

# Attitudes, beliefs and values of students in undergraduate medical, nursing and pharmacy programs

Rodney J Perkins, Margaret Horsburgh and Barbara Coyle

## Abstract

First and final year students in medicine, nursing and pharmacy programs at the University of Auckland completed a questionnaire used in studies of professional subcultures. Before entering training, students differed in how they believed clinical work should be organised. The collectivist attitude of pharmacy students was greater among those completing their studies than it was among those commencing study.

Doctors, nurses, pharmacists and other professional groups are expected to work in multidisciplinary teams to deliver high quality health services. This study suggests that the individualistic attitudes of medical students may need to be addressed during training if medical students are to graduate with a commitment to working in teams, an expectation of clinical governance.

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THE CLINICAL GOVERNANCE literature identifies quality improvement as a central concern of the management of contemporary health care organisations and the clinical staff who work in them.<sup>1-4</sup> Clinical governance includes an understanding that health professionals will support the systemisation of clinical work and subscribe to power

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## What is known about the topic?

Previous studies have shown that subcultures exist among health professional groups.

## What does this paper add?

This paper recounts survey results from starting and finishing undergraduate medical, nursing and pharmacy students, compared with practising health professionals. Pharmacy students demonstrated more collectivist attitudes on graduation than in the first year of study. Nursing and medical students demonstrated similar attitudes to practising clinicians.

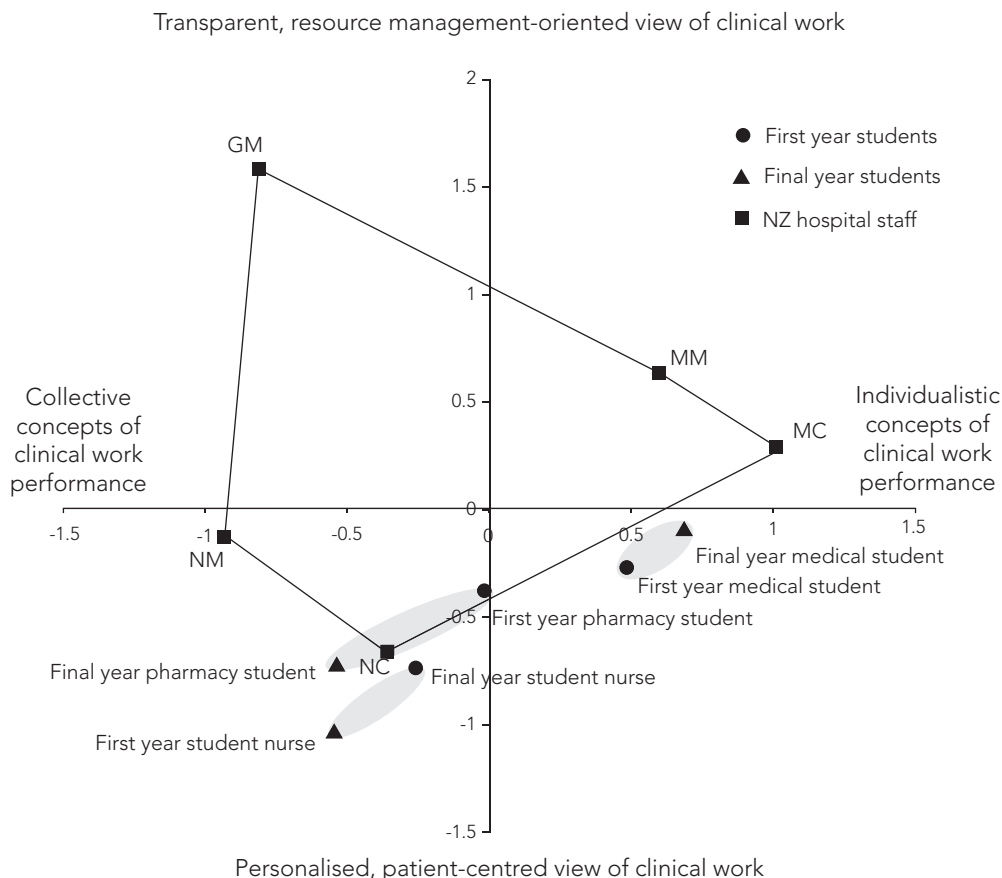
## What are the implications for practitioners?

Training programs must incorporate understanding of the values, beliefs and roles of different professional groups if multidisciplinary working in teams is to be achieved in contemporary health systems.

sharing within multidisciplinary approaches to clinical work.

Degeling and colleagues have described the subcultures of medicine, nursing and management arising from numerous studies in the United Kingdom, Australia, New Zealand and elsewhere.<sup>5-9</sup> These studies demonstrate that medical, nursing and managerial staff have different attitudes, beliefs and values with respect to how they believe clinical work should be undertaken, what leads to variations in its quality, the role of teams and what it means to be accountable for performance. Their work suggests that nurses believe that clinical work is best performed within a systems view of organisation, and further, that the health care organisation in which the work is being carried out needs to endorse and take ownership of the work systems. This is in contrast to medical practitioners who favour a more individualistic approach to the way work is organised and carried out. Mintzberg's<sup>10</sup> conception of nurses is similar. He suggests that as a group nurses focus on

### Location of occupational and student groups (by year) on a resource management versus patient-orientated dimension and on a collective versus individualistic dimension



MC = Medical clinician, MM = Medical manager, GM = General manager, NM = Nurse manager, NC = Nurse clinician

the system of service delivery and do so within a formal organisational context. He views doctors as being significantly different, having little or no interest in hierarchy or organisation structure.

In his advocacy of high reliability organisations, Reason<sup>11</sup> argues that health care organisations should emphasise a systems approach (in contrast to the person approach) in their quest to become safer places for patients. His work, along with that cited above, challenges organisations involved in health service delivery to develop staff who will accept teams and a systems approach to work.

In 2004, a study using Degeling's cultural survey, modified as appropriate for students,

demonstrated that, like practitioners in medicine and nursing, students entering these two professions shared similar attitudes, beliefs and values.<sup>12</sup> Using the same methods, this paper reports on whether a cohort of students who have completed their training have different attitudes, beliefs and values from those entering their tertiary study.

## Methods

All students graduating from undergraduate programs in medicine, nursing and pharmacy in the University of Auckland Faculty of Medical and

Health Sciences in 2004 were given the modified Degeling cultural survey questionnaire to complete on the last day of their study. The survey included questions about health systems, work values, clinical governance, clinical practice, resource allocation, accountability, standard setting, management and autonomy. Comprising 21 pages of questions, the survey asked students to use a scale to:

- accord priority to propositions;
- agree or disagree with them; or
- identify them in terms of importance.

Because much of the subject matter would be new to students, definitions of terms unfamiliar to students were provided on each page of the questionnaire. For example, when the word “accountability” was used, the following explanation of its meaning was provided:

*Accountability* means being held responsible for actions. For example, if there are shortcomings in the *accountability* of professionals, it means that there are significant problems associated with professionals being held responsible for what they do. It is similar in sports teams where for example, some players, let's say goal shooters or goal kickers are held more *accountable* than others for shooting or kicking goals.

Data were analysed using SPSS version 12.0.1 (SPSS Inc, Chicago, Ill, USA) in the Centre for Clinical Management Development, Wolfson Research Institute, University of Durham.

## Results

One-hundred and thirty-one responses were received from final year students in the three professional disciplines in December 2004 (overall response rate 48%). By discipline, response rates were: medicine 34/155 (22%), nursing 42/51 (82%), pharmacy 55/66 (83%). It was recognised that giving the students a 21-page questionnaire with unfamiliar material on the last day of their course was unlikely to achieve a high response rate. Nursing and pharmacy students completed the questionnaire in “class time” while the medical students took the questionnaire away

with them and were asked to return it within a week. Not surprisingly, different response rates resulted.

A combined dataset was constructed of New Zealand hospital staff and student responses to the questionnaire together with the findings of the study of students entering programs in medicine, nursing and pharmacy in the beginning of 2004.<sup>12</sup> Principal component (or factor) analysis was used to find combinations of questionnaire items that adequately explained the overall observed variation within the data. The factors derived were consistent with previous studies which used the questionnaire. Multiple discriminant analysis (MDA) was used to examine the patterns of difference between groups on the mean scores for each of the selected factors. MDA produced five dimensions, two of which explain 90% of the underlying variation. The stances of the occupational and educational groups on these two dimensions are set out in the Box.

The only significant difference between first and final year students, on these two dimensions, is for pharmacy students on the horizontal axis ( $t = 2.49$ ;  $df = 61$ ;  $P = 0.16$ ).

When first and final year students were combined into one category and then tested against NZ hospital staff, medical clinicians and medical students were significantly different on the horizontal axis ( $P = 0.01$ ) and on the vertical axis ( $P = 0.01$ ). However there were no statistical differences between nursing clinicians and nursing students on these two dimensions. No comparison was made with pharmacy students as pharmacy staff were not surveyed in the original New Zealand study.

## Discussion

The response rate was low for medical students, thus limiting the conclusions and generalisability of the findings. The figure in the Box shows the location of students on the same graph as nurse clinicians and medical clinicians. Among the students, medical students are more individualistic in their views about how work should be performed than the nursing and pharmacy students.

In addition, medical clinicians are more inclined to see accountability in terms of resource use than medical students. The influence of clinicians as contributors to the students' training or as role models is apparent.

The findings are of interest and suggest a need to find creative ways of including teamwork in training, promoting the clinical governance agenda, and understanding the values, beliefs and roles of different professional groups if multidisciplinary working with teams as the principle delivery units in contemporary health systems is to be achieved. Students at the University of Auckland are the first students to complete Degeling's questionnaire. We suggest that a longitudinal study should be repeated for a cohort of students.

## Competing interests

The authors declare that they have no competing interests.

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