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Rural Nurses: Knowledge and Skills Required by to Meet the Challenges of a Changing Work Environment in the 21st Century: A Review of the Literature

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Executive summary and recommendations

Introduction

This literature review covers a range of issues, which impact on the practice of rural nurses and will increasingly determine nurse's ability to influence and respond to the challenges posed in the 21st century. Rural nursing is recognised as being different to nursing practiced in non-rural environments. Hegney (1998) argues that the practice of rural nurses is diverse and by necessity rural nurses must be experts in a range of clinical nursing specialties. The isolation experienced by many rural communities because of geographical distance from capital centres, inadequate telecommunication networks, the trend to centralise services impact on the sustainability of rural communities. In the health environment these challenges are further exacerbated by professional isolation, increasing expectation by employers and communities that nursing staff will be multi-skilled, changing technologies and continuing fiscal constraints on healthcare. The nursing workforce of the 21st century will be required to be effective and cost efficient in their practice. Nurses will be expected to demonstrate advanced levels of knowledge and clinical competence. They will be required to justify nursing interventions using current research and to contribute to nursing knowledge by initiating clinical research.

Practice Challenges

The literature has been reviewed to establish the key challenges facing rural nursing. These have been identified as:

- Recruitment and retention of staff
- Legal and ethical aspects of practice
- Changing Technology
The literature clearly shows that the nursing profession has developed "advanced practice" to meet the challenges of rural practice in Australia. The literature covering advanced practice is reviewed and the conclusion is drawn that advanced practice in rural areas is different from urban ones. Rural nursing practice is generalist in nature and the practice is at an advanced level.

Educational and training providers must provide programs, which prepare nurses to meet the challenges they will face in rural practice. One question posed by the authors was:

>'If rural nursing practice is advanced in nature - can under-graduate, pre-service education prepare nurses for such a role?'

It is not clear from the review that this if question has been addressed in Australia. It is however clear that the training and educational needs of rural nurses are not fully met by post-registration programs for a number of reasons. This could indicate that there is a skills and knowledge gap amongst nurses in rural Australia that needs to be addressed.

Core Skills

There have been a number of studies, which have been undertaken to establish the core skills needed for rural practice. After reviewing these a list of curriculum areas have been identified. These are:

- Interpersonal skills
- Management
- Legal and ethical issues
- Practice skills
- Education
- Research

Rural nurses need and are expected to have a similar knowledge base to those working in urban areas. The curriculum areas identified in this review should not be seen as a definitive rural nursing curriculum, but rather an indication of subjects that need to be taught within a rural context. It is also important that student nurses be exposed to rural nursing environments as part of their training.

Continuing Learning Skills

Professional development does not start with the provision of educational opportunities but by a mindset that thirsts for development. It is evident from the literature that rural nurses identify the need for ongoing opportunity to enhance their knowledge and skills. Continuing education is of the
utmost importance to rural nurses in Australia. The presence of continuing learning opportunities has been found to enhance the self-esteem, aid networking and promote personal and professional development of those who take part (Anderson & Kimber: 1991). Alternatively lack of learning opportunities can deter nurses from practicing rurally. Huntley (1995) found that 71% of rural nurses surveyed stated that the "lack" of access to continuing education opportunities could contribute to them leaving their rural nursing position. Huntley identifies the provision of continuing education for rural nurses as one of the top priorities of rural Universities. However, consistently it is reported in the literature that rural nurses are disadvantaged in accessing education and training (Hegney et al 1997; Kreger 1991).

This review has found (Blue 1993) that nurses are more likely to undertake tertiary postgraduate education if there is:

- a (rural) university campus relatively near
- family support and encouragement
- flexible delivery styles of education
- employer sponsored study
- more information about available programs
- more places made available
- course content relevant to rural needs
- workplace recognition for study and eventual qualification
- options to study over longer periods of time than traditionally allowed
- no compulsory residential module
- scholarship and peer support

It has also been found that the barriers to education for rural nurses are:

**Workplace focused**

- problem with staffing levels and locum replacement for staff undergoing continuing education
- an increasing withdrawal of management and employer support for continuing education.
- lack of funding (both personal and institutional)

**Personal focused**

- family commitments (particularly child care and responsibilities in family business)
- lack of time, both personally and professionally

**Educational provider focused**

- lack of information about available courses
- a lack of access to relevant and appropriate courses
- Inappropriate course content

There have also been a number of studies, which have investigated the post registration educational needs of rural nursing to establish post registration course content. From these the authors have drawn up a list of curriculum priorities for post registration courses. These are as follows:

**Clinical**

- Pharmaceuticals and pharmacology
- Accident and emergency
The literature review also investigates the modes of delivery of such courses and concludes that rural nurses appreciate courses which have face to face content, and have "hands on skill" development. It was also found that rural nurses do not like distance education courses or computer based course. These facts pose significant challenges for educational providers, as nurses are restricted in their ability to leave the workplace. This may mean that the most appropriate style of courses use an "out reach" distance education model where the educator visits the workplace. This is an expensive model to provide and does have resource implications for the employing authority.

If nurses are to be adequately prepared for a rural nursing career the points made in this part of the review must be heeded. The authors have also conclude that this will have a positive impact on recruitment and retention issues. It has also been noted from the literature, that rural nurses require an advanced generalist education. This could best be provided by nurses utilising a range of subjects from different universities using a "pick and mix" model. However it was found that nurses find the credit transfer mechanisms between universities limits the flexibility of such an approach.

**Conclusion**

Issues that are impacting negatively on rural nursing have been identified in the literature review.
It is acknowledged that this review has been limited by time constraints and is therefore not intended to be read in isolation to other material. The authors believe that nursing education cannot be considered in isolation to the workplace and have attempted to incorporate literature which is descriptive of the workplace in undertaking this review. It is further asserted that rural nursing must be considered as a unique specialty practice and emerging within the literature is information, which is attempting to define, and contextualise practice. The authors recommend ongoing research to assist this process and inform curriculum development which will meet rural nurses and consumer needs. To facilitate the recruitment and retention of the rural nursing workforce it is recommended that federal and state/territory governments continue to provide scholarship programs and incentive programs to support rural nurses and their families.

In conclusion policy should support education programs that:

- Clearly define rural nursing practice;
- Identify core skills of rural nursing with reference to all stakeholders;
- Provide universal access for rural nurses by using flexible `modes of delivery;
- Provide opportunities to maintain and enhance knowledge and skills learnt;
- Provide orientation to facilitate the transition to rural practice;
- Provide post registration courses, which are more clinically skills based;
- Consider providing specialist pre-registration rural nursing courses, which have different content including advanced practice skills and that, may be longer than traditional nursing courses; and
- Undertake studies to evaluate the effectiveness of the course that they are delivering for rural nurses.
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Defining of rural

Handley (1998) suggests defining 'rural' is difficult because rural environments are diverse and must include a range of seemingly unrelated usage of land geographically distant from urban centres such as dairy farming areas, forestry, wheat and sheep country, seaside tourist resorts, horticulture and fruit growing regions, mining regions and industrial areas. Humphreys and Rolley (1991 in Handley 1998, p.2) consider rural Australia "... characteristically encompasses large distances, sparsely distributed populations, often harsh environments, extensive land uses and social and economic diversity". While the term 'rurality' has been used to describe behaviour or lifestyle in a context which is not urban, Gray and Lawrence (2000, p.ix) believe rurality refers to "... the distinguishing features of rural life and the condition of possessing them, which make differences apparent between urban and rural situations". They further contend that a 'rural' ideology pervades the discourses focussed on rurality. This ideology embraces dogma which views farming as a noble endeavour because those engaged in such business are hard working, are characteristically persevering and they epitomise the Australian image of family. This ideology is embraced by rural communities, politicians and other Australians and has traditionally been linked to the myth that living in the country equate(s) with a healthy lifestyle. Hegney & McCarthy (2000) and Humphreys and Rolley (1991 in www.aihw.gov.au/publications/health/hrra/index.html 2001, p1) suggest however, that people who live in rural and remote Australia experience many health disadvantages. These include higher mortality and morbidity rates for some diseases, higher exposure to injury in the workplace, socioeconomical disadvantage, and inequitable access to health services as compared to urban counterparts. This description echoes the material from Canadian (Baird-Croocks, Graham & Bushy, 2000) and New Zealand research on rural health.
Taheri-Kennedy (1997) concludes that there is evidence which supports the thesis as the population size decreases access to professional health care is reduced and poorer health results.

The term rural contends Dunn (1989), first appeared in the Australian health literature in the late 1980's. Hegney and Hobbs (1998) believe, it was not until the inaugural National Rural Health Conference in 1991 when health disciplines raised concern about the provision of health care services, the health care workforce and the lack of specific health policy in rural Australia, that Government's attention focussed on health in the rural sector. This conference was organised by The Rural Doctors Association of Australia and attracted key organisations. The conference provided a forum for national consultation on rural issues and provided for consultation on the draft Rural Health Strategy Document prepared by the Federal Government (Buckley 1997 in Siegloff 1997). Following this conference a series of government policy's and strategies were developed to address the identified inequities experienced by rural people in accessing health services and the increasing problems associated with recruitment and retention of health professionals to rural areas (Hegney and Hobbs 1998).

Humphreys and Rolley (1991, p.19) explain that a number of methods have been used to arrive at an unambiguous definition of rural. They argue that there is no agreed consensus as definitions are developed in response to the research being undertaken. These definitions describe rural as being "... synonymous with anything which is non-urban in character to positive attempts to specify important elements of rural identity" (Humphreys & Rolley 1991,p.19).

Some of the classification systems that have been used to define rural include: The Australian Bureau of Statistics, The Rural and Remote Area Classifications (RaRa), the Rural, Remote and Metropolitan Areas Classification System (RMAC), the Griffith Service Access Frame and the Accessibility/Remoteness Index of Australia (ARIA) (Hegney 1997; Cullen et al 1990; Hegney in Daly 2000; Handley 1998; Best 2000). Hegney (1998) maintains the most appropriate definition of rural for use is the Rural, Remote and Metropolitan Areas Classification System. This system was developed "... to meet the increased demand for a common national rural and remote classification to overcome limitations in the methodology of the existing DHS&H (Department of Human Services and Health) and the DPIE (Department of Primary Industries and Energy) classifications" (Department of Primary Industries and Energy, 1994 in Hegney et al 1997,p.45). "This model uses distance to larger towns and cities and from other people as the basis for its remoteness index" and was developed on the following assumptions

- People tend to obtain goods and services from the nearest urban centre which offers these
- Goods and services which are available in smaller centres and also available in larger urban centres, but the larger centres have a wider range
- The frequency of access to goods and services is related to remoteness and therefore those available at a nearby town are likely to be purchased or utilised more often than those available at a more distant town or city (Hegney et al 1997, p. 43).

In addition, goods and services that are most needed are more likely to be available locally" (Department of Primary Industries 1994 in Hegney et al 1998). RAMAC is based on Statistical Local Areas (SLAs) but is dependent on the internal characteristics of the SLA (Hegney in Seigloff 1997).

Best (2000) argues that Health should adopt the ARIA classification system which "...stresses accessibility in terms of known transport links" and allows for the differentiating the medical workforce. However Hegney et al (2000) critique ARIA as it looks at the "...extent to which services are able to be accessed, rather than the extent to which people are actually accessing them".

Hegney (2000) argues that approximately one-third of Australia's population live outside capital cities and metropolitan centres which are concentrated on the coastal fringes of the continent. Approximately 84% of the Australian population live on 1% of the land mass (Handley 1998). It is
agreed that with increasing distance inland there is an inverse decrease in population (Humphreys & Rolley 1991). Therefore the provision of health services which are largely determined on a population based formula (GMAHS 1998) means that service provision is also reduced with distance from centres of high population density. Health services which are provided in rural/remote areas rely on clinicians having multiple skills to meet community needs (Malko 2001; AMWAC 1996).

The RRMAC system provides a useful framework for examining rural nursing. Understanding the diversity of practice situations, the challenges faced by rural nurses and the knowledge and skills required to meet a changing work environment are considered within the RRMAC model.

**Rural Nursing**

Nursing the sick in isolated and remote settings is a not a new phenomena (Bushy 2000), however, acknowledgment by nurses who work in rural environments, that their practice is different to nurses who practice in metropolitan areas, is new. This is supported by the "Health Department of Western Australia (in Drury et al 2001, p.1) who maintain "... that nurses working in rural and remote areas of Western Australia are often sole practitioners and are therefore expected to function at a higher level than nurses employed in metropolitan areas. Hegney (1997,p.15) and AMWAC (1996) claim that there is a reluctance by medical practitioners to work in small rural areas and an inability by health services to employ (due to the cost) a range of allied health professionals. This is supported by Best (2000) while Hegney (1997) maintains that if rural nurses do not fill the gap, services would not exist. Hegney (1997) advocates that rural nurses must practice in extended roles if services are to be maintained in many rural areas.

In 1991, Hegney and a group of nursing academics from Armidale College of Advanced Education NSW, launched a new nursing association, the Association for Australian Rural Nurses (AARN) whose mandate was to raise the profile of rural nurses and to influence State and Territory and the Federal Governments about issues facing rural communities and health professionals (Buckley in Seigloff 1997). Remote and metropolitan nurses interests, asserts Hegney (1999) prior to 1991 were represented politically through professional associations (eg. CRANA; RCNA; NSWCN) which legitimatised their claims for credibility. Rural nursing however remained invisible until the formation of AARN in 1991. AARN provides rural nurses with a political voice, representation on national and state executive committees and is the conduit for needs of 'bush' nurses to be addressed (Hegney, 1999).

The AARN believe that nursing practice in rural Australia is qualitatively different to nursing practice in metropolitan and remote areas. Rural and remote nurses are recognised as being resourceful people within the health service (Hegney 1996), often practising in multiskilled and extended roles (NSW Health 1998). The practice of rural/remote nurses often is in environments with limited medical, collegiate and other support and requires nurses to assume high levels of responsibility. Rural nurses, maintains Hegney (1999; 1997) use similar core skills to remote and metropolitan nurse colleagues but the skills required for rural nursing practice are more generalist than specialist in nature. Hegney (1997) found that rural community nurses, like their hospital counterparts require a broader range of skills, and that this range expands with a decreasing community size.

Bell, Daly and Chang (1997,p.2/11) suggest that rural practice has its "... own unique stressors" and inadequate training for rural area practice may push nurses to the limit in what is already recognised as a stressful occupation. They argue that authorities fail to provide cost effective education for rural health professionals. This view is supported in the findings of a Review into Registered Nurses Expectations commissioned by the NSW Nurses Registration Board 1997, which stated that experienced registered nurses "... do not expect that new graduates will be able to function adequately in a wide range of other clinical settings or in rural or remote areas" (77).
Keyzer (199, p.1) draws attention to Hegney's work and suggests the nature of rural nursing work has linkages with a population construct of care giving and the role and status of women in specific communities. He argues that while ever nursing and others define rural nursing using a medical model as the framework the scope of nursing practice will be limited and controlled by a perceived dominant discipline.

Bushy (2000), Buckley and Gray (1993 in Handley 1996) and McDonald (1994 in Handley 1996) claim that it is difficult to generalise about the role of rural nurses because each community in which nurse's practice is different. Bushy (2000) points out salient themes which consistently appear in the literature allow researchers to generalise about the context of rural nursing practice which include professional, geographic and social isolation, resource limitations, and the need for practitioners to be multiskilled.

There is no agreed definition of rural nursing argues Hegney (2000 in Daly et al 2000) however several definitions have been used. Blue (1993 in Handley 1996, p.2) claims rural nurses "... work is primarily in health care settings outside of the major metropolitan and urban areas". Kreger (1991 in Hegney et al 1997) suggests rural nursing is the practice of nurses who work in environments with limited access to medical support, while Hegney et al (2000, p.183) believe rural nursing is nursing practiced in environments where "... no medical practitioners are employed full-time in a hospital, but are located within the town, or in community health or district nursing service located outside a capital city or other major urban environments (that is less than 80,000)". Thornton (1992 in Hegney et al 1997, p.46) however, defines rural nursing as "... the practice of nursing in communities with a population between 500 and 10,000 who have access at most time to at least one medical practitioners living within the town". Anderson and Kimber (1991 in Handley 1996, p.3) define rural nursing in the USA as "the practice of professional nursing within the physical and socio-cultural context of sparsely populated communities". While each definition embodies characteristics of rural nursing practice, the authors believe the following is a more accurate description of rural nursing:

*Rural nursing is the practice of professional nurses in rural environments as defined by the RRMAC with or without medical and/or allied health support.*

The authors contend that the practice of nurses in rural environments is determined by the employer and the needs of the community and concur with Bushy (2000), Hegney et al (1997) and Handley (1996) who assert rural nurses by necessity must have broad knowledge and skill base.

Chapter Background continues
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Context of Nursing Practice

Health professionals practice in environments and in a manner reflective of contemporary thinking. Foucault (in Grbich 1996) argues that our knowledge and therefore interpretations of the world are formulated on culturally associated discourses. That is, the way in which people view health and illness is determined by predominate discourses. During the 19th Century there was a global movement by western industrialised nations to adopt public health measures to protect communities from the spread of diseases. Public health measures including the provision of clean water, sewage disposal, and building codes to ensure the quality of housing, and the introduction of immunisation programs were among the many measures implemented. As infectious diseases ceased to be the main cause of mortality, western nations embraced an idea developed in the Southern states of the USA, community development. The underlying philosophy of the movement was to empower communities to take responsibility for their own health. In 1978 the World Health Organisation convened a conference which has become known as the Alma Ata Conference, to develop strategies to address the inequities in the health of people globally.

Primary Health Care as a philosophy was adopted by Government, although Wass (2000) contends in Australia selective primary health care underpins health policy. Selective primary health argues Riflin & Walt (1986 in Wass 2000,p.13) "... concentrates on providing medical interventions aimed at improving the health status of the most individuals at the lowest cost". Wass (2000,p.13) concludes that this approach "... assumes that medical care alone results in improved health and ensures control over health is maintained by health professionals".

Bushy (2000,p.10) believes that there has been a paradigm shift in the USA in terms of health service delivery. She argues that "... primary care has assumed a prominent position while acute care services rendered in hospitals have decreased along with an explosion in managed care, community based services, and capitated reimbursement". A similar situation has occurred in Australia and as Bushy (2000,p.10) claims "... nurses are expected to have more sophisticated skills and should be able to function within an expanded scope of practice".

McLean (1998, p.1) points out that in rural Australia there has been an increasing emphasis on "... primary care and health promotion and illness prevention has been commonly supported even if not put in place in every rural community". Hegney (1997,p.19) found that rural communities value rural doctors and therefore embrace the medical model of health care. In addition, she claims that many rural nurses value "... hospital nursing practice over community nursing which promote(s) a primary health care model of health service delivery". She concludes that "... both hospital nurses' attitudes and community attitudes require change before a primary health care model of health service delivery or an advanced rural nurse practitioner would be valued equivalently to rural medicine".
The practice of nurses in rural communities is controlled by medicine directly and indirectly, although nursing practice is based on a humanistic philosophy of care not on the medical model. The evolution of nursing practice in rural areas must be permitted to occur if rural health services are to survive. Nursing must accept the role of other health service providers, and other health service providers including medicine must allow nursing to evolve as determined by nursing and community needs. There must be a concerted effort by government, universities and other educational and training providers to develop and deliver appropriate programs, developed in consultation with nurses which strengthen, enhance and challenge nurses who practice in rural areas.

Common problems identified in the literature regarding rural nursing practice include professional isolation, scarce resources, the expectation that health practitioners skills will be more generalist than specialist in nature, limited scope to specialise, legal implications of practicing in an expanded role, and identifying professional boundaries of practice (Bushy 2000). Nurses have been practicing in the 'bush' since the beginnings of white colonisation however their contribution to nursing and health service delivery has been largely ignored.

**Top**

**Historical Background to Rural Nursing**

Indigenous Australians, suggests Francis (1998) provided health care and used the native flora and fauna to treat illnesses effectively. The first nurses to practice in Australia were convict men and women who were not able to perform manual labour. The convict nurses were unskilled and were therefore under the direct supervision of the colonial medical officers (Francis, 1998). Colonial medical practitioners were employees of the British Crown and were therefore required to provide medical treatment to convicts and other British Crown employees.

With the expansion of the colony north, south and west of Sydney the demands on the colonial surgeons increased. The colonial surgeons became disenchanted with the pressures placed on them to service vast, isolated geographical distances (Francis 1998; Ford, 1955). Ford (1955) argues that prior to 1805 some medical practitioners were often reluctant to treat patients located beyond the city limits.

As travel was difficult health services in rural communities was limited. With and/or without medical support colonial pioneers were forced to rely on each other for medical succour. Women assumed responsibility for caring for their immediate families and neighbours with traditional healing knowledge being passed down from mothers to daughters. In addition, Francis (1998) claims indigenous Australians often provided medical and midwifery assistance to rural families.

Early records indicate that the colonial surgeons were the sole providers of health services, however, as the colony matured competitors challenged medicine for dominance (Willis, 1989). In addition to medicine, untrained convict men and women worked as nurses under the direct supervision of the surgeons and lay- midwives assisted women in child birth only calling upon medical support if the impending birth was complicated (Ford, 1955).

In 1838 the first trained nurses arrived in the colony of NSW, five Irish Sisters of Charity. The Catholic religious women established convents in Parramatta and Sydney (Macginley, 1996). They provided nursing care to people in their homes and in the convict hospitals located in Parramatta and Sydney until they established the first private charitable hospital, St Vincent's, Potts Point in 1857 (Francis, 1998; Francis, 1999; Burchill, 1992; Schultz, 1991). As more Catholic religious women arrived foundations were established throughout the colony. Many of the religious women's congregations were nursing orders including the Irish Sisters of Mercy who founded the Mater Misericordia hospitals, the Little Company of Mary, the Dominican Sisters and the Sisters of St
John. In addition, the Protestant Benevolent Society founded an institution in Sydney and others located in the rural townships of Windsor, Wilberforce, Richmond and Pitt Town to provide health and welfare services to the poor (Rathbone, 1994). By 1858 settlements had been established in eighteen (18) areas throughout the colony. Each of the new townships had established hospitals for the treatment of the sick (Schultz, 1991). Nurses were employed at the hospitals and there is evidence that lay women provided assistance to rural families, including attending lying-in-women in remote areas not serviced by hospitals and medical practitioners (Burchill, 1992; Francis, 1998). Pearson (1993 in Hegney 1997, p.15) claims that lay nurses, who he refers to as the ‘bush nurses’ 
"... provided the majority of care to rural populations, prior to the expansion of the population and the resultant increase in service provision".

Hegney (1999; 1997) asserts that rural nurses use similar core skills to remote and metropolitan nurse colleagues however, the skills needed by these nurses are more generalist than specialist in nature. Francis (1998) argues that specialised nursing practice is more highly valued by nurses and the wider community than generalist nursing practice. While Pearson (1993) suggests that nursing practice which is generalist in orientation is often associated with deskilling. Specialisation allows nurses a pathway for career advancement and legitimates the claim for recognition by the profession and others that the work performed is unique (Stlyes,1991). Generalist practice however assumes that professionals' roles or boundaries of practice will be extended and that the skills required for practice are not highly developed. Pearson (1993) argues that this trend is not nursing specific citing rural medicine and rural allied health professionals as also being challenged to become generalist practitioners (Wilcannia Nurse Practitioner Project 1994). The Wilcannia Nurse Practitioner Project (1994) clearly indicates a need for the recognition and accreditation of the rural nurse practitioner.

Hegney (1997) maintains that while rural nursing practice is generalist in nature, practitioners are advanced generalist nurses who provide a variety of services in settings which may or may not have medical support. Rural nurses are key health care providers and as Humphreys and Rolley (1991) affirm are often the only primary health care service providers. Handley (1999:iii) comments that rural health providers (including nurses) "...respond to a range of health related problems which is arguably wider than their metropolitan counterparts...

For health professionals working in rural areas practice is a challenge. For rural communities access to health services, the number and type of service providers available, distances to health services, community members occupations, environmental health hazards etc are determinants which impact on the health of rural communities. These communities with limited access to health services represent a range of occupations which are also associated with environmental and workplace health hazards. The range of skills required by health professionals to deal with these issues indicates the need for advanced nurses practitioners adept not only in core skills and nursing knowledge but the ability to provide community education and counselling with/without additional support services (Hamilton 2000; Sutton & Smith 1995). Attracting health professionals to work in rural areas has been difficult for many rural communities. The value placed on rural health professionals by the community and the professionals' discipline influence the attractiveness of rural practice for rural health practitioners. Issues that further influence the value health professionals and health disciplines place on rural practice include the extent of the generalist nature of practice, remuneration, incentive programs and professional recognition and support of health practitioners.

The NRHA (2001) summarises the key factors impacting on health professionals, including nurses in rural and remote Australia which include:

- Poor health status of the rural and remote population compared with people of urban areas.
- Complexities stemming from confusion about the roles and responsibilities of the three levels of government in the financing, planning and provision of health care services.
- Overall budgetary constraints and pressures.
- Perceived inflexibilities in health funding and inappropriate use of short-term funding.
• Changing locations and emphases in health care, for example:
  ∫ consumer focus,
  ∫ emphasis on greater integration and coordination of services;
  ∫ less reliance on institutional care, eg aging in place, community-based mental health care and hospital in the home, and
  ∫ greater emphasis on primary health care.

• Changing disease pattern.

• Higher proportions of indigenous peoples in rural and, especially, remote areas.

• Changing demographics, eg aging population, declining population in some areas, expanding in others.

• Rapidly expanding knowledge base and need for competence and flexibility across a wide range of health needs.

• Increasing use of IT.

• Increasing use of medical technologies.

• Isolation, both professional and geographic.

• High levels of autonomy.

• Relative under-supply of all health professionals.

• Less support staff, with professionals therefore having a greater role in administrative matters.

• Impact of economic downturn in some areas of regional Australia

• Limited infrastructure, eg transport and telecommunications

(NRHA 2001, pp.3-4).

The above issues will be discussed in detail throughout the report as they impact on the knowledge and skills required by rural nurses to meet the challenges of a changing work environment in the 21st Century.
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Rural nursing workforce profile

Nurses represent 69.2% of all practising health professionals (Grbich 1996) and are employed in both the public and private health sectors in a diversity of areas including community health, acute care hospitals, rehabilitation, aged care etc. Figures provided by the NRHA (2001) indicate that 57.4% of the total number of people engaged in health occupations in Australia are nurses, which includes unlicensed nurses including personal care assistants and nursing assistants, representing a decline of 11.8%. Moreover, it may be inferred that the actual numbers of licensed nurses is much less than is indicated by these figures. Data suggests that licensed nurses represent approximately 72% of the nursing workforce (Australian Institute of Health and Welfare 1996). AIHW indicates that there is "... an estimated 257 662 persons registered or enrolled in Australia as nurses of whom 221 998 are actually employed in nursing" (2000 in NRHA 2001). Hegney and McCarthy (2000) argue that of this total, 30% work in non-metropolitan areas, and that there has been a fall in the relative numbers of enrolled nurses from 26.6% to 16.3% between 1989 and 1999 (AIHW in NRHA 2001). The NRHA (2001) suggest that the nursing workforce in non-capital cities is 72 252 representing 68% of those engaged in health occupations. NRHA (2001, p.22) believe that the nursing workforce has remained stable - or there has been a lack of growth - in the numbers of nurses employed in nursing compared to other health professionals. As indicated previously these figures may be misleading and the situation much worse than it appears. Hegney (1997) found that the rural nursing workforce has a higher percentage of part-time employees when compared to metropolitan and remote areas.

Studies indicate that rural nursing workforce is aging (Williams 2001). Hegney et al (1997) found the mean age of rural nurses in their study was 38 years, with the largest numbers between 35 and 45 years. These figures are similar to that reported by Blue (1993) and Harris (1992). AARN (1998) reports that the age of rural nurses in their study ranged from 25 to 58 years with the majority (80%) aged over 40 years, with the largest group aged between 45-49 years. NRHA (2001, p.26) report that the rural nursing workforce is "... concentrated in age groups up to 45 years, with 69.1% of the total nursing workforce aged 44 years or less". Moreover, they argue that there is evidence that cohorts within these figures have an older profile. For instance Hegney et al (1997) assert nurses working in rural hospitals in 'rural other' areas are more likely to be aged 50 years and over while a survey by Stephenson et al (1999 in NRHA 2001) found registered and enrolled nurses mean age was 43 years. The Commonwealth Department of aged care found that 35% of remote and rural nursing population is aged over 45 years (NRHA 2001). Williams (2001) suggests the worrying aspect of these details, is in a predominantly ageing female workforce that many will revert to part-time work and will retire within 10-15 years. Vicik (in Zimmermann 2000) and the Chief Nursing Officers group proposed restructuring the workplace to accommodate the experienced older nurse as a strategy to maintain the existing rural nursing workforce.

The gender mix of rural nurses is reflective of national trends. Hegney et al (1997) report that 91.5% of the nurses in their study are female. Stephenson et al found that over 90% of the rural
nurses in their study were female which is collaborated by the AARN who indicate 93% of their membership are female. Nationally 92.9% of registered and enrolled nurses are female and 7.1% male (Reid 1994). Hegney (in Siegloff 1997) cautions the size of the employing health facility influences the ratio of female to male nurses employed. She argues the smaller the health facility the more likely are the nurse/s to be female.

AARN (2001 Workforce Inquiry Submission) argue

- The average rural nurse is between 45 and 50 yrs of age.
- Most of these nurses anticipate retiring or leaving the profession within the next 10 years.
- A very small percentage of graduates are going to rural areas. Most good graduate programs are conducted in large metropolitan hospitals and this is where they tend to stay.
- Rural nurses are being deskilled and have an inadequate opportunity to maintain knowledge and skills commensurate with their responsibilities.

This profile indicates that the rural nursing population is ageing with advantages of experience and practice expertise and the disadvantage of ritualisation and routine. A lack of new entrants with new and different ideas and a fresh pair of eyes mean that practice can potentially stagnate. The mutual learning by both groups and the development of new knowledge is seriously impaired. Hamilton (2001) maintains it is essential to address the recruitment problems by developing new strategies for promoting nursing as a career to the group 2010.

Stephenson et al (1999 in NRHA 2001) suggest that the dominant qualification held by rural nurses is a hospital registered nurse certificate, which is supported by Hegney (in Siegloff 1997; Handley & Blue 1998). Stephenson et al found that;

- 81% have generalist qualifications;
- over one third are practising midwives;
- less than 7% have psychiatric qualifications; and
- 14% are Enrolled Nurses ( 1999 in NRHA 2001, pp.28).

The NRHA (2001,p. 29) believe that "... the proportion of nurses who are Registered Nurses falls with increasing rurality. As a proportion of Registered and Enrolled Nurses, Registered Nurses comprise:

- 77.8% overall;
- 82% in capital cities;
- 76.8% in other metropolitan areas;
- 77.1 % in large rural centres;
- 70% in small rural centres;
- 69.4% in remote centres; and
- 69.2% in other remote areas.

The NRHA further asserts the increasing proportion of enrolled nurses employed in remote areas is of concern, as these areas are characterised by limited support from medical and other health professionals.

These figures highlight the disproportionate investment of resources between rural and metropolitan health care environments. This inequity may be due to centralisation of acute services in the metropolitan areas or a myriad of other reasons. It is obvious that rural communities have access to decreased health care resources. Vacant positions remain vacant due to non-appointment and poor recruitment, which then leads to gaps in service with resultant frustration and increasing workload by incumbent practitioners. This in turn becomes well known among the nursing population who seek or who gain employment in rural areas and may result in nurses seeking
alternative employment or remove himself or herself from the nursing workforce ((AIHW 1996).

Scope of Practice

Scope of Practice is defined by characteristics of the practice settings, practice acts, and normative and prescriptive role expectations (Mechanic 1988 in Kreger 1991, p.21). Hegney (1996 in Spencer et al 1998,p.2-3) proposes that the scope of rural nursing practice is "... shaped by the context and settings in which nurses' work, and factors such as low population densities and isolated geographical locations...". Keyzer (1997,p.6) contends that rural nursing is specialist practice and bases this belief on the following premises:

1. the morbidity and mortality profiles of rural communities;
2. the job content;
3. the population's demand for multi-skilled and flexible workers;
4. the overlap between the social and occupational roles of the nurse in a specific community;
5. local demands for nursing care that are not solely related to medical care;
6. the need for self reliance in the absence of specialist support;
7. the extension of the role into that of many other health professions;
8. the role of the nurse in developing communities; and
9. the current need to retrain metropolitan educated graduates for their work in the rural area.

The literature reinforces the views outlined, that is, rural nursing practice is context specific and is generalist in nature. Hegney (1997) makes the point that rural nurses are "jacks of all trades and masters of many". This description is supported by the stories told by rural nurses such as that of Nancy Grogan. Grogan (1997,p. 85) is a rurally based independent generalist community nurse who suggests her role incorporates general nursing, midwifery, child and family health nursing, domiciliary nursing, aged care, health education/promotion, and administration. She states she works closely with other health service providers including the general practitioner, ambulance officer, other emergency personnel and the wider community. The literature supports the view that the very complex, generalist nature of the rural nurse's work makes it a specialist field of practice. This has been recognised in the USA where rural nursing is a specialist practice area (Bushy 2000). Offredy (2000) contends that research indicates that rural/remote nurses in NSW are constrained by legal barriers which limit their ability to provide services. She claims that reforms such as providing for nurse initiated prescription rights, and allowing nurses to initiate diagnostic procedures is required to effectively improve health service delivery. In NSW legislation related to the Goods and Poisons Act (1966) and the Pharmacy Act (1964) have been amended to accommodate the practice of Nurse Practitioners. Nurse Practitioner is defined as an advanced practice nurse. The title Nurse Practitioner (in NSW) is protected under the NSW Nurses Act for registered nurses who have been accredited by the NSW Nurses Registration Board of NSW to use the title (Offredy 2000,p.9/12). Each of the States and Territories is in the process of developing guidelines etc for the appointment of Nurse Practitioners, who it is argued provide essential services which compliment existing service provision.

The Status of Nursing

It is acknowledged in the literature that nursing has low status. AARN (2001 Workforce Inquiry Submission) conclude this occurs because;

- There is a poor understanding in the broader community about the complexity of nursing.
● There is minimal knowledge of the need for a strong educational base.
● There is minimal knowledge of the decision-making requirements of nurses and the independent nature of much of the work that nurses do.
● The prevalence of socially unfriendly shift work is a deterrent, particularly when this is accompanied by relative low wages. Many new graduates comment on the fact that they may begin their careers with a student-based debt, which is higher than their annual wage (Source: research currently being conducted for AUTC).
● Nursing is seen to be a dead-end job with minimal chance for advancement, relative to effort and benefits from other professional groups.
● There is an increased range of career options for those people who would possibly consider nursing as a career.

The issues identified by the AARN are magnified for rural nursing because of the generalist nature of nursing practice. Educational programs dealing with all health care professions (not just nursing) should address these issues and strive to enhance the profile of nursing. This will lead to better recruitment and retention of nurses. However not all the problems identified lie within the education domain and health authorities should act to address structural and work issues.

Health team profile

The rural health workforce is composed of nurses, medical practitioners, allied health, pharmacy, hospitality, administrative staff and others. The AIHW (1996,p.1) provide the following details on the health workforce:

● The total employment in the health sector is 386,024 persons;
● Of the total health workforce 73.7% are female;
● Males dominate in the following occupations
  ○ medical practitioners 68.2%
  ○ dentists (78.7%)
  ○ dental technicians (81.5%)
  ○ chiropractors (78.2%)
  ○ orthotists (79.6%)
  ○ ambulance and paramedic (85.3%)
  ○ primary product and safety inspectors (88.7%)
● 55.8 % of the total are nurses

There has been considerable discussion on the perceived rural doctor shortage. Best (2000) claims that many strategies have attempted to address the rural doctor crisis including financial incentives, recruitment of overseas trained doctors and the establishment of the rural Workforce Agencies (RWA). In addition, Departments of Rural Health have been established to facilitate rural education of doctors. Alexander (1998) contends that national and State initiatives have failed to address the personal issues such as family education and support that impede doctors taking up rural practice.

Many rural areas are perceived by doctors, to be socially and culturally under-resourced, making rural practice an unattractive option. In addition, to the rural doctor shortage, rural health services are unable to recruit allied health and nursing personal. The reasons for this are related to funding and similar issues as discussed in the medical and nursing literature (AMWAC 2000; Bishop 1998; Hegney 1997; Knowles 2000; Malko 2001). Vacancy of positions across the health workforce in rural areas has been identified as a problem for rural health services and for the communities. Handley (1996) articulates that many communities are experiencing widening gaps between health needs and the type and frequency of services available. She concludes, that in some communities, which may have medical support, the needs of the community remain unmet. This occurs because
the focus of medical practice is on cure, not health education and promotion (Parker in Daly et al 1998).

Nursing represents the greatest proportion of the health workforce numbers. Handley (1996) believes that nursing vacancies in rural areas are escalating with many services unable to provide for relief support. She concludes that health services often have inappropriate nursing staff mix, limited numbers of qualified specialist nurses, and experience high nursing staff turn over. Many studies argue that all rural health professionals should have specialist training (Munoz & Mann 1982; Cramar 1989; Sturmey & Edwards 1991 in Siegloff 1997). Spencer (in Siegloff 1997), and Hegney et al (1998) believe that nurses are taking on responsibilities and practices in the absence of medical doctors as a gap - fill strategy to maintain health services in many rural and remote areas.

Rural Health Care

Some have come to the conclusion that rural health care is in crisis (Humphreys in Cullen et al 1990, Simpson 2000). However the Australian Government argues that all Australian people have a right to expect equitable access to health care. It has already been identified in this review that people who live in rural and remote Australia experience many health disadvantages when compared to urban counterparts which is demonstrated by higher morbidity and mortality rates (Humphreys and Rolley 1991; Hoadley et al 2000). It is recognised that the health status of the Australian population is determined by social, economic, environmental and lifestyle factors. However Strong et al (2001) maintain that for people living in rural Australia additional factors indirectly impact on health status. These factors include; ethnicity, employment, the industry base of rural communities, demographic features such as ageing populations, geography, climate, and access to information and attitudes to health, illness and disability (Fragar 1997 in Strong et al 2001). In addition, rural health disadvantage is exacerbated by;

- Geographical isolation and problems of access to care;
- Shortage of health care providers and health services;
- Socioeconomic disparities;
- Greater exposure to injury, in particular for persons employed in farming and mining;
- Lower road quality;
- Small, sparsely distributed populations; and
- Indigenous health needs (Strong et al 2001,p.1).

The rural health care crisis is a global problem. Shreffler (1998) argues two interrelated problems are responsible for the crisis, the decline in rural health care services in the wake of the global embracing of economic rationalisation and changing demographics of rural populations. Gray and Lawrence (2000) hypothesise that globalisation has undermined rural economies, which are traditionally based on family-run enterprises. In addition, drought conditions that Stehlik (2000) concedes has lasted almost a decade in parts of Queensland and NSW, has adversely impacted on family incomes, their energy to sustain farms and consequently the health of many rural families.

Simpson (2000,p.8) argues that we live in a time marked by incredible advances "... in health science with new technologies and drug treatments, (yet) the gap between health outcomes in country and city areas remains stark". In recognition of the rural health crisis Best (2000, p.9) was commissioned by the Commonwealth to undertake a consultancy which was underpinned by the following assumptions;

- A belief that the health of the rural and remote population is worse than it is for urban counterparts; and
A belief that the resources available for rural and remote populations are substantially less than those available in the urban population at large (Best 2000, p.9).

The Best (2000) report concentrated largely on general practice and medical specialist services and found that access by communities to these services is increasingly limited with increasing rurality.

There has been a great deal of Commonwealth funding directed toward recruitment and retention of medical practitioners in rural and remote areas and little consideration of nursing and allied health services. Simpson (2000) maintains that if health in rural communities is to improve then there must be a commitment by governments, Federal, State and local, and communities to support the health team not just medicine. She claims "... there is a need for positive discrimination to elevate the importance of rural health....". And in elevating rural health ... the status of not only those who receive the services but the team of people who deliver those services" (2000, p.8). Simpson (2000, p.9) identifies that if nursing numbers in rural areas continue to fall, "... the level of services (rural) communities have a right to expect will simply disappear".

There is a recognised global shortage of nurses (Lasala 1995; Irwin 2000; Kearns 1997; Bushy 2000) and the impact that this is having on Australia is beginning to be realised and is most pronounced in rural and remote areas (Hegney & McCarthy 2000). A number of taskforces have been convened to review nursing recruitment and retention (NSW Health 1996; Queensland Health 1999; Victoria 1999-2000) which have had little impact the current situation.

As the shortage of nurses continues to worsen studies are being undertaken to identify the number of nurses who have chosen not to maintain licensing. A study commissioned by the NSW Department of Health is being undertaken to identify how many of these nurses exist, and aims to identify if they are willing to return to the health workforce (Meppem 2000). Hamilton (2000), reporting on Foley's address to the Australian Nurses' Association, while acknowledging the complexity of reasons for the current shortages in nursing, points out that the real problems will occur in 2010. There is a need to propose changes to current ways of structuring the workforce. These will be brought about, not by inadequate numbers of nurses now, but the problems associated with the environment in which nursing occurs. Fiscal constraints, the influence of market forces and cost cutting measures, and having to perform roles for which staff are unprepared produce stressed people and ultimately result in staff shortages and turnover (Spencer in Siegloff 1997).

Handley (1998) asserts that the rural/remote nursing shortage has been recognised for many years. However, concern about nurse shortages is no longer confined to professional discourse. Public forums and tabloid newspapers are expressing alarm with some health services indicating a need to reduce or close existing services because of insufficient nursing numbers (Conky 2001; Kearney 2001).

The AARN (2001) assert:

Registered Nurses (RNs) are pivotal to the management and provision of quality care in rural areas. Due to shortages, vacant RN positions are having to be filled with Enrolled Nurses and unregulated workers, and this will have a dramatic effect on the ability of those RNs to adequately supervise these nurses whilst managing their own heavy workloads. Nurses from overseas are also increasingly being used to fill gaps where no Australian nurses are available. This too will be detrimental to the health care provided in these areas, as these nurses have little if any knowledge of the important socio-cultural aspects of rural populations, especially those with high numbers of indigenous people.

If the Australian Government's wish to give all Australian people equal access to health care is to be
realised the issues which are contributing to the health crisis in rural Australia must be addressed. It is noted that incentive programs have been introduced to encourage medical practitioners to train and practice in rural Australia. Federal and State/Territory governments should devise and implement such incentive schemes for nursing and allied health - if they are to attract staff to rural areas.
Practice Challenges

Introduction

Nursing in rural environments in the 21st century will pose many challenges. From the literature major issues facing rural nursing have been identified. These include recruitment and retention of rural nurses, practice issues such as legal issues, changing technology, and the work environment. It is recognised that the rural environment is responsive to extraneous factors such as national and international economies, political ideology, and climatic conditions. This section of the review will discuss these issues with reference to how they impact on nursing practice in rural areas. One way in which rural nursing practice has responded to these factors is the development of the philosophy of advanced practice and an investigation of skill mix issues. These aspects of rural nursing will also be examined in this section.

Educational providers, policy makers, the health service authorities and professional bodies must address the issues that are identified in this section.

Recruitment and Retention of Staff

Recruitment and retention issues and rural nurse shortages have been discussed previously in this
review. It is noted that these issues will become most problematic in 2010 as the current rural workforce retires (Hamilton 2000). It is proffered that employers, education providers and rural communities must focus their efforts on addressing the challenge of the recruitment and retention of nurses (Simpson 2000).

As discussed in the literature nurses who choose to practice, and who remain in rural areas are committed to the community through families and partners (Hegney 1997). Attracting nurses to rural communities who do not have these ties may require the development and implementation of collaborative strategies between employers, local councils, government and others to develop incentive programs which support nurses and their families in relocating and remaining in rural communities. Furthermore, the review has identified workplace issues, which are perceived by nurses as deterrents to practicing in rural environments. These issues are discussed more fully in this section and include safety, intra- and inter-professional relationships, maintaining currency and specialist skills, and access to education etc.

It is suggested that rural nursing practice is advanced nursing practice (Hegney 1997; Hegney et al 1997; Bushy 2000). If this is accepted then education providers must develop and/or modify programs at the pre and post-registration level to prepare and support nurses practicing in rural Australia. In addition, education providers must look to the availability, access, and status of their courses if they are to contribute to addressing the issues raised by a chronic shortage of nurses. The status and profile of generalist nursing practice both within the nursing profession and outside must be elevated and valued by nursing, other health professionals and the community if nurses are to be attracted to this area of practice (Hegney 1997).

**Legal and Ethical Aspects of Practice**

Australia in the 21st Century will leave a legacy as an era of litigation. All health professionals practice within an environment in which autonomy of practice is demanded by practitioners, and responsibility and accountability for practice and improved health outcomes for actions implemented are expected by professional bodies, and the community (Mair 2000).

Nursing practice in Australia is governed by the ANCI competencies, which were developed to provide standards to regulate nursing practice. The ANCI competencies communicate to consumers the competency standards that they can expect of nurses (Australian Nursing Council Inc., 2002). All registered and enrolled nurses are licensed to practice by nursing registration authorities in each State and Territory in Australia (Reid 1994; Mair 2000). Each State/Territory Nurses Registration Acts regulate and control the profession and provide for penalties for breeches of the Act. While there is similarity regarding licensing expectations across Australia there are also differences between states and territories.

Hegney et al (1997) point out nurses are concerned about negligence and breeching specific legislation in carrying out their duty of care. They assert that nurses should have a sound understanding of the law particularly common law and parliamentary or statute law and provide an overview of the legal requirements attached to the ordering and dispensing of Schedule 4 and 8 drugs. Miar (2000) argues that the very nature of nursing practice requires nurses to be vigilant about understanding the law. She cautions that nurses must recognise that if they claim to possess special skills they are required to exhibit higher standards of care and must be able to prove in court that care provided was to a standard expected if a case of negligence is bought against them. Hegney & Hobbs (1998) states nurses are concerned that they have become deskilled with the downgrading of health services in rural areas because they are unable to practice specialist skills routinely, eg midwifery. Conversely, the same situation has allowed some nurses to develop new skills and enhance their scope of practice (Mahnken et al 1997 in Hegney & Hobbs 1998). Plainly,
the message that nurses must hear and respond to, is that they must feel competent and have a knowledge base, which supports their practice. Many speciality organisations, mindful of the legal ramifications, are developing credentialling criteria as a benchmark for practice. For rural nurses this process is more difficult, given the multiplicity of roles expected in a multi-skilled nursing practitioner.

Several studies indicate that many rural nurses practice outside the legal parameters governing nursing practice (Kreger 1991; Hegney et al 1997; Handley & Blue 1998; Spencer in Siegloff 1998). In a study by Cramar (2000) which investigated rural/remote nurses' practice she notes many of the nurses took on medical roles in the absence of medical practitioners, and practised in a manner which she deems did not meet the standards expected of either nursing or medicine. Hegney (1998) argues that many rural nurses are forced to practice outside the legal parameters governing nursing practice. Keyser (1997,p.3) notes that "... rural nurses are often working well outside the legal parameters of nursing and providing services normally undertaken by a variety of healthcare workers". Reasons nurses provided in Kreger's (1991, p.22) study for undertaking practices which were outside legislation and standards of practice include:

- it is not realistically possible to cover all contingencies that arise in rural and remote health services with the human and material resources at present available;
- a medical practitioner is not always available on-site, or by telephone or radio, on all occasions advice or personal intervention is required for emergency or basic health care in rural and remote areas;
- pharmacists, radiographers and other allied health and welfare professionals are not available on-site on all occasions required for basic care;
- many rural medical practitioners, overtly and covertly, expect nurses to exercise their own discretion about the need for medical intervention or advice. The nurse is expected to determine whether he or she is competent to manage the presentation independently irrespective of the need for medical interventions. This perceived expectation can arise from open discussions between medical and nursing practitioners who trust each other, or as a result of nurses receiving professionally irresponsible responses when they do attempt to consult their distant medical colleagues on occasions legally requiring them to do so;
- the time involved in obtaining a medical practitioner's authorisation on every occasion it is legally required would render the remote area health service, in particular, dysfunctional in relation to the existing primary health care demands on the nurses;
- some distant medical practitioners order nurses to undertake medical procedures and levels of care not appropriately preformed at a remote location, or by a nurse. Cost factors associated with aerial evacuation are perceived by nurses to influence such expectations excessively, however reports on these matters are not confined to locations dependant on aerial evacuation of patients. The consumer's right to safe and appropriate health care, and the nurse's competence and capacity to fulfil extraordinary expectations within a remote community are often ill-considered;
- consumers exert pressure on nurses to adhere to a standard of service based on previous fulfilment of medical, pharmaceutical and radiographic functions. Pressure occurs, particularly, when the alternative for the consumer involves returning for an investigation or therapeutic intervention at a later time or date, a significantly increased waiting time, time consuming travel to another centre or an additional financial outlay;
- nurses attempt to ensure ease of access to health services, and cooperation with consumer and colleague demands, needs and expectations. Nurses' moral and professional obligation to ease or prevent suffering is not related to the presence or absence of a medical practitioner, and frequently overrides the possibility of litigation;
- nurses perceive tacit approval of their expanded practice. This is based on conclusions drawn from the inaction of others with responsibility in these matters. For example, the store or regional pharmacy continues to provide medical supplies and medications in the absence of prescriptions, licences to supply and accreditation certificates. The employer and medical, nursing and pharmaceutical responsibilities in the absence of written or verbal authorisation. The health service administration or regulatory authorities provide no practical alternatives or guidelines that are workable within the existing conditions.
Issues including the principles of ethics, professional responsibility and patient rights have become the focus of all health professionals' practice. Mair (2000, p.124) warns that nursing practice involves touching health care consumers and in "... accordance with common law, all people have the right to determine what treatments or diagnostic tests they will be subjected to, unless there is some overriding law that allows treatment without consent." Consent she claims must be informed consent, which involves the health care consumers understanding of what is to be done and the risks involved.

The law as it relates to ethics associated with research is perhaps not as clear as it needs to be. Chester (2000) indicates research may be conducted and unwittingly or wittingly be in breech of human rights and the law. Nurses like all health professionals are expected to add to nursing's knowledge base through research, and to use research to inform practice. An understanding of the ethical implications of doing research, which maybe applied within the workplace ie patient records, health knowledge assessments etc is fundamental knowledge and will increasingly be part of all nursing roles.

Rural nursing practice presents the nurse with many ethical and legal issues. Surveys have shown that rural nurses are concerned about these aspects of practice. It is clear that some rural nurses work outside statute law in an attempt to provide a quality service (Hegney et al 1997). This leaves rural nurses very exposed to legal action. Anderson (1990 in Johnson 1999) states that because morality is constantly changing people need to be constantly reviewing their own ethical practice.

The literature clearly indicates that nurses practicing in rural areas are often required to practice outside legal parameters. What is also emerging from the literature is a growing concern by nurses about this practice. The authors conclude that if the boundaries of practice are not expanded and legalised then recruitment of nurses to rural and by inference to remote area practice, will continue to decline. In addition, it is asserted that educationalists and employers must provide opportunity for nurses to investigate, discuss and contribute to debate regarding legal and ethical practice. There must be opportunity for rural nurses to raise issues about practice within the community, the profession and at legislative level. Contribution to the discourse will increase nurses awareness of their obligations and understandings of legal issues and will assist rural nurses endeavours to advance practice which is consistent with the philosophy underpinning nursing.

**Changing technology**

There have been significant advances in technology in nursing practice in the past ten years (Hegney & Hobbs 1998). These advances can be broadly divided into two categories direct medical treatment technology such as patient monitoring, ventilation technology etc and communication technology such as the Internet. The advances in these categories of technology have advantaged some rural communities and disadvantaged others (Humphreys & Rolley 1993). Access to services which are available in major rural centres results in people from smaller communities incurring additional costs associated with travel to access these services. Conversely, for rural centres where these technologies are located the boost to the local economy is substantial and the health services provided more comprehensive (Hegney & Hobbs 1998). Some rural nurses feel that they lag behind their metropolitan colleagues in terms of advances in technology (Handley 1996). They equate rural practice with low technology and inferior practice.

However, it is recognised that increasingly health services are reliant on communication technology. This is evidenced by the common usage of database patient information systems, computerised medical records, and telecommunication systems. Studies have been undertaken to identify nurses' perceptions of technology in the workplace. Hovel et al (1998) found that rural nurses agree that
treatment communication technology is used in everyday practice. They also identified barriers to the use of technology which include:

- physical and infrastructure
- personal and professional
- cost constraints

The role of government in providing equitable communication services in rural Australia is a political platform enjoying considerable attention. Key telecommunication giants including Telstra, Vodaphone and Optus are lobbying for financial support from government to provide rural and remote Australia with effective telecommunication systems. These initiatives will increase rural health facilities ability to support information systems etc in the workplace and may reduce professional isolation which has been identified in the literature as a problem for all health professionals (PRHCIT Report 1996 in Hovel et al 1998). If health services provide access to staff to telecommunication services including the Internet access to information to assist in practice will be improved.

Technology has been used to alleviate the isolation experienced by some rural nurses. Technology, which can be used in this endeavour, includes:

- Teleconferences
- Video conferences
- E mail
- List servers

If these utilities are to be used effectively, education providers must include these elements in their courses. There is evidence that Universities are using these technologies to deliver their courses and hence introducing their students to the technology.

Sinclair & Gardner (1997) studied the perception of nurse educators to information technology. The results indicate,

that although there remain tutors who have not received any formal training in computer use, the majority want to use computers and recognize their need for competence. While training would appear to have a positive effect on their perceived level of competence and computer knowledge, the study identifies factors which contribute to the restricted use of computer assisted learning (CAL). Student assessment varies across the province and findings of the study indicate that although many changes have taken place, staff expect more in the future. They identify a need for policies that include training programmes, competence assessment, appropriate technology, and networking.

McKenna & Ribbons (1997) investigated the educational applications of the Internet and World Wide Web. They identified that the role played by the Internet and more specifically, the World Wide Web (WWW or web), will become increasingly important to health care providers. They described how

nurse academics within the School of Nursing, Monash University, have adopted an innovative and integrated approach to Internet technologies as part of information processing and inquiry in nursing. This approach is aimed at enhancing the teaching/learning process by lending additional richness to the learning environment.. Initial feedback from this project supports the assumption that information technology has an important, and increasingly prominent, role to play within nursing education and clinical practice.
Bradley and McLean (1999 in NRHA 2001, p.3) state

the development of health care in rural and remote Australia has, however, heavily relied on the work of nurses. For many years, nurses have provided extensive health services without any readily available access to medical or allied personnel other than via telecommunication.

It is becoming increasingly popular for education providers to offer education using web based learning material. While the arguments for the uses of this technology are sound (Gray 1994), they are problematic for some rural nurses. Many rural communities' lack the efficient tele-communication facilities found in urban and provincial areas, and the associated costs for students to purchase hard and software combined with inadequate access to local computer support, means that this mode of delivery is often ineffective.

Chapter Practice Challenges continues
Rural Nurses: Knowledge and Skills Required by to Meet the Challenges of a Changing Work Environment in the 21st Century: A Review of the Literature

Health funding

The provision of health services in rural areas of Australia is complex in that the problems of distance and sparsely populated areas have yet to be overcome (Hegney and Hobbs 1998). It is also recognised that the health services are inadequately funded (Department of Community Services and Health 1991, Fragar et al 1997). Hegney (1996) argues that historically health service provision in rural areas has been ad hoc. Moreover Hegney and Hobbs maintain that Health Policies in Australia are characterised as:

- Being fragmented, and reflecting the division of responsibilities between Commonwealth, State and Territory governments;
- Emphasising institutional care rather than health promotion and prevention; and
- Being based upon cost containment and minimisation, efficiency and cost effectiveness rather than ensuring the effectiveness of the services provided (1998, p4).

McMurray (1999,p.341) asserts that "... among the health systems of the world, there is no paragon of excellence". What is central however, is an underlying assumption that the system will be responsive to the needs of the nation and that the system must be funded. She concludes that governments have finite resources and the distribution of funds must be devolved to address the health concerns of the nation. Wass (2000) points out that while Australia agrees with the rhetoric of the World Health Organisation relating to equity, she suggests that the health care system is driven by a medical model which does little to address inequities and does not empower the community. Hegney and Hobbs (1998) maintain that the "... rationalisation of health resources has led to demoralisation and de-skilling of health professionals as health services are closed or down sized" (p4).

As well as having an impact on the rural nurse's work environment, financial issues also have a direct impact on the provision of education to rural nurses. In the previous section the importance of access to education was high lighted. However there are limits to funding for rural health care. This can manifest itself as a lack of support for clinical education and staff development. A study of Victorian rural district nurses found that management and community expected resources to be directed towards service delivery rather than staff development (Progressive Projects Lampshire and Rolfe: 1993). NSW nurses also feel that budget constraints make course attendance difficult (Donnelly: 1992).

Health care funding has a direct impact on the work and education of rural nurses. It is therefore important that they have a sound knowledge and understanding of the politico-economics of health. Rural nurses have a significant role in lobbying health authorities and other agencies for funding to support health services (Bushy 2000). Furthermore, nurses are increasingly being asked to justify their practice within budgetary constraints, and are required to develop applications for funding and
identify sources for financial support outside traditional income avenues. Understanding the processes associated with such applications, policy and funding mechanisms are core skills for nurses in the 21st Century. Educational programs should provide content to assist nurses develop these skills and providers of professional development should also address these issues with regular updating through professional development.

**Consumerism in Healthcare**

The Australian Constitution provides each citizen with the right to expect justice. In addition, the legal system maintains that all Australian people have the right to challenge individuals, corporation's etc if they believe an injustice has occurred. Traditionally however, health service providers have not been regularly challenged in courts of law (Johnston 1999). However over the past decade there has been increasing awareness nationally and internationally focused on health consumer rights. Mair (2000) notes that health professionals are becoming increasingly concerned about litigation as this awareness increases. In addition, she suggests health care consumers expect positive outcomes from health services. It is also noted from the literature that people are becoming more aware of complementary therapies and are requesting their use (Van der Riet & Mackey 1998).

**Inter and intra-professional relationships**

Health care professionals practice in environments that require professional interaction between service providers, communities and individual consumers. The interaction, which occurs may be positive and result in health outcomes that contribute to the sustainability of rural communities and/or individuals well-being. However, the literature highlights episodes of negative interaction often referred to horizontal and vertical violence, and inter-professional and/or intra-professional bullying. Vertical and horizontal violence is tolerated to a much higher level in nursing than in other organisations (Stevens, 1998).

**Evidence based practice**

Ustick (1997) contends that there is a growing body of rural nursing research, and asks the question "...why (is) rural based nursing ... not used as the testing ground for new ideas, new treatments, new research in nursing"? Ustick hypothesises that there is a national way of thinking which links rural living with slow mindedness and outdated practice, and that this cultural more has infiltrated health and education policy. Keyzer (1997) concurs and adds that rural universities have not challenged state and federal governments, or competing metropolitan universities for equitable distribution of research funding. Research which looks at rural nursing practice, attempts to define and refine nursing, measures outcomes and provides direction is necessary and valued research.

In the literature there is growing recognition by nurses, that practice must be based on current knowledge. Handley (1996) found that rural nurses felt they needed developed research skills. While she did not clarify what these research skills were, it seems that accessing information, particularly related to drug therapy and interventions is required by nurses. Brinsmead (1997, p.60) contents that rural nurses "... use all types of information in their practice and are aware, whether instinctively or voluntarily, that this information should be up-to-date in order to provide
quality care for clients”. The accessing of information for many rural nurses is difficult given the levels of telecommunications available, and reluctance (anecdotal evidence suggests that hospital libraries predominantly subscribe to medical texts and journals over nursing material and the costs of journal subscriptions are inhibitive for many health services) by health services to provide significant resource materials (Hovel, Blue and Kirkbridge 1998). Brinsmead (1997) in her study identified that while nurses are motivated to seek information on specific issues, topics which impact on their practice they do not always know how or want to learn how to access information (Hovel et al 1998).

Educational providers have a responsibility to include research skills in their programs. These research skills should cover many elements including:

- Research methods,
- Evaluation and critique of published research,
- Application and adaptation of research findings to fit rural nursing practice and hence develop relevant nursing practice guidelines, and
- Systematic evaluation of nursing practice using accepted models.

The provision of education, professional development and training

The provision of education is a major challenge that faces rural nurses. There are two aspects to this education - the preparation of beginning rural nurses and their development once in practice. Although there is much literature to suggest the content of pre-service courses there is little that addresses the fundamental nature of pre-service education. For example should there be courses of different duration and content for those who want to practice in rural locations where the literature indicates practitioners must have advanced skills? The literature does clearly state that rural nurses must have advanced skills but at present new recruits are not prepared in any identifiable way for this practice. Although educational programs are available for registered nurses which cover advanced practice skills for those who chose to avail themselves of them e.g. NSW College of Nursing, University of Southern Queensland have post graduate programs in rural nursing practice. The literature clearly indicates that rural nurses have inequitable access to education, training and professional development that is viewed as essential if health service delivery is to be effective. Barriers to the provision of, and utilisation of education and training are discussed at length elsewhere in this review. However, it is an expectation that the delivery of relevant, accessible and practical programs for rural nurses is a challenge for all educational providers.

Occupational Health and Safety

Work place safety is an important issue particularly in light of the fact many rural health professionals practice in isolated areas without support of other staff or security personnel. Adams (2001) comments that a real workplace issue in rural health facilities is the provision of a safe environment. She asserts that staffing numbers are minimal which poses a treat to personal safety of both staff and patients and of equipment. In addition, Adams points out that there is also a risk to maintaining the privacy and confidentiality of patients and staff.

In a study by Drury et al (2001, p.11) examining the experience of rural mental health nurses, participants described feelings of being unsafe in their day to day practice, explaining that "... there is a lack of supported accommodation services in the region coupled with the geographical isolation
Mean(s) that the nurses (are) putting themselves in danger by going out alone to see clients" and ... that something need(s) to be done to reduce the risk of harm to nurses". Deans (1997) asserts that nurses are often victims of aggressive behaviours displayed by patients, colleagues and others. While Francis et al (2001) claim that the within nursing horizontal violence perpetrated between colleagues is undermining the workplace and impacting on recruitment and retention of nurses.

Support Networks and Organisations

Handley (1996) identified key associations/organisations which support rural nursing. These include: The Association of Australian Rural Nurses (AARN), Royal College of Nursing, Australia (RCNA), Australian Nursing Federation (ANF, NSW College of Nursing (NSWCN), Nursinginfo, Rural Information Network, Rural Health Training Units, Regional Networks. These organisations have differing mission statements but all provide support for nurses through professional representation, education and training programs, information access and dissemination and employment/retention issues.

Remote and metropolitan nurses interests, asserts Hegney (1999) prior to 1991 were represented politically through professional associations (eg. CRANA; RCNA: NSWCN) which legitimated their claims for credibility but may not have served the interests of rural nurses. Rural nursing as a distinct area of practice remained invisible until the formation of the Association for Australian Rural Nurses (AARN) in 1991. AARN provides rural nurses with a political voice, representation on national and state executive committees and is the conduit for needs of 'bush' nurses to be addressed (Hegney, 1999).

Advanced Practice and Skill Mix

Kreger (1991) in her study argued that rural and remote area nurses have demonstrated a willingness to adapt their practice to meet the needs of the communities in which they work. Hegney (1997) believes that rural nurses practice in an advanced role and that this role must be defined and legislation changed to reflect the 'real' practice situation. Walker (1997,p.25) defines advanced practice as "... a level of practice which has developed well beyond entry level practice and exists in both specialist and generalist practice areas". Price (in Walker 1997,p.25) describes a number of attributes of advanced practice nurses which include:

- A commitment to reflective practice and professional development;
- Is caring, objective and empathetic;
- Has a broad social and political awareness; and
- Acts as a positive role model in showing initiative, a responsible attitude and an ability to explore options and who is;
  - articulate in regard to role and language;
  - focused upon best patient outcomes;
  - capable of advocacy and collaboration;
  - prepared at masters level of education.

Bradley and McLean (1996 in Drury et al 2001) point out that there is a need by nurses, other health professionals and bureaucrats to recognise rural and remote nursing roles, the role of the nurse practitioner, to acknowledge and accept the nurse practitioner role, prescribing rights, advanced emergency clinical skills and ongoing competency training.
Keyzer (1997) investigated the relationship between the advanced rural nurse and the rural doctor. Keyzer finds that the relationship between the two groups of health care professionals has complex and interrelated roles.

These roles are viewed as being complementary to each other in any healthcare setting, but more so within the context of rural Australia. The current move towards the development of advanced nurse practitioner roles is often clouded by unnecessary medical fears that nurses are attempting to displace doctors.

In contrast, this paper argues that the development of new rural nursing roles identifies rural nursing as a major specialist area within the wider profession of nursing and, at the same time, recognises the reality of practice for many rural nurses. Individual public figures may perceive the solution to the shortage of rural doctors to lie in their replacement with nurses. However Keyzer feels that the nursing profession will resist this approach. The paper concludes that

Nurses are educated and acknowledged to focus their practice on the clients' responses to healthcare problems and not the practice of medicine. The primary role of the nurse is to provide care. The primacy of care should not be set aside by those nurses seeking to develop their practice, not should advanced practice be defined in terms of taking on tasks previously carried out by other healthcare professionals.

Nurses practising in rural environments with limited or no medical support must be prepared to face all challenges as they present. It is clear that many rural nurses are required to have advanced practice skills and some of these nurses will seek credentialling as nurse practitioners. Walker (1997) deems that competency standards are suitable for articulating advanced practice and for providing benchmarks for assessment purposes. However she believes that generic competency standards are not suited and advocates the development of specific competencies for speciality and/or advanced practice.

Rural nursing practice by definition occurs in environments with limited or no collegiate, medical and other support. It may therefore be inferred that nurses who practice in these environments may need advanced practice skills to meet needs as they present. Cramar (2000) points out that it is well documented that nurses in isolated and rural environments perform extended or advanced practice roles. She cautions however, that advanced practice should not be confused with extended practice which she defines as "... as stretching outward to make it go further" (2000,p.29).

Wicks (in Germov, 1996) indicates that the sociological writings about nursing paint a negative picture of medical dominance. She acknowledges there is a difference between the image portrayed of nursing as 'handmaiden' and the real life situation and cites instances in which nurses have not conformed. In rural nursing practice there is ample evidence which is testament to nursing's refusal to accept dominance which has limited the scope of practice to the detriment of health consumers. Indeed Cramar (2000) contends that nurses should be careful not take on "gap filling roles" as there is little evidence to support the success and/or failure of such initiates. Cramar advocates that nurses should advocate on behalf of communities demanding those equitable services. She concludes that many nurses are not prepared to take on advanced practice roles and should not be expected to. Nurses who wish to practice in such roles must be adequately prepared and understand the ramifications for nursing.

Hegney (1997) deduces that medicine is threatened by the emergence of advanced practice nurses who seek independence through legitimisation of the role as Nurse Practitioners. Further, she argues that nurses have not acquiesced to medicine's continued attempts to maintain control over nursing practice. She sites strategies used by nurses to resist medical dominance which include:
Resistance through non-compliance to medical orders. That is, rural nurses used tactics to select which aspects of the extended role they would use and when and where they would consult with a medical officer or allied health professional; continuing to work within an extended role despite the legal dilemma; and having local agreements with medical officers to overcome institutional rules and regulations (Hegney 1997, p.20).

In the study by Handley and Blue (1998) they found that 33% of nurses in their study indicated that they performed procedures for which they were not legally qualified. These procedures were categorised and include:

- drug administration;
- suturing;
- intubation or catheterisation;
- cannulation;
- radiotherapy;
- physical assessment and diagnosis;
- defibrillation;
- mental health & counselling;
- midwifery; and administering anaesthetics (Handley & Blue 1998, p.20).

They indicate the most common area of unreported practice was related to drug administration.

Drury et al (2001, p.7) argue "the Council of Remote Area Nurses Australia (CRANA), Alcorn and Hegney (2000) support the role of the rural and remote nurses as nurse practitioners practicing at an advanced level in their report on recruitment of nurses to the bush. The HDWA (2000) has endeavoured to address this through their project on the Remote Area Practitioner. In this report it is suggested, that the training is formalised through the completion of a recognised post graduate diploma accredited by the Nurse's Board and that legislative changes are made to legitimise the advanced practice role performed by some nurses in rural and remote areas. These changes it is argued must include: standard orders for medications, to allow remote area nurses to prescribe and dispense specified medications, following assessment of clients and diagnosis of certain conditions (Drury et al 2001).

In rural environments the composition of the health workforce is determined by the degree of rurality. A number of studies have shown that rural Australia is under served by general practitioners and specialists (Medical Workforce Data Review 1995, NSW Health Department 1995, Overs, M. 1989, Rosenman, S.J., Batman G.J. 1992). In Australian capital cities there are 1043 people per general practitioner and in rural Australia there are between 1400 and 1745 people for every general practitioner (Commonwealth Department of Health and Family Services: 1996). This reduced access to medical practitioners and allied health professionals has led to an increased scope of professional practice for rural nurses than for their metropolitan colleagues. This greater scope of practice is characterised by an increased independence (Anderson & Kimber 1991) and a greater generalisation of skills and a wider clinical experience (Hope: 1993, Sturmey & Edwards 1991).

The NRHA (2001) raise concern that the number of enrolled nurses to registered nurses increases with rurality. They believe that health outcomes maybe compromised as these areas are characterised by limited access to medical and other health professionals. In a survey Huntley (1995) found that rural nurses enjoyed the variety that rural nursing provided. It is well recognised that because there is little access to other health care professions rural nurses need broad scope of knowledge to aid their clinical decision making (Spencer 1998; Kreger 1991; Harris 1992; Buckley & Gray 1993).

The areas that they need good working knowledge of have been identified by Thornton (1988),
Kreger (1991) Harris (1992), Buckley and Gray (1993) as knowledge of primary health care, health promotion, child and family health, mental health, aged care, communication and counselling skills, community development, occupational health and safety, acute and chronic medical care, first aid, emergency care and palliative care.

Rural nurses often perform tasks that are performed by medical doctors and allied health professionals in metropolitan areas (Reid: 1994, Thornton: 1992). Bradley and McLean (1999) have described the development of the nurse practitioner role in the form of the nurse led service. They have also identified issues that are impacting on the nurse practitioner role within Australia:

- General medical practitioner resistance to recognition of the nurse practitioner role, especially related to prescribing rights
- Inconsistent general medical practitioner support for the nurse practitioner
- Recruitment issues for attracting health care professionals into the rural and remote sector
- Knowledge deficit within the nursing profession about the scope and practice of rural and remote area nurse
- Education issues and ongoing competency attainment
- Professional isolation

In performing a wide range of roles rural nurses often have to have reduced emphasis on official policy and union rules (Thornton: 1992). This can leave the rural nurse vulnerable from a legal perspective. The National Rural Alliance (1998) proposed the introduction of a nurse partitioner role, which would legalise some of the extended role practices.

Hegney et al (1997) analysed the role and function of rural nurses. They found that the size of the health service (defined by the number of acute beds) influences the activities of rural nurses. They assert that the size of the health service is an outcome of rurality (small population densities, distance from larger health facilities, lack of on-site medical and allied health staff). They also noted that the size of the health service is a factor related to patient acuity and staff skill-mix in small rural hospitals, and therefore the scope of rural nursing practice.
Rural Nurses: Knowledge and Skills Required by to Meet the Challenges of a Changing Work Environment in the 21st Century: A Review of the Literature

Core Skills

Introduction
Communication
Leadership
Counselling
Cultural Sensitivity
Legal and Ethical Practice
Assessment Skills
Conclusion
Interpersonal skills
Management
Practice skills
Education
Research

Core skills

Introduction
Practicing in rural environments requires health professionals to be innovative, creative and flexible and be responsive to needs and presenting situations as the socio-cultural, political and economic climates in which practice takes place is largely determined by extraneous factors. The 1995 NSW Statewide Nursing Skills Audit and Needs Analysis contends that the rapid changes in nursing technology and focus require constant updates to identify skill gaps pre and post-registration. This identification needs to be combined with ongoing managerial reform and policy control to accommodate change and delivery for cost effective care. Bushy (2000,p.10) points out that a "...conceptual basis for rural nursing practice is in its infancy but is expanding quickly." She further argues that rural nursing practice is context specific but requires a nursing workforce, which is able to perform in an advanced practice role. Rural nurses "... have total responsibility for all aspects of health care when medical practitioners are not available" (Kreger 1991,p.13). As noted earlier, rural and remote areas have less access to medical practitioners who Humphreys & Rolley (1991) claim have a heavier workload when compared to urban counterparts. Kreger (1991) maintains that this situation has resulted in an expressed need for nurses to back-up medical practice.

Best (200) claims medical practitioners are often deterred from practising in rural communities because of the expectation that they will need to be generalist medical practitioners. Nurses who practice in rural environments are by necessity required to have a broad range of well-developed
generalist skills underpinned by a sound knowledge base. It is argued by many, that lack of recognition for the skills required to practice as a rural nurse by employers, the profession, other professions and the community, discourage nurses from seeking employment and staying in rural areas (Hegney et al 1997).

Handley (1996,p.7) maintains that rural and remote nurses may lack advanced practice skills and may not be prepared adequately when first taking positions. She suggests many new rural and remote nurses have:

- Inadequate preparation to perform an extended practice role including performing procedures traditionally considered medical practice;
- Limited skills required to work with different cultural groups; and
- Lack skills to deal with professional isolation.

A study by Sturmey and Edwards (1991 in Handley 1996) found that nurses believe that skills in cultural sensitivity are fundamental to their practice. They further identified that they required well-developed counselling, administration, management, and team leadership skills. Harris (1992 in Handley 1996) asked participants to identify and rank competencies needed by rural nurses. These include:

- Counselling;
- Management and administration;
- Financial management;
- Computers/systems;
- Health education/promotion;
- Law;
- Human resource management/development;
- Pharmaceuticals and pharmacology;
- Accident and emergency;
- Geriatric care;
- Quality assurance;
- Teaching;
- Aboriginal/other cultures or languages;
- Writing and research;
- AIDS/HIV infection; and
- Physical assessment.

Handley (1996) reports other studies indicate that rural nurses need post-registration qualifications in midwifery, community health, child health, mental health, primary health care, critical care, accident and emergency and occupational health and safety. While Cleasby (1997) claims that rural nurses must be able to provide effective mental health nursing interventions and prevention strategies. Cleasby (1997,p.51) concludes that rural communities are being adversely affected by factors including the "... economic down turn, state and federal government policies regarding health services, the peculiarities of living in small communities, and the chronic shortage of health professionals ...". These factors are reported to be contributing to the significantly higher levels of mental illness in rural and Aboriginal communities (Nutbeam, et al 1993). Rural nurses must therefore, have skills which allow them to develop, implement and evaluate health promotion activity designed to raise awareness about mental illness and to act when a crisis presents. A report on the Education, Training & Professional Support for Rural Nurses nationally by Jones and Blue (1998) found that Rural Health Training Units are providing programs for nurses focused on clinical issues including wound care, advanced life support and diabetes management. In addition, these training units provided programs on topics, which include; Cardio-Pulmonary Resuscitation, grief counselling, preceptorship, child and adolescent health, Intravenous therapy, clinical pathways, rural midwifery, appraisal and review performance, leadership, communication, pain management, emergency care, immunisation, research, pharmacology, drug and alcohol, stress, trauma nursing, and advanced clinical skills.
Marginson (1993 in Reid 1994, p.45) argues that there is ongoing debate about employability of graduate nurses. He maintains employers want nurses who are competent and who also possess generic skills that he lists as including:

**Communication:** listening, understanding, speaking, reading, written communication in its various forms, electronic communication, management of communication systems.

**Cognitive attributes:** the capacity to identify underlying assumptions, logic, quantitative thinking, orderly thinking, reflective thinking, critical thinking, imagination, creativity, lateral thinking, curiosity.

**Knowledge centred attributes:** command of/ability to access information, breadth of knowledge, grasp of knowledge systems, capacity to conceive knowledge required, capacity to build on [previous knowledge and experience.

**Interpersonal Skills:** friendliness and empathy, persuasiveness, team skills, capacity to discuss issues in a group, capacity to respond sensitively to others, capacity to relate with others from different backgrounds and experience, diplomatic skills and tact, capacity to negotiate and achieve results.

**Work Context:** ability to conceive issues and problems relevant to work requirements, capacity to treat new situations as problematic and 'solve' them, quick and efficient responses, following through a project from design to execution to evaluation and review, entrepreneurial flair, management functions.

**Meta-attributes:** generalising, synthesising, uniting, independent thinking, capacity for supervised initiative, self-management, intuition, mature judgement, leadership, outcomes focused, confidence, flexibility, adaptability.

Reid (1994) identified core skills expected of all graduate registered nurses when applying for positions. These attributes are common expectations reported in the literature of all nurses and include:

- Effective interpersonal skills
- Verbal and written communication skills
- Analytical skills
- Leadership and management qualities
- Teamwork
- Problem identification and solving
- Creative
- Lateral thinking

Health consumers indicate that they want nurses who have the following characteristics:

- Are responsive to their needs,
- Are congenial in their interactions,
- Are competent, and
- Provide education (Webb 1995).

Rural nurses are often in positions where they are known to their communities. For many nurses this is a benefit in terms of understanding the environmental, socio-political and economic issues,
which may underlay client presentation for health services (Hegney et al 1997). Hegney et al (1997, p. 247) maintain that rural nursing practice is different and that the following attributes characterise rural nursing practice:

- Knowing the community,
- Caring for relatives and friends,
- Lack of anonymity,
- Isolation from support services, and
- A broad range of skills and knowledge.

Offredy (2000) examined advanced nursing practice as it relates to rural and remote areas and found that competencies, accountability, diagnostic imaging, diagnostic pathology, prescribing of medications, and referral procedures were routinely part of advanced nursing practice. Hegney (2000) claims that rural nursing practice has remained invisible as nursing education has traditionally been based on a medical model. She asserts that as advanced nursing practice in rural areas expands, recognition of the rural nurses’ role will increase and the advantages of educating nurses for rural practice using a new framework will ensure that rural nursing meets community needs.

Therefore the literature begs the question how should nurses be prepared for rural nursing practice? Should nurses be prepared for rural practice during their undergraduate study or should this be left to post graduate studies? If the skills and knowledge are to be included in undergraduate courses these will have to be lengthened to include extra topics as identified in the literature. There may be grave problems associated with leaving this education to a post graduate level however. It will be argued later in this review that rural nurses have limited access to post graduate education, training and professional development due to a number of factors. If acquisition of these important skills and knowledge is left to post registration it may be problematic. The issue of core skills is re-visited and elaborated on, both in the section of this review that covers education and in the section on practice challenges. The following are some of the identified core skills rural nurses indicate are required for practice. Much of the literature indicates that rural nurses have these skills but are concerned their level of skill is not as well developed, as they would like.

Chapter Core Skills continues
Rural Nurses: Knowledge and Skills Required by to Meet the Challenges of a Changing Work Environment in the 21st Century: A Review of the Literature

Communication

Effective communication skills are an essential attribute of the nurse (Reid 1994; Lubbers & Roy 1990). Nursing asserts Stein-Parbury (2000,p.3) is a social activity which involves "... knowing, doing and being". She argues that nurses must be effective interpersonal communicators which is defined as "... interactions with patients which are helpful to the patients" Stein-Parbury (2000, p.3). Lubbers & Roy (1990) proffers good communication skills are an essential element in nursing practice and warns, poor communication can lead to litigation and or result in harm to patients. The six, most important communication skills identified by the Lubbers and Roy (1990) study include:

- Listening
- Relationship building
- Instructing
- Motivating
- Exchanging routine information

In addition, Lubbers & Roy suggest that communication skills do not feature in staff development programs. However many studies provide examples of the importance of communication as a diagnostic and therapeutic tool used by nurses. Hall (1997,p.83) describes the nursing practice of district nurses in a rural area as involving a

... complexity of physical tasks, technical procedures, assessment based on knowledge and additionally social acceptance and understanding need within a given context. Complexity reflected the tasks performed 'degree of difficulty', and viewing the patient as a person. This implies being aware of each patient's life within the context of their daily reality. Lifestyle, needs and values are heard as the patient is showered; still talking, assessing and following lives concurrently. Constant maintenance, constant assessment, and constant prevention or intervention; embedded in a knowledge base, deep and complex; supported with interpersonal sensitivity and acceptance.

Leadership

Working intimately with patients, the community and other health professionals require leadership skills. Leadership is providing resources and information to support decisions (Sullivan, 1999). Sullivan (1999) suggests that the information used in leadership drives the health care system by
"... producing integrated clinical and financial outcomes". While Sullivan & Decker (1988 in Siegloff 1998, p.213) claim a leader "... uses skills to influence others to perform to the best of their ability". Leadership involves a synthesis of interpersonal skills and as Blanchard (1995 in Sullivan 1995) states, effective leaders have strong convictions, are consistent, helpful, knowledgeable and honest. Siegloff (1998) argues, rural nurses are willing to take on leadership roles to improve health outcomes but often feel unprepared educationally for these roles. Aspects of this core skill are seen to be based in the hidden curriculum of nursing. However, it is believed that leadership should be visible in pre and post-registration programs.

Teamwork

The health literature abounds with descriptions of the health team, inter-professional and intra-professional teamwork. However, there is a growing evidence which argues that working in a multidisciplinary team which shares responsibilities and is respectful of each members contribution is mythical (NSW Nurses Registration Board 1997; AIHW 1996). In addition, the nursing literature is scathing of the level of horizontal violence displayed intra-professionally among nurses (Spring & Stem 2000; Short et al 1993; Francis et al 2001). Hemingway & Smith (1999) argue that the flow on effect of such behaviours is manifested in high levels of absenteeism, high rates of staff turnover and may result in people leaving the health professions permanently. Francis et al (2001) suggest that intra-professional and inter-professional violence may be responsible for nurses choosing not to work in rural areas. They argue that in rural areas the numbers of staff are small and there is limited ability for individuals to remove themselves from threatening or abusive situations. This is supported by Hegney (19970 who concludes many rural nursing students who have had negative clinical experiences seek employment in metropolitan areas where the numbers of staff are higher, and therefore the risk of being abused is diluted. Chun-Heung & French (1997) deduce that if student nurses have positive clinical experiences they are more likely to seek employment in these places, and conversely a negative experience deters them from seeking employment in these places.

It is recognised however, that most nursing occurs in situations involving other nurses and/or health care staff. Working in teams is a skill that all nurses must acquire if they are to be effective.

Management

Nurses practising in rural environments may work with other nurses and/or other staff. Inevitably all nurses are required to take on a management role in day to day practice. The reviewed literature suggest that management is the skill of accommodating change and sets the practice tone. It is seen as an essential skill, however, management is also seen as detracting from daily practice. Nurses see management as increasing their role in policy development, while removing them from the hands on approach of nursing (Marles 1988; Ollfredy 1997; Geissinger & Lloyd 2000; Swansburg, 1999). Rural nurses increasingly see the acquisition of necessary management skills as being integral to their role/s. They believe that these skills can only be acquired by undertaking post-graduate qualifications (McCoppin & Gardner 1994).

Counselling
The literature clearly indicates that rural nurses must have counselling skills. Dietsch (1998) claims that counselling is an integral part of general and sexual health nursing practice. This is supported by Cleasby (1997) who acknowledges that rural nurses must be equipped with skills which allow them to meet the mental health needs of rural communities. Handley & Blue (1998) point out that rural nurses surveyed believe that counselling skills are required in rural nurse's daily practice.

**Cultural Sensitivity**

Australia is a multicultural society and requires health professionals to have a well developed understanding of cultural groups to inform practice (Cameron-Traub in Omeri 1996). Bushy (2000) believes that rural nurses globally must be prepared to work with cultural minorities. She indicates that the process of being an effective nurse begins with "... self-other awareness and evolves to implementing nursing interventions that mesh with rural client's health beliefs and expectations, even when these are different from those of the nurse" (Bushy 2000, p.103). For Australian rural nurses, understanding cultural differences between Aboriginal and Torres Strait Islander peoples and others, is fundamental to practice claims Goold (1998). Goold (1998, p.123) quoting Socrates states "... awareness of one's ignorance is the foundation of knowledge". She further argues all pre-registration nursing programs must include studies designed to familiarise nurses with cultural issues if cultural sensitivity is to become a corner stone of nursing practice.

**Legal and Ethical Practice**

Issues impacting on professional nursing practice in a rural context will be discussed under the section "Practice Challenges", however it is recognised that a core skill underpinning all nursing practice is the recognition and understanding of legal and ethical issues in every day practice. Bushy (2000) claims that all nurses must be aware of the legal requirements of practice and understand the principles governing bioethics. Education programs she claims must equip nurses with knowledge about legal and ethical principles and provide them with the skills to justify practice.

**Assessment Skills**

Nursing work requires nurses to be effective in monitoring health of individuals, groups and communities (Bushy 2000; Sutton & Smith 1995; Ollfredy, 2000). Assessment requires the collection of base-line data that informs the decisions made by nurses regarding intervention planning, service delivery and health promotion and education activity.

Sutton & Smith (1995) assert that rural nurses think, see and experience their practice differently to other nurses. They content, as does Bushy (2000) that rural nurse's style of practice requires an intimate knowledge of the community and of individuals within the community. Sutton & Smith (1995) further state, that the rural nursing practice concentrates on the interpersonal rather than technological aspects of care.

Consistently the literature discusses the need for rural nurses to be familiar with concepts of primary health care and community development. Dunkin (in Bushy 2000,p.63) provides a useful framework which illustrates the factors impacting on health care behaviours of rural people. This framework is useful for rural nurses in planning their practice.
The NSW Registration Board (1997) maintains that beginning registered nurses are often seen by experienced registered nurses as being less confident and competent in their basic assessment skills of individuals and communities. This document also notes that new graduates often overestimate their own competency in assessment skills, especially in rural areas. The challenge for rural nursing therefore, is to provide nurses with opportunity to develop and enhance assessment skills which are considered core skills for practice.

Conclusion

In this section core skills for rural nurses have been described. The list of core skills is not exhaustive and requires ongoing reassessment to identify emergent skills as rural nursing practice becomes visible.

A number of sources have been identified that suggest content for courses which aim to prepare nurses for rural practice. From these sources the following list has been devised. Rather than being a comprehensive curriculum this list should be seen as a set of elements that should be emphasised in programs which are designed to prepare nurses for rural practice.

Interpersonal skills

- Counselling;
- Cultural sensitivity;
- Verbal and written communication skills;
- Effective interpersonal skills;
- Caring for relatives and friends.

Management

- Management and administration;
- Financial management;
- Computers/systems;
- Human resource management/development;
- Quality assurance;
- Leadership and management qualities;
- Teamwork;
- Problem identification and solving;
- Creative and Lateral thinking.

Legal and ethics

- Law;
• Ethics.

**Practice skills**

• Pharmaceuticals and pharmacology;
• Advanced life support;
• Life span care;
• Analytical skills;
• AIDS/HIV infection; and
• Physical assessment;
• Knowing the community.

**Education**

• Health education/promotion;
• Teaching.

**Research**

• Writing and research;
• Research methods;
• Evaluation and critique of published research;
• Application and adaptation of research findings to fit rural nursing practice and hence develop relevant nursing practice guidelines; and
• Systematic evaluation of nursing practice using accepted models.
Rural Nurses: Knowledge and Skills Required by to Meet the Challenges of a Changing Work Environment in the 21st Century: A Review of the Literature

Continuing Learning Skills

Introduction

"Access to timely and appropriate education, training and professional support is essential for any health professional" (Handley 1998,p.17). Consistently it is reported in the literature that rural nurses are disadvantaged in accessing education and training (Hegney et al 1997; Kreger 1991). One of the reasons identified that limits the access to educational programs is the financial cost. These costs include course, travel, accommodation, childcare, and for the employee back fill or locum relief. If rural nurses are to be encouraged to undertake educational programs financial support such as scholarship programs and employer support must be considered as essential.

Continuing education is of the utmost importance to rural nurses in Australia. The presence of continuing learning opportunities has been found to enhance the self-esteem, aid networking and promote personal and professional development of those who take part (Anderson & Kimber: 1991). Alternatively lack of learning opportunities can deter nurses from practicing rurally. Huntley (1995) found that 71% of rural nurses surveyed stated that the "lack" access to continuing education opportunities could contribute to them leaving their rural nursing position. Huntley identifies the provision of continuing education for rural nurses as one of the top priorities of rural Universities. Lack of access to continuing education opportunities was seen to be a major human resource issue in Victoria (Victorian Hospitals Association: 1992). Buckley and Gray (1993) also demonstrated the importance that rural nurses place on continuing education in a study in which they asked rural and remote nurses to rate the personal importance of various educational activities. They found that highest rating activity was continuing education (65.3%) followed by employer support for study (64.7%). They conclude that the provision of continuing education and...
employer support are key issues for rural nurses.

With the importance of continuing education for rural nurses clearly identified it would be hoped that the literature would provide us with a very positive picture of learning opportunities for nurses working rurally - however this is not the case. Blue and Howe-Adams (1993) note that those who want to pursue professional education face a daunting task from three perspectives: choosing a suitable education program, accessing the program and finally staying with the program.

The provision of education and training for nurses in rural Australia suggests the Association for Australian Rural Nurses fail to meet the needs of its membership. AARN (2001,p.2) suggests the following reasons;

- Postgraduate education is too onerous, inaccessible and expensive and there is little reward in the workplace for the qualifications gained
- Many new graduates are unable to cope with the pressures of the workplace and quickly leave, pursue other positions or leave the profession
- Many new graduates who go to rural areas do so with inadequate specific preparation for the rural context
- Poor support for Postgraduate rural students from some Universities results in the student receiving a poor learning experience, and demonstrates inadequate support for external students (needs clarification - a good point but needs more)
- Appropriate education for managers, specialists, nurse practitioners and those working outside traditional hospital roles needs urgent review.

AARN (2001) further assert that most educational programs available for specialist education and training, involve on-campus residential periods, which make access for many rural nurses impossible. It may therefore be necessary to rethink the delivery of clinically based courses, and include more flexible (and affordable) options for how students gain clinical skills.

In her literature review Handley (1996,p.7) identifies two main problems with the training and education of rural nurses:

- There is an inadequate or inappropriate tertiary education for rural practice at the pre-registration level, often combined with a lack of preparatory training for registered urban nurses moving to rural positions."
- "Once employed in a rural position, whether hospital trained or tertiary trained, nurses can have difficulty in maintaining professional competences through continuing education or further degrees, and in developing new specialist skills.

The role of education providers with regard to rural nursing is complex. Hegney et al (1997) have identified the roles of the education providers for rural nurses as being:

- Preserving the focus on nursing as a unique discipline within the multidisciplinary team
- Keeping abreast of and supporting professional change such as that heralded by the advent of advanced nurse practitioner role
- Providing educational programs necessary for developing and maintaining rural nurse competences
- Working towards cost effective, accessible, equitable and streamlined educational programs
- Providing a forum for sharing education and peer support for isolated nurses
- Recognising and creating curricula on the basis of preparing nurses for the specialty role of the rural nurse.

Spencer et al (1998) have identified key responsibilities of educational providers. Combined with Hegney's roles these provide a valuable check list by which educational providers judge their
performance in this area and a guide to those developing initiatives to encourage continuing education opportunities for nurses in rural Australia. The responsibilities identified are:

- Encouraging and facilitating the uptake of courses
  - Education providers should ensure multiple entry points and recognition of prior learning
  - Education providers should accept students with cross-industrial credits and encourage articulation between different forms of continuing education
  - Education providers should increase access to education using a range of delivery styles, including innovative use of information technology
  - Education providers should work to ensure flexible time-tableing, both in when and how courses are taught and flexibility in due dates for assignments, recognising the limits of rural postal services and pressures of work
  - Education providers should aim for accreditation of all courses
  - Education providers should ensure teaching provides access to both knowledge and experience through appropriate placements
  - Education providers should actively circulate information about their courses
  - Education providers must recognise that the scope of practice of rural nurses is different to that of city/urban nurses and their education needs may also differ.

- Identifying and responding to local and regional needs;
  - Providers of education and training for rural nurses must recognise the widely varying local and regional needs of those nurses
  - Education providers must accommodate current and changing learning needs in the light of an increasing emphasis on competencies, credentialing and advanced practice

- Working collaboratively to foster a culture of learning;
  - Education providers must foster a culture of learning that encompasses all members of the learning circle, including rural nurses, their managers, and educational providers.

Current education providers

There is presently a range of education providers offering opportunities for nurses working in rural Australia. Spencer et al (1998) have identified the providers of education and training and support organisations for rural nurses include universities, federal and state health departments, Rural Health Training Units, Hospitals and Private groups. There are also organisations that have developed to support rural nurses including the association for Australian Rural Nurses Inc (AARN), the National Rural Health Alliance (NRHA) and the National Association for rural Health Training Units. There is a commercial organisation Pathways Nursing Education Service. There are also information services such as the Health Education Rural and Remote Resources Database (HERRD), Nursinginfo (Flinders University) and the Rural Information Network (Toowoomba Rural Health Training Unit). Since 1993 and 1996 there have been major initiatives to address the problems faced by nurses who want to undertake further study. Many Australia Universities offer continuing learning opportunities for Rural nurses and in1997 the Commonwealth funded University Departments of rural Health. Spencer et al (1998) state that these play a significant part in supporting nurses in education but warn that programs offered have had varying degrees of success.

Educational philosophies and modes of delivery

The practice of nursing is fast changing. The knowledge base and skills developed by nurses during
their education begins to become out dated on their first day in clinical practice. This has been recognised by most education establishments and they have endeavoured to give their students learning skills that they can use during their entire professional life. However, it should be noted that life long learning is more than a simple set of study skills. The notion of life long learning leads comfortably into the development of a culture of learning, that is, accepting the attitude that learning, along with the tools of support to achieve the learning, is an accepted part of one's working life. It is this culture that provides the ways, means and the incentives for learning. Various theories of education need to be employed to underpin curriculum development (Landa et al 1995, Marland and Store 1982, Rowntree 1990, Gross-Davis 1993). Like any culture, this one offers a wide provider and employer resources. Flexibility in education and training, recognition of experiences and prior learning, acceptance of different learning styles and respect for individual needs, commitments and resources are all components in such a culture suggest Spencer et al (1998).

Providing continuing education in rural Australia is very different to providing it in Metropolitan areas. The reduced density of students means that provision of services and delivery methods have to be carefully considered. Because of the distances that rural nurses live from education provider's modes of delivery such as internet and distance education are often tried. However it is found that rural nurses prefer more traditional forms of delivery such as face to face education (Blue 1993; Buckley & Gray 1993; Sturmy & Edwards 1991). This was reflected in Huntley's (1995) survey that found that rural nurses ranked technological approaches to education as important rather than very important.

Although distance education may be seen as a major tool for delivering education to rural nurses it does have its limitations. It has difficulties of providing "Hands On" clinical skills (Spencers et al 1998). These are the very skills that many rural nurses are seeking. Some centres address this issue by using information technology such as multi-media and CD ROM - however, high costs of information technology equipment may reduce the availability to rural nurses (Project for Rural Health Communications and Information Technology 1996).

The most popular learning styles for rural nurses undertaking postgraduate course are (Sturmy & Edwards 1991);

- face to face discussion and skill development
- observing and working with previous workers to 'learn the ropes'
- observing and being supervised by experienced workers early in employment

The same study found that the most unpopular styles were:

- distance education to be completed while in the field
- computer assisted learning packages
- radio lectures

Chapter Continuing Learning Skills continues
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Mentorship and Preceptorship

Mentorship and preceptorship are seen as important aspects of nursing education. Within an area of practice as complex as rural nursing practice it is thought that mentorship would be particularly valuable. Shaiman and Inhaber (1985) define preceptors, as an experienced nurse who carries out one to one teaching of new employees or nursing students in addition to their regular duties. Alternatively Pierce (1991) describes preceptors as an intense, one on one, reality based clinical rotation for a student nurse whose learning experience are coordinated and supervised by a staff nurse.

There may be a reluctance suggests Hegney et al (1993) for some nurses to act as preceptors due to other commitments and a belief that training of student nurses is not a part of their role. With staff shortages it is thought that this attitude may be becoming more common among rural nurses.

Pre-registration education

All nurses who wish to become licensed practitioners require pre-service education. The preparation of registered nurses pre 1985 was an apprenticeship style training program offered in hospital based Schools of Nursing. However from 1985 Australia embraced the global trend of Baccalaureate preparation for pre-service registered nurses. All Australian single baccalaureate nursing degrees prepare graduate nurses to practice as generalist nurses who are employable in most states in a diverse range of practice settings; acute care, aged care, mental health, community health, correctional services. The Australian Council of Deans (1994 in Duffy et al 1998) believe that since the transfer of nurse education to higher education institutions, undergraduate programs have been inadequately funded. They claim this has occurred because of "... arrangements between the state health and education authorities in determining labour force demands and funding levels. The AARN (2001) identified inadequate financial support for nursing by the Federal and State/Territory Governments as a significant factor impacting on recruitment and retention. Further, they maintain that " there are an inadequate number of nurses being enrolled in degrees to meet workforce needs. This is linked to inadequate consultation between workforce agencies and universities and DETYA with regard to funding" (AARN 2001).

On completion on undergraduate programs graduate nurses, even if educated in rural universities are not returning to the rural sector to work (AARN 2001). The AARN (2001) claim that "... a very small percentage of graduates are going to rural areas. Most good graduate programs are conducted in large metropolitan hospitals and this is where they tend to stay". While Duffy et al (1998) believe inadequate funding has led to many rurally based nursing students having poor
clinical experiences which has negatively impacted on recruitment of graduate nurses to rural areas.

Enrolled nursing practice "... has evolved and altered over the years in line with structural changes, differing organisational needs and modifications in health care delivery systems" (Owens & McCarty 1998, p.4). Enrolled nurses complete an educational program provided through the Technical and Further Education (TAFE) system while employed as a student enrolled nurse in a hospital which participates in enrolled nurse education. Like registered rural nurses, enrolled nurses working in rural areas fulfil a diversity of practice roles.

The NRHA (2001) notes that with increasing rurality the proportion of enrolled nurses to registered nurses increases. This suggests that enrolled nurses are more easy to recruit to rural and remote areas than are registered nurses. The question raised, therefore is this trend linked to educational preparation?

Access to education, professional development and training at the post registration or enrolment level is consistently reported as difficult (Hegney 1997; Handley 1996, Kreger 1991, Owens & Macarty1998). For enrolled nurses however, the development of university bachelor of nursing programs for enrolled nurses using distance education, is a beginning attempt to reduce such barriers (Owens & Macarty 1998).

Gibb (2001) while acknowledging the importance of degree registered nursing preparation argues that a transfer of nursing into tertiary education has removed from the nursing workforce a nursing labour force that once trained in small rural communities where local hospitals were major providers of employment. Gibb advocates strategies including a two partnership model which includes local health providers and Technical and Further Education Colleges (TAFE) as well as the universities to overcome demographic and socioeconomic issues which have effected rural employment. Gibb also notes, as does Lawrence (1987) that limited access to education has, and continues to be a major problem in recruiting rural residents for tertiary education. The non-tertiary educational background of parents tends to reproduce career limitations.

Huggonson (2001) suggests that universities need financial assistance to offset the costs of educating Aboriginal nursing students from rural and remote communities. This follows "... recommendation 31 of the report of the inquiry into Indigenous health by the House of Representatives Standing Committee on Family and Community Affairs..." (in Hugggonson 2001, p.2/5). This measure, Huggonson suggest will provide stimulus to disadvantaged rural areas.

In reviews of the literature by Hegney (1996) and Handley (1996 ) there was little literature regarding preparatory training and education for rural nursing. It was noted however that some universities offer rural and remote electives for student nurses. A number of rural Universities and Universities with rural campuses offer pre-registration nursing courses in rural Australia, although a new double-degree 4 year pre-registration course Bachelor of Nursing/Bachelor of Rural Health Practice has developed and will begin in February 2002 . Rural Universities offering undergraduate pre-service nursing programs tend to be situated in regional centres and most are internal on-campus programs. Becoming a nurse in a regional University is expensive. Often regional centres cannot support all nursing students in the centre's University. Nurses have to travel to gain all there clinical costs. This gives them costs that metropolitan nursing students do not have to endure.

Huntley (1995) found that one of the main reasons for nurses choosing rural work was rural background and family relationships. This would seem to indicate that recruitment of rural people into nursing programs is very important.
Post-registration education, professional development

In her review of the literature Handley (1996) identified a number of factors which are barriers or hinder rural nurses from planning and proceeding with further education. These were:

- family commitments (particularly child care and responsibilities in family business)
- distance from educational institutions
- a lack of access to relevant and appropriate courses workload/lack of relieving staff/no study leave
- lack of information about available courses
- lack of funding (both personal and institutional)
- lack of time, both personally and professionally

McManamny: (1996) found that the barriers had been exacerbated by:

- increasing financial restraints in health care agencies
- downsizing of nursing staff
- problem with locum replacement for staff undergoing continuing education
- increasing costs of education programs
- a fragmented approach to the provision of continuing education in rural areas
- an increasing withdrawal of management and employer support for continuing education.

McManamny: (1996) also found that there was a high level of dissatisfaction among Victorian nurses about the apparent lack of support and the level of cooperation from the university sector. This lack of support was seen as the universities not providing courses that meet the needs of the rural hospitals or registered nurses.

Blue (1993) notes that rural nurses are more likely to undertake tertiary postgraduate study if there is:

- a (rural) university campus relatively near
- family support and encouragement
- flexible delivery styles of education
- employer sponsored study
- more information about available programs
- more places made available
- course content relevant to rural needs
- workplace recognition for study and eventual qualification
- options to study over longer periods of time than traditionally allowed
- no compulsory residential module
- scholarship and peer support

A large-scale study of 780 rural nurses was undertaken by Harris (1992) to determine what rural nurses wanted to study. It was found that the top ten priority areas identified were:

- Pharmaceuticals and pharmacology (chosen by 17% of respondents)
- Accident and emergency (chosen by 8% of respondents)
- Diabetes (chosen by 7% of respondents)
- Cardiac care (chosen by 6% of respondents)
- Paediatric care (chosen by 5% of respondents)
- Midwifery (chosen by 4% of respondents)
- Geriatric care (chosen by 3% of respondents)
- Resuscitation (chosen by 3% of respondents)
- Nursing procedures and processes (chosen by 3% of respondents)
In the same study it was found that the top ten skills that rural nurses wanted to develop were:

- Counselling skills (chosen by 19% of respondents)
- Health Education and Promotion (chosen by 15% of respondents)
- Financial management (chosen by 14% of respondents)
- Management/Administration (chosen by 13% of respondents)
- Computer skills/systems (chosen by 8% of respondents)
- Teaching skills (chosen by 7% of respondents)
- Communication skills (chosen by 7% of respondents)
- Human resource skills (chosen by 6% of respondents)
- Time/self management skills (chosen by 5% of respondents)
- Accident and emergency skills (chosen by 5% of respondents)

Another study conducted by Buckley & Gray (1993) in South Australia using a different methodology established rural nurses' perceived needs for future education needs. The top ten responses are shown below with the percentage of respondents who felt that they need each need in their future education:

- Legal aspects of nursing care (chosen by 90% of respondents)
- Teaching skills (chosen by 82.6% of respondents)
- Counselling skills (chosen by 81.1% of respondents)
- Problem solving and decision making (chosen by 79.3% of respondents)
- Bereavement (chosen by 77.3% of respondents)
- Communication skills (chosen by 77% of respondents)
- Physical assessment skills (chosen by 77.2% of respondents)
- Health education skills (chosen by 76.8% of respondents)
- Nursing standards (chosen by 76.5% of respondents)
- Leadership skills (chosen by 76.2% of respondents)

From these studies it is concluded that the following course content be given priority when developing post registration courses for rural nurses:

**Clinical**

- Pharmaceuticals and pharmacology
- Accident and emergency
- Diabetes
- Cardiac care
- Paediatric care
- Midwifery
- Geriatric care
- Resuscitation
- Nursing procedures and processes
- Nutrition and diet management
- Physical assessment skills
- Nursing standards
From the previous discussion of modes of delivery it is concluded that rural nurses appreciate courses which have face to face content, and have "hands on skill" development. It was also found that rural nurses do not like distance education courses or computer based courses. These facts pose significant challenges for educational providers, as nurses are restricted in their ability to leave the workplace. This may mean that the most appropriate style of course delivery is an "out reach" distance education model where the educator visits the workplace. This is an expensive model to provide and does have resource implications for the employing authority.

Handley (1996) notes there is little recognition of prior learning and limited opportunity for credit transfer when nurses apply to universities for enrolment in courses. Coupled with a lack of employer support, and lack of recognition of postgraduate studies by nursing and employers leads to reduced motivation. There should be more opportunity for credit transfer rather than stand alone courses (Blue 1993, Buckley and Gray 1993, Hegney 1993) which will lead to a more mobile, broadly educated rural nursing workforce (Howe-Adams 1992). It has also been noted from the literature that rural nurses require advanced generalist education. This could best be provided by nurses utilising a range of subjects from different universities using a "pick and mix" model. However, as established the credit transfer mechanisms between universities limits the flexibility of such an approach.

It is argued that rural nursing must be supported by strategies which assist them to access and complete educational programs. This may be achieved through the establishment of Nursing Development Units similar to those in the United Kingdom (Wright 1989). The authors conclude that such a strategy must be separate to other initiatives including the Divisions of General Practice and University Departments of Health which have focussed their activity on medical practice at the expense of nursing and allied health.
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Recommendations

Introduction

Issues, which are impacting negatively on rural nursing, have been identified in this literature review. It is acknowledged that this review has been limited by time constraints and is therefore not intended to be read in isolation to other material. The authors believe that nursing education issues cannot be considered in isolation to the workplace issues and have attempted to incorporate literature which is descriptive of the workplace in undertaking this review. It is further asserted that rural nursing must be considered as a unique specialty practice and emerging within the literature is information, which is attempting to define, and contextualise practice. The authors recommend ongoing research to assist this process and inform curriculum development which will meet rural nurses and consumer needs.

Incentive Programs

The obvious response to address the shortage of rural nurses is to offer incentives. For example, providing improved working conditions including; more flexible hours, greater security in the workplace, increased remuneration and consideration of partner and family needs. It is recommended that collaborative partnerships between health services and local councils, similar to those which exist for medical practitioner support be formed, and strategic guidelines developed which address these issues. In addition, offering incentive programs to nurses, similar to those recently announced by the NSW State Government for teachers who are willing to work in targeted remote areas (AARN 2001).
Scholarships

Lobbying by professional associations, student networks, and universities on behalf of nursing students, for funds to be made available to assist rural/remote nursing students meet the costs of clinical practice resulted in significant scholarship money being made available from 2002 for 4 years through the Commonwealth. It is recommended that pressure continue to be asserted by the professional associations, student networks and universities for this funding to be ongoing.

The NSW Department of Health provide scholarship funding to a lesser level to undergraduate and postgraduate nursing students to assist with education, training and/or professional development costs. It is further recommended that all State and Territory Governments offer similar scholarship schemes and the funding increased to a more meaningful level.

While the support of students and nurses through scholarship funding is needed what has not been addressed is "how are nurses who must be advanced multiskilled practitioners before commencing practice in rural environments, to be prepared for practice and is there a place in rural nursing for beginning nurses?"

Recruitment to the Rural Nursing Workforce

The NRHA (2001) report that the existing rural nursing workforce will be retiring in the next 10-15 years. Clearly strategies must be identified to prepare replacement nurses to take on the roles of these nurses. Handley (1996) suggests that bridging programs be developed to prepare new graduate and metropolitan educated nurses for practice in rural areas. Further, she concludes that metropolitan educated nurses are not adequately prepared for rural nursing practice, because they are not skilled generalist nurses but have usually focused their practice in a specialty area. She argues that undergraduate nursing programs do not adequately prepare nurses for rural practice, as rural nurses are required to have advanced practice knowledge and skills. While Handley's recommendations are reasonable, it is an incomplete strategy. Rural Nursing must be promoted as a specialist area of nursing practice, and incentives and status attached to such positions.

Competition exists between medicine and nursing for practice delineation. The lack of medical services in rural/remote Australia is an ongoing issue which has failed to be resolved irrespective of the incentives initiated by the federal and state governments to attract rural medical practitioners. Nurses given their numbers and diversity of skills are recognised as being appropriate health professionals to meet community needs. In response to growing pressure from nursing to provide a career pathway for advanced practice nurses, the NSW Department of Health is committed to the appointment of professionally accredited Nurse Practitioners in rural/remote areas. However, Hegney (2000) warns the needs of rural/remote communities will not be met if medicine and other health stake holders do not recognise the skills of advanced practice nurses. Hegney (2000) concludes, that if this recognition is forthcoming job satisfaction and therefore recruitment and retention of nurses in rural and remote areas will improve. In addition, it is recommended that rural nurses must engage in state, national, international debate to raise issues for the global community to consider.

Undergraduate Nursing Education
Undergraduate programs that are based in rural Universities need to be redeveloped and perhaps extended in duration, to provide students with greater opportunity for knowledge and skill development and increased rural clinical experience. Resources must be directed to rural health facilities to support the clinical education of rural nurses and of the current staff, and to support the nursing associations representing rural nurses.

Post-Registration education, training and professional development

There is evidence that suggests rural nurses, when compared with metropolitan counterparts, are disadvantaged because of inequitable access to education, training and professional development initiatives. Nurses, as professional health practitioners are legally and ethically required to maintain and enhance knowledge and skill (Hegney et al 1998; Siegloff 1997; Handley 1991; Keyzer 1997). However, for many nurses who live and practice in rural areas, access to information provided online, via journals and other publications, conferences, staff development programs etc is limited because of inadequate communications systems, geographical isolation, poor resourcing of health facilities, increasing workloads and professional responsibilities, limited locum relief etc (Reid 1994). The implications of not addressing the problem of providing access to such information and skill development include; a decline in nurses' confidence, competency, and knowledge base which is linked to recruitment and retention and ultimately the quality of health services provided. Therefore, more flexible approaches to education (pre and post-graduate), staff development and training are required. It is recommended that such programs limit reliance on web-based learning and maintain mechanisms for student - teacher interaction. Support of professional development, training and education by employers must be guaranteed with funding provided to allow nursing staff opportunity to access initiatives. In addition, closer links between sources of funding, the Federal and State Government's, employers and education providers is recommended.

- Skillmix in rural areas must be adjusted to reflect a similar proportion of registered nurses to enrolled nurses as in metropolitan and large rural centres.
- A range of advanced practice skills are required by rural nurses in order to meet practice needs and include
  - advanced resuscitation
  - cannulation
  - physical assessment and diagnosis
  - prescribing
  - suturing
  - triage

AARN (2001) recommends:

- Education and training programs must be developed in the context of rural nursing practice. These programs need to consider the multiplicity of the needs in the specific community in which they intend to serve.
- Appropriate provision of educational support needs to be extended to enrolled as well as registered nurses.
- Integration, collaboration and coordination of educational activities should be established. Budgets for education and training programs should include funding for relief staff and provide access to education at major centres.
- Support in the use of information technology, particularly internet access, should be increased in regions to enable nurses to more readily access ongoing education and support.
- Specific purpose orientation. Induction programs should be developed and made available to all beginning rural nurses. These programs should include advanced practice skills as well as cultural awareness and coping skills.
Rural nurses should be provided with equal opportunities to gain access to formal education programs that will adequately prepare them for advanced nursing practice.

More leadership is needed for the nursing profession within governmental bureaucracies (with a particular focus on the needs of rural nurses and health care agencies). There needs to be a follow through on recommendations made at various other inquiries.

In recognition of the specific concerns of rural nursing the following recommendations are made:

- The role of the rural nurse should be legitimised through appropriate legislation and industrial awards in each state, and supported by access to appropriate education and training for practice.
- Extensive advertising campaigns targeting schools, universities, metropolitan health care agencies need to be undertaken to promote rural nursing as a viable career.
- Universities need positive incentives in order to increase the proportion of nursing undergraduates from rural backgrounds.
- Universities need to be encouraged to establish rural clubs and focus on providing quality clinical placements in rural areas, to provide students with valuable rural experiences.
- University Departments of Rural Health should be encouraged to increase their participation in and support of rural educational placements for nurses.
- Rural hospitals should be funded to enter into agreement with RHTUS/DRHs and larger provincial hospitals to provide more graduate nurse programs.

Conclusion

Clearly the issues which arise are related to what type of nurse is required in the rural context? Is there a place for inexperienced graduate nurses and nurses who maybe experienced but whose experience is in a metropolitan environment only? Finally how can universities develop and/or modify undergraduate program content and experience to prepare new graduate students with advanced practice knowledge and skills to meet the needs of the rural nursing environment? The authors contend there is a need for ongoing research to support the emergence of advanced practice in rural areas and guidelines, policies and protocols must be developed.

The literature indicates that policy must support educational programs which:

- Provide opportunities for rural nurses to maintain and enhance knowledge and skills learnt;
- Provide orientation to facilitate the transition to rural practice;
- Provide post registration courses, which are more clinically skills, based;
- Consider providing specialist pre-registration rural nursing courses, which have different content including advanced practice skills and that, may be longer than traditional nursing courses.
- Undertake studies to evaluate the effectiveness of the course that they are delivering for rural nurses.

The health and education systems should come together to work in a more integrated approach to provide nursing education. This integration should include planning and resourcing including funding. Care should be taken that rural nurses do not perceive that disproportionate funding is going towards the education of other health care professionals such as medicine. This can only be seen as devaluing the contribution of rural nurses.

This review of the literature has shown that there are a range of studies which have sought to identify the types of skills and knowledge that rural nurses require. However the review has also
demonstrated that the rural nursing work environment is complex and specific and it is difficult to
generalise exactly what skills and knowledge are needed. Moreover, the literature is convincing that
rural nursing practice is generalist in nature and practitioners require advanced practice skills and
knowledge across a range of speciality areas.

The exciting challenge for rural nursing in the 21st Century is to identify and contextualise rural
nursing practice. Education providers must consider this in light of the modification and
development of programs for preparation and development of nurses for rural practice.
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