



Building Bridges in Rural and Remote Allied Health Professional Education:

The James Cook University Experience

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This presentation is jointly authored with Ilsa Nielsen and Wendy Pearce - we are the undergraduate program co-ordinators for Occupational Therapy, Physiotherapy and Speech Pathology respectively, at JCU. Unfortunately Ilsa and Wendy are busy with teaching commitments this week and were unable to attend this conference and so I am grateful to Anne Bent, from Physiotherapy, who is here with me today.

The presentation will provide a basic overview of the developments at JCU and our attempts to develop three programmes that adequately prepare rural and remote allied health professional. Owing to the newness of the programs, this paper is information and provides a flavour of what is currently happening. We hope in the future to be able to provide more research about our students and about the efficacy of the program in rural and remote health care preparation.

Undergraduate Programs offered by JCU School of Public Health, Tropical Medicine and Rehabilitation Sciences

- Bachelors in Occupational Therapy (OT)
- Bachelors on Physiotherapy (PT)
- Bachelors in Speech Pathology (SP)
- Bachelors in Sports and Exercise Sciences (ISES)



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The allied health programs offered at JCU sit in the school of public health, tropical medicine and rehabilitation sciences (SPHTMRH). This grouping ensures that the programs have a strong public health influence and a focus on rehabilitation and continuum of service from acute management to community empowerment.

In addition to the three program I have already mentioned, a fourth program in Sports and Exercise Science is part of the Rehab Science group and to some extent adds a fourth wing to the rehab science bird. This is a three year degree program and attracts a different student group, however as you will observe there is a degree of interaction between the programs that will be discussed further in this presentation.

In terms of development the Bachelors of Sports and Exercise sciences is the oldest program of the four having existed, as part of the Institute of Sports Science since 1995 (?)

Occupational Therapy commenced at JCU in 1998 and Physiotherapy and Speech Pathology commenced in 2005.

The Challenge

- To develop two new undergraduate programs in Physiotherapy and Speech Pathology
 - professional accreditation requirements
 - equip graduates to work in metropolitan, rural and remote practice
 - attract new staff with commitment to be innovative
 - provide sufficient practical experiences



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JCU Faculty of Medicine Health and Molecular Sciences has been the fastest growing faculty in the University. The regional location of the university has been identified as a strength in relation to providing health professional education that is targetted to attract rural and remote students and to prepare those students for rural, and remote practice.

Within the faculty there are 5 school including;

Medicine,
Nursing,
PHTM&RS,
Pharmacy and Molecular science
Veterinary and Biomedical Sciences,

In addition to the schools there are three centres;

Mt Isa Centre for Rural and Remote Health (MICRRH)
Anton Brienl Centre (Tropical Medicine research centre)

Comparative Genome Centre (medical research centre founded to study human disease from a genetic and evolutionary perspective)

The development of a Rehab Science Unit, including OT Physio and SP, has been long anticipated and although the OT program commenced earlier that goal of offering there three disciplines had originated some years ago.

The challenge then for the last three years has been to bring that goal into reality.

Firstly to develop programs that would meet accreditation standards and ensure that graduates were competent to practice anywhere in Australia, including metropolitan, rural and remote locations.

There is an identified need for more allied health professional in the area. Vacancies exist in most locations with public health services experiencing difficulties in recruitment and retention of allied health staff. Increasing populations along the eastern seaboard throughout Queensland and especially in relation to the economic growth in the area, will ensure graduates have future employment options. In the longer term increasing the allied health professional workforce will make it easier to place students and to attract staff to the programs. However in the beginning attracting staff and accessing placements have been two major issues for the development of the programs.

With the challenges of new programs come many opportunities and the first of these opportunities came with the promise of limited funding for a new building to house the Rehabilitation Sciences

Once funding for places had been pledged the

The New Building



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6.2 Million Dollar development (commonwealth funding)

Lecture Space

Office Space

Practical learning areas

Tutorial Space

Resources and Equipment



Discipline Specific and Multiuse Space



Planning began in 2003 to ensure that the building was ready for the first intake in 2005. At that time I was acting Head of OT and was involved in the planning meeting and the design concepts of the building.

The limited budget meant that the new building couldn't house all of the needs and it was agreed early on not to include lecture space in this building. However the need for open workshops and tutorial space was clear and should allow for the specific needs of each discipline.

The building sits close to the Hospital, the School of Nursing, Pharmacy and the School of Medicine so that together the cluster of building make up what could be called a health enclave – students have access to a communal computer lab space, a coffee and snack bar, and lots of open space for meeting and communicating across disciplines.

Inside the building the left hand side of the building on two floors are the staff offices and staff dining area, where all disciplines can ey-ball each other on a daily basis and can meet together easily.

The rest of the building houses practical workshop area and tutorial rooms and the speech pathology clinic area. At the back of the building in a large purpose built movement analysis lab and to the right hand side we have an outside rehabilitation area with ramps and steps for mobility and wheelchair manoeuvring practice.

A joint reception and admin area is in the entrance and there is a joint resource area for equipment and resources that might be required by students and lecturers for the education program.

Practical Workshops



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Key Appointments

Professor Michele Clark,
Professor of Rehabilitation Sciences

Adj Prof Lorraine Sheppard (Uni SA)
(UQ)

Adj Prof Linda Worrall

Ilsa Nielsen
Anne Jones
Anne Bent
Dr Susan Gordon
Robyn Adams

Wendy Pearce
Alison Howle
Dr Tom Mylne
Louise Brown



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Staffing

In preparation for the new programs a professorial position was created in Rehabilitation Sciences and Dr Michele Clark was appointed in 2004.

In her role as leader of the Rehabilitation Sciences - key appointments were made in order to develop the new programs. Discipline Heads and adjunct professors in both physio and Speech Pathology were appointed in 2004.

The adjunct professors had experience in accreditation and in curriculum development and together with the program heads the initial curriculum design and development commenced.

Both disciplines have small teams of lecturing staff and these are increasing as the programs develop. There will be new positions advertised in the next few weeks and so if any on is interested in applying please talk to either Anne or myself after the presentation.



Curriculum Development

- Occupational Therapy Curriculum (1998)
- Health Science Subjects [Health Promotion, Rural and Remote Health, Research] (multi-professional learning)
- Teaching from other disciplines [Anatomy and Physiology] (common learning)
- Rehabilitation Science Subject (inter-professional learning)
- Discipline Specific Subjects – learning of specific professional knowledge



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In developing the curriculum each discipline has to develop in ways that are consistent with the specific goals of the program, current and future practice trends and accreditation processes. In addition the JCU programs had an opportunity to establish a rural and remote focus and to instigate interprofessional education within the three disciplines.

It is important to acknowledge that since the OT curriculum was already established there were opportunities to review the content of some existing subjects with a view to ensuring their appropriateness for all disciplines.

Several health science subjects that were already in existence were able to be adapted for the large numbers of students, e.g. Health Professional Research was already available for OTs and Sport Science, both physio and speech pathology students now enrol in this subject. These subjects provide multi-professional educational experiences

Collectively the three programs had 'buying power' with in the university system that allowed for new subject to be developed in the area of anatomy and physiology. The Anatomy and Physiology for Rehabilitation Sciences, for Physiotherapists and for Speech Pathologists shared lecture and workshop content but have separate discipline specific tutorials, in some cases separate lectures and different assessments in order to address specific discipline needs. These subject provide common learning.

Several subjects that were originally offered within the OT curriculum and have been adapted to include other disciplines now have a particular focus on interprofessional education.

Lastly each program have the discipline specific subjects

Interprofessional Learning

- A tool to encourage a collaborative working culture between professions and agencies by learning from and about each other to improve collaboration and the quality and integration of care across agencies (CAIPE 1997)
- e.g. Communication for Rehabilitation, Clinical medicine



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So to define those terms

The goals of Interprofessional learning is to encourage collaboration and knowledge of each others role in order to improve continuity of care to clients.

The lectures, workshops and tutorials in these subjects encourage communication between the disciplines and provide opportunities for students to teach each other about their disciplines roles in relation to healthcare.

Inter-professional education:

Strengthens the relationships between professions

Improve understanding and respect between the professions

Improve communication and teamwork

Improve quality of care to patients

New service models (community and primary care)

Multi-Professional Learning

- Learning that has educational relevance to more than one profession (generic knowledge and skills)
- Students learn together and perceives the relevance of the information to each of the disciplines (Harden1998)
- *e.g. Rural and Remote Healthcare*



Health Promotion for the Health professions

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Multi-professional learning allows for students to develop the skills and knowledge that is relevant to more than one profession, and gain an understanding of how these generic skills are perceived by each of the disciplines. In Health promotion there is a common understanding that health promotion strategies may be utilised by all of the disciplines in both specialist and generalist ways, and that health promotion activities may be multidisciplinary in nature and will also involve other community stakeholders.

Multi-professional learning equips graduates to meet the demands of expanded practice roles that are required on rural and remote locations.

Common Learning

- Learning in Common
- Schedule alignment to allow students in different disciplines to learn side by side
- Knowledge and skills that underpin health and social care practice and are common to all professions
- *e.g. Anatomy and Physiology, Management and Organisation*



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Common learning is very different – these subject simply allow students to learn side-by-side the foundation knowledge that is then interpreted and applied in their own disciplines. In our curriculum anatomy and physiology lectures are delivered to all disciplines as common learning to a degree and then each discipline runs its own tutorials and in the case of speech pathology have additional lectures focussing on the head and neck region.



Discipline Specific Learning

- Learning designed and organised in isolation
- Theory and practice specific to the profession and/or taught in a profession specific format
- e.g. Tasks and Roles of OT, Introduction to Physiotherapy, Linguistics and Phonetics



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Year One – Semester One

OT	PT	SP	ISES
BM1031 Anatomy & Physiology (RS)	BM1041 Anatomy & Physiology (PT)	BM1051 Anatomy and Physiology (SP)	BM1031 Anatomy & Physiology (RS)
OT1001 Tasks & Roles of Occ Therapy	PS1001 Introduction to Physiotherapy	SL1001 Introduction to Speech Path	SP1001 Science and practice of Phys Activity
RH1002 Communication Skills for therapy	RH1002 Communication Skills for therapy	RH1002 Communication Skills for therapy	PH1001 Prep Physics
RH1004 AHP's in the Health Environment	RH1004 AHP's In the Health Environment	SL1002 Linguistics and phonetics	MA1001 Prep Maths or elective

Year One – Semester Two

OT	PT	SP	ISES
BM1032 Anatomy & Physiology	BM1042 Anatomy & Physiology (PT)	BM1052 Anatomy and Physiology (SP)	BM1032 Anatomy & Physiology
OT1005 Occupational Practice	PS1002 Introduction to Physiotherapy Applications	SL1003 Speech Development and Impairment	SP1002 Sports and exercise nutrition
HS1003 Lifespan Development	HS1003 Lifespan Development	HS1003 Lifespan Development	HS1003 Lifespan Development
HS1401 Health and Health Care in Australia	HS1401 Health and Health Care in Australia	HS1401 Health and Health Care in Australia	PY1102 Exploring Psychology



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Relevance to Rural and Remote practice

- Workforce shortages
- Professional Isolation/lack of supervision
- Flexible roles (e.g. case managers, health educator)
- Collaborative planning, facilitation and evaluation of programs



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So the development of the programs in Townsville is a direct result of the commitment of national and local government to address the shortage of health professionals in rural and remote Australia. The content and delivery of the programs are supported by a range of evidence regarding the challenges and rewards of rural and remote practice.

The importance of the regional Universities, in offering education to students from rural and remote areas has been recognised, indeed JCU have the highest number of first generation university student in Australia. There is considerable research to suggest that students who have previously lived in rural and remote areas will be more return to practice in those areas on graduation.

In addition to students selection, the programs also provide students with opportunities to hear first hand about rural and remote experiences, from staff and from guest lecturers. Practical teaching will highlight situations that a rural or remote health professional may need to deal with, including professional isolation and lack of supervision. Learning to be effective self-managers and being able to prioritise needs and apply for funding for programs are some of the skills that our graduates have learnt.

The evidence informs the curriculum in relation to the diversity of practice that graduates might undertake in rural and remote health. Students are encouraged to see themselves as specialist generalists who may work across a broad range of clinical specialities in their day to day roles.

In addition we know that many graduates may undertake more flexible roles as case managers and health educators. These roles are discussed in the program, to promote students to think about possible future career options.

While the programs aims to graduate competent allied health professionals in their own discipline, we are also attempting to ensure that our graduates have the skills to work alongside other professionals, to be truly collaborative team-workers and net-workers and to work towards improving health not only through direct clinical intervention but through the development of effective health programs.



Preparing Students for Rural Health

Discipline Specific Learning

- Case Studies/subject content
- Rural Lecturers
- Fieldwork/Clinical Placement



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Within the discipline specific subjects case based scenarios emphasise the rural and remote framework for learning. In all disciplines students work through a variety of case studies to determine the health needs and environmental issues that may impact on interventions. This teaching methodology encourages a problem solving focus, and helps students to move away from text book formula in treatment approaches. Rather they discover each case has numerous factors that will need to be considered in the overall intervention plan, and students frequently are required to research and discuss possible solutions before coming to any conclusions.

Throughout the programs the discipline knowledge and theory is presented through a rural and remote lens, with consideration of the likelihood that the allied health professional may not have all the resources available in the metropolitan centres, and may need to improvise to reach the desired outcomes. The experience of many of the lecturing staff is rural and remote and in addition invited guest lecturers provide current examples of rural and remote practice.

Some examples are teaching students how to assess child development with a collection of toys and articles that can easily be found or assembled, with major expense.

Teaching students about wheelchairs and walking aids suitable for remote locations and non sealed roads etc.

All program require students to undertake one rural placement and many will undertake more than one placement outside regional centres.



Indigenous Health Focus

- Discussion Forums in first year
- Essay on AHP service delivery to indigenous clients
- Issues of practice within the discipline specific subjects



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Finally an indigenous health focus is deliberately integrated within the curriculum. Particular emphasis is provided by two assignments in first and second years –

the discussion forums in first year provides an opportunity for students to communicate with each other in a professional way on the subject of indigenous health. Although some students begin by using this forum as an opportunity to express their own opinion, the emphasis here is for students to become informed by the evidence available, and gain greater understanding of the social and political determinants of health.

The second year assignment requires students to research within their own discipline to gain knowledge of service delivery to indigenous persons.

Other examples include:

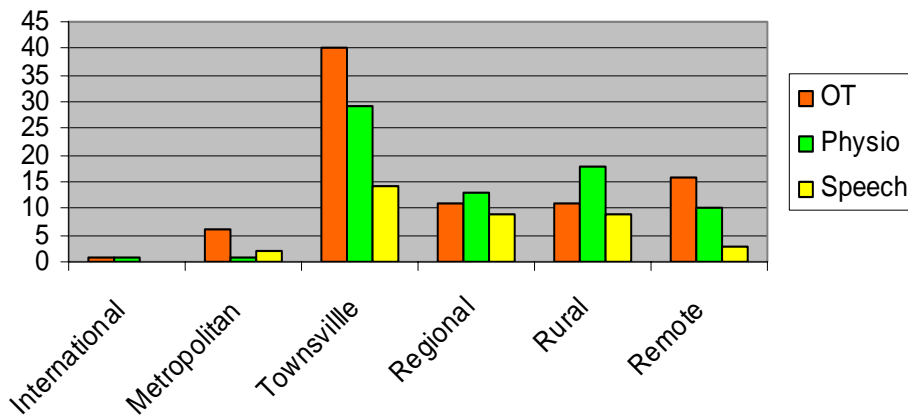
the use of the Sharing True Stories videos when looking at cross cultural communication

The teaching of aboriginal English and indigenous language to speech pathology students

And looking at the lack of normative data for indigenous clients in relation to for instance Pulmonary Function testing

Student Permanent Addresses

2006 Intake for Each Discipline



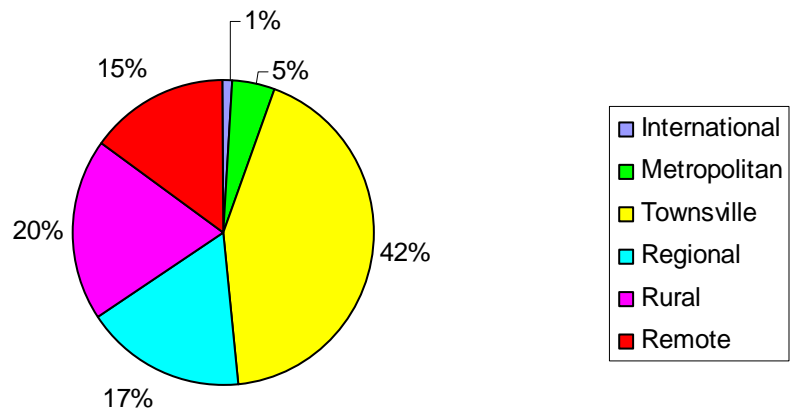
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The intake for 2006 shows that
85 students entered OT (purple)
71 students enter Physiotherapy (wine coloured)
37 students enter Speech Pathology (yellow)
Total of 194 students

Local students make up nearly half of the student population however it is important to say that since many students are not school leavers, and these statistics are based on where students call their permanent address, many of these student have moved to Townsville to take up permanent residence in town although they may have previously lived in rural and remote areas. One example is a woman who moved from rural South Australia to Townsville with her husband who is studying veterinary sciences and has chosen to study Speech Pathology.

What is of interest in this graph are the high number of students who's permanent addresses are Rural and Remote. In total these students add up to 36% of the intake (include locations such as Emerald, Wiepa, Mt Isa, Thursday Island, Port Augusta, and Biloela.

2006 OT/PT/SP Intake





Planning for Future

- Indigenous student support
- Program Evaluation
- Research – student success
- Graduate Outcomes

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The Faculty actively promotes health professional education to indigenous students through the Indigenous health unit. The unit liaise with schools and visits regularly to encourage students to apply for university. Indigenous school students are also brought to the university to experience days where they visit the departments and have presentations and activities related to each program. There are a number of scholarships and awards, including the indigenous cadetship that are run through Queensland health. More recently the IHCAPs program has been instigated to support indigenous students by providing a full year of preparatory subjects prios to moving into the discipline specific programs.