* students regarding the nursing needs of long-term care patients
5	… enriches the curriculum through faculty research in gerontology
6	… promotes use of a nursing home as clinical site for *undergraduate* students
7	…increases the awareness of *undergraduate* students regarding nursing needs of long-term care patients
8	…improves *undergraduate* student attitudes towards elderly and aging
9	…encourages innovative practices between the school of nursing and nursing home

SOURCE: MEZEY, LYNAUGH & CARTIER 1988: 286, TABLE 2

Responses from Deans of Nursing were in agreement with other Faculty members but Deans placed greater emphasis on the increased prestige of their Schools, increased opportunity for Faculty members to influence nursing homes' standards of care, increased opportunity for closer collaboration between nursing education and practice, and access to older people for teaching purposes.

The TNHP was also found to have had a positive impact on staff in the Schools of Nursing with the following positive impacts most frequently identified:

- ⇨ Exposure to learning opportunities outside the academic setting.
- ⇨ Collaboration between nursing home and nursing school staff in solving clinical problems.

- Increased networking and mentoring opportunities.
- Increased opportunity to become expert in one area of long-term care.
- Increased opportunity for national exposure through publications and presentations (Mezey, Lynaugh & Cartier 1988: 287).

Feedback from Faculty members identified the high value placed on research as an incentive to participate in the TNHP. Deans, professors, associate professors and tenured faculty ranked research opportunities as the most significant item. Analysis of funding successfully obtained for research showed that for Program participants there had been an **eight-fold** increase from 1984 (the year prior to the implementation of the TNHP) to 1988 (the year after its completion), with research focusing on the clinical needs of aged care residents and being in harmony with nursing faculties' research interests (Mezey, Lynaugh & Cartier 1988: 288).

The researchers concluded that the TNH model and the outcomes it achieved in the relatively short space of a five year timeframe merited replication.

> ***What is clear from this five year experiment … is that the basic tenets and outcomes of the Teaching Nursing Home Program deserve to be examined, analysed and replicated by schools of nursing and nursing homes (Mezey, Lynaugh & Cartier 1988: 292).***

Later research (Mezey, Mitty & Bottrell 1997) found further and enduring positive impacts. Schools of Nursing reported -

- increased student interest in a clinical placement in a nursing home and
- increased Faculty research in clinical and administrative domains during the TNHP.
- During the TNHP all participating Schools of Nursing developed graduate courses and/or new programs in gerontologic nursing at the masters level and this was accompanied by an increase in student numbers in these programs.
- By the end of the Program, most Schools of Nursing had made gerontologic nursing a core part of the undergraduate nursing curriculum.

Faculty noted the value of clinical practice in nursing homes made possible by the affiliations and the need for more faculty to be interested and educated in gerontological nursing in order to provide positive role models for students (Mezey *et al* 1997: 134-135).

Impact on participating aged care facilities

The TNHP was found to have led to participating nursing homes –

- extending and enhancing their role and profile in the wider health care system,
- strengthening their links with acute care hospitals and
- expanding their service offerings – including by adding medical day programs, units to support hospital discharge preparation and home health care services.

Almost all sites initiated projects based on affiliations with hospitals and community nursing services. Participating TNHP sites quickly developed as regional centres for gerontological education and research, with aged care staff benefiting from a range of new gerontology-related courses (Mezey *et al* 1984: 150).

> ***The achievement of a viable affiliation changes the appearance and standing of the nursing home and school, not only within their respective***

> ***spheres of influence but also within their mutual communities (Mezey et al 1984: 150).***

The sharing of recruitment responsibilities by university and nursing home partners was found to have led to a different mix of staff than existed prior to the TNHP affiliation, in particular, bringing the addition of nurse practitioners to the nursing home workforce (Aiken *et al* 1985: 199). Joint appointments were found to have had a significant impact, not only in the new clinical roles often created, but because of the partnership role played by those working across both affiliated organisations (Mezey *et al* 1984: 148).

> ***The people holding joint appointments become human bolts or linchpins that tie the joint venture together (Mezey et al 1984: 149).***

Of the 11 nursing homes involved in the TNHP, after one year, the following workforce changes were evident:

- Nine had appointed nurse practitioners
- Eight had appointed clinical specialists
- Five had appointed new associate or assistant directors of nursing
- One had appointed a new director of clinical service
- One had appointed a chief of professional nursing practice (Mezey *et al* 1984: 148).

Later research (Mezey *et al* 1997) found that there had been reduced staff turnover in participating TNHs and this was attributed to both the employment of nurse clinicians and the range of outputs they delivered, and to the reorganisation of care enabled by their inclusion in the workforce.

Impact on students

Evaluation of the TNH Program (Mezey *et al* 1988) included interviews with students from participating sites. This found that they consistently cited these indicators of a desirable clinical indication in Program sites–

- faculty members' qualifications,
- knowledge of the clinical setting, and
- involvement in and ability to influence care.

Distance between their School of Nursing and the TNH was not a deterrent and choice of site was also likely to be influenced by –

- the opportunities offered to practice skills and
- the slower pace of learning (compared with the acute care setting) that allowed for reflective clinical decision making.

Graduate students placed particular value on being able to work directly with expert Faculty clinicians, teachers and researchers in the care setting.

> ***The longer stays of nursing home patients allowed graduate students to manage caseloads, interact with families, and teach and consult with staff (Mezey, Lynaugh & Cartier 1988: 288).***

Many undergraduate students who had been assigned to a TNH in their first rotation were found to have chosen to continue with a further rotation as part of their senior clinical education (Mezey, Lynaugh & Cartier 1988: 287). Multiple USA and Australian research studies have found TNH programs have resulted in a marked increase in

students taking up aged care post-graduate positions (LeCount 2004; Lepp 2004; Trossman 2003; Hollinger-Smith 2003; Burke & Donley 1987).

PARTNERSHIP IMPACTS

Those involved in the design and implementation of the Robert Wood Johnson Foundation TNH Program explored its impact on the affiliations involved, recognising the potential challenges involved in maximising each partner's expertise without one dominating the other and maintaining equity to avoid that happening.

A 'shared vision' between university and aged care partners was found to be essential to the success of a teaching nursing home program (Mezey, Mitty & Bottrell 1997; Hutchins 2006, 2002).

Earlier analysis undertaken towards the end of the TNHP (Mezey *et al* 1984: 149) found that relationships required re-adjustment within partner organisations. For schools of nursing, the assumption of clinical responsibilities by some faculty left a gap that needed to be filled by other staff, while within nursing homes, innovations created in care required that staff work differently, relocate or assume new responsibilities. The involvement of researchers in the nursing home setting also brought impacts with requirements for observation, data collection and analysis of records. Student intakes where little or none previously existed also impacted on staff and residents.

Other TNHP stakeholders found that over time, partners came to realise that their separate organisational status did not equate to separate accountability for Program outcomes, and that their success depended on this.

> ***Although they maintained separate organizational structures, as the projects progressed participants came to realize that in order to be successful the schools had to become to some degree accountable for the clinical practice within the homes, and the homes to some degree for the clinical training of students (Mezey & Lynaugh 1989: 773).***

Later research undertaken to assess the TNHP's impact found that the following key success factors need to be structured into a TNH affiliation:

- ✓ Mutual understanding of each other's purposes
- ✓ Goal reciprocity
- ✓ Adequate planning
- ✓ Effective leadership
- ✓ Readiness by both faculty and aged care staff
- ✓ Well designed communication processes
- ✓ Decision making systems that respect the needs of both partners (Mezey Mitty & Bottrell 1997: 139).

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