

# Well-being in the rural and remote health workplace: What's happening out there? <sup>1</sup>

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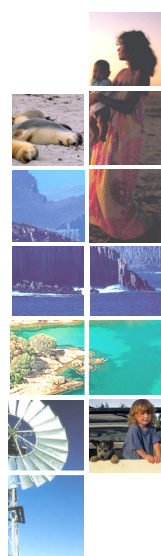
Among the challenges of delivering health care to rural and remote Australia, the fundamental issues of recruitment and retention require urgent action. The recruitment issue has received considerable attention in popular media but efforts to recruit health workers to rural Australia will be to no avail if turnover rates continue at their current alarming levels.

Although comprehensive data on health staff turnover for rural and remote areas is not available, Kelly (1998) cites rates up to 300% per annum in remote area nursing in the early 1990s. Anecdotal evidence suggests the situation has not substantially improved. High rates of turnover constitute an enormous drain on the rural health dollar. The costs extend beyond the direct expenses of recruitment and relocation to the indirect expenses of retraining, initial supervision by existing staff, additional pressure on remaining staff and reduced quality of care during periods of staff shortfall (Kelly, 1998). In addition, there are the hidden social costs to individuals, host communities and organisations, the professions and the broader community. The Equal Opportunity for Women in the Workplace Agency (EOWA: 2002) cite research from the Council for Equal Opportunity in Employment that estimate labour turnover costs to range from 50% to 130% of an incumbent's salary. To increase the stability of the rural health workforce and reduce these costs, we need to understand both the issue of turnover itself and the characteristics of the rural health workplace, which may function to both reduce and increase turnover rates. Although a review of turnover research is beyond the scope of this paper, some relevant aspects are addressed in the discussion of this paper.

Research regarding the defining characteristics of work in the rural health workplace is remarkable primarily by its absence from the literature. Does this reflect an inherent assumption on the part of typically urban-based policy planners, administrators and researchers that data from urban settings can be validly extrapolated to rural settings or is it a product of population density resulting in the urban voice being heard more clearly than the rural voice, or even the banality of convenience? It is not enough to glibly lump rural workforce problems under the banner of "the tyranny of distance" and give three cheers for the extent to which technological advancement is helping rural communities to overcome this tyranny. Technology provides valuable tools, but technology does not help the remote health worker deal with lack of privacy or multiple role issues, nor to make an instantaneous decision to work outside the boundaries of their prescribed job description or to allow a patient to die.

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What do exist in the literature are isolated pockets of work focusing on addressing specific problems (e.g. Kelly's (1998, 2000) work on preventable sources of occupational stress in the remote health workplace and avoiding burnout in remote areas). However, to address the turnover challenge systematically, we need to know both the positive and negative dimensions of workers' experience of the rural health workplace and their relative importance; we need to know "What's happening out there?"

## THE PROJECT

This project is predicated on the notion that appropriately targeted education can enhance well-being at work which contributes to reducing turnover. Stage one of the project involved a needs assessment to identify the challenges faced by health staff in rural locations that may be partially addressed via postgraduate education in work psychology. These data were used to inform curriculum development to ensure relevance to rural health workers. A broadly constituted reference group further guided curriculum development. Stage two of the project will see course delivery and evaluation of initial impact in 2003.

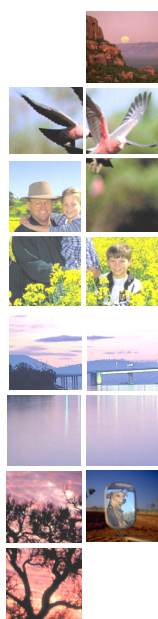
The needs assessment data however has relevance beyond informing course development. It provides a basis on which to begin to map the features that define work in rural health and therefore design a way forward for refining recruitment strategies, reducing turnover, improving the functioning of rural health organisations and ultimately health, in rural communities.

## Methodological framework

An action-research framework was adopted since the aim was to design a way to meet needs emerging from the field rather than to produce theoretical knowledge. In addition, the literature search yielded inadequate data on which to base hypothetico-deductive research. The origin of action research is broadly attributed (e.g. Grundy & Kemmis, 1982) to Kurt Lewin whose seminal work focused on facilitating change in social systems and emphasises the importance of collaboration between researchers and practitioners (Lewin, 1947). Ketterer, Price and Politser (1980) provide a brief overview of the early schools of thought in action research. Additionally, McNiff (1988) traces the development of action research in education and more recent additions include Checkland and Scholes' (1990) Soft Systems Methodology.

Needs analysis emerged in this context in the field of organisation development, with specific application in training. Goldstein (1993) presents a comprehensive model of systematic training and development predicated on the conduct of needs assessment to derive instructional objectives and criteria by which outcomes can be measured. Needs assessment addresses three levels of analysis: organisation, task and KSA (knowledge, skill, ability), and person. The data is used to inform the selection and design of instructional programs and an evaluation framework.

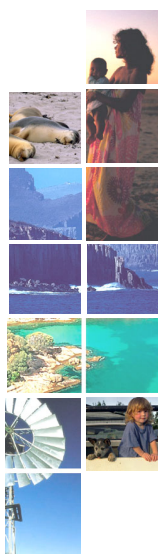
Typically, a needs analysis is conducted within a single organisation, and involves the use of multiple sources of information. Analysis of organisation goals, structures, procedures etc. provides the framework to make sense of task and KSA, and person analysis. The application of this framework to rural health workers involves four



challenges. Firstly, many organisations with disparate goals, structures and procedures are involved. Secondly, primary health care and allied health fields involve a large number of professions with differing values, tasks, KSA and person requirements. Thirdly, rural and remote health workers are geographically spread over thousands of square kilometres, are busy professionals and in some cases have been surveyed repeatedly (not always resulting in a valued outcome). Lastly, although the use of multiple sources and methods of data collection increases the comprehensiveness and validity of the findings, it concomitantly increases the cost of data collection. The most common methods used are survey or interview.

## Project needs assessment

For the purposes of this project, it was not possible to attempt a comprehensive needs analysis; rather, a pragmatic design was required. Although a range of organisations is involved, they have in common the goal, however specified, of effective and efficient health service delivery in rural and remote Australia. It was also assumed that they would subscribe to common notions of the desirability of improving workplace well-being and reducing turnover. Similarly, it is assumed that the professions have in common, values related to enhancing client health and maintaining the well-being of their members, regardless of differences in actual tasks and KSAs. Further, it was assumed that both the individuals and their clients would generally support the desirability of health professionals who can, are willing, and do, competently execute the tasks of their profession in a manner that supports human dignity. Lastly, it was necessary to assume that self-report data generated by the health workers themselves would be sufficiently robust to identify the broad parameters of characteristics that are both satisfying and problematic in the rural health workplace, and their needs in relation to the dissatisfying factors. This latter assumption may seem bold from a theoretical perspective without access to independent sources of data to confirm or disconfirm the incumbent's views. However in light of the central question of turnover, arguably it is the incumbent's views that ultimately decide whether they stay on in rural Australia.



## METHOD

The aim of this needs assessment was to establish a consensus view about the most important sources of dissatisfaction in the rural health workplace. This view could then be used to inform curriculum design. A process to derive a consensus view was developed using elements of Nominal Group and Delphi techniques.

Nominal group technique (NGT) was originally developed by van de Venn, Delbecq and Gustafson in the late 1960s to improve the decision-making efficiency of work groups (Toseland, Rivas and Chapman, 1984). Dow and Deadrick (1982: p 26) assert that NGT is "one of the most effective methods for conducting a training needs assessment". Van de Ven and Delbecq (1974) found that NGT was particularly effective in terms of idea generation and hint that this may reflect the perception that every voice was afforded the right to be heard.

Research comparing decision-making outcomes from traditional interacting groups and NGT groups, indicates the superiority of NGT in terms of the quantity of ideas generated (Pringle and Neeley, 1983). Furthermore, the NGT avoids the possibility of



over-representation of ideas from those with the loudest voice, most prestige, power or status (Davis, Rhodes and Baker, 1998). In essence, the outcome of NGT is a comprehensive solution believed to represent a diverse audience, diverse needs and therefore, to be potentially more creative.

There are four procedural phases to NGT covering the generation, recording, discussion and finally, voting on ideas. In the generation phase, individuals in the nominal group work alone to produce a list of issues related to the problem situation. Once idea production is exhausted, ideas are recorded and then presented to the entire group, one at a time. When all ideas are listed for the group, discussion ensues to clarify the items. This can be refined by asking the group to cluster items that they perceive as representing a single issue. The final round involves voting to assign priorities to the items in terms of the importance they have in resolving the problem situation.

The Delphi technique (attributed to Dalkey (1972) by Kaiser and Woodman in 1985) is an alternative group decision-making process, also designed to address the perceived shortcomings of traditional group decision-making processes. Unlike NGT, the Delphi process does not involve face-to-face contact between participants and is completely anonymous. Similar to NGT, respondents are presented a problem and required to take a position on that problem, communicating it in writing, usually via a survey or questionnaire. Respondents may elect to alter their position in the second phase of the Delphi process. After a firm position is taken, a vote is conducted to ascertain group consensus on the best possible solutions.

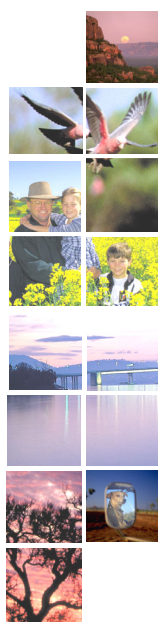
The procedure developed for this project sought to adapt both NGT and Delphi for a geographically spread and professionally and organisationally diverse group of participants, retaining the strength of both processes in generating ideas and consensus.

## Procedure

A web site was created providing background information, with informed consent being indicated by the choice to proceed to the question page. Given the expected sensitivity of some issues that may be of concern to participants, no identifiers were requested and cgi-email was used to ensure anonymity of source. In an attempt to maximise response rate, demographics sought and the questions to frame idea generation, were minimised. With regard to working in rural health, respondents were asked to list pleasing/satisfying aspects, displeasing/dissatisfying aspects, factors affecting retention/attrition, skills/what's needed and other issues. The site was open for three weeks (the time-frame was restricted by project parameters).

## Participants

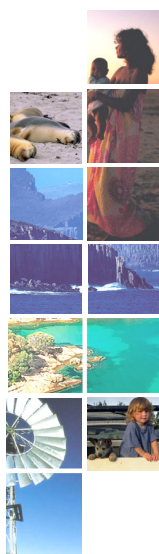
Participation was invited from professionals working in rural health via professional organisations, some employer organisations and supported by media coverage (ABC radio and Imparga television). In addition, a snowballing technique was used, inviting respondents to encourage colleagues to participate.



## RESULTS

Of the 156 respondents, 85.9% were female and 12.8% were males (the remainder declined to nominate gender). The age of respondents was reasonably spread with 44.2% under 35 years of age and 52% over 35 years of age. A majority 65.4% of respondents indicated they had completed some form of postgraduate study. These distributions reflect those found in larger surveys. An Australian Institute of Health and Welfare (AIHW) web-based report on the health workforce indicates that of all health workers in Australia, 73.7% were females. A Services for Australian Rural and Remote Allied Health (SARRAH) web-based report concerning allied health workers in rural and remote areas, attracted 1600 responses and identified the majority of allied health professionals were females (84.2%) with 40% under 29 years of age. Further, 33.6% of allied health professionals were postgraduate qualified.

Figure 1 indicates the clear majority of responses were received from allied health professionals, followed by nurses. It should be noted that the allied health professional category represented a diversity of professions. For the purposes of this study, respondents were not asked to specify their profession. (The AIHW web-based report indicates that allied health are over-represented in this study – allied health professionals practicing in other than capital cities numbered 9,610 compared to 70,252 nurses in the 1996 census data.)



**Figure 1 Professional categories represented**

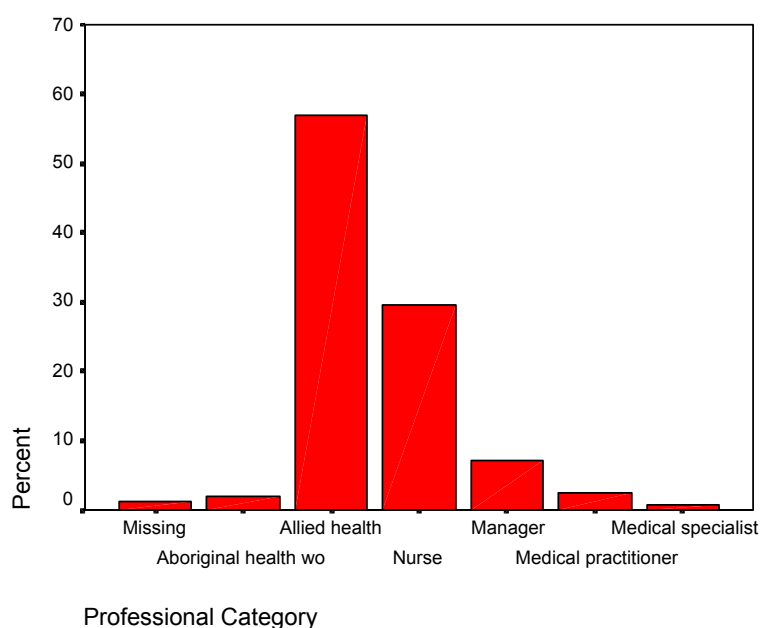
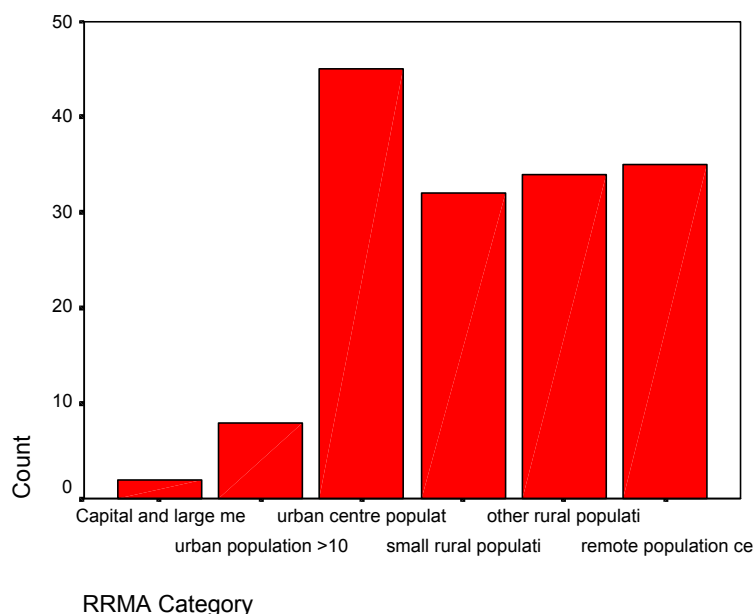


Figure 2 displays the percentage of respondents from each Rural and Remote Metropolitan Area (RRMA) category. It was pleasing to note that the target rural and remote populations were well represented with the majority of respondents currently working in centres with central populations less than 100,000 people (RRMA categories 3 to 6).



The mean length of service in rural and remote areas was 103 months (sd = 87.18, min = 2, max = 384). The distribution was bimodal with the modes appearing at 3 years and 10 years service. These points indicate potential risk periods for staff turnover.

**Figure 2** Distribution of sample by RRMA category



Multiple response analyses were coded using the guidelines from Coakes and Steed (2000). Although the total response lists were used in the second stage of the needs assessment for course development, for the purposes of this paper, only most frequently cited issues will be addressed. The top ten responses from the total sample to each of the open-ended questions are recorded in Tables 1 through 5 and are ranked in descending order of response rate.

**Table 1** Pleasing/satisfying factors

Category label	% respondents
Work relationships	25.2
Independence/autonomy/control	23.2
Relationships in community	23.2
Location	20.5
Relationship with clients/continuity	17.9
Case variety	15.9
Respect/Appreciation from community	15.2
Teamwork	12.6
Variety of job content	12.6
Professional support from peers	9.9

**Table 2 Displeasing/dissatisfying factors**

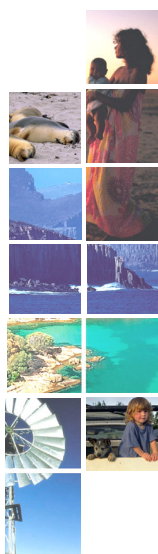
Category label	% respondents
Lack of management support	26.1
Lack of Continuing Professional Development	26.1
Professional isolation	25.5
Lack of financial resources	24.8
Lack staff	22.2
High workloads	13.7
Distance/travelling (time, cost etc)	13.1
Lack of time off/ relief	11.1
Undervalued/Lack respect from city peers	9.2
Bureaucracy/politics	8.5

**Table 3 Factors affecting retention/attrition**

Category label	% respondents
Lack of managerial support	24.5
Lack of Professional Development/difficulty studying	21.0
Lack of financial incentive	16.8
Staff shortages	14.7
Accommodation (inadequate/expensive/poor quality)	14.0
Isolation from friends/family	14.0
Lack of career progression	14.0
Workloads	12.6
Poor pay	9.1
Lack of professional support	9.1

**Table 4 Skills/what's needed**

Category label	% respondents
More staff	21.9
Financial support	21.2
Increased management support	20.5
Increased opportunity for Professional Development	15.8
Increased professional support	13.0
Teamwork/teambuilding	8.2
Resources for admin functions	7.5
Appropriate equipment	6.8
Emotional support/debriefing/supervision	6.8
Effective communication processes	5.5



**Table 5 Other Issues**

Category label	% respondents
Self-protection/stress management	19.3
How to work as a team	8.8
Multi-disciplinary teams	7.0
Time management	5.3
Balancing family/work commit taken into account	5.3
Intersectoral links	5.3
Cultural awareness	3.5
Conflicts of interest – partners as professionals	3.5
Maintaining professional standards in rural and remote	3.5
Conflict management training	3.5

To appreciate diversity of issues between the two larger sub-populations, responses were also tabulated by professional category. Tables 6 and 7 indicate the 10 most frequently cited displeasing factors for allied health and nursing respondents, respectively. It is clear from these preliminary results that the majority of issues are similar for both professional groups with only slight alteration to the order of those issues. One difference of note is the concern for nurses about how they are perceived by urban-based colleagues. It is likely that this difference relates to a structural difference in how nurses and allied health professionals work.

**Table 6 Ten most frequently cited displeasing workplace factors for allied health professionals**

Category	% respondents
Lack of Continuing Professional Development	34.5%
Professional isolation	29.9%
Lack of financial resources	28.7%
Lack management support	27.6%
Lack staff	19.5%
High workloads	17.2%
Distance (travel/costs)	14.9%
Lack of time off/relief	13.8%
Holes in service provision	12.6%
Bureaucracy/politics	8%

N.B. N = 87

**Table 7 Ten most frequently cited displeasing workplace factors for nurses**

Category	% respondents
Lack staff	32.6%
Lack management support	23.9%
Lack of financial resources	19.6%
Lack of Continuing Professional Development	19.6%
Professional isolation	17.4%
Undervalued/lack of respect from city peers	15.2%
On-call hours	10.9%
Lack of time off/relief	10.9%
Accommodation (avail/quality)	10.9%

N.B. N = 133



## DISCUSSION

Some issues from the demographics of the sample deserve comment. Firstly although 156 is a small sample of the total pool of graduate rural health workers, it serves as an adequate group for the purpose of developing a consensus view to inform curriculum development. In the context of a broader needs analysis, it can only be considered to serve as a pilot study.

The level of response from allied health professionals is of interest. A strong response was expected from nursing since this is a cohesive group which, through their professional associations are actively aware of the issues canvassed in this needs assessment. The allied health group represents a diverse group of professions that could not easily be reached to make direct invitation to participate. Whether the strong response from allied health workers indicates the salience of workplace issues to this group deserves further investigation.

With regard to the geographical spread of respondents, it is perhaps telling that this distribution indicates a disproportionate level of response from the smallest rural and remote communities. Whether this may be indicative of higher levels of concern among the most remote practitioners is worthy of further consideration.

Finally, while the age distribution for the total sample was evenly distributed above and below 35, when allied health and nursing are compared, the former are younger and the nurses are older. If the bimodal distribution for length of service could be confirmed in a larger study, this has profound implications for long-term workforce planning. Firstly there is the well-worn concern about the high proportion of minimally experienced, younger allied health staff who do not stay long (resulting in the need for frequent recruiting). The implication in nursing relates to the possibly significant knowledge loss when the current cohort of older and more experienced, long-stayers retire and/or move on. The likely flow-on effects derive from the resulting strain placed on a decreased pool of mentors by an increased proportion of less experienced staff. Succession planning is recognised as an essential ingredient for ensuring ongoing organisational capacity and if these figures proved to be representative of the broader situation in the sector, rural health services are highly vulnerable to further future decline.

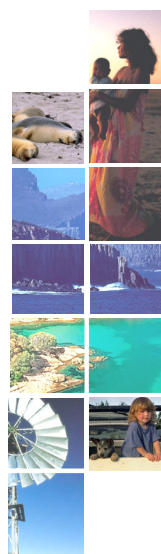
Further discussion of findings will be restricted to dis/satisfying factors.

### Pleasant/satisfying factors

The most satisfying factors cited focus on connections with clients/community and co-workers, and co-worker relationships and the fundamental job characteristics of variety and autonomy. These are important when considered in relation to the job characteristics model (Hackman and Oldham, 1976).

The first part of this model specifies five core job dimensions that induce motivation:

- skill variety – the number of different activities, skills and talents the job requires
- task identity – the degree to which a job requires completion of a whole, identifiable piece of work – that is, doing a job from beginning to end, with visible results.



- task significance – the job's impact on the lives or work of other people, whether within or outside the organisation
- autonomy – the degree of freedom, independence, and discretion in scheduling work and determining procedures that the job provides
- task feedback – the degree to which carrying out the activities required results in direct and clear information about the effectiveness of performance.

These dimensions impact on the personal and work outcomes of: high internal work motivation, high-quality work performance, high satisfaction with work and low absenteeism and turnover. A meta-analysis (Fried and Ferris, 1987) of over 200 studies which have tested this model, confirmed the existence of multiple job dimensions and the relationship between the job characteristics and individual motivation (and hence to turnover). In evaluating research on the model, Muchinsky (2003), concludes that motivation is not a durable personal attribute or a trait that some people possess more of than others, but rather a variable attribute that can be enhanced by appropriate work environment design.

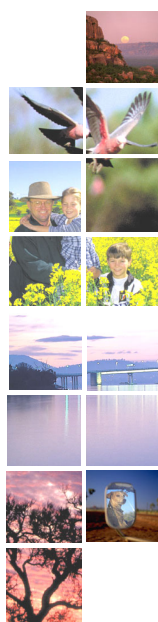
On the basis of the responses to this needs assessment, it appears that work in rural health currently offers strengths in the job characteristics of variety, autonomy and task significance. Satisfaction with community connections, especially the respect/appreciation from community may also relate to task feedback. Indeed, patient feedback was ranked 11th in the total list of responses. Since the needs assessment did not seek directly to test the job characteristics model, no comment can be offered regarding the task identity element.

The remaining element noted in this needs assessment as satisfying related to relationships with co-workers. Research on job satisfaction has identified the importance of dispositional factors, job dimensions and the interpretive process of forming feelings about a job. Job dimensions include: supervisor, coworkers, promotional opportunities, pay etc. as measured by instruments such as the Job Descriptive Index (Balzer, Smith & Dravitz, 1990). The relationships between job satisfaction, and performance, turnover and absence have been extensively researched. The correlation with turnover is clear: on average approximately -.40, and with absenteeism -.25 (Muchinsky, 2003). Hence the positive mention of co-workers in this context is important in consideration of turnover factors. It must be noted that turnover is also affected by the availability of alternative positions.

In summary, this needs assessment indicates that work in rural health potentially offers some factors important to high levels of worker motivation and satisfaction and hence low turnover.

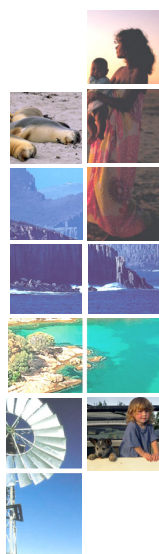
### Dissatisfying/displeasing factors

In the total sample, the top ten factors (see Table 2), relate to management (perceived lack of management support, bureaucracy/politics), resourcing deficits (financial, staff and hence lack of time off/relief), career development (lack of continuing professional development opportunities, professional isolation), and the distinctly rural issues of distance/travelling time and a perception of being under-valued/respected by city peers. The issue of high workload may be a direct consequence of resourcing deficits; however in this study it cannot be differentiated from more endemic workforce



perceptions of high workloads. To specify the links between these factors and impacts on work stress, motivation and satisfaction is beyond the scope of this research and perhaps not necessary since the elements are so widely recognised. It may be more constructive to view these as indicators of areas in which intervention is warranted in order to take advantage of the positive aspects of rural health work already identified.

Organisations can take initiatives to better equip managers to deal with the challenges they face. Firstly, managers may benefit from participation in appropriately targeted management development programs and secondly, particularly where services are ultimately managed from urban bases, it may be important to develop understanding of the particular challenges staff face in rural contexts. For example, the National Health and Medical Research Council (2002) manual explores the barriers to managing episodes of violence in rural and remote settings, noting that few practitioners have been trained to deal with violence, and that the course of action appropriate in the urban setting may not be the best response in rural and remote settings. Professional Associations and employers can co-operatively address issues of career development mutual respect among professionals working in different contexts by developing innovative solutions rather than dismissing rural Continuing Professional Development as “too hard”. For example: remote practitioners cite the difficulty of securing relief staff in order to take much-needed leave; perhaps an exchange program placing urban colleagues in these centres might address both the need for down-time and the mutual respect concern. And finally, although the broad resourcing issues may require direct attention, effective intervention to reduce turnover is crucial to achieving better use of the rural health dollar.



## CONCLUSION

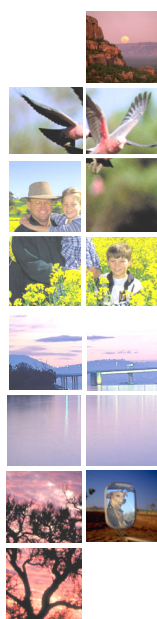
This needs assessment was purpose-designed to elicit a consensus view about issues affecting quality of worklife in the rural health workforce in order to inform curriculum development for a postgraduate course. Although the sample is relatively small, the data have important implications for workforce planning and organisation management in rural health. Most crucially, the data raise a “red flag” regarding the alarming turnover rates in the rural health workforce. High turnover is immensely expensive and therefore constitutes a drain on the rural health dollar with resulting impact on primary health care in rural Australia. It appears that the turnover problem is not inevitable given the positive aspects of work in rural health, but rather that urgent action must be taken to address the factors identified as dissatisfying.

## REFERENCES

- AIHW “Health and Community Services Labour Force”, National Health Labour Force Series No. 19, 11th May 2001. <http://www.aihw.gov.au/publications/hwl/hcslf96/hcslf96-c01.pdf>
- Balzer, W.K., Smith, P.C., Kravitz, D.A. (1990). *User's manual. Job descriptive index*. Bowling Green, Oh: Bowling Green State University.
- Checkland, P. and Scholes, J. (1990). *Soft systems methodology in action*. Chichester” Wiley.
- Coakes, S.J. & Steed, L.G. (2000). *SPSS:Analysis without anguish version 10.0 for Windows*. John Wiley & Sons Australia Ltd: Brisbane.



- Dalkey, N.C. (1972). *Studies in the quality of life: Delphi and decision-making*. Lexington Books: Lexington, Mass.
- Davis, D.C., Rhodes, R & Baker, A.S. (1998). Curriculum revision: Reaching faculty consensus through the nominal group technique. *Journal of Nursing Education*, 37(7), 326-332.
- Dow, S., & Deadrick, D. (1982). The Nominal group technique: Applications for training needs assessment. *Training and Development Journal*, 36(6), 26-32.
- Equal Opportunity for Women in the Workplace Agency (2002). Five ways EO Boosts Profitability. [http://www.eeo.gov.au/Why\\_EO\\_Makes\\_Business\\_Sense/Five\\_Ways\\_EO\\_Boosts\\_Profitability/Attract\\_and\\_Retain\\_the\\_Best\\_Talent.asp](http://www.eeo.gov.au/Why_EO_Makes_Business_Sense/Five_Ways_EO_Boosts_Profitability/Attract_and_Retain_the_Best_Talent.asp)
- Fried, Y., & Ferris, G.R. (1987). The validity of the job characteristics model: A review and meta-analysis. *Personnel Psychology*, 40, 287-322.
- Goldstein, I.L. (1993). *Training and organizations: Needs assessment, development and evaluation*. Pacific Grove, CA: Brooks/Cole.
- Grundy, S. & Kemmis, S. (1982). Educational action research in Australia: The state of the art (an overview). In S. Kemmis (Ed.), *The action research reader*, Victoria: Deakin University Press.
- Hackman, J.R. & Oldham, G.R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behaviour and Human Performance*, 16, 250-279.
- Kaiser, S.M. & Woodman, R.W. (1985). Multidisciplinary teams and group decision-making techniques: Possible solutions to decision-making problems. *School Psychology Review*, 14(4), 457-470.
- Kelly, K. (1998) *Preventable sources of occupational stress in the remote health workplace*. Occasional Paper No. 1, The Council of Remote Nurses of Australia, Alice Springs.
- Ketterer, R.F., Price, R.H., and Politser, P.E. (1980) The action research paradigm. In R.H. Price & P.E. Politser, *Evaluation and Action in the Social Environment*. (pp. 1-13). New York: Academic Press.
- Lewin, K. (1947). Action research and minority problems. Reprinted in S. Kemmis (Ed.). (1982), *The action research reader* (pp. 38-47). Victoria: Deakin University Press.
- McNiff, J. (1988) *Action research: principles and practice*. London: Macmillan Education.
- Muchinsky, P. (2003). *Psychology Applied to work*. (7th ed). CA: Wadsworth.
- National Health & Medical Research Council, (2002). *When its right in front of you: Assisting health care workers to manage the effects of violence in rural and remote Australia*. Canberra: NHMRC.
- National Rural Health Alliance, (2002). Action on Nursing in Rural and Remote Areas Recommendations and Action Plan. <http://www.ruralhealth.org.au/nursingactions301002.htm>
- Pringle, C.D & Neeley, S.E. (1983). Nominal vs. interacting groups: Further evidence. *The Mid-Atlantic Journal of Business*, 21(2), 25-35.
- SARRAH Services for Australian Rural and Remote Allied Health (2000) "A study of allied health professionals in rural and remote Australia". <http://www.ruralhealth.org.au/sarraah/execsumm.pdf>
- Toseland, R.W., Rivas, R.F., & Chapman, D. (1984). An evaluation of decision-making methods in task groups. *Social Work*, July-August, 339-346.



Van de Ven, A.H., & Delbecq, A.L. (1974). The effectiveness of nominal, delphi, and interacting group decision-making process. *Academy of Management Journal*, 17(4), 605-621.

## PRESENTER

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