The time is RIPE for community-based interprofessional education

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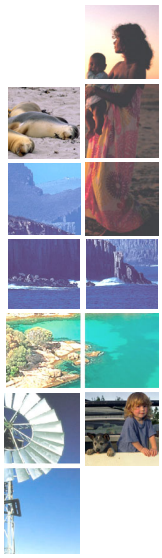

ABSTRACT

The Rural Interprofessional Education Project (RIPE) is a positive response to major changes in health care provision and delivery, which have not necessarily led to modernising the largely mono-disciplinary, often "medico-centric" education and training of health professionals. The project is a three-year initiative that aims to develop a generic interprofessional learning curriculum module, attract students to the prospect of rural practice, conduct research and offer meaningful and enduring educational experiences for students of health-related disciplines.

In 2001 volunteer medical and nursing students worked together on clinical placements in rural primary health care contexts to complete a range of activities including a collaboratively developed, community-based project. In 2002 and 2003 the project also includes pharmacy and physiotherapy students. Research data continue to be gathered from pre- and post-placement questionnaires completed by preceptors and students, as well as a range of qualitative sources such as on-line discussion, tutorials, interview and focus group analyses.

Mid-project results indicate that the experience has led to significant interprofessional (IP) learning for both students and preceptors. This paper focuses on student projects and interaction with local communities, which were reported to be of significant value and interest to those concerned. Qualitative and quantitative findings indicate that the community setting has mutual benefits for all participants and for the community itself. The community-based project enhances student learning about interprofessional practice through an experiential learning approach.

The outcomes, challenges and opportunities that have so far emerged from RIPE suggest useful future directions for planning, implementing, sustaining and evaluating IP learning programs in rural communities. RIPE is proving a valuable augmentation to existing research, highlights the need for specific and strategic policy reform within government, educational and professional bodies to incorporate future IP initiatives into curriculum.

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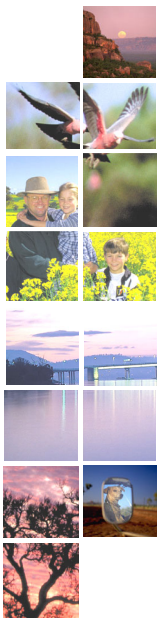
PROJECT OVERVIEW

In 1999 a multi-disciplinary group of health professionals and academics, joined by their commitment to the principles of interprofessional education, prepared and submitted a proposal for funding to the Department of Human Services (Victoria). The submission was successful—a three-year pilot enterprise was born and dubbed the Rural Interprofessional Education (RIPE) project. The project aims to:

- develop a curriculum package to support clinical placements focusing on interprofessional education (IPE)
- enhance the interprofessional effectiveness of students and, to some extent, preceptors involved in the project
- provide student with a positive experience of rural health practice in the hope that they may become more interested in returning to rural settings as future practitioners
- contribute to the research base relating to interprofessional practice (IPP) and IPE.

A part-time project manager/research position was created and filled, later to be supplemented with a part-time project officer both of which were co-located with the chief investigator at the Department of General Practice, University of Melbourne. The project budget allowed for these salaries as well as the costs of running rural clinical placements such as project manager and student travel and accommodation allowances, preceptor honoraria and tutor fees. Potential placement sites were contacted and visited by the project manager and were selected according to their interest and capacity to provide effective preceptorship within an interprofessional, primary health care context.



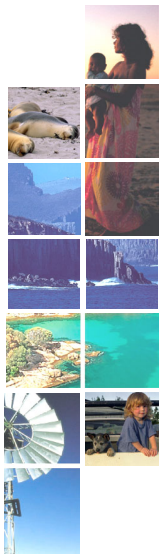
The project revolves around two-week rural clinical placements in which students learn with and from other students from different health disciplines. They do this under the preceptorship of health practitioners from the same disciplines as the students. The placements involve two tutorials, on-line discussion, clinical health practice experience and community-based projects and activities. More detailed methodology and project development steps have been described elsewhere (McNair, Brown, Sims and Stone 2001).

Participants reported increases in important aspects of interprofessional knowledge and improved understanding of the skills and attitudes required for effective IP practice. There are suggestions that the experience has a positive effect on the IP attitudes and beliefs of local practitioners. Findings have also revealed different self-awareness levels of respective professions relating to their own IP practice (Stone, McNair, Sims and Nesbitt 2002). The substantive vehicle for achieving the above project aims is the community-based project (CBP) that students undertake, as well as a range of other community-related activities. This paper outlines the findings of the project so far with a specific focus on the perceived benefits perceived by students, preceptors and communities through these community-related projects and activities.

Student recruitment and motivation

In the first project year, students from all medical and nursing schools in Victoria were invited to participate. In the second year a small number of students of physiotherapy and pharmacy were also invited to take part. Students were mostly in their third year of study, a level chosen as a result of prior research such as that of Leaviss (2000) that suggests interprofessional education should not occur before students have a foundation sense of professional identity, but not so late in courses that they have potentially developed stereotyped views and beliefs about the role and worth of professionals from other health disciplines.

Most students gain little if any academic credit for their participation. This voluntary dimension appears to work "both ways". It is an advantage because those students who participate are typically highly motivated and self-directed, all excellent qualities for an interprofessional program. The fact that the students are volunteers and often do the placement in their "own" time, usually also means that they are inherently interested in rural, community-based health practice. Preceptors have commented on their reluctance to take students who have been "conscripted" to do a compulsory rural placement as an unwelcome course requirement. In contrast, they report that the enthusiasm and genuine commitment of RIPE students have re-opened doors for future students in a situations where there is growing pressures on limited resources to run rural placements (Mahnken 2002).



Student voluntarism obviates problems outlined by Howe (2000) such as negative student attitudes to community or general practice, possibly seeing these contexts as irrelevant to student career goals. Perhaps the most valuable aspect of RIPE voluntarism is that it allows for types of learning associated with intrinsic motivation such as the examination and development of personal value schemas (Kohn 1994) that are fundamental to effective interprofessional collaboration. When learning experiences are limited to those driven by extrinsic motivation, such as short-term rewards or punishments, the personal development goals of interprofessional education are unlikely to be addressed. There are also likely to be lower levels of interest and enjoyment when motivation sources are extrinsic (Wild, Enzle, Nix and Deci 1997).

Site/preceptor recruitment

Sites are selected according to the following criteria:

- they can offer two preceptors from different professions who are willing and able to supervise the two students
- the preceptors can demonstrate, to a reasonable degree, effective interprofessional collaboration
- the agency or agencies within which they work are located in rural primary health care settings
- a local RIPE co-ordinator can be nominated to facilitate finding appropriate accommodation, community contacts and activities.

Perhaps most crucial of the criteria are the "willing and able" qualities of preceptors. Prior preceptorship experience may be one useful indicator of suitability, but other qualities such as empathy, providing encouragement and discussing student needs are also important (Lucas 1998).

The first RIPE placements took place across the state of Victoria in 2001. Actual and expected numbers of students, preceptors and sites involved are illustrated in Table 1.

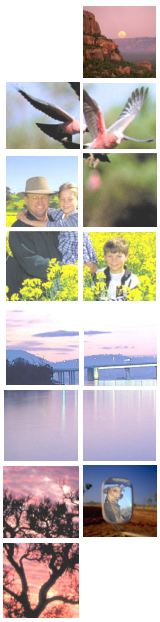
Table 1 Participants in RIPE placements 2001–2003

	2001 (actual)	2002 (actual)	2003 (expected)	Total
Students	14 nursing 13 medical	14 medical 13 nursing 3 physiotherapy 3 pharmacy	15 medical 15 nursing 4 physiotherapy 4 pharmacy	98
Preceptors	13 nurses 13 GPs	14 GPs 13 nurses 3 physiotherapists 3 pharmacists	15 nurses 15 GPs 4 physiotherapists 4 pharmacists	98
Sites	13	14	18	

Placement sites have so far included Multipurpose Services, remote and other Community Health Centres, small and large general practice clinics and centres, District Hospitals, Bush and District Nursing Services, drug and alcohol and mental health agencies.

BACKGROUND AND RATIONALE FOR COMMUNITY PLACEMENTS

Defining "community"



Before describing the RIPE community-based activities and outcomes it seems appropriate to look at what is meant by the term "community" in this context, especially as the term is often used broadly to refer to a variety of concepts. The Macquarie Dictionary (1997) has eight definitions, two of which are potentially relevant to the context of rural clinical placements: "1. A social group of any size whose members reside in a specific locality, share government, and have a cultural and historical heritage 2. *the* community—the public."

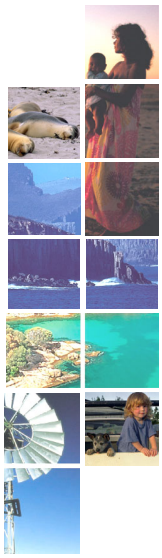
The first meaning includes the defining characteristics of shared place, culture, history and government and is more useful than the second, very broad meaning. Bush, Dower and Mutch (2002) offer a definition that includes the dimension of shared purpose (actual or potential), but excludes the "locality" criterion, presumably to allow for communities that may interact from a distance such as "virtual" communities that may communicate using information and communication technology (ICT): "Any existing or potential network of individuals, groups or organisations that share or have the potential to share common concerns, interests or goals."(p3)

If we assume the shared purpose is to maximise health outcomes then we approach a more specific, "actionable" definition such as that of Westbrook and Schultz (2000): "A group, population, or cluster of people within the health planning area that identify

with a common characteristic and have the potential to interact with each other to improve health."(p51)

It may seem tautological, even patronising to identify health improvement in such obvious terms. However, previous research suggests that it is essential not only to explicitly recognise this shared goal, but also that effective interprofessional collaboration, rather than "the omnipotent independent practitioner", is the most likely approach to achieve improved health outcomes (Headrick, Wilcock and Batalden 1998, p771).

Primary health care principles driving community-based learning and interprofessional education



Why educate our health professional students in community settings and in particular in rural settings? Do the benefits to the students outweigh the disruption to their work and social life? Is the effort and administrative load involved for academic institutions and exhausted health care providers worthwhile? What benefits do the involved communities gain in hosting students for anything from a day to a year? These questions deserve well-researched answers if we are to continue to justify costly and demanding community placements for our health care students, particularly in a climate of the increasingly tenuous health care indemnity industry. A further layer of questions occurs when interprofessional education in the community is added to the equation:

- Are there enough community practitioners who demonstrate effective interprofessional practice to accommodate students in need of excellent role models?
- Is interprofessional learning important enough to justify the requirement to overcome complex logistical and institutional dynamics in order to place students from multiple disciplines together?

The health equity literature provides some enlightenment as to the importance of community-based education. The primary health care principles that drive community health care highlight the importance of community participation in health care decision making and in turn the need for health care providers to be responsive to community needs (WHO 1978). Mooney (2000) recently reiterated this principle in a challenge to build community autonomy and provide public health care following a social justice model. Autonomy in health care is seen as a human rights issue, which has been undermined by the mainstream, institutionally based health care system (Galbally 2000). Further threat to community participation has occurred with health care reforms that were based on market principles (Brown 2000). Recent health care reforms in rural Australia however, such as the multi-purpose service model, have recognised the need for community participation through a strongly consultative approach, with successful outcomes (Hoodless and Evans 2001).

The multi-disciplinary team is an important component of any primary health care system, and is most effective if skills of shared understanding and mutually respectful collaboration are developed. These skills can be learned and interprofessional education is emerging as an important and effective framework for such learning (Makaram 1995, Pearson 1999, Barr et al 2000). Interprofessional education can also

alter attitudes towards other health professions, which cannot be influenced as effectively in mono-disciplinary settings (Horsburgh et al 2001).

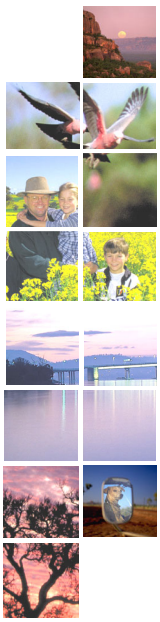
Howe (2000) argues that increases in the use of primary care settings for teaching purposes requires corresponding evaluation of the experiences of those involved. She also provides a useful list of "expected outcomes" of community-based medical student attachments (p762):

- broadening student definitions of the scope of medical intervention
- increased interprofessional collaboration
- improved recruitment to community oriented specialities
- altered power relationships between the (medical) profession and the society it serves.

All of these outcomes are relevant to the goals of the RIPE project, which also aims to provide insights into the "experiences of those involved", particularly from the student perspective.

Addressing rural health care workforce in undergraduate education

Primary health care philosophy encompasses a principle of equity and accessibility in providing services close to where people live, without financial, social or cultural barriers. The burgeoning evidence that social factors are important determinants of health provides further incentive to address health care access (Marmot 1999). The mal-distribution of the health care workforce in rural and outer-urban Australia undermines the access principle (Saunders and Schofield, in Prideaux et al. 2001) and must be addressed at all levels including undergraduate education.



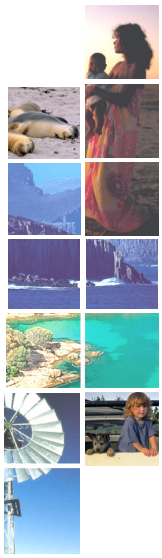
Students cannot learn to put such principles into practice without exposure to primary health care in action. Traditional health care professional courses have been based in institutional settings, in mono-disciplinary "silos". Such courses rarely address health inequalities, tend to ignore health promotion and marginalise community health care. One reviewer states, "medical schools are divorced from the health needs of their communities" (Iliffe 1992, page 391). Most students have emerged with little interest in or understanding of rural health care and few skills for interprofessional practice.

The medical workforce has been extensively reviewed, with recommendations to increase the number of rural origin students and increase exposure to rural community settings throughout undergraduate courses (AMWAC 1998). Federal and state government policies now reflect these recommendations, with subsequent educational funding to address rural workforce distribution including the establishment of Departments of Rural Health, rural health clubs and rural scholarships (Department of HFS 1998). Key performance indicators for medical undergraduate rural funding now include a target of 25% rural-origin students and at least eight weeks of rural experience for all students (Worley, in Prideaux 2001).

Given that increasing numbers of health care students will now be placed in rural community settings, attention must be turned to the benefits of such placements to the students and to the community itself. There is evidence that such exposure will alter the career preferences of some students in favour of rural practice (Howe, Crofts and

Billingham 2000). There is also good evidence that community placements influence student attitudes and knowledge of primary health care principles and improve their social responsiveness and cultural competency, benefiting any subsequent community in which they work (Reeves 2000, Ross and Southgate 2000, Sternas et al 1999). Westbrook and Schultz (2000) for example, found that "interdisciplinary collaboration was essential to ... community mobilization efforts" (p50). They also explicate the underlying assumption that the community is actually capable of sharing control and responsibility for health improvement efforts. This assumption reflects humanistic approaches to related domains of social improvement including education and psychology (Rogers 1961). These approaches assume that not only are humans capable of such individual and collective self-improvement, but also that enduring positive change actually relies on the active participation and control sharing of those involved.

Potential short-term gains of student placements for the communities are not as clear, although there are suggestions of modest positive gains stemming from the RIPE placements. Practitioner's involvement in interprofessional education of students may also influence practitioner's attitudes towards working within their own health care teams (Stone et al 2002). These potential outcomes are further investigated in the current study.



METHODOLOGY

The research methodology evolved as a product of relatively small sample sizes and the logistics of managing the RIPE project, including a limit on how much data can be reasonably extracted from students and preceptors in a relatively short space of time. Both quantitative and qualitative methodology has been used. The quantitative method used pre and post-placement questionnaires completed by students and preceptors, with Likert agreement scales on issues such as knowledge and attitudes towards rural health, primary health care, various health professional roles, the impact of student projects and the satisfaction level post placement. It is expected that approximately 100 preceptors and the same number of students will have participated by the end of the project funding cycle (see Table 1). These numbers are spread over three years and also need to be examined by profession which reduces the effective group size to less than 50. This means that interpretation of any observed pre/post placement quantitative changes needs to be conducted with caution and should be considered in conjunction with other sources of evidence.

Qualitative data was therefore seen as an important complement to the quantitative data. This is in keeping with the advice of Campbell and Johnson (1999) who decry the often inappropriate over-reliance on quantitative methods in interprofessional education. Qualitative data sources include expression of interest forms, short written pre- and post-placement questionnaire responses, on-line discussion fora, tutorial discussion transcripts, community-based projects and a range of informal communication and correspondence. Tutorials are also evaluated using questionnaires inviting written comments as well as agreement scales. For the purposes of this paper, all analysis is descriptive, although some analysis of variance results are presented elsewhere (Stone et al. 2002). A key underpinning question for both data genres is "What was learned by students and preceptors as a result of the RIPE placement?".

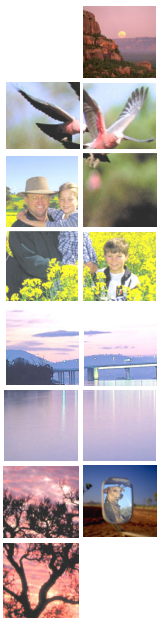
RESULTS

RIPE community-based projects

The Community-Based Project (CBP) is a focal component of the student RIPE experience. The following criteria are used to guide the identification and completion of appropriate projects. They should be:

- relevant: address clearly identified local need(s)
- negotiated: the topic should be identified through discussion between students and preceptors and relate to the interests of those involved
- broadening: involves interaction and consultation with the local community, preferably outside clinical contexts
- doable: within the two-week timeframe and able to be presented at the second tutorial at the end of the RIPE placement
- sustainable: builds on an existing initiative or is able to be continued within existing local resources.

Prior to the placement commencing, students are encouraged to make contact with co-students, preceptors and local co-ordinators to discuss interests and possible ideas for community-based projects. As well as initiating the project, this also provides a pretext for initial contact and rapport establishment between students and preceptors who up until this point are usually strangers. A pre-placement student teleconference is held to facilitate this process.



Community projects can be classified in a number of ways. Doyle (et al. 1998) identify two main project areas in the literature, medical services and community outreach, and call for a increased research focus in student projects. They found that many projects emphasised community service and community needs awareness, with some aspects of community diagnosis and project evaluation. With only two weeks the RIPE student placements are inherently time-limited but RIPE students have shown that significant, small-scale achievements are possible. Most projects can be classified within one or more of the following areas, which include actual examples of projects that have been undertaken by students while on RIPE placements:

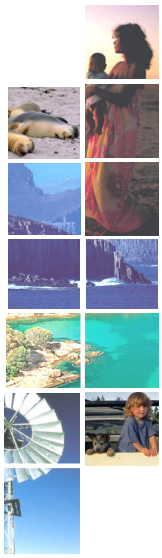
- community health needs analysis—for example, interviewing a range of community members to identify a specific need such as diabetes management, then designing and trialing an information and record keeping tool
- community health promotion—for example, establishing a young men's health program in collaboration with a local high school
- community health education—for example, developing and deploying a snake bite education kit for a remote primary school
- community health program planning, implementation and/or evaluation—for example, consulting with the community to plan, initiate and provide an evaluation framework for an aged-care Tai Chi program

- disease/illness prevention—for example, initiating the local implementation of a community-walking program designed to reduce cardiovascular disease.

- improvement of communication, policy and/or information with respect to procedures or treatment involving several health professions—for example, developing a protocol and facilitating an inaugural case conference for clients with complex health needs

- raising community awareness of health services, resources or programs—for example, conducting a range of recreational activities and promotional materials designed to increase access to and utilisation of aged care facilities and services.

The projects constitute a major focus of collaboration between students of different health disciplines. Students report that the short time frame creates considerable pressure to investigate possible projects, decide quickly on an appropriate topic and actually complete it in time to present their achievements in the tutorial at the end of the second week. These conditions, and particularly the fact that the students rely on each other's contribution to achieve their shared goal, creates a "positive interdependence" dynamic that is essential to effective co-operative learning (Johnson, Johnson and Smith 1998).



Bush (et al. 2002) have developed a definition of "community capacity " to accompany their "Community Capacity Index": "A collection of characteristics and resources which, when combined, improve the ability of a community to recognise, evaluate and address key problems." (p3). Both this definition and the index itself offer an appropriate frame of reference with which to guide and evaluate RIPE community projects in ways that are consistent with the "community empowerment" ethos discussed above.

Evaluation of the community-based projects takes place from a variety of sources including self-assessment, preceptor ratings on post-placement questionnaires, on-line discussion and tutorial presentations. Because they are not formally assessed as course requirements, there is no overall grade, per se, but students are encouraged to actively reflect on the processes involved in undertaking the projects, as well as whatever products may arise. Having usually been trained to focus on "product" rather than "process", students frequently report frustration that they investigate a number of "dead-end" options before actually deciding on a final topic and may initially see this as "wasted" time. However, when they have the opportunity to reflect on what they have learned during this process they soon realise that the time is far from wasted. In the tutorials, on-line and other discussions they are urged to consider the insights and knowledge they have gained about a range of aspects of the community health issues they would be unlikely to achieve otherwise.

Preceptor and student evaluations of the impact of CBPs

Preceptors are asked to provide both quantitative and qualitative feedback on the projects. Quantitative results are illustrated in Table 2. Analysis of the raw data revealed that those who disagreed on the impact on the local community, tended to agree on the benefit to their professional work (and vice versa). This suggests that preceptors perceived the CBP to have likely positive impact either within the community, or is likely to assist their professional duties, but generally not both. This

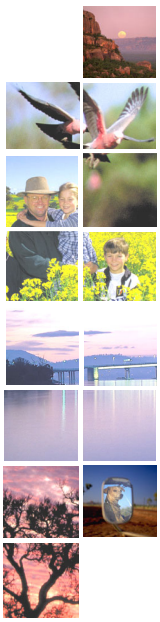
may reflect the tendency of projects to fall into one or the other dichotomies identified by Doyle et al. (1998), namely community outreach or medical services.

Table 2 Preceptor reports on impact of CBPs (combined 2001 and 2002 results)

	Rating					
Group and item	1. Strongly Agree	2. Agree	3. Uncertain	4. Disagree	5. Strongly Disagree	Mean
Q 38. GPs: CBP is likely to have a positive impact on the local community (n=23)	7	8	7	0	1	2.13*
Q 38. Others: CBP is likely to have a positive impact on the local community (n=29)	17	8	3	0	1	1.62*
Q 38. Total (n=52)	24	16	10	0	2	1.85
Q39. GPs: CBP is likely to assist my professional duties (n=24)	4	7	3	9	1	2.83
Q39. Others: CBP is likely to assist my professional duties (n=30)	5	11	1	11	2	2.80
Q39. Total (n=54)	9	18	4	20	3	2.82

NB: "Others" refers to nursing, physiotherapy and pharmacy preceptors.
* Denotes significant differences ($p<0.05$) between GP and "Other" preceptors' responses.

With relatively small numbers caution is needed in interpreting these results. Patterns of response may be more confidently discerned once the third year data has been incorporated. At this stage, however, it does appear that preceptors perceive the CBPs to be of value to the local community. However, they generally appear "uncertain" about benefits to their own duties. The 2001 data suggested more positive perceptions about benefits to their own duties than the aggregated 2001/2002 data. This may be because there was a much clearly articulated focus on "community capacity building" during 2002, rather than potentially focusing more on the local agency or preceptor practice. It is also worth noting a significant difference ($p = 0.03$) between the responses of GPs and "Others" — GPs still generally agreeing, but less strongly than other preceptors about the likely benefits of CBPs to the local community.



As Table 3 indicates, students also generally agreed that the projects were likely to have local community benefits:

Table 3 Student reports on impact of CBPs (combined 2001 and 2002 results)

	Rating					
Group and item	1. Strongly Agree	2. Agree	3. Uncertain	4. Disagree	5. Strongly Disagree	Mean
Q 39. Nursing Students: CBP is likely to have a positive impact on the local community (n=30)	10	13	6	0	1	1.97
Q 39. Medical Students: CBP is likely to have a positive impact on the local community (n=22)	10	11	1	0	0	1.59
Q 39. Total	20	24	7	0	1	1.81

Examination of the written responses of the small number of students and preceptors who disagreed with these statements revealed that they did not believe the CBP would have any significant impact—as distinct from believing that it would have a negative impact.

Preceptors and students were also asked an open-ended question regarding how they believed the RIPE placement impacted on their local communities. The results are summarised under the themes shown in Tables 4 and 5, which are ranked in order of frequency. The order of frequency is somewhat arbitrary, as some responses are interrelated and could belong to more than one category. For example, a number of students undertook a range of activities, including but not limited to the community-based project itself, to increase awareness and utilisation of health services. The sample comments in Table 5 illustrate this interrelatedness and also offer more detail of the nature of these responses:

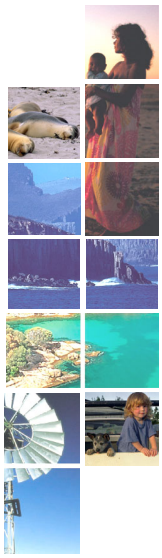


Table 4 Frequencies of preceptor and student thematic responses to question "How has the RIPE placement impacted on your local community?"

Themes and ranked response frequency	Preceptor	Student
1. Positive impact of CBP	23	36
2. Positive effect of contact with students	16	13
3. Increased awareness of IPE programs	15	14
4. Benefits to local health service	12	13
Total responses under these themes	66	76

These four major themes were then analysed and subdivided into sub-themes shown in Table 5.

Students were also asked to rate their overall levels of personal satisfaction with the RIPE placement. Table 6 shows these satisfaction levels to be generally high.

Table 5 Sub-themes within preceptor and student responses to question "How has the RIPE placement impacted on your local community?"

Subtheme	Example comment
Theme 1. Positive impact of CBP	
Increased capacity of local health service	'Has allowed the development of a chronic disease initiative that may have major impact in the future.' (GP preceptor)
Health promotion	'Raised awareness for aged care group within the local community.' (Medical student)
	'The case conferencing the students developed has helped our residents and their families understand and cope with changes in treatment and conditions' (Nurse preceptor)
	'The CBP would have benefited the community. They seemed to have enjoyed our CBP. We even made it to the front page of the local newspaper.' (Nursing student)
Meeting community need	'Creating a worthwhile women's health project – meeting and identifying community need.' (Physiotherapy preceptor)
Community building	'Increased community spirit.' (Nursing student)
Theme 2. Positive effect of contact with students	
Opportunity for exchange and sharing with students	'They were pleased we had something positive to contribute and were pleased we enjoyed our stay. They willingly shared their knowledge and often asked our opinions. They even invited us back.' (Nursing student)
Personal qualities of students	'The student's keenness and enthusiasm impressed the host families.' (Pharmacy preceptor)
	'The students made a positive impact on the community—personally.' (Nurse preceptor)
Theme 3. Increased awareness of IP education programs	
Promotion of IPP	'The preceptors or people we came into contact with in the local community (other health people) are more aware for the need for IPP.' (Nursing student)
	'The community were very receptive to the concept of RIPE and learnt more about how this impacts on professional service' (Nurse preceptor)
Promotion of health care careers	'We did a bit of 'careers advice' to the high school students—a lot of who hadn't necessarily considered Melbourne or a health career before.' (Medical student)
Community awareness	'Community members aware of RIPE and its usefulness.' (Nurse preceptor)
	'More understanding of how health education is addressing interprofessional co-operation.' (GP preceptor)
Theme 4. Benefits to local health service	
May attract health professionals to rural practice	'...it had a huge impact on me and my thoughts towards rural practice.' (Pharmacy student)
Improved relationship between agency and community	'It has certainly helped to improve the relationship between our agency and the local Koori Co-op.' (Medical preceptor)
	'Sense of connectedness to the health service.' (Nurse preceptor)
Improved IPP capacity of preceptors/agency	'Better understanding of skills other preceptors have.' (Physiotherapy preceptor)
	'I believe that members of the health professions became more aware of (and possibly better at) interprofessional practice while we were there.' (Nursing student)
	'Interviews and increasing awareness of the RIPE project seems to have given health care professionals some food for thought – many expressed never having thought about it, and had many interesting conversations.' (Nursing student)
Helped breakdown professional barriers	'Changing attitudes of other health professionals.' (Nursing student) 'Nurses and doctors were talking about IP more because of our presence.' (Medical student)

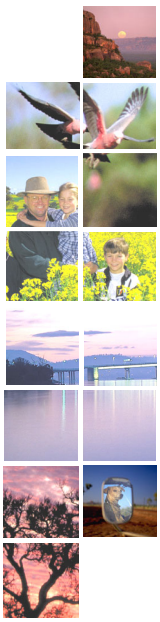


Table 6 Student satisfaction reports (combined 2001 and 2002 results)

Group and item	Rating					
	1. Strongly Agree	2. Agree	3. Uncertain	4. Disagree	5. Strongly Disagree	Mean
Q 23. Other Students: I found this placement personally satisfying (n=29)	14	11	4	0	0	1.66
Q 23. Medical Students: I found this placement personally satisfying (n=21)	14	5	2	0	0	1.43
Q 23. Total	28	16	6	0	0	1.56

Positive reports of RIPE-related interprofessional knowledge gains, by both preceptors and students, have been presented elsewhere (Stone et al. 2002). Students were also asked to report on the perceived effect of the placement on their attitudes towards interprofessional practice. Table 7 shows general agreement that RIPE has positively affected these attitudes.

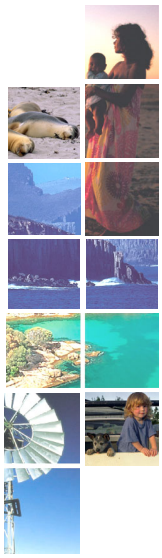


Table7 Student reports on IPP attitude change (combined 2001 and 2002 results)

Group and item	Rating					
	1. Strongly Agree	2. Agree	3. Uncertain	4. Disagree	5. Strongly Disagree	Mean
Q 52. Other Students: My attitude towards IPP has become more positive as a result of RIPE (n=31)	17	9	2	2	1	1.74
Q 52. Medical Students: My attitude towards IPP has become more positive as a result of RIPE (n=22)	13	8	0	1	0	1.50
Q 52. Total	30	17	2	3	1	1.64

Further examination of the results showed that three out of the four students who disagreed to this statement were placed together and reported a degree of "personality clash" between both themselves and their preceptors. After the placement it was revealed that two of the students were involved in the program for "less than voluntary" reasons and had been placed by their clinical co-ordinator to complete outstanding course requirements. This suggests the importance of selecting students who volunteer or elect to undertake this sort of placement which requires a minimal level of positive attitude, self-directedness and co-operative inclination.

CONCLUSION

Student interaction with the community provides the primary context for interprofessional learning in the RIPE project. Mutual benefit, or "reciprocity" (Bittle et al. 2002) is an essential aspect to assist the attractiveness and sustainability of such placements in times of increasing pressures on host communities (Mahnken 2002). Overall, there were mutual benefits to the participants and communities involved in RIPE placements. The placements were perceived to have a positive impact on the community and to a limited extent on the preceptors' practice, in that students became actively involved in community health care at various levels. Students' learning of

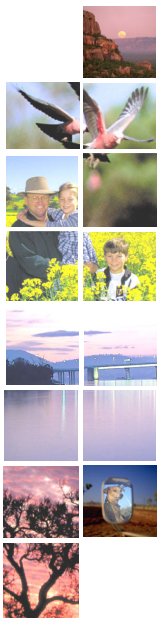
interprofessional practice was enhanced though their collaborative development of the community based projects. Specifically, student satisfaction with the placements, IPP-related attitudes and knowledge were reported to have been positively affected by the experience.

More broadly, they are found to have embraced many of the principles of primary health care during their placements by putting them into practice including community participation, health promotion, working in a multi-disciplinary team and addressing access to health care. Such outcomes serve to justify the development and maintenance of community-based placements for mixed groups of health professional students.

All students participating in RIPE are volunteers, leading to benefits of student enthusiasm and motivation. However, lack of formal assessment or accreditation have posed one of the biggest challenges to the RIPE project, and a resulting lack of commitment from some students risks compromising the value of placements for ongoing students and placement sites. An ideal or "happy" medium arrangement might involve students having the choice of elective work units including rural interprofessional placements, but having made that decision, they would need to fulfil their commitment in order to gain required assessment credits. Such arrangements would rely on a degree of flexibility and creative timetabling possibilities that do not currently exist. A key recommendation, therefore is:

That all undergraduate courses in the health disciplines include at least one formally assessed elective unit that explicitly focuses on interprofessional education and involves at least one community-based activity.

The outcomes, challenges and opportunities that have so far emerged from RIPE suggest useful future directions for planning, implementing, sustaining and evaluating IP learning programs in rural communities. For example, the evidence of benefits of actively engaging students in local rural communities, albeit for short periods, could be highlighted to prospective placement sites and preceptors to provide incentive for their involvement. RIPE is proving a valuable augmentation to existing research, highlights the need for specific and strategic policy reform within government, educational and professional bodies to incorporate future IP initiatives into curriculum. The processes (as well as the products) involved in undertaking such projects should continue to be examined and elucidated. It is important that lessons learned from community-based learning can be pooled using a truly interprofessional approach of collaboration and be made accessible to administrators, researchers, students and practitioners who may be seeking insights to support their endeavours into this field.



Therefore, a further recommendation stemming from this paper is:

> That government, universities and other co-ordinating bodies collaborate to conduct research, develop and maintain a pool of advice, exemplars and other resources to assist those undertaking community-based learning activities in the health disciplines.

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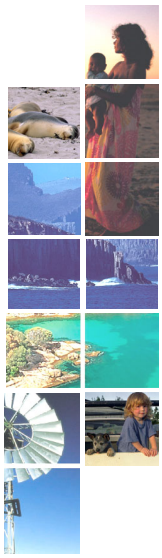

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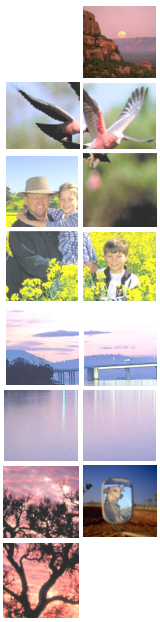

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PRESENTER

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