Te Whare Whakakotahitanga Mo Te Hauora Taiwhenua

An International Literature Search & Review of Rural Teamwork & Teambuilding

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ABOUT THE CENTRE

The Centre for Rural Health was established late 1994. It was funded (initially by the Southern Regional Health Authority, then the Health Funding Authority and finally by the Ministry of Health) for a series of projects to support rural health services and community involvement. The Centre was under the directorship of Martin London and Jean Ross from, respectively, rural general practitioner and rural nurse backgrounds. It was also known as the National Centre for Rural Health. The Centre closed in late 2002, with final publications being completed in 2003. The resources and reports created under the auspices of the Centre were uploaded mid 2003 to be available indefinitely.

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RURAL HEALTH CARE TEAMWORK

Introduction

It is a widely held article of faith that better teamwork will produce more effective health care, and result in the improvement of health at both the individual and population levels. This belief rests on the following foundations:

- Health is now viewed holistically, as involving not just the absence of disease, but the overall wellbeing of an individual or population, and their capacity to achieve their potential. Health improvement is therefore a single goal towards which a range of disciplines strive. Health problems are interrelated, and again, a range of disciplines and resources can contribute to their solution. Coordination and collaboration among the various disciplines and their practitioners thus *ought* to optimise the successful delivery of health care

- Teamwork has been shown to improve organisational effectiveness in a range of settings, and team-building interventions have been among the most telling in the private sector. [1]

However, while there is agreement that teamwork is important for better health care, it is not always clear what form it should take, or who should be involved.

Our interest is in health care teamwork in the rural setting, and the particular influence that rurality might have on the nature or effectiveness of teamwork. Some key questions include:

- What is the nature of health care teamwork in rural areas, and how do rural teams differ from teams as traditionally described?

- Who are the members of rural health care teams amongst whom teamwork should be promoted?

- What facilitates successful health care teamwork in rural areas?

- What are some barriers to successful health care teamwork in rural areas?

- What educational or other interventions can help improve health care teamwork in rural areas?

In many respects, these are the same questions which motivate inquiries about health care teamwork in general. However, as rural health and health care are increasingly seen as unique concerns, it is worth investigating health care teamwork within this specific context.

Simon Bidwell and Jean Ross (2001)

International Experiences

West and Slater (1996) provide an overview of experiences and a review of literature on teamwork and teambuilding in primary health care, predominantly in Britain and Europe[1].

The emphasis there has been on getting primary health care teams to function more effectively, and therefore to better meet the health needs of local communities. Authorities have wanted to develop primary care teams with clear goals and feedback processes – thus allowing strategic planning of how to best meet communities' health needs.

This vision is summed up by West and Slater:

> Clear structure and objectives in primary health care are essential if a context is to be provided within which co-operation and creativity can flourish, and professionals can concentrate their energies on relieving suffering and improving the health and wellbeing of the population. (1996, p.5)

In the U.K., 'the primary health care team' has been conceptualised as based around a GP practice. In some cases the team is considered to include the GP, practice nurse, receptionist, administrator and practice manager, as well as attached community staff such as community nurse, health visitor and midwife. In other cases, it is limited to only those directly involved in or employed by the practice.

Attempts to improve teamwork in primary health care in the have focused on 'team building' workshops run by multidisciplinary, inter-sectoral Local Organising Teams (LOT) since 1987. They have met with mixed results, and representatives report that fewer than one in four teams is successful in building effective teamwork.

Barriers to improved teamwork are identified as including lack of team meetings, different locations, separate lines of management, professional elitism, GPs' status as independent contractors, and differing orientations of health care agencies.

None of the studies reviewed by West and Slater have tracked differences in health care teamwork between rural and urban areas.

In the United States, an alternative approach has been taken, focusing on health professionals' education. In the American context, there have been strong links made between improvement in the areas of interprofessional collaboration, community-orientation and recruitment and retention to rural areas. Since 1988 a number of educational institutions have received funding to undertake community-based, interdisciplinary educational programs.

While the British literature makes mention of *multidisciplinary* teams, the American literature emphasises what it points out is the stronger concept of *interdisciplinary* teamwork, which is claimed to involve a greater sharing of goals, values and competencies. It is considered that in rural areas there is both a greater need and greater potential for interdisciplinary teamwork. Collaboration is seen as necessarily spreading beyond the health professionals themselves, to include and involve the community. Interdisciplinary education is intended to produce exposure to and understanding of, not only other disciplines, but also the society and culture of rural areas.

Content of the Literature

The literature reviewed below was derived from in-depth searches, which scoured databases of published literature and the internet for material which made any mention of 'interdisciplinary', 'multidisciplinary', 'interprofessional', 'collaboration', 'cooperation' or 'team', along with 'rural'.

The resulting literature, such as it is, is dominated by accounts of the various rural interdisciplinary educational programs in the U.S.A. Fifteen articles on this topic were considered to contain content relevant to the nature or improvement of rural health care teamwork.[2-16] Other literature identified as relevant to these topics includes:

- 3 articles which describe interdisciplinary continuing education programs in Canada which focus on particular rural health problems (palliative care and trauma care)[17-19];
- 1 article which describes a general multidisciplinary continuing education program in South Australia[20];
- 2 articles which describe and discuss role extensions by pharmacists in rural areas and their interactions with other health professionals[21 22];
- 2 articles which consider the integration of social work and mental health services with general health services in rural areas[23 24];
- 2 articles which argue for the advanced, complementary role nurses can play in collaboration with doctors in rural areas[25 26]
- 1 article which describes the experiences of a mobile allied health team in remote Australia[27];
- 1 article which discusses the relationship between doctors and nurses and indigenous practitioners[28];
- 1 article which discusses the effect of rurality on leadership in rural directors of nursing[29]

The Nature and Effectiveness of Rural Health Care Teamwork

Although there have been no systematic studies, there is some consensus in the literature among the anecdotal accounts and summations of the key features that mark out health care teams and teamwork in rural areas

- informal support networks are likely to already exist within the rural community prior to any involvement of health professionals – in a sense, the community can itself be a 'team', and to deliver health care successfully health professionals need to be aware, and supportive of, these networks [3 5 8 9 17];

- correspondingly, the 'health team' is often considered to have a broad, intersectoral membership, including community organisations, the fire brigade, the police, the school, volunteer drivers and so on[8 17 18];
- rural areas are likely to be under-resourced, which means health professionals often have to collaborate anyway in order to make the most out of the available resources and personnel[13 14 16 17 24 27 30];
- however, distance and isolation remain important factors which restrict face-to-face interaction, collegiality and the development of formal teams[8 10 17];
- there is some dispute over the extent to which information and communications technology can ease isolation and aid team building[5 8 10 15];
- personal and professional relationships and roles often overlap, which may either strengthen or provide obstacles to collaborative teamwork[17 29 30];
- interactions between professionals may be more likely to be based on skills than discipline, and the rural ethos of 'getting the job done' may promote collaboration[17 30];
- other health professionals (for example nurses and pharmacists) may take on extended roles, given the undersupply of doctors – this necessitates, and often produces, greater communication and collaboration between these professionals and doctors[21-26];
- health professionals may also need to understand and collaborate with indigenous or traditional practitioners or practices[17 28];
- local professionals form part of a wider regional 'team', and collaboration is important between rural professionals with their local knowledge and connections, and base hospital experts or specialists[19 30].

Teambuilding and Improvement of Teamwork

One of the articles from the U.S.A. mentions a team building program for practising rural professionals[10], and another describes checking possible student practicum locations for the collaborative nature of the practice[7]. However, attempts to improve rural interdisciplinary teamwork have largely focused on student education. A wide variety of programs are described which have received funding to carry out the twin tasks of improving recruitment to, and preparation for, rural practice.

Students from disciplines including medicine, nursing, pharmacy, dentistry, social work, psychology, physiotherapy, occupational therapy, dietetics, dental hygiene, health education, health administration, public health, communication disorders and clinical laboratory science have taken part in these programs, which vary greatly in duration, intensity, and whether the emphasis is on didactic learning or clinical practice.

The majority, however, have the same core aims, which are:

- to improve students' knowledge of other disciplines' role in health care, and to prepare them for working in interdisciplinary teams;

- to increase their exposure to, and understanding of, rural society and culture, thus promoting their recruitment to practise in rural areas.

Given these aims, most of the interdisciplinary programs have been based around some kind of problem-based learning (PBL), ranging from games and puzzles, to fictional case studies, to real-world clinical situations. This is thought to promote teamwork, as participants have to collaborate in order to pool their disparate resources and solve the problems, while at the same time developing a holistic understanding of the rural environment.

There has also been great emphasis put on community involvement, with some of the educational institutions forming 'partnerships' with nearby rural communities, and many seeking community input into the development of programs. The development of local health care providers as clinical preceptors has been another feature of these programs.

The outcomes of these educational programs are hard to ascertain at present. Almost all report that students exit with improved understanding of rural health and practice, better knowledge of other disciplines, and greater amenability to working in interdisciplinary teams. However, these reports must be met with some reservations. The number of students in the programs is often small, and 'improvement' is reported over samples of as few as six students. In addition, it is difficult to discount the possibility of measurement bias. The participants are self-selected, and having volunteered for the program, are likely to already be somewhat amenable to rural interdisciplinary practice. The educational institutions have at times received a considerable amount of funding in the short term for a pilot demonstration, and the programs take place in a resource-rich setting.

It will be in the long term that the true effect of these interdisciplinary educational programs will be seen. One wonders at the rationale lying behind their development, which seems to be that since rural health care will remain difficult and under-resourced, practitioners had better be prepared for it. As long as these programs remain part of the safety net for the underserved, and are developed separately from the American medical and health care mainstream, their effect may be limited.

Elsewhere, there has been some success with interdisciplinary continuing education programs in Canada that focus on specific, yet broadly defined, health care issues such as palliative care and trauma care[17-19]. The need to provide a better response to these health issues is a goal which transcends disciplinary centricities, and can promote greater collaboration. Instead of trying to engineer better teamwork in a perhaps artificial workshop situation, these programs bring together participants with a recognition of the need to collaborate in order to better deal with a real world problem. Such programs have been credited with promoting a team approach and leading to the creation of regional networks.

Suggestions for Further Reading

From the results we can be fairly sure that there have been no published, systematic studies of health care teams or teamwork in rural areas. However, literature searches only reveal material that is *indexed* in such a way as to correspond with the search request. It may well be that information on the nature and effectiveness of health care teamwork in rural areas may be found in articles where is has not been conceptualised as one of the key themes of the article, and therefore not included in the list of keywords or in the abstract summary.

Such information would be most likely to be found in literature on service configurations in rural areas where some of the identified barriers to better teamwork are not present. These barriers are listed as including different lines of management, operation from different locations, different agency orientation and the independent contractor status of GPs. However, some rural service configurations are notable in that they feature all or some of, integrated funding, a 'one-stop shop' location, a single management structure and salaried medical practitioners.

Examples of these arrangements include:

- Migrant and Community Health Centres (M/CHC) in the U.S.A., which have been in existence for over 25 years, and on which there is a substantial literature;

- Multi Purpose Services in Australia. In one case study of an MPS, it is commented that "staff are now communicating across previous service boundaries" (Humphreys, Rolley and Mathews-Cowey 1996);

- Rural Health Centres and Community Trusts in New Zealand, such as those in the Hokianga, Taihape, Te Kuiti, Balclutha and Lawrence.

It would be worthwhile to study these service configurations in order to ascertain whether the absence of some of the barriers to teamwork identified by West and Slater facilitates better teamwork. In particular:

- Are there signs of improved organisational processes – i.e. productive team meetings, better communication, strategic planning?

- Is the health care delivered by such integrated organisations more effective?

Given the strong links that have emerged between interdisciplinary teamwork and community orientation, it would also be worth checking the substantial literature on community-oriented practice, which often focuses on rural areas, for indications of collaborative practice or teamwork in this context.

There is also likely to be substantially more information on role extensions in rural areas by pharmacists, nurses and social workers, and their collaboration with physicians, indexed under those topics.

In summation, the following topics might be studied to further understand the effect of rurality on the corresponding aspects of teamwork:

Integrated services	→	Organisational context
Community orientation	→	Goal directedness
Role extension	→	Personal and professional interaction

Interdisciplinary team training for rural health care

Schrader S, Blue R, Miller D, Jensen G, Zawada E, Hill P et al.
Strengthening geriatric knowledge and use of interdisciplinary teams among allied health students and practitioners
Educational Gerontology 1999, 25(1), 51-65

Location: South Dakota, U.S.A.

Describes a 3-year program undertaken with grant support by the Sioux Valley Hospital and the University of South Dakota School of Medicine. Involved allied health (communicative disorders, dietetics, dental hygiene, occupational therapy and physical therapy) students and practitioners. The aims of the program were to help improve the numbers of practitioners skilled in interdisciplinary geriatric assessment and rehabilitation in underserved rural areas. Didactic instruction used lectures, case studies and role-playing to improve understanding of the role of other disciplines. Clinical training also attempted to integrate the concepts of interdisciplinary team building and geriatric assessment.

Outcomes of the program were difficult to ascertain. Awareness of the roles of the other disciplines was raised (from a very low base level). The authors recommend longitudinal tracking of program graduates, and more formal involvement of other members of the geriatric assessment team (nursing, social work, pharmacy and medicine) in the training process.

Virgin S, Goodrow B
A community crossword puzzle. An interdisciplinary approach to community-based learning
Nursing and Health Care Perspectives 1997, 18(6), 302-07

Location: Tennessee, U.S.A.

Describes an instance of problem or inquiry-based learning carried out at East Tennessee State University. Since 1991, this university has been conducting a research and demonstration program aimed at providing interdisciplinary, community-based education to health professions students (nursing, medicine and public health). Two rural counties are involved in this Community Partnership program, and citizens of these counties are included on curriculum, personnel, recruitment and admissions committees. Community members also have a majority (4 to 3) on an executive board.

The initial course developed by the curriculum committee, entitled “Introduction to Rural Health” was a two-week workshop during which students resided in the local communities with host families.

The Community Crossword Puzzle was an inquiry-based learning experience designed by the committee, with the aim of teaching students about the social, economic and historical structure of the rural community. 154 items were included in the puzzle, which included people, places and events relevant to the economic development, health care system, demography and geography of the community. In order to solve the ‘clues’, students had to utilise the help of someone with intimate knowledge of the area’s life and culture.

Students were required to work in independent teams of three or four, within a time frame of five days, and then present their findings and experiences to an audience of faculty, students and community members. The exercise apparently generated enthusiasm both among students and in the community. The twin aims of accustoming students to working in teams, and developing awareness of the political, cultural and historical structure of the region, were both met.

LaSala K, Hopper S, Rissmeyer D, Shipe D
Rural health care and interdisciplinary education
Nursing and Health Care Perspectives 1997, 18(6), 292-98

Location: Virginia, U.S.A.

Describes another interdisciplinary, community-based undergraduate training program carried out with grant support by an American university. The program was carried out in a rural county in Virginia over four weeks in a summer session. It involved 13 students (five nursing, five health administration and three social work) in four interdisciplinary teams. The students experienced 15 classroom and 90 field hours.

The university faculty were assisted by the director of nursing from the county hospital who acted as the Community Resource Professional (CRP). The CRP was vital in providing entry to the community, organising epidemiological and demographic data, making contact with local providers to act as preceptors, and setting up local housing for the students.

The students' field experience included observing and accompanying a wide variety of local health and social service providers in a variety of institutional and community settings, with the hospital as a central 'home base'.

The aims of the program were the typical ones: exposing students to interdisciplinary teamwork and the realities of rural life and health care, thus improving their amenability to, and preparation for, working in such areas in such a manner. The students were compared with a control group of 53 students taking course in the same disciplines in regular educational settings. There were no initial significant differences between the test group and the control group in measures of attitude towards rurality and interdisciplinary practice. Nor did the control group change over time.

However, the study group expressed a higher level of agreement with 'negative' rural images in the posttest, while maintaining high agreement with 'positive' rural and 'wilderness open spaces' images. The authors interpret this as showing that the students had become "more oriented to the reality of rural practice". The study group's attitudes towards interdisciplinary practice also became "dramatically more positive" during the course.

The authors conclude: "…these results indicate that students internalized attitudes consistent with the course objectives, which will in turn increase the probability of their successfully practising in rural areas".

Note: this program had three faculty and more than 40 community professionals for 13 students. It was "free of normal budgetary and workload constraints."

Crouse B, Mueller C, Uden D
AHC – Community partnerships for interdisciplinary education
Academic Medicine 1998, 73(9), 920-21

Location: Minnesota, U.S.A.

Another example of an interdisciplinary, community-based teaching program established by a U.S. university. Representatives of both providers and disciplinary schools helped select five rural training sites. The program was envisioned as a "virtual school" for interdisciplinary training, and one of the criteria for training site selection was the capacity to support internet access and interactive television.

Nineteen students participated in the pilot program, from medicine, pharmacy, advanced practice nursing and physician assistant courses. They spent 12 weeks at their designated rural site, with eight hours per week devoted to interdisciplinary learning activities. Over the 12 weeks, they had to work on an interdisciplinary community project, developing a needs assessment and plan. Students were connected with other rural sites and with faculty by interactive television for learning activities, used list-serve applications for discussion, and kept electronic journals.

The authors say the program was a success in improving students' understanding of both rural practice and interdisciplinary team concepts. Involvement of community leaders in all aspects of program development was a key to this success.

Brickell J, Cole C
Using a problem-based learning format to teach CLS students interdisciplinary health care practice
Clin Lab Sci 1996, 9(1), 48-54

Location: Kentucky, U.S.A.

Describes and evaluates an interdisciplinary learning experience involving clinical laboratory science students at the Centre for Rural Health in Kentucky.

Comment on rurality: because a certain kind of practitioner might be under-represented in a rural area, they have to take a broader view of professional roles in health care.

There is the suggestion that students in clinical laboratory science, pharmacy and psychology are more isolated during clinical training than other professions, and have less opportunity to learn teamwork and joint decision-making informally.

The Problem Based Learning (PBL) exercise carried out by students involved assessing and developing strategies for a fictitious patient. Three CLS students participated along with masters nursing students, a family practice resident and a physician assistant student. In several instances, students were able to integrate information from various sources in the case study. Difficulties were, however, experienced with the differing educational levels and familiarity with terminology, with some of the students becoming 'intimidated' by the family practice resident.

The authors recommend that future interdisciplinary case study teams should have prior attention paid to issues of team dynamics and training levels.

Edwards J, Smith P
Impact of interdisciplinary education in underserved areas: health professions collaboration in Tennessee
Journal of Professional Nursing 1998, 14(3), 144-49

Location: Tennessee, U.S.A.

Another article originating from East Tennessee State University. The authors note that many questions remain unanswered about the efficacy of community-based interdisciplinary education.

They note the historical barriers to interdisciplinary teamwork, including the segregated education of disciplines, and a "dominant rather than supportive role" by health professionals in communities.

The undergraduate program (described by Virgin and Goodrow 1997) was funded for five years, but still continues, with 25% of nursing, medicine and public health students enrolling in interdisciplinary, community-based courses. The second program was funded and set up for graduate level students.

Outcomes of the original undergraduate program included:

participants in the interdisciplinary program performed as well as their traditional counterparts in licensing examinations, with positive differences in physical assessment, communication skills and thinking critically in clinical situations;

students expressed a better understanding of the role of other disciplines;

all medical graduates chose primary care residency, 80% of nursing students chose to work in underserved rural areas;

53% increase in enrolment at the university from the partner counties.

The intention of the graduate program was to develop "provider teams who will be better prepared to work with one another and with communities"

Graduate seminars began in 1996. The second seminar featured an exemplar provider team from the region. The physician, nurse practitioner and social worker spoke about how they interrelate in practice and in meeting clients' needs.

"Potential physician and nurse practitioner preceptors whose practice meets the criteria to be considered collaborative are targeted as training sites for the student teams".

Kovacich J
Interdisciplinary team training on the information superhighway
Journal of Interprofessional Care 1996, 10(2), 111-19

Location: Maine: U.S.A.

Describes and discusses a rural interdisciplinary training program in Maine utilising computer-mediated communication (CMC). E-mail, chat and electronic notice boards were used to create a '24-hour classroom', which allowed students to digest new information, discuss, learn and interact, without spatio-temporal constraints. (This article was published in 1996, so all this was pretty avant-garde – the author says at the conclusion that further training programs will make 'extended use of hypermedia technologies' – something apparently quite new at the time).

Perhaps the most interesting part of the article is the opening section where the author discusses definitions of teamwork and interdisciplinary training as compared to the reality of rural practice. It is claimed that interdisciplinary team-building usually takes place in a 'teacher-Centred learning environment', based around face-to-face interactions at a particular place and time. However, in the rural environment, it is noted, there are not often opportunities or resources for the development of a face-to-face interdisciplinary team.

The author also reports on interviews with multi-disciplinary providers, which 'revealed a wide range of interdisciplinary practice and definitions of team'. It is noted that resource-rich health care settings tend to produce a narrow definition of teamwork, as shown by the comment from a physician in a rural family health centre:

> … there's a lot of talk about interdisciplinary things and teamwork as far as some of the Statewide organisations go but I don't think there's too much that we really get involved in here … it's not very often that the family doctor and the physician need to sit down together … for the most part there is each one providing their speciality service and in most cases it doesn't require a whole lot of coordination … And social workers, if they were in the same building, I suspect we'd probably have more of a team type process going on.

The author notes that this physician "failed to notice the licensed social worker just down the hall from him or acknowledge the availability of the speech therapist, physical therapist, dentist, psychologist, and Department of Human Services who rented space in the facility".

By contrast, health care resource-poor practices tend to make all-inclusive definitions of teams, including geographically dispersed health service and community agencies. A nurse practitioner in a remote area commented that:

> My team is the receptionist, the administrator, the nurse, the police, the school, DHS – the community … When we moved into this building the whole community helped. They helped clean and the little old ladies brought us brownies … The community makes up our board.

The balance of the article is concerned with the interdisciplinary students' computer-mediated learning experiences. The students (from communication disorders, human development, nursing, nutrition, occupational therapy, physical therapy, psychology, special

education and social work) initially shared information and reviewed fictional case studies using the aforementioned media. They then split into four interdisciplinary teams to evaluate individual cases, rotating through different team roles of 'leader, process facilitator and feedback evaluator', achieving consensus about which resources to request to help them with the case.

In one case, Team Two neglected to view the occupational therapist's report, and it is noted that "It was only after they had read the OT's report that they understood what an OT does. For the second study the team read the OT's report first".

The students demonstrated a 'greater understanding of rurality' at the end of the second semester, but had difficulty comprehending and implementing the different 'team roles'.

The author is perhaps over-enthusiastic about IT as a panacea for addressing issues of isolation, collaboration and information sharing.

Lilley S, Clay M, Greer A, Harris J, Cummings H
Interdisciplinary rural health training for health professional students: strategies for curriculum design
Journal of Allied Health 1998, 27(4) 208-12

Location: North Carolina, U.S.A.

After three years of experience in running rural interdisciplinary educational programs, the authors offer a list of strategies for curriculum design. These fall under the following headings:

1. Give adequate attention to site preparation

2. Prepare university faculty and preceptors

3. Consider timing and duration of exposure in student training

4. Clearly define expectations and roles of university faculty, preceptors, and students

5. Focus learning activities on the need for collaboration and shared responsibility for patient care

6. Design curricular elements to address interdisciplinary content and rural health issues

7. Give case conferences a high priority
8. Involve students in a structured community project

9. Enhance informal learning by encouraging students to spend time together

10. Anticipate the need for intensive on-site coordination and be flexible.

At the outset, the authors attempt to distinguish between *multidisciplinary* care, which they say involves several disciplines focusing on one problem or patient, and *interdisciplinary*

care, which "implies a level of collaboration that transcends the discipline for the greater good of the patient (or outcome), and usually involves the patient (or community) in decision-making processes". So, interestingly, the authors signal that the holistic approach inherent in more genuine collaboration between health professionals necessarily flows on into involving the community.

The students involved in the interdisciplinary program at East Carolina University come from health education, medicine, nursing, nutrition, pharmacy and social work. What seems to set this program apart from some of the other ones studied in this review is the strong involvement from medicine (three of the authors are professors or assistant professors in family medicine).

On their clinical rotations, the students are supervised by a preceptor who guides the discipline-specific experience, while concurrently participating in an interdisciplinary curriculum coordinated by a separate preceptor. It is noted that students possible discomfort at learning in an unfamiliar style and setting may be lessened if the curriculum "incorporates some familiar structure", and they understand the roles of the preceptors and faculty and their own responsibilities.

Eide P
Rural interdisciplinary healthcare training in Hawaii: a cross-cultural project
Australian Journal of Rural Health 1996, 4(3), 165-70

Location: Hawaii, U.S.A.

Yet another write up of an interdisciplinary training program at an American university, this time in Hawaii. This is interesting for a fairly succinct stating of the aims and objectives of community-based, interdisciplinary education, and the political and philosophical rationale for its development. The article abstract states:

> The development and funding of interdisciplinary rural health projects across the United States reflects the growing awareness that limited resources and access to health in rural areas [sic] requires resource sharing, both physical and non-physical. Exposing students to information about rural health care, and then providing hands-on opportunities for teamwork with fellow students in a rural setting, can serve an additional and critical function: to recruit to rural areas healthcare workers who are already aware of the challenges and rewards of this type of practice.

Mentioned in the historical summary is Doctor Oscar Kurren, who apparently had a federally funded interdisciplinary training grant for *working* health professionals prior to 1993.

The necessity of making interdisciplinary education community-oriented is underlined once again, and this time the source of this philosophy is indicated as the WHO. It is asserted that "… the concept of community orientation must underlie the design of any curriculum that hopes to foster interdisciplinary development, and … such development is not an end in itself, but must be a means of ensuring that different types of health personnel can work together to meet the health needs of the people".

The recruitment of students took place from the departments and schools of social work, medicine, public health, dental hygiene, psychology and nursing. Interested students were provided with a questionnaire that ascertained their sex, ethnicity, place of birth and size of home community, rural experience, health related experience, benefits hoped to gain from participation and level of interest in rural practice after graduation. Responses were used to 'rank' the students, with this actually proving useful in the case of nursing students, as eight applied, more than the six for whom there was space. However, due to dropouts, only four nursing students were eventually involved.

The students had nine months of monthly seminars to prepare them for their six-week summer practicum. Interactive television was used to communicate with the nursing students, as the School of Nursing is based on the island of Hawaii, while the other disciplines are based on the island of Ohau. In this case it is made clear that the use of technology did not prove to be a panacea, either in the didactic or the practical part of the course. The author comments on the "problematic nature of attempting to establish a team feeling and approach when a member of the team was only reachable by distance communication means". It was more successful when the nursing students were able to be brought to Ohau to meet with their fellow team members on a couple of occasions.

In her summary, the author again casts doubt on the potential of technology as a panacea for combating isolation and fostering collaboration. She points out that team building requires "face-to-face contact and sufficient time to build the sense of being a team", and in conclusion states:

> Personal contacts between team members and between the team and the community, in conjunction with HITS (the teleconferencing technology), have proved to be a far superior method of achieving the goals of the project, as opposed to strict reliance on technology for team development.

Slack M, McEwen M
An interdisciplinary problem-based practicum in case management and rural border health
Family and Community Health 1997, 20(1), 40-53

Location: Arizona, U.S.A.

Describes and discusses a ten-week interdisciplinary practicum carried out by students from pharmacy, nursing, social work and public health in a rural area of Arizona on the border between the United States and Mexico. The practicum is an example of problem-based learning (PBL), but unlike some of the rural interdisciplinary training programs described elsewhere, involves real, rather than fictional clients.

The students live and work in the rural area during the ten weeks, and provide case management services to pregnant women through a community health centre, while meeting on a weekly basis for case management seminars. The students work with *promotoras* (also known as lay health educators or community health workers) and follow the case management process through from assessment to management and evaluation. In order to do this successfully, the students which the authors describe had to gain awareness and knowledge of linguistic, cultural, immigration, financial and transport issues, all of which affected their clients' access to health care.

The authors report that the practicum produces "global changes in the students' reasoning process", noting that while at the beginning of the practicum they generate hypotheses specific to their discipline, their hypotheses are broader and less restricted by the end. Students also indicate improved ability to work with other disciplines and recognise the interrelation of patient problems.

The perceptions of one group of six students are reported as to improvements in the effectiveness of their interdisciplinary teamwork. Larger gains were experienced in agreement on goals, recognition and use of member resources, establishment of procedures and use of agreed-on approaches for solving problems. Lesser gains were reported in trust, participation in leadership and communication, but these were relatively high to begin with.

The authors provide a careful discussion of the benefits and drawbacks of the hands-on, real world learning situation. One benefit is that, while classroom-based PBL tends to concentrate on diagnosis, in the real scenario management and evaluation problems receive equal weight, and these may in fact be more problematic. A disadvantage is the necessity to minimise student contacts in order to avoid excessive demands on the client.

Again we see a distinction made in this article between *multidisciplinary* and *interdisciplinary*. The authors define each as follows:

Multidisciplinary: a team leader establishes the team goal - members contribute their particular expertise, working in parallel with little awareness of the others' work.

Interdisciplinary: work towards a goal established by an "egalitarian process" which incorporates findings and recommendations from all team members.

Slack M, McEwen M
The impact of interdisciplinary case management on client outcomes
Family and Community Health 1999, 22(3), 30-48

Location: Arizona, U.S.A.

The same authors revisit at greater length the program described above, but this time focus on the case management process, the Omaha System for client assessment and outcome measurement, and the effect of the program on the clients (the same demographic of Mexican American pregnant women as in the earlier article). The case management interventions are reported to have had significant positive effects, but as the authors acknowledge, homogeneity of test group, measurement bias, lack of a control group, specificity of client group and the short-term, intensive nature of the program all skew the results, so we ultimately learn little.

Depoy E, Wood C, Miller M
Educating rural allied health professionals: an interdisciplinary effort
Journal of Allied Health 1997, 26(3), 127-32

Location: Maine, U.S.A.

Reports on a year-long interdisciplinary education program at graduate level in Maine. Students were from psychology, speech communications, social work, human development and nursing. The article describes two years of the program, with 10 students completing the first course and 18 the second. The themes of the program are the typical ones: in the first semester the focus was on the role and functions of the various health professions, the nature of rurality and an introduction to conflict resolution, while the second semester treated rural sociocultural and health issues and the theory and practice of interdisciplinary teams.

Evaluation of the program suggests improved knowledge of the various disciplines, interdisciplinary practice, and increased confidence with conflict resolution. However, once again, the sample is small and skewed, and the improvement in knowledge of interdisciplinary practice did not even count as statistically significant.

Vinal D
Interdisciplinary health team care: nursing education in a rural health setting
Journal of Nursing Education 1987, 26 (6) 258-59

Location: Dominican Republic

Describes an educational/team-building project of a different sort: an interdisciplinary team of student and professional volunteers from the U.S. who spend up to eight weeks in the Dominican Republic providing health care services in rural areas. Emphasis is placed on both students and professionals being forced out of their 'comfort zones', thus enabling more collaboration and team-building, as they are cut adrift from cultural and professional centricities.

Students are in their fourth year in nursing, medicine, pharmacy and dentistry. They undertake a weekend workshop program as an "early avenue for team interaction". The nursing students (at least) are required to complete a Spanish language course in the semester prior to the program.

The students arrive in the Dominican Republic two weeks prior to the professionals, and spend the time in a city campus setting receiving orientation on language, culture, history and problems of the Dominican Republic. The students then provide orientation for the professionals when they in turn arrive. A student is also assigned ultimate authority for each group, being responsible for the safety of the team and logistics of the experience. These students are chosen in December, and receive extra instruction in group process and dynamics.

The interdisciplinary teams live, work and eat together in the Dominican countryside and share responsibility for the provision of health care, which includes health promotion and home visits. Team conferences, or "reflection meetings" are held nightly, which enable

planning, conflict resolution and problem solving. Some comments on the process by the author include:

> The group is formed into an efficient team through this daily face-to-face interaction. Environmental adversity, cultural dissonance and generalized frustration lead to a cohesiveness that is uncharacteristic of most health care teams. (p.258)

> The material differences between the North Americans and the Dominicans initiate a corresponding difference in the functioning of the health care team. What is routine in the States is ineffective in this setting. There is no inequality among health care providers. There is no assumed status or proven authority. Common problems concerning the interpretation of the language, symbols and customs of the country also facilitate the concept of a collaborative team effort. In this setting, the entire team takes responsibility for the outcome of the health care. (p.259)

Swanson E, Taylor C, Valentine A, McCarthy A
The integrated health professions education program seminar
Nurse Educator 1998, 23(2), 18-21

Location: Iowa, U.S.A.

Yet another description of an interprofessional education program at an American university. The program, this time state-funded is particularly brief, comprising three 2 ½ hour seminars and a three day clinical practicum. Students from medicine, pharmacy, dentistry and nursing take part. The instruction covers the typical themes – orientation to rural practice, knowledge of each other's professions and team building exercises such as a scavenger hunt, which concurrently promotes exposure to information technology resources.

Rural interdisciplinary continuing education

Kelley M, Maclean M
Interdisciplinary continuing education in a rural and remote area - the approach of the Northern Educational Centre for Aging and Health
Educational Gerontology 1997, 23(7), 631-49

Location: Ontario, Canada

Excellent article in which the authors try to articulate the key features of both interdisciplinary education and rural health care practice, as an introduction to their description of a continuing education program run at Lakehead University, Thunder Bay, Ontario (pop. 120,000).

Rural practitioners are identified as perhaps more amenable to interdisciplinary education, since they tend to rely more on informal networks than urban practitioners, tend to be more generalist, and need to be willing to collaborate with other professionals in order to address rural health problems.

The Northern Educational Centre for Ageing and Health, (NECAH) at Lakehead University undertook to provide continuing education for palliative care for rural northwestern Ontario. This was based on initiatives outlined and funded by the provincial health ministry. However, whereas the ministry outlined different initiatives for physicians, other-discipline providers of palliative care and hospice volunteers, the NECAH decided to concentrate efforts on a five-day institute for *all* regional providers.

A year was devoted to planning the institute, and 80 people representing regional agencies and health care providers were involved in the planning process Palliative care was defined as broadly as possible in order to recognise rural realities.

Notable features of the institute included:

- 87 disciplinary delegates were spread evenly between nursing (40%), family medicine (25%), psychosocial disciplines (16%), pharmacy, physical therapy, occupational therapy, radiation therapy (19%);
- 40+ hospice volunteers attended, as did community workers from remote areas and immigrant and aboriginal communities;
- delegates met daily to work through case studies;
- name badges indicated first name and home community rather than discipline in order to promote teamwork.

Comments on rurality and teamwork:

- In rural communities there is overlap between personal and professional roles – this can either strengthen or provide obstacles to professional collaboration.

- Rural practitioners are usually willing to assist one another, frequently going beyond professional boundaries to provide clients the best possible care.

- "Although there is unlikely to be a formalized 'interdisciplinary team' operating, there is a sense of a 'community team' or a network of caregivers held together by personal relationships or professional need" (p. 643)

- Interactions are based more on skill level than on discipline.

96% of participants recommended the use of interdisciplinary continuing education in the future. Outcomes included the development of a regional directory of palliative care resources and a resource manual written from the perspective of many disciplines.

Key references used by authors: Clark (1991 and 1993) - this is the same (Philip) Clark, who along with Theresa Drinka has written the (2000) *Health care teamwork: interdisciplinary practice and teaching.*

Janson L, Dudgeon D, Nelson F, Henteleff P, Balneaves L
Evaluation of an interdisciplinary training program in palliative care: addressing the needs of rural and northern communities
Journal of Palliative Care 1997, 13(3), 5-12

Location: Manitoba, Canada

Describes a pilot test of an interdisciplinary training program for palliative care in rural communities in Manitoba, Canada. The article's abstract provides a good summation, and is printed here:

> The program involved two weeks of intense palliative care training for nurses, social workers, physicians, and volunteers. Four teams were trained during a six-month period. A repeated measures design was used to assess the effectiveness of the program. Results indicated that health professionals' knowledge about care of the dying improved upon completion of the program and remained improved three months following the program. Improvements in the use of medications, increased attention to family care, increased discussion of DNR orders and increased consultation related to symptom management were evident following the training program. The parallel training program for volunteers was also judged to be effective.

The program was to involve teams of one physician, one nurse and one social worker per community, but in fact four physicians, eight nurses and one social worker received training. This was due to the fact that often social workers were not able to attend the course, or were not formal members of the palliative care teams. Nurses were eager to attend, as they often fulfilled major roles, such as home care coordinator or volunteer coordinator. In some cases, a defined palliative care team emerged as an outcome of the invitation to receive training.

With regard to teamwork, the authors comment:

> Palliative care requires a multidisciplinary team approach, recognising that all health care workers have roles to play. Only through a team approach is it possible to fully assess problems, integrate personal and family perceptions in care decisions, sustain a readily available source of professional advice, supervise the application of treatment decisions, monitor progress, arrange changes of site of care, and anticipate and support the dying and grieving process.

The program was modelled on the Manitoba Cancer Treatment and Research Foundation (MCTRF) outreach program for physicians and nurses in rural and northern Manitoba.

Trickett J, Kitson C
Trauma outreach education: assessing the needs of rural health care providers
International Journal of Trauma Nursing 1999, 5(4): 128-31

Location: Ontario, Canada

Describes a survey tool developed to determine how best to deliver outreach trauma continuing education to providers in rural areas from Ottawa base hospitals. Previously, the hospitals had simply utilised retrospective questionnaires of satisfaction with pre-designed and delivered programs. Nurses, physicians and paramedics from three rural hospitals which referred to the Ottawa trauma centres were surveyed.

There were many similarities as well as some differences in the way the various disciplines ranked what, how, when and where they wanted to learn, and what were barriers to their learning. A significant result was that all disciplines selected constructive feedback and criticism with case reviews as their preferred method of learning. This prompts the authors to note that this is a challenging format for the educator to use, as they have to be wary of creating the perception of "those city folks coming to tell us what we did wrong".

Blue I, Howe-Adams J
"Education choices" a program of educational support for multidisciplinary health professionals in rural and remote areas
Australian Journal of Rural Health 1993, 1(3), 7-16

Location: South Australia, Australia

Describes and evaluates a multidisciplinary continuing education program run by the University of South Australia for rural and remote health professionals in various parts of the state. At the time of writing, the program had run over two pilot years. The program consisted of a series of two or three day workshops held in the rural centre of Whyalla, with participants keeping in contact with a coordinator by phone, fax or mail in the interim (this was in the days before universal email!).

The courses were geared towards the broad needs of the rural and remote professionals, and covered a wide range of topics, including social, cultural, economic and legal issues, career

development, personal and practical survival skills, as well as a broad set of primary health care and health promotion topics. The aims of the program are listed as including:

- enhancing group networking;
- improving interdisciplinary understanding;
- providing opportunities for 'hands on' practical learning;
- meeting individual students' needs through flexible teaching methodology.

The 28 participants from the first year and 24 from the second were dominated by nurses, but also included physiotherapists, social workers, community support workers, administrative and managerial staff and a teacher. Participants felt that the program had a number of positive outcomes, including building professional networks, learning skills to manage professional and personal difficulties, increasing knowledge of other agencies and services and promoting appropriate referral, broadening knowledge about rural community dynamics and realising the necessity of such a broad educational background for rural practice.

Rural experiences of teamwork and collaboration

Allen O
Anthill and other injuries: a case for mobile allied health teams to remote Australia, *Australian Journal of Rural Health* 1996 4(1), 33-42

Location: Northwest Queensland, Australia

Reports on the experiences of a mobile allied health team which travelled to some extremely remote parts of north-west Queensland. Teamwork and communication were reported as crucial to the successful operation of the service. The team included a physiotherapist, occupational therapist and social worker. They had to deal with some complex health and social problems in the very remote communities as well as coordinate their activities, and it is reported that:

> After the outreach team had made a few trips, it was recognised how important the team itself was in supporting its members. Consultation throughout and after the trips has been vital to problem solving in the remote communities

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Blieker P, Lewis A
Extending the role of community pharmacists: the views of GPs
International Journal of Pharmacy Practice 1998, 6(3), 140-44

Location: **Southwest Devon, England**

Reports on a questionnaire sent out to 368 GPs in the south-west Devon area of England to determine their attitudes towards community pharmacists taking on expanded roles and being part of the primary health care team.

Rural GPs were more likely than urban to respond to the questionnaire, which in any case had an 81% response rate. The authors suggest that this could be due to the greater likelihood of rural GPs having dispensing rights, and therefore interest in the issue. The survey generally demonstrated increasingly positive attitudes towards an extended role for community pharmacists compared with earlier surveys. GPs were particularly positive about the potential role for pharmacists in health education, monitoring of repeat prescriptions and advice on cost-effective prescribing. However they were sceptical about pharmacists taking on screening or semi-diagnostic roles. GPs generally felt that communication with pharmacists was good, and wanted to see extra communication and meetings. However, only around a quarter would accept a pharmacist as a partner in their practice, and only 31% thought that "Pharmacies should usually be located within medical practices".

Gilbert L
Pharmacy's attempts to extend its roles: a case study in South Africa
Social Science and Medicine 1998, 47(2), 153-64

Location: South Africa

Describes and discusses the extended role taken on by community pharmacists in rural underserved areas of South Africa. The author provides a socio-historical discussion of the desire of pharmacy to "re-professionalise" itself as a discipline, and an analysis of the issues of professional autonomy, role boundaries and professional control with regard to the division of labour in health care.

Some community pharmacists in rural areas of South Africa have been granted a special permit to provide certain restricted (Schedule 3 and 4) medicines in specific circumstances, provided they undertake supplementary training.

The 66 pharmacists with a special permit were surveyed by mail, with a response rate of 49%. The pharmacists with a special permit are compared with a random survey of community pharmacists in Johannesburg.

- 70% of the pharmacies were visited by more than 100 clients per day;
- 62% of the pharmacists reported that more than 40% of patients did not have a doctor's prescription;
- complaints treated included upper respiratory infection (40%), urinary tract infection (22%), tick-bite fever, trachoma, acne and skin and soft-tissue infections;
- if the possible daily activities of pharmacists were grouped in to "traditional" and "new" activities, the permit pharmacists reported a similar level of traditional activity as the Johannesburg pharmacists, but many more (48% as opposed to 18%) of the permit pharmacists engage in "new" activities, with the crucial difference being prescribing in the case of acute illness (91% vs. 13%), which is the main legally distinguished activity;
- while the randomly sampled pharmacists in Johannesburg reported minimal and unsatisfactory contact with other health professionals, 58% of the permit pharmacists had daily, and 25% weekly, contact with a doctor. 42% employed a nurse, while the rest had at least weekly contact. 55% had at least weekly contact with a specialist;
- 73% would have liked more contact, largely to have more information about patients;
- 82% were in favour of hiring a nurse;
- 71% felt that all pharmacists should be able to practice pharmacy as allowed by the permit, but 75% thought that access to restricted medicines should only be allowed for those who undertake structured, compulsory training.

The author concludes that role boundaries and turf disputes remain an obstacle to the extension of pharmacy's role. However, she suggests that the development of "health centres" offer the ideal venue for the integration of pharmacists into the health care team.

This would provide the pharmacist with the necessary access to patient records and interaction with other professionals, while allowing doctors overall supervision and easing fears of role boundary encroachment.

Van Hook M, Ford M.
The linkage model for delivering mental health services in rural communities.
Health & Social Work 1998, 23 (1), 53-60.

Location: U.S.A.

Evaluates a "linkage" model of delivering mental health services in rural communities. 28 mental health staff were interviewed who had been placed in "inter-organisational" arrangements in "general health care settings", which variously included community hospitals, public health clinics, "comprehensive health and service Centres", physicians' offices and a nursing home.

Previous studies reviewed by the authors found that barriers to these arrangements included "differences between primary care and mental health practices, and primary care staff distrust of the professional competence of mental health personnel". Other issues were isolation of mental health staff within the primary care setting, and logistical problems related to billing for linked services, records, space and transportation.

The mental health staff surveyed by Van Hook and Ford reported that referrals had increased under the linkage arrangement. Generally, contact between mental health and general health professionals resulted in improved understanding of the other's work and competency. Mental health staff perceived strong support for the arrangement from the administrators both of the general health facility and their own "home base". Primary care providers saw the arrangement as "an effective means of delivering services in a way that freed them from mental health responsibilities".

Overall advantages identified included:

> Improved access to care, more holistic care…increased coordination and continuity of care…and reduced stigma in using mental health services ([because of the] presence of general health care services)

Problems continued to involve lack of space, privacy of clients, differences between disciplines, administrative issues and isolation of mental health staff. Staff stressed the need to communicate with medical staff in both formal and informal ways, and develop clear arrangements for referrals.

Badger L, Ackerson B, Buttrell F, Rand E
The case for integration of social work psychosocial services into rural primary care practice
Health & Social Work 1997, 22(1), 20-29

Location: Alabama, U.S.A.

The authors establish a prima facie case for full integration of social work services into rural primary care practice. The usefulness of social work services in the primary care context has long been acknowledged, they say. And in the rural setting, "lack of access to other professionals and to continuing education opportunities makes the need for adjunctive services especially critical". Collaboration between rural primary care physicians and psychosocially trained social workers thus ought to make for more effective health care.

91 rural physicians (out of a possible 299) responded to a survey which aimed to ascertain their attitudes towards collaborative practice with social workers. These physicians had generally positive attitudes towards social workers, but only a small proportion expressed interest in integrated practice.

Nearly all the physicians reported that they had worked with a social worker in the past month, and most considered the experience positive. However, only 17% had considered hiring a social worker for their practice, and only one-third expressed interest in partaking in a trial of integrated social work in their practice.

The authors speculate that lack of third-party reimbursement and lack of space could be possible factors in this lack of interest, but consider as more likely reason a limited view on physicians' behalf of the extent of social workers' role and competencies. A majority saw as potentially useful 'traditional' social work activities such as establishing eligibility, coordinating care among caregivers, providing supportive therapy for personal problems and helping patients adapt to health crises, resolve financial problems, make transitions to new living arrangements and obtain medical supplies. However, less than half endorsed less traditional activities such as screening patients for mental disorders, providing psychotherapy, helping patients prepare for hospitalisation, taking social histories, or counselling for pregnancy or birth control. Maintaining control over patient management was also important to physicians, and between half and two-thirds wanted to maintain control over patient referral.

Bastien J
Collaboration of doctors and nurses with ethnomedical practitoners
World Health Forum 1994, 15(2), 133-37

Location: Bolivia

Discusses the relationship in Bolivia between doctors and nurses and indigenous herbalists, diviners, midwives and healers. The author considers that ethnomedical practitioners can assist doctors and nurses to understand the social, cultural, psychological and spiritual components of patients' illness. They can give insight into the beliefs of indigenous communities, and can facilitate health promotion, acceptance of immunisations, and healthy birth practices.

Some integrated clinics have been developed in Bolivia which incorporate both bio and ethno-medical practitioners. They provide a "culturally holistic approach to illness", and attract more patients than orthodox clinics. The author recommends that doctors and nurses recognise and respect the practices of traditional healers, and study their work, so that they can best collaborate in the implementation of health programmes, and sensitively replace harmful practices where they exist.

Strasser R
Teams in rural health
Healthcare Review Online 1999, 4(1)
http://www.enigma.co.nz/hcro_articles/0001/vol4no1_001.htm

Location: Australia

Provides a succinct overview of rural health issues for a general audience. The fourth of four concise sections is the author's view on teamwork in rural areas. He identifies three levels of teamwork:

- interdisciplinary co-operation between health practitioners;
- teamwork between local generalists and distant specialists;
- co-operation between health service agencies, GPs and other providers, and the rural community.

Interdisciplinary co-operation is considered to be made more likely by the shortage of health care personnel, and is more likely to occur in rural areas than in urban areas, where it is talked about more. In addition, the author states:

> This teamwork is encouraged both by the rural culture, with its focus on getting the job done and "doing the necessary", and also the special relationship between rural practitioners and their communities.

Adams C
Leader behavior in rural directors of nurses
Journal of Nursing Administration 1993, 23(9), 29-34

Location: Idaho, Montana, Wyoming, Washington, U.S.A.

Discusses the 'leader behaviours' of directors of nursing in rural hospitals according to a particular model of leadership. According to the theory of situational leadership, effective leaders vary their behaviour along the 'relationship/supportive behaviour' and the 'task/directive behaviour' dimensions according to the 'readiness' of 'followers'. A study of 63 directors of nursing revealed that they almost exclusively used 'high relationship' leadership styles.

According to the theory, the lack of adaptability in their leadership styles is limiting to their leader effectiveness. However, the author points out that this may well be due to the distinctive nature of the rural environment:

> Rural directors of nursing extend their practice into the domains of other professionals. They deliver babies, drive ambulances, and act as respiratory therapists. In these fluid and problematic intersections … directors of nursing are probably better served by using high relationship leadership styles.

She also points out that rural directors of nursing often take on clinical roles, so may be in peer relationships with staff nurses, as well as having personal connections with them in the tightly-knit rural community. Such behaviour helps the director of nursing "maintain community relationships with workers".

The author concludes:

> From the perspective of situational leadership theory, [the directors of nursing] did not function with optimal effectiveness. However, [they] very likely used leader behaviours that maximised opportunities for success in rural environments, where work and community life are interwoven and where their work roles are fluid.

Keyzer D
Working together: the advanced rural nurse practitioner and the rural doctor
Australian Journal of Rural Health 1997, 5(4), 184-89

This paper discusses the complex and interrelated roles of the rural nurse and doctor. These roles are viewed as being complementary to each other in any healthcare setting but more so within the context of rural Australia. The current move towards the development of advanced nurse practitioner roles is often clouded by unnecessary medical fears that nurses are attempting to displace doctors. In contract, this paper argues that the development of new rural nursing roles identifies rural nursing as a major specialist area within the wider profession of nursing and, at the same time, recognises the reality of practice for many rural nurses. Individual public figures may perceive the solution to the shortage of rural doctors to lie in their replacement with nurses. The nursing profession, however, will resist this approach. Nursing is not the first rung on the ladder to a career in medicine. Nurses are educated and acknowledged to focus their practice on the clients' responses to healthcare problems and not the practice of medicine. The primary role of the nurse is to provide care. The primacy of care should not be set aside by those nurses seeking to develop their practice, nor should advanced practice be defined in terms of taking on tasks previously carried out by other healthcare professionals.

Ross J
The development of the advanced role of rural nurses in New Zealand
Australian Journal of Rural Health 1999, 7(4), 253-57

This paper offers an informative insight into the development of the advanced role of rural nursing practice in New Zealand. Provided is a futuristic vision of nurses' contribution for the provision of primary rural health care. The concept of advanced nursing practice will be discussed within the context of the interdisciplinary health care team. It is argued that as nurses take on advanced practice it is essential they receive appropriate clinical and theoretical skills to ensure they are in a position to provide competent and clinically safe, effective health care in an ethical, efficient manner.

A description of a survey, undertaken by the author, studying rural nurses' skills provides the recommendation for the development of an appropriate postgraduate course at Masters level, designed specifically for primary rural nurses for the advanced role. The provision of this advanced education together with preparation and support, can pave the way for the highly skilled and knowledgeable nurses of the future working in collaboration with the interdisciplinary rural health care team and rural community.

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