

Foreward



This study represents a first step in looking at the key issues facing allied health professionals in rural and remote Australia. While it is certainly not a complete analysis of the issues, SARRAH is enormously proud to present this report which highlights key areas for improvement in support, education and training for allied health professionals in rural and remote areas. This study also highlights a number of areas where further examination will assist in completing a strategy that will positively impact on this professional group, and subsequently ensure that rural and remote communities can access allied health services.

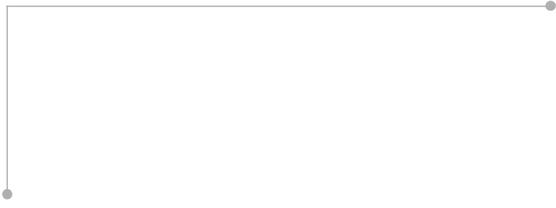
This study is intended to be used by individual allied health professionals, as well as professional associations, employers, government, and education and training providers in establishing a clear direction for programs.

I would like to recognise the key contribution of the SARRAH management committee, and particularly the multidisciplinary reference group of allied health professionals that provided direction and enthusiasm for this study.

We must ensure that the process from this point on continues to be dynamic and that this project is the catalyst for more research and analysis that can assist allied health professionals provide even better quality services to communities in rural and remote Australia.

Finally I would like to thank the Commonwealth Department of Health and Aged Care and specifically the RHSET program for their financial support of this project.

Christine Ward
National President



Executive Summary



The aim of this study was to examine the support, education and training needs of allied health professionals in rural and remote Australia. It is highly significant in that this is the first major study of this type on a national basis. The study highlighted important information about this health workforce, and also identified major areas for further consideration. As such it is appropriate that the results are considered within the context of the study aims and recommendations.

The methodology applied to this study included both quantitative and qualitative analysis and included, as a major focus, a survey of rural and remote allied health professionals to which there were over sixteen hundred responses. Qualitative data was further analysed through a series of one on one interviews and focus groups.

This study focussed primarily, but not exclusively, on the following allied health professions:

- Audiologists;
- Dietitians;
- Occupational Therapists;
- Physiotherapists;
- Podiatrists;
- Psychologists;
- Radiographers;
- Social Workers; and
- Speech Pathologists.

The majority of those who responded to the survey were female (84.2%), and while a considerable proportion (40%) were under 29 years of age there was also a significant proportion of the sample who were aged between 35 – 44 years of age. This highlights that while the concept of a young workforce is true, it is counterbalanced by a significant proportion of the rural workforce being experienced.

Age distribution did vary between professions with dietitians, occupational therapists and speech pathologists more likely to be under 25 years of age, representing a reasonably high new or recent graduate proportion in these professional groups.

The vast majority of allied health professionals in this study sample were trained in Australia (93.4%) with a high proportion of those (33.6%) indicating they had completed a post graduate qualification and a further 15.2 percent currently undertaking post graduate studies.

Drawing from the sample in this study, allied health professionals in rural and remote Australia are most likely to reside in a regional centre (31.9% of all respondents) and more than half (55.7%) provide services across multiple geographic locations.

Over half of those who responded to the survey had spent a proportion of their childhood years in a rural area.

Retention rates of allied health professionals in this study indicate a reasonably high turnover rate, with 42 percent indicating they had been in their current location for less than two years.

Allied health professionals, while most commonly employed in a state funded organisation, are also found across commonwealth funded agencies and private practices.

Access to locum services is remarkably low with only 26 percent of those in the study sample indicating they had access to locum services. Those with access was disproportionately spread across the professions with radiographers and physiotherapists most likely to have access to locums, and psychologists and audiologists least likely to have access to locums. Locum availability decreased in proportion to the size of the centre the professional was located in, and access to locums was greater in the Northern Territory and Tasmania and lowest in South Australia and New South Wales. Overall, sole allied health professionals had less access to locum services with 19.8% of sole allied health professionals indicating access to locum services compared to 30.4% of those allied health professionals with a co-located peer.

While a high proportion of allied health professionals in the sample (40% of responses) were supervised by a like allied health professional in the same location, there were several other models of supervision described. Only 4.7 percent of the sample were supervised in model with a Director of Allied Health and overall only 50 percent were directly supervised by an allied health professional of the same discipline either in the same or different location. This has considerable implications for professional development of the rural and remote allied health workforce as a whole.

Sole practitioners form a considerable proportion of the rural and remote allied health workforce with 37 percent of the sample indicating they were sole practitioners. Overall most sole practitioners fell into the 35-44 year age group, although the sole allied health professionals in the sample were more likely to be under 29 years of age compared to the sample of co-located allied health professionals.

The study results demonstrated the highest numbers of sole allied health professionals (from the total respondents) from physiotherapy, occupational therapy and speech pathology. When the sole practice group was further analysed, the results indicated that dietitians, speech pathologists and podiatrists were more likely than other disciplines to be working in sole positions.

With the current focus on encouraging students to undertake rural placements, it was disappointing to find that in the study sample 39.1 percent indicated that they had never supervised students, with the most common reason being that they had never been asked or approached. In addition, 66.9 percent of all respondents indicated that they have never received any training on student supervision.

Access to information technology highlighted that 70 percent of respondents had access to e-mail and 64.1 percent had access to the internet, however, less than one third (29.5%) of those with e-mail access and 16.5 percent of those with internet access had a computer on their desk. Others utilised computers in a shared area or library. Respondents from New South Wales, Queensland and South Australia had lowest access to internet and those from New South Wales, South Australia and Victoria had lowest access to e-mail.

As a critical early step in the analysis of the results of the outcomes of the information from the study, it is clear that further research into key aspects of allied health practice in rural and remote Australia is urgently required. Specific to this study, the following key recommendations are posed. To follow through these recommendations, commitment and cooperation from all levels of government, employers, professional associations and individual allied health professionals is required. Services for Australian Rural and Remote Allied Health Inc (SARRAH) will undertake to facilitate action on the recommendations and document relevant developments.

Recommendations

A definition of “allied health” must be developed and agreed on by all key stakeholders such as professional bodies, employers, government and government agencies.

Programs aimed at the long term retention and support of skilled and experienced allied health professionals are urgently required to maintain the significant proportion of the workforce that is highly experienced in rural practice.. This will ensure the sustainability of already available expertise in rural and remote areas, and provide appropriate recognition for experienced allied health professionals.

Allied health professionals should be formally represented on advisory groups, working parties, policy and program groups, management bodies and others that impact on rural health to ensure allied health needs, views and expert input is considered. This recommendation is relevant for all levels of government, and employers. Allied health professionals and professional associations such as SARRAH, must continue to seek this representation.

Comprehensive data specific to the allied health workforce in Australia be collected as a matter of urgency. Specifically the Australian Institute of Health and Welfare (AIHW) should be equipped to provide detailed information on the allied health workforce generally, as well as the rural and remote allied health workforce that is relevant for government, employers, professions and communities.

Government and employers should support allied health professionals to provide services that are responsive to community needs. This includes support for a primary health care approach. Further, major government bodies and employers must work with allied health professionals and appropriate professional associations to develop relevant purchasing strategies and benchmarks for rural allied health practice that enable allied health professionals to provide effective services.

Innovative practice arrangements, including private practice rights for allied health professionals with part time public positions and the co-location of private practitioners in public facilities in rural and remote areas, should be supported where there this does not disadvantage the business potential of others in the marketplace.

The restriction of private provider numbers by some private health insurers for private allied health professionals who have a commercial arrangement with public facilities in rural and remote areas should be urgently addressed.

Intersectoral collaboration for better allied health services is supported, particularly where this collaboration makes clear efforts to remove artificial program boundaries to the delivery of needs-based services to rural and remote areas.

Research and evidence is required to guide the development of sustainable models of allied health outreach practice.

Employing agencies have a duty of care to allied health staff who are required to provide outreach services, to ensure that processes are effective with respect to occupational health and safety.

Employers should ensure that rural and remote allied health professionals have access to same discipline support and professional development. Where the direct supervisor is not of the same profession, alternatives such as mentor programs or contracted clinical support should be arranged. This support person need not be co-located but should work with the allied health professional and the line manager to ensure appropriate standards of clinical and non-clinical responsibilities are provided.

SARRAH develop a 'Blueprint Paper' for Sole Allied Health Practice in Rural and Remote Australia. This document would integrate key findings of this study as they apply to sole allied health professionals and could be used by sole allied health professionals and employers to determine appropriate recommended standards in key areas such as access to clinical profession support, education and training requirements and appropriate management support.

SARRAH seek support to facilitate a study into current vacancy statistics and rates of non-practicing allied health professionals in rural, and particularly remote areas, and make recommendations to increase participation in the workforce and improve recruitment strategies.

A qualitative study be undertaken to identify the characteristics of the experienced sole allied health professional. This data could then be utilised to develop a set of core and advanced competencies for sole allied health practice.

Due to their prevalence as sole allied health professionals, resources should initially be allocated to assist the preparation of physiotherapy, occupational therapy and speech pathology graduates for sole allied health practice. Outcomes from such a program can then be applied to other professions.

A high proportion of allied health professionals in sole positions intend to take on postgraduate studies, and a significant proportion will have to leave their positions to do so. It is therefore recommended that education & training providers, including University Departments of Rural Health, actively pursue appropriate delivery of education and training programs at all levels to allow sole allied health professionals to remain in their location. Programs should be available in clinical and management areas and utilise a range of education delivery strategies.

Employers support sole allied health professionals intending to undertake postgraduate study to reduce the requirement for sole allied health professional to leave their positions. This will reduce the likelihood of communities having a gap in services, and ensure continued improvement of allied health programs and skills in the community.

Employers and communities recognise the need for flexibility in establishing and maintaining allied health services to communities, particularly in relation to small communities that may only require a sole allied health professional in a particular service area. Flexibility of job opportunities such as part time availability, job share and innovative service delivery should be encouraged based on the needs of the community and the allied health professional.

Due to the extremely low locum accessibility for all allied health professionals in rural and remote areas, and in particular for those working in sole positions, it is recommended that State/ Territory and Commonwealth governments consider funding appropriate locum support programs. Locum support programs must take into account various rural and remote practice situations and must be flexible in meeting the needs of rural communities.

Governments and tertiary institutions are required to improve access to appropriate tertiary education courses and opportunities for rural and remote allied health professionals.

Employers of allied health professionals are required to support the provision of improved access to quality and quantity of continuing professional development opportunities.

The exploration and utilisation of other delivery methods for education and training programs requires attention from employers and education providers.

The type of education and mode of delivery for allied health professionals living in rural and remote Australia must remain tailored to the needs of the individual disciplines.

Professional associations need to continue to develop appropriate programs and delivery means for rural and remote allied health professionals.

Training providers are required to collaborate to deliver appropriate content and delivery methods for continuing professional education for allied health professionals in rural and remote locations.

Employers need to ensure that remotely located allied health professionals have at least a comparable level of access to employer-provided education and training, as do urban-based allied health professionals.

Employers ensure that a minimum standard of technology access is met for all allied health professionals. The minimum standard should comprise an email account and Internet access at the allied health professional's primary place of work. These facilities must be available in a location that respects confidentiality.

SARRAH compile a blueprint for videoconferencing (telehealth) which provides allied health professionals with guidance for the use of telehealth technology. The blueprint may include a position paper, clinical and non-clinical protocols specific to the allied health professions, and guidelines for equipment usage.

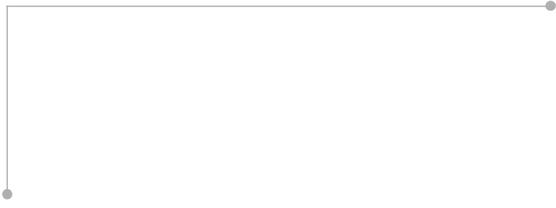
Educational opportunities in the use of various technologies should be provided by employers and professional associations.

Research which investigates how technologies should be used to support and deliver allied health services must be supported. Knowledge of the most efficient, effective methods for implementing technologies will enhance the provision of appropriate access for allied health professionals.

A comprehensive project is undertaken to examine key factors in the decision for allied health students to commit to a rural career.

SARRAH seek resources to undertake a project to collate information on programs that assist students to undertake rural placements.

SARRAH and the National Rural Health Network (NRHN) liaise to ensure that information about the NRHN is communicated to practising allied health professionals. SARRAH will also offer support and mentoring to allied health clubs, or multidisciplinary clubs with allied health involvement.



Executive Summary

The aim of this study was to examine the support, education and training needs of allied health professionals in rural and remote Australia. It is highly significant in that this is the first major study of this type on a national basis. The study highlighted important information about this health workforce, and also identified major areas for further consideration. As such it is appropriate that the results are considered within the context of the study aims and recommendations.

The methodology applied to this study included both quantitative and qualitative analysis and included, as a major focus, a survey of rural and remote allied health professionals to which there were over sixteen hundred responses. Qualitative data was further analysed through a series of one on one interviews and focus groups.

This study focussed primarily, but not exclusively, on the following allied health professions:

- Audiologists;
- Dietitians;
- Occupational Therapists;
- Physiotherapists;
- Podiatrists;
- Psychologists;
- Radiographers;
- Social Workers; and
- Speech Pathologists.

The majority of those who responded to the survey were female (84.2%), and while a considerable proportion (40%) were under 29 years of age there was also a significant proportion of the sample who were aged between 35 – 44 years of age. This highlights that while the concept of a young workforce is true, it is counterbalanced by a significant proportion of the rural workforce being experienced.

Age distribution did vary between professions with dietitians, occupational therapists and speech pathologists more likely to be under 25 years of age, representing a reasonably high new or recent graduate proportion in these professional groups.

The vast majority of allied health professionals in this study sample were trained in Australia (93.4%) with a high proportion of those (33.6%) indicating they had completed a post graduate qualification and a further 15.2 percent currently undertaking post graduate studies.

Drawing from the sample in this study, allied health professionals in rural and remote Australia are most likely to reside in a regional centre (31.9% of all respondents) and more than half (55.7%) provide services across multiple geographic locations.

Over half of those who responded to the survey had spent a proportion of their childhood years in a rural area.

Retention rates of allied health professionals in this study indicate a reasonably high turnover rate, with 42 percent indicating they had been in their current location for less than two years.

Allied health professionals, while most commonly employed in a state funded organisation, are also found across commonwealth funded agencies and private practices.

Access to locum services is remarkably low with only 26 percent of those in the study sample indicating they had access to locum services. Those with access was disproportionately spread across the professions with radiographers and physiotherapists most likely to have access to locums, and psychologists and audiologists least likely to have access to locums. Locum availability decreased in proportion to the size of the centre the professional was located in, and access to locums was greater in the Northern Territory and Tasmania and lowest in South Australia and New South Wales. Overall, sole allied health professionals had less access to locum services with 19.8% of sole allied health professionals indicating access to locum services compared to 30.4% of those allied health professionals with a co-located peer.

While a high proportion of allied health professionals in the sample (40% of responses) were supervised by a like allied health professional in the same location, there were several other models of supervision described. Only 4.7 percent of the sample were supervised in model with a Director of Allied Health and overall only 50 percent were directly supervised by an allied health professional of the same discipline either in the same or different location. This has considerable implications for professional development of the rural and remote allied health workforce as a whole.

Sole practitioners form a considerable proportion of the rural and remote allied health workforce with 37 percent of the sample indicating they were sole practitioners. Overall most sole practitioners fell into the 35-44 year age group, although the sole allied health professionals in the sample were more likely to be under 29 years of age compared to the sample of co-located allied health professionals.

The study results demonstrated the highest numbers of sole allied health professionals (from the total respondents) from physiotherapy, occupational therapy and speech pathology. When the sole practice group was further analysed, the results indicated that dietitians, speech pathologists and podiatrists were more likely than other disciplines to be working in sole positions.

With the current focus on encouraging students to undertake rural placements, it was disappointing to find that in the study sample 39.1 percent indicated that they had never supervised students, with the most common reason being that they had never been asked or approached. In addition, 66.9 percent of all respondents indicated that they have never received any training on student supervision.

Access to information technology highlighted that 70 percent of respondents had access to e-mail and 64.1 percent had access to the internet, however, less than one third (29.5%) of those with e-mail access and 16.5 percent of those with internet access had a computer on their desk. Others utilised computers in a shared area or library. Respondents from New South Wales, Queensland and South Australia had lowest access to internet and those from New South Wales, South Australia and Victoria had lowest access to e-mail.

As a critical early step in the analysis of the results of the outcomes of the information from the study, it is clear that further research into key aspects of allied health practice in rural and remote Australia is urgently required. Specific to this study, the following key recommendations are posed. To follow through these recommendations, commitment and cooperation from all levels of government, employers, professional associations and individual allied health professionals is required. Services for Australian Rural and Remote Allied Health Inc (SARRAH) will undertake to facilitate action on the recommendations and document relevant developments.

S.A.R.R.A.H

A Study of Allied Health Professionals in Rural and Remote Australia



S.A.R.R.A.H
Services for Australian Rural & Remote
Allied Health

2000

Recommendations

A definition of “allied health” must be developed and agreed on by all key stakeholders such as professional bodies, employers, government and government agencies.

Programs aimed at the long term retention and support of skilled and experienced allied health professionals are urgently required to maintain the significant proportion of the workforce that is highly experienced in rural practice. This will ensure the sustainability of already available expertise in rural and remote areas, and provide appropriate recognition for experienced allied health professionals.

Allied health professionals should be formally represented on advisory groups, working parties, policy and program groups, management bodies and others that impact on rural health to ensure allied health needs, views and expert input is considered. This recommendation is relevant for all levels of government, and employers. Allied health professionals and professional associations such as SARRAH, must continue to seek this representation.

Comprehensive data specific to the allied health workforce in Australia be collected as a matter of urgency. Specifically the Australian Institute of Health and Welfare (AIHW) should be equipped to provide detailed information on the allied health workforce generally, as well as the rural and remote allied health workforce that is relevant for government, employers, professions and communities.

Government and employers should support allied health professionals to provide services that are responsive to community needs. This includes support for a primary health care approach. Further, major government bodies and employers must work with allied health professionals and appropriate professional associations to develop relevant purchasing strategies and benchmarks for rural allied health practice that enable allied health professionals to provide effective services.

Innovative practice arrangements, including private practice rights for allied health professionals with part time public positions and the co-location of private practitioners in public facilities in rural and remote areas, should be supported where there this does not disadvantage the business potential of others in the marketplace.

The restriction of private provider numbers by some private health insurers for private allied health professionals who have a commercial arrangement with public facilities in rural and remote areas should be urgently addressed.

Intersectorial collaboration for better allied health services is supported, particularly where this collaboration makes clear efforts to remove artificial program boundaries to the delivery of needs-based services to rural and remote areas.

Research and evidence is required to guide the development of sustainable models of allied health outreach practice.

Employing agencies have a duty of care to allied health staff who are required to provide outreach services, to ensure that processes are effective with respect to occupational health and safety.

Employers should ensure that rural and remote allied health professionals have access to same discipline support and professional development. Where the direct supervisor is not of the same profession, alternatives such as mentor programs or contracted clinical support should be arranged. This support person need not be co-located but should work with the allied health professional and the line manager to ensure appropriate standards of clinical and non-clinical responsibilities are provided.

SARRAH develop a ‘Blueprint Paper’ for Sole Allied Health Practice in Rural and Remote Australia. This document would integrate key findings of this study as they apply to sole allied health professionals and could be used by sole allied health professionals and employers to determine appropriate recommended standards in key areas such as access to clinical profession support, education and training requirements and appropriate management support.

SARRAH seek support to facilitate a study into current vacancy statistics and rates of non-practicing allied health professionals in rural, and particularly remote areas, and make recommendations to increase participation in the workforce and improve recruitment strategies.

A qualitative study be undertaken to identify the characteristics of the experienced sole allied health professional. This data could then be utilised to develop a set of core and advanced competencies for sole allied health practice.

Due to their prevalence as sole allied health professionals, resources should initially be allocated to assist the preparation of physiotherapy, occupational therapy and speech pathology graduates for sole allied health practice. Outcomes from such a program can then be applied to other professions.

A high proportion of allied health professionals in sole positions intend to take on postgraduate studies, and a significant proportion will have to leave their positions to do so. It is therefore recommended that education & training providers, including University Departments of Rural Health, actively pursue appropriate delivery of education and training programs at all levels to allow sole allied health professionals to remain in their location. Programs should be available in clinical and management areas and utilise a range of education delivery strategies

Employers support sole allied health professionals intending to undertake postgraduate study to reduce the requirement for sole allied health professional to leave their positions. This will reduce the likelihood of communities having a gap in services, and ensure continued improvement of allied health programs and skills in the community.

Employers and communities recognise the need for flexibility in establishing and maintaining allied health services to communities, particularly in relation to small communities that may only require a sole allied health professional in a particular service area. Flexibility of job opportunities such as part time availability, job share and innovative service delivery should be encouraged based on the needs of the community and the allied health professional.

Due to the extremely low locum accessibility for all allied health professionals in rural and remote areas, and in particular for those working in sole positions, it is recommended that State/ Territory and Commonwealth governments consider funding appropriate locum support programs. Locum support programs must take into account various rural and remote practice situations and must be flexible in meeting the needs of rural communities.

Governments and tertiary institutions are required to improve access to appropriate tertiary education courses and opportunities for rural and remote allied health professionals.

Employers of allied health professionals are required to support the provision of improved access to quality and quantity of continuing professional development opportunities.

The exploration and utilisation of other delivery methods for education and training programs requires attention from employers and education providers.

The type of education and mode of delivery for allied health professionals living in rural and remote Australia must remain tailored to the needs of the individual disciplines.

Professional associations need to continue to develop appropriate programs and delivery means for rural and remote allied health professionals.

Training providers are required to collaborate to deliver appropriate content and delivery methods for continuing professional education for allied health professionals in rural and remote locations.

Employers need to ensure that remotely located allied health professionals have at least a comparable level of access to employer-provided education and training, as do urban-based allied health professionals.

Employers ensure that a minimum standard of technology access is met for all allied health professionals. The minimum standard should comprise an email account and Internet access at the allied health professional’s primary place of work. These facilities must be available in a location that respects confidentiality.

SARRAH compile a blueprint for videoconferencing (telehealth) which provides allied health professionals with guidance for the use of telehealth technology. The blueprint may include a position paper, clinical and non-clinical protocols specific to the allied health professions, and guidelines for equipment usage.

Educational opportunities in the use of various technologies should be provided by employers and professional associations.

Research which investigates how technologies should be used to support and deliver allied health services must be supported. Knowledge of the most efficient, effective methods for implementing technologies will enhance the provision of appropriate access for allied health professionals.

A comprehensive project is undertaken to examine key factors in the decision for allied health students to commit to a rural career.

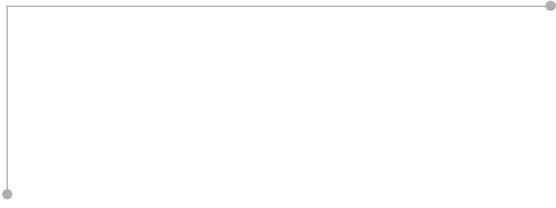
SARRAH seek resources to undertake a project to collate information on programs that assist students to undertake rural placements.

SARRAH and the National Rural Health Network (NRHN) liaise to ensure that information about the NRHN is communicated to practising allied health professionals. SARRAH will also offer support and mentoring to allied health clubs, or multidisciplinary clubs with allied health involvement.

Contents



Chapter 1: Introduction	1
1.1 Introduction	1
1.2 Identification and Identity	2
1.3 Allied Health Workforce	4
1.4 Allied Health Organisation and Service Provision in Rural and Remote Australia	10
1.5 Introduction to Study	15
Chapter 2: Methodology	17
2.1 Scope	17
2.2 Underlying Principles of the Project	17
2.3 Project Reference Committee	18
2.4 Project Human Resourcing	18
2.5 Review and Analysis of Current Initiatives	18
2.6 Open Consultation	19
2.7 Targeted Consultation	19
2.8 Quantitative Data Collection	19
2.9 Data Analysis	20
2.10 Qualitative Validation of Data	20
Chapter 3: Characteristics of the Allied Health Workforce in Rural and Remote Australia	23
4.1 Introduction	23
4.2 Data and Results	23
4.3 Discussion and Recommendations	32
Chapter 4: Characteristics of the Allied Health Services in Rural and Remote Australia	37
4.1 Introduction	37
4.2 Data and Results	37
4.3 Discussion and Recommendations	50
Chapter 5: Working as a Sole Allied Health Professional	57
5.1 Introduction	57
5.2 Data and Results	58
5.3 Discussion and Recommendations	71
Chapter 6: Discussion on Education and Training Issues for Allied Health Professionals in Rural and Remote Australia	81
6.1 Introduction	81
6.2 Data and Results	81
6.3 Discussion and Recommendations	90
Chapter 7: Access to Technology for Rural and Remote Allied Health Professionals in Australia	95
7.1 Introduction	95
7.2 Data and Results	95
7.3 Discussion and Recommendations	100
Chapter 8: Commentary on Undergraduate Education	103
8.1 Introduction	103
8.2 Data and Results	103
8.3 Discussion and Recommendations	105
Appendices	107
Reference List	109





1.1 Introduction

Allied health professionals form a significant proportion of the health workforce in rural and remote Australia, however, there is still relatively little known about this group. The contributions that these professions make are across all major health, education, disability and aged care programs, both private and public, and this diversity in itself may be one of the reasons that this group is difficult to study. Other reasons may include the inherent difficulties in studying issues such as recruitment and retention as these are linked to problems such as limitations in planning services and a lack of understanding of allied health professions' contributions to the health of rural and remote communities (Hodgson and Berry, 1993).

It is clear that a study such as this is required to address some of the gaps in knowledge about allied health professionals in rural and remote Australia. While the current study is not intended to be a labourforce study, it will provide a range of information about the allied health workforce in rural and remote Australia which will inform decision making and program planning.

This study will also look at key factors in the provision of allied health services with specific foci on issues facing sole allied health professionals and issues pertaining to education, training, professional support and information technology.

Finally, the study will provide broad direction and recommendations for program development to support and improve allied health services in rural and remote areas, so that appropriate strategies are sustainable. Key recommendations in this study may be applicable to government, employers, professional associations, as well as allied health professionals themselves.

1.2 Identification & Identity

A major issue facing allied health professionals and their stakeholders is that the inclusion/exclusion of professions in the group referred to as “allied health” is poorly understood and often defined differently according to the source and purpose of identification.

This confusion can lead to difficulties in terms of how allied health professionals work, both in relation to their own identity and the perception of their identity by others. Clarification of this is a critical issue, particularly in rural areas where allied health professionals, who may be sole practitioners in their allied health specialty, work closely together in teams, and where program funding and employer groups require “allied health” to work as a homogenous group. Development of an agreed identity of allied health is therefore critical as an issue internally to the relevant professions and professionals, and externally to the health system.

There is no nationally or internationally accepted definition of “allied health” and this contributes to the difficulties in studying this group of health professionals. In fact, the recent Healthy Horizons (1999) document, which defines the direction for health in rural and remote Australia, could not offer a clear definition of what “allied health” is. In contrast, while Hodgson and Berry (1993) describe administrative definitions which include those health professionals that are not medical or nursing professions, this definition does not add to the value or understanding of the role and contribution of allied health professionals. Further, in their report “Allied Health: The establishment of an identity” Hodgson and Berry (1993) broaden the definition to include:

“those identifying themselves as rural allied health professionals... have been defined as university trained health professionals (other than medical practitioners or nurses) involved in direct patient care and / or services to the community.” (p.iii)

In such a definition there is still no singular or distinct definition of an allied health professional. While it is clear that many of the traditionally included professions within the scope of allied health practice have many similarities, a functional definition must be agreed upon to provide a descriptive definition of an allied health practitioner.

An alternative functional definition is that utilised in the Commonwealth Department of Health and Family Services, *Service Delivery Guides and Selected Case Studies - Ambulatory Care Reform Program* (1997, P.72) which states,

“Allied health practitioners are health professionals from one of several individual professions who have, for the purpose of presenting a collaborative position, come together to work towards a common goal. Professions represented in any allied health practitioner group vary depending on the goal of their collaborative effort.”

In adopting this definition for a review of metropolitan allied health services in Western Australia, allied health professionals were further identified as belonging to three groups of categories including clinical, investigative / diagnostic and resource (MHSB, 1998; Compton and Robinson, 1997).

Recommendation 1(i)

A definition of “allied health” must be developed and agreed on by all key stakeholders such as professional bodies, employers, government and government agencies.

Identifying who should be included in the group referred to as “allied health” is challenging, not only from an external perspective, but from an internal perspective as well. While other health professionals recognise early in their training that they are a member of a specific group and may specialise later (e.g. in completing medical or nursing training, specialisation comes after a basic identity with that group has been established), this is not the case with allied health professionals.

Developing an identity occurs in the reverse process for an allied health professional when compared to a doctor or a nurse. For medicine and nursing a common profession is established at the outset of training, prior to specialisation later in the career pathway. In allied health the reverse is true, where the individual specialisation occurs first and then there is an expectation after graduation that the individual will belong to the generic group of allied health. Figure 1.1 demonstrates the specialisation process highlighting the development of specialisation after the establishment of a primary identity, while Figure 1.2 shows the differing process in the development of allied health professions.

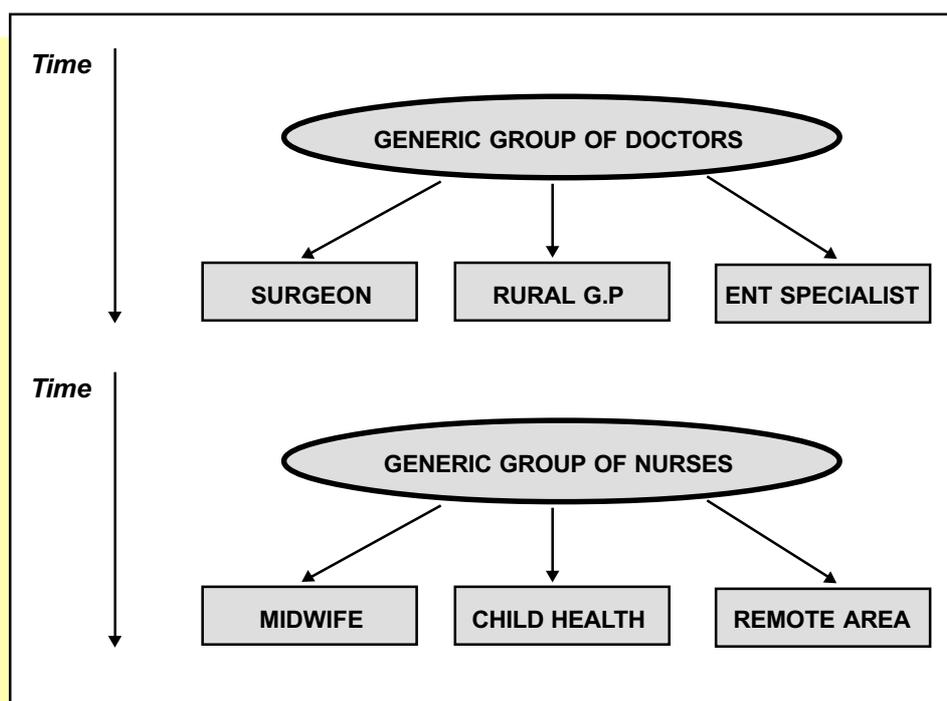


Figure 1.1: Development of identity of a professional group (a) doctors (b) nurses

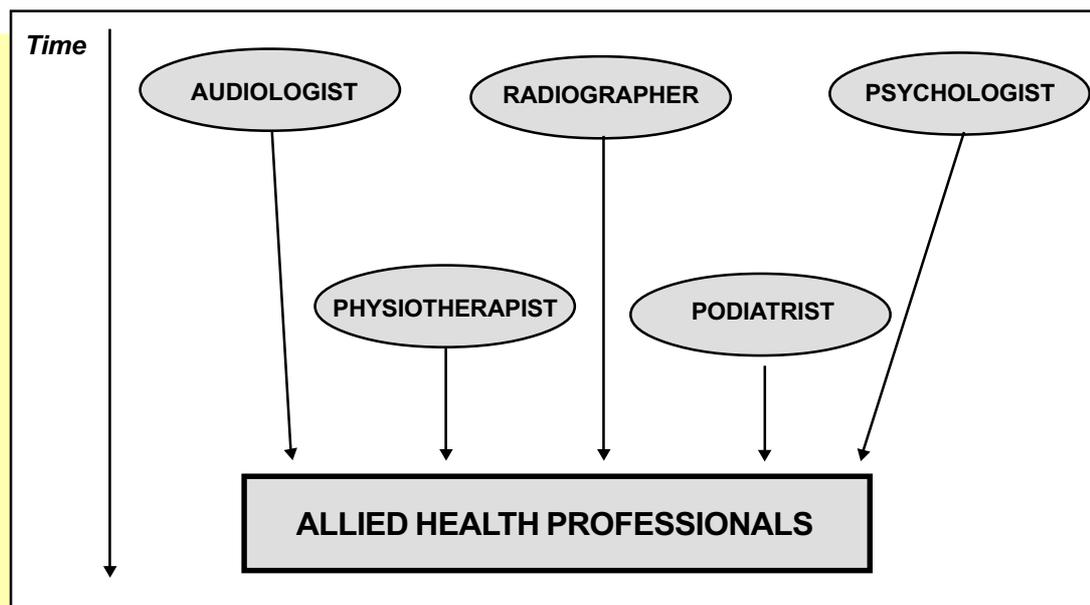


Figure 1.2: Development of an identity for allied health professionals

In fact, between three and six years of specialised training in a particular allied health profession will occur prior to any formal connection being made between the professions, and this contributes to the poorly identified sense of being an allied health professional. Reasons for this are varied, however, it has been suggested by Services for Australian Rural and Remote Allied Health (S.A.R.R.A.H.) (Victorian Allied Health Professional Conference, 1998) that unless steps are taken to address this identity issue at the undergraduate level, it will be difficult to establish an allied health identity later in professional life. Perhaps, through the development of a unified identify as an allied health professional, these professionals will first identify themselves as an allied health professional, and then as associated with a particular specialty.

It is apparent from this discussion that these professional and inter-professional issues may need clarification in the allied health professions. While allied health professionals continue to be grouped as a team in the work environment, the development of a cohesive professional group has to follow individual professional specialisations. This is the opposite process that occurs for the other health professions.

1.3 Allied Health Workforce

The literature on rural allied health professionals is limited. There has been very little discussion of the role of allied health professionals, either within the context of the collective or individual professional groups generally, or as a part of the structure of a whole of health system and all of its complex and connected parts. In fact, data is unavailable even on an international basis with Gupta and Konrad (1992) describing data on the allied health workforce in the United States as grossly inadequate.

While there is no comprehensive data available to describe the allied health workforce, some information is available on a global scale. The Australian Bureau of Statistics

(1999) identified the number and proportion of persons employed in health occupations in Australia in 1998-99. While no specific grouping was formed for allied health professionals, or was there any analysis of rural or remote compared to metropolitan, the following table illustrates the significant number of allied health professionals in Australia.

Table 1.1: Health professionals in Australia

OCCUPATION	NUMBER '000	% OF TOTAL PERSONS EMPLOYED IN HEALTH OCCUPATIONS
Medical	45.7	17
Nursing	168.7	63
Dental Practitioners	7.4	3
Pharmacists	13.7	5
Allied Health (Total)	32.6	12
Includes subgroups of:		
Occupational Therapists	6.4	
Physiotherapists	10.9	
Speech Pathologists	1.8	
Podiatrists	1.1	
Medical Imaging	10.3	
Dietitians	2.1	

(Source: Australian Bureau of Statistics, 1999)

While it is useful to have an indication of overall allied health numbers, this table is problematic for several reasons;

- It does not include all groups commonly identified as allied health professionals. In fact, five major allied health professions are omitted from the ABS classification (Audiology, Orthotics, Orthoptics, Social Workers, and Psychologists). The data is therefore an underestimate of the allied health workforce. It may be that the remainder of the allied health workforce is included in the 'other category' of health occupations, or in the miscellaneous category (n=71000) that was not included in percentage categories.
- Data accuracy is also questionable. When numbers are less than 4400 (as is the case for dietitians and speech pathologists), errors of over 25 percent may occur (ABS, 1999).

In effect, all that can be safely extrapolated from this data is that at least 13 percent of the health workforce in Australia is allied health. Using these figures as a basis for some calculations, the proportion of allied health professionals to other health professionals is:

- five allied health professionals for every 7 doctors;
- four allied health professionals for every 21 nurses;
- four allied health professionals for every one dentist; and
- three allied health professionals for every one pharmacist.

Another feature of the allied health workforce highlighted by the Australian Bureau of Statistics study (1999) was the female dominance of many of the allied health professional groups.

Table 1.2: Participation in health occupation by sex

HEALTH OCCUPATION	% FEMALE	% MALE
Allied Health		
Speech Pathologist ^b	96	4
Occupational Therapist ^b	90	10
Physiotherapist ^b	75	25
Medical Imaging ^a	63	27
Nursing		
Registered Nurses ^b	91	9
Enrolled Nurses ^a	94	6
Medical		
General Practitioners ^b	32	68
Medical Specialists ^b	21	79
Dental Practitioners ^b	18	82
Pharmacists ^a	39	61

^aSource: Australian Bureau of Statistics, 1991)

^bSource: Australian Bureau of Statistics, 1999)

Perhaps related to the predominance of female allied health professionals is the high proportion of the potential allied health workforce who are non practicing, ranging from 22 percent (Speech Pathology) to 48 percent (Orthoptics) (Department of Labour Relations 1973 in Palmer and Short, 1989).

Allied health professionals are also employed in both public and private settings, with the level of involvement in each varying considerably between professions. While 76 percent of Podiatrists and 45 percent of Physiotherapists are involved in private practice, this rate reduces markedly for other professions such as Speech Pathologists (17%) and Occupational Therapists (12%) (National Rural Health Strategy, 1991).

Harris (1992) identified in a survey that, of the rural allied health workforce, 48 percent were located in rural major, 34 percent in rural other and 13 percent in remote major communities. The predominance of allied health professions in larger rural areas is not unexpected as services may be provided to the more remote areas on an outreach basis.

In terms of growth of professions, the category "other" in the Australian Bureau of Statistics Study (1991) of health occupations (which predominantly includes allied health professions) has shown significant growth. Growth was 28.2 percent from 1976 to 1981, 20.9 percent from 1981 to 1986, and 17 percent from 1986 to 1991.

Table 1.3: Percentage growth in professions from 1976 – 1991

PROFESSION	1976-1981 (%)	1981-1986 (%)	1986-1991 (%)
Medical Practitioners	32.5	17.0	18.9
Dentists	20.6	14.9	6.5
Nurses	17.0	14.5	3.5
Other (n.b. includes some Allied Health)	28.2	20.9	17.0

Little comprehensive data exists on a national basis to describe the allied health workforce and data on State or regional basis is fragmented. Several of these fragments may assist in indicating what the picture may look like, however the critical pieces are not yet identified. While this project is not purely a workforce study, one of the aims is to contribute to the knowledge of the rural and remote allied health workforce nationally.

A broad analysis of health professionals by regional areas shows a gross distribution analysis of health professionals in rural and metropolitan areas. To concur with the Australian Bureau of Statistics figures (1991), 1991 population figures have been utilised from the Regional Population Growth Australia (Australian Bureau of Statistics, 1997) data. Appendix One shows the number of 'other' health professionals¹ per population in statistical divisions of each State and Territory, also comparing major metropolitan areas with non-metropolitan areas and whole States/ Territories.

Figure 1.3 and Table 1.4 demonstrate the broad maldistribution by population by a professional grouping that is predominantly comprised of allied health practitioners. While these figures again cannot be taken as definitive of the allied health professional group due to the inclusion of some non-allied health groups, as well as possible exclusion of other allied health professions, the picture shown describes the broad trend.

Of note is the relative consistency of "other" health professional to population in major metropolitan areas (ranging from 1:393 in Tasmania to 1: 484 in Darwin), however this is not the case in non-metropolitan areas (see Table 1.4). In these areas, ratios range from 1:575 in New South Wales to 1:904 in the Northern Territory. In considering individual non-metropolitan statistical divisions across Australia the ratio varies from 1:536 in Tasmania's Northern Region (which includes Launceston) to 1:1250 in Queensland's Central West.

¹ Includes pharmacists, occupational therapists, optometrists, physiotherapists, speech pathologists, chiropractors and osteopaths, podiatrists, radiographers and other health and diagnosis treatment practitioners.

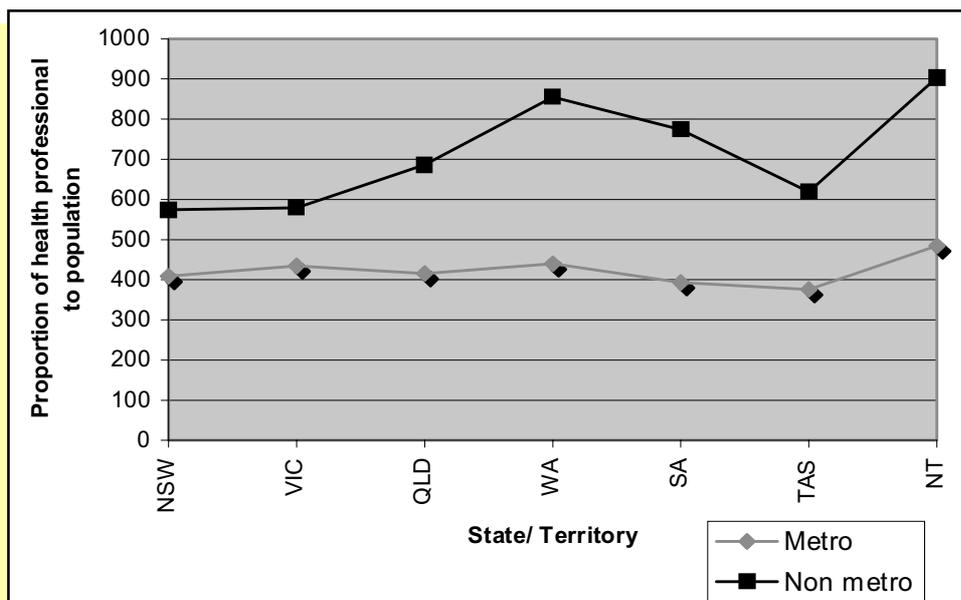


Figure 1.3: Proportion of 'other' health professionals to population, by State and Territory

Table 1.4: Proportion of 'other' health professionals to population by State and Territory

STATE	PROPORTION OF 'OTHER' HEALTH PROFESSIONALS TO POPULATION
Victoria	
Overall Vic	1:468
Melbourne	1:435
Other than Melbourne	1:580
Queensland	
Overall Qld	1:530
Brisbane	1:416
Other than Brisbane	1:686
Western Australia	
Overall WA	1:504
Perth	1:439
Other than Perth	1:855
South Australia	
Overall SA	1:453
Metropolitan Area	1:393
All non metropolitan	1:775
Tasmania	
Overall Tas	1:494
Greater Hobart Area	1:376
All other than Greater Hobart	1:619
Northern Territory	
Overall NT	1:649
Darwin	1:484
All other than Darwin	1:904

[Data by Statistical Division for each State and the Northern Territory is shown in Appendix One]

Few workforce studies have examined data by profession and rural area, although there has been some work on a national basis for the physiotherapy, podiatry and pharmacy professions. While not specific to rural areas, there are some global statistics that can be drawn from these studies.

In an examination of the podiatry workforce the following data were of relevance and interest to a discussion on rural podiatry:

- Only 17.7 percent of podiatrists work in rural and remote areas which is significantly less than the proportion of population in these areas (27%);
- Rural podiatrists are more likely to be female (77.3%) compared to 65.3 percent in the metropolitan area;
- Male podiatrists in rural and remote areas are likely to be younger (average age 30 years) than those working in metropolitan areas (average age 36.9 years); and
- 44.7 percent of rural podiatrists are likely to be salaried in 'rural other' and remote areas, compared to 27.6 percent in rural major, and 26.1 percent in metropolitan areas (AIHW, 1996).

While information in these studies is of interest and stimulates broad discussion, as a national summary the data lacks the specificity required to examine trends in more detail.

While much attention has been paid recently to the need for overseas trained medical practitioners to support Australia's rural health system, the overall percentage of health practitioners born overseas is also significant for other health professional groups. The Australian Bureau of Statistics study of health occupations (1991) identified 34 percent of medical practitioners and 24 percent of nurses are born overseas. For the group entitled *health diagnosis and treatment practitioner*, which includes several allied health professional groups, 31 percent were born overseas (ranging from 17% for speech pathologists to 34% for dentists). For all groups, these figures are higher than the national average of the population born overseas (22.9%). Again these figures may lead to general assumptions about the health workforce and the ability of Australia's tertiary education institutions to provide an adequate number of Australian graduates (although the data does not distinguish between those who were born overseas from those who were recruited from overseas). More importantly, the data poses further questions for the rural allied health workforce in terms of determining the balance between Australian trained graduates and recruitment, and in the impact that overseas recruitment (to and from Australia) has on the rural allied health workforce. Questions can also be raised about differences between overseas recruitment needs in the rural areas compared to the metropolitan area.

Some of the key data from other studies that indicate further direction for the current study include information from New South Wales (Gadiel and Riddout, 1993). In their study of the allied health workforce in New South Wales, Gadiel and Riddout demonstrated key barriers to the provision of allied health services. Barriers included vacancy rates being more than double those of similar professions in the metropolitan area with vacancies ranging from 22.8 percent for Physiotherapy positions to 83.7 percent for podiatry positions.

The age distribution in New South Wales indicated that the average age of an allied health practitioner in rural New South Wales was 35.6 years, with 36 percent being less than 30 years of age. There were variations between the individual professions, for eg. 39 percent of rural Speech Pathologists were under the age of 25 years compared to only 6 percent of Psychologists (Gadiel and Riddout, 1993).

1.4 Allied Health Organisation and Service Provision in Rural and Remote Australia

Allied Health recruitment and retention issues and allied health management structures have received some attention in the literature (Boyce, 1996; Ovreteit, 1991), however, many of the other pieces of evidence purported to form part of the picture are in fact borrowed from studies of similar issues in other health professions. As with workforce issues, the research is fragmented and often incomplete.

Several key issues are relevant to allied health organisation in Australia and include elements that critically influence the health improvement of rural communities.

1.4.1 Allied Health in a Political Context

The health industry in rural Australia is a complex mixture of politics, professions and communities, and consequently decision making is a complex blend of interrelated influences. One of those is the political influence of health decision making at all levels.

In discussions of the balance of health service delivery across all levels of government, allied health features rather poorly in a rural health context. While there is some nice rhetoric about multidisciplinary practice and a primary health care approach based on a community's health need, the practice of politics and funding belies these principles. On the Commonwealth agenda, the focus has remained on medical services and pharmaceutical products, and as such allied health practitioners fit poorly into that national agenda. Recently funding has been allocated for allied health in the More Allied Health Services program (Commonwealth of Australia, 2000), however, the funding is limited and the detail and implementation of this program are not clear.

Specific funding of rural and remote health again demonstrates an imbalance across the health professions. Existing programs include the General Practice Rural Incentives Program, which provides significant funding for programs such as the Divisions of General Practice and support groups for rural GP's spouses. Students of Medicine are supported by the Commonwealth with funds available nationally for the administration of student clubs and the provision of scholarships for medical students to increase their exposure to rural practice. To date there has been no Commonwealth funding for allied health professional support or programs.

The allied health professions also need to be considered in the context of professional politics. Soothill, Mackay and Webb (Eds, 1995) describe the difficulties facing the professions in work environments where interprofessional collaboration is described as a process that requires *"a willingness to listen and hear what others are saying. It requires some bravery to stand aside from one's own professional group. It also requires a continuing acknowledgment of the contribution which others have to make"* (p.10).

The politics of professions are probably felt the strongest in the health (particularly medical) field, with the literature describing the presence of political and professional dominance by the medical profession. Palmer and Short (1994) and Beattie (in Soothill et al., 1995) described this dominance in terms of the development of both the nursing and allied health contexts. Beattie (et al., 1995) described the challenges as "tribalism" (p.11) in the professions and identified the role that education has had in the separatism of the professions. While there may be some moves towards integration through the recent Federal Government development of University Departments of Rural Health, the

outcomes of these Departments on the development of integration of the professions has yet to be determined.

While at the individual allied health practitioner level, politics may seem too distant to have an effect on rural practice, the effect of professional politics and the influence of this can not be underestimated. Palmer and Short (1994) identified key inter-professional issues between medicine and nursing, noting deterioration in recent years of doctors' awareness of the role and contribution of nurses. Nurses, in turn, were reported to be in competition with allied health professionals as the role of allied health professionals encroached on services that were traditionally seen as the generalist nurse's role (Palmer and Short, 1994). In addition Palmer and Short note that "*while the allied health occupations have neither the influence of the medical profession, nor the numbers of the nursing profession they are usually on strong demand in health workforce*" (p.164).

The relevance of the political discussion for this project is complex, and relates to key issues in the development of rural and remote allied health practice including the self perceptions of allied health professionals within the health system. It also relates to the critical examination of the relationships between the allied health professions as viewed by other key players in the rural health industry including government, employers, medical staff and nursing.

1.4.2 Support Structures

Boyce (1996) and Ovretveit (1991) examined formal structures for the management of allied health and its contribution to corporate goals through the formation of a "Division of Allied Health Model". Such a model has been inconsistently applied in rural health management structures across Australia. Management structures vary considerably, and include allied health managers, allied health professionals managed by another health professional such as a Director of Nursing / Health Service Manager or Medical Practitioner at a health service unit level, and allied health staff being managed individually by the General Manager of a District/ Region. Further research into the appropriateness of these models for the management of allied health professionals in rural and remote Australia is required. This study will describe the various allied health management models utilised in rural and remote Australia.

In addition Boyce (1996) identified the need for a significant allied health voice in corporate policy, planning, and decision making. It is this input to policy agendas that can be critical in the professional politics of rural health. In fact Palmer and Short (1994, p. 293) note that "*exclusion from the policy agenda...is often a major barrier to be overcome before successful policy making can be undertaken*". These difficulties are well highlighted when it is considered that representation of allied health in State health departments is limited, with few State/Territory health departments having senior allied health representation for advice and input.

1.4.3 Recruitment and Retention of Allied Health Practitioners

Significant interest has been directed to the recruitment and retention of rural health practitioners (Harrison, 1997; National Rural Health Strategy, 1994; Hays et al., 1995; Huntley, 1991; Mills, 1997; Hodgson, in Taylor and Hodgson, 1995; National Rural Health Policy Forum, 1999; Sturmey and Edwards, 1991; Rourke, 1993). While only a small number of the references referred to are specific to rural and remote allied health practice, there are considerable parallels that can be drawn.

So critical is the issue of recruitment and retention, it forms a major goal of Healthy Horizons: A Framework for Rural, Regional and Remote Australians 1999- 2003 (1999). This document, which was agreed on by all State/Territory Governments as well as the

Commonwealth Government, recognises the ongoing difficulties of retaining a skilled and responsive rural health workforce and identifies several key actions that are required. Each of these areas are as equally relevant to the rural and remote allied health workforce as they are to other health professions. The seven key actions identified include:

1. Remove legal and professional boundaries to practice for health professionals in rural, regional and remote Australia in order to promote flexible services and improve clinical and management capacities;
2. Tailor training programs to meet the needs of health professional and the communities in which they work;
3. Implement education and employment strategies to encourage greater participation of Aboriginal and Torres Strait Islander peoples in health sciences education and management;
4. Encourage and support Aboriginal and Torres Strait Islander staff to work in all health services;
5. Implement rural workforce recruitment and retentions strategies in collaboration with health professionals and local communities;
6. Provide opportunities and support for rural, regional and remote health professionals to maintain and advance skills, develop capacity for sole practice and encourage personal initiative; and
7. Increase numbers of students undertaking rural preparation courses and choosing careers in rural, regional and remote areas.

(Healthy Horizons, p.19, 1999)

Key points relevant to allied health from the Healthy Horizons recommended actions include:

- Issues such as differences in professional registration between States / Territories and between professions, and access to provider numbers for rural and remote practitioners are particularly relevant to action one;
- There is no data to measure the participation of Aboriginal and Torres Strait Islander peoples in allied health professions, although it is anticipated the participation rate would be low at this point;
- Action 5 calls for program implementation for recruitment and retention. While this has been dealt with to varying degrees at local levels, it has not been considered comprehensively for all allied health professional groups; and
- The issue related to sole practice noted in action 6 is particularly relevant to the current study with allied health professionals being unique in that many positions are sole practice and are often filled with recent graduates. This is a significant focus of the current study.

To meet the goal of a skilled and responsive health workforce (National Rural Health Policy Forum, 1999) it is also important to recognise that skills for rural practice may be different to skills required for metropolitan practice. It is important therefore to consider what is an appropriate set of skills for rural allied health practice.

Cook (1998) identified several skills that are required by rural allied health professionals early in their careers, such as:

- diverse clinical skills resulting in specialisation as a generalist clinician;
- management abilities in areas such as data management;
- service planning & negotiation;
- community liaison and development;
- self management in considering and advancing one's professional development while often working as a sole practitioner; and
- the need to be flexible in service delivery and management.

Skills identified as important to a rural General Practitioner which may be equally transferable to other health professions are highlighted in a simple but clear manner by a medical student in an essay competition (Cussons, Williams & Power, 1995) and include:

1. Medical Competence (or clinical competence for other professionals);
2. Knowing your limitations;
3. The ability to say no;
4. The ability to work as a team;
5. Skills within the community other than medical (clinical for other professionals);
6. Recognition of the social structure of the community;
7. Skills in health promotion;
8. The use of support networks;
9. Commitment; and
10. Sense of Humour.

Once a rural practitioner has been recruited to a position, the challenge remains to retain that professional. Harris (1992) identified that 29 percent of allied health practitioners in his study had worked in rural or remote areas for less than two years and a further 24 percent had been in a rural or remote area for 3 - 5 years. While this is a disturbingly high figure, of further interest is that 47 percent of respondents to Harris' survey had been employed in a rural area for six years or more. While considerable attention is given to the reasons people leave rural areas, further attention must be given to the factors that encourage practitioners to stay in rural areas.

Some of the factors associated with practitioners leaving rural practice were identified in Huntley's (1991) multidisciplinary study and included:

- professional isolation;
- poor access to education and training;
- social isolation;
- lack of educational and employment opportunities for family;
- lack of financial incentives;
- lack of locum or agency relief;
- poor staffing levels;
- poor understanding of all health professionals roles;
- lack of opportunity to use special skills; and
- limited opportunities for career advancement.

However there are also many positives of rural practice as identified specifically for allied health professionals (Hodgson & Berry, 1993) including:

- practical skills development;
- multi skilling opportunities;
- closer professional relationships;
- ability to develop management skills;
- a sense of autonomy;
- the ability to be flexible and creative;
- the variety of work;
- ability to form close community relationships; and
- lifestyle.

Clearly the two lists are similar and in one situation a positive factor for retention can be a negative in another situation.

Successful recruitment and retention does not begin with the placement of a newspaper advertisement seeking to fill a position. Action seven of Healthy Horizons (1999) relates

to the implementation of undergraduate strategies to impact on recruitment. Rural health employers and the health industry have for some time looked to the undergraduate education of future practitioners as a starting point. Hays et al (1993; 1995) cited Kamien (1987) noting that prior rural experience was a strong indicator of a decision to enter rural practice, with Harris (1992) indicating that 45 percent of allied health practitioners had a rural upbringing. Based on this, various initiatives have been established to firstly encourage country school students to consider a health profession and then to support those students through undergraduate rural scholarships (WACCRM, 1996).

In addition, undergraduate student clubs have been established to support students considering rural careers, to facilitate undergraduate exposure to rural health and to provide information about the differences in rural health practice and lifestyle (Hays et al., 1993). Other than the development of skills in preparation for rural practice, the benefits of interdisciplinary collaboration will provide useful opportunities to develop a concept of the health care multidisciplinary team at an early stage in a practitioner's career. In fact, Mackay, Soothill and Webb (in Soothill et.al., 1995) note that *"positive attitudes to inter and multi professional working are best engendered during pre-qualification education, before the recruits receive the traditional view of working"* (p. 6).

Kamien (1996) identified an additional function of the student clubs as providing potential influence to change the undergraduate curriculum from having a purely academic and research purpose to one that incorporates social responsibility with regard to rural practice. Kamien (1996) proposed that these principles are relevant to medical, nursing and health science (allied health) schools in universities.

As a recent Commonwealth initiative, funding was provided to establish University Departments of Rural Health. These Departments have been established to meet several objectives, some of which are to;

- *"build links and affiliations between the universities and health service providers to develop the knowledge and skills of students and trainees"*;
 - *"provide a range of learning experiences in rural / remote health for undergraduate and postgraduate students and trainees at various levels from [sic] a range of health professions"*;
 - *"develop, implement and evaluate collaborative teaching / learning strategies which encourage students' and trainees' active participation in the learning process"*; and
 - *"increase the number and effectiveness of health professionals willing to act as mentors and advocates for rural practice roles, clinical teachers and preceptors"*.
- (Rural Health Development, 1998)

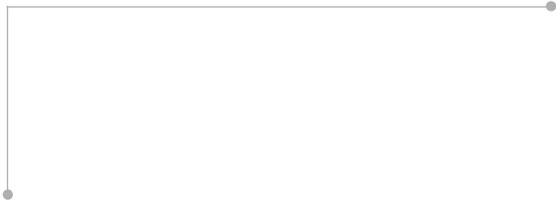
1.5 Introduction to the Study

As noted in the introduction, a study such as this will provide some of the direction for the development of programs for the support, education and training of allied health professionals in rural and remote Australia.

The current study will broadly examine issues impacting on the allied health workforce in rural and remote Australia so that more informed decision making and program planning can occur.

Key factors in the provision of allied health services will also be included with specific foci on issues facing sole allied health professionals and issues pertaining to education, training, professional support and information technology.

The recommendations will assist government, employers, professional associations, as well as allied health professionals in improving support, education and training programs. The current study will also facilitate dialogue on critical areas requiring further investigation in the future.



2.1 Scope

This project was commissioned by The Rural Health Support, Education and Training Program [RHSET], through the Department of Health and Aged Care. The purpose of the study was to inform the Commonwealth of issues affecting rural and remote allied health professionals. Specifically, this information would assist RHSET in decision making regarding future priority areas for the support of the allied health workforce working in rural and remote areas.

Given the potential enormity of the study, and the lack of consistent National data available, negotiations were undertaken during the scoping phase of the project between RHSET and SARRAH, to ensure that the scope of the project was well understood. The management of scope creep throughout the duration of the project has required significant effort.

During the process of undertaking this study, many industry groups, Government and University Departments and other individuals, have requested specific information/analysis from the quantitative data collected. Due to the finite allocated funding and limited resources, it has not been possible to respond to all of these requests.

2.2 Underlying Principles of the Project

The key principles that underpinned each activity in the project included:

- a multidisciplinary approach must be the priority focus;
- the outcomes must be transferable – across States/Territories and professions;
- the recommendations must reflect allied health best practice; and
- the project must be conducted with appropriate customer focus.

2.3 Project Reference Committee

The project was overseen by a project reference committee. This comprised of members of the executive [of SARRAH Inc] as well as nominated SARRAH members. Representation from ARRAHT [Australian Rural and Remote Allied Health Taskforce] was included on the committee. Membership of the reference committee during the whole of the project has included¹:

<i>Chris Ward</i>	President SARRAH; Radiographer, Bathurst, NSW
<i>Renae Moore</i>	Chairperson ARRAHT [1998/9]; Senior Speech Pathologist, Darwin, Northern Territory
<i>John Ward</i>	Chief Radiographer, Bathurst, NSW
<i>Jason Warnock</i>	Private Outreach Podiatrist, North Queensland
<i>Michael Bishop</i>	Director Allied Health [1999] Toowoomba, Qld
<i>Kathryn Fitzgerald</i>	Senior Policy Development Officer, Rural Health Development, Western Australia
<i>Lisa Hudson</i>	Director of Speech Pathology, Toowoomba, Queensland
<i>Danielle Hornsby</i>	Telemedicine Manager, Queensland
<i>Shirley Preston</i>	Senior Occupational Therapist Darwin, Northern Territory.

2.4 Project Human Resourcing

As a wholly voluntary organisation, it was necessary to employ a senior project officer to carry out this project under the guidance of the Project Reference Group. As an organisation, resources were not available to support a project of this magnitude within the voluntary commitments of its membership.

This senior project officer remained on the project for a total of six months, and was able to initiate the data collection processes, before her departure for permanent employment.

Following this change, three members of the Reference Group undertook the processes of collation, analysis, evaluation and write up of the report.

2.5 Review and Analysis of Current Initiatives

The introductory phase of the project included review and analysis of key issues as well as potential gaps in knowledge in reference to this project.

¹ This information was correct at the time that the individual was a member of the Reference Committee.

2.6 Open Consultation

Open consultation regarding this project was encouraged through:

- open invitation for comment in professional newsletters;
- establishment of a website with updated information on the project and encouraging comment at all stages of the project;
- rural health media coverage, particularly to capture feedback from non-practicing allied health professionals.

2.7 Targeted Consultation

Targeted consultation included invited consultation from:

- individual allied health professionals [public, private, and non practicing];
- ARRAHT;
- SARRAH;
- Line Managers of allied health professionals;
- Universities, including University Departments of Rural Health;
- Rural Health Training Units and the National Association of Rural Health Education Organisations;
- National Rural Health Alliance and member bodies.

This has occurred through:

- written feedback;
- informal meetings;
- focus groups; and
- questionnaires.

2.8 Quantitative Data Collection

A survey questionnaire was developed to collect consistent quantitative data from around Australia. This questionnaire was a lengthy 65+ question tool, and included questions in each of the following areas:

- demographic details;
- educational background;
- employment/work details; and
- education, training and professional development.

There were 4000 questionnaires printed. The dissemination of this tool relied on the network approach. Key SARRAH contacts in each State were provided with questionnaires, and were required to coordinate the dissemination of these to allied health professionals in that State. A covering letter described the purpose of the study, and encouraged individuals to ensure that other allied health professionals in their immediate work environment also completed and returned the survey.

1652 questionnaires were returned for collation. 32 surveys were discarded from the sample due to:

- inappropriate professional background of respondent [eg nursing]; and
- survey responses were insufficient or incomplete.

A total of 1620 questionnaires were considered appropriate, and were included in the data analysis.

2.9 Data Analysis

Professional statistician services were purchased from a large government organisation to ensure that the following processes were undertaken with scientific rigour:

- data coding;
- data entry;
- data validation;
- collation of frequency counts for each question;
- designing cross-tabulation counts;
- conducting statistical significance analysis on cross tabulation data; and
- expert advice on interpretation of results.

Cross tabulation allowed more detailed analysis and provided the following sections of information:

- general workforce information;
- education and training;
- student placements and undergraduate supervision;
- information technology; and
- sole practice.

2.10 Qualitative Validation of Data

In order to validate the quantitative data, and also to provide more indepth information, a number of rural and remote facilities were visited throughout the project, where focus groups and individual interviews were conducted with allied health professionals, students on placement, line managers, and others involved in allied health programs.

Due to financial constraints of the project, all States/Territories were unable to be targeted for this phase of the project, however, all attempts were made to gain representative information from isolated, rural and regional centres, where it is understood the perspectives and allied health issues may be varied.

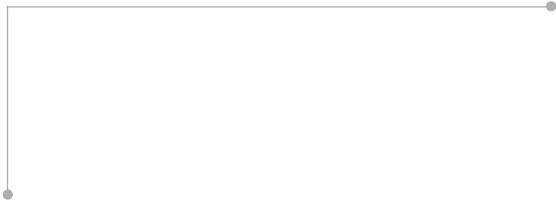
Due to the inability to de-identify individuals in this process, the communities will be listed separately to the professionals who were interviewed. Individuals who were interviewed, were assured that their responses would remain confidential, and that all attempts would be made to maintain their anonymity.

The following communities were visited for consultation:

- Mt Isa, Queensland [*a regional centre extremely isolated from other centres/capital cities. Outreach services are commonly provided to remote Indigenous communities*]
- Thursday Island, Queensland [*A small island community servicing the Torres Strait and the far-north Peninsula of Queensland*]
- Wagga Wagga, NSW [*a regional centre providing a base for outreach services to small surrounding communities*]
- Launceston, Tasmania [*a regional centre providing services to smaller communities in Tasmania*]
- Devonport, Tasmania
- Burnie, Tasmania [*a small rural community with a small number of sole clinicians*]
- Hobart, Tasmania [*a capital city, isolated from the mainland, providing a range of visiting services to the State*]
- Goondiwindi, Queensland [*a small rural centre on the border of NSW/Qld, mostly sole clinicians providing some outreach services*].

The following professions and individuals were included for consultation. The number of consultations varied in each location from one to 11 people:

- physiotherapy;
- occupational therapy;
- speech pathology;
- podiatry;
- dietetics;
- psychology;
- allied health student on placement;
- manager of regional allied health department; and
- University Department's of Rural Health.



3.1 Introduction

This chapter provides a description of the characteristics of the allied health workforce within Australia. 1620 survey responses were collated and analysed to provide these results, and adequate numbers of responses were obtained to validate the use of statistical methods.

Many parameters were used in order to provide some level of detail about the composition of the allied health workforce, including the obvious demographic parameters, as well as others that provide some information about recruitment and retention rates. In this chapter, there is a level of cross-purpose with other chapters, and as such the reader is urged to read this chapter in the context of the full study.

3.2 Data and Results

3.2.1 Gender

The majority of survey respondents were female (84.2%). Respondents who were male accounted for 15.8 percent.

3.2.2 Age

Table 3.1: Overall age distribution of respondents

AGE	% OF TOTAL
Under 25 years	17.1
25-29 years	22.3
30-34 years	13.6
35-44 years	26.1
45-54 years	15.9
56-64 years	04.2
65+ years	00.2

There were seven categories allocated to account for age. Table 3.1 illustrates the age range and distribution of respondents. 40.0 percent of respondents were aged 29 years or less. Respondents aged 35-44 years accounted for 26.1 percent, or over one quarter of the survey sample.

3.2.3 Profession

Ten profession categories were used in the survey, and the distribution of respondents is illustrated in Table 3.2. The majority of respondents were from a physiotherapy background (30.3%).

Table 3.2: Professional background of respondents

PROFESSION	% OF TOTAL
Audiology	1.9
Dietetics	6.3
Occupational Therapy	20.8
Physiotherapy	30.3
Podiatry	3.6
Psychology	5.1
Radiography	6.5
Social Work	11.5
Speech Pathology	13.6
Other	0.3

A cross tabulation and Chi Squared test for *Gender* and *Profession* demonstrated a highly significant difference ($p < 0.001$) between professions for gender. Table 3.3 demonstrates the percentage of males and females within each of the professions. *Radiography* and *Audiology* were most likely to have a larger proportion of males, compared with professions such as *Dietetics* and *Speech Pathology*.

Table 3.3: Distribution of gender within professions

PROFESSION	% MALE	% FEMALE
Audiology	36.7	63.3
Dietetics	02.9	97.1
Occupational Therapy	06.6	93.4
Physiotherapy	19.8	80.2
Podiatry	34.5	65.5
Psychology	24.1	75.9
Radiography	41.9	58.1
Social Work	16.2	83.8
Speech Pathology	02.3	97.7

A highly significant difference ($p < 0.001$) also existed between professions for age. Age distribution within professions is demonstrated in Table 3.4. The overall sample showed that 40.0 percent of respondents were under 30 years. A number of professions demonstrate an over-representation of respondents within the age ranges less than 30 years. These professions were dietetics (53.9%); speech pathology (52.3%); occupational therapy (50.7%) and podiatry (44.8%).

Table 3.4: Age distribution within professions (percentage of respondents)

YEARS	PROFESSION								
	Audiology	Dietetics	Occ Thy	Physio	Podiatry	Psychology	Radiography	Soc Wk	Sp Path
<25	6.7	24.5	26.7	14.2	17.2	7.2	10.5	8.1	25.5
25-29	30.0	29.4	23.7	20.8	27.6	21.7	17.1	14.5	26.8
30-34	13.3	15.7	12.9	13.4	24.1	9.6	11.4	9.7	17.3
35-44	23.3	22.5	23.4	32.6	19.0	21.7	31.4	25.8	19.5
45-54	26.7	5.9	11.4	14.8	8.6	27.7	22.9	31.7	9.1
55+	0.0	2.0	1.8	4.1	3.4	12.0	6.7	10.2	1.8

Professions where there was an under-representation of respondents aged less than 30 years (compared with the overall figure of 40.0 %), were Social Work (22.6%); Radiography (27.6%); Psychology (29.9%), Physiotherapy (35.0%); and Audiology (36.7%). This information is represented in Figure 3.1.

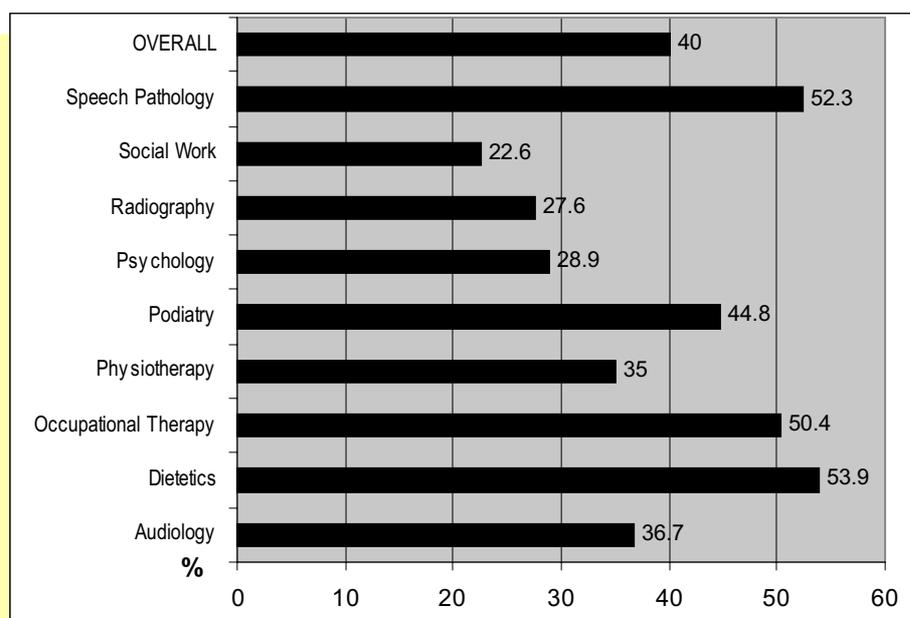


Figure 3.1: Percentage of respondents aged 29 years or less per profession

3.2.4 Educational Level

The majority of the respondents (93.4%) undertook their undergraduate studies within Australia. Of those who gained their degree overseas, 56.2 percent were from the United Kingdom. Podiatry and radiography had the highest proportions of overseas trained graduates (13.8% and 11.4% respectively).

Respondents in this sample were more likely to have gained their undergraduate qualification from (in rank order);

- University of Sydney (including Cumberland College) (20.5%);
- University of Queensland (17.7%);
- Curtin University of Technology (12.7%); and
- LaTrobe University (11.2%).

In the overall sample, 33.6 percent of respondents had a post-graduate qualification, and 15.2 percent indicated that they were currently undertaking post-graduate studies (29.8% of these were at a Masters level and 9.4% at a Doctorate level).

Table 3.5: Respondents (by location) intending to stay in current location to undertake future study

LOCATION	% OF TOTAL
Metropolitan area	71.4
Provincial city	63.9
Regional centre	63.1
Large rural town	56.2
Medium rural town	67.2
Small town/community	53.3
Town <2000 people	70.0

Of the people who were undecided, or not intending to undertake further study in the next three years, 41.6 percent indicated that the main reason was “lack of time”. Table 3.6 demonstrates the reasons for not intending to undertake post-graduate study.

Of the people who were not undertaking post-graduate studies, 52.9 percent indicated that they intended to study (post-graduate) in the next three years, and 62.8 percent of these intended to remain in their current location to study. Respondents who lived in a metropolitan area (71.4 %) AND a town<2000 people (70.0 %) were equally as likely to remain in their current location to study, compared with only 53.3 percent of respondents from a small town. This result is approaching significance (p=0.098), and is illustrated in Table 3.5.

Table 3.6: Reasons for not considering post-graduate study in the next three years

REASON	% ^a
Lack of time	41.6
Family/personal reasons	39.9
Too expensive	36.5
Lack of access	22.0
Not interested	20.1
Already have post-grad qualifications	10.9
Mode of tuition not appropriate	7.5
Other	14.6

^a = more than one option allowed when completing survey

Table 3.7: Respondents (by location) not intending to undertake post-graduate study in the next 2 years

LOCATION	% OF TOTAL
Metropolitan area	51.4
Provincial city	40.6
Regional centre	47.0
Large rural town	49.8
Medium rural town	52.7
Small town/community	46.8
Town <2000 people	55.6

People who were not intending to undertake post-graduate study were over-represented in the smaller locations. For example, 55.6 percent of respondents from towns <2000 people indicated in the negative, compared with 40.6 percent from provincial cities. These differences were not statistically significant ($p=0.119$). Table 3.7 indicates the proportions of respondents (according to location) who were not intending to undertake post-graduate study in the next 2 years.

3.2.5 Place of Employment

The largest proportion of respondents indicated that their employment was principally within *New South Wales* [NSW] (34.1%). Table 3.8 illustrates the distribution of respondents' *State/Territory of employment*.

Table 3.8: State/Territory of employment of respondents

STATE/TERRITORY OF EMPLOYMENT	% OF TOTAL
New South Wales/A.C.T	34.1
Queensland	20.9
Western Australia	13.3
Tasmania	10.2
South Australia	9.4
Victoria	6.9
Northern Territory	5.2

3.2.6 Location of Employment

The base location of respondents is indicated in Table 3.9. The largest group of respondents indicated that they were based in a Regional Centre, accounting for 31.9 percent of the total respondents. The *metropolitan* group included allied health professionals based in capital cities who provided outreach services to rural and remote areas AND allied health professionals based in non-capital cities with a population in excess of 100,000 people (eg. Newcastle, Townsville). This latter group did not necessarily provide outreach services. Also note that Darwin has been classified as a *provincial centre* for the purposes of this study (population between 50,000 and 100,000 people).

Table 3.9: Base location of respondents

LOCATION	% OF TOTAL
Metropolitan area	5.9
Provincial city	19.0
Regional centre	31.9
Large rural town	15.5
Medium rural town	13.4
Small town/community	11.1
<2000 people	3.2

A cross tabulation was performed between *Age* and *Location*, and demonstrated no significant difference ($p=0.165$) between *location* types for *age*. Table 3.10 indicates the distribution of age ranges across each of the location types. Large rural town is over-represented with respondents aged 29 years or less (50.6%), as compared with the overall proportion in this survey (40.0%). The smallest proportion of the group aged 29 years or less, occurred in towns <2000 people (25.5%).

Table 3.10: Distribution of age ranges for location types (percentage of respondents)

AGE (YEARS)	LOCATION						
	Metropolitan	Provincial	Regional Centre	Large Rural	Medium Rural	Small Town	< 2000 People
<30	36.9	39.8	41.3	50.6	39.8	33.7	25.5
30-34	13.0	16.8	13.6	11.1	12.3	9.9	15.7
35-44	33.7	23.2	24.8	25.1	25.6	30.2	31.4
45-54	13.0	16.5	15.4	9.9	18.5	19.2	19.6
55+	3.3	3.7	4.9	3.3	3.8	7.0	7.8

A cross tabulation between *Location* and *Place of Employment*, demonstrated a highly significant difference ($p<0.001$) between States/Territory on the proportion of respondents employed in each location type. Table 3.11 illustrates each State/Territory and the proportion of allied health professionals who were located in each of the location category types.

Table 3.11: Distribution of respondents' location types, according to place of employment (percentage of respondents)

STATE	LOCATION						
	Metropolitan	Provincial	Regional Centre	Large Rural	Medium Rural	Small Town	< 2000 People
NSW	2.4	10	47.9	12.2	14.8	10	2.6
QLD	7.6	35.4	19.2	9.8	12.8	11.6	3.7
VIC	4.5	20	20.9	23.6	13.6	10.9	6.4
SA	0	0	28.8	30.8	20.5	17.1	2.7
WA	1.5	0.5	33.7	26.3	18.5	15.1	4.4
TAS	28.4	29	21	13	2.5	4.9	1.2
NT	0	71.6	14.8	0	2.5	7.4	3.7

Victoria demonstrated the most even spread of respondents across locations and also had the highest proportion of respondents in communities with <2000 people, with 6.4 percent of the total for the State. The Northern Territory demonstrated the largest degree of variance between locations, with 71.6 percent of respondents indicating provincial city, 3.7 percent for town <2000 people, and only 2.5 percent for medium rural town.

Tasmania demonstrated the smallest percentage of respondents located in communities with <2000 people (1.2%), however all States/Territory demonstrated a very small percentage, with the largest proportion being for Victoria (6.4%).

Western Australia and South Australia demonstrated the most similar patterns of distribution of respondents, however generally there is dissimilar patterns across States/Territory with respect to the distribution of respondents.

3.2.7 Experience Level

Table 3.12: Number of years work experience of respondents

YEARS OF WORK EXPERIENCE	%
Less than 2 years	18.3
Between 2-5 years	19.5
Between 6-10 years	22.3
Between 11-20 years	24.8
More than 20 years	15.0

Allied health professionals were asked to indicate their total number of years work experience (including management experience). Overall, 18.3 percent of allied health professionals in this study had less than 2 years work experience, and 15.0 percent had over 20 years experience. Table 3.12 demonstrates the level of work experience of respondents.

A cross tabulation on *Location* and *Total Work Experience* demonstrated a non-significant difference ($p=0.182$) between location types for work experience. However, the majority of allied health professionals, irrespective of location, had over 6 years experience. Smaller locations registered the largest proportions of respondents with over 11 years experience. Communities with <2000 people had only 7.8 percent of their allied health professionals with less than two years experience. Table 3.13 demonstrates the distribution of work experience ranges, according to location type.

Table 3.13: Distribution of total work experience, according to location (percentage of respondents)

WORK EXPERIENCE	LOCATION						
	Metropolitan	Provincial	Regional Centre	Large Rural	Medium Rural	Small Town	< 2000 People
<2 years	11.1	18.0	18.7	20.8	19.2	19.7	7.8
2-5 years	23.3	20.0	20.7	21.3	17.3	13.3	21.6
6-10 years	22.2	24.7	22.4	23.8	23.1	16.2	19.6
11-20 years	25.6	22.7	22.6	22.9	27.4	30.6	35.3
20+ years	17.8	14.6	15.7	11.3	13.0	20.2	15.7

3.2.8 Current Family Status

72.8 percent of respondents indicated they were in a relationship. Of these respondents, the largest proportion had *other professional* as their partner. Frequency counts of partner categories are listed in Table 3.14 below.

Table 3.14: Partner’s occupation for respondent with partner

PARTNER CATEGORY	%
Other Professional	22.0
Other	18.6
Self-employed	10.3
Primary Producer	9.2
Allied Health Professional	9.2
Corporate Employee	8.0
Commonwealth/State Govt	7.6
Nurse	4.5
Small Business Operator	3.9
Medical Practitioner	3.3
Local Government	1.7
Dentist	0.9
Pharmacist	0.8

38.8 percent of respondents indicated that they had dependent children, with 41.9 percent of these having two children. 48.8 percent had children at primary school, 39.7 percent at secondary school, 36.3 percent at 0-5 years, and 19.4 percent post-secondary.

3.2.9 Previous Rural and Remote Experience

Information about childhood and work history in a rural or remote location was collected and analysed. Over half (54.4%) of total respondents indicated that they had spent more than two years of their childhood/ adolescence in a rural or remote location. This information was further analysed against location of employment. There was no significant difference ($p=0.424$) demonstrated between location types for previous childhood experience in a rural or remote location. Table 3.15 demonstrates the distribution.

Table 3.15: Respondents (according to location) with rural/remote childhood experience

LOCATION	% OF TOTAL
Metropolitan area	52.2
Provincial city	53.4
Regional centre	58.9
Large rural town	52.5
Medium rural town	56.0
Small town/community	51.1
Town <2000 people	49.0

Work experience in a rural/remote location was also analysed according to location. Over half (52.4%) of total respondents indicated that they had previously worked in a rural/remote location before commencing duties in their current location. Out of all respondents who worked in towns <2000 people, 58.8 percent had previous rural and remote work history, compared with 52.3 percent of metropolitan respondents. This cross tabulation result (work experience and location type) was not statistically significant (p=0.475).

3.2.10 Length of Time in Current Location

Respondents were asked to indicate the length of time spent working in their current location. 42.0 percent of all respondents indicated that they had been in their current location for less than two years (as indicated in Table 3.16).

Table 3.16: Length of time in current location

TIME IN CURRENT LOCATION	% OF TOTAL
Less than 2 years	42.0
Between 2-5 years	30.7
Between 6-10 years	14.0
Between 11-15 years	08.2
Between 16-20 years	03.1
More than 20 years	02.1

Intention to stay in current location was also asked of respondents. 37.1 percent indicated that they intended to stay for more than five years, and 28.2 percent between two and five years, as indicated in Table 3.17.

Information about length of time in current location has been analysed against State/Territory, to provide a macro-picture of retention rates across the country.

There was a highly significant difference (p=0.003) between States/Territory when analysed for length of time in current location. Western Australia demonstrated the highest proportion (52.9%) of

Table 3.18: Respondents (by State/Territory) spending less than 2 years in current location

STATE/TERRITORY	%
Western Australia	52.7
South Australia	47.3
Northern Territory	44.4
Queensland	43.9
Tasmania	43.5
New South Wales	37.4
Victoria	27.8

Table 3.17: Intention to stay in current location (length of time)

ANTICIPATED TIME IN CURRENT LOCATION	% OF TOTAL
Less than 12 months	12.8
Between 1-2 years	22.0
Between 2-5 years	28.2
More than 5 years	37.1

respondents who have spent less than two years in their current location. Victoria demonstrated the lowest percentage (27.6%). Table 3.18 indicates the proportion of respondents from each State/Territory, who indicated that they had been in their current location for less than two years.

3.3 Discussion and Recommendations

The national survey conducted by SARRAH provided the opportunity to collect data on the allied health professional workforce, which has never before been captured nationally or included so many disciplines. 1620 surveys were analysed.

The national allied health workforce is as diverse as it is disperse. Although there are many conclusions that have been made about the workforce as a whole, the reader is urged to consider the results in the context of this diversity.

The numerical levels of allied health professionals practising in rural and remote Australia are not available from the data collected in this study. Subsequently, the ratio of allied health professionals to population counts is also unavailable. However, a study in 1995 indicated that this ratio was 41:100,000 in rural areas and 131:100,000 in urban areas. (Taylor & Hodgson 1995).

3.3.1 Personal Characteristics of the Workforce

Age

The allied health workforce in rural and remote Australia has typically been viewed by researchers, managers and government as a very young, highly mobile and inexperienced group. The results of this study challenge this notion. Although the overall sample demonstrated 40 percent of the respondents were very young (29 years or less), in very small communities (populations <2000) this proportion is only 25.5 percent.

It can be postulated that allied health professionals from 30 years of age onwards, are more likely to be settled in small isolated communities because of family ties, rather than in the search for employment. Indeed, this hypothesis is supported by many responses in the interviews and focus groups conducted as part of this study.

Large rural towns and regional centres are more likely to have higher proportions of very young allied health professionals. This would seem to follow the supply and demand theory for employment of allied health professionals, whereby employment has been most highly valued in more densely populated areas, and is in progressively less demand in rural locations. There have been no successful or consistent attempts by industry and employment bodies to address this phenomenon with incentive or location packages, as has occurred for workforce shortages demonstrated in other health workforce categories.

Level of Experience

Overall, the study sample suggests that the allied health workforce is perhaps more experienced than once believed. Again, this information challenges the stereotype of the young, new-graduate allied health professional working in a sole position in a remote location. Indeed, this study suggests that small remote communities (population <2000) have access to allied health professionals who have many years of work-experience, and that only one in twelve allied health professionals have less than two years experience in these areas. This is favourably compared to one in five professionals who have less than two years experience in *large rural* locations.

Educational Level

The allied health workforce in rural and remote Australia is a highly qualified group, and demonstrates a high degree of motivation to undertake further post-graduate level studies. One-third of the workforce already possess post-graduate qualifications, and one in six allied health professionals are currently undertaking postgraduate qualifications, the majority of which are Masters or Doctorate level. A more detailed discussion on post-graduate study will be undertaken in the chapter associated with education and training.

Many highly experienced allied health professionals who were interviewed during the course of this study commented strongly about the lack of employment incentives, and paucity of professional recognition by their employers, as factors influencing their employment satisfaction.

“...I feel that I have to continually justify my worth...to young doctors who are 15 years my junior”.

“...I often get asked by nurses which TAFE course I did...I have two degrees”.

(Experienced sole practitioners).

Additionally, many interviewees commented that a number of initiatives that had been funded to provide them with support, were extremely metropolitan focused, and that it was often inappropriate to have large tertiary specialist units being the lead agency for such support. Many believed that these types of programs would be better coordinated elsewhere where a knowledge, understanding and appreciation of rural practice was well demonstrated. In fact, one practitioner summed it up by saying:

“...it seems that each time a “specialist” from the city is charged with helping the country therapist, they (metropolitan allied health professionals) get more out of it than we do...which isn’t a bad thing, but probably not what I suspect the aim of the game is”.

Recommendation 3(i)

Programs aimed at the long term retention and support of skilled and experienced allied health professionals are urgently required to maintain the significant proportion of the workforce that is highly experienced in rural practice.. This will ensure the sustainability of already available expertise in rural and remote areas, and provide appropriate recognition for experienced allied health professionals. (refer also recommendation 5 (iii))

Gender and Age

The allied health professional workforce is highly dominated by women, with males accounting for only about 15 percent of respondents. Additionally, there appear to be differences in each of the professions with respect to the proportion of women represented in that group. Speech pathology and dietetics have higher proportions of women than any other discipline, and radiography and audiology have higher levels of males.

Similarly, there are many differences between the professions with respect to age. Professions which demonstrate the highest proportion of younger members include dietetics, speech pathology, occupational therapy and podiatry (in rank order). Dietetics and speech pathology are also more likely to have higher proportions of females. These disciplines are also likely to be practicing as sole practitioners, if located in a rural area. This has major implications for support and training.

Social work and psychology disciplines were more likely to have a workforce which was represented by individuals who were older. In this sample, about 70 percent of social workers, and 60 percent of psychologists were over 35 years. This again, raises the question about appropriate supervision and support for these groups.

3.3.2 Factors Affecting the Drain from the Workforce

Overseas recruitment of Australian allied health graduates adds to the difficulties of recruitment to rural areas. Attractive salary and travel packages are offered to allied health professionals by British, American and Canadian recruitment agencies. Anecdotally, the figures are alarming. Graduating allied health professionals are addressed during lecture time at universities by recruiting agencies offering exciting travel and work schemes. It has been suggested that up to 85 percent of a graduating year of physiotherapists will consider commencing their employment overseas.

Additionally, the focus groups in this study have indicated that the graduate medical course now widely available in universities across Australia is another drain from the allied health labourforce. The thousands of undergraduates who once entered the medical courses, are now forced into other degrees [many are allied health courses] in preparation for medicine as a post graduate option. This in turn has made entry into allied health courses more difficult for students who have a true and genuine interest in a career as an allied health professional. At the conclusion of their allied health degree, many enrol straight into a medical course, never to practice the profession they have just trained for.

It was suggested by many allied health professionals who have supervised students, that many of the current cohort of allied health undergraduate students are undertaking their degree solely for the purpose of gaining entry into medicine. Again, little numerical data is available to support this phenomenon, or indeed to address what will be a crisis situation for the allied health labourmarket in several years from now. Both of these issues require urgent, objective evaluation.

3.3.3 Other Factors

The results of this study corroborate the view that the allied health workforce as a group is heterogeneous, and cannot be routinely treated as a homogeneous group. There are many demographic factors that influence the collective picture of the allied health workforce, and it is the understanding of these issues and how they inter-relate which has long been a challenge for allied health workforce planning.

Recommendation 3(ii)

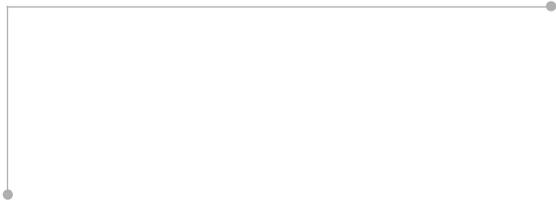
Allied health professionals should be formally represented on advisory groups, working parties, policy and program groups, management bodies and others that impact on rural health to ensure allied health needs, views and expert input is considered. This recommendation is relevant for all levels of government, and employers. Allied health professionals and professional associations such as SARRAH, must continue to seek this representation.

There has long been disagreement between different studies regarding workforce statistics. This reinforces the need for a national collection of reliable data, which more accurately describes the characteristics of the allied health workforce. Such information has been available at a national level for nursing and medical workforces for some time. Planning for an adequate allied health workforce (in numbers, skills and distribution) can only be accurately undertaken if appropriate data is available to use over time. Best's recent stocktake of rural health (Best 2000) emphasizes the dearth of allied health professional workforce data, and also supports the immediate action to rectify this.

It seems that each time a new project initiative is funded for allied health, yet another expensive, time consuming “ad hoc” workforce study is undertaken in a piece-meal approach. In the interests of the common good and efficiency of scale for Commonwealth and State/Territory Governments, this data availability must be addressed.

Recommendation 3(iii)

Comprehensive data specific to the allied health workforce in Australia be collected as a matter of urgency. Specifically the Australian Institute of Health and Welfare (AIHW) should be equipped to provide detailed information on the allied health workforce generally, as well as the rural and remote allied health workforce that is relevant for government, employers, professions and communities.



Characteristics of Allied Health Services in Rural and Remote Australia



4.1 Introduction

This study provides useful data to further describe the allied health services characteristics in rural and remote Australia. The survey tool was particularly targeted at professionals either working in rural and remote Australia, or with a professional interest in rural and remote practice. As such, responses were obtained from across all locations, including metropolitan locations and small communities with a population of less than 2000 people.

This chapter describes the service characteristics, including employment information, work practices, management and supervision aspects. It is important that the results of this chapter are read in the context of the other information contained in this report.

4.2 Data and Results

4.2.1 Employment Status

Table 4.1: Employment status of respondents

EMPLOYMENT STATUS	% ^a RESPONDENTS
Full-time salaried	65.6
Part-time salaried	20.9
Casual	03.4
Self-employed	12.4
Locum	03.3
Self-retired	00.4
Parental Leave	00.5
Other	01.6

^a = more than one option allowed when completing survey

The majority of respondents indicated that they were in full-time salaried employment (65.6%), followed by part-time salaried employment (20.9 %) and self-employed (12.4%). Table 4.1 demonstrates the distribution of the respondents according to employment status.

An analysis of *employment type* as it relates to *gender* was performed. There was a highly significant difference ($p < 0.001$) between *males* and *females* in *part-time employment*, with 94.0 of respondents in part-time employment being female.

There was also a significant difference ($p = 0.011$) between male and female categories for *casual employment*. *Females* represented 98.1 percent of the *casual employment* group. There was a highly significant difference ($p = 0.001$) also demonstrated for *self-employment*, with *females* representing 75.3 percent of this group.

Given that the overall sample was 84.2 percent female, there is an over-representation of females in part-time salaried, casual, and locum employment. Males were over-represented in self-employed and full-time salaried employment types. Table 4.2 illustrates these representations.

Table 4.2: Employment status and gender

EMPLOYMENT STATUS	% MALE	% FEMALE
Full-time salaried	18.1	81.9
Part-time salaried	06.0	94.0
Casual	01.9	98.1
Self-employed	24.7	75.3
Locum	08.2	91.8
Self-retired	13.2	86.8

4.2.2 Employing Agencies

Respondents were asked to indicate the nature of their employment, and on the survey were able to indicate more than one location, to account for multiple employers. The majority of respondents were employed in hospitals (41.8%), and community health services (32.1%), which reflects the relative employment bias of the State/Territory Governments. However, it is also interesting that about one third of allied health professionals are spread very thinly across a wide range of Local, State/Territory and Commonwealth Government areas, as well as not-for-profit groups, private practice and other employing bodies.

The breakdown of employment agencies is indicated in Table 4.3.

Table 4.3: Employing agency of respondents

EMPLOYMENT AGENCY	%^a RESPONDENTS
Hospital	41.8
Community Health Service	32.1
State-Territory Public Service	20.2
Private Practice	16.7
Australian Public Service	5.5
Nursing Home/ Hostel/Retirement Village	4.6
Home and Community Care Service	3.5
Private Practice/Hospital (approx equal)	2.9
School/Education Department	2.9
Church Organisation	1.7
Dept Veteran's Affairs	1.7
Tertiary Education - University etc	1.5
Statutory Organisation	1.0
Aboriginal Community Controlled Health Service	0.7
Dept of Defence	0.3
Local Government	0.3
Private Practice/Teaching (approx equal)	0.2
Royal Flying Doctor's Service	0.2

a = more than one option allowed when completing survey

4.2.3 Allied Health Outreach Services

Table 4.4: Outreach services provided by respondents

NUMBER OF GEOGRAPHIC LOCATIONS	% RESPONDENTS
2 locations	34.5
3 locations	24.2
4 locations	15.2
5 locations	09.3
6-10 locations	13.7
11-20 locations	02.0
More than 20 locations	01.0

55.7 percent of respondents indicated that they provide services in more than one location. Of these respondents, 65.5 percent practiced in three or more locations, with 13.7 percent practicing in 6-10 locations, as indicated in Table 4.4.

Table 4.5: Frequency of outreach services provided by respondents

FREQUENCY OF PROVISION	% RESPONDENTS
More than once per week	28.6
Weekly	24.4
Fortnightly	15.0
Monthly	15.1
Three monthly	05.2
Six monthly	01.2
Other	10.6

53.0 percent of respondents who provided outreach services, travelled at least weekly to other locations (see Table 4.5).

Respondents were also asked to indicate the method of delivering these outreach services (see Table 4.6). 25.4 percent of respondents provided these services as part of a visiting team, and 7.9 percent using telehealth technologies.

Table 4.6: Means of providing services to other locations

METHODS OF SERVICE PROVISION	% ^a RESPONDENTS
Visits by individual health professionals	87.5
Visits by a team of health professionals	25.4
Telehealth consultations	07.9
Other	5.4

a = more than one option allowed when completing survey

Table 4.7: Provision of outreach services according to location

LOCATION	% RESPONDENTS
Metropolitan area	54.9
Provincial city	43.1
Regional centre	47.5
Large rural town	64.2
Medium rural town	66.7
Small town/community	70.9
Town <2000 people	76.5

Analysis of outreach services indicated that there was a highly significant difference ($p < 0.001$) between *locations* for the provision of outreach services. In communities <2000 people, 76.5 percent of allied health professionals provided outreach services, versus *provincial cities*, where 43.1 percent of allied health professionals provided outreach services. Table 4.7 demonstrates the provision of outreach services with respect to location.

Further analysis of outreach visiting patterns demonstrated a highly significant difference ($p = 0.001$) between locations on the frequency of outreach visits. Table 4.8 indicates the proportion of allied health professionals within each location type, who provided outreach services at least once per week. In towns <2000 people, 71.8 percent of allied health professionals provided outreach services at least weekly.

Table 4.8: Percentage of respondents (according to location) providing outreach visits

LOCATION	FREQUENCY OF OUTREACH SERVICES				
	>once/week	weekly	fortnightly	monthly	three/monthly
Metropolitan area	28.0	28.0	20.0	10.0	06.0
Provincial city	28.6	15.9	13.5	15.9	16.7
Regional centre	23.4	24.7	14.3	16.5	06.5
Large rural town	27.6	26.9	12.8	20.5	03.2
Medium rural town	33.8	24.5	21.6	07.9	05.0
Small town	30.8	25.0	13.3	16.7	03.3
Town <2000 people	38.5	33.3	07.7	10.3	0.0

4.2.4 Supervision & Management of Allied Health Professionals

Respondents were asked to indicate their *immediate supervisor*, by selecting predetermined categories. Overall, the most common category of *immediate supervisor* was same allied health professional/same location (31.8% of respondents). Over half of the respondents (53.9%) indicated that they were supervised by someone else other than an allied health professional who was co-located, as indicated in Table 4.9.

Table 4.9: Immediate supervisor of respondents

SUPERVISOR CATEGORY	% RESPONDENTS
Same AHP/same location	31.8
Same AHP/different location	08.3
Different AHP/same location	10.5
Different AHP/different location	02.1
Medical Practitioner	07.7
Director of Nursing	04.5
Non-health professional	03.8
District/General Manager	07.5
N/a - private practitioner	08.3
N/a - managerial position	01.2
N/a - non-practising	00.3
Other	10.8

The data was then cross-tabulated with *Profession*, to provide information about supervision characteristics according the profession types. There was a highly significant difference ($p < 0.001$) between *Professions* when analysed for *immediate supervisor*. Table 4.10 indicates these results. Radiographers were more likely to be supervised by same allied health professional/same location (50.0%) than any other profession.

Table 4.10: Percentage of respondents (according to profession) and immediate supervisor

IMMEDIATE SUPERVISOR	PROFESSION								
	Audiology	Dietetics	Occ Thy	Physio	Podiatry	Psychol	Radiog	Soc Wk	Sp Path
Same AHP/Same Loc	25.0	15.8	35.7	36.3	25.0	24.7	50.0	29.5	22.4
Same AHP/Diff Loc	14.3	6.9	8.5	7.5	0.0	19.8	5.9	8.7	6.8
Diff AHP/SameLoc	3.6	16.8	13.7	5.2	8.9	17.3	2.9	12.0	15.5
Diff AHP/Diff Loc	3.6	2.0	3.4	0.8	0.0	4.9	1.0	3.3	1.8
Med Pract	3.6	10.9	6.7	7.3	3.6	3.7	10.8	9.8	8.7
DON	3.6	3.0	2.4	7.1	5.4	0.0	8.8	3.3	3.2
Dir Allied Hlth	0.0	6.9	3.7	2.7	3.6	1.2	3.9	6.6	3.7
Non-Health Prof	3.6	2.0	3.0	2.7	3.6	0.0	0.0	2.7	8.2
Gen Manager	14.3	8.9	8.5	4.2	10.7	4.9	3.9	9.3	12.8
N/A	21.4	6.9	3.0	17.9	33.9	12.3	2.9	2.2	5.0
Other	7.1	19.8	11.3	8.3	5.4	11.1	9.8	12.6	11.9

A non-allied health professional in the same location was the immediate supervisor for over half of the respondents in each profession except audiology and radiography.

Audiology respondents were most likely to have another allied health professional as an immediate supervisor, with 78.6 percent of this group having access to this category of supervision (see Table 4.11).

Table 4.11: Supervision of respondents by other than AHP in same location, according to profession

PROFESSION	% WITH NON-AHP SUPERVISION/SAME LOCATION
Dietetics	67.4
Podiatry	66.1
Speech Pathology	62.1
Physiotherapy	58.5
Social Work	58.5
Psychology	58.0
Occupational Therapy	50.6
Radiography	47.1
Audiology	21.4

Table 4.12: Respondents (by location) where immediate supervisor was NOT an allied health professional but was in the same location

LOCATION	% RESPONDENTS
Metropolitan area	41.9
Provincial	43.3
Regional	50.4
Large rural	54.1
Medium rural	75.7
Small town	77.8
<2000 people	96.0

Analysis of management and supervision of respondents according to *location* was undertaken. A highly significant difference ($p < 0.001$) between location types was indicated when analysed for immediate supervisor.

Table 4.12 indicates the proportion of respondents (according to location) who received immediate supervision from a person who was not an allied health professional but who was located in the same location. 96.0 percent of respondents from towns <2000 people had an immediate supervisor described by this category. Similarly, over three quarters of respondents in small and medium rural towns did not have allied health professional supervision.

This analysis also provided information on other immediate supervisor categories. In towns <2000 people, 20.4 percent of respondents were supervised by a Director of Nursing, 14.3 percent were supervised by a Medical Practitioner and 16.3 percent were supervised by a non-health professional. Table 4.13 indicates the relative frequency of Allied Health, Director of Nursing, Medical Practitioner and Non-Health professional supervision across each of the location categories.

Table 4.13: Supervision of respondents, according to location (percentage)

LOCATION	IMMEDIATE SUPERVISOR			
	Any Allied Health Supervisor	Director of Nursing Supervisor	Medical Practitioner	Non-health Professional Supervisor
Metropolitan	75.9	2.2	5.5	3.3
Provincial	66.6	1.4	6.2	10.3
Regional centre	62.3	2.4	6.1	11.3
Large rural town	60.4	2.9	9.1	9.1
Medium rural town	32.8	8.6	10.5	12.8
Small town	33.3	10.5	9.9	10.0
Town <2000 people	18.3	20.4	14.3	16.3

4.2.5 Support and Management Structures

Respondents were asked to select which management structures were available to them to support them in their professional role, and could indicate as many items as necessary. The overall proportion of respondents indicating access to these structures is demonstrated in Table 4.14.

Table 4.14: Proportion of respondents indicating access to management structures

SUPPORT/MANAGEMENT STRUCTURE	% ^a RESPONDENTS
Face-to-face meetings	80.9
Professional development	67.2
Performance appraisals	53.2
Workshops	44.1
Email	39.3
Staff development days	35.1
Newsletter	27.5
Teleconferences	19.7
Debriefing sessions	17.4
Mentors	17.4
Locum support	10.2
Electronic bulletin boards	06.9
Other	9.3

a = more than one option allowed when completing survey

Information regarding the *type of support structures* available to allied health professionals was analysed according to the *immediate supervisor*. 90.1 percent of allied health professionals who had a supervisor described as *same allied health profession/ same location*, had access to face-to face meetings. Table 4.15 indicates the proportion of respondents within different Immediate Supervisor categories, and their respective access to management structures. Table 4.16 shows the respondents, according to their location type, and the proportion who indicated that they had access to various management structures. From all respondents who lived in towns of less than 2000 people, only 5.9 percent had access to debriefing sessions, compared with 26.2 percent of allied health professionals who lived in provincial locations.

Table 4.15: Percentage of respondents within immediate supervisor categories, with access to management structures

MANAGEMENT STRUCTURES	IMMEDIATE SUPERVISOR									
	Same AHP/Same Loc	Same AHP/Diff Loc	Diff AHP/Same Loc.	Diff AHP/Diff Loc.	Med Pract	Dir Allied Hlth	Non-health Prof	Gen Manager	Other	N/A
Face-to-face meetings	90.1	83.3	86.8	78.8	69.7	85.0	73.6	78.3	80.1	41.0
Teleconferences	38.6	32.6	32.3	45.5	59.8	40.0	41.5	35.8	40.4	32.7
Debriefing sessions	23.2	24.4	22.8	6.1	9.0	10.0	18.9	16.7	12.9	8.3
Prof devt	71.9	67.4	67.7	60.6	63.1	73.3	66.0	63.3	66.1	46.8
Perf appraisals	65.5	48.5	64.7	48.5	36.1	65.0	49.1	40.0	57.3	12.2
Mentors	20.2	15.9	23.4	6.1	14.8	10.0	20.8	12.5	17.5	10.9
E-bulletin boards	6.3	5.3	9.0	6.1	6.6	5.0	9.4	8.3	5.3	7.1
Workshops	46.6	41.7	49.1	27.3	42.6	53.3	45.3	37.5	47.4	30.1
Staff devt days	35.6	37.9	48.5	39.4	23.0	41.7	45.3	32.5	36.8	15.4
Newsletter	26.9	29.5	24.6	27.3	19.7	28.3	20.8	26.7	25.7	35.9
Email	35.6	39.4	43.1	36.4	54.9	41.7	47.2	38.3	40.9	26.9
Locum support	10.5	7.6	7.2	3.0	19.7	6.7	5.7	3.3	13.5	12.2

Table 4.16: Percentage of respondents within location types, with access to management structures

MANAGEMENT STRUCTURES	LOCATION						
	Metropolitan	Provincial	Regional Centre	Large Rural	Medium Rural	Small Town	<2000 people
Face-to-face meetings	88.0	86.6	81.2	81.6	68.7	65.5	51.0
Teleconferences	31.5	43.3	35.9	40.2	32.7	40.2	37.3
Debriefing sessions	18.5	26.2	15.6	17.6	10.0	13.2	5.9
Prof devt	70.7	69.5	65.7	66.8	57.8	59.2	51.0
Perf appraisals	53.3	56.4	54.1	54.1	45.5	44.8	17.6
Mentors	17.4	21.1	15.6	16.8	12.3	16.1	15.7
E-bulletin boards	9.0	12.4	5.6	2.5	3.8	4.6	5.9
Workshops	46.7	48.0	42.3	45.1	37.0	36.2	29.4
Staff devt days	26.1	37.9	37.7	34.4	29.4	27.6	13.7
Newsletter	25.0	23.5	29.7	26.2	25.6	25.3	19.6
Email	45.7	43.0	35.1	42.2	31.3	35.1	17.6
Locum support	7.6	10.4	11.0	13.1	5.2	10.9	3.9

Cross tabulations and chi-squared analyses indicated statistically significant differences between immediate supervisors, and between location types, for many of the support/management structures available to allied health professionals, namely:

Face-to-face meetings: there was a highly significant difference between *immediate supervisors* and the access to *face-to-face meetings* for respondents ($p=0.001$). There was also a significant difference, between *locations* for access to *face-to-face meetings* ($p=0.030$).

Teleconferences: there was a significant difference between *immediate supervisors*, and the level of access by respondents ($p=0.040$). There was no statistically significant difference between *location* types for *teleconference* access.

Debriefing sessions: there was a highly significant difference between *immediate supervisors* for the level of access to *debriefing sessions* ($p=0.001$), with 43.8 percent of respondents with access to debriefing sessions having *allied health professional/same location* as Immediate Supervisor, and all other categories (non-allied health professional supervisor), demonstrating less than 10 percent access to *debriefing sessions*. Similarly, there was a highly significant difference between *locations* for access to *debriefing sessions* ($p<0.001$).

Performance appraisals: there was a highly significant difference between *Immediate Supervisor* categories and the access to *performance appraisals* for respondents ($p<0.001$). There was also a significant difference between *locations* for *performance appraisals* ($p=0.015$).

Staff development days: there was a highly significant difference between *Immediate Supervisor* categories and the access to *staff development days* for respondents ($p=0.001$), and a significant difference between *locations* ($p=0.029$).

Locum support: there was a highly significant difference between *Immediate Supervisor* categories and the access to *locum support* ($p=0.003$).

Email access: there was a difference approaching significance between *Immediate supervisor* categories for *email access* ($p=0.076$), and a significant difference between *location* types for *email access* ($p=0.038$).

There were no statistically significant differences demonstrated between *Immediate Supervisor* categories for access to professional development, mentors, electronic bulletin boards, workshops, and newsletters.

There were no statistically significant differences demonstrated between *Locations* for access to teleconferences, professional development, mentors, workshops, newsletters, or locum support.

Electronic Bulletin Boards, *locum support*, *debriefing sessions* and *mentoring* were the least likely to be accessed by respondents, regardless of *location* or *immediate supervisor* type.

4.2.6 Locum & Relief Services

26.0 percent of respondents indicated that they had access to locum services. Of the other respondents (those who indicated no access to locum services), a range of options were provided to respondents, to indicate how services were covered while on leave. The majority of these respondents (49.8%) indicated that their position was not covered at all.

Table 4.17 indicates these options for coverage and the relative frequencies indicated by respondents.

Table 4.17: Coverage of services while clinician is on leave (for those with no access to locum services)

HOW POSITION IS COVERED WHILE ON LEAVE	% RESPONDENTS
Not covered at all	49.8
Position is partly covered by other allied health professionals	27.9
I am a private practitioner etc	7.8
Position is partly covered by other health professionals	5.4
Management aspects covered not clinical role	3.0
Other	6.1

With respect to the access to locum services, there was a highly significant difference ($p < 0.001$) between *profession types*, with 57 percent of radiographers having access to locum coverage, and only 12.2 percent of psychologists. Table 4.18 indicates the proportion for each profession, and their relative access to locum services.

Table 4.18: Access to locum services by profession

PROFESSION	% WHO INDICATED ACCESS TO LOCUM SERVICES
Radiography	57.0
Physiotherapy	35.4
Dietetics	24.2
Podiatry	21.8
Social Work	20.2
Occupational Therapy	20.1
Speech Pathology	14.6
Audiology	13.3
Psychology	12.2

Highly significant differences were also evident between States ($p < 0.001$) and location types ($p = 0.002$) with respect to the accessibility of locum services. Table 4.19 and Table 4.20 indicate these differences.

Table 4.19: Access to locum services by State/Territory

STATE/TERRITORY	% WHO INDICATED ACCESS TO LOCUM SERVICE
Northern Territory	39.0
Tasmania	34.6
Western Australia	30.8
Queensland	30.4
Victoria	21.6
New South Wales	20.2
South Australia	17.8

Table 4.20: Access to locum services by location

LOCATION	% RESPONDENTS
Metropolitan area	32.9
Large rural town	30.2
Provincial city	29.4
Regional centre	25.9
Small town/community	24.9
Medium rural town	22.4
Town <2000 people	08.8

4.2.7 Supervision of Undergraduate Students

60.9 percent of respondents indicated that they had supervised students at some point in their current position. 43.3 percent of respondents indicated that they currently had responsibility for the supervision of undergraduate allied health students in their current position. Additionally, 66.9 percent of all respondents indicated that they had never been provided with training in supervision of students on placements. Of the respondents who indicated that they did not currently supervise students, a number of reasons were provided. The most common reason for not supervising students was “*never been asked*” (28.6%). These reasons are listed in Table 4.21.

Table 4.21: Reasons for not supervising undergraduate students

REASONS FOR NOT SUPERVISING UNDERGRADUATE STUDENTS	% RESPONDENTS
Never been asked	28.6
Workload is already too heavy	20.2
Recent graduate/insufficient experience	19.5
Lack of resources - human and capital	13.7
Lack of training in supervisory role	13.6
Private Practice - cost and time	11.8
Cannot get students to come here	7.7
Issues of confidentiality	4.0
Past experience has been negative	2.3
Other	26.7

4.3 Discussion and Recommendations

4.3.1 Employment and Employing Agencies

This study has indicated that a wide range of employing bodies are involved at some level in the provision of allied health services to rural and remote Australia. The majority of allied health services are provided through State/Territory based funding schemes. However, many other program areas are clearly involved in the provision of allied health services. Many of these areas are under the responsibility of the Commonwealth Government such as Aged Care, Disability, Home and Community Care, Veteran’s Affairs, Aboriginal Services, and the Australian Public Service.

Additionally, the roles of State funded allied health professionals in rural and remote communities have a direct impact on program areas for the Commonwealth. Many of the interviewees (who were employed by State government agencies) stated that an increasing component of their roles had a primary health care and public health foci.

This creates a dilemma for allied health professionals who are increasingly moving from a “treating illness” to a “promoting wellness” paradigm, particularly if employed by State/Territory hospital-based facilities. The performance of these allied health professionals is most commonly measured by management in terms of “total number of patients seen”, and “occasions of service”, which is entirely inappropriate for a community (or wellness) focused role. More alarmingly, some respondents reported that they were being compared to benchmarks that were set as targets in major teaching hospitals. These target figures did not reflect the variety of the rural caseload, the outreach/travel

commitments, or the other important community development activities that were part of the position. This historical method does nothing to reflect the nature of rural practice at a community and primary health level.

Recommendation 4(i)

Government and employers should support allied health professionals to provide services that are responsive to community needs. This includes support for a primary health care approach. Further, major government bodies and employers must work with allied health professionals and appropriate professional associations to develop relevant purchasing strategies and benchmarks for rural allied health practice that enable allied health professionals to provide effective services.

The number of allied health professionals in private practice was also of interest in this study. Traditionally, very little has been done to support the needs of private allied health practitioners in rural and remote locations, in contrast to general practitioner initiatives. Indeed, it would appear that private practitioners do contribute significantly to the rural workforce, and assist in providing greater access to, and increased levels and choice of, services to rural and remote communities.

Some part-time salaried allied health professionals would consider the supplementation of income with private practice. However, due to the relatively high business development costs this is not always feasible in rural areas, given the high risk, and dubious return on investment potential. Anecdotally, some of these professionals have developed partnerships with local hospitals for the use of public facilities in exchange for a percentage of private practice revenue. This benefits the professional, the health facility and the community.

Alarming, a focus group reported that provider numbers (allied health) for private practice cannot be obtained from health insurance funds if the practicing premises are public facilities. This is a major disincentive to the recruitment and retention of allied health professionals to rural and remote areas. One allied health professional described this scenario from the consumers perspective:

“...rural health consumers, who pay the same health insurance premium as their city counterparts, have no access to private services, receive less choice of treating practitioner and therefore are subsidising the private allied health treatment of metropolitan consumers.”

Recommendation 4(ii)

Innovative practice arrangements, including private practice rights for allied health professionals with part time public positions and the co-location of private practitioners in public facilities in rural and remote areas, should be supported where there this does not disadvantage the business potential of others in the marketplace.

Recommendation 4(iii)

The restriction of private provider numbers by some private health insurers for private allied health professionals who have a commercial arrangement with public facilities in rural and remote areas should be urgently addressed.

The figures in this study also indicate that one allied health professional may have several employing bodies. Specifics about the implications for the provision of services for that community are not understood from this study. However, it can be said that the principles of intersectorial collaboration are well supported with respect to the creation of allied health positions in rural areas. Multi-agency funded positions which provide services to a community based on “need” rather than “program targets” would appear to be the best option.

Frustrations for many allied health professionals appeared when there was more than one person of a particular profession in a community, employed by separate agencies. In one instance, there were two separately employed physiotherapists in the community. Each agency had strict eligibility criteria for service. This meant that any workload and caseload variability could not be compensated by the other, and they could not “share” the responsibility of providing a “needs” based service to that community. When one therapist was on leave, the other could not cover the urgent cases, and rural clients had to travel to another centre to obtain a service.

Recommendation 4(iv)

Intersectorial collaboration for better allied health services is supported, particularly where this collaboration makes clear efforts to remove artificial program boundaries to the delivery of needs-based services to rural and remote areas.

4.3.2 Allied Health Outreach Services

An overwhelming number of allied health professionals in this study provided outreach services to other communities. Many of these respondents provided at least weekly outreach services, and practiced in more than three locations.

This degree of outreach service provision has many implications for individual safety, preparation for travel, and employer expectations.

A situation was described in a focus group:

In one community there were two contrasting allied health teams, who provided outreach services, but were employed by separate agencies. One team had a team manager (who was an allied health professional) and an administrative officer, who arranged travel, booked and confirmed clients and session times, coordinated with other services in the remote locations, and ensured that the travelling therapists (all new graduates) followed the appropriate safety protocols. They were also provided with a defensive driving course, and were required to travel with at least one other person, rather than alone. Arrival at the destination was confirmed with the home-base administrative assistant.

The other team were required to travel at least three days out of five. Much of the travel was done outside of work hours due to the distances. The agency “rules” stipulated that the first hour of each leg of the travel was not able to be claimed as TOIL (time off in lieu). This meant that at least 6 hours per week of travel time was borne by the individual in their own time. Additionally, there was no way of ensuring the safety or whereabouts of each team member, and trips were not coordinated with other team members, let alone with the other agencies in that community. Each of the team members reported separately to the area manager of the health service.

(Geographically isolated regional centre)

This situation was not an isolated incident. Alarming many of the interviewees recounted similar situations where they were subject to avoidable risks in the delivery of outreach services.

This situation does, however, highlight many reasons why the delivery of outreach services by allied health professionals needs careful examination and immediate action.

Recommendation 4(v)

Research and evidence is required to guide the development of sustainable models of allied health outreach practice.

Recommendation 4(vi)

Employing agencies have a duty of care to allied health staff who are required to provide outreach services, to ensure that processes are effective with respect to occupational health and safety.

4.3.3 Management and Supervision of Allied Health Professionals

A major factor which significantly impacts on the support of rural and remote allied health professionals, is the appropriateness and effectiveness of a management and supervisory structure. In this study, quantitative information describes what (and to what degree) these arrangements existed for allied health professionals who responded to this survey. Qualitative information collected from focus groups and interviews, provided descriptive information regarding the impact of these structures and made suggestions about appropriate management and supervision methods.

According to Boyce (1996) the implementation of a division of allied health model led by a director of allied health has very positive implications for the retention and recruitment of allied health professionals in rural and remote locations due to the 'concentrated focus given to allied health issues and the organisation expectation of strategic human resource management development and cross-professional problem solving.' (p.29)

Alarming, only 3.8 percent of the 1620 respondents had a structure where there was a clear Director of Allied Health who provided supervision, management, support and advocacy.

About half of the allied health professionals in this study had an immediate supervisor who was not an allied health professional. Supervisors for these respondents tended to be either a medical practitioner (mainly the medical superintendent) or a General/District Manager. Coupled with this arrangement there are often no attempts made to link the allied health professional with a more senior professional (same discipline) for support and supervision of clinical work. This structure of management and supervision is entirely inappropriate for allied health professionals working in rural and remote areas.

Not only are these models inappropriate from an industrial point of view, but also from a practical point of view. Many of the allied health professionals who were interviewed commented that they thought they were a "burden" to their line-manager, because there was precious little time from their supervisor to devote the necessary attention. Additionally, the supervisors tended to have quite stressful and demanding responsibilities (especially sole medical superintendents, directors of nursing, and general/district managers) without the added responsibility of "looking after" the allied

health services as well. Many allied health professionals felt a sense of guilt when they sought assistance from their supervisors.

Additionally, some interviewees described their management situation in very negative terms. There was obviously some resentment that, even though the allied health professional exercised a high degree of autonomy in their services, on occasions when assistance was required, the allied health professional was not confident that the expected level of management and support could be provided.

As several interview participants described:

“... as long as there are no letters of complaint, or bad stories in the local newspaper, he doesn't care what I do”
(remote allied health professional, supervised by the District Manager)

“they are far too busy doing their own jobs, that they really don't have any spare time to help us when we do ask questions...really all they do is sign my time sheet”
(new graduate allied health professional in small rural town, supervised by DON)

“I report to the medical superintendent, who rotates every 3 months, so with each new boss, there are totally different expectations”
(remote allied health professional – long-term resident)

An interesting model of providing appropriate supervision was highlighted from the focus groups. This model focuses on a regional basis, rather than a local level. Allied health professionals in this area report to a senior discipline director, who assumes regional responsibility for the performance of these staff, and the efficiency and effectiveness of the service to this area. There is also an allied health director, who assumes ultimate financial and service delivery responsibility. Previous to this regional model, allied health professionals were employed by local health facilities.

Many of the staff who worked within this model felt more supported, and were more satisfied with the service that they provided to the neighbouring communities. They had worked in the previous model and made unfavourable comparisons to it. New graduates were more supported, and were able to rotate through a range of different caseloads, providing a broad scope of experience.

This study has also highlighted the disparity of access to appropriate supervision for allied health professionals who live and work in communities of less than 2000 people, compared with those who are located in larger centres. Not only are these allied health professionals more likely to be delivering outreach services to multiple communities, and more likely to be working as a sole allied health professional, but 96 percent do not have access to another allied health professional as their immediate supervisor.

Professional and social isolation is a major factor identified as a disincentive for taking up or remaining in rural practice. The development of an ‘allied health’ identity (as opposed to specific discipline identity) in rural and remote areas may “be able to act as proxy support by developing a sense of peer relationships from the discipline based concept to an ‘allied health’ focused concept. This may be particularly beneficial for sole allied health professionals.

This is supported by the work of Boyce (1996), who argues:

“Allied health professionals working in isolated sole positions in rural and remote settings outside regional population centres may benefit from closer inter-disciplinary relationships which focus on ‘allied health’ as a form of proxy support to reduce isolation. This outcome could be achieved by developing more formal relationships (institution to institution) with larger regional allied health departments contracted to provide a specific package of support negotiated as part of a recruitment and retention strategy.” (p.46)

Appropriate management structures, which are formalised within the organisation, are essential to ensure that the quality of allied health services is maximised, and that equitable services are provided to communities, based on need.

Recommendation 4(vii)

Employers should ensure that rural and remote allied health professionals have access to same discipline support and professional development. Where the direct supervisor is not of the same profession, alternatives such as mentor programs or contracted clinical support should be arranged. This support person need not be co-located but should work with the allied health professional and the line manager to ensure appropriate standards of clinical and non-clinical responsibilities are provided.

4.3.4 Processes for the Support and Management of Allied Health Professionals

As well as an indication of the type of immediate supervisor available to allied health professionals, this study also examined the types of structures available to allied health professionals to provide support and management.

There were thirteen support structure options provided for selection by respondents, and respondents could choose as many as required. The most frequently available means of support and management was face-to-face meetings, but about 20 percent of the respondents didn't even have access to this. So even the most routine, frequent method of management is not accessible to 20 percent of the workforce.

Even more inaccessible was the availability of locum support, mentors, and debriefing sessions, where over 80 percent of respondents indicated that these options were not available.

The analysis of the information about immediate supervisor and support/management structures was able to further indicate the differences in support/management structures available to allied health professionals who had different immediate supervisors.

The analysis generally indicated that, when the immediate supervisor was an allied health professional, more positive support/management structures existed to support the clinician in their professional role. When these allied health professional supervisors were in the same location as the allied health professional, the access to support/management structures increased.

4.3.5 Locum Services Available to Allied Health Professionals

Only about one quarter of allied health professionals indicated that they had access to locum services.

The results indicated that in the cases where locum services were provided (i.e. backfilling of an allied health position with locum services for leave periods etc), the immediate supervisor tended to be a medical practitioner. It could be assumed from this, that medical practitioners are more cognizant of the community need for the continuity of allied health services, and/or the medical practitioner may have been adversely affected by increasing workload if there were a decrease in allied health professionals.

4.3.6 Recruitment Issues

The results in the previous chapter described information related to previous childhood and work experience in a rural location. Although there was statistically significant difference between location types for either childhood experience, or previous work experience, the impact of these factors on the choice of current location is still not understood.

Given that a larger percentage of respondents from smaller locations (when compared to those in metropolitan locations) also had previous work experience in a rural and remote location, some relationship between location choice and previous experience can be assumed. Student placements in rural and remote locations are therefore supported as a viable option for increasing the recruitment of allied health professionals to rural and remote locations.

This study has also highlighted the broad range of employing agencies of allied health professionals. Over 60 percent of employing agencies were in areas other than traditional hospital settings. This indicates that there are many opportunities available for agencies to collaborate on joint appointments for allied health professionals, as one strategy for improving recruitment.

5.1 Introduction

Sole allied health professionals in health service delivery have often been noted as being a unique group. It has been anticipated that this group would in fact be young professionals relative to the rest of the rural and remote allied health population, who have taken on a sole practice role with little experience or support. It was further anticipated that this group might have different needs in training and education because of their sole practitioner roles and responsibilities.

Sole allied health professionals are different from other sole health professionals as they can commence their professional life in a sole position, following graduation from university. This brings with it questions about how best to support skill consolidation and development whilst dealing with additional responsibilities such as caseload management and administrative responsibilities. While these issues are also pertinent for nursing and medical sole practitioners, these professionals do not have the added complexity of commencing their careers in such demanding positions.

The analysis of the sole practice workforce, in this study, however did not meet the expectation of the stereotypes young inexperienced sole professional. Sole allied health professionals in fact have many features in common with allied health professionals who are co-located with peers of the same profession. The differences in sole allied health practice in many ways are more subtle than reflected in the survey component of this study, and are more apparent in focus group results and one on one interviews. The results of the questionnaire survey are analysed and discussed in the context of additional data from these interviews.

One caution in analysing the data related to sole allied health professionals is that, while about 36 percent of respondents to the survey were classified as sole allied health professionals, it is not clear whether the sample that responded was indicative of the sole allied health professional population. Further research is required to confirm and expand on key aspects of the results.

A key component of this project was to examine the particular issues facing sole allied health professionals, and factors that differentiate them from the rural and remote allied health workforce generally. *For the purposes of this project a sole allied health professional was defined as an allied health professional who was not co-located with a peer of the same profession.* This definition was adopted to include consideration of sole allied health professionals in isolated communities, as well as those who may be located in the same town as a peer of the same professions, however did not worked directly with that peer.

Recommendation 5(i)

SARRAH develop a 'Blueprint Paper' for Sole Allied Health Practice in Rural and Remote Australia. This document would integrate key findings of this study as they apply to sole allied health professionals and could be used by sole allied health professionals and employers to determine appropriate recommended standards in key areas such as access to clinical profession support, education and training requirements and appropriate management support.

5.2 Data and Results

5.2.1 Sole Allied Health Professionals by Nearest Peer of the Same Profession

Table 5.1: Sole allied health professionals by nearest peer of the same profession

NEAREST PEER	%
In the same town	57.4
Up to 50 kilometres away	11.8
50-100 kilometres away	13.6
100-300 kilometres away	12.8
Over 300 kilometres away	4.4

Of the 1620 responses, 35.9 percent were described as sole allied health professionals¹, with 31 percent of this group having the nearest co-located peer of the same profession over 50 kms away.

5.2.2 Sole Allied Health Professionals by Age

Table 5.2 shows a comparison of sole and co-located allied health professionals by age group. A highly significant result ($p < 0.001$) was found. Sole allied health professionals were of a similar age to their co-located peers. In the total group of respondents aged less than 29 years, 39.6 percent were sole allied health professionals, compared with 60.4 percent who were co-located with another peer.

¹ a sole practitioner was defined as an allied health professional who was not co-located with a peer of the same profession

Table 5.2 : Age Distribution of sole allied health professionals

AGE RANGES	SOLE ALLIED HEALTH PROFESSIONALS %	ALLIED HEALTH PROFESSIONAL WITH CO-LOCATED PEER %
Under 25 years	16.3	19.4
25-29 years	20.1	23.9
30-34 years	11.7	14.2
35-44 years	27.5	24.9
45-54 years	18.9	13.7
55+ years	5.5	3.9

5.2.3 Sole Allied Health Professionals by Profession

Ten profession categories were used in the survey, and the distribution of sole allied health professionals by allied health profession is illustrated in Table 5.3. A highly significant result ($p < 0.001$) was found in relation to location of the nearest peer (co-located or sole practice, by allied health profession).

Table 5.3: Sole practice by professional background of respondents

SOLE ALLIED HEALTH PROFESSIONALS BREAKDOWN	
PROFESSION	%
Dietetics	52
Speech Pathology	47
Podiatry	45
Audiology	39
Social Work	38
Physiotherapy	33
Psychology	31
Radiography	30
Occupational Therapy	23

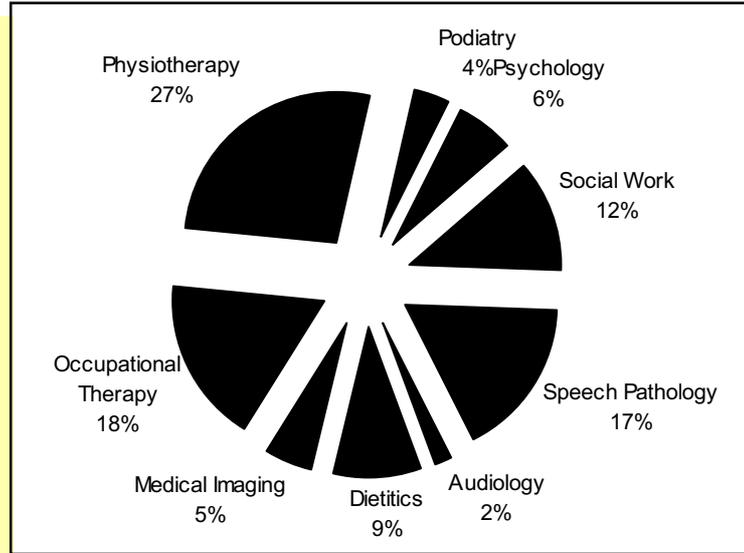


Figure 5.1: Professional breakdown of total sole allied health professionals responses

Of the subgroup of sole allied health professionals, the distribution of allied health professionals by profession is illustrated in Figure 5.1.

5.2.4 Post Graduate Qualifications

Table 5.4: Sole practice and post graduate qualifications

NEAREST PEER	% WITH POSTGRADUATE QUALIFICATIONS
<i>a. Co-located</i>	57.9
<i>b. Categories of sole allied health professionals</i>	42.1
In the same town	57.1
Up to 50 kilometres away	11.3
50-100 kilometres away	16.5
100+ kilometres away	15.1

A cross tabulation and Chi Squared test for comparison of nearest peer and postgraduate education demonstrated a significant difference ($p=0.041$). Table 5.4 demonstrates the breakdown of those with postgraduate qualifications with categories of nearest peer highlighting sole allied health professionals and those who are co-located. The results indicate that the sole practice workforce are more likely to hold post graduate qualifications (57.9%) compared to co-located allied health professionals (42.1%).

There was no significant difference in the comparison of sole practice versus co located practice and the

highest postgraduate qualification held. Similarly there was no statistically significant difference when comparing sole allied health professionals currently undertaking postgraduate studies (15.7%) and their co-located peers (13.6%).

For those who did not hold a post graduate qualification, a higher number of sole allied health professionals intended to undertake postgraduate qualifications in the next three years (15.0%) compared with co-located peers (12.0%). A higher percentage of more remotely located sole allied health professionals indicated a likelihood of undertaking further studies (19.0%).

5.2.5 Employment of Sole Allied Health Professionals

Employment Status

A highly significant difference ($p < 0.002$) was demonstrated between *locations of the nearest peer*, when analysed for *hours worked in an allied health position*. While 18.9 percent of the total respondents who were co-located worked 30 hours or less, a higher proportion was evident in sole practice categories, with 27.0 percent working 30 hours or less per week. Table 5.5 shows the percentage of allied health professionals who worked over 40 hours per week. Those co-located with their peers, and those with peers in the same town, were more likely to work over 40 hours.

Table 5.5: Hours worked by location of closest peer

NEAREST PEER	THOSE WHO WORKED OVER 40 HRS/WK %
Co-located	20.2
In the same town	24.9
Up to 50 kilometres away	16.2
50-100 kilometres away	12.5
Over 100 kilometres away	16.8

Location of Employment

The majority (31.9%) of respondents indicated that their base location was within a Regional Centre. Metropolitan based respondents included Allied health professionals based in capital cities who provided outreach services to rural and remote areas, and allied health professionals based in non-capital cities with a population in excess of 100,000 people (eg. Newcastle, Townsville). This latter group did not necessarily provide outreach services. Also note that Darwin has been classified as a provincial centre for the purposes of this study (population between 50,000 and 100,000 people).

The base location of respondents is indicated in Table 5.6, and demonstrates the differences between co-located and sole practice categories. The results showed a highly significant difference ($p = 0.001$) between co-located and sole practice locations.

Table 5.6: Base location of respondents by nearest peer of the same profession

LOCATION TYPE	CO-LOCATED PEERS %	SOLE PRACTICE CATEGORIES %
Metropolitan area	6.9	3.9
Provincial	24	10.8
Regional centre	37.1	23.2
Large rural town	16.2	14.6
Medium rural town	9.9	19.2
Small town/community	5.5	20.4
<2000 people	0.4	8.1

5.2.6 Work Experience

A cross tabulation between *nearest peer of the same profession* and *total years of experience* was undertaken to investigate whether there were differences between sole practice and co-located professionals in the amount of work experience. Categories for total years of experience were used, and the most frequently indicated category for both co-located and sole practice groups are provided in Table 5.7.

Table 5.7: Nearest Peer of Same Profession by years of experience

NEAREST PEER	YEARS OF EXPERIENCE RANGE WITH THE HIGHEST FREQUENCY	%
a. Co-located	6-10 years	23.4
b. Sole practice	11-20 years	27.3

Analysis for *Location* did not support the common assumption that new graduates are more likely to be in smaller centres, however, cross tabulation demonstrated a non-significant ($p=0.182$) difference between location types for total work experience. Furthermore, analysis of sole practice groups and time in the current location did show a significant difference ($p=0.017$) as shown in Table 5.8 below.

Table 5.8: Location and Work Experience in current location

YEARS IN CURRENT POSITION	NEAREST PEER (CO-LOCATED) %	NEAREST PEER (SOLE PRACTICE - ALL CATEGORIES) %
Less than 2 years	42.8	40.9
Between 2-5 years	30.9	30.2
Between 6-10 years	13.8	14.1
Between 11-15 years	8.0	8.6
Between 16-20 years	2.7	3.8
More than 20 years	1.8	2.4

5.2.7 Work Practices

Data for all respondents who practiced in more than one location was analysed. There was a highly significant difference ($p<0.001$) between groupings of respondents, where the grouping was based on the location of the nearest peer, as indicated in Figure 5.2. Those who were co-located had a significantly lower rate of geographical responsibility than those in sole practice categories. Figure 5.2 clearly highlights that the proportional increase on percentage of sole allied health professionals who work across more than one location as proximity to the nearest professional increases.

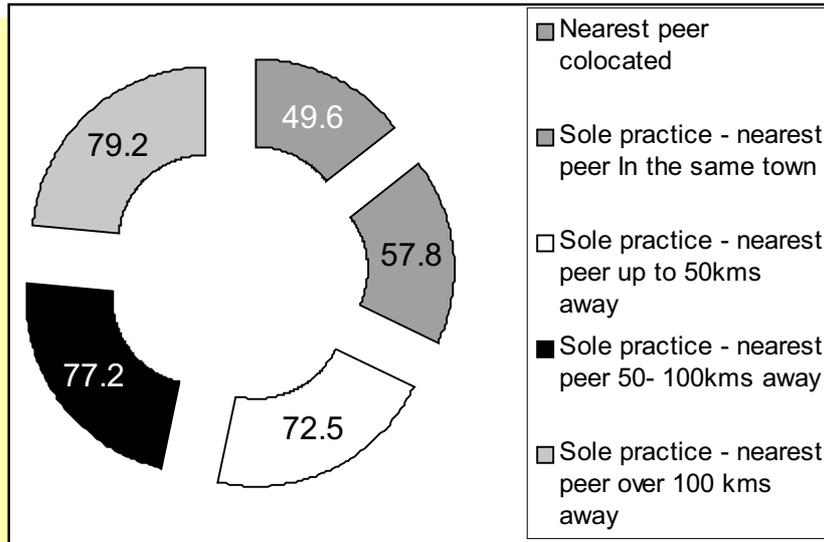


Figure 5.2: Comparison of sole allied health professional categories and those co-located with a peer of the same profession, who travel to more than one location

Further analysis demonstrated a non-statistically significant difference for those who were required to travel, in terms of frequency of required travel. The data however did demonstrate a more frequent travel requirement for those who were further away from peers. There was also no significant difference between categories of *outreach services* according to *nearest peer of the same profession*.

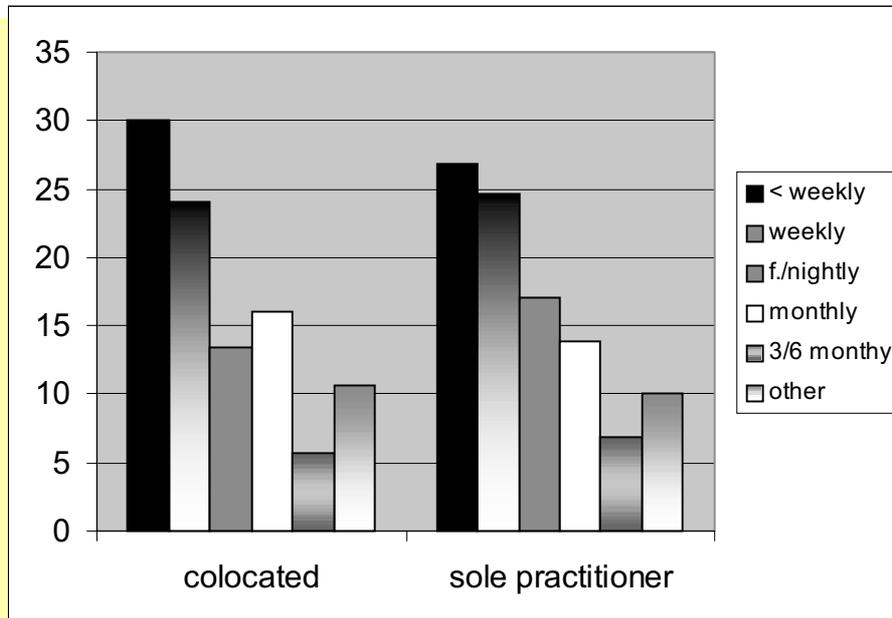


Figure 5.3: Comparison of travel frequency of sole allied health professional categories and those co-located with a peer of the same profession

There was no significant difference between those co-located and sole allied health professionals (ie not co-located with a peer of the same profession) in terms of the type of outreach services provided. Table 5.9 shows these results and demonstrates a continued reliance on traditional face to face service delivery models.

Table 5.9: Comparison of service delivery types for sole and co-located allied health professionals

OUTREACH SERVICE DELIVERY TYPE	THOSE WHO ARE CO-LOCATED %	THOSE WHO ARE SOLE ALLIED HEALTH PROFESSIONALS %
Visits by individuals	67.8	69.6
Visits by teams	22.0	19.7
Telehealth consults	6.4	6.2
Other	3.7	4.5

Locum Access

There was a highly significant difference ($p < 0.001$) with respect to access to locums between co-located and sole allied health professionals. For co-located allied health professionals, 30.4 percent had access to locums, compared with only 19.8 percent for sole allied health professionals. Additionally, for the there was also a highly significant difference ($p < 0.001$) between these two groups, when analysed for how the position is covered when on leave (when no locums were available).

Table 5.10 below shows the difference in coverage of positions for sole allied health professionals when locums were not utilised.

Table 5.10: Locum coverage access for sole and co-located allied health practitioners

COVERAGE OTHER THAN LOCUMS	CO-LOCATED ALLIED HEALTH PROFESSIONAL %	SOLE ALLIED HEALTH PROFESSIONAL %
Not covered	42.3	60.8
Partly covered by Allied Health Professionals	38.6	13.9
Partly covered by other HP	5.5	5.0
Management only	2.9	2.9
Private practitioner	4.7	11.7
Other	6.0	5.7

5.2.8 Retention of Sole Allied Health Professionals

While these results indicate similarities, further analysis of sole practice categories clearly showed a higher rate of experience for less than two years for sole allied health professionals who are located more than 100 kms from the nearest peer (48.5%).

There was no statistically significant difference between sole allied health professionals and co-located practitioners in their intention to stay in their current position.

Table 5.11 shows the comparison of responses for intention to stay in current positions by co-located allied health professionals and all categories of sole allied health professionals.

Table 5.11: Sole allied health professionals Intention to stay in rural and remote areas

INTENTION TO STAY IN CURRENT POSITION	CO-LOCATED ALLIED HEALTH PROFESSIONALS %	SOLE ALLIED HEALTH PROFESSIONALS %
Less than 12 months	12.8	12.9
Between 1-2 years	22.2	21.6
Between 2-5 years	29.6	22.6
More than 5 years	35.4	39.0

When further analysis of the sole allied health professionals groupings was undertaken, those who are more than 100kms away from the nearest peer of the same profession were more likely to move away within two years (42.6%) than those located 50 – 100 kms away (32%), 0-50kms away (23.6%) and located in the same town but not co-located (35%).

A considerable proportion of allied health professionals across all groups identifying the closest peer of the same profession intended to stay more than five years, as indicated in Table 5.12.

Table 5.12: Comparison of co-located peers and sole allied health professionals' intention to stay in their current location

RESPONDENT WHO INTEND TO STAY IN THEIR CURRENT LOCATION MORE THAN FIVE YEARS	%
Nearest peer co-located	35.4
Sole practice - nearest peer in the same town	39.7
Sole practice - nearest peer up to 50kms away	50.0
Sole practice - nearest peer 50-100kms away	42.3
Sole practice - nearest peer over 100 kms away	31.7

The impact of work experience on the likelihood of working in a rural/remote setting was investigated, through an analysis of the respondents' intention to practise in a rural location and their previous work experience. There was non-significant result for both the responses of the co-located group and the sole allied health professionals. For both groups the most frequent response was 5 in a rating scale of (0=current experience has decreased the likelihood of future rural/remote employment; 10=current experience has increased likelihood; 5=current experience has not affected likelihood).

There was no statistically significant difference between sole allied health professionals (ie peer not co-located) and co-located allied health professionals for factors that may influence a decision to move from the current location. The most frequently noted factors that may influence a person to move are noted below in table 5.13 (top five factors);

Table 5.13: Top five factors influencing sole allied health professionals to move from a rural area

CO-LOCATED ALLIED HEALTH PROFESSIONALS	SOLE ALLIED HEALTH PROFESSIONALS
Career development	Partners career
Partners career	Burnout
Promotional opportunities	Career development
Income	Professional isolation
Burnout	Promotional opportunities

5.2.9 Management and Supervision

Analysis of the availability of management and supervision structures to support allied health professionals according to location of the nearest peer was undertaken. There was a highly significant difference in use of face to face meetings and the use of performance appraisals for co-located when compared with sole allied health professionals. Table 5.14 shows the distribution of responses for co-located and sole allied health professionals according to type of management structures used to support the allied health professional.

Table 5.14: Types of management support for co-located and sole allied health professionals

TYPE OF SUPPORT	CO-LOCATED ALLIED HEALTH PROFESSIONALS %	SOLE ALLIED HEALTH PROFESSIONALS %
Mentors	6.0	6.7
Debriefing	6.5	5.7
Teleconferences	13.2	16.6
Performance appraisal	20.6	16.0
Professional development	23.7	25.7
Face-to-face meetings	29.8	28.8

While there was no statistically significant difference between co-located and sole allied health professionals in terms of immediate supervisor, the following demonstrates a difference in type of supervision available for sole allied health professionals.

Table 5.15: Comparison of co-located peers and sole allied health professionals' immediate supervisors

IMMEDIATE SUPERVISOR	CO-LOCATED ALLIED HEALTH PROFESSIONAL %	SOLE ALLIED HEALTH PROFESSIONAL %
Same AHP/same location	48.7	5.0
Same AHP/different location	6.4	11.6
Different AHP/same location	10.2	11.6
Different AHP/different location	0.8	4.2
Medical Practitioner	5.4	11.7
Director of Nursing	2.9	7.3
Director of Allied Health	3.9	4.2
Non-health professional	1.5	5.9
District/General Manager	5.3	10.9
N/A e.g private practitioner	6.0	14.5
Other	8.9	13.1

5.2.10 Sole Allied Health Professionals and Continuing Education and Professional Development

There was no statistically significant difference in the number of professional development programs attended by co-located and sole allied health professionals, nor in the source of funding to attend professional development programs.

In terms of the major identified educational and training priorities of respondents, there was little difference between sole and co-located Allied Health professionals.

Table 5.16 highlights the percentage distribution of top three responses of sole allied health professionals for education and training priorities.

Table 5.16: Education and training needs for co-located and sole allied health professionals

EDUCATION NEEDS	CO-LOCATED ALLIED HEALTH PROFESSIONALS %	SOLE ALLIED HEALTH PROFESSIONALS %
Clinical training	81	83
Information technology	42	46
Management training	34	31
Evaluation methodology	20	18
Communication	15	16
Data management	11	15
Strategic planning	16	14
Research skills	16	13

Tables 5.17 and 5.18 show the distribution of education attendance and funding for co-located and sole allied health professionals.

Table 5.17: Professional development programs attended by co-located and sole allied health professionals

NUMBER OF PROFESSIONAL DEVELOPMENT PROGRAMS ATTENDED IN THE LAST 12 MONTHS	CO-LOCATED ALLIED HEALTH PROFESSIONAL %	SOLE ALLIED HEALTH PROFESSIONAL %
None	6.6	7.2
One	15.7	15.6
Two	25.4	26.5
Three	18.6	17.9
More than three	33.8	32.5

Table 5.18: Source of education funding for sole and co-located allied health professionals

SOURCE OF FUNDING FOR PROFESSIONAL DEVELOPMENT PROGRAMS	CO-LOCATED ALLIED HEALTH PROFESSIONAL %	SOLE ALLIED HEALTH PROFESSIONAL %
Self	23.1	27.6
Employer	25.3	28.4
Combination	48.1	40.8
Other	3.5	3.2

5.2.11 Sole Allied Health Professionals and Information Technology

A highly significant ($p < 0.001$) was found for comparison of co-located and sole allied health professionals according to their access to the Internet and e-mail.

Table 5.19: Co-located and sole allied health professional' access to information technology

ACCESS TO	CO-LOCATED ALLIED HEALTH PROFESSIONAL %	SOLE ALLIED HEALTH PROFESSIONAL %
E-mail	75.2	60.0
Internet	71.1	52.0

Sole allied health professionals were more likely to have access via their own computer or a shared computer in the workplace as shown in Table 5.20.

Table 5.20: Co-located peer and sole allied health professionals' access to own computer

ACCESS TO	CO-LOCATED ALLIED HEALTH PROFESSIONAL %	SOLE ALLIED HEALTH PROFESSIONAL %
Own computer	20.6	41.7
Shared computer	67.6	50.3
Library	8.8	4.2
Other	2.9	3.8

5.2.12 Undergraduate Student Supervision

The results of this study showed a highly statistically significant difference in responsibility for student supervision between co-located and sole allied health professionals. ($p < 0.001$). 51.8 percent of co-located allied health professionals noted that they had responsibility for undergraduate student supervision, compared with 29.6 percent of sole allied health professionals, as indicated in Figure 5.4. The degree of responsibility for student supervision decreased in sole allied health professional categories as the distance from the nearest peer increased.

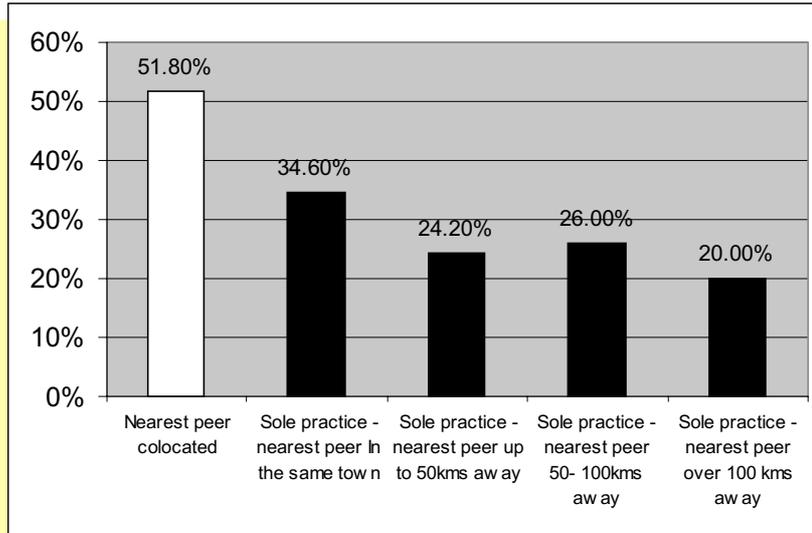


Figure 5.4 : Co-located peers and sole allied health professionals who have responsibility for student supervision

There was very little difference between the co-located and sole allied health professional groupings, for each of the reasons why they did not supervise students. Respondents were asked to indicate any number of reasons, with the most common reason being they had not been approached to take students, as indicated in Figure 5.5.

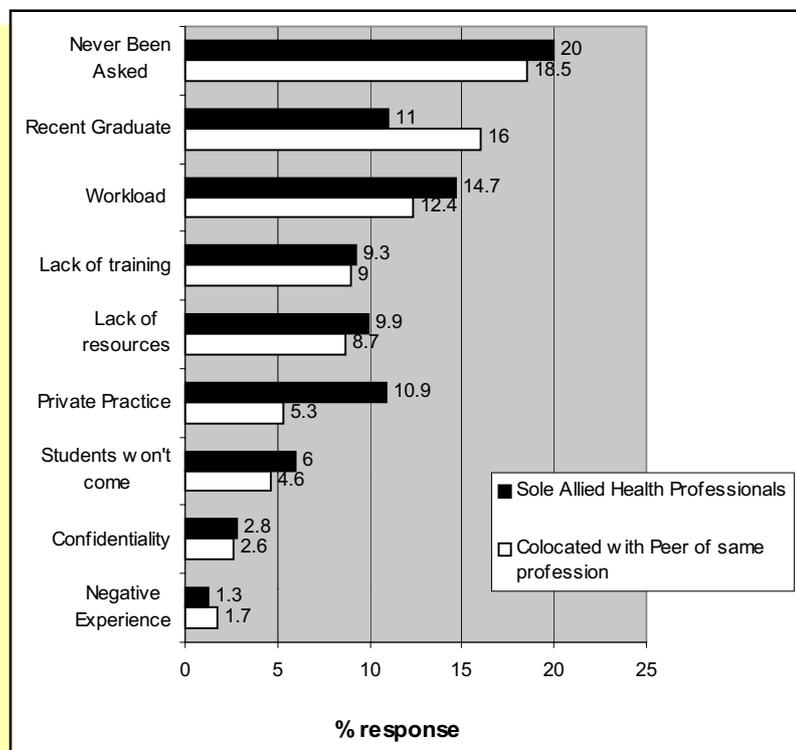


Figure 5.5: Comparison of co-located peers and sole allied health professionals' reasons for not supervising students

5.3 Discussion and Recommendations

Sole practice, particularly in remote areas continues to be undervalued by the professions. There is little recognition of the clinical and management skills sole allied health professionals have. This can be very frustrating when clients may visit a specialist clinic in a metropolitan area. Often my metropolitan colleagues have no knowledge of why particular clinical decisions are necessary, and the types of service delivery that works in remote areas. There is a real need for sole practice to be valued as the specialty that it is.

(Sole allied health professional, remote Australia)

Ironically one of the major problems noted in many sole allied health professional interviews was the high vacancy factor for positions, both in their own discipline, and in other allied health disciplines. One allied health professional noted that the position was vacant for sixteen months prior to her taking on the role. Others noted that positions for their allied health peers disappeared when not filled.

The results of these surveys cannot capture this very important problem in rural and remote allied health practice and this should be taken into account in considering the data results.

Recommendation 5(ii)

SARRAH seek support to facilitate a study into current vacancy statistics and rates of non-practicing allied health professionals in rural, and particularly remote areas, and make recommendations to increase participation in the workforce and improve recruitment strategies.

5.3.1 Sole Allied Health Professionals

In considering the total responses, the breakdown of sole and co-located professionals by profession showed similar patterns. The proportion of respondents who were sole allied health professionals for each of the disciplines were essentially equal for each of the professional groups, as indicated in Figure 5.6.

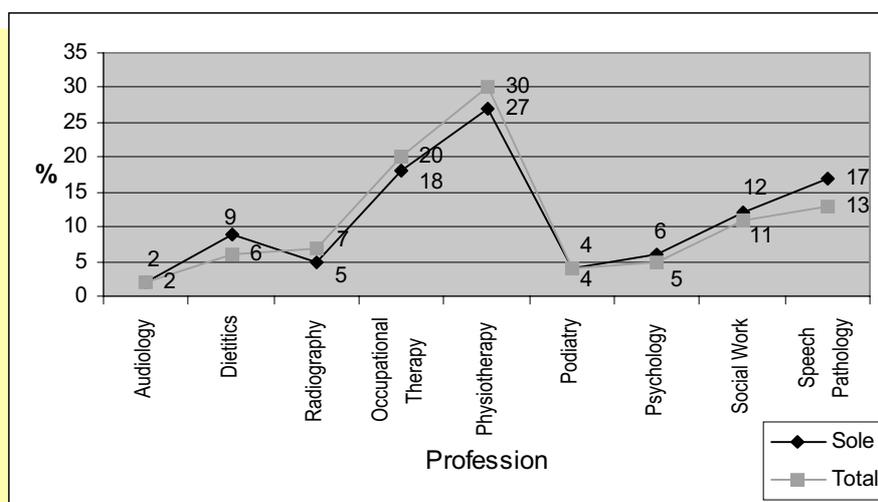


Figure 5.6: Pattern of responses from sole allied health professionals and total respondents

The response from sole allied health professionals was considerable with 37 percent of all survey responses indicating they were sole professionals (ie not co-located with a peer of the same profession). Further breakdown of this group in terms of geographic distance from the nearest peer of the same profession showed that a significant number of the sole allied health professional group (21% of the total survey responses) had a peer of the same profession located in the same town. Ten percent (10%) of the total responses were locate up to 100kms away from a peer of the same profession, 5 percent 100 – 300kms away and a small but significant number (2%) located over 300 kms away from the nearest peer of the same profession.

5.3.2 Age Breakdown of Sole Allied Health Professionals

The age distribution of sole allied health professionals is similar to the all survey responses, as indicated in Figure 5.7. In both the co-located and sole allied health professional categories, the age grouping with the highest representation was the 35-44 year category with 27 percent of sole allied health professionals and 25 percent of co-located allied health professionals in that age group. This was an unexpected result as it has often been hypothesised that the sole allied health professional group was a relatively young and not highly experienced faction. It may be that there are in fact several subgroups of sole allied health professionals ranging from those who are experienced and have chosen to stay long term in a sole practice role or location, to those who take on sole allied health positions as recent graduates. The value in further analysing these possibilities is in considering utilising the expertise of those who are committed to staying in sole practice roles for increasing the understanding of sole allied health practice competencies, as well as to provide support for less experienced clinicians.

When analysing the age breakdown for sole practitioners according to distance from their nearest peer of the same profession, it was apparent that a high percentage of those who were more professionally isolated (ie more than 100kms from the nearest peer of the same profession), were aged under 29 years. In fact 49.5 percent of sole allied health professionals in this geographical group were 29 years or under compared to 33 percent in the co-located group, and 26 percent in the group where the nearest peer of the same profession was up to 50 kms away. This confirms that higher levels of support should be offered in more remote locations.

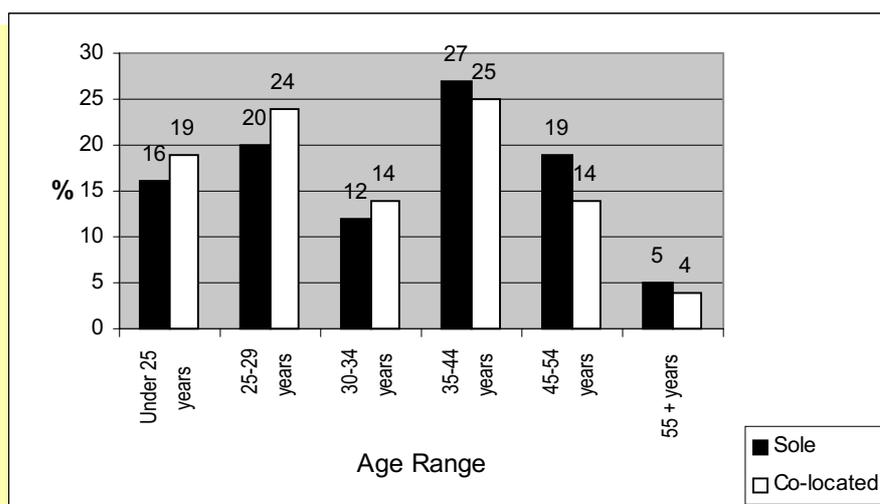


Figure 5.7 Age ranges of co-located peers and sole allied health professionals

Recommendation 5(iii)

A qualitative study be undertaken to identify the characteristics of the experienced sole allied health professional. This data could then be utilised to develop a set of core and advanced competencies for sole allied health practice.

5.3.3 Professional Breakdown of Sole Allied Health Professionals

The individual allied health professions were quite different in their patterns of sole practice. Taking each professional group individually, Table 5.3 demonstrates that of the total respondents in each professional group, dietitians (52%), speech pathologists (47%) and podiatrists (45%) were more likely to be sole allied health professionals. Occupational therapists (23%) and radiographers (29%) were least likely to be practising in a sole position. Even though these professionals were less likely to be sole clinicians, 23 percent and 29 percent are still a considerable proportion of the rural allied health workforce.

It is also useful to describe sole practice results in terms of raw frequencies of professionals, to provide information about which professions (of the total of sole practitioners) are more represented. Physiotherapists (27%), occupational therapists (18%) and speech pathologists (17%) constituted the largest proportions of the total of sole allied health respondents. This data has implications for the training and preparation of graduates for rural practice and indicates that these professions should be targeted as a priority group for experience and skills development relevant to sole allied health practice.

Recommendation 5(iv)

Due to their prevalence as sole allied health professionals, resources should initially be allocated to assist the preparation of physiotherapy, occupational therapy and speech pathology graduates for sole allied health practice. Outcomes from such a program can then be applied to other professions.

5.3.4 Post Graduate Education

Sole allied health professionals were clearly a well educated group, with 39 percent holding a post graduate qualification compared to 30 percent of co-located allied health professionals. While this result was not statistically significant, it may be proposed that sole allied health professionals undertake additional qualifications either in areas that they believe are required for their position (eg either management or further clinical development). No data was collected on the type of postgraduate course completed and so it cannot be determined if the needs of the sole allied health professional are different from the total respondents. Certainly one hypothesis could be that the sole allied health professionals may complete formal qualifications to compensate for decreased access to continuing professional development programs. The data from this study however, does not support this with sole and co-located allied health professionals attending similar numbers of professional development programs.

For those who did not hold a post graduate qualification, while not statistically significant, a higher number of sole allied health professionals were intending to undertake postgraduate qualifications in the next three years compared to co-located peers. Of the co-located allied health group, 12 percent intended to undertake further post graduate study, compared with 15 percent for allied health sole practice groups. A higher percentage of more remote allied health sole allied health professionals indicated a likelihood of undertaking further studies (19%).

There are implications of these results for professional associations and education providers who must consider the education delivery needs of these groups. While 28 percent sole allied health professionals and 33 percent of co-located allied health professionals intended to leave their current location to undertake their intended studies, the recruitment and retention implications for the sole professional group may be more significant. This is particularly apparent since 40 percent of those located over 100kms away from the nearest peer of the same profession, indicated they would move away to undertake study.

While this study did not examine vacancy and recruitment statistics in detail it is anecdotally evident that filling a sole allied health professional position in a more remote area is considerably more difficult than in a co-located practice. In order to keep skills current, allied health professionals must access postgraduate education, however it is ironic that rural and remote communities must lose services for these professionals to do so.

When I was a sole practitioner, I would have loved to complete a postgraduate qualification in my clinical area, however there were no external programs in Australia. I did continue my studies in management areas but it is now 12 years since I first thought of doing a clinical post graduate. I don't think that even now there are programs available. Due to my management qualifications I moved out of my allied health profession, although I am still working in a rural area.

(Former sole allied health professional, rural Australia)

Recommendation 5(v)

A high proportion of allied health professionals in sole positions intend to take on postgraduate studies, and a significant proportion will have to leave their positions to do so. It is therefore recommended that education & training providers, including University Departments of Rural Health, actively pursue appropriate delivery of education and training programs at all levels to allow sole allied health professionals to remain in their location. Programs should be available in clinical and management areas and utilise a range of education delivery strategies.

Recommendation 5(vi)

Employers support sole allied health professionals intending to undertake postgraduate study to reduce the requirement for sole allied health professional to leave their positions. This will reduce the likelihood of communities having a gap in services, and ensure continued improvement of allied health programs and skills in the community.

5.3.5 Employment of Sole Allied Health Professionals

Employment Status

In relation to part or full time employment, there were considerably more respondents who worked in part time roles of 30 hours or less, with 27 percent in sole practice positions compared with 19.9 percent of co-located peers. While further detail was not available from the survey results in terms of whether this was influenced by choice or availability of employment, there is obviously a need to examine this further. In particular, this should be examined in relation to the high proportion of females in allied health professions, as it may be hypothesised that part time employment options would be more attractive to some. The issue of part time employment availability is also critical for smaller communities who may be able to support a part time, but not full time position in an allied health profession. In essence, situational and contextual factors relating to

communities and individual professionals must be considered to maximise the benefit of an allied health service to a community whilst meeting the allied health professional. This is particularly pertinent in sole practice locations, where flexibility, or lack of, may result in innovative service solutions, or cessation of existing services.

Recommendation 5(vii)

Employers and communities recognise the need for flexibility in establishing and maintaining allied health services to communities, particularly in relation to small communities that may only require a sole allied health professional in a particular service area. Flexibility of job opportunities such as part time availability, job share and innovative service delivery should be encouraged based on the needs of the community and the allied health professional.

Geographic Location of Sole Allied Health Professionals

As expected, co-located allied health professionals were more likely to be found in metropolitan (3.9%), provincial (10.8%) and regional centres (23.2%). Sole allied health professionals were most commonly found in regional centres (23.3%) followed by small towns (19.2%), medium towns (19.2%), large rural town (14.6%) and community of less than 2000 people (8.1%). The high proportion of sole allied health professionals in regional centres is not unexpected considering the outreach services that are provided.

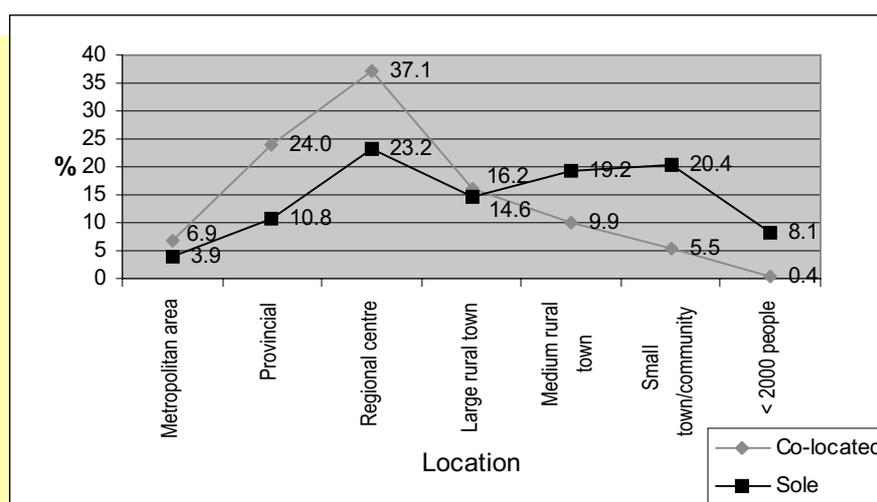


Figure 5.8: Location of co-located peers and sole allied health professionals

5.3.6 Work Practices

Travel and Outreach Services

While co-located allied health professionals travelled to more than one location (49.6%), sole allied health professionals demonstrated a higher geographic responsibility, which increased with distance from the nearest peer of the same profession. While 57.8 percent of sole allied health professionals (with nearest peer in the same town) travelled to more than one location, this increased to 72.5 percent for those who had the closest peer of the same profession up to 50kms away (77.2% for those with the closest peer 50 – 100 kms away and 79.2% for those with the closest peer over 100kms away). In interviews with sole allied health professionals it was not uncommon for them to advise that they travelled to several locations with considerable time spent on the road. It would appear from these sole allied health professional interviews that often this travel component of the positions is not taken into account.

As a sole allied health professional in a remote area, I am often on the road 3-4 days per week. To keep up with workload I have to take paperwork home after a long day. I never get to take time off in lieu of overtime or travel as my workload is too heavy and there is no one who can fill in.

(Sole allied health professional, remote Australia)

Indeed as one sole allied health professional noted, the component of the position's travel is not considered seriously enough with the example of allied health professionals denied access to air travel when medical students were in town and wished to travel. Safety is also a critical issue for sole allied health professionals who are required to travel. If there is not a colleague to travel with, at the very least, the sole allied health professional should receive adequate training in key safety issues relevant to the area they are travelling in. Appropriate communications equipment should also be provided (refer recommendation 4(vi)).

While figure 5.9 demonstrates little difference between co-located and sole allied health professionals in the travel frequency, this data does not take into account the type of travel and the number of different places visited. A visiting service within a co-located practice in a provincial centre may allow shared workload for visits, and in fact these visits may not require significant travel. Through interviews with sole allied health professionals, particularly those in remote areas, it is likely that sole allied health professionals may travel to several areas with several hundreds of kilometres between them.

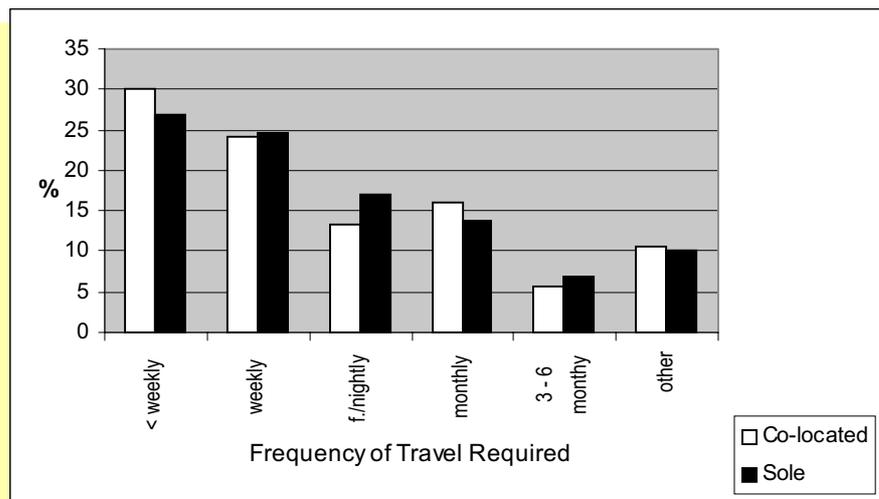


Figure 5.9: Travel frequency of co-located peers and sole allied health professionals

Locum Services

It is clear from the data that access to locum coverage is problematic for the entire allied health workforce in rural and remote Australia. This issues is particularly critical for the 37 percent of respondents who identified themselves as sole allied health professionals. With less than one of five sole allied health professionals having access to locums when on leave or when attending education programs this is likely to discourage allied health professionals to go on any type of leave, as the following comments from the sole allied health professional illustrate.

The reasons for not accessing locum support can be varied ranging from no resources to employ a locum through to no allied health professionals available. This issue is critical

to allied health professionals who responded to the survey with 67.5 percent indicating that they would utilise locums if available.

I recently attended a National Conference at my own expense, but my position was not backfilled while I was away. The clients blamed me for the service being unavailable, and not the employer. This kind of situation makes it hard for a sole practitioner to attend professional development and would make me think twice about attending further programs.

(Sole allied health professional, rural Australia)

For those who indicated that their service was partially covered by other than locum services, again the allied health professionals in sole positions were more likely to have no alternative cover at all (refer Figure 5.10)

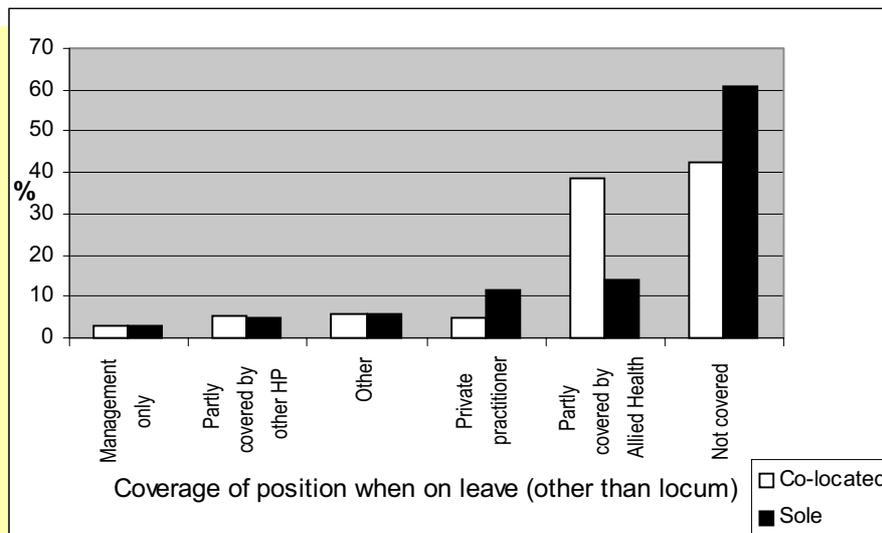


Figure 5.10: Coverage other than locums for co-located peers and sole allied health professionals

Recommendation 5(viii)

Due to the extremely low locum accessibility for all allied health professionals in rural and remote areas, and in particular for those working in sole positions, it is recommended that State/ Territory and Commonwealth governments consider funding appropriate locum support programs. Locum support programs must take into account various rural and remote practice situations and must be flexible in meeting the needs of rural communities.

5.3.8 Retention

In considering the likelihood of sole allied health professionals staying in their current location, the results were similar for those who were co-located with a peer of the same profession compared to all sole allied health professional categories. In both categories a very high percentage of allied health professionals intended changing positions within 2 years (40% of co-located and 34.5% of sole allied health professionals) and represents an enormous turnover in the workforce.

Recruitment to sole positions is not always difficult as these positions often appeal to the more adventurous types. Unfortunately retention is frequently the problem as these professionals often seek new adventures, often overseas, after about a year!

(Senior allied health professional, rural Australia)

The results showed that a co-located peer is more likely to move for their own career development, followed by their partner’s career whereas in the sole allied health professional group the partner’s career rated as a higher priority, followed by burnout and then their own career. These results may imply that sole allied health professionals may not be in their current position by professional choice, and may have moved to a sole position when their partner moved. In fact 72.8 percent of all respondents reported that they were in long term relationships, and 38.8 percent of all respondents had dependent children.

Of interest was the relatively high proportion of sole allied health professionals who noted that they intended to stay more than five years. Figure 5.11 shows the breakdown of the responses by co-located peers, and all sole allied health professional groups. The group of sole allied health professionals with the nearest peer of the same profession over 100kms away, were least likely to stay over five years, however the percentage that did intend to stay was still relatively high (31.8%). Further information is required about this group to determine what factors make them want to stay long term. If there are key skills and supports that encourage the retention of some sole allied health professionals then these should be studied further. Alternatively the intention to stay could be simply family ties to the area, however again this is important to analyse.

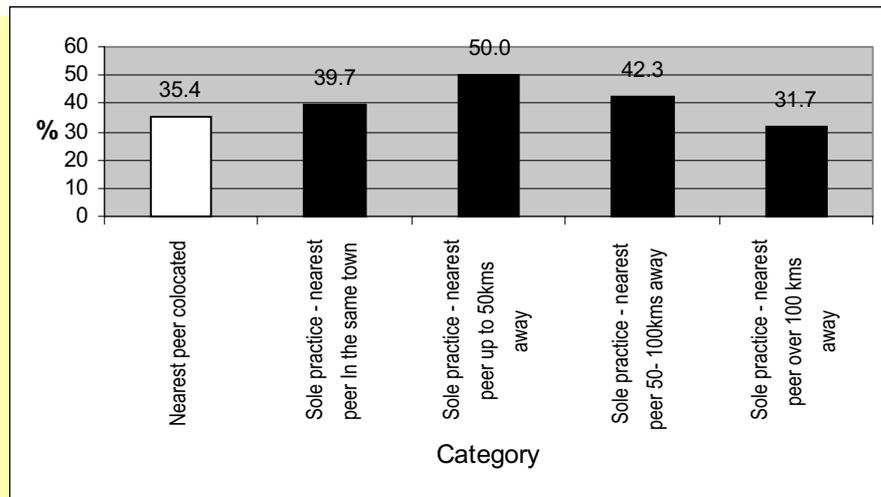


Figure 5.11: Co-located peers and sole allied health professionals who intend to stay in the same location for more than five years

5.3.9 Management and Supervision

The key feature with respect to immediate supervisor was that almost half of the co-located peers were supervised by someone of the same allied health profession and in the same location. While it would be expected that the sole allied health professionals group response to this would have been extremely low, in fact 5 percent noted that they were supervised in this way. For the purposes of this analysis it can only be assumed that this was a misinterpretation of the survey item with sole allied health professionals coding this response in situations such as when a supervisor visited their site or vice versa.

Of more interest however were the results that showed that overall 55.1 percent of co-located peers had an immediate supervisor of the same allied health profession, compared to only 16.6 percent of sole allied health professionals. In considering those that were supervised by an allied health professional of a different allied health profession, this was higher in the sole practice group with 15.8 percent of this group compared to 11 percent of the co-located group supervised in this way.

Of concern was that a director of allied health model was rarely utilised in both co-located (3.9%) and sole allied health professional (4.2%) groupings.

In terms of other supervision arrangements, it was of concern that 19 percent of all sole allied health professionals were supervised by a non allied health professional, either a Medical Practitioner or Director of Nursing, compared to only 8.3 percent of co-located peers. Similarly a higher proportion of sole allied health professionals (16.5%) were supervised by a District/ General Manager or non health professional compared to their co-located peers (6.8%).

In terms of sole allied health professionals the key issue here must be whether or not the supervisory arrangements that are in place allow the sole practitioner access appropriate clinical development, supervision and support. This is addressed in recommendation 5 (i) in the development of a SARRAH Blueprint paper outlining appropriate standards including access to direct clinical support and development.

5.3.10 Continuing Education and Professional Development

While it may be hypothesised that the continuing education and professional development needs of co-located and sole allied health professionals would be different, this has not been shown to be the case in this study. For both groups the top three needs identified were clinical education, management training and information technology. There were also similarities to the number of programs attended by allied health professionals in sole and co-located groups. While there may be differences in the types of education and training required in each these priority areas by the co-located and sole allied health professional groups, the results indicated that providers of education and training content may be able to target different practice needs with similar programs.

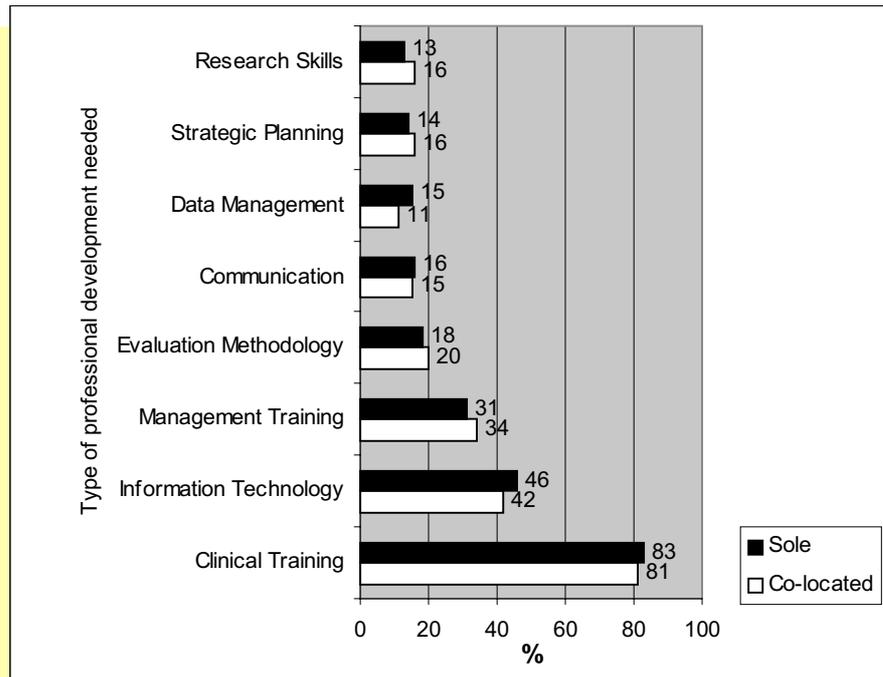


Figure 5.12: Professional development needs of co-located sole allied health professionals

6.1 Introduction

This chapter describes the specific issues that relate to education and training for allied health professionals practicing in rural and remote areas. This description is based on the results obtained from a survey of allied health professionals, and a subsequent analysis of 1620 responses. It is important that this chapter is read in the context of the whole study, as other important information regarding education and training is also contained within other chapters.

6.2 Data and Results

6.2.1 Undergraduate Training

93.4 percent of the total respondents obtained their undergraduate degree within Australia. There was a highly significant difference ($p=0.001$) between overseas graduates and Australian graduates within all the professions.

6.2.2 Postgraduate Study

Completion of Postgraduate Study

33.5 percent of respondents indicated that they had at least one postgraduate qualification. Of these respondents, 42.2 percent indicated they had attained a Diploma level, 20.0 percent indicated they had attained a Masters level, 16.1 percent had a second Bachelor degree and 1.5 percent had attained a Doctorate.

Undertaking to Complete Postgraduate Study

When asked to indicate their current undertakings, 15.2 percent of the total respondents indicated that they were currently studying for postgraduate qualifications. Of these respondents, 32.2 percent were undertaking Diploma studies, 29.8 percent undertaking Masters level, 9.4 percent undertaking Doctoral studies, and 5.7 percent undertaking a second Bachelor degree.

Intention to Undertake Postgraduate Study

Of the respondents who were not currently undertaking postgraduate study, 52.1 percent indicated “yes” or “maybe” to the question of studying postgraduate courses in the next three years. Of this group, the most popular postgraduate study type was Masters level, with 38.8 percent of this group indicating this preference. This group was further asked to indicate their intent to move location in order to undertake these studies. 30.8 percent indicated that they intended to move, and 6.4 percent indicated “maybe” they would move.

Further analysis was undertaken to ascertain any relationship between the respondents' location, and their intention NOT to undertake postgraduate study. There was no significant difference ($p=0.119$) between location types (eg between Metropolitan and small town etc.).

Respondents who indicated "no" or "maybe" to undertaking postgraduate studies within the next three years, were asked to indicate their reasons for not considering this option. The most frequent response was lack of time (41.6%). Figure 6.1 demonstrates these responses.

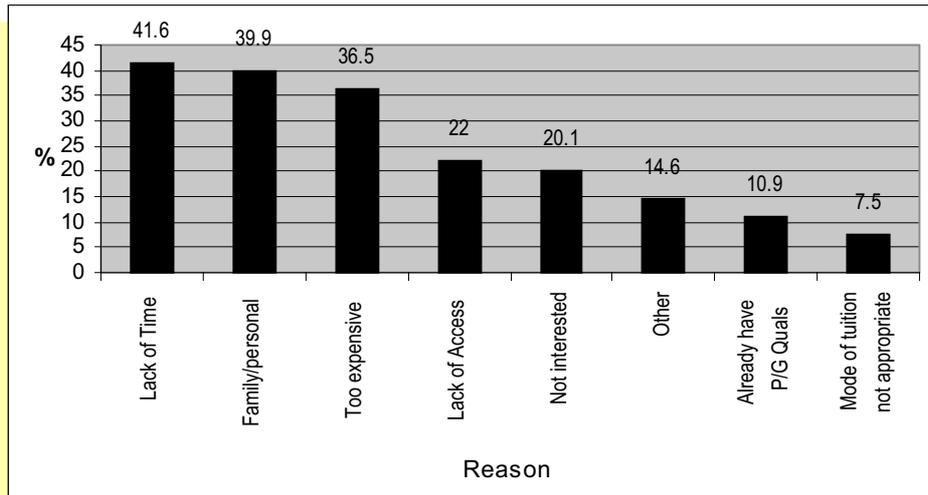


Figure 6.1: Reasons for not considering postgraduate study

6.2.3 Participation in Professional Education

Respondents were asked how many professional development programs they had undertaken in the last twelve months. The frequency of participation in educational programs for respondents is illustrated in Figure 6.2 below. 66.5 percent of respondents indicated that they had attended three or less professional development activities in twelve months.

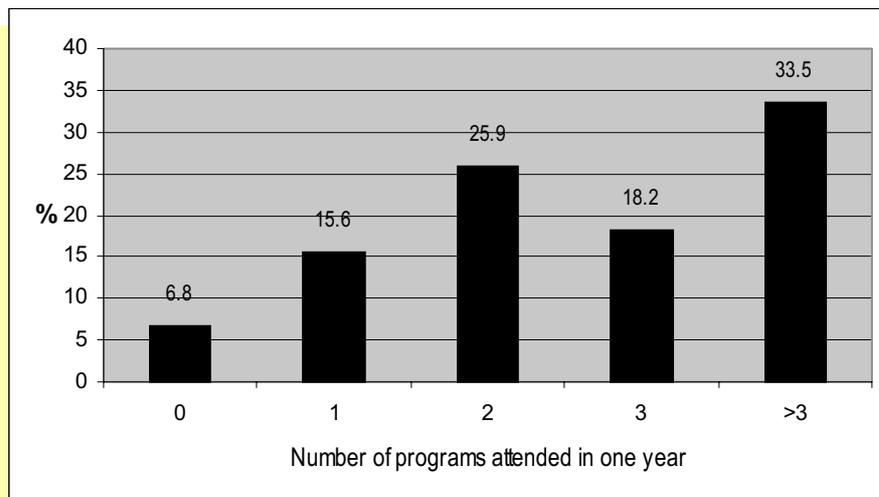


Figure 6.2: Participation in professional development programs

Respondents who indicated that they had attended more than three programs in the last twelve months, were then asked to indicate the reason/s for this. A range of responses were provided by participants, and included (rank ordered most frequent to least frequent):

- Personal motivation;
- CPE requirements;
- Specific clinical need;
- Newly recruited;
- New technology introduced; and
- New administrative arrangements.

Funding for Professional Development

The majority of respondents indicated that their attendance at professional development programs over the last twelve months was a combination of self and employer funded (45.6%). 24.6 percent of respondents indicated that they self-funded attendance at programs, and 26.4 percent indicated that the employer funded their attendance.

Nature of Education and Training Programs

Educational programs were accessed by respondents over the last twelve months in varying amounts. Respondents were instructed to indicate their top three types. Figure 6.3 indicates respondents access to these programs.

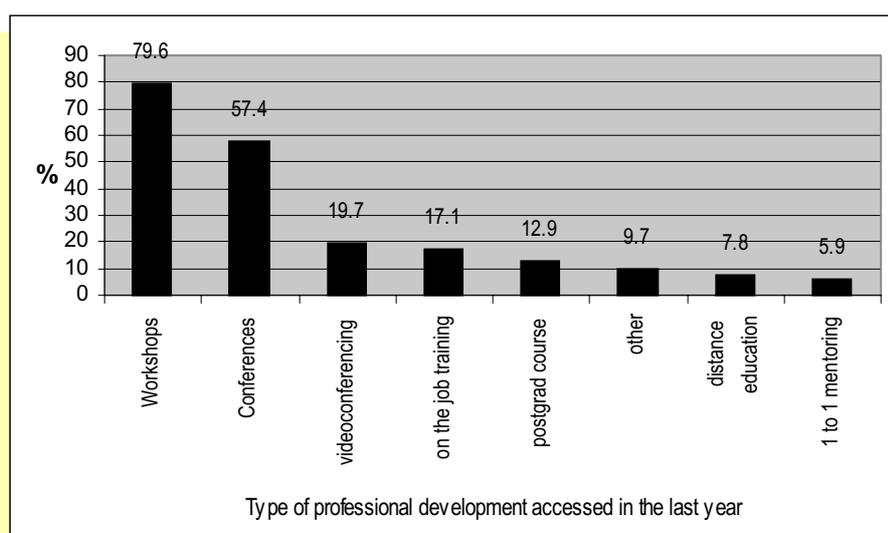


Figure 6.3: Professional development accessed over the last 12 months

Further analysis on professional development access was performed to ascertain relationships between location of the respondents, and the type of education being accessed. Access to professional development according to location type is demonstrated in Table 6.1. This data highlights that about half of respondents, irrespective of location, have accessed conferences, and about three quarters have accessed workshops. There is a higher proportion of respondents from smaller locations who undertake distance education and videoconferencing, compared with larger centres.

Table 6.1: Percentage of respondents indicating access to professional development types, according to location

PD ACCESSED	LOCATION						
	Metropolitan	Provincial	Regional Centre	Large Rural	Medium Rural	Small Town	< 2000 People
Conferences	51.1	57.4	50.1	50.4	55.0	56.9	47.1
Workshops	76.1	74.5	74.0	73.0	74.0	73.0	70.5
Distance educ.	4.3	7.4	6.4	4.1	9.0	9.8	7.8
Video-conf.	16.3	19.1	16.0	17.2	21.8	19.5	23.5
Mentoring	10.9	4.7	4.0	7.0	8.1	3.4	2.0
Post-grad course	17.4	12.8	9.2	7.0	10.9	19.5	7.8
OTJ training	18.5	18.5	15.4	20.1	10.4	12.6	3.9
Other	7.6	6.0	9.4	11.9	9.5	8.6	11.8

A similar analysis was performed to identify access to professional development types according to the State/Territory of employment of the respondents. The results are illustrated in Table 6.2. Again a large percentage of respondents, irrespective of place of employment, indicated that they had accessed conferences and workshops within the last twelve months. A higher percentage of respondents from Victoria accessed post graduate courses (17.0%) and distance education (9.8%) in the last year, than other States/Territory. Tasmania reported the highest percentage of respondents who have accessed on-the-job training (23.6%), and Queensland reported a remarkably higher percentage (42.9%) of respondents who accessed videoconferencing. Videoconferencing is also more readily accessed by those respondents in SA and WA (23.3% and 22.9% respectively) compared with other states.

Table 6.2: Percentage of respondents indicating access to professional development types, according to State/Territory of employment

PD ACCESSED	STATE/TERRITORY OF EMPLOYMENT						
	NSW/ACT	QLD	VIC	SA	WA	TAS	NT
Conferences	48.1	56.2	68.8	52.9	54.0	50.9	51.2
Workshops	72.3	71.9	79.5	76.5	73.0	69.7	81.0
Distance educ.	6.9	7.4	9.8	5.2	7.9	5.5	9.5
Video-conf.	5.6	42.9	11.6	22.9	23.3	7.3	9.5
Mentoring	3.8	7.4	6.3	6.5	3.7	6.7	7.1
Post-grad course	10.5	12.7	17.0	11.1	11.2	12.7	13.1
OTJ training	16.6	11.8	16.1	17.6	12.1	23.6	16.7
Other	8.5	7.7	6.3	8.5	9.3	11.5	15.5

Additional analysis on the nature of professional development according to professional discipline was undertaken to establish the degree to which various disciplines had accessed professional development. These results are shown in Table 6.3. Respondents who were psychologists or social workers were less likely to access conferences than other disciplines. Radiographers were much less likely to access workshops than the other disciplines. Physiotherapy has the largest percentage of respondents who had accessed distance education. Physiotherapists and speech pathologists were more likely to have accessed Videoconferencing than other disciplines. Psychology respondents were more likely to have experienced mentoring than other disciplines. Podiatry, radiography, psychology and physiotherapy were more likely to have accessed post-graduate studies over the last twelve months. Audiology and radiography were more likely to have accessed on-the-job training.

Table 6.3: Percentage of respondents indicating access to professional development types, according to professional discipline

PD ACCESSED	PROFESSION								
	Audiology	Dietetics	Occ Thy	Physio	Podiatry	Psychology	Radiography	Soc Wk	Sp Path
Conferences	66.7	61.8	51.8	55.1	62.1	47.0	51.4	47.0	50.5
Workshops	80.0	73.5	76.5	74.0	62.1	84.3	38.1	79.6	78.2
Distance educ.	0.0	8.8	6.8	10.5	3.4	2.4	7.6	6.5	4.1
Video-conf.	0.0	22.5	14.9	26.0	10.3	4.8	1.9	12.9	25.9
Mentoring	3.3	2.9	6.3	4.3	5.2	13.3	2.9	4.8	7.3
Post-grad course	6.7	11.8	12.8	14.1	17.2	14.5	15.2	7.0	6.4
OTJ training	20.0	19.6	13.7	17.2	10.3	12.0	22.9	18.8	11.4
Other	13.3	8.8	6.5	13.1	12.1	3.6	4.8	3.8	10.0

Providers of Education and Training

Information regarding the major providers of education and training was obtained, and analysis undertaken to ascertain relationships with location, State/Territory of employment, and discipline. Respondents were instructed to list their top three major providers of education and training.

With respect to location of respondents and training providers, professional associations and colleges were the largest provider of education and training irrespective of the respondents' location. The percentage of respondents who had accessed training through Rural Health Training Units [RHTUs] is proportional to the rurality of the location, ie the more rural the location, the larger number of respondents who indicated RHTU as a major provider. Conversely, the percentage of respondents who were provided with training from their employer is inversely proportional to rurality, ie. smaller percentages of respondents from rural and remote locations indicated their employer as a major provider. Table 6.4 illustrates these figures.

Table 6.4: Percentage of respondents indicating their major education and training provider, according to location

MAJOR PD PROVIDERS	LOCATION						
	Metropolitan	Provincial	Regional Centre	Large Rural	Medium Rural	Small Town	< 2000 People
RHTU	8.7	16.1	15.0	18.4	18.0	21.8	25.5
Universities	20.7	13.4	15.4	15.6	9.0	14.9	13.7
My employer	40.2	27.5	27.7	23.8	23.7	21.8	15.7
Training consultant	2.2	5.4	6.0	3.3	5.2	4.6	3.9
I.T. provider	4.3	3.0	2.4	0.0	1.4	1.7	2.0
Self	14.1	11.4	12.2	12.7	14.7	10.3	13.7
Prof assoc.	34.8	43.3	37.7	42.6	47.9	47.7	49.0
Prof college	29.3	31.9	28.3	26.6	29.4	29.3	21.6
Other	12	7	9.6	11.5	10.9	9.8	7.8

With respect to State/Territory of employment, there were marked variances in the provision of professional education by specified training providers. Table 6.5 indicates these values. Of respondents who identified RHTUs as a major provider, the largest proportions were found in Queensland (39.6%) and South Australia (20.9%). There were no respondents from Victoria and Tasmania who indicated RHTUs as a major provider. Victorian respondents were least likely to indicate their employer as a major provider. Respondents who indicated *self* as a major provider were more likely to be based in Western Australia, Tasmania and Northern Territory. Professional associations were more likely to be a major provider for those respondents who were based in Victoria.

Table 6.5: Percentage of respondents indicating their major education and training provider, according to State/Territory of employment

MAJOR PD PROVIDERS	STATE/TERRITORY OF EMPLOYMENT						
	NSW/ACT	QLD	VIC	SA	WA	TAS	NT
RHTU	15.9	39.6	0.0	20.9	8.4	0.0	2.4
Universities	13.9	14.8	20.5	22.2	15.8	12.1	10.7
My employer	28.4	25.7	16.1	21.6	24.7	28.5	39.3
Training consultant	4.0	3.3	6.3	5.2	7.0	4.2	10.7
I.T. provider	1.8	2.4	2.7	0.0	1.4	2.4	4.8
Self	13.0	10.7	8.0	8.5	15.8	14.5	13.1
Prof assoc.	37.6	41.7	57.1	37.3	39.5	46.7	48.8
Prof college	26.6	24.6	30.4	32.7	31.2	35.8	25.0
Other	8.3	7.1	15.2	11.8	9.8	15.2	6.0

Information regarding the major training providers, according to the respondents' discipline is presented in Table 6.6. RHTUs were indicated as a major training provider for about one fifth of respondents from social work, occupational therapy, speech pathology, physiotherapy, radiography and dietetics. Respondents from audiology, podiatry or psychology backgrounds were least likely to receive training from RHTUs. Podiatrists were most likely to access education from Universities (25.9%). Almost half of the audiology respondents indicated their employer as a major provider. About one third of the remaining disciplines indicated that they receive training from their employer, except podiatry, where only 15.5 percent of this group indicating their employer as a provider. Psychology respondents indicated that training consultants are more likely to be a major provider, when compared with other disciplines.

Over 50 percent of audiologists, physiotherapists, podiatrists and speech pathologists from this sample indicated that their professional association was a major training provider. Social Work demonstrated the lowest percentage (17.7%) of all disciplines with respect to professional associations providing training.

Table 6.6: Percentage of respondents indicating their major education and training provider, according to professional discipline

MAJOR PD PROVIDERS	PROFESSION								
	Audiology	Dietetics	Occ Thy	Physio	Podiatry	Psychology	Radiography	Soc Wk	Sp Path
RHTU	3.3	14.7	19.0	17.0	6.9	4.8	16.2	25.8	17.3
Universities	20.0	15.7	16.4	13.1	25.9	19.3	16.2	16.1	10.9
My employer	43.3	27.5	28.0	23.2	15.5	27.7	21.0	30.6	30.0
Training consultant	6.7	0.0	7.4	1.8	1.7	12.0	1.9	14.0	1.8
I.T. provider	3.3	5.9	0.9	1.6	3.4	2.4	0.0	2.2	2.7
Self	6.7	9.8	10.4	16.6	17.2	10.8	14.3	7.5	10.0
Prof assoc.	56.7	46.1	31.5	54.1	53.4	31.3	33.3	17.7	51.4
Prof college	6.7	22.5	30.7	27.7	27.6	38.6	15.2	31.7	31.4
Other	16.7	12.7	14.6	5.3	6.9	10.8	9.5	12.9	7.3

Table 6.7: Preferred methods of education & training delivery

METHOD OF DELIVERY	%
Hands-on training	72.5
Face-to-face training	67.1
Group learning situations	53.3
Problem based learning	19.0
Individual study	18.6
Mentoring	15.1
Self-paced learning modules	13.2
Distance education	10.0
Computer based	5.5
Other	1.3

Delivery of Professional Development

Respondents were asked to list their top three preferred methods for the delivery of education and training. Face-to-face training (67.1%) and hands-on training (72.5%) were the most frequently selected options. Other methods of delivery are indicated in Table 6.7, together with the frequency of selection.

6.2.4 Educational Needs

Respondents were asked to indicate the person who determines their educational needs. 89.2 percent indicated that they determined their own professional development needs, and 31.2 percent were determined by immediate supervisor/line manager.

Educational needs were established by asking clinicians to list their top three priorities. In summary, clinical training was overwhelmingly the most frequent priority (82.4%), followed by information technology (44.4%), and management training (33.8%). The relative frequencies of these priorities are highlighted in Figure 6.4.

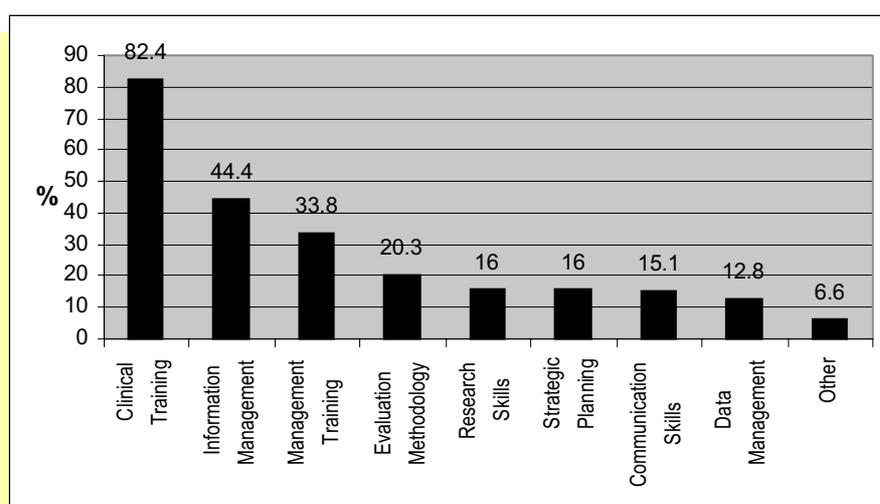


Figure 6.4: Educational needs Indicated by respondents

This information was further analysed according to location and discipline. Table 6.8 indicates the percentage of respondents from each location type. Clinical training, irrespective of location type, was the most frequently chosen priority area, ranging from 73.9 percent of metropolitan respondents to 88.2 percent of respondents from locations <2000 people. Respondents from this location type were less likely to indicate research skills, data management, management training and strategic planning, when compared with other location types. The content areas of evaluation methods and information technology had relatively high responses for more rural locations, compared with other location types.

Table 6.8: Percentage of respondents indicating their major educational need/s, according to location

PD NEEDS	LOCATION						
	Metropolitan	Provincial	Regional Centre	Large Rural	Medium Rural	Small Town	< 2000 People
Info technology	41.3	45.3	40.7	43.4	48.3	43.7	45.1
Data management	10.9	13.8	12.2	9.8	13.7	14.4	7.8
Communication skills	16.3	16.4	15.8	11.5	15.2	20.1	15.7
Clinical training	73.9	81.2	80.8	79.5	84.4	85.6	88.2
Management training	30.4	29.5	37.5	34.0	30.8	27.6	27.5
Research skills	31.5	14.1	15.8	11.9	12.3	13.8	11.8
Strategic planning	12.0	16.4	15.6	13.5	15.2	16.1	9.8
Evaluation methods	21.7	21.8	17.2	25.4	13.7	17.2	21.6
Other	6.5	5.7	5.4	6.1	6.2	7.5	13.7

Information regarding educational priority areas for each of the disciplines is listed in Table 6.9. Psychologists and occupational therapists were less likely to indicate information technology as a priority area, when compared with other disciplines. Psychology respondents had much lower proportions for most of the priority areas, except for clinical training. Respondents who were radiographers indicated low preferences for research skills strategic planning and evaluation methods.

Table 6.9: Percentage of respondents indicating their major education need/s, according to discipline

PD NEEDS	PROFESSION								
	Audiology	Dietetics	Occ Thy	Physio	Podiatry	Psychology	Radiography	Soc Wk	Sp Path
Info technology	43.3	47.1	35.4	44.9	50.0	32.5	55.2	42.5	46.8
Data management	13.3	11.8	10.1	12.7	5.2	9.6	10.5	13.4	18.2
Communication skills	16.7	23.5	18.8	12.7	17.2	7.2	22.9	10.2	10.9
Clinical training	80.0	69.6	80.4	86.3	72.4	86.7	76.2	70.4	83.2
Management training	33.3	34.3	31.8	32.0	36.2	21.7	35.2	33.9	37.3
Research skills	20.0	19.6	15.8	15.0	24.1	15.7	9.5	15.1	14.5
Strategic planning	23.3	21.6	18.5	11.7	13.8	16.9	7.6	21.5	15.5
Evaluation methods	13.3	23.5	21.1	20.5	15.5	19.3	3.8	18.3	25.5
Other	6.7	11.8	6.5	4.3	3.4	7.2	10.5	9.1	4.5

6.3 Discussion and Recommendations

6.3.1 Post Graduate Education Issues

The results of this study indicate that the allied health workforce is committed to furthering their professional skills and knowledge, with almost half of all respondents in possession of, or working toward, a post graduate qualification. This degree of uptake for professional studies illustrates the high level of experience that currently exists within the workforce.

Of those currently studying for a post graduate qualification, approximately 40 percent were enrolled at a Masters or Doctoral level, demonstrating the degree of analytical and research skills that are available within this group of professions. A major issue in the rural health sector in recent times, has been the availability of appropriate skills to undertake research and projects in the area of rural health. It appears there are resources available in rural and remote areas, that are under-utilised, in the quest to further our knowledge of rural and remote health, and health service delivery.

One third of respondents who would like to undertake postgraduate study, indicated that they intended to relocate in order to do this. This figure is an alarming indicator of the lack of appropriate post graduate opportunities available to people, where they live. It is clear that the allied health workforce is a highly motivate group. In order to maintain this level of motivation and knowledge in rural and remote areas, appropriate educational opportunities that cater for distance learning are required.

Recommendation 6(i)

Governments and tertiary institutions are required to improve access to appropriate tertiary education courses and opportunities for rural and remote allied health professionals.

Almost half of the respondents have suggested that they do NOT intend to undertake post-graduate study in the future. The main reasons given for this were related to personal and family issues/decisions. Alarming, about one-third indicated that the expense was a major decision factor, and about one fifth indicated lack of access as a contributing factor.

Expense of study would appear to be a comparatively easy barrier to overcome, given the good-will of Government and tertiary institutions to collaborate on programs which alleviate these financial disincentives. Additionally, the access to post-graduate study for rural and remote health professionals (also indicated in this study as a contributing factor), is likely to be positively influenced by the increasing availability of communications technologies to rural and remote workplaces.

6.3.2 Continuing Professional Education

Commitment to ongoing education was also apparent in relation to professional development undertaken. Although about two thirds of respondents had undertaken three or less programs in the past twelve months, it is encouraging to note that one in three respondents had undertaken more than three professional development activities over the past twelve months.

Perhaps a greater indicator of commitment to ongoing education, is the proportion of those respondents who financially supported their own professional development activities. This study demonstrates that 70 percent of allied health professional respondents self-funded all or part of their professional development activities. This would suggest that employers might not provide, or accept the importance of, professional development opportunities for allied health professionals.

In a number of professional disciplines, there is an increasing requirement to undertake a quota of continuing professional development in order to maintain registration and/or membership of the professional association. This is even further confirmation that improved access to professional development is needed by allied health professionals.

Recommendation 6(ii)

Employers of allied health professionals are required to support the provision of improved access to quality and quantity of continuing professional development opportunities.

Respondents in this study had accessed workshops and conferences more than any other type of continuing professional development event. Data from interviews and focus groups, confirmed that these events were more likely to be conducted in metropolitan or large regional centres, rather than in smaller communities. Queensland respondents were almost twice as likely than any others to have utilised videoconferencing to access professional development, and New South Wales, Tasmania, and Northern Territory respondents had utilised videoconferencing in a very limited way.

With increasing demands on workload and service delivery, education and training opportunities that do not require the professional to leave the workplace for long periods of time require attention and effort. This study suggests that alternative methods for delivering educational programs are under-utilised, particularly those enabled by information technology.

Recommendation 6(iii)

The exploration and utilisation of other delivery methods for education and training programs requires attention from employers and education providers.

Whilst conferences and workshops were more frequently attended by respondents, there were variations in the type of education undertaken when analysed for each discipline. From these results, it is clear that no one form of education type will meet the requirements for all allied health professions. Due to the individual duty requirements of different professions, a blanket solution is not practical, nor recommended.

Recommendation 6(iv)

The type of education and mode of delivery for allied health professionals living in rural and remote Australia must remain tailored to the needs of the individual disciplines.

This study indicates that there is a range of service providers who regularly provide professional education. The professional associations were indicated as the major provider of education, particularly for those respondents living in Victoria, Northern Territory and Tasmania.

Although professional associations were clearly one of the largest providers of education in this study, between 46 percent and 82 percent of respondents did not indicate professional associations as a major provider. Anecdotally, a proportion of allied health professionals in rural and remote locations are not members of their professional associations, due to the perceived lack of accessible services for their distant memberships. This would indicate that there are a vast number of potential recipients of continuing professional education who are not accessing their respective professional associations for this.

This study also attempted to gauge the educational needs of different groups of allied health professionals. Overall, there was an overwhelming indication that clinical training was most needed. This was especially apparent in more rural and remote locations.

The information collected through focus groups varied in relation to the level of satisfaction that allied health professionals perceived for the educational programs received from professional associations. In more remote locations, some respondents were critical about the access they had to quality education. Professional associations were perceived to provide quality content, however, respondents felt that this educational content was more available to their colleagues in metropolitan areas, and that a greater degree of effort was required to ensure that the association membership in rural areas had the same amount of access. Although no quantitative information is available to substantiate this level of satisfaction, it is clear that professional associations need to maintain their focus on the delivery of accessible education.

Recommendation 6(v)

Professional associations need to continue to develop appropriate programs and delivery means for rural and remote allied health professionals.

Another interesting feature of the data available for education providers, is the degree to which allied health professionals rely on Rural Health Training Units [RHTUs] as a major provider. This is particularly apparent for Queensland and South Australia, where State Governments have invested in these institutions, with specific funding allocations for allied health professions. The results indicate that, where there are RHTUs, they remain an important provider of education, and are maintaining results for their target groups of rural and remote health professionals.

It would appear that a greater degree of collaboration between professional associations and RHTUs may culminate in greater access to quality educational programs. Professional associations are strongly identified as providing quality content, and RHTUs are recognised as a forerunner in appropriate delivery methods. The challenge is achieving the balance between efficiency and effectiveness.

Alternative education delivery methods such as distance education packages, videoconferencing and computer based learning were least preferred by the respondents to this survey. Concomitantly, the frequency of experience of this type of learning was also low for respondents.

Recommendation 6(vi)

Training providers are required to collaborate to deliver appropriate content and delivery methods for continuing professional education for allied health professionals in rural and remote locations.

When training provider information was analysed for location type, self education provision appears to remain relatively constant. This suggests that regardless of the location of the allied health professional, there is minimal change in the degree to which the individual assumes responsibility for maintaining and improving knowledge and skills. It is also postulated that allied health professionals who live in more remote locations would necessarily suffer a greater personal loss than their counterparts in urban Australia when providing their own professional development. While employers can expect a large degree of responsibility for self education from their allied health employees, it must also be recognised that there are virtually no allowances made for those in rural areas for this self education.

Employer provided education and training was accessed to a lower degree by remotely located clinicians. Although over 40 percent of metropolitan based respondents listed their employer as a major provider, only about 15 percent of allied health professionals in small remote communities identified their employer as a provider. Alarming, this would indicate that the employers of remotely located clinicians, are unable to provide appropriate continuing education, when compared with employers in metropolitan area. This may indeed be a reflection of the management and supervision structures, discussed previously in this study.

Recommendation 6(vii)

Employers need to ensure that remotely located allied health professionals have at least a comparable level of access to employer-provided education and training, as do urban-based allied health professionals.

7.1 Introduction

Throughout the data collection phase of this study, limited access to technology was repeatedly highlighted as an issue by rural and remote allied health professionals. The aim of the current study was to examine the support, education and training needs of allied health professionals in rural and remote Australia, hence the survey and focus groups addressed the application of technology to meet these needs. Consequently, the current study is not a comprehensive examination of all potential technology applications for allied health practice. In particular, the use of technology in the direct delivery of clinical services was not investigated. This study does, however, provide a valuable overview of the Internet, email, videoconferencing and teleconferencing applications that are available to allied health professionals across rural and remote Australia.

7.2 Data and Results

7.2.1 Internet Access

Table 7.1: Percentage of respondents in each State who have internet access

STATE/TERRITORY	%
Northern Territory	81.7 ^a
Victoria	73.0 ^a
Tasmania	72.8 ^a
Western Australia	72.3 ^a
South Australia	59.7
Queensland	59.4
New South Wales	57.2

^a $p < 0.001$

Respondents were asked whether on-line access to the Internet was available at their workplace. Of 1593 respondents, 1021 (64.1%) had Internet access. Of those with Internet access, 58.4 percent used a shared computer in the workplace, 20.8 percent accessed a computer in a library, while 16.5 percent had a computer at their desk. Respondents from the Northern Territory, Victoria, Tasmania and Western Australia were significantly more likely to have access than those from other States ($P < 0.001$) (see Table 7.1).

Table 7.2: Percentage of respondents in each location who have internet access

LOCATION	%
Provincial city	73.3
Metropolitan area	69.6
Regional centre	67.4
Large rural town	63.0
Small town/community	57.6
Medium rural town	51.7
Town < 2000 people	39.2 ^a

The location of the workplace also affected whether Internet access was available, with respondents who worked in a town with a population of less than 2000 significantly less likely to have on-line access (P<0.001) (see Table 7.2).

^a p < 0.001

“The IT equipment we are using currently is archaic - we need to have appropriate hardware. We did have access to the Internet until someone downloaded some inappropriate literature which resulted in no one having access.”

(Remote speech pathologist)

“Part of the problem with on-line computer access is the lack of sufficient telecommunication lines into the areas. The terrain also affects the user of mobiles in a number of areas – so communication all round is a major problem.”

(Rural and remote occupational therapist)

Table 7.3: Percentage of respondents with internet access (by nearest peer)

NEAREST PEER OF SAME PROFESSION	%
Co-located	71.1 ^a
Up to 50 km away	58.8
In the same town	52.9
Over 100 km away	52.5
50-100 km away	41.6

Also of note is the finding that respondents who were co-located with a peer of the same profession were significantly more likely to have Internet access than those respondents who were sole practitioners (P<0.001) (see Table 7.3).

^a p < 0.001

“I have good to excellent IT skills and am very familiar with the Internet. At work we have no access to the Internet but we had corporate email installed last month. We have waited for over a year to get this while everybody else has been using it for ages.”

(Remote dietitian)

7.2.2 Email Access

Table 7.4: Percentage of respondents in each State with email access

STATE/TERRITORY	%
Northern Territory	89.2 ^a
Queensland	80.4 ^a
Western Australia	79.8 ^a
Tasmania	72.6
Victoria	69.6
South Australia	60.3
New South Wales	58.6

^a $p < 0.001$

Table 7.5: Percentage of respondents in each location with email access

LOCATION	%
Provincial city	81.4
Metropolitan area	73.6
Regional centre	70.3
Large rural town	68.3
Small town/community	68.0
Medium rural town	59.4
Town < 2000 people	38.0 ^a

^a $p < 0.001$

Of the 1588 people who responded to the question about email, 1111 (70%) had email access at their workplace. A shared computer was used by 60.2 percent of respondents while 29.5 percent of respondents had email access at a computer on their own desk. Access to email at the workplace was significantly influenced by both the State in which respondents were working and the location of their workplace. Respondents from the Northern Territory, Queensland and Western Australia were more likely to have email access ($P < 0.001$) (see Table 7.4).

Respondents working in a town of less than 2000 people were least likely to have access to email ($P < 0.001$) (see Table 7.5).

“Only the head Physiotherapist has access to email”

(Remote physiotherapist)

Respondents who were co-located with a peer of the same profession were significantly more likely to have email access than sole practitioners. They were also more likely to use email as a tool to support their professional role (see Table 7.6).

Table 7.6: Percentage of respondents with email access (by nearest peer)

NEAREST PEER OF SAME PROFESSION	% OF RESPONDENTS WITH EMAIL ACCESS	% OF RESPONDENTS USING EMAIL FOR PROFESSIONAL SUPPORT
Co-located	75.2 ^a	68.2 ^a
In the same town	62.7	20.5
Over 100 km away	61.0	6.5
Up to 50 km away	59.7	2.4
50-100 km away	49.4	2.4

^a*p* < 0.001

The immediate supervisor of respondents did not significantly affect the availability of email, however, location of employment did influence whether email was used to support the professional role of the respondent. Respondents from Regional Centres were more likely to use email as a tool to support their professional role (*p*<0.001) (see Table 7.7).

Table 7.7: Use of email for professional support (by location)

LOCATION	% OF RESPONDENTS USING EMAIL FOR PROFESSIONAL SUPPORT
Regional centre	30.1 ^a
Provincial city	21.9
Large rural town	17.6
Medium rural town	11.3
Small town/community	10.4
Metropolitan area	7.2
Town < 2000 people	1.5

^a*p* < 0.001

7.2.3 Access to Videoconferencing

General access to videoconferencing facilities was not addressed by the survey, however, respondents were asked to indicate whether they had used videoconferencing to access educational / training / professional development programs over the last 12 months. Of the 1494 respondents, 294 (19.7%) had used videoconferencing for continuing education. Of those 294 respondents who had accessed professional development via videoconferencing, almost half (49.3%) were employed in Queensland (see Table 7.8). This represented a highly significant difference between Queensland and the other States (*p*<0.001). A high proportion of all Queensland respondents (42.9%) had used videoconferencing compared to the other States (see Table 7.8).

Neither the location of the workplace nor the location of the nearest peer significantly influenced the use of videoconferencing for educational purposes.

Table 7.8: Percentage of respondents in each State who have used videoconferencing for educational purposes

STATE/TERRITORY	% OF TOTAL VIDEOCONFERENCING GROUP (n=294)	% OF TOTAL SURVEY RESPONDENTS IN EACH STATE
Queensland	49.3 ^a	42.9 ^a
Western Australia	17	23.3
South Australia	11.9	22.9
New South Wales	10.5	5.6
Victoria	4.4	11
Tasmania	4.1	7.3
Northern Territory	2.7	9.5

^ap<0.001

"I am concerned about the location of the telehealth sites as they seem to reflect medical school needs and not those of allied health students."
(Rural physiotherapist)

"Telehealth is a great opportunity for accessing clinical support and gaining second opinions."
(Focus group, Tasmania)

"I believe that telehealth provides enormous opportunities for the supervision and support of allied health and social work professionals."
(Senior social worker)

"We tried to access the University Department of Rural Health's equipment to link into an education session and subsequently got sent a bill for \$200. The maximum amount we know of for line charges is \$40 to Videoconference."
(Remote physiotherapist)

7.2.4 Availability of Other Technologies

Other technologies used by respondents in accessing professional support were teleconference facilities and electronic bulletin boards. Teleconferencing was being used by 39.7 percent of respondents while just 6.9 percent of respondents had accessed an electronic bulletin board. Respondents from a provincial city or regional centre were significantly more likely to use an electronic bulletin board (p<0.001) while there was no significant difference in the use of teleconferencing across various locations.

7.2.5 Information Technology Training Needs

44.4 percent of survey respondents selected information technology as one of their top three training needs. This result was not influenced by either allied health profession or workplace location. Only 12.8 percent of respondents identified data management as a priority topic for continuing education. Again, neither allied health profession nor workplace location influenced this choice. Unfortunately, age was not analysed in relation to information technology training needs. The focus groups and interviews indicated that the allied health professional's age is a relevant factor when introducing IT to the workplace.

“A number of the social workers at the hospital are older women who do not have the skills with computers and IT. The younger ones are very computer and technology literate. However, there are few courses and limited time for these older women to undertake a course.”

(Regional social worker)

“There is a lack of understanding about the potential of computers. New graduates are very familiar whereas older allied health professionals are not familiar with the technology and some fear it.”

(Focus group, Tasmania)

7.3 Discussion and Recommendations

Technology has the potential to minimise the effects of distance and isolation throughout the world, creating equal opportunities for those who have access to both the facilities and knowledge that are required to use the technologies effectively. The current study demonstrated that allied health professionals in Australia have variable access to technology in their workplaces. Factors such as the State in which an allied health professional works, the size of the community in which they work and whether they are a sole practitioner significantly influences their access to technology.

Overall, allied health professionals who work in the Northern Territory or Western Australia are more likely to have Internet and email access. Those who work in Victoria or Tasmania may also access the Internet while allied health professionals who work in Queensland are likely to use email. While access rates in the aforementioned States were significantly higher than in other Australian States, up to one quarter of respondents from those States reported that they did not have access to Internet and / or email facilities. Hence, all Australian States need to make gains in Internet and email usage. It is likely that those workplaces providing staff with an email account without Internet access have policy issues that need to be addressed as clearly, the infrastructure is in place for Internet usage to occur.

While it may be expected that allied health professionals who work in small communities and / or are sole practitioners have the most to gain from using technology in the course of their work, it was these groups who reported the least access to and usage of Internet and email. The cost and availability of infrastructure to support access to these technologies may be an issue in remote locations. The knowledge and skill of more isolated professionals may also prevent the development of email/Internet facilities, however, further investigation is required to explain this result.

Recommendation 7(i)

Employers ensure that a minimum standard of technology access is met for all allied health professionals. The minimum standard should comprise an email account and Internet access at the allied health professional's primary place of work. These facilities must be available in a location that respects confidentiality.

Almost half of the respondents who had used videoconferencing for educational purposes were working in Queensland. Queensland Health, a major employer of allied health professionals, has approximately 200 videoconferencing sites located throughout the State, however, the availability of equipment does not necessarily translate into high levels of usage as demonstrated by the reported usage in Victoria and Tasmania. Victoria has 120 videoconferencing sites available for its Department of Human Services and yet only 11 percent of Victorian respondents had made use of it. Similarly, Tasmania has a widespread network of videoconference sites (as reported by the University Department of Rural Health) and yet just 7.3 percent of Tasmanian respondents had accessed the facilities. As indicated by the Tasmanian focus group, training and guidelines for use may enhance the uptake of videoconferencing for educational and other purposes.

Recommendation 7(ii)

SARRAH compile a blueprint for videoconferencing (telehealth) which provides allied health professionals with guidance for the use of telehealth technology. The blueprint may include a position paper, clinical and non-clinical protocols specific to the allied health professions, and guidelines for equipment usage.

All allied health professional groups across Australia placed equivalent emphasis on the need for training in information technology. There was no particular allied health profession or workplace location that proclaimed to be more or less proficient in technology usage than any other. It can not be assumed that the provision of technology infrastructures will, in itself, result in increased usage of those technologies in the workplace. Appropriate education in current hardware and software applications will continue to be an ongoing requirement as technology advances and opportunities for work practice changes occur.

Recommendation 7(iii)

Educational opportunities in the use of various technologies should be provided by employers and professional associations.

When surveying and interviewing respondents on their access to / use of technology, this study made the assumption that such technologies benefit rural and remote allied health professionals in the delivery of services to their clients. To date, there has been no formal evaluation of the types and uses of technologies that should be available in rural and remote locations. Consequently, any investment in technology for rural and remote workplaces is being undertaken in good faith that there are advantages to health professionals and health service consumers.

Recommendation 7(iv)

Research which investigates how technologies should be used to support and deliver allied health services must be supported. Knowledge of the most efficient, effective methods for implementing technologies will enhance the provision of appropriate access for allied health professionals.

8.1 Introduction

The comprehensive examination of issues related to undergraduate education and experience was outside of the scope of this project. This area however is critical in ensuring a viable *future* rural and remote allied health workforce and should attract considerable attention for further research.

A small number of survey items did, however, provide limited information about the undergraduate experiences of the allied health professionals surveyed.

8.2 Data and Results

Of the 1599 responses to the question “Did you have exposure to a rural placement as an undergraduate?”, less than half (46.2%) indicated that they did.

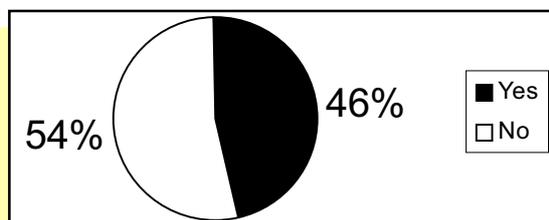


Figure 8.1: Percentage of responses showing undergraduate experience in a rural placement

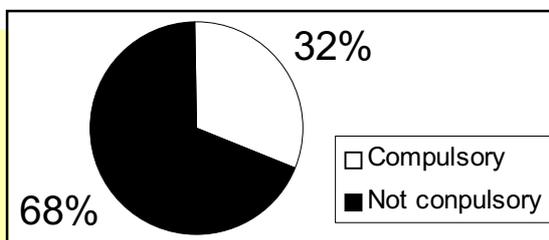


Figure 8.2: Of those who had undertaken an undergraduate placement, the percentage of compulsory/non-compulsory placement

For those who indicated that they did have a rural placement in their undergraduate training, almost two third noted that this was not compulsory.

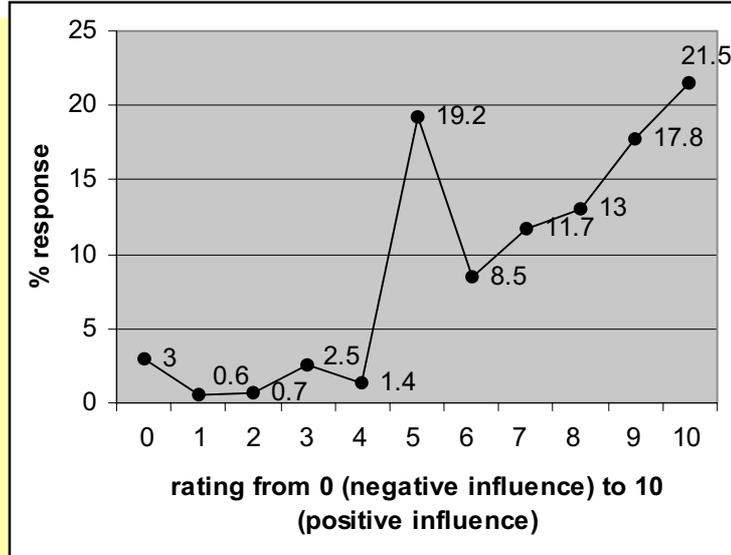


Figure 8.3: Influence of rural undergraduate placements on allied health professionals' decision to take up a rural/remote position

Of all those who responded to the survey, 1577 answered the question “Did the university that you attended have a rural club for undergraduate health science students?” The results showed clearly that only a very small proportion were aware of undergraduate rural health clubs.

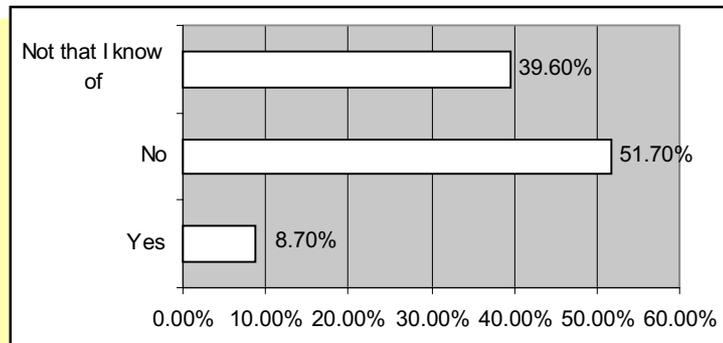


Figure 8.4: Percentage of respondents who were aware of undergraduate rural health clubs

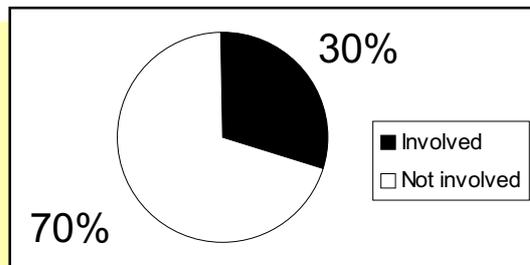


Figure 8.5: Percentage of respondents who were aware of undergraduate rural health clubs and who indicated involvement in the clubs

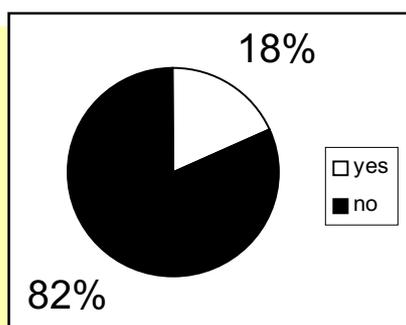


Figure 8.6: Percentage of responses showing awareness of the National Rural Health Network (of student clubs)

While only a small percentage of respondents to the survey were aware of the National Rural Health Network of student clubs, a very high percentage (69.7%) were keen to find out more information about the Network.

8.3 Discussion and Recommendations

Less than half of those responding to the survey reported undergraduate experience through clinical placements, giving a broad indication that not enough undergraduate allied health students have been exposed to rural practice. It is important to note, however, that this response came from those who had already chosen to work in a rural area. Questions raised from this include;

- What factors, other than rural undergraduate experience, convinced the 54 percent who had *not* had rural undergraduate experience to work in rural and remote areas?
- What percentage of those who *did* have rural undergraduate experience chose *not* to practice in a rural area?
- Of the 54 percent who did not experience a rural undergraduate placement, did they choose not to have a rural placement, or was this not available to them?
- Is there a correlation between the undergraduate rural experience and factors influencing the careers of rural allied health professionals as reported in this study? Factors such as intention to stay long term in rural areas, and reasons to stay/ leave rural practice may be different in these two groups.
- Is there a difference in rural undergraduate opportunities and experiences between States/ Territory, Educational Institutions and Professional groupings?
- Is there a difference when years since graduation is considered? For example, it may be hypothesised that more recent graduates would have higher participation rates in rural clinical undergraduate placements simply due to availability.

There is also the potential to compare these results with the impact of University Departments of Rural Health programs that have been aimed at facilitating positive choice of rural careers through undergraduate support.

Perhaps of more interest than the raw number of students having a rural undergraduate experience is the perceived influence of that placement in their choice of pursuing a rural career. Those who responded to the survey indicating that they had undertaken a rural undergraduate placement were asked to rate the placement from 1-10 according to how much the placement influenced their choice in working in a rural areas. Figure 8.3 highlights the results with 72.5 percent showing a rating of 6 or higher indicating a positive influence, 19.2 percent rated their experience as neutral in their choice and 8.2 percent indicated that the placement negatively influenced their choice. Of interest was that the highest rating (rating=10) showed the most positive score (21.5%) showing that rural placements had a strong positive influence on one fifth of those who responded.

Clearly more information is required to determine the key influencing factors, both positive and negative, to enable employers, educational institutions and professions to better utilise resources and provide a workforce that is not only rural ready, but rural by choice.

Items in the survey related to awareness of undergraduate rural health clubs showed that only 8.7 percent had a positive awareness of a club at the institution that they trained at (see Figure 8.4), and of this group only 30 percent indicated they had involvement (see Figure 8.5). These low percentages are almost certainly strongly influenced by the recent establishment of undergraduate clubs and the fact that the survey was only sent to practising allied health professionals who may have graduated prior to rural clubs being established.

Of interest was the relative lack of awareness of the National Rural Health Network of student clubs (see figure 8.6). While this is a relatively new Network and many of the clubs involved have a focus on health professions other than allied health, it is important to build the linkages between this developing multidisciplinary undergraduate network and practising professionals.

In conclusion, it must be reiterated that this project did not intend to examine undergraduate issues in any depth. The small amount of information gathered, however, does assist in setting direction for future projects. With this in mind, the following recommendations are proposed.

Recommendation 8 (i)

A comprehensive project is undertaken to examine key factors in the decision for allied health students to commit to a rural career.

Recommendation 8 (ii)

SARRAH seek resources to undertake a project to collate information on programs that assist students to undertake rural placements.

Recommendation 8 (iii)

SARRAH and the National Rural Health Network (NRHN) liaise to ensure that information about the NRHN is communicated to practising allied health professionals. SARRAH will also offer support and mentoring to allied health clubs, or multidisciplinary clubs with allied health involvement.



Appendix One: Proportion of 'Other' Health Professional to Population in Statistical Division

STATE	PROPORTION OF 'OTHER' HEALTH PROFESSIONALS TO POPULATION IN STATISTICAL DIVISION
Western Australia	
Overall WA	1:504
Perth	1:439
All Other	1:855
South West	1:797
Lower Great Southern	1:1003
Upper Great Southern	1:992
Midlands	1:858
South Eastern	1:1128
Central	1:737
Pilbara	1:810
Kimberley	1:855
South Australia	
Overall SA	1:453
Adelaide	1:393
All Other	1:775
Outer Adelaide	1:696
Yorke and Lower North	1:881
Murray Lands	1:963
South East	1:696
Eyre	1:825
Northern	1:759
Tasmania	
Overall Tas	1:494
Greater Hobart Area	1:376
All Other	1:619
Southern	1:861
Northern	1:536
Mersey-Lyell	1:688
Northern Territory	
Overall NT	1:649
Darwin	1:484
All Other	1:904
Australian Capital Territory	
ACT	1:452

Proportion of 'Other' Health Professional to Population in Statistical Division (contd)

STATE	PROPORTION OF 'OTHER' HEALTH PROFESSIONALS TO POPULATION IN STATISTICAL DIVISION
New South Wales	
Overall NSW	1:459
Sydney	1:409
All Other	1:575
Hunter	1:561
Illawarra	1:532
Richmond-Tweed	1:573
Mid North Coast	1:625
Northern	1:595
North Western	1:732
Central West	1:594
South Eastern	1:436
Murrumbidgee	1:710
Murray	1:616
Far West	1:884
Victoria	
Overall Vic	1:468
Melbourne	1:435
All Other	1:580
Barwon	1:584
Western District	1:589
Central Highlands	1:518
Wimmera	1:580
Mallee	1:726
Loddon-Carpaspe	1:507
Goulburn	1:761
Ovens-Murray	1:356
East Gippsland	1:672
Gippsland	1:667
Queensland	
Overall Qld	1:530
Brisbane	1:416
All Other	1:686
Moreton	1:637
Wide Bay-Burnett	1:896
Darling Downs	1:644
South West	1:833
Fitzroy	1:847
Central West	1:1250
Mackay	1:707
Northern	1:620
Far North	1:585
North West	1:898

Reference List



Australian Bureau of Statistics (1997) **Regional Population Growth Australia** ABS Catalogue No. 3218.0.

Australian Bureau of Statistics, (1991) **Census Population and Housing, 6 August 1991. Characteristics of Persons Employed in Health Occupations.**

Australian Health Ministers' Conference (1994) **National Rural Health Strategy** Commonwealth of Australia.

Australian Institute of Health and Welfare (1996) **Pharmacy Labourforce 1994** Canberra.

Australian Institute of Health and Welfare (1996) **Podiatry Labourforce 1994** National Health Labour Force Bulletin 7.

Australian Institute of Health and Welfare (1996) **Australia's Health 1996** Australian Government Publishing Service Canberra.

Best, J (2000) **Rural Health Stocktake Advisory Paper** Australian Government Publishing Services Canberra.

Bourke, M (1997) **Practising as a New Graduate Sole Practitioner in a Rural Health Service** Paper presented at the 1997 National Conference for Rural and Remote Allied Health Professionals.

Boyce, R. (1996) **Management and Organisation of Rural Allied Health Services** University of Queensland.

Commonwealth Department of Health and Family Services (1997) **Service Delivery Guides and Selected Case Studies - Ambulatory Care Reform Program** Australian Government Publishing Service.

Compton, J. & Robinson M (1997) **National Allied Health Best Practice Industry Report, Final Report to the Commonwealth Department for Health and Family Services.**

Commonwealth of Australia (2000) **Regional Health Strategy Fact Sheet 1: Growing and Strengthening the Rural Health Professional Workforce.**

Cook, K (1998) **Presentation to the Victorian Rural and Remote Allied Health Conference.**

Cussons, A., Williams, B. & Power, R (1995) Ten skills important to a country GP **The Australian Journal of Rural Health** 3, 175 - 178.

Gadiel, D. & Ridoutt, L. (1993) **Towards a Rural Allied Health Strategy** NSW Health.

Gupta, G. & Konrad, T.R (1992) Allied health education in rural health professional shortage areas of the United States **Journal of the American Medical Association** 268 (9) 1127 - 1130.

Harris R (1992) **Australian Rural Health A National Survey of Education Needs** University of Wollongong.

Reference List (contd)

Harrison, H (1997) **Discussion Paper: Trends in the Delivery of Rural Health, Education and Banking Services** National Farmers Federation, Volume 11.

Hays, R., Nichols, A., Wise, A., Adkins, P., Craig, M., & Mahony, M. (1995) Choosing a career in rural practice in Queensland **The Australian Journal of Rural Health** 3, 171 - 174.

Hays, R., Acklin, F., Chan, P., Davis, A., McAllister, L., Murphy, B., Romanini, J. Williams, V. & McEwen, E. (1993) The University of Sydney Rural Careers Project **The Australian Journal of Rural Health** 1 (3) 23 - 25.

Hodgson, L & Berry, A (1993) **Rural Practice and Allied Health: The Establishment of an Identity** Queensland Health.

Huntley, B (1991) **Recruiting and Retaining Health Professionals in Rural and Remote Areas - A Cross Professional Study** Instructional Design Solutions, NSW.

Joint Working Group of Health Department and Union Representatives (1991) **Examination of Allied Health Professional Issues Within the Health Department of WA** Health Department of Western Australia.

Kamien, M. (1996) Rural student clubs and the responsibility for medical schools **The Australian Journal of Rural Health** 4 (4) 237 - 241.

Kirkby, E (1994) **Roles and Relationships of Health Care Staff in Remote Kimberley Aboriginal Communities** Northern Health Authority.

Metropolitan Allied Health Council (1998) **Metropolitan Allied Health Survey Report**.

Mills, I (1997) Recruiting General Practitioners to rural areas: One community's experience **Australian Journal of Rural Health** 5, 194 - 197.

National Rural Health Policy Forum (1999) **Healthy Horizons: A framework for Rural, Regional and Remote Australians 1999-2003**.

Ovretveit, J (1985) Medical dominance and the development of the physiotherapy profession **Sociology of Health and Illness** 7 (1) 76 - 91.

Ovretveit, J. (1991) Future organisation of therapy services **Health Services Management** April 78 - 80.

Palmer, G.R., & Short, S. D. (1994) **Health Care & Public Policy An Australian Analysis** MacMillan Education Australia Pty Ltd.

Rourke, J (1993) Politics of rural health care: recruitment and retention of physicians **Canadian Medical Association** 148 (8) 1281 - 1288.

Rural Health Development (1998) **An Introduction to the Combined Universities Centre of Rural Health Geraldton** Health Department of Western Australia.

Services for Australian Rural and Remote Allied Health (1998) **Draft Strategic Plan**.

Services for Australian Rural and Remote Allied Health (1997) **Conference Outcomes from the 3rd National Rural and Remote Allied Health Professionals Conference**, Whyalla.

Soothill, K., Mackay, L. & Webb, C (1995) **Interprofessional Relations in Health Care** Edward Arnold, London.

Sturmey, R. & Edwards, H (1991) **The Survival Skills Package: Community services and health workforce in rural and remote areas: needs and recommendations study** Commonwealth Department of Community Services and Health.

Taylor, P. & Hodgson (1995) **Resourcing Rural Allied Health** Queensland Health.

Western Australian Centre for Remote and Rural Medicine (1996) **An Evaluation of the Western Australian Country Medical foundation Scholarship Program for Medicine and Nursing Students** University of Western Australia.

