Multidisciplinary Policy Research—An Australian Experience*

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ABSTRACT *A brief overview is provided of a project which examined the feasibility of conducting a trial of heroin prescription for dependent heroin users. The processes used in the feasibility study brought together multiple disciplines and interest groups and some detailed examples of how this worked are presented. The paper concludes by drawing out some general strands relating to the strengths of multidisciplinary research generally, guidelines for how to do it and comments on multidisciplinary policy research in particular.*

Keywords: multidisciplinary, policy research, interest groups, heroin prescription.

Introduction

As an undergraduate in the 1970s, I took to heart the message from some of my lecturers and from burgeoning publications that multidisciplinary research was the way of the future. So I set off on that course, with only a vague understanding of what multidisciplinary means or how to do multidisciplinary research. While many extol its virtues, there is little guidance when it comes to practicalities. I started tamely in the neurosciences in a well defined area combining pharmacology and psychology. I then moved into occupational health where I explored the interfaces between clinical science, epidemiology and sociology, where I also worked closely with people affected by the disorder I was studying, and where I was involved in shaping policy to deal with the disorder. In 1991 serendipity struck in the form of 'Feasibility Research into the Controlled Availability of Opioids'. It is my experience with this project which has direct relevance to drug policy, especially drug treatment policy, which will form the basis of this paper.

The paper has three sections: a brief overview of the project, some detailed examples of how multiple disciplines and interest groups were brought together, and finally some general strands are drawn out relating to the strengths of multidisciplinary research generally, guidelines for how to do it and comments on multidisciplinary policy research in particular.

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Brief Overview of Feasibility Research into the Controlled Availability of Opioids

In March 1991, the Director of National Centre for Epidemiology and Population Health (NCEPH), Professor Bob Douglas, was approached by Mr Michael Moore, the presiding member of the Australian Capital Territory (ACT) Legislative Assembly Select Committee on HIV, Illegal Drugs and Prostitution. That committee had decided that a trial of heroin on prescription was worth considering and was asking NCEPH if it would be interested in running the trial. The response was to bring together drug treatment and policy experts from around Australia and to ask them if this was a worth-while project. The answer was an overwhelming 'yes' and a four-stage process was suggested.

Whether or not a trial was feasible in principle should first be considered. If not, the process would end there. If it was, the next stage would be to consider logistic feasibility. If it was found to be feasible logistically, pilot studies should be conducted and if those were successful there should be a full-scale trial. It was also recommended that we should work in collaboration with the Australian Institute of Criminology. I volunteered to be project director and so Feasibility Research into the Controlled Availability of Opioids was born.

Stage 1 of the project, the investigation of in principle feasibility, was undertaken between May and July 1991 and logistic feasibility, Stage 2, was investigated from January 1992 to June 1995. We found that a trial was feasible both in principle and in practice and recommended that Stage 3, two pilot studies, should be undertaken as well as setting the criteria for moving to Stage 4, the full-scale trial.[1]

By the end of the project, the disciplines that had been involved were: anthropology, clinical science and health care, criminology, demography, economics, epidemiology, law, pharmacology, philosophy, political science, policy analysis, psychology, sociology and statistics. The key interest groups included people who are or have been dependent on heroin; police; people involved in providing treatment and other services to illicit drug users; the general community and policy makers.

Well over 100 people have been involved in the research—as collaborators, assistants and advisers—and many hundreds have provided feedback through workshops, seminars and discussions. Opinions have also been elicited from around 5000 members of the general community through ACT and national surveys.

In both Stage 1 and Stage 2, the overall 'problem' was divided into sub-problems. The key areas examined were: legal issues, community attitudes, ethics, evaluation, day-to-day running, previous experience with heroin prescribing, cost and political issues. Within the legal area we looked at international treaty obligations, civil and criminal liability, and what laws would have to be changed. In terms of evaluation we carefully considered trial design and surveyed potential participants about unmet treatment needs and to obtain information about individual outcome measures. We also carefully considered potential social risks, how they could be minimised and how they could be evaluated. These included effects on migration of dependent users to the ACT, drug markets, road safety, numbers of illicit drug users, the 'message' a trial would give to young people, and effects on ex-users. Another way of conceiving the project, especially during Stage 2, was that we were looking to see if we could develop a proposal which was clinically workable, could be rigorously evaluated and had minimal risks.

The whole process was guided by an Advisory Committee, which included academics, advocates for illicit drug users, judiciary, police, policy makers, and treatment service providers.

During Stage 1, the Advisory Committee and a 60 member reference group covering

pretty well all aspects of the topic were relied on to read draft proposals and reports and prevent us from missing the obvious or falling into 'black holes'. We worked at speed and it was a heavy load.

During Stage 2 we targeted people for advice more specifically. Much of the input from interest groups was solicited through workshops on specific topics, e.g. evaluating drug markets,[2] policing, medical issues involved in prescribing heroin and cost considerations for service provision. Informal contacts were also widely used. We established one specific reference group to have input into surveys of illicit drug users and particularly dependent heroin users. They also ended up commenting on a range of other issues. The interaction with this reference group and with interest groups generally was loosely adapted from participatory action research models,[3] Wadsworth's notion of critical reference groups,[4] search conferences[5] and has links with the interactions with stakeholders described in Guba and Lincoln.[6]

This general overview has aimed to provide the overall context for the specific issues which follow. The focus is on the multidisciplinary research process not the research findings.

Examples of Multidisciplinary Research

Some of the detail of the multidisciplinary research process can be illustrated by considering aspects of the evaluation design.

The question we began with was something like 'should there be a trial of controlled availability of heroin for heroin users?' This evolved into 'should a carefully controlled and rigorously evaluated trial be conducted to determine whether or not the prescription of pharmaceutical heroin (diacetylmorphine) is a useful addition to current maintenance treatment for dependent heroin users?' Considerable conceptual development underpinned this change in wording; some examples of that development are presented here.

During the Stage 1 research working groups or individuals focused on a number of specific topics. One examined legal issues[7] and defined the constraints within which controlled availability of heroin could occur. Predominant are international treaties and, in particular, a general obligation imposed on Parties by the Single Convention on Narcotic Drugs, 1961, is:

> to limit exclusively to medical and scientific purposes the production, manufacture, export, import, distribution of, trade in, use and possession of drugs.

The restriction of heroin availability to medical and scientific purposes meant that subsequent thinking revolved around the meaning of providing heroin as treatment. Jennifer Norberry's work also identified a second constraint, that of restricting heroin prescription to dependent users. In her analysis, inclusion of non-dependent users could be problematic in terms of the international treaty obligations.

Another working group examined possible options for a trial. Those involved included a clinician, a health policy analyst, an anthropologist, two psychologists and an advocate for the interests of illicit drug users. (The project director was also involved in all working groups.) The project director, policy analyst and one of the psychologists looked carefully at the prescription program established by John Marks and Allan Parry in the United Kingdom and the psychologist also reviewed the literature on controlled availability of heroin.[8] This revealed a dearth of evaluation. In the 1970s a randomised controlled trial had been conducted comparing the new treatment, oral methadone, with the then gold standard, injectable heroin.[9] However, the results were inconclusive. There are now contested claims about the value of heroin prescription and about the reasons

for a change in prescription policy away from injectable heroin to methadone. There is little empirical evidence which casts light on the competing claims.

These results highlighted the necessity for sound evaluation and this was reinforced by a working group considering the political aspects of the trial.[10] This group, including a political scientist, a drug policy analyst and an advocate for the interests of illicit drug users, found that a series of government enquiries since the 1970s had all called for more research to underpin informed community debate and policy making. At the same time an ethics working group was comparing the issues involved in running a scientific trial with simply introducing a program of heroin prescription, as well as defining parameters under which a trial would be ethical. The ethics working group included a philosopher and a psychologist, both with particular expertise in ethical issues, and an advocate for the interests of illicit drug users.[11]

These considerations all reinforced the deliberations of an evaluation working group including three epidemiologists, an advocate for illicit drug user interests and an advocate for service provider interests. After considering a range of options, the evaluation working group settled on a randomised controlled trial.[12]

The problem with the 1970s trial in the United Kingdom by Hartnoll and colleagues[13] was that those allocated to oral methadone had a high drop-out rate, with only 29% remaining in the trial at the end of 12 months. We were worried about the same problem in our trial. This was taken up by two statisticians as part of the Stage 2 research. They developed designs that might minimise the effects of drop-outs.[14] These designs were discussed at a workshop attended by four statisticians, three epidemiologists, two criminologists, a sociologist, a clinician and the project director.[15] This workshop recommended staying with a standard randomised controlled trial. In the recommendations developed at the end of the feasibility study,[16] it was decided that there should be a pilot study to investigate if the randomised controlled trial would work, before embarking on a full-scale clinical trial. There were several considerations which influenced this decision, including meeting with the clinician who was responsible for the randomisation in the trial conducted by Hartnoll and colleagues,[17] surveys of dependent heroin users and discussions with service providers and potential participants. These all suggested that a randomised controlled trial would work if service providers and participants were convinced of its necessity.

Another essential element in the decision to use a randomised controlled trial was the groups to be compared. In Stage 1 the evaluation group had concluded that the focus of the comparison should be between choice and no choice. In other words, the 'experimental treatment' gave participants a choice of heroin alone, heroin plus methadone, and methadone alone, and these participants would be compared with those in the control group who could have oral methadone, the current gold standard treatment, only. The participants in the choice group could choose which treatment they wanted of the three available options and could move between them at will, as long as this was within the limits of medical safety.

Although many argued for a comparison between heroin alone and methadone alone, the original decision was maintained for both clinical and practical reasons. In addition, one of the reasons for not going with the modified randomised controlled trial designs developed by Jarrett and Solomon[18] was that participants would have to be randomised into a fixed option.

The clinical reasons for preferring a comparison between choice and no choice are as follows. Methadone is now well established as a useful treatment,[19] and although it does not work for everyone, it is likely to remain the gold standard treatment for the foreseeable future. Heroin is not being tested as a replacement for methadone; instead

it is being tested to see if it is a useful addition to methadone treatment. If heroin was found to be successful and was introduced as an additional option, those for whom it was found to be useful would not be denied methadone treatment and so it does not make sense to make methadone unavailable to this group during the trial, particularly as the combination of heroin and methadone may be what many find useful. It is also likely that people's needs will change and different options will work at different times, so that for a time heroin alone may be effective, later the combination may be useful and from time to time methadone alone might work best. Essentially this is what is being tested. In other words, is having a range of options which includes heroin and/or methadone more effective than methadone treatment alone?

There was also an important practical consideration. One of the risks of heroin prescription is that the prescribed drug may find its way onto the black market. This can be minimised by making heroin available for injection at the clinic only, in other words not allowing take-away doses. The surveys we conducted in Stage 1 showed considerable support for clinic administration compared to take-aways, even among illicit drug users and ex-users.[20] The responses to the question 'If a trial was conducted, should users be allowed to take their drugs home or should they be required to use them at the distribution point?' are shown in Table 1.

Table 1

	% General community ($n = 517$)	% Police ($n = 431$)	% Service providers ($n = 90$)	% Drug users/ex-users ($n = 127$)
Take home	3	2	18	28
Take at distribution point	93	96	76	69
Don't know	4	2	7	4

We followed this up with surveys of and discussions with dependent heroin users specifically, most of whom could see advantages and disadvantages in both options. A major disadvantage of restricting heroin administration to the clinic was the limitations it would put on the mobility of participants. This could be countered to some extent by making oral methadone alone an option, so that participants who did not want to or were unable to attend the clinic for a period could apply for take-away methadone. By the end of the feasibility study trials of heroin prescription had started in Switzerland and they showed that this option was workable.[21] (It is worth noting that the Swiss trials are not randomised controlled trials.)

Determining the eligibility criteria for trial participation is similarly illustrative. On one hand, in Stage 1 the options working group[22] reviewed the historical literature as well as current prescription practice in the United Kingdom. Although heroin was widely prescribed in the United Kingdom in the 1960s, in current practice it tends to be seen as a treatment of last resort, to be tried when all else has failed. This is also the rationale behind the current Swiss trials.[23] This restriction is not based on any evidence that heroin prescription is most effective or cost-effective in this group compared with other dependent heroin users. On the other hand, the options group also surveyed key individuals in Australia representing users and ex-users of illicit opioids, service providers and people with academic or bureaucratic interests in the illicit drugs area. People in this group as well as some outside it made strong representations that dependent heroin users currently in treatment should not be automatically excluded. They argued that this group should not be denied a treatment option they very much wanted just because they were

trying to make the best of currently available options; that if they had to drop out to get on a trial they would and that they would risk the harms this could entail. In addition, members of the Advisory Committee argued that it would be useful to test the ability of heroin prescription to bring into treatment dependent heroin users who had never been in treatment. The proposal that we have put forward is therefore that this new option should be tested in three groups—those for whom current options have been shown to be unsuccessful; those currently in treatment who would prefer the expanded range of options; and those who have never been in treatment.[24]

A trial risk which was of great concern to the ACT police, as well as the other interest groups, was also relevant to these conditions. This was that dependent heroin users might move to Canberra from all over Australia.[25] Responses to the question "If a trial was conducted how worried would you be that heroin/opiates users would be attracted to the ACT from elsewhere in Australia?" are shown in Table 2.

Table 2

	% General community ($n = 517$)	% Police ($n = 442$)	% Service providers ($n = 93$)	% Drug users/ex-users ($n = 132$)
Very worried	31	70	20	14
Somewhat worried	32	21	33	44
Not worried	35	6	40	38
Don't know	1	2	5	4

This issue was explored in detail[26] and eligibility criteria form part of the strategy to minimise the risk. There are three components—one was to limit the number of places (we had at one stage considered not having a limit), the second was to restrict the pilot studies to long-term ACT residents who had been or were on the methadone program (thus restricting the pilots to two of the three eligible groups) and the third was to conduct the full-scale trial in three cities which would also improve the generalisability of the results.[27] The police reaction to these safeguards was favourable and they were all also scientifically sound.

A final issue relevant to eligibility criteria is the potential numbers of users in each group in the ACT. The first component was to estimate the numbers of dependent heroin users and a demographer worked on this.[28] We also surveyed people in methadone treatment to see how many would be interested in participating in a trial and tried (fairly unsuccessfully) to recruit people in the other two categories to interview as well. We also worked with staff at the methadone clinic to help them analyse data they collect routinely which was useful both for our purposes (getting more information on people who had dropped out of treatment) and for theirs. This was done as a collaborative effort with the relevant staff member co-authoring the final report (paper in preparation). Some of the analysis results bothered her and she worried at it and finally discovered a major flaw in the data collection system. This may not have happened if she had not been so involved in the analysis.

As these examples have shown, in general, reasonable compromises between various competing interests could be reached. All decisions were scrutinised in terms of their effects on the evaluation, clinical workability and trial risks. An analogy which comes to mind is that of manipulating a Rubic cube. Every option had multiple ramifications and these were worked through before final decisions were made, so that the final proposal was both complete and coherent. Others may well have made different decisions and

different compromises; nevertheless we believe we have developed a good workable proposal and in the 21 months of discussion since our report and recommendations were released only individual aspects of the proposal have been questioned, there has been no challenge to the overall package.

These illustrations do not consider the whole of the development of the evaluation, let alone the development of the clinical practice or the assessment and minimisation of risks. What I have tried to do with these examples is to illustrate the specifics of a multidisciplinary approach and present the flavour of what was involved.

General comments

The Strengths of Multidisciplinary Research

Different disciplines have different technical or methodological expertise as well as different ways of viewing the world. In terms of methodological expertise, a multidisciplinary approach increases rigour, as each discipline demands that its technical strengths are brought to bear. Integrating different ways of viewing the world can lead to a better rounded project which has more relevance and generalisability to the real world.

Working with interest groups also contributes to making research more relevant—it helps ensure that the most useful questions are addressed and that interpretations of the information gathered are valid. In other words interest groups provide an invaluable 'reality check'. Working with interest groups involves developing an understanding of their 'cultures' and techniques for doing this are being developed, as a result, at least partly, of the strong consumer movement. In the area of illicit drug use working with interest groups can also help ensure that researchers are not complicit in legitimising or entrenching misinformation.

There is also benefit when interest groups develop a better understanding of the strengths and limitations of the research process. It can help ensure that their expectations are realistic.

Tentative Guidelines for how to do Multidisciplinary Research

These guidelines are still very tentative and need considerably more development. I have tried to think about my own skills and interests, how I would recruit and supervise Ph.D. students doing multidisciplinary research and what sort of preparation I would encourage for those entering university as undergraduates.

The ideal background for research which draws together a range of disciplines and interest groups to work on an issue of policy relevance is:

- the ability to identify which disciplines are relevant and what it is that they might have to offer, as well as enough knowledge about each discipline to be able to have a meaningful dialogue with the experts and to be able to identify the experts with whom to have the dialogue;
- a good understanding of the 'cultures' of different interest groups and empathy with their concerns;
- a thorough understanding of the policy making process, as well as the history of the policy concerned, the key players and the political sensitivities;
- management, negotiation and conflict resolution skills; and
- the ability to integrate all aspects of the research to develop a solution to the policy problem under consideration.

I have to confess that I am lacking substantial elements of the ideal background. I made do with networks and confidence. Networks are essential to the content, confidence to the process. Let me deal first with the process. The feasibility study ranged over many disciplines and interest groups and I had little understanding of many of them before I began. I had to have the confidence to approach people some of whom I knew vaguely or not at all and grapple to communicate often ill-formulated ideas. When you do not know the basics of a discipline or the first thing about an interest group, you can be quite foolish and you have to be confident enough to cope with that.

Networks are essential. Working at NCEPH and having a collaborative relationship with the Australian Institute of Criminology were centrally important. NCEPH provided epidemiologists, statisticians, economists, sociologists and demographers (the Centre's five core disciplines) as well as clinical science and health care practitioners, anthropologists, health policy analysts and psychologists. One Ph.D. student who was researching illicit drug use in the ACT was a valuable conduit to that interest group, another who had previously worked with drug treatment agencies provided a way in there, and a third Ph.D. student had previously worked as a police doctor and was able to provide a valuable sounding board on policing issues. The Australian Institute of Criminology provided lawyers and criminologists, as well as drug policy analysts. Staff at both institutions had an interest in Aboriginal health and played an important role in that component of the research.[29] These institutional colleagues were supplemented in a variety of ways. My own academic history gave me additional contacts and others were a product of circumstance—for example at the time I lived next door to a policeman, activists from various community groups that I did or had belonged to provided contacts and so on.

Many people collaborated on the project and I owe many debts to them as well as to people who gently (and sometimes not so gently) pointed me in the right direction, told me when I was wrong or needed to look at things differently and provided a sounding board to refine ideas.

Repaying these debts is also integral to the research process. Fellow academics are or will be co-authors on papers and that is generally an appropriate repayment. There is also the collegiality of returning the favour, in other words listening to their ideas, giving advice, reading drafts and so on. Finding ways to repay interest groups is more challenging. There is a debt both to the group and the individual. In general I was able to structure the feasibility research so that it had broader relevance than just the prescription of heroin. That was one of the principles which guided the research. Thus, various projects looked at how drug treatment could be improved and this was one way of repaying service providers and illicit drug users as groups. Other current and planned projects are helping to improve the collection and analysis of data by treatment agencies and police and to improve intersectoral collaboration. Still other projects may help improve the collection of information about illicit drug markets or better ways of intercepting drugged drivers, which help policing and community safety. Individuals can be repaid by receiving recognition in such projects. If I were to do this again I would also want to be able to pay unwaged consumer advocates. I was able to meet their expenses and help some with employment, but this is an area which needs more careful consideration.

The final issue I want to consider here is the position of the researcher *vis-àvis* the research topic. While no-one is free of values, the experience of this project has convinced me of the power of a dispassionate and open-minded stance. When the project began there was a general expectation that I was working to justify a predetermined outcome and that I was on the 'side' of drug law reformers. I went to some pains to let

drug law reformers know that we did not have the same agenda and to seek out the views of the critics of the proposal. I aimed to make the research process open and transparent and put considerable effort into soliciting feedback, particularly to identify points of weakness. To this end, throughout the research process I gave numerous talks, seminars and conference presentations, both nationally and internationally to a wide variety of audiences, academic and non-academic. Seeking out critics was important for identifying weaknesses and I had discussions individually and in groups, formally and informally. In essence the conclusion from the Stage 2 research was that both sides speak with authority, but neither has convincing evidence for or against a trial. We concluded that empirical evidence is needed and that the benefits of gathering that evidence outweigh the risks.

I think it is important for the researcher to take a position at the end of the research, but in doing so not to become blind to or dismissive of the opposing arguments. In the case of the feasibility research, I argue strongly that if a trial eventuates, the risks and potential negative outcomes must be measured with the same rigour and resources as the potential positive outcomes. In that way both can be considered at the end of the trial when final assessments about the value of this new treatment option are made.

The role of values in research is, of course, a well debated topic and I do not want to go into it further here. I would however argue that the power of multidisciplinary research lies in its ability to bring together different viewpoints and arguments and to subject conflicts to close scrutiny. If all sides do not feel they are being dealt with fairly and respectfully, the approach is devalued.

Comments on Multidisciplinary Policy Research

The area I feel most tentative in commenting about is how all this relates to policy research. That is the process I understand least well and we are also in the middle of the policy considerations, so it is not a completed process that can be reflected on easily.

Without going into all the details (they can be found in Bammer)[30], this was essentially an independent piece of research, not one commissioned by the policy makers. It is also probably fair to say, at least in the beginning, that many policy makers did not welcome this research. There were two important issues during the first two stages of the feasibility research—first to get input from policy makers, so that their concerns could be fully incorporated into the research process and second to encourage them not to make any decisions for or against a trial until the feasibility research had been completed. The main issue now is to get our recommendations considered rationally with minimal interference from whim, prejudice and political expediency. (Let me hasten to add that I do not argue that agreement with our recommendations is necessarily the only rational outcome.)

The central process for all of these objectives has been an extensive series of personal verbal briefings of key politicians and public servants to explain what we were doing and hear their concerns. Most were hamstrung when it came to more detailed participation because of both time and propriety and when they did participate it was mostly to listen rather than contribute fully.

We tried not to set political hares running—we deliberately chose a boring and neutral title for the project, we avoided releasing reports at politically sensitive times such as elections, we brief all political parties and we let them know ahead of time about research results they may be asked to comment on, and we do not 'leak' information gathered during briefings (although that has not stopped policy makers leaking our results when it has suited them).

We are now at a stage when political decisions about the future of the project must be made—the pilot studies cannot be conducted without legislative change—and I am watching the process with some trepidation. Watching is not the right word, because it is now a closed insider process for policy makers only. Occasionally I am asked to provide answers to questions and the lack of understanding these questions often reveal rings alarm bells. But basically the process is now in the hands of the policy makers and the researchers are largely irrelevant.

It is this process of the relationship between researcher and policy maker that needs to be further explored, developed and argued through. Through my eyes the process looks unaccountable and the whims of individual policy makers, both public servants and politicians, can take precedence over carefully considered research. Their disciplinary preferences can negate a multidisciplinary approach, in that they may decide that some aspects can be ignored. For example, they may decide that an understanding of the basic pharmacokinetics of heroin is not important or that the views of one interest group should be given overriding precedence. As it currently stands, the policy making process can negate all the advantages of the multidisciplinary research process. I am not arguing that policy makers should be excluded from having input or suggesting modifications; what is problematic is the lack of scrutiny of their suggestions, their lack of integration into the whole process and their overriding power. I am arguing that the policy making process should be as open and accountable as the research process and, ideally should be an integral part of the research process.

Researchers and policy makers must find mutually agreeable and properly accountable ways of working together. From the point of view of the researcher, these must respect academic freedom. Unless this is the case, researchers will find it easier to simply be critics of existing policy rather than partners in the formulation of better policy.

Conclusions

When I was asked to give this paper, it was suggested that I might reflect on 'what could have made the multidisciplinary research process easier for this project?' I replied that the more appropriate question in this case was 'what made it so easy to do?'

The important elements

National support. There was national support for the project from drug treatment and policy experts before it was undertaken. In addition, they overwhelmingly supported NCEPH and the Australian Institute of Criminology as the centres where the project should be conducted. On-going support from an Advisory Committee representing the relevant constituencies has also been important.

The multidisciplinary structure of NCEPH and the collaboration with the Australian Institute of Criminology. A multidisciplinary approach was expected and many of the essential colleagues were readily accessible.

The topic. Most researchers are completely overcommitted, but there was enough in this topic that was innovative and exciting that got researchers, many of them the best in their fields, to donate their time.

Money. The bulk of the project was funded from untied and very flexible sources. It allowed us to work fast and innovatively. The smaller proportion of money that came from more traditional funding sources was very time consuming to apply for and it generally took a long time before we knew it had been awarded. It was specifically tied to particular subprojects and was difficult to use flexibly. There were also political sensitivities in getting some of these funds and we were only successful after we obscured the link with the feasibility research. Overall, we estimate that the first two stages of the project cost around $1 million; that is $250 000 per year.

Serendipity. Fortune smiled on the first stage of the feasibility research in particular. We had three months to complete the project and essentially things just fell into place. For example, we were able to recruit the right people at the right time, so that when we needed a political scientist, for instance, someone completely appropriate who had just completed his Ph.D. turned up in our network. (The Stage 2 research was much more normal.)

The key players. This project came at the right time for me in my academic quest and I am fortunate to work with a director, Bob Douglas, who is and has been completely supportive of the process and has been an invaluable sounding-board and contributor to it.

The challenges which face us are to firmly integrate this approach into the research mainstream. It would be useful to get some sense of how much and what sorts of multidisciplinary research, particularly policy related research, are already being conducted. A meeting of researchers already involved may provide ideas and stimuli for further advancement. We need to articulate and systematise our methodologies. The model I have presented involves a project director who is the hub and we should also document and explore other models. Ph.D. students who by definition are working at the cutting edges are potentially a valuable resource. There may be value in commissioning demonstration projects to deal with particular public health policy problems. A technical advisory group, similar to those established recently in Australia to foster research in general practice or pharmacy practice, could be set up to foster multidisciplinary research.

I feel very fortunate to have had the opportunity to have directed the feasibility research. It allowed me to put into practice ideas which have been shaping for many years. Doing it was straightforward, documenting it and trying to find ways of encouraging others that this is a worthwhile approach are much more difficult. This paper is just the beginning.

Acknowledgements

Details of those involved in the feasibility research and of grant support are provided in Bammer.[31]

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