THE PARADOXICAL EFFECTS OF WORKFORCE SHORTAGES ON RURAL INTERPROFESSIONAL PRACTICE.

ABSTRACT

Rationale & Aim

While interprofessional practice has been promoted as a solution to the challenges besetting rural health services, current evidence does not offer a clear explanation as to why it is effective in some domains and yet is not successful in others. At the same time, rural clinicians are frequently faced with major workforce pressures and this has a significant influence on professional practice. The aim of this study was to explore how these pressures impact on rural interprofessional practice.

Method

This study is part of a larger project investigating factors that enhance and detract from effective interprofessional working. We utilised a modified realistic evaluation approach to analyse the context, mechanisms and outcomes of rural interprofessional practice. Approval for this study was granted by an accredited research ethics committee. Semi-structured interviews were conducted with 22 rural clinicians who were purposively recruited from a range of settings, roles, locations and professions.

Findings & Discussion

We found that clinicians often invested in interprofessional practice because of the need to manage intense workloads and this necessitated sharing of responsibilities across disciplines and blurring of role boundaries. Paradoxically, participants noted that workload pressures hampered interprofessional working if there were long term skill shortages. Sharing workload and responsibility is an important motivator for rural practitioners to engage in interprofessional practice; however this driver is only effective under circumstances where

there are sufficient resources to facilitate collaboration. In the context of intransient resource challenges, rural health service managers would be best to focus on enabling IPP through facilitating role understanding and respect between clinicians. This is most feasible via informal workplace learning and allowing time for teams to reflect on collaborative processes.

Key Words

Interprofessional practice, rural healthcare, teams, collaboration, workload, flexibility.

INTRODUCTION

Interprofessional practice (IPP)

Healthcare organisations are increasingly engaging in teamwork and collaborative practice to more effectively manage complex healthcare issues (1-3). Interprofessional practice has been defined as collaboration between health practitioners from various backgrounds and specialties working together with patients and their carers so the most appropriate, prompt and integrated care is delivered with as few obstacles as possible (4-6). This has been promoted as an ideal framework for improving the effectiveness of healthcare teams and particularly for those operating in rural and remote areas (7, 8). However the success of IPP is subject to a range of environmental, institutional and professional contextual factors (9) including the norms, policies and resources of professional and healthcare organisations (10-12).

IPP has been linked to a range of benefits including greater innovation and enhanced patient outcomes, reduced health care costs and waiting times and improved resource utilisation (5, 13, 14). For clinicians, IPP results in improvements in staff satisfaction and retention (5, 15) and can overcome some of the challenges arising from workforce shortages in rural settings (16). However, simply forming a team of different health practitioners does not guarantee

productive collaboration (17, 18). The effectiveness of IPP can be hindered by information withholding, misunderstandings and affective conflict (19-21) or by clinicians who view collaborative team meetings as confusing to the decision making process (22). Moreover, interprofessional teams in healthcare are typically more complex and variable than teams in other domains (23) and are challenged by "communication and relationship patterns [which] are deeply embedded in professional identities and organisational cultures, and not easily changed" (24, p. 1). Such conflicting findings reinforce the positive potential of interprofessional working and the need to further examine those factors which enhance and detract from effective IPP.

Role overlap and flexibility

Implicit in IPP is the need for practitioners to share specialised knowledge and authority to allow blurring of professional boundaries (25). Innovation in job design, flexibility in role boundaries and broader scopes of practice for health clinicians is characteristic of rural practice (8, 26). Flexible health roles contribute to enhanced communication and relationships and reduction in errors (27) while role expansion increases satisfaction for some clinicians (28); however such flexibility is not without challenges. Indistinct role boundaries and overlapping scopes of practice can threaten professional identities and claims to expert knowledge (29) and result in confusion and tension within health care teams (30, 31). While practitioners are willing to accept some overlap in their roles, genericism or duplication is likely to evoke territoriality and concerns about professional identity and role security (32).

Professional identities and role understanding

The enduring cultures and professional identities within health care help to explain why the evidence on the effectiveness of interprofessional teams is mixed (33). Interprofessional approaches necessitate health professionals building relationships where there is sharing of

goals and knowledge as well as mutual respect (24, 34, 35). However, segregation during the education process results in few health professionals being adequately conversant about the scopes of practice and skills of other disciplines (36). Moreover, divergent education and socialisation processes contribute to different communication patterns, professional schema and patient care recommendations (10, 23). Entrenched status hierarchies potentially frustrate the achievement of respectful relationships between the professions (37) and lack of interprofessional knowledge can engender negative stereotyping of other clinicians (36). This led us to further examine factors that enhance IPP effectiveness. In particular we focused on IPP in rural settings, where collaborative team-based care offers significant benefits (38) but where there are greater workforce challenges and resource limitations than in urban areas.

Rural context

Most countries face the problem of maldistribution of health care professionals between metropolitan and rural settings. The supply of health professionals as a ratio of practitioner to population is poor in many rural and regional areas (39). The scarcity of rural clinicians is attributed, inter alia, to heavy workload, on-call responsibilities, long hours and lack of locum coverage (16, 40, 41). Due to limited resources, rural clinicians often become generalists in their field (42) requiring a broader knowledge base and a flexible approach to working (43). In addition, they are expected to carry greater clinical responsibility and provide a wider range of services compared to urban practitioners (44). Previous research suggests that workforce shortages may impact on the way in which rural practitioners work (45) and place increased pressure on clinicians to take on responsibilities typically outside their professional role (40, 46). However, to date, there has been little exploration of workforce shortages as a factor affecting IPP.

Workforce pressures are reported to result in flexible, team-oriented approaches in rural and remote practice (47). In rural practice, collaboration between health professionals is partly influenced by workforce shortages and the "consequent need to work cooperatively to 'get the job done'" (48, p.145) and may be more realisable within smaller communities (49). Thus practitioners need to fulfil multiple roles and have good working relationships with other providers and the community generally (48, 50). Variable roles necessitate flexibility in role boundaries and overlapping knowledge and skills (23, 26). While the literature highlights that flexibility and role overlap are often consequent to the workload pressures of rural practice, current evidence does not elucidate the interaction between clinician workload and effective IPP. Hence, our research sheds light on how workload impacts on IPP.

Aim

This study is part of a larger project that investigated the mechanisms through which rural IPP occurs and the environmental factors that enhance and detract from effective interprofessional working within rural healthcare contexts (9). The aim of this paper is to examine how the mechanisms associated with workforce shortages and consequent workload demands affect rural IPP.

METHOD

Research Design

Qualitative studies have been identified as important in revealing the interactive processes that contribute to effective interprofessional collaboration (51, 52). The overall research project adopted a modified realistic evaluation approach (53) that included elements of the input-processes/mediator-output model (54). This approach facilitates analysis of contextual influences, participant perceptions of mechanisms that drive or inhibit IPP, as well as expected and observed outcomes (9). Similar frameworks have been employed elsewhere in

interprofessional reviews and empirical research (2, 55). Such explication of mechanisms, context and outcomes enables other practitioners and researchers to potentially translate the research in future health service interventions taking into account the contextual differences (56).

Utilising this framework, we undertook a review of the rural interprofessional literature to identify a range of factors related to interprofessional work to develop the interview guide. These included contextual factors such as interprofessional education and training (6, 57) and the social and economic context (41, 58) as well as individual and relational factors such as professional boundaries and role clarity (59-61). Each of the factors considered are summarised in Table 1 and have been detailed in an earlier paper (9).

Table 1: Factors related to interprofessional collaboration.

Individual & Interpersonal	Professional & Organisational	Institutional & Environmental
Individual role clarity, boundaries & responsibilities	Professional organisation, norms, policies & resources	Federal, State & regional policies, resourcing & structures
Individual approach to professional boundaries & interprofessional work	Healthcare organisations, norms, policies & resources	Social & economic context
Individual & shared accountability	Organisational leadership	Interprofessional education & training
Team processes & dynamics including communication & decision-making	Organisational information & communication technology & practices	Integration of interprofessional approaches at institutional levels
	Integration of interprofessional approaches at organisational level	Geographic proximity including models of co-location
	Shared interprofessional protocols & tools	

Source: Mitchell, Paliadelis (9)

The larger study was conducted across a range of sites within an Australian local health district (LHD) employing over 15,000 staff. This LHD spans a major urban centre, several regional hubs, rural towns and small and remote communities. The health district faces challenges in servicing the health needs of a very widespread and diverse population which is

hampered by the difficulties in recruiting and retaining adequate numbers of health professionals in rural and remote regions (LHD Strategic Plan, 2012). Triangulation of data was achieved by recruiting participants from different hierarchical levels, sectors, locations and professions within the LHD. The inclusion of both acute and community care health contexts acknowledged the importance of integrating care across sectors for those with chronic conditions (62, 63) and that models of IPP can vary across settings (64). The recruitment of policy makers, managers and clinicians recognised the critical nature of each of these roles in effective IPP (65) and the inclusion of a range of professions reflected the impact of professional cultures, norms and identity in interprofessional work (10, 33).

Ethics

The study was approved by the LHD's accredited research ethics committee. Participation in this study was entirely voluntary and only those who gave their informed written consent were included in the project. Participants were advised that they could withdraw from the project at any time without needing to provide a reason to the researchers. Code numbers were used in place of names throughout the research process thus maintaining confidentiality of participants' information. Given the close-knit nature of rural communities limited demographic information about the interviewees has been disclosed to protect the anonymity of informants.

Participants

To overcome some of the challenges associated with recruitment in rural health services research, we employed a purposive sampling approach aiming to include participants from a range of settings, functions, locations and health professions (9). Healthcare professionals providing or managing rural healthcare services were included in the study; clinicians providing services to only urban centres within the LHD were excluded. The 22 interviewees

included: clinical consultants with oversight of rural areas but located in the urban tertiary referral hospital; area managers and policy makers located at rural referral hospitals; managers and clinicians located at district hospitals, community hospitals, multipurpose service centres, community health centres or in private practice in rural areas. The participants were based in various settings (*area management, acute care and community health*), and represented a range of roles (*clinicians, management and policy makers*) and locations (*community health centres, hospitals, individual practices, and multipurpose services*). The range of health professions included medicine, nursing, social work, speech pathology and occupational therapy. The latter three professions have been categorised as Allied Health Professionals (AHPs) to protect the identity of the participants. Five participants [notably the AHPs and Medical Officers (MOs)] worked across more than one setting. The number of informants in each category is detailed in Table 1.

Table 2: Study sample details

Health Profession/Role	Number	Setting	Number
Health Service Manager [1]	7	Area Office (5 at a rural referral hospital; 2 at an urban tertiary referral hospital)	7
Medical Officer	3	Hospital	9
Nurse Manager	2	Community Health	9
Registered Nurse	5	Multipurpose Service	1
Allied Health Practitioner	3	General Practice	2
Clinical Nurse Consultant	2		
TOTAL	**22**	**TOTAL**	**28[2]**

[1] Health Service Managers had professional backgrounds in either nursing or allied health
[2] Four participants worked across two settings, one participant worked in three settings.

The participants were recruited by the university-based research team members and thus independent from the LHD.

Interviews

Interviews comprising structured and non-structured questions (66) were conducted over a period of 12 months during 2011 and 2012. The interview guide was developed from the interprofessional collaboration literature as described earlier. Interviews with managers and policy makers focussed on contextual, institutional and professional influences while interviews with clinicians focussed on their perceptions of the context and process of rural IPP (9). Participants were asked about: the benefits of rural IPP; their form of engagement in IPP; the processes of IPP; the circumstances under which IPP was most effective; the barriers to IPP working in their context of practice. One-on-one interviews were conducted by three university-based members of the research team. Interviews were of between 20 minutes and 90 minutes duration and were conducted either by telephone or in the privacy of an office or meeting room. The interviews were recorded and transcribed by an external confidential transcription service. Informants were given the option of reviewing and editing their transcript.

Analysis

The eight member research team (comprising both university and LHD-based researchers) conducted the analysis in five steps. First, all team members read the transcripts to gain an overall impression of the material. Second, guided by the modified realistic evaluation approach, they discussed and agreed upon codes and grouped these under the following headings: contexts *(who, what, where)*, mechanisms/processes *(how, why, why not)* and outcomes to provide a framework for further analysis. Third, using this framework, six members of the research team independently reread the transcripts, coded the data and

highlighted significant statements. This process of independent coding provided assurance that the analysis was trustworthy (67). Two researchers then synthesised these independent analyses by condensing the codes into categories which were then grouped into themes. Finally, themes were then developed through an iterative process of reading, reflecting and writing to produce a qualitative description (68) populated with exemplars which most effectively represented the data and conveyed meaning.. This textual representation was validated by the full research team.

FINDINGS

In this section we describe how rural clinicians interpret and engage in IPP and collaborate with other health professionals. As depicted in Figure 1, we identify that workload pressures both facilitate and impede effective IPP, contingent on a number of barriers and enablers including role overlap, flexibility and role understanding.

Figure 1: How workload impacts on rural IPP
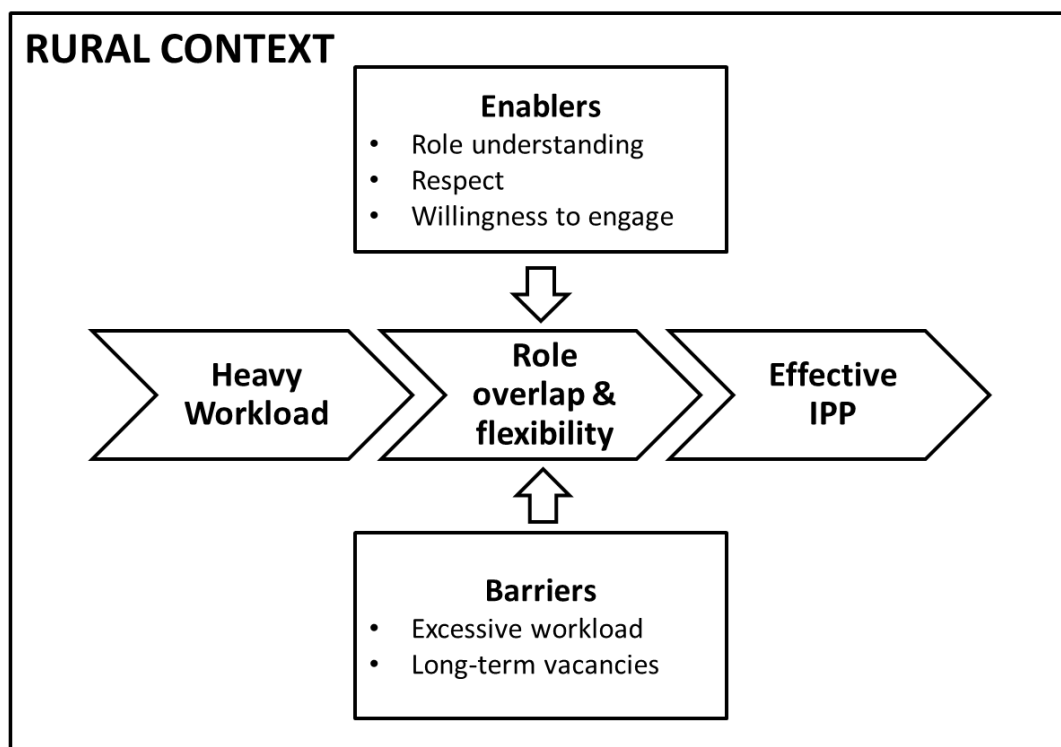
Workload as a driver of IPP

There was general recognition that IPP is essential to meet the complex needs of patients:

> …there are a lot of benefits from different professions working together…you're getting a more rounded view of the patient and what the issues are [Nurse Manager (NM) 1].

However, participants indicated that IPP often exists out of necessity and is driven largely by workload considerations rather than specific policy or management direction. The following participant conceded that they would not be able to continue in their role without the team support:

> … I guess we probably don't do as much active intentional interprofessional … But I guess that's probably to do with workloads and those kinds of issues. But there's definitely a lot of interaction between different professions in our team but I don't think I could still be in this position without that. It definitely has helped me. (AHP 2).

Role overlap and flexibility

In rural practice, heavy workload leads to pressure to share responsibilities across professional boundaries driving blurring of roles which in turn enhances IPP. There was evidence of overlapping and flexible roles among AHPs, particularly between Occupational Therapists (OTs) and Physiotherapists . Clinicians generally viewed this flexibility as a positive aspect of rural practice:

> …inter-professionally we all overlap a little bit, so often you actually go and...see clients together and work together with clients as well, so it's reasonably flexible like that. It's good. (AHP 1).

Similar overlap also occurred between AHPs and community nurses helping to overcome the challenge of covering a broad geographic area. One clinician acknowledged the invaluable support of community nurses:

...the community nurses are fantastic up there. They do a lot of equipment and things

for me, if I just can't get there to do all the time... I can't manage my caseload and take

on that many clients and that much paperwork and keep things consistent across all the

areas I cover...they'll go and see someone and call me and say, well what do you think?

Or, do you need to go and see them, or can you see them next time? So from that point

of view it's fantastic (AHP 1).

Role flexibility occurs because nurses are able to work within a broader scope of practice that overlaps with other disciplines. This is particularly important in light of workload levels or in the absence of AHPs:

...And there may be things that the nurse might be able to, if it's something, like

ordering a piece of equipment, the nurse might be able to do that there and then, as

opposed to getting the occupational therapist in who has a large waiting list that we, or

we don't have [an OT]. So therefore the client's not waiting for allied health staff

member to come in. (HSM 2).

Nonetheless role flexibility and role boundaries are open to individual interpretation:

…you have those people that will work within their boundaries and then you will have

the other extreme of people that will go beyond their boundaries…Which can be a

problem (HSM 2).

Thus some clinicians still resist role flexibility and this impedes effective interprofessional working.

Role understanding

An AHP highlighted how the team drew on each other's strengths and knowledge and that a good understanding of each other's roles is critical in rural IPP:

There's little bits that overlap amongst us all as well and I think because we do know

each other quite well and there's only one of each of us, it's quite consistent in terms of

professional relationships and knowing who does what and who's got what strengths

and what knowledge (AHP 1).

Participants spoke about the need to respect and understand the different skills and knowledge within the team and that a lack of knowledge may be the result of divergent education processes. For example:

...so many different professions can have an input into people's situations. So it's

probably more awareness-raising of what other professionals can contribute (AHP 3).

…I think that if we still educate people in silos…then you will still have this kind of

arrogance between professions that need not be there...But I do think that if we can get

the students to have some perception of what the roles are of these other people and

respect them and then that's heading in the right direction (MO 2)

Notably, there was evidence that IPP can facilitate interprofessional learning and thus an appreciation of the perspectives other health professionals:

…where I've had more to do with Allied Health, it's taken me a while but I realise that

they've actually got a totally different mindset or they're taught a different way of

looking at patients than nurses do, so I think that's a really good thing to bring to a case

discussion about clients (NM 1)

The limits of role overlap and flexibility

Role flexibility and the subsequent blurring of role boundaries work well to overcome some of the challenges associated with rural practice, particularly in the case of absences and workforce shortages. However, there is a limit to which such flexibility can compensate for staff shortages and skill mix problems:

…the biggest probably challenge in rural areas is when there are vacancies. We had no

physiotherapist for a good 12 to 18 months at one point, so that certainly affects the

outcomes…I think that's the biggest barrier, if there isn't someone in that position at the

time, there's no one else to pick up that load, or with those specific clinical skills. There's blurring on the edge of the boundaries of what we all do but there's still some very specific skills that we all have and all need to be here for basically (AHP 1).

While participants saw great potential from IPP in rural settings, some reinforced how workforce shortages and intense workloads limited the ability of practitioners to effectively adopt IPP:

…I see benefits from interprofessional practice in any setting. And I guess you could say even more so in rural settings because of the scarcity of numbers but I think the reality is that makes interprofessional practice difficult because there's not enough say, GPs [General Practitioners] or nurses, practice nurses or allied health people to really get a good mix of people together to do things together (HSM 5).

This problem was exemplified when an interprofessional model of care was disbanded due to workforce shortages and difficulties in recruiting adequate staff:

We used to have a child development clinic that has fallen by the wayside with workload and change of staff and recruiting vacant positions and things like that. So hopefully it will come back in time but it was just for…the first three years of life, if the parent was concerned, to bring them in and be able to see three allied health staff and a community child and family health nurse in the one room and have that kind of one-stop shop situation. (AHP 2).

Participants noted difficulties associated with the workload, recruitment and retention of allied health staff and how this negatively impacted on IPP. For example, professionals from other health disciplines conceded that rural allied health staff often service broad geographic areas which restricts their availability to particular centres, prevents them from being involved in team meetings and contributes to fatigue. Heavy workloads present a significant barrier effective IPP:

...I think the barrier is obviously availability of clinicians. Most of the clinicians on staff are extremely busy...because we have waiting lists and different prioritisation schedules... it's very hard to pick up the same patient at the same time (AHP 2).

Whilst the literature points to the potential for IPP to be limited by traditional discipline boundaries and structural impediments (69), one participant concluded that intense workload and fatigue may cement entrenched attitudes to flexible working:

...I think more often than not the workload and with that tiredness comes an inability to be able to see the forest for the trees (HSM 3).

Ultimately, IPP is effective only if clinicians are willing and able to engage in the process, understand their roles and responsibilities as well as other team members' skills and knowledge – and this can take time:

It really comes down to the professionals themselves and their willingness to actually look at interprofessional practice, where people can feel free to say and critique what's happening with that patient... And there's some personalities that just don't really feel comfortable in terms of engaging in that model. It's around defining roles and responsibilities really. And so you know it takes time to do that and knowing each other's kind of skills, that kind of thing. (MO 3).

DISCUSSION

This study set out to examine the role of workload shortages on IPP. Our findings indicate that workload demand has a paradoxical effect by both driving and impeding IPP. Workload pressures associated with rural practice facilitated IPP by motivating clinicians to adopt more flexible approaches that entailed sharing responsibilities across traditional professional divides and blurring disciplinary role boundaries. Conversely excessive workloads also impeded IPP where there were long term vacancies or the absence of specific clinical skills or where team members were unable to attend meetings.

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Interprofessional health care teams and the subsequent need for flexible scopes of practice for health practitioners have been advocated as an antidote to significant workforce shortages in rural areas. Given the evidence that IPP is not always successful (69-71), there have been calls to more closely examine the nature and mechanisms of collaboration between health professionals (52).What emerges from our study is that rural clinicians invest in IPP because they derive benefits in terms of being better able to manage their workloads and provide mutual support to colleagues. While there was consensus that IPP is important in rural practice to achieve the best outcomes for patients, clinicians viewed interprofessional teamwork and flexible role boundaries as a means to share workload, manage absences and overcome some of the workforce limitations associated with rural practice. It appears that IPP in rural contexts is driven less by policy and management direction and more by necessity and individual recognition of its benefits to clinicians and patients.

We found many examples of the professions managing overlapping roles. As has been observed in other settings, joint visits and proximity foster effective overlap and IPP (72). Similar to previous research (23, 72), there was significant overlap between occupational therapists and physiotherapists, often compensating for staff shortages. Additionally we found overlap between the roles of AHPs and community nursing staff to be a means for covering broad geographic areas.

Conversely, overlapping roles and flexible boundaries can be problematic. Flexible scopes of practice may place undue stress on clinicians if they are inadequately supported or operating beyond their skill level. Role boundaries are open to individual interpretation and difficulties occur when practitioners operate at extreme ends of the spectrum: limiting or extending their scopes of practice well beyond the norm. While there is flexibility, overlapping of roles is limited as each health profession has specific clinical skills and thus patient outcomes are adversely affected in the long term absence of a particular profession. Extended overlap of

professional scopes of practice or genericism can raise concerns (29) potentially provoking professional identity threat conflict within teams (33).

Although workload pressures help to facilitate IPP, they can also act to impede effective IPP. A number of practitioners considered the potential for IPP to be severely limited by workforce shortages in rural areas. The limited numbers of AHPs servicing broad geographic areas necessarily restricts their potential to successfully engage in IPP teams. A long term physiotherapist vacancy was particularly noted as an impediment to effective IPP as there was no clinician available to undertake those specific skills. Although the blurring of roles compensated for the vacancy to a limited extent, this was not a viable long term solution to the lack of needed skills. High workload levels along with the consequent fatigue and stress might explain why some practitioners were wary of IPP. In essence, our evidence suggests that workload pressures and the subsequent blurring of roles and flexibility can enable IPP in rural settings but there is limit; if pushed too far or if there are insufficient skills within the team, then IPP is less likely to be effective.

Limitations

Our study overcomes some of the challenges of participant recruitment in rural health services research by adopting a purposive sampling design covering a range of settings, functions, locations and health professions (9). A strength of our study was the representation of a range of diverse settings which is typical of rural health care contexts, both in Australia and in many other countries. However, the unique nature of many small towns and the services they provide means that much more work needs to be done to understand the dynamics of IPP in context and over time. A more in-depth analysis of a number of single health care contexts may have helped us to develop a more comprehensive understanding of how sharing of workloads and blurring of professional boundaries plays out within teams. Moreover, analysis of diary records would reveal how professional

relationships and interactions enable workload sharing and role blurring and foster IPP over time. The advent of new health professions and generic health workers raises questions concerning the long-term implications of sharing and blurring of roles and responsibilities. In particular, it would be important to examine whether professional identities are strengthened or threatened by this evolution of roles within health care teams.

Practice Implications

By definition collaboration is voluntary. So while government policy may direct that health care organisations implement structures to support interprofessional collaboration, they can only be effective if clinicians are willing and able to actively engage in the process (1). As has been noted earlier, IPP can produce undesired consequences (73) which indicates the importance of managers paying heed to the context and mechanisms of interprofessional teams (17) and developing an understanding of the factors that contribute to effective interactions within interprofessional teams (74).

Given the significant and long term nature of recruitment and retention difficulties in rural health services (69), local health service managers would be best to focus on the enablers of IPP, namely fostering role understanding, respect between the different health professions in their team and thus building on clinicians' willingness to engage in IPP. Moreover, the ageing of the rural health workforce (16) means that a significant proportion would not have been exposed to interprofessional education at undergraduate level. This training gap is exacerbated by the fact that continuing professional development is still largely undertaken within discipline-specific silos (75). Given the resourcing challenges and lack of locum coverage for clinicians to attend external training (16), informal workplace learning offers the most realisable and cost effective means to develop role understanding between team members (75).

Indeed informal learning comprises the bulk of workplace learning and managers could focus on developing their team members' "…ability to know what, when and how to interact with other health professionals in order to fully utilize the expertise within the team" (75, p. 469). Further, they can enhance understanding of the roles and values of other health professions by setting aside time for their team to reflect on collaborative processes (75, 76). Such learning should also be extended to locums to ensure that interprofessional team efforts are not derailed in the absence of permanent team members. Most importantly however, managers need to be supported and educated in the skill of facilitating workplace interprofessional learning as this has garnered little attention compared to other leadership competencies (77).

Our findings strongly suggests that rural context facilitates IPP and provides direct benefits for individuals and teams of practitioners in terms of better managing workloads and so improving patient care. What is notable is that workforce shortages have long been identified as negative factors in rural health care, but even though there are negative consequences, shortages may also drive effective IPP. However, there are circumstances where workforce shortages and associated pressures are damaging to IPP which suggests that while IPP is a useful approach to overcoming the ubiquitous shortages in rural contexts, its utility is limited to circumstances where there are sufficient resources to foster collaboration. Rurality can foster IPP but there is a point at which workforce shortages start to inhibit IPP causing stress as well potential threats to professional identity. Nonetheless, our study offers hope that IPP can assist in overcoming some of the problems associated with rural workforce limitations.

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