Publish and perish: a case study of publication ethics in a rural community

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Background: Health researchers must weigh the benefits and risks of publishing their findings.
Objective: To explore differences in decision making between rural health researchers and managers on the publication of research from small identifiable populations.
Method: A survey that investigated the attitudes of Australian rural general practitioners (GPs) to nurse practitioners was explored. Decisions on the study's publication were analysed with bioethical principles and health service management ethical decision-making models.
Results: Response rate was 78.5% (62/79 GPs). 84–94% of GP responders considered it to be undesirable for nurse practitioners to initiate referrals to medical specialists (n = 58), to initiate diagnostic imaging (n = 56) and to prescribe medication (n = 52).
Bioethical analysis: It was concluded that the principle of beneficence outweighed the principle of non-maleficence and that a valid justification for the publication of these results existed.
Decision-making models of health service managers: On the basis of models of ethical decision making in health service management, the decisions of the area's health managers resulted in approval to publish this project's results being denied. This was because the perceived risks to the health service outweighed benefits. Confidentiality could not be ensured by publication under a regional nom de plume.
Conclusions: A conflict of interests between rural researchers and health managers on publication of results is shown by this case study. Researchers and managers at times owe competing duties to key stakeholders. Both weigh the estimated risks and benefits of the effect of research findings. This is particularly true in a rural area, where identification of the subjects becomes more likely.

H ealth researchers need to consider the potential benefits and risks of publishing their findings.[1] Ethically, research projects in small communities may not be publishable if the population is identifiable (with the need to consider the stigma of disclosure on a population or a person).[2] These ethical issues may limit the amount of research published on small communities. De-identified case studies have been advanced as a means of exploring rural health and dealing with this problem.[3] Often, this de-identification is inadequate and the people concerned can be identified by a small amount of demographic information.

Humphreys *et al*[4] characterise Australia's "classical supremacy metropolitan mindset", observing that a capital city dominance in fields such as academic, economic and government activities is a major barrier to progress in rural health. Research focusing on rural issues, including health, is important, as the population and health needs of this group of people are often different from those of their urban counterparts, with worse outcomes from preventable causes of mortality and morbidity.[4]

Researchers continue to have ethical obligations in supervising their project and its publication after receiving ethics committee approval to proceed.[1] At times, health service management decisions on the use of research information may differ from the researcher's view. This is particularly relevant when the researcher is employed by a health service. This paper explores differences in decision making between rural health researchers and managers about the publication of research from small identifiable populations. We use a case study of a project focusing on attitudes of Australian rural general practitioners (GPs) to nurse practitioners to explore how these differences can affect publication in rural health research.

METHODS

Rationale for study and our relationship with the research question

In Australia, two different programmes have been developed to increase the utilisation of nurses in primary healthcare. The Commonwealth has developed strategies to subsidise employed practice nurses in general practices. By contrast, many states have developed an autonomous expanded role for nurse practitioners. Nurse practitioners are independent clinicians with legislated powers to extend their role to the management and treatment of common conditions.

In Australia, it is widely accepted that nurse practitioners should collaborate with doctors to optimise health outcomes, rather than being used as "substitute doctors".[5][6] A collaborative framework for nurse practitioner services was legislated in New South Wales (NSW), Australia, in 1998.[6] In 1999, we considered that assessing the views of GPs from a rural region towards the placement of nurse practitioners was useful in defining roles and practice models.

One of us (JF) had worked in another state as a rural researcher and GP and had positive experiences working in a multidisciplinary team that included nurse practitioners. In this model, nurses and doctors worked for the same government organisation. The proposed model for NSW differed in that the government-employed nurse practitioners would work with private-sector fees for GP services.

Questionnaire methods

A research instrument measuring knowledge and attitudes was developed and pretested with GPs and nurses using a 5-point Likert Scale. The regional ethics committee and two of

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Abbreviations: GP, general practitioner; NSW, New South Wales

Table 1 Viewpoints of rural general practitioners on nurse practitioners (n = 62)

Statement	n (%)
It is undesirable for nurse practitioners to	
Initiate referral to medical specialists	58 (94)
Initiate diagnostic imaging	56 (90)
Prescribe medications	52 (83)
Initiate diagnostic pathology services	50 (81)
Define health problems	36 (58)

Table 2 Percentage of general practitioners supportive of differing employment models for nurse practitioners (n = 62)

Model of employment for nurse practitioner	GPs supportive of this model (%)
Local community health centre	28
GPs own practice	23
Local hospital	20
Division of general practice	17

GP, general practitioner.

the region's three divisions of general practice approved this project. One division refused to participate in the study because of its objections to the legislation and concerns that other services would be reduced to pay for nurse practitioners. Subsequent to these approvals, a cover letter, survey form and reply-paid envelope were sent to all 79 GPs practising in these two divisions of general practice in 1999. Reminder letters, including another survey form and a reply-paid envelope, were sent to non-responders. Quantitative data were analysed with SPPS statistical software. Qualitative data were independently coded for theme and content and validated between the research team.

We required approval from the management to publish the research, as both of us were employees of the health service. This approval process was independent of the decision of the regional ethics committee to approve the project. The regional ethics committee was constituted according to National Health Medical Research Council Guidelines.[1] Regional ethics committee decisions were made independent of the management.

The confidentiality of the GPs included in this study could not be assured because of the small size of the population and the links that the authors have with a rural region of Australia.

RESULTS

A response rate of 78.5% was obtained: 45 male GPs and 17 female GPs returned completed questionnaires. We found no statistical difference between the observed and expected gender response rates ($\chi^2 = 0.15$, p = 0.7).

In all, 69% of male GPs and 65% of female GPs were aware of the NSW Department of Health nurse practitioner initiatives and 45 (73%) GPs were aware of the work of nurse practitioners. The most common ways of gaining this understanding was by reading the relevant literature (n = 27) and through discussions with colleagues (n = 26).

Attitudes to nurse practitioners

In order of rank, more GPs than those who held neutral views were unaware of the outcome or agreed with the outcome, did not consider the procedures carried out by nurse practitioners to be cost effective, of high quality or safe for patients. Most of the GPs considered the broader functions of nurse practitioners as outlined in the NSW health framework to be inappropriate (table 1).

Most GPs were opposed to nurse practitioners working in various models of employment, with 17% and 28% of the participating GPs being supportive of these arrangements (table 2).

Ethical analysis about dissemination of results

The publication of these results raised an ethical dilemma for both researchers and managers. Researchers were concerned that the overall negative assessment of GPs about the contribution nurse practitioners could make to providing effective healthcare to the region's population, coupled with

the fact that most GPs were opposed to employing nurse practitioners, would enable those few GPs who would welcome the opportunity to employing nurse practitioners to be identified. Health managers were worried that these results, once published, would further entrench the position of GPs opposed to the employment of nurse practitioners and jeopardise the negotiations between the area health service and the region's GPs and divisions of general practice.

Beauchamp and Childress[7] provide a useful bioethical framework for the rural researcher in planning and publishing research. In this study, we concluded that the principle of beneficence outweighed the principle of non-maleficence and that a valid justification for publication of these findings had arisen.

Principle of beneficence

This research had the potential to be beneficial to the region, as research on employed nurse practitioners working with private GPs is limited. In Australia, funding agreements for health are divided between the Commonwealth and the states. This has led to programmes for nurse practitioners being implemented by the states, with most of the GPs working in private "fee for service" arrangements subsidised via the Commonwealth-funded Medicare scheme. Funding differences can hinder doctor–nurse practitioner collaboration.[8]

Despite their employment in rural and remote areas of Australia, the fears of medical practitioners about nurse practitioners are a major barrier to the implementation of programmes.[9] Our research could potentially have raised awareness and fears of these concerns as well as provided useful information to guide further planning and discussions between stakeholders. Additionally, researchers consider that there is an "ethical imperative" to publish approved human research. Subjects consent to be included in a research project for the benefit of others.[10] Doing research entails an opportunity cost in that limited resources, which could have been used elsewhere, have been invested in finding new information. Divisions of general practice supported this project and wished to disseminate their views on the issue. For these reasons, Pearn[10] has recommended that ethics committees insist that all approved research is submitted for publication and that committee processes are monitored for quality assurance.

Principle of non-maleficence

In our study, our pretested instrument on attitudes of GPs to nurse practitioners measured fear, anger and resistance to change among GPs, rather than being a measure of the true competence of nurse practitioners. The box shows qualitative data presenting these themes. Documenting these attitudes was important to the planning and implementing of our project. Publicising these attitudes, however, could further inflame divisions between local nurses and doctors; between doctors willing to pilot the employment of nurse practitioners and those doctors strongly opposed to this; and between the

region's doctors who, as a group, were opposed to the employment of nurse practitioners and local health service managers who were briefed to implement the NSW Government policy directives. Owing to the small number of health professionals in rural NSW, the confidentiality of subjects could not be guaranteed by de-identifying the region during publication.

Research and health service management models of decision making

Decision making in health service management has similarities with rural health research, with both using case studies design in teaching and research.[3] [11] Health service research is an important management tool broadly focusing on the interface between "a population and the organisation of healthcare delivery".[12] The Australasian College of Health Service Executives has a code of ethics for ethical decision making.[13] The highest priority is given to protecting the well-being of patients of health services. Ross[14] describes ethical decision making in health service management as problem solving to achieve the best balance between employer, professional and personal values. Winkler and Gruen[15] have developed four principles to guide ethical decision making in health service management, reflecting the diverse roles of a manager. These include "providing care with compassion, treating employees with respect, acting in a public spirit and spending resources reasonably". The priority of these (at times) competing principles needs to be decided on by the individual manager on the basis of the problem being considered.

Regardless of the model used, Lewis and Boldy[16] consider a "good-quality" decision to be in terms of having most of the following characteristics: it should be "realistic, feasible, made with good data, timely, defensible, acceptable and have a good outcome."

In many ways, these characteristics parallel the bioethical principles of Beauchamp and Childress.[7] The main difference is that decision making in health service management has to take into account many uncertainties and imprecise information in situations of organisational change and resistance of stakeholders to this change. In this setting, the principle of non-maleficence should be, and is, given more weighting by managers with a tendency to focus on the risks of new ideas, concepts and changes. This construct is supported by North,[12] when she asserts that "the word 'research' often alarms practising managers". The priorities of health service managers are to meet benchmarks, outcomes and implement centrally determined health policy. The needs of researchers,

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Qualitative comments of GPs about nurse practitioners

I am not in favour of the whole concept of nurse practitioners. Even the name is ridiculous. Nurses are already practitioners—practitioners of nursing. We need more doctors in the country, not quasi doctors. Give the nurse practitioner applicant easy access to medical schools so they can train to become doctors.

Nurse practitioners are being foisted on rural areas as a substitute for appropriate medical care.

Nurse practitioners are a second-rate way to exploit rural doctor shortage—it is based on ignorance.

Doctor shortage is not a medical problem. It is a sign of poor socio-economic policies of governments and the pervasive attitude that civilisation and life stop at boundaries of metropolitan areas. Having nurse practitioners is not the answer.

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subjects, organisational ethics committees and research findings need to be considered within this broader framework, which includes many other competing stakeholders (including clinicians and patients) and other factors.

On the basis of models of best practice health service management, the decision not to approve publication of this research in peer-reviewed journals was justified in terms of the potential negative effects that such public dissemination of the project's results may have on the delicate state of negotiations (mediating major issues at a local level) with the region's key stakeholders. Publication using a regional nom de plume was unlikely to maintain confidentiality, as the small number of health professionals resident in the region and the links the authors have with one geographical Australian region would make the region identifiable.

Rather than exposing opposition to the employment of nurse practitioners by the region's GPs and differing views among GPs regarding the proposal to employ nurse practitioners, an incremental approach to organisational change was adopted by the management, with an ongoing consultation between GPs, nurse managers and the area health service.

Publish and perish

As employees of a health organisation, the publication of research projects needs to be approved by the management. Researchers have ethical obligations to their employers as resources have been used to commission the research. Nevertheless, Hofstede[17] in his study on culture and work observes: "Inequality of power is a functional, inevitable aspect of all organisations. Hierarchy exists between bosses and their subordinates." Researchers need to work within the structures of their organisations to foster mutually beneficial relationships with their managers, to ensure that research meets strategic and operational objectives and can be used to improve health service delivery and health outcomes.[12]

Nevertheless, we also owed an obligation to the participants included in this research project. A summary of findings of this survey was forwarded to the participating divisions of general practice, the area health service and NSW health with the recommendation that further consultation with key stakeholders was required to deal with concerns and fears expressed by GPs.

Ethical issues concerning publication of this case study

Owing to the recent amalgamation of health services, the health service's regional boundaries and senior management have changed since the time of the original research (1999). In addition, a number of nurse practitioner models have been implemented in NSW. Consequently, senior health managers now consider the publication of this case study to have benefits to other rural health service research, thereby outweighing the earlier decision, made about 5 years ago, not to publish these results. The earlier decision to avoid publication was based on several uncertainties in an environment of organisational change involving many stakeholders. With the development of many different new models of care including nurse practitioners, multidisciplinary multipurpose health services and practice nurses and allied health professionals employed by GPs, many of the uncertainties of the past research findings affecting organisational change have been resolved. Local divisions of general practice and the area health service, which could be potentially identified in this case study were shown a draft of this paper and they gave their consent for its publication.

DISCUSSION

Organisational change strategies can range from collaborative methods to directive authoritarian approaches without any

consultation.[18] The nurse practitioner framework advocated a collaborative approach.[6] This requires a stakeholder analysis assessing individual and organisational resistance to change.[18] Our research finding that a small minority of GPs was supportive of nurse practitioners in specified locations was useful, as this group could be used as change advocates if suitable demonstration projects were developed with their input. This collaborative approach to improving quality in Australian general practice by using small demonstration sites to change behaviour is being increasingly recognised in Australia.[19] Publishing our findings could have adversely affected this supportive group by creating divisions between supporting and opposing GPs. This would make any change more difficult. Our study was noteworthy as it differed from other published work about the positive attitudes of GPs to nurse practitioners in the UK.[20 21]

This case study shows how differential power structures and assessments affect the public dissemination of rural health research. Authors conducting rural research need to weigh the benefits and risks of publishing results.[11 22] Health researchers and managers share common goals of improving the effectiveness and efficiency of health service delivery with limited resources to improve health outcomes. Presently, there is a limited amount of published rural health research to assist evidence-based decision making.[23 24] Researchers have an obligation to their subjects to present their results in a manner that will not deleteriously affect rural communities and individuals. Managers have an obligation to many stakeholders and need to weigh the risks and benefits of the effect of research findings in their decision making.

Some readers may question the ethics of this case study. The main reasons for this were to show the interface between researchers and health service managers in decision making, to describe an instance where the absolute pursuit to publish research results would have been counterproductive by, at the very least, delaying the piloting of nurse practitioners being employed in this region and antagonising key stakeholders.

The decision not to publish this project's results at the time the project's authors requested it seems to have all the requirements given by Lewis and Boldy.[16] The last criterion, a good outcome, can be applied only to a decision in retrospect. In this case, several nurse practitioner models have since been implemented in the region, suggesting the benefits of the incremental organisational change method implemented.

CONCLUSION
Researchers have an ethical imperative to publish their findings. Health researchers and managers share the common goals of improving the effectiveness and efficiency of health service delivery, with limited resources to improve health outcomes. Researchers owe an obligation to their subjects in presenting their results in a manner that will not deleteriously affect rural communities and individuals. Managers have an obligation to many stakeholders and need to weigh the estimated risks and benefits of the effects of

research findings in their decision making. The imperative to publish research results in a timely manner may sometimes need to be assessed in a broader context, giving due consideration to the merits of the plethora of management strategies available, to achieve a mutually satisfactory outcome.

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