

PRELIMINARY REPORT

Development of a common national questionnaire to evaluate student perceptions about the Australian Rural Clinical Schools Program

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ABSTRACT

The Australian Commonwealth Department of Health and Ageing provided funds for the Australian medical schools to establish Rural Clinical Schools. This workforce initiative has enabled medical students to learn in a diverse range of rural and remote healthcare settings. A common questionnaire was developed and agreed on by all the directors of the Rural Clinical Schools. Use of this common questionnaire will facilitate reports on student attitudes and program outcomes, both within individual Rural Clinical Schools and at a national program level. The data analysis will inform the community and the Australian Government about the effectiveness of the national Rural Clinical School program in (1) meeting the primary aims of providing high quality rural medical education; and (2) addressing the medical workforce shortage in rural and remote areas.

Key words: evaluation, undergraduate medical education, medical workforce, Rural Clinical Schools.



Introduction

In order to address the shortage of rural doctors, the Commonwealth Department of Health and Ageing (DoHA) established nine rural clinical schools (RCS) across Australia in 2000 as part of the Regional Health Strategy¹. DoHA initially mandated that for each participating university 25% of each cohort of Australian medical students were to spend 50% of their clinical training in the RCS environment. Two pre-existing rural medical student programs^{2,3} were included and, by 2003, all RCS programs were placing students in rural Australia.

In 2002 the RCS directors met to discuss common issues and subsequently established the Federation of Rural Australian Medical Educators (FRAME) in late 2003. Among the common issues identified, evaluation of the RCS programs, including student perceptions and attitudes, was considered one of the most important by both FRAME and DoHA.

In 2001, DoHA asked the Committee of Deans of Australian Medical Schools (CDAMS) to develop a questionnaire for use by DoHA in its biannual evaluation of the RCSs. As part of that process, members of the CDAMS-DoHA working group recognized the need for a tool for ongoing evaluation, not only of the RCS program, but also for tracking medical students more generally for the purposes of workforce evaluation and planning (Fig 1). This spurred development of a minimum data set questionnaire and national database to track all medical students in Australia. The FRAME questionnaire was designed to link with the CDAMS questionnaire and national database.

This article describes the development of the FRAME questionnaire and presents the questionnaire, including the minimum dataset questions as developed through the CDAMS Steering Group, so that it might be adapted and used more broadly by those with an interest in this area.

1. Flinders University
2. Monash University
3. University of Adelaide
4. University of Melbourne
5. University of New South Wales
6. University of Queensland
7. University of Sydney
8. University of Tasmania
9. University of Western Australia

Figure 1: Australian universities participating in the FRAME project.

Method

In 2003, several of the RCS began to develop questionnaires to assess student perceptions and educational effectiveness. Important issues included student recruitment, student perceptions about their academic and clinical education, and any effect that their RCS experience had on their intentions about training (pre-vocational and vocational) or practising in rural Australia. Two of the authors (DD, RM) developed a draft questionnaire, based on published work by one of the authors (DD)^{4,5} and presented it to the FRAME membership. A modified Delphi process^{6,7} coordinated by one of the authors (SS), was used over the following year to refine the questionnaire.

Delphi is an expert opinion survey with three special features - anonymous response, iteration and controlled feedback, and statistical group response. The number of Delphi questionnaires may vary from three to five, depending on the agreement and amount of additional information being sought or obtained. Each subsequent questionnaire is built upon responses to the preceding questionnaire. The process stops when consensus has been approached among participants, or when sufficient information exchange has been obtained.⁸



Additional questions originated from unpublished work at participating institutions (Leahy C, Peterson R [Adelaide University]. Pers. data, 1999), from FRAME members, and some were adapted from the MEDLINE literature⁹. An online modular version was developed to aid distribution and data collection in a dispersed environment across multiple universities. Two of the RCS (The University of Adelaide and Flinders University) piloted the online draft of the questionnaire. Due to concerns about excessive length and avoidance of duplication with the CDAMS questionnaire, the FRAME questionnaire was shortened, a common methodology was developed, and the CDAMS questionnaire was incorporated into the FRAME questionnaire in order to collect demographic data in a consistent manner (JC).

Results

The FRAME questionnaire was finalised at a meeting in May 2005 and is presented in **Appendix I**.

Discussion

The RCS directors have developed and accepted the FRAME questionnaire as the common evaluation tool for core educational outcomes and student perceptions. The questionnaire will be delivered online and each RCS will maintain ownership and security of data relating to its students.

To achieve both consensus (of FRAME members) and brevity (as an aid to securing completions), the FRAME questionnaire has been limited in size. Larger amounts of data could be collected but analysis and reporting would be more difficult and not necessarily produce clearer outcomes. FRAME is confident that enough data will be collected for meaningful analysis. Because students will be identifiable for linkage with the CDAMS database and longitudinal tracking of training and practice location, full ethics committee approval is being sought at each participating institution.

DoHA and the medical schools have invested considerable energy and funds in establishing Australian RCS. The FRAME questionnaire will ensure that not only will comprehensive national outcomes be measured and progressively reported as students enter the rural workforce, but also that individual RCS have a tool that will allow modifications to be made to their programs as they mature and develop so that the results can be optimised.

Acknowledgements

Substantial contributors to development of the FRAME RCS educational outcomes questionnaire and the CDAMS minimum dataset outcomes database questionnaire are acknowledged as follows.

1. FRAME Investigators (RCS Directors): Peter Baker, Dawn DeWitt, Rick McLean, Steve Margolis, Campbell Murdoch, Jonathan Newbury, Louis Pilotto, Sandy Reid, Geoff Solarsh, Judith Walker, Paul Worley.

2. CDAMS Outcomes Database Steering Committee (2005):
Convenor: Professor Andrew Coats (Dean, Faculty of Medicine, University of Sydney).

Executive: Professor David Prideaux (Head, Department of medical Education, Flinders University, Deputy Head, School of Medicine, Griffith University); Professor John Humphreys (Rural Undergraduate Support & Coordination Reference Group/Monash University); Ms Danielle Brown (CDAMS, Executive Officer); Ms Baldeep Kaur (CDAMS, Database Project Officer).

Members: Professor Dawn DeWitt (FRAME representative); Professor Teng Liaw (ARHEN representative); Dr Peter Vine (CDAMS/University of New South Wales); Mr Ped Ristic (CDAMS/University of Western Australia); Mr David Meredyth (Department of Health & Ageing); Professor Richard Hays (Rural Undergraduate Support & Coordination Reference Group/James Cook University); Dr Mary Harris (Australian Medical Workforce Advisory Committee); Prof



Peter Roeser (Confederation of Postgraduate Medical Education Councils); Ms Dana Stanko (Vice-President, Australian Medical Students Association); Ms Lydia Scott (Chair, national Rural Health Network).

References

1. Department of Health and Ageing. *Workforce Education and Training: Rural Clinical Schools*. (Online) 2002. Available: <http://www.health.gov.au/internet/wcms/Publishing.nsf/Content/health-workforce-education-clinical.htm> (Accessed 12 September 2005)
2. Worley P, Lines D. Can specialist disciplines be learned by undergraduates in a rural general practice setting? Preliminary results of an Australian pilot study. *Medical Teacher* 1999; **21**: 482-484.
3. Sturmberg J, Reid S, Khadra M. A longitudinal, patient-centered, integrated curriculum: facilitating community-based education in a rural clinical school. *Education and Health (Abingdon)* 2002; **15**: 294-304.
4. DeWitt DE, Curtis JR, Burke W. What influences career choices among graduates of a primary care training program? *Journal of General Internal Medicine* 1998; **13**: 257-261.
5. DeWitt DE, Migeon M, LeBlond R, Carline JD, Francis L, Irby DM. Insights from outstanding rural internal medicine residency rotations at the University of Washington. *Academic Medicine* 2001; **76**: 273-281.
6. Turoff M. *The policy Delphi*. London: Addison-Wesley, 1975.
7. Williams PL, Webb C. The Delphi technique: a methodological discussion. *Journal of Advanced Nursing* 1994; **19**: 180-186.
8. Hwang C-L, Lin M-J. *Group Decision Making Under Multiple Criteria: methods and applications*. Berlin: Springer-Verlag, 1987.
9. Adams ME, Dollard J, Hollins J, Petkov J. Development of a questionnaire measuring student attitudes to working and living in rural areas. *Rural Remote Health* 5: 327. (Online) 2005. Available: <http://rrh.deakin.edu.au> (Accessed 12 September 2005).

Appendix I

Rural Clinical School Evaluation 2005

About this Survey

The 10 Rural Clinical Schools have agreed on a common 2005 evaluation to determine baseline data about students currently studying in the Rural Clinical Schools (RCS). This data will be used to better understand factors in choosing a RCS and studying in an RCS. Collated de-identified data for each RCS may then be compared with national data. This de-identified data may be published in journals or at conferences. Your agreement to these outcomes for data from your participation in this survey is implicit in you choosing to participate in completing this survey. You will not again be consulted about publication of data. Your participation is voluntary, and you are able to withdraw at any stage. Your data will be de-identified and used to create cohort data. Non-participation, or data you divulge, will not affect your academic progress.

For further information, contact: << >>

Q. ID Private Code (mother's maiden name 1st 4 letters) or Student ID Number (optional for each RCS depending on their Ethics Approval),
Code or ID number:



1. Medical School:

- Australian National University
- Flinders University
- Monash University
- University of Adelaide
- University of Melbourne (Undergraduate)
- University of Melbourne (Graduate)
- University of New South Wales
- University of Queensland
- University of Sydney
- University of Tasmania
- University of Western Australia (Undergraduate)
- University of Western Australia (Graduate)

2. Admission / Entry Scheme:

Please indicate if you are a (*please select one response only*)

- Unbonded Commonwealth Supported (HECS) student
- Medical Rural Bonded Scholarships (MRBS) student
- Bonded medical Places Scheme (BMPS) student
- International student
- Australian fee-paying student

3. Scholarship:

Do you hold a scholarship?

- None
- Yes, Medical Rural Bonded Scholarship
- Yes, Rural Australian Medical
- Undergraduate Scholarship (RAMUS)
- Yes, John Flynn Scholarship
- Yes, Other (please specify name of scholarship)

4. Place of Birth:

- NSW SA NT VIC TAS
- WA ACT QLD country other than Australia:

Please specify:

Please indicate year of first arrival in Australia:

5. Gender:

- Male Female

6. Date of Birth:

/ /
D M Y



7. Citizen / residence indicator:

Are you:

- Australian citizen (including Australian citizens with dual citizenship)
- New Zealand citizen
- Australian permanent resident status but excluding those who have New Zealand citizenship
- Temporary entry permit (e.g. international students)
- Status other than one of the above

8. Aboriginal or Torres Strait Islander:

Do you identify yourself and do others identify you as:

- Of Aboriginal origin
- Of Torres Strait Islander origin
- Of Aboriginal and Torres Strait Islander origin
- Not applicable

9. Language

Do you speak a language other than English at your permanent address?

- No
- Yes (*please specify language*)

10. Rural/Urban background:

10.1 Over the last twelve years, how many years has your principal home address in Australia been outside of a capital city and outside one of the major urban centres: Gosford-Wyong, Newcastle, Wollongong, Queanbeyan, Blue Mountains, Geelong, Gold Coast-Tweed Heads and Townsville-Thuringowa.

Number of years:

10.2 Please indicate the type of location you have lived in the longest within Australia:

- Capital city or major urban centre (>100,000)
- Smaller town (10,000-24,999)
- Regional city or large town (25,000-100,000)
- Small rural community (<10,000)

10.3 Number of years of secondary schooling in Australia outside of a capital city and outside one of the major urban centres: Gosford-Wyong, Newcastle, Wollongong, Queanbeyan, Blue Mountains, Geelong, Gold Coast-Tweed Heads and Townsville-Thuringowa.

Number of years:

10.4 What was the name and postcode of your Secondary School for your final year at school, in Australia?

Name of Secondary School:

Postcode:

10.5 Do you consider yourself to come from a rural background?

- Yes
- No



11. Previous tertiary education:

Please list the details in the table below if you have completed a University degree(s).

Name of completed degree(s)	Year of Completion	Name of University
1.		
2.		
3.		
4.		

12. Your marital status:

- Single
 Divorced/Separated
 Married/Living with partner
 Widowed

Occupation of partner:

13. Dependants:

13.1 Number of children under 16 years of age:

13.2 Number of other dependants for whose care you are financially contributing:

14. Source(s) of income support: *(Please select as many responses as necessary)*

- Government assistance (e.g. Youth Allowance, Austudy/Abstudy)
 Supported by parents
 Currently employed on a part-time basis
 Scholarship
 Financially independent
 Other (please specify)

15. Preferred location of future medical practice:

On completion of your basic medical degree, where would you most like to practice medicine? Please answer questions as follows.

15.1 Please indicate in which State/territory, or country other than Australia (you may rank up to 3 options):

- NSW
 SA
 NT
 VIC
 TAS
 WA
 ACT
 QLD
 country other than Australia

Please specify:

15.2 Please indicate in which geographical location within Australia (you may rank up to 3 options):

- Capital city
 Major urban centre: e.g. Gosford-Wyong (>100,000)
 Regional city or large town in Australia (25,000 – 100,000)
 Smaller town in Australia (10,000 – 24,999)
 Small rural community in Australia (<10,000)



16. Preferred type of future medical practice:

Please answer questions as follows.

16.1 When you have completed your Basic medical degree, what area of medicine are you most interested in pursuing? (Please select your top three responses)

1st preference: _____

2nd preference: _____

3rd preference: _____

16.2 Are you interested in becoming involved in medical teaching/research as part of your medical career?

Yes No

17. Are you a member of a Rural Medical Club?

Yes No Previously

18. Year of your medical study:

1st 2nd 3rd 4th 5th 6th

19. Do/did you go to a Rural Clinical School?

Yes No

	not at all	slightly	moderately	strongly	very strongly
	1	2	3	4	5
19.1 How strongly did you consider the RCS as an option?	<input type="checkbox"/>				

19.2 Which items were most important in deciding whether to attend the RCS?

	disagree strongly	disagree moderately	disagree slightly	agree slightly	agree moderately	agree strongly	N/A	In my decision this factor was	
	1	2	3	4	5	6		Positive	Negative
1. My spouse/partner's needs	<input type="checkbox"/>	<input type="checkbox"/>							
2. My children's needs	<input type="checkbox"/>	<input type="checkbox"/>							
3. Other family members' needs	<input type="checkbox"/>	<input type="checkbox"/>							
4. My friends	<input type="checkbox"/>	<input type="checkbox"/>							
5. Extracurricular activities	<input type="checkbox"/>	<input type="checkbox"/>							
6. Social opportunities	<input type="checkbox"/>	<input type="checkbox"/>							
7. Cultural/religious issues	<input type="checkbox"/>	<input type="checkbox"/>							
8. Academic reputation	<input type="checkbox"/>	<input type="checkbox"/>							



9. Patient access	<input type="checkbox"/>								
10. Subsidised accommodation provided by the clinical school	<input type="checkbox"/>								
11. Transportation costs	<input type="checkbox"/>								
12. Availability of paid part-time employment	<input type="checkbox"/>								
13. Support from other Scholarship	<input type="checkbox"/>								
14. No need to rent/pay for on campus residence	<input type="checkbox"/>								

20. Was your rural/metro Clinical School enrolment your first choice?

- Yes No N/A

21. If not 1st choice, where on ranking?

- 2nd 3rd 4th 5th 6th 7th

22. Were you conscripted to the RCS?

- Yes No

If yes, how long did/will you spend there?

- < ½ year ½ - 1 year 1-2 years > 2 years

23. Do you have a car?

- Yes No

24. While based at your metro medical school, did/do you have access to free (eg. family) accommodation?

- Yes No

25. Comments on selecting RCS option

Placement Experiences

26. During your clinical school experience were you able to appropriately develop skills for further training? (If you attended an RCS, answer regarding the RCS.)

	disagree strongly	disagree moderately	disagree slightly	agree slightly	agree moderately	agree strongly
	1	2	3	4	5	6
1. Develop my knowledge base	<input type="checkbox"/>					
2. Develop my procedural skills	<input type="checkbox"/>					
3. Develop my case presentation skills	<input type="checkbox"/>					
4. Develop my written case histories	<input type="checkbox"/>					



27. Overall:

	disagree strongly	disagree moderately	disagree slightly	agree slightly	agree moderately	agree strongly
	1	2	3	4	5	6
1. The environment was conducive to learning	<input type="checkbox"/>					
2. The educational experience met my expectations	<input type="checkbox"/>					
3. I saw a sufficient number of patients	<input type="checkbox"/>					
4. I was well prepared for examinations	<input type="checkbox"/>					
5. I was able to negotiate my learning goals	<input type="checkbox"/>					
6. I was able to participate actively in patient care	<input type="checkbox"/>					
7. I had access to house staff to assist my learning	<input type="checkbox"/>					
8. I had access to adequate Information Technology to assist my learning	<input type="checkbox"/>					

28. Comments on Educational Experience

Supervision Experiences

29. Your clinical supervisors generally (if you attended an RCS please answer about your RCS experience):

	disagree strongly	disagree moderately	disagree slightly	agree slightly	agree moderately	agree strongly
	1	2	3	4	5	6
1. Gave adequate help and advice	<input type="checkbox"/>					
2. Were approachable	<input type="checkbox"/>					
3. Were enthusiastic	<input type="checkbox"/>					
4. Assisted me in identifying my learning needs.	<input type="checkbox"/>					
5. Treated me with respect	<input type="checkbox"/>					
6. Facilitated a learning environment	<input type="checkbox"/>					
7. Gave me sufficient autonomy	<input type="checkbox"/>					
8. Gave useful feedback	<input type="checkbox"/>					
9. Were excellent role models	<input type="checkbox"/>					
10. Provided me with access to people with a wide range of health problems	<input type="checkbox"/>					
11. Provided me with appropriate clinical responsibilities	<input type="checkbox"/>					
12. Provided opportunities for continuity of patient care	<input type="checkbox"/>					
13. Facilitated the development of my decision-making about patient management	<input type="checkbox"/>					
14. Provided appropriate supervision of my clinical decisions	<input type="checkbox"/>					
15. Overall my clinical school provided an excellent clinical education	<input type="checkbox"/>					

30. Comments on Supervision:



Overall questions

31. Did you attend a RCS?

Yes No

32. The best things about my clinical school experience are/were . . .

33. What would improve the clinical school experience in the future?

34. Was there anyone who became a role model for you and contributed positively to your Clinical School experience?

Yes Rural
 No Metro

If yes, what was important about that experience?

35. If you intend to sub-specialise (e.g. Oncology, Head and Neck Surgery) are you concerned about the availability of rural-based patients/practice opportunities in your intended training area?

Yes No

Comment:

36. Compared with your peers at their Clinical Schools, your Clinical School experience is/will be/was . . .?

37. What things would encourage you to consider further rural practice?

38. What would encourage you to choose a rural hospital for some/most of your post medical school training?

39. Do you have other comments or concerns?

Other rural experience

40. Outside this Clinical School experience, what rural clinical / medical experiences have you had?

41. How much total time have you spent (other than this) in rural compulsory and elective training experiences?

Number of weeks:

Interest in further rural education and intent regarding rural practice

42. Please answer the following if you went to an RCS:

	disagree strongly	disagree moderately	disagree slightly	agree slightly	agree moderately	agree strongly
	1	2	3	4	5	6
1. Given my time over I would go to the RCS again	<input type="checkbox"/>					
2. I would spend more time at the RCS if I could	<input type="checkbox"/>					



43. Please answer the following:

	disagree strongly	disagree moderately	disagree slightly	agree slightly	agree moderately	agree strongly
	1	2	3	4	5	6
1. My Clinical School experience increased my interest in rural training and rural practice	<input type="checkbox"/>					
2. I would prefer a rural internship/basic training after my clinical school experience	<input type="checkbox"/>					
3. I would consider rural practice after my clinical school experience	<input type="checkbox"/>					

44. Please help us with any further comments or concerns about your Clinical School experience:

45. When considering rural practice, I believe that:

	disagree strongly	disagree moderately	disagree slightly	agree slightly	agree moderately	agree strongly
	1	2	3	4	5	6
1. Working in a rural area provides more opportunity to practice a variety of skills	<input type="checkbox"/>					
2. There are good opportunities for employment in rural areas	<input type="checkbox"/>					
3. There are good opportunities for career advancement in rural areas	<input type="checkbox"/>					
4. Staff are more supportive of each other in rural areas	<input type="checkbox"/>					
5. Professional isolation is a problem when working in rural areas	<input type="checkbox"/>					
6. Rural practice provides greater opportunity for clinical practice autonomy	<input type="checkbox"/>					
7. There are things I enjoy doing in rural areas	<input type="checkbox"/>					
8. Rural areas have good social opportunities	<input type="checkbox"/>					
9. Rural areas have insufficient recreational facilities	<input type="checkbox"/>					
10. People in rural areas are very friendly	<input type="checkbox"/>					
11. Working in a rural area means being too isolated from friends	<input type="checkbox"/>					
12. Rural practice will be too isolated	<input type="checkbox"/>					
13. Rural practice is too hard	<input type="checkbox"/>					

1. Questions 1-16.2 are taken or adapted from the Council of Deans of Australian Medical Schools (CDAMS) "Medical Schools Outcome Database Project", 2005.

2. Question 45 adapted from Adams M, Dollard J, Hollins J, Petkov J, (2004) "Development of a questionnaire measuring student attitudes to working and living in rural areas" EJRHH, 2005. Used with the author's express permission.

End of Questionnaire

Thank you for your time and input - it is greatly appreciated.
